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ANALYTICAL REPORT

Job Number: 280-129830-1

Job Description: Cornhusker (CHAAP)

For:
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Attention: Scott Mann



Approved for release.
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11/19/2019 2:58 PM

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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.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

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Qualifiers

GC VOA

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
U	Undetected at the Limit of Detection.

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.
D	The reported value is from a dilution.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
M	Manual integrated compound.
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

General Chemistry

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
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: 280-129830-1

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 10/17/2019 at 9:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.8º C and 4.3º C.

DISSOLVED GASES (GC)
Samples EW7-PM23A-1-25 (280-129830-1), EW7-PM25A-1-25 (280-129830-2) and EW7-PM25B-1-35 (280-129830-3) were analyzed for Dissolved Gases (GC) in accordance with RSK_175. The samples were analyzed on 10/23/2019.

Methane failed the recovery criteria high for the MS and MSD of sample EW7-PM25B-1-35 (280-129830-3) in batch 280-475070. The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount. Refer to the QC report for details.

The closing continuing calibration verification (CCVC) associated with batch 280-475070 recovered above the upper control limit for Acetylene. The samples associated with this CCV were non-detect for the affected analyte; therefore, the data have been reported. Associated results are flagged "Q".

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

NITROAROMATICS AND NITRAMINES (HPLC)
Samples EW7-PM23A-1-25 (280-129830-1), EW7-PM25A-1-25 (280-129830-2) and EW7-PM25B-1-35 (280-129830-3) were analyzed for Nitroaromatics and Nitramines (HPLC) in accordance with 8330A. The samples were prepared on 10/23/2019 and analyzed on 10/24/2019, 10/29/2019, 10/30/2019 and 11/01/2019.

1,2-Dinitrobenzene failed the surrogate recovery criteria low for EW7-PM23A-1-25 (280-129830-1), EW7-PM25A-1-25 (280-129830-2), and EW7-PM25B-1-35MS (280-129830-3MS). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed. Associated results are flagged "Q".

The initial calibration verification (ICV) result for batch 280-475429 was failing control limits for m-Nitrotoluene. The instrument is confirming detections and the analyte not in control is a non target for confirmation. Associated results are flagged "Q".

2-Nitrotoluene and 3-Nitrotoluene failed the recovery criteria low for the MS of sample EW7-PM25B-1-35 (280-129830-3) in batch 280-475188. Tetryl failed the recovery criteria high. 1,3,5-Trinitrobenzene failed the recovery criteria low for the MSD of sample EW7-PM25B-1-35 (280-129830-3) in batch 280-475188. Tetryl failed the recovery criteria high. The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount. Refer to the QC report for details.

Sample EW7-PM23A-1-25 (280-129830-1)[25X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

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

ALKALINITY
Samples EW7-PM23A-1-25 (280-129830-1), EW7-PM25A-1-25 (280-129830-2) and EW7-PM25B-1-35 (280-129830-3) were analyzed for Alkalinity in accordance with SM20 2320B. The samples were analyzed on 10/24/2019.

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

AMMONIA
Samples EW7-PM23A-1-25 (280-129830-1), EW7-PM25A-1-25 (280-129830-2) and EW7-PM25B-1-35 (280-129830-3) were analyzed

for ammonia in accordance with EPA Method 350.1. The samples were analyzed on 10/31/2019.

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

TOTAL KJELDAHL NITROGEN
Samples EW7-PM23A-1-25 (280-129830-1), EW7-PM25A-1-25 (280-129830-2) and EW7-PM25B-1-35 (280-129830-3) were analyzed for total kjeldahl nitrogen in accordance with EPA Method 351.2. The samples were prepared on 10/26/2019 and analyzed on 10/28/2019.

Nitrogen, Total Kjeldahl failed the recovery criteria low for the MS of sample EW7-PM25B-1-35 (280-129830-3) in batch 280-475682. Refer to the QC report for details.

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

NITRATE-NITRITE AS NITROGEN
Samples EW7-PM23A-1-25 (280-129830-1), EW7-PM25A-1-25 (280-129830-2) and EW7-PM25B-1-35 (280-129830-3) were analyzed for nitrate-nitrite as nitrogen in accordance with EPA Method 353.2. The samples were analyzed on 11/03/2019.

Nitrate Nitrite as N failed the recovery criteria low for the MS of sample EW7-PM25B-1-35 (280-129830-3) in batch 280-476322. Refer to the QC report for details.

Samples EW7-PM23A-1-25 (280-129830-1)[5X] and EW7-PM25A-1-25 (280-129830-2)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

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

SULFIDE
Samples EW7-PM23A-1-25 (280-129830-1), EW7-PM25A-1-25 (280-129830-2) and EW7-PM25B-1-35 (280-129830-3) were analyzed for sulfide in accordance with EPA SW-846 Method 9034. The samples were prepared and analyzed on 10/22/2019.

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

ANIONS (28 DAYS)
Samples EW7-PM23A-1-25 (280-129830-1), EW7-PM25A-1-25 (280-129830-2) and EW7-PM25B-1-35 (280-129830-3) were analyzed for anions (28 days) in accordance with 9056A. The samples were analyzed on 11/13/2019.

Sulfate failed the recovery criteria high for the MS and MSD of sample EW7-PM25B-1-35 (280-129830-3) in batch 280-477274. Refer to the QC report for details.

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

DISSOLVED ORGANIC CARBON
Samples EW7-PM23A-1-25 (280-129830-1), EW7-PM25A-1-25 (280-129830-2) and EW7-PM25B-1-35 (280-129830-3) were analyzed for dissolved organic carbon in accordance with EPA SW-846 Method 9060A. The samples were analyzed on 11/04/2019.

The following samples were received unpreserved at pH 7 and acidified to pH<2 prior to analysis: EW7-PM23A-1-25 (280-129830-1), EW7-PM25A-1-25 (280-129830-2), EW7-PM25B-1-35 (280-129830-3).

No additional 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: 280-129830-1

Client Sample ID: EW7-PM23A-1-25 — Lab Sample ID: 280-129830-1

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Methane	0.42		0.0050	0.0020	0.00063	mg/L	1		RSK-175	Total/NA
2,4-Dinitrotoluene	0.24	J	0.39	0.20	0.083	ug/L	1		8330A	Total/NA
2-Amino-4,6-dinitrotoluene	3.3	Q	0.20	0.12	0.050	ug/L	1		8330A	Total/NA
HMX	0.93	Q M	0.39	0.20	0.086	ug/L	1		8330A	Total/NA
RDX	1.0	Q	0.39	0.39	0.16	ug/L	1		8330A	Total/NA
1,3,5-Trinitrobenzene - DL	70	D	25	9.9	4.9	ug/L	25		8330A	Total/NA
2,4,6-Trinitrotoluene - DL	28	D	9.9	9.9	3.9	ug/L	25		8330A	Total/NA
Ammonia	1.8		0.10	0.050	0.022	mg/L	1		350.1	Total/NA
Nitrate Nitrite as N	24		0.50	0.25	0.095	mg/L	5		353.2	Total/NA
Sulfate	90		5.0	3.0	1.0	mg/L	1		9056A	Total/NA
Total Alkalinity as CaCO3	330		10	10	3.1	mg/L	1		SM 2320B	Total/NA
Dissolved Organic Carbon - Quad	3.6		1.0	1.0	0.35	mg/L	1		9060A	Dissolved

Client Sample ID: EW7-PM25A-1-25 — Lab Sample ID: 280-129830-2

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Methane	0.59		0.0050	0.0020	0.00063	mg/L	1		RSK-175	Total/NA
1,3,5-Trinitrobenzene	1.9	Q M	0.96	0.39	0.19	ug/L	1		8330A	Total/NA
2,4,6-Trinitrotoluene	13	Q	0.39	0.39	0.15	ug/L	1		8330A	Total/NA
2-Amino-4,6-dinitrotoluene	2.4	Q	0.19	0.12	0.049	ug/L	1		8330A	Total/NA
4-Amino-2,6-dinitrotoluene	2.4	Q	0.19	0.12	0.056	ug/L	1		8330A	Total/NA
HMX	1.6	Q M	0.39	0.19	0.084	ug/L	1		8330A	Total/NA
RDX	1.6	Q M	0.39	0.39	0.15	ug/L	1		8330A	Total/NA
Ammonia	0.13		0.10	0.050	0.022	mg/L	1		350.1	Total/NA
Nitrate Nitrite as N	25		0.50	0.25	0.095	mg/L	5		353.2	Total/NA
Sulfate	87		5.0	3.0	1.0	mg/L	1		9056A	Total/NA
Total Alkalinity as CaCO3	320		10	10	3.1	mg/L	1		SM 2320B	Total/NA
Dissolved Organic Carbon - Quad	4.4		1.0	1.0	0.35	mg/L	1		9060A	Dissolved

Client Sample ID: EW7-PM25B-1-35 — Lab Sample ID: 280-129830-3

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Methane	3.9	J1	0.0050	0.0020	0.00063	mg/L	1		RSK-175	Total/NA
1,3,5-Trinitrobenzene	20	J1	0.95	0.38	0.19	ug/L	1		8330A	Total/NA
2,4,6-Trinitrotoluene	4.1		0.38	0.38	0.15	ug/L	1		8330A	Total/NA
2-Amino-4,6-dinitrotoluene	1.5		0.19	0.11	0.048	ug/L	1		8330A	Total/NA
4-Amino-2,6-dinitrotoluene	1.1		0.19	0.11	0.055	ug/L	1		8330A	Total/NA
Ammonia	1.5		0.10	0.050	0.022	mg/L	1		350.1	Total/NA
Nitrogen, Total Kjeldahl	1.5	J1	1.0	1.0	0.69	mg/L	1		351.2	Total/NA
Nitrate Nitrite as N	1.7	J1	0.10	0.050	0.019	mg/L	1		353.2	Total/NA
Sulfate	110	J1	5.0	3.0	1.0	mg/L	1		9056A	Total/NA
Total Alkalinity as CaCO3	410		10	10	3.1	mg/L	1		SM 2320B	Total/NA
Dissolved Organic Carbon - Quad	4.8		1.0	1.0	0.35	mg/L	1		9060A	Dissolved

This Detection Summary does not include radiochemical test results.

Client Sample ID: EW7-PM23A-1-25
Lab Sample ID: 280-129830-1

Date Collected: 10/16/19 10:45
Matrix: Water
Date Received: 10/17/19 09:15

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Methane	**0.42**		0.0050	0.0020	0.00063	mg/L		10/23/19 19:07	1

Method: 8330A - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3-Dinitrobenzene	0.20	U M	0.39	0.20	0.088	ug/L		10/24/19 15:45	1
2,4-Dinitrotoluene	**0.24**	**J**	0.39	0.20	0.083	ug/L		10/24/19 15:45	1
2,6-Dinitrotoluene	0.20	U	0.20	0.20	0.064	ug/L		10/24/19 15:45	1
2-Amino-4,6-dinitrotoluene	**3.3**	**Q**	0.20	0.12	0.050	ug/L		10/24/19 15:45	1
2-Nitrotoluene	0.20	U	0.39	0.20	0.084	ug/L		10/24/19 15:45	1
3-Nitrotoluene	0.39	U	0.39	0.39	0.19	ug/L		10/24/19 15:45	1
4-Amino-2,6-dinitrotoluene	0.12	U	0.20	0.12	0.057	ug/L		10/24/19 15:45	1
4-Nitrotoluene	0.39	U M	0.99	0.39	0.20	ug/L		10/24/19 15:45	1
HMX	**0.93**	**Q M**	0.39	0.20	0.086	ug/L		10/24/19 15:45	1
MNX	0.39	U	2.0	0.39	0.15	ug/L		10/30/19 05:05	1
Nitrobenzene	0.20	U M	0.39	0.20	0.090	ug/L		10/24/19 15:45	1
RDX	**1.0**	**Q**	0.39	0.39	0.16	ug/L		10/24/19 15:45	1
Tetryl	0.20	U M	0.24	0.20	0.078	ug/L		10/24/19 15:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene	*70*	*Q*	*83 - 119*	*10/23/19 15:47*	*10/24/19 15:45*	*1*
1,2-Dinitrobenzene	*85*		*83 - 119*	*10/23/19 15:47*	*10/30/19 05:05*	*1*

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	**70**	**D**	25	9.9	4.9	ug/L		10/29/19 13:52	25
2,4,6-Trinitrotoluene	**28**	**D**	9.9	9.9	3.9	ug/L		10/29/19 13:52	25

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene	*87*	*D*	*83 - 119*	*10/23/19 15:47*	*10/29/19 13:52*	*25*
1,2-Dinitrobenzene	*0*	*Q*	*83 - 119*	*10/23/19 15:47*	*10/30/19 05:40*	*25*

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ammonia	**1.8**		0.10	0.050	0.022	mg/L		10/31/19 13:46	1
Nitrogen, Total Kjeldahl	1.0	U	1.0	1.0	0.69	mg/L		10/28/19 19:51	1
Nitrate Nitrite as N	**24**		0.50	0.25	0.095	mg/L		11/03/19 19:12	5
Sulfide	1.9	U	4.0	1.9	0.79	mg/L		10/22/19 18:54	1
Sulfate	**90**		5.0	3.0	1.0	mg/L		11/13/19 17:16	1
Total Alkalinity as CaCO3	**330**		10	10	3.1	mg/L		10/24/19 21:33	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon - Quad	**3.6**		1.0	1.0	0.35	mg/L		11/04/19 18:24	1

Client Sample ID: EW7-PM25A-1-25
Lab Sample ID: 280-129830-2

Date Collected: 10/16/19 12:50
Matrix: Water
Date Received: 10/17/19 09:15

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Methane	**0.59**		0.0050	0.0020	0.00063	mg/L		10/23/19 19:21	1

Client Sample ID: EW7-PM25A-1-25

Date Collected: 10/16/19 12:50
Date Received: 10/17/19 09:15

Lab Sample ID: 280-129830-2

Matrix: Water

Method: 8330A - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	**1.9**	**Q M**	0.96	0.39	0.19	ug/L		10/24/19 17:17	1
1,3-Dinitrobenzene	0.19	U M	0.39	0.19	0.086	ug/L		10/24/19 17:17	1
2,4,6-Trinitrotoluene	**13**	**Q**	0.39	0.39	0.15	ug/L		10/24/19 17:17	1
2,4-Dinitrotoluene	0.19	U	0.39	0.19	0.081	ug/L		10/24/19 17:17	1
2,6-Dinitrotoluene	0.19	U	0.19	0.19	0.062	ug/L		10/24/19 17:17	1
2-Amino-4,6-dinitrotoluene	**2.4**	**Q**	0.19	0.12	0.049	ug/L		10/24/19 17:17	1
2-Nitrotoluene	0.19	U	0.39	0.19	0.082	ug/L		10/24/19 17:17	1
3-Nitrotoluene	0.39	U	0.39	0.39	0.19	ug/L		10/24/19 17:17	1
4-Amino-2,6-dinitrotoluene	**2.4**	**Q**	0.19	0.12	0.056	ug/L		10/24/19 17:17	1
4-Nitrotoluene	0.39	U M	0.96	0.39	0.19	ug/L		10/24/19 17:17	1
HMX	**1.6**	**Q M**	0.39	0.19	0.084	ug/L		10/24/19 17:17	1
MNX	0.39	U M	1.9	0.39	0.15	ug/L		10/24/19 17:17	1
Nitrobenzene	0.19	U	0.39	0.19	0.088	ug/L		10/24/19 17:17	1
RDX	**1.6**	**Q M**	0.39	0.39	0.15	ug/L		10/24/19 17:17	1
Tetryl	0.19	U M	0.23	0.19	0.076	ug/L		10/24/19 17:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene	*79*	*Q M*	*83 - 119*	*10/23/19 15:47*	*10/24/19 17:17*	*1*
1,2-Dinitrobenzene	*90*		*83 - 119*	*10/23/19 15:47*	*11/01/19 18:57*	*1*

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ammonia	**0.13**		0.10	0.050	0.022	mg/L		10/31/19 13:44	1
Nitrogen, Total Kjeldahl	1.0	U	1.0	1.0	0.69	mg/L		10/28/19 19:52	1
Nitrate Nitrite as N	**25**		0.50	0.25	0.095	mg/L		11/03/19 19:14	5
Sulfide	1.9	U	4.0	1.9	0.79	mg/L		10/22/19 18:54	1
Sulfate	**87**		5.0	3.0	1.0	mg/L		11/13/19 17:51	1
Total Alkalinity as CaCO3	**320**		10	10	3.1	mg/L		10/24/19 21:43	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon - Quad	**4.4**		1.0	1.0	0.35	mg/L		11/04/19 18:39	1

Client Sample ID: EW7-PM25B-1-35

Date Collected: 10/16/19 14:55
Date Received: 10/17/19 09:15

Lab Sample ID: 280-129830-3

Matrix: Water

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Methane	**3.9**	**J1**	0.0050	0.0020	0.00063	mg/L		10/23/19 17:33	1

Method: 8330A - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	**20**	**J1**	0.95	0.38	0.19	ug/L		10/24/19 17:40	1
1,3-Dinitrobenzene	0.19	U M	0.38	0.19	0.085	ug/L		10/24/19 17:40	1
2,4,6-Trinitrotoluene	**4.1**		0.38	0.38	0.15	ug/L		10/24/19 17:40	1
2,4-Dinitrotoluene	0.19	U	0.38	0.19	0.080	ug/L		10/24/19 17:40	1
2,6-Dinitrotoluene	0.19	U	0.19	0.19	0.062	ug/L		10/24/19 17:40	1
2-Amino-4,6-dinitrotoluene	**1.5**		0.19	0.11	0.048	ug/L		10/24/19 17:40	1
2-Nitrotoluene	0.19	U J1	0.38	0.19	0.082	ug/L		10/24/19 17:40	1
3-Nitrotoluene	0.38	U J1 M	0.38	0.38	0.19	ug/L		10/24/19 17:40	1

Client Sample ID: EW7-PM25B-1-35
Lab Sample ID: 280-129830-3

Date Collected: 10/16/19 14:55
Matrix: Water
Date Received: 10/17/19 09:15

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
4-Amino-2,6-dinitrotoluene	**1.1**		0.19	0.11	0.055	ug/L		10/24/19 17:40	1
4-Nitrotoluene	0.38	U M	0.95	0.38	0.19	ug/L		10/24/19 17:40	1
HMX	0.19	U	0.38	0.19	0.084	ug/L		10/24/19 17:40	1
MNX	0.38	U M	1.9	0.38	0.15	ug/L		10/24/19 17:40	1
Nitrobenzene	0.19	U	0.38	0.19	0.087	ug/L		10/24/19 17:40	1
RDX	0.38	U	0.38	0.38	0.15	ug/L		10/24/19 17:40	1
Tetryl	0.19	U J1	0.23	0.19	0.076	ug/L		10/24/19 17:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene	*83*		*83 - 119*	*10/23/19 15:47*	*10/24/19 17:40*	*1*
1,2-Dinitrobenzene	*97*		*83 - 119*	*10/23/19 15:47*	*11/01/19 19:32*	*1*

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ammonia	**1.5**		0.10	0.050	0.022	mg/L		10/31/19 14:37	1
Nitrogen, Total Kjeldahl	**1.5**	**J1**	1.0	1.0	0.69	mg/L		10/28/19 19:46	1
Nitrate Nitrite as N	**1.7**	**J1**	0.10	0.050	0.019	mg/L		11/03/19 19:06	1
Sulfide	1.9	U	4.0	1.9	0.79	mg/L		10/22/19 18:54	1
Sulfate	**110**	**J1**	5.0	3.0	1.0	mg/L		11/13/19 18:26	1
Total Alkalinity as CaCO3	**410**		10	10	3.1	mg/L		10/24/19 22:08	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon - Quad	**4.8**		1.0	1.0	0.35	mg/L		11/04/19 17:23	1

Default Detection Limits

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

Job ID: 280-129830-1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	LOQ	DL	Units
Methane	0.0050	0.00063	mg/L

Method: 8330A - Nitroaromatics and Nitramines (HPLC)

Prep: 3535

Analyte	LOQ	DL	Units
1,3,5-Trinitrobenzene	1.0	0.20	ug/L
1,3-Dinitrobenzene	0.40	0.089	ug/L
2,4,6-Trinitrotoluene	0.40	0.16	ug/L
2,4-Dinitrotoluene	0.40	0.084	ug/L
2,6-Dinitrotoluene	0.20	0.065	ug/L
2-Amino-4,6-dinitrotoluene	0.20	0.051	ug/L
2-Nitrotoluene	0.40	0.086	ug/L
3-Nitrotoluene	0.40	0.20	ug/L
4-Amino-2,6-dinitrotoluene	0.20	0.058	ug/L
4-Nitrotoluene	1.0	0.20	ug/L
HMX	0.40	0.088	ug/L
MNX	2.0	0.15	ug/L
Nitrobenzene	0.40	0.091	ug/L
RDX	0.40	0.16	ug/L
Tetryl	0.24	0.079	ug/L

General Chemistry

Analyte	LOQ	DL	Units
Ammonia	0.10	0.022	mg/L
Nitrate Nitrite as N	0.10	0.019	mg/L
Sulfate	5.0	1.0	mg/L
Total Alkalinity as CaCO3	10	3.1	mg/L

General Chemistry

Prep: 351.2

Analyte	LOQ	DL	Units
Nitrogen, Total Kjeldahl	1.0	0.69	mg/L

General Chemistry

Prep: 9030B

Analyte	LOQ	DL	Units
Sulfide	4.0	0.79	mg/L

General Chemistry - Dissolved

Analyte	LOQ	DL	Units
Dissolved Organic Carbon - Quad	1.0	0.35	mg/L

Surrogate Summary

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

Job ID: 280-129830-1

Method: 8330A - Nitroaromatics and Nitramines (HPLC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	12DNB1 (83-119)						
280-129830-1	EW7-PM23A-1-25	70 Q						
280-129830-1 - DL	EW7-PM23A-1-25	87 D						
280-129830-1	EW7-PM23A-1-25	85						
280-129830-1 - DL	EW7-PM23A-1-25	0 Q						
280-129830-2	EW7-PM25A-1-25	79 Q M						
280-129830-2	EW7-PM25A-1-25	90						
280-129830-3	EW7-PM25B-1-35	83						
280-129830-3	EW7-PM25B-1-35	97						
280-129830-3 MS	EW7-PM25B-1-35	80 Q						
280-129830-3 MS	EW7-PM25B-1-35	72 Q						
280-129830-3 MSD	EW7-PM25B-1-35	86						
280-129830-3 MSD	EW7-PM25B-1-35	83						
LCS 280-475090/2-A	Lab Control Sample	86						
LCS 280-475090/3-A	Lab Control Sample	93						
MB 280-475090/1-A	Method Blank	92						

Surrogate Legend

12DNB = 1,2-Dinitrobenzene

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 280-475070/4
Matrix: Water
Analysis Batch: 475070

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Methane	0.0020	U	0.0050	0.0020	0.00063	mg/L		10/23/19 10:41	1

Lab Sample ID: LCS 280-475070/2
Matrix: Water
Analysis Batch: 475070

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methane	0.0730	0.0735		mg/L		101	73 - 125

Lab Sample ID: LCSD 280-475070/3
Matrix: Water
Analysis Batch: 475070

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
Methane	0.0730	0.0719		mg/L		98	73 - 125	2	20

Lab Sample ID: 280-129830-3 MS
Matrix: Water
Analysis Batch: 475070

Client Sample ID: EW7-PM25B-1-35
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Methane	3.9	J1	0.0730	4.79	4	mg/L		1285	73 - 125

Lab Sample ID: 280-129830-3 MSD
Matrix: Water
Analysis Batch: 475070

Client Sample ID: EW7-PM25B-1-35
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methane	3.9	J1	0.0730	4.48	4	mg/L		859	73 - 125	7	20

Lab Sample ID: 280-129830-3 DU
Matrix: Water
Analysis Batch: 475070

Client Sample ID: EW7-PM25B-1-35
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Methane	3.9	J1	4.39		mg/L		13	20

Method: 8330A - Nitroaromatics and Nitramines (HPLC)

Lab Sample ID: MB 280-475090/1-A
Matrix: Water
Analysis Batch: 475188

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 475090

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.40	U	1.0	0.40	0.20	ug/L		10/24/19 12:19	1
1,3-Dinitrobenzene	0.20	U	0.40	0.20	0.089	ug/L		10/24/19 12:19	1
2,4,6-Trinitrotoluene	0.40	U	0.40	0.40	0.16	ug/L		10/24/19 12:19	1
2,4-Dinitrotoluene	0.20	U	0.40	0.20	0.084	ug/L		10/24/19 12:19	1
2,6-Dinitrotoluene	0.20	U	0.20	0.20	0.065	ug/L		10/24/19 12:19	1
2-Amino-4,6-dinitrotoluene	0.12	U	0.20	0.12	0.051	ug/L		10/24/19 12:19	1

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

Lab Sample ID: MB 280-475090/1-A
Matrix: Water
Analysis Batch: 475188

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 475090

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
2-Nitrotoluene	0.20	U	0.40	0.20	0.086	ug/L		10/24/19 12:19	1
3-Nitrotoluene	0.40	U M	0.40	0.40	0.20	ug/L		10/24/19 12:19	1
4-Amino-2,6-dinitrotoluene	0.12	U	0.20	0.12	0.058	ug/L		10/24/19 12:19	1
4-Nitrotoluene	0.40	U	1.0	0.40	0.20	ug/L		10/24/19 12:19	1
HMX	0.20	U	0.40	0.20	0.088	ug/L		10/24/19 12:19	1
MNX	0.40	U M	2.0	0.40	0.15	ug/L		10/24/19 12:19	1
Nitrobenzene	0.20	U	0.40	0.20	0.091	ug/L		10/24/19 12:19	1
RDX	0.40	U	0.40	0.40	0.16	ug/L		10/24/19 12:19	1
Tetryl	0.20	U	0.24	0.20	0.079	ug/L		10/24/19 12:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene	*92*		*83 - 119*	*10/23/19 15:47*	*10/24/19 12:19*	*1*

Lab Sample ID: LCS 280-475090/2-A
Matrix: Water
Analysis Batch: 475188

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 475090

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trinitrobenzene	2.00	1.96		ug/L		98	73 - 125
1,3-Dinitrobenzene	2.00	1.92		ug/L		96	78 - 120
2,4,6-Trinitrotoluene	2.00	1.84		ug/L		92	71 - 123
2,4-Dinitrotoluene	2.00	1.87		ug/L		93	78 - 120
2,6-Dinitrotoluene	2.00	1.82		ug/L		91	77 - 127
2-Amino-4,6-dinitrotoluene	2.00	1.86		ug/L		93	79 - 120
2-Nitrotoluene	2.00	1.59	M	ug/L		80	70 - 127
3-Nitrotoluene	2.00	1.81	M	ug/L		90	73 - 125
4-Amino-2,6-dinitrotoluene	2.00	1.72		ug/L		86	76 - 125
4-Nitrotoluene	2.00	1.78	M	ug/L		89	71 - 127
HMX	2.00	1.89		ug/L		95	65 - 135
Nitrobenzene	2.00	1.78		ug/L		89	65 - 134
RDX	2.00	1.94		ug/L		97	68 - 130
Tetryl	2.00	2.06		ug/L		103	64 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dinitrobenzene	*86*		*83 - 119*

Lab Sample ID: LCS 280-475090/3-A
Matrix: Water
Analysis Batch: 475188

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 475090

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
MNX	2.33	2.56		ug/L		110	57 - 132

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dinitrobenzene	*93*		*83 - 119*

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

Lab Sample ID: 280-129830-3 MS
Matrix: Water
Analysis Batch: 475188

Client Sample ID: EW7-PM25B-1-35
Prep Type: Total/NA
Prep Batch: 475090

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trinitrobenzene	20	J1	1.91	22.1	Q 4	ug/L		100	73 - 125
1,3-Dinitrobenzene	0.19	U M	1.91	1.98	Q	ug/L		103	78 - 120
2,4,6-Trinitrotoluene	4.1		1.91	5.68	Q	ug/L		83	71 - 123
2,4-Dinitrotoluene	0.19	U	1.91	1.70	Q	ug/L		89	78 - 120
2,6-Dinitrotoluene	0.19	U	1.91	1.58	Q	ug/L		83	77 - 127
2-Amino-4,6-dinitrotoluene	1.5		1.91	3.03	Q	ug/L		81	79 - 120
2-Nitrotoluene	0.19	U J1	1.91	1.20	Q J1	ug/L		63	70 - 127
3-Nitrotoluene	0.38	U J1 M	1.91	1.34	Q J1	ug/L		70	73 - 125
4-Amino-2,6-dinitrotoluene	1.1		1.91	2.62	Q	ug/L		77	76 - 125
4-Nitrotoluene	0.38	U M	1.91	1.55	Q	ug/L		81	71 - 127
HMX	0.19	U	1.91	1.57	Q M	ug/L		82	65 - 135
Nitrobenzene	0.19	U	1.91	1.28	Q	ug/L		67	65 - 134
RDX	0.38	U	1.91	1.75	Q M	ug/L		91	68 - 130
Tetryl	0.19	U J1	1.91	23.5	Q J1 M	ug/L		1229	64 - 128

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dinitrobenzene	*80*	*Q*	*83 - 119*

Lab Sample ID: 280-129830-3 MS
Matrix: Water
Analysis Batch: 475188

Client Sample ID: EW7-PM25B-1-35
Prep Type: Total/NA
Prep Batch: 475090

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
MNX	0.38	U M	2.23	2.05	M	ug/L		92	57 - 132

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dinitrobenzene	*72*	*Q*	*83 - 119*

Lab Sample ID: 280-129830-3 MSD
Matrix: Water
Analysis Batch: 475188

Client Sample ID: EW7-PM25B-1-35
Prep Type: Total/NA
Prep Batch: 475090

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trinitrobenzene	20	J1	2.00	21.4	4	ug/L		62	73 - 125	3	30
1,3-Dinitrobenzene	0.19	U M	2.00	2.14		ug/L		107	78 - 120	8	30
2,4,6-Trinitrotoluene	4.1		2.00	5.78		ug/L		84	71 - 123	2	30
2,4-Dinitrotoluene	0.19	U	2.00	1.87		ug/L		94	78 - 120	9	30
2,6-Dinitrotoluene	0.19	U	2.00	1.75		ug/L		87	77 - 127	10	30
2-Amino-4,6-dinitrotoluene	1.5		2.00	3.18		ug/L		86	79 - 120	5	30
2-Nitrotoluene	0.19	U J1	2.00	1.47		ug/L		73	70 - 127	20	30
3-Nitrotoluene	0.38	U J1 M	2.00	1.61		ug/L		81	73 - 125	18	30
4-Amino-2,6-dinitrotoluene	1.1		2.00	2.75		ug/L		80	76 - 125	5	30
4-Nitrotoluene	0.38	U M	2.00	1.82		ug/L		91	71 - 127	16	30
HMX	0.19	U	2.00	1.75	M	ug/L		88	65 - 135	11	30
Nitrobenzene	0.19	U	2.00	1.54		ug/L		77	65 - 134	19	30
RDX	0.38	U	2.00	1.85	M	ug/L		93	68 - 130	6	30
Tetryl	0.19	U J1	2.00	22.7	J1 M	ug/L		1136	64 - 128	4	30

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

Lab Sample ID: 280-129830-3 MSD
Matrix: Water
Analysis Batch: 475188

Client Sample ID: EW7-PM25B-1-35
Prep Type: Total/NA
Prep Batch: 475090

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dinitrobenzene	*86*		*83 - 119*

Lab Sample ID: 280-129830-3 MSD
Matrix: Water
Analysis Batch: 475188

Client Sample ID: EW7-PM25B-1-35
Prep Type: Total/NA
Prep Batch: 475090

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
MNX	0.38	U M	2.30	2.05	M	ug/L		89	57 - 132	0	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dinitrobenzene	*83*		*83 - 119*

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 280-476097/20
Matrix: Water
Analysis Batch: 476097

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ammonia	0.050	U	0.10	0.050	0.022	mg/L		10/31/19 13:00	1

Lab Sample ID: LCS 280-476097/18
Matrix: Water
Analysis Batch: 476097

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ammonia			2.50	2.54		mg/L		102	90 - 110		

Lab Sample ID: LCSD 280-476097/19
Matrix: Water
Analysis Batch: 476097

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
Ammonia			2.50	2.56		mg/L		102	90 - 110	1	10

Lab Sample ID: 280-129830-3 MS
Matrix: Water
Analysis Batch: 476097

Client Sample ID: EW7-PM25B-1-35
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ammonia	1.5		1.00	2.58		mg/L		105	90 - 110		

Lab Sample ID: 280-129830-3 MSD
Matrix: Water
Analysis Batch: 476097

Client Sample ID: EW7-PM25B-1-35
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia	1.5		1.00	2.55		mg/L		102	90 - 110	1	10

Method: 351.2 - Nitrogen, Total Kjeldahl

Lab Sample ID: MB 280-475492/2-A
Matrix: Water
Analysis Batch: 475682

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 475492

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrogen, Total Kjeldahl	1.0	U	1.0	1.0	0.69	mg/L		10/28/19 19:45	1

Lab Sample ID: LCS 280-475492/1-A
Matrix: Water
Analysis Batch: 475682

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 475492

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrogen, Total Kjeldahl	6.00	6.25		mg/L		104	90 - 110

Lab Sample ID: 280-129830-3 MS
Matrix: Water
Analysis Batch: 475682

Client Sample ID: EW7-PM25B-1-35
Prep Type: Total/NA
Prep Batch: 475492

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrogen, Total Kjeldahl	1.5	J1	3.00	4.15	J1	mg/L		87	90 - 110

Lab Sample ID: 280-129830-3 MSD
Matrix: Water
Analysis Batch: 475682

Client Sample ID: EW7-PM25B-1-35
Prep Type: Total/NA
Prep Batch: 475492

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrogen, Total Kjeldahl	1.5	J1	3.00	4.24		mg/L		90	90 - 110	2	25

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 280-476322/22
Matrix: Water
Analysis Batch: 476322

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	0.050	U	0.10	0.050	0.019	mg/L		11/03/19 18:28	1

Lab Sample ID: LCS 280-476322/21
Matrix: Water
Analysis Batch: 476322

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	5.00	5.22		mg/L		104	90 - 110

Lab Sample ID: 280-129830-3 MS
Matrix: Water
Analysis Batch: 476322

Client Sample ID: EW7-PM25B-1-35
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	1.7	J1	4.00	5.29	J1	mg/L		89	90 - 110

Method: 353.2 - Nitrogen, Nitrate-Nitrite (Continued)

Lab Sample ID: 280-129830-3 MSD — **Client Sample ID: EW7-PM25B-1-35**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 476322

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate Nitrite as N	1.7	J1	4.00	5.62		mg/L		97	90 - 110	6	10

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 280-474982/2-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 474999 — **Prep Batch: 474982**

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfide	1.9	U	4.0	1.9	0.79	mg/L		10/22/19 18:54	1

Lab Sample ID: LCS 280-474982/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 474999 — **Prep Batch: 474982**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	21.8	20.0		mg/L		92	44 - 110

Lab Sample ID: 280-129830-3 MS — **Client Sample ID: EW7-PM25B-1-35**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 474999 — **Prep Batch: 474982**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	1.9	U	21.8	22.4		mg/L		103	44 - 110

Lab Sample ID: 280-129830-3 MSD — **Client Sample ID: EW7-PM25B-1-35**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 474999 — **Prep Batch: 474982**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfide	1.9	U	21.8	22.4		mg/L		103	44 - 110	0	20

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 280-477274/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 477274

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	3.0	U	5.0	3.0	1.0	mg/L		11/12/19 14:30	1

Lab Sample ID: LCS 280-477274/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 477274

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	100	97.4		mg/L		97	87 - 112

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 280-477274/5
Matrix: Water
Analysis Batch: 477274

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
Sulfate			100	97.1		mg/L		97	87 - 112	0	10

Lab Sample ID: MRL 280-477274/3
Matrix: Water
Analysis Batch: 477274

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

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate			5.00	4.32	J	mg/L		86	50 - 150		

Lab Sample ID: 280-129830-3 MS
Matrix: Water
Analysis Batch: 477274

Client Sample ID: EW7-PM25B-1-35
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate	110	J1	50.0	165	J1	mg/L		117	87 - 112		

Lab Sample ID: 280-129830-3 MSD
Matrix: Water
Analysis Batch: 477274

Client Sample ID: EW7-PM25B-1-35
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	110	J1	50.0	166	J1	mg/L		118	87 - 112	1	10

Lab Sample ID: 280-129830-3 DU
Matrix: Water
Analysis Batch: 477274

Client Sample ID: EW7-PM25B-1-35
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Sulfate	110	J1		106		mg/L				0.4	10

Method: 9060A - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 280-476389/2-A
Matrix: Water
Analysis Batch: 476539

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dissolved Organic Carbon - Quad	1.0	U	1.0	1.0	0.35	mg/L		11/04/19 16:54	1

Lab Sample ID: LCS 280-476389/1-A
Matrix: Water
Analysis Batch: 476539

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Dissolved Organic Carbon - Quad			25.0	23.7		mg/L		95	88 - 112		

Method: 9060A - Organic Carbon, Dissolved (DOC) (Continued)

Lab Sample ID: 280-129830-3 MS
Matrix: Water
Analysis Batch: 476539

Client Sample ID: EW7-PM25B-1-35
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Dissolved Organic Carbon - Quad	4.8		25.0	28.8		mg/L		96	88 - 112

Lab Sample ID: 280-129830-3 MSD
Matrix: Water
Analysis Batch: 476539

Client Sample ID: EW7-PM25B-1-35
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dissolved Organic Carbon - Quad	4.8		25.0	28.9		mg/L		96	88 - 112	1	15

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 280-475343/33
Matrix: Water
Analysis Batch: 475343

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Alkalinity as CaCO3	10	U	10	10	3.1	mg/L		10/24/19 20:15	1

Lab Sample ID: LCS 280-475343/31
Matrix: Water
Analysis Batch: 475343

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity as CaCO3	200	207		mg/L		103	89 - 109

Lab Sample ID: LCSD 280-475343/32
Matrix: Water
Analysis Batch: 475343

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 Alkalinity as CaCO3	200	208		mg/L		104	89 - 109	1	10

GC VOA

Analysis Batch: 475070

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-129830-1	EW7-PM23A-1-25	Total/NA	Water	RSK-175	
280-129830-2	EW7-PM25A-1-25	Total/NA	Water	RSK-175	
280-129830-3	EW7-PM25B-1-35	Total/NA	Water	RSK-175	
MB 280-475070/4	Method Blank	Total/NA	Water	RSK-175	
LCS 280-475070/2	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 280-475070/3	Lab Control Sample Dup	Total/NA	Water	RSK-175	
280-129830-3 MS	EW7-PM25B-1-35	Total/NA	Water	RSK-175	
280-129830-3 MSD	EW7-PM25B-1-35	Total/NA	Water	RSK-175	
280-129830-3 DU	EW7-PM25B-1-35	Total/NA	Water	RSK-175	

HPLC/IC

Prep Batch: 475090

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-129830-1	EW7-PM23A-1-25	Total/NA	Water	3535	
280-129830-1 - DL	EW7-PM23A-1-25	Total/NA	Water	3535	
280-129830-2	EW7-PM25A-1-25	Total/NA	Water	3535	
280-129830-3	EW7-PM25B-1-35	Total/NA	Water	3535	
MB 280-475090/1-A	Method Blank	Total/NA	Water	3535	
LCS 280-475090/2-A	Lab Control Sample	Total/NA	Water	3535	
LCS 280-475090/3-A	Lab Control Sample	Total/NA	Water	3535	
280-129830-3 MS	EW7-PM25B-1-35	Total/NA	Water	3535	
280-129830-3 MS	EW7-PM25B-1-35	Total/NA	Water	3535	
280-129830-3 MSD	EW7-PM25B-1-35	Total/NA	Water	3535	
280-129830-3 MSD	EW7-PM25B-1-35	Total/NA	Water	3535	

Analysis Batch: 475188

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-129830-1	EW7-PM23A-1-25	Total/NA	Water	8330A	475090
280-129830-2	EW7-PM25A-1-25	Total/NA	Water	8330A	475090
280-129830-3	EW7-PM25B-1-35	Total/NA	Water	8330A	475090
MB 280-475090/1-A	Method Blank	Total/NA	Water	8330A	475090
LCS 280-475090/2-A	Lab Control Sample	Total/NA	Water	8330A	475090
LCS 280-475090/3-A	Lab Control Sample	Total/NA	Water	8330A	475090
280-129830-3 MS	EW7-PM25B-1-35	Total/NA	Water	8330A	475090
280-129830-3 MS	EW7-PM25B-1-35	Total/NA	Water	8330A	475090
280-129830-3 MSD	EW7-PM25B-1-35	Total/NA	Water	8330A	475090
280-129830-3 MSD	EW7-PM25B-1-35	Total/NA	Water	8330A	475090

Analysis Batch: 475589

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-129830-1 - DL	EW7-PM23A-1-25	Total/NA	Water	8330A	475090

Analysis Batch: 475783

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-129830-1	EW7-PM23A-1-25	Total/NA	Water	8330A	475090
280-129830-1 - DL	EW7-PM23A-1-25	Total/NA	Water	8330A	475090

Analysis Batch: 476190

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-129830-2	EW7-PM25A-1-25	Total/NA	Water	8330A	475090

HPLC/IC (Continued)

Analysis Batch: 476190 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-129830-3	EW7-PM25B-1-35	Total/NA	Water	8330A	475090

General Chemistry

Prep Batch: 474982

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-129830-1	EW7-PM23A-1-25	Total/NA	Water	9030B	
280-129830-2	EW7-PM25A-1-25	Total/NA	Water	9030B	
280-129830-3	EW7-PM25B-1-35	Total/NA	Water	9030B	
MB 280-474982/2-A	Method Blank	Total/NA	Water	9030B	
LCS 280-474982/1-A	Lab Control Sample	Total/NA	Water	9030B	
280-129830-3 MS	EW7-PM25B-1-35	Total/NA	Water	9030B	
280-129830-3 MSD	EW7-PM25B-1-35	Total/NA	Water	9030B	

Analysis Batch: 474999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-129830-1	EW7-PM23A-1-25	Total/NA	Water	9034	474982
280-129830-2	EW7-PM25A-1-25	Total/NA	Water	9034	474982
280-129830-3	EW7-PM25B-1-35	Total/NA	Water	9034	474982
MB 280-474982/2-A	Method Blank	Total/NA	Water	9034	474982
LCS 280-474982/1-A	Lab Control Sample	Total/NA	Water	9034	474982
280-129830-3 MS	EW7-PM25B-1-35	Total/NA	Water	9034	474982
280-129830-3 MSD	EW7-PM25B-1-35	Total/NA	Water	9034	474982

Analysis Batch: 475343

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-129830-1	EW7-PM23A-1-25	Total/NA	Water	SM 2320B	
280-129830-2	EW7-PM25A-1-25	Total/NA	Water	SM 2320B	
280-129830-3	EW7-PM25B-1-35	Total/NA	Water	SM 2320B	
MB 280-475343/33	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-475343/31	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 280-475343/32	Lab Control Sample Dup	Total/NA	Water	SM 2320B	

Prep Batch: 475492

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-129830-1	EW7-PM23A-1-25	Total/NA	Water	351.2	
280-129830-2	EW7-PM25A-1-25	Total/NA	Water	351.2	
280-129830-3	EW7-PM25B-1-35	Total/NA	Water	351.2	
MB 280-475492/2-A	Method Blank	Total/NA	Water	351.2	
LCS 280-475492/1-A	Lab Control Sample	Total/NA	Water	351.2	
280-129830-3 MS	EW7-PM25B-1-35	Total/NA	Water	351.2	
280-129830-3 MSD	EW7-PM25B-1-35	Total/NA	Water	351.2	

Analysis Batch: 475682

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-129830-1	EW7-PM23A-1-25	Total/NA	Water	351.2	475492
280-129830-2	EW7-PM25A-1-25	Total/NA	Water	351.2	475492
280-129830-3	EW7-PM25B-1-35	Total/NA	Water	351.2	475492
MB 280-475492/2-A	Method Blank	Total/NA	Water	351.2	475492
LCS 280-475492/1-A	Lab Control Sample	Total/NA	Water	351.2	475492
280-129830-3 MS	EW7-PM25B-1-35	Total/NA	Water	351.2	475492

General Chemistry (Continued)

Analysis Batch: 475682 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-129830-3 MSD	EW7-PM25B-1-35	Total/NA	Water	351.2	475492

Analysis Batch: 476097

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-129830-1	EW7-PM23A-1-25	Total/NA	Water	350.1	
280-129830-2	EW7-PM25A-1-25	Total/NA	Water	350.1	
280-129830-3	EW7-PM25B-1-35	Total/NA	Water	350.1	
MB 280-476097/20	Method Blank	Total/NA	Water	350.1	
LCS 280-476097/18	Lab Control Sample	Total/NA	Water	350.1	
LCSD 280-476097/19	Lab Control Sample Dup	Total/NA	Water	350.1	
280-129830-3 MS	EW7-PM25B-1-35	Total/NA	Water	350.1	
280-129830-3 MSD	EW7-PM25B-1-35	Total/NA	Water	350.1	

Analysis Batch: 476322

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-129830-1	EW7-PM23A-1-25	Total/NA	Water	353.2	
280-129830-2	EW7-PM25A-1-25	Total/NA	Water	353.2	
280-129830-3	EW7-PM25B-1-35	Total/NA	Water	353.2	
MB 280-476322/22	Method Blank	Total/NA	Water	353.2	
LCS 280-476322/21	Lab Control Sample	Total/NA	Water	353.2	
280-129830-3 MS	EW7-PM25B-1-35	Total/NA	Water	353.2	
280-129830-3 MSD	EW7-PM25B-1-35	Total/NA	Water	353.2	

Filtration Batch: 476389

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-129830-1	EW7-PM23A-1-25	Dissolved	Water	FILTRATION	
280-129830-2	EW7-PM25A-1-25	Dissolved	Water	FILTRATION	
280-129830-3	EW7-PM25B-1-35	Dissolved	Water	FILTRATION	
MB 280-476389/2-A	Method Blank	Dissolved	Water	FILTRATION	
LCS 280-476389/1-A	Lab Control Sample	Dissolved	Water	FILTRATION	
280-129830-3 MS	EW7-PM25B-1-35	Dissolved	Water	FILTRATION	
280-129830-3 MSD	EW7-PM25B-1-35	Dissolved	Water	FILTRATION	

Analysis Batch: 476539

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-129830-1	EW7-PM23A-1-25	Dissolved	Water	9060A	476389
280-129830-2	EW7-PM25A-1-25	Dissolved	Water	9060A	476389
280-129830-3	EW7-PM25B-1-35	Dissolved	Water	9060A	476389
MB 280-476389/2-A	Method Blank	Dissolved	Water	9060A	476389
LCS 280-476389/1-A	Lab Control Sample	Dissolved	Water	9060A	476389
280-129830-3 MS	EW7-PM25B-1-35	Dissolved	Water	9060A	476389
280-129830-3 MSD	EW7-PM25B-1-35	Dissolved	Water	9060A	476389

Analysis Batch: 477274

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-129830-1	EW7-PM23A-1-25	Total/NA	Water	9056A	
280-129830-2	EW7-PM25A-1-25	Total/NA	Water	9056A	
280-129830-3	EW7-PM25B-1-35	Total/NA	Water	9056A	
MB 280-477274/6	Method Blank	Total/NA	Water	9056A	
LCS 280-477274/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-477274/5	Lab Control Sample Dup	Total/NA	Water	9056A	

General Chemistry (Continued)

Analysis Batch: 477274 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MRL 280-477274/3	Lab Control Sample	Total/NA	Water	9056A	
280-129830-3 MS	EW7-PM25B-1-35	Total/NA	Water	9056A	
280-129830-3 MSD	EW7-PM25B-1-35	Total/NA	Water	9056A	
280-129830-3 DU	EW7-PM25B-1-35	Total/NA	Water	9056A	

Client Sample ID: EW7-PM23A-1-25
Lab Sample ID: 280-129830-1

Date Collected: 10/16/19 10:45
Matrix: Water
Date Received: 10/17/19 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	RSK-175		1	18 mL	18 mL	475070	10/23/19 19:07	CAS	TAL DEN
Total/NA	Prep	3535			506.4 mL	5 mL	475090	10/23/19 15:47	KSA	TAL DEN
Total/NA	Analysis	8330A		1			475783	10/30/19 05:05	CBB	TAL DEN
Total/NA	Prep	3535	DL		506.4 mL	5 mL	475090	10/23/19 15:47	KSA	TAL DEN
Total/NA	Analysis	8330A	DL	25			475783	10/30/19 05:40	CBB	TAL DEN
Total/NA	Prep	3535			506.4 mL	5 mL	475090	10/23/19 15:47	KSA	TAL DEN
Total/NA	Analysis	8330A		1			475188	10/24/19 15:45	CBB	TAL DEN
Total/NA	Prep	3535	DL		506.4 mL	5 mL	475090	10/23/19 15:47	KSA	TAL DEN
Total/NA	Analysis	8330A	DL	25			475589	10/29/19 13:52	CBB	TAL DEN
Total/NA	Analysis	350.1		1	10 mL	10 mL	476097	10/31/19 13:46	BWH	TAL DEN
Total/NA	Prep	351.2			25 mL	25 mL	475492	10/26/19 15:22	JDR	TAL DEN
Total/NA	Analysis	351.2		1			475682	10/28/19 19:51	SVC	TAL DEN
Total/NA	Analysis	353.2		5	100 mL	100 mL	476322	11/03/19 19:12	SVC	TAL DEN
Total/NA	Prep	9030B			50 mL	50 mL	474982	10/22/19 16:37	JLA	TAL DEN
Total/NA	Analysis	9034		1			474999	10/22/19 18:54	JLA	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	477274	11/13/19 17:16	JAP	TAL DEN
Dissolved	Filtration	FILTRATION			20 mL	20 mL	476389	11/04/19 11:18	BWH	TAL DEN
Dissolved	Analysis	9060A		1	20 mL	20 mL	476539	11/04/19 18:24	SGB	TAL DEN
Total/NA	Analysis	SM 2320B		1			475343	10/24/19 21:33	SPG	TAL DEN

Client Sample ID: EW7-PM25A-1-25
Lab Sample ID: 280-129830-2

Date Collected: 10/16/19 12:50
Matrix: Water
Date Received: 10/17/19 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	RSK-175		1	18 mL	18 mL	475070	10/23/19 19:21	CAS	TAL DEN
Total/NA	Prep	3535			518.6 mL	5 mL	475090	10/23/19 15:47	KSA	TAL DEN
Total/NA	Analysis	8330A		1	1 mL	1.0 mL	476190	11/01/19 18:57	CBB	TAL DEN
Total/NA	Prep	3535			518.6 mL	5 mL	475090	10/23/19 15:47	KSA	TAL DEN
Total/NA	Analysis	8330A		1			475188	10/24/19 17:17	CBB	TAL DEN
Total/NA	Analysis	350.1		1	10 mL	10 mL	476097	10/31/19 13:44	BWH	TAL DEN
Total/NA	Prep	351.2			25 mL	25 mL	475492	10/26/19 15:22	JDR	TAL DEN
Total/NA	Analysis	351.2		1			475682	10/28/19 19:52	SVC	TAL DEN
Total/NA	Analysis	353.2		5	100 mL	100 mL	476322	11/03/19 19:14	SVC	TAL DEN
Total/NA	Prep	9030B			50 mL	50 mL	474982	10/22/19 16:37	JLA	TAL DEN
Total/NA	Analysis	9034		1			474999	10/22/19 18:54	JLA	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	477274	11/13/19 17:51	JAP	TAL DEN
Dissolved	Filtration	FILTRATION			20 mL	20 mL	476389	11/04/19 11:18	BWH	TAL DEN
Dissolved	Analysis	9060A		1	20 mL	20 mL	476539	11/04/19 18:39	SGB	TAL DEN
Total/NA	Analysis	SM 2320B		1			475343	10/24/19 21:43	SPG	TAL DEN

Client Sample ID: EW7-PM25B-1-35
Lab Sample ID: 280-129830-3

Date Collected: 10/16/19 14:55
Matrix: Water
Date Received: 10/17/19 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	RSK-175		1	18 mL	18 mL	475070	10/23/19 17:33	CAS	TAL DEN
Total/NA	Prep	3535			523.9 mL	5 mL	475090	10/23/19 15:47	KSA	TAL DEN
Total/NA	Analysis	8330A		1	1 mL	1.0 mL	476190	11/01/19 19:32	CBB	TAL DEN
Total/NA	Prep	3535			523.9 mL	5 mL	475090	10/23/19 15:47	KSA	TAL DEN
Total/NA	Analysis	8330A		1			475188	10/24/19 17:40	CBB	TAL DEN
Total/NA	Analysis	350.1		1	10 mL	10 mL	476097	10/31/19 14:37	BWH	TAL DEN
Total/NA	Prep	351.2			25 mL	25 mL	475492	10/26/19 15:22	JDR	TAL DEN
Total/NA	Analysis	351.2		1			475682	10/28/19 19:46	SVC	TAL DEN
Total/NA	Analysis	353.2		1	100 mL	100 mL	476322	11/03/19 19:06	SVC	TAL DEN
Total/NA	Prep	9030B			50 mL	50 mL	474982	10/22/19 16:37	JLA	TAL DEN
Total/NA	Analysis	9034		1			474999	10/22/19 18:54	JLA	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	477274	11/13/19 18:26	JAP	TAL DEN
Dissolved	Filtration	FILTRATION			20 mL	20 mL	476389	11/04/19 11:18	BWH	TAL DEN
Dissolved	Analysis	9060A		1	20 mL	20 mL	476539	11/04/19 17:23	SGB	TAL DEN
Total/NA	Analysis	SM 2320B		1			475343	10/24/19 22:08	SPG	TAL DEN

Laboratory References:

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

Accreditation/Certification Summary

Client: Brice Environmental Services, Corp
Job ID: 280-129830-1
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	Identification Number	Expiration Date
A2LA	DoD	2907.01	10-31-21

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

Method Summary

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

Job ID: 280-129830-1

Method	Method Description	Protocol	Laboratory
RSK-175	Dissolved Gases (GC)	RSK	TAL DEN
8330A	Nitroaromatics and Nitramines (HPLC)	EPA	TAL DEN
350.1	Nitrogen, Ammonia	MCAWW	TAL DEN
351.2	Nitrogen, Total Kjeldahl	MCAWW	TAL DEN
353.2	Nitrogen, Nitrate-Nitrite	MCAWW	TAL DEN
9034	Sulfide, Acid Soluble and Insoluble (Titrimetric)	SW846	TAL DEN
9056A	Anions, Ion Chromatography	SW846	TAL DEN
9060A	Organic Carbon, Dissolved (DOC)	SW846	TAL DEN
SM 2320B	Alkalinity	SM	TAL DEN
351.2	Nitrogen, Total Kjeldahl	MCAWW	TAL DEN
3535	Solid-Phase Extraction (SPE)	SW846	TAL DEN
9030B	Sulfide, Distillation (Acid Soluble and Insoluble)	SW846	TAL DEN
FILTRATION	Sample Filtration	None	TAL DEN

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

None = None

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

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

Sample Summary

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

Job ID: 280-129830-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-129830-1	EW7-PM23A-1-25	Water	10/16/19 10:45	10/17/19 09:15	
280-129830-2	EW7-PM25A-1-25	Water	10/16/19 12:50	10/17/19 09:15	
280-129830-3	EW7-PM25B-1-35	Water	10/16/19 14:55	10/17/19 09:15	

GC VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: VGC_J Analysis Batch Number: 454595

Lab Sample ID: IC 280-454595/6 Client Sample ID:

Date Analyzed: 04/15/19 11:30 Lab File ID: 04151906.D GC Column: Rt-Alumina KC ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethylene	1.87	Incomplete Integration	meierg	04/15/19 13:21

Lab Sample ID: IC 280-454595/7 Client Sample ID:

Date Analyzed: 04/15/19 11:44 Lab File ID: 04151907.D GC Column: Rt-Alumina KC ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethylene	1.87	Split Peak	meierg	04/15/19 13:20

GC VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: VGC_J Analysis Batch Number: 475070

Lab Sample ID: CCV 280-475070/32 Client Sample ID:

Date Analyzed: 10/23/19 20:29 Lab File ID: 032F2801.D GC Column: Rt-Alumina KC ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethylene	1.84	Split Peak	sciannac	10/24/19 09:01

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Analysis Batch Number: 475429

Lab Sample ID: IC 280-475429/7 Client Sample ID:

Date Analyzed: 10/25/19 19:30 Lab File ID: 10250007.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitroglycerin	15.95	Baseline Smoothing	beckerc	10/26/19 10:04
2-Nitrotoluene	16.70	Baseline Smoothing	beckerc	10/26/19 10:05
4-Nitrotoluene	16.90	Baseline Smoothing	beckerc	10/26/19 10:05
4-Amino-2,6-dinitrotoluene	17.28	Baseline Smoothing	beckerc	10/26/19 10:05
3-Nitrotoluene	18.04	Baseline Smoothing	beckerc	10/26/19 10:05
1,3,5-Trinitrobenzene	19.06	Baseline Smoothing	beckerc	10/26/19 10:05

Lab Sample ID: IC 280-475429/9 Client Sample ID:

Date Analyzed: 10/25/19 20:40 Lab File ID: 10250009.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Picric acid	5.61	Baseline Smoothing	beckerc	10/26/19 10:08
HMX	7.09	Baseline Smoothing	beckerc	10/30/19 15:38

Lab Sample ID: IC 280-475429/10 Client Sample ID:

Date Analyzed: 10/25/19 21:15 Lab File ID: 10250010.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Picric acid	5.68	Peak assignment corrected	beckerc	10/26/19 10:09
HMX	7.08	Baseline Smoothing	beckerc	10/30/19 15:38

Lab Sample ID: IC 280-475429/11 Client Sample ID:

Date Analyzed: 10/25/19 21:50 Lab File ID: 10250011.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Picric acid	5.74	Assign Peak	beckerc	10/26/19 10:01
HMX	7.08	Baseline Smoothing	beckerc	10/30/19 15:36

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Analysis Batch Number: 475429

Lab Sample ID: IC 280-475429/12 Client Sample ID:

Date Analyzed: 10/25/19 22:25 Lab File ID: 10250012.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	7.10	Baseline Smoothing	beckerc	10/30/19 15:35
Nitroglycerin	16.02	Baseline Smoothing	beckerc	10/26/19 10:12
2-Nitrotoluene	16.75	Baseline Smoothing	beckerc	10/26/19 10:13
4-Nitrotoluene	17.05	Baseline Smoothing	beckerc	10/26/19 10:13
4-Amino-2,6-dinitrotoluene	17.37	Baseline Smoothing	beckerc	10/26/19 10:13
3-Nitrotoluene	17.96	Baseline Smoothing	beckerc	10/26/19 10:13
2-Amino-4,6-dinitrotoluene	18.26	Baseline Smoothing	beckerc	10/26/19 10:13
1,3,5-Trinitrobenzene	19.12	Baseline Smoothing	beckerc	10/26/19 10:13
2,6-Dinitrotoluene	20.05	Baseline Smoothing	beckerc	10/26/19 10:13

Lab Sample ID: IC 280-475429/13 Client Sample ID:

Date Analyzed: 10/25/19 23:00 Lab File ID: 10250013.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	7.07	Baseline Smoothing	beckerc	10/30/19 15:35
Tetryl	23.80	Baseline Smoothing	beckerc	10/26/19 10:14
2,4,6-Trinitrotoluene	24.87	Baseline Smoothing	beckerc	10/26/19 10:14

Lab Sample ID: IC 280-475429/14 Client Sample ID:

Date Analyzed: 10/25/19 23:35 Lab File ID: 10250014.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	7.07	Baseline Smoothing	beckerc	10/30/19 15:35

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Analysis Batch Number: 475783

Lab Sample ID: CCV 280-475783/23 Client Sample ID:

Date Analyzed: 10/30/19 02:10 Lab File ID: 10290023.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Picric acid	5.73	Baseline Smoothing	beckerc	10/30/19 14:52

Lab Sample ID: 280-129830-1 Client Sample ID: EW7-PM23A-1-25

Date Analyzed: 10/30/19 05:05 Lab File ID: 10290028.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	7.07	Baseline Smoothing	beckerc	10/30/19 15:02
1,3-Dinitrobenzene		Invalid Compound ID	beckerc	10/30/19 15:02
2,6-Dinitrotoluene		Invalid Compound ID	beckerc	10/30/19 15:03
2-Nitrotoluene		Invalid Compound ID	beckerc	10/30/19 15:03
3-Nitrotoluene		Invalid Compound ID	beckerc	10/30/19 15:03
Tetryl		Invalid Compound ID	beckerc	10/30/19 15:03
Nitrobenzene	12.31	Baseline Smoothing	beckerc	10/30/19 15:02

Lab Sample ID: 280-129830-1 DL Client Sample ID: EW7-PM23A-1-25 DL

Date Analyzed: 10/30/19 05:40 Lab File ID: 10290029.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3-Dinitrobenzene		Invalid Compound ID	beckerc	10/30/19 15:04
2,4-Dinitrotoluene		Invalid Compound ID	beckerc	10/30/19 15:05
2-Amino-4,6-dinitrotoluene		Invalid Compound ID	beckerc	10/30/19 15:05
3-Nitrotoluene		Invalid Compound ID	beckerc	10/30/19 15:05
4-Amino-2,6-dinitrotoluene		Invalid Compound ID	beckerc	10/30/19 15:05
HMX		Invalid Compound ID	beckerc	10/30/19 15:04
RDX		Invalid Compound ID	beckerc	10/30/19 15:04
Tetryl		Invalid Compound ID	beckerc	10/30/19 15:05
2,4,6-Trinitrotoluene	24.86	Baseline Smoothing	beckerc	10/30/19 15:05

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Analysis Batch Number: 475783

Lab Sample ID: CCV 280-475783/32 Client Sample ID:

Date Analyzed: 10/30/19 07:25 Lab File ID: 10290032.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Picric acid	5.72	Baseline Smoothing	beckerc	10/30/19 16:09

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Analysis Batch Number: 476190

Lab Sample ID: 280-129830-2 Client Sample ID: EW7-PM25A-1-25

Date Analyzed: 11/01/19 18:57 Lab File ID: 11010011.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	7.00	Baseline Smoothing	beckerc	11/04/19 17:01
1,3-Dinitrobenzene		Invalid Compound ID	beckerc	11/04/19 17:01
2,4-Dinitrotoluene		Invalid Compound ID	beckerc	11/04/19 17:02
4-Nitrotoluene		Invalid Compound ID	beckerc	11/04/19 17:01
Tetryl		Invalid Compound ID	beckerc	11/04/19 17:02

Lab Sample ID: 280-129830-3 Client Sample ID: EW7-PM25B-1-35

Date Analyzed: 11/01/19 19:32 Lab File ID: 11010012.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	7.01	Baseline Smoothing	beckerc	11/04/19 17:02
1,3-Dinitrobenzene		Invalid Compound ID	beckerc	11/04/19 17:03
4-Nitrotoluene		Invalid Compound ID	beckerc	11/04/19 17:03
Tetryl		Invalid Compound ID	beckerc	11/04/19 17:03

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Analysis Batch Number: 476190

Lab Sample ID: CCV 280-476190/18 Client Sample ID:

Date Analyzed: 11/01/19 23:01 Lab File ID: 11010018.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Picric acid	5.55	Baseline Smoothing	beckerc	11/04/19 17:59
HMX	7.01	Baseline Smoothing	beckerc	11/04/19 17:59
RDX	9.19	Baseline Smoothing	beckerc	11/04/19 17:59
1,3-Dinitrobenzene	15.63	Baseline Smoothing	beckerc	11/04/19 17:56
Nitroglycerin	15.87	Baseline Smoothing	beckerc	11/04/19 17:59
2-Nitrotoluene	16.65	Baseline Smoothing	beckerc	11/04/19 17:56
4-Nitrotoluene	16.90	Baseline Smoothing	beckerc	11/04/19 17:56
4-Amino-2,6-dinitrotoluene	17.21	Baseline Smoothing	beckerc	11/04/19 17:56
3-Nitrotoluene	17.86	Baseline Smoothing	beckerc	11/04/19 18:00
2-Amino-4,6-dinitrotoluene	18.07	Baseline Smoothing	beckerc	11/04/19 17:59
1,3,5-Trinitrobenzene	18.98	Baseline Smoothing	beckerc	11/04/19 17:56
2,6-Dinitrotoluene	19.91	Baseline Smoothing	beckerc	11/04/19 17:56
2,4-Dinitrotoluene	20.39	Baseline Smoothing	beckerc	11/04/19 17:56

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: CHHPLC_X3 Analysis Batch Number: 463276

Lab Sample ID: IC 280-463276/12 Client Sample ID:

Date Analyzed: 07/01/19 16:36 Lab File ID: 07010012.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.65	Baseline Smoothing	fiedlerh	07/01/19 18:30

Lab Sample ID: IC 280-463276/13 Client Sample ID:

Date Analyzed: 07/01/19 17:00 Lab File ID: 07010013.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.65	Baseline Smoothing	fiedlerh	07/01/19 18:30
2-Amino-4,6-dinitrotoluene	11.72	Unspecified		
2,6-Dinitrotoluene	11.85	Unspecified		

Lab Sample ID: IC 280-463276/14 Client Sample ID:

Date Analyzed: 07/01/19 17:23 Lab File ID: 07010014.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Picric acid	8.21	Baseline Smoothing	fiedlerh	07/01/19 18:33
2-Amino-4,6-dinitrotoluene	11.72	Unspecified		
2,6-Dinitrotoluene	11.84	Unspecified		

Lab Sample ID: ICV 280-463276/15 Client Sample ID:

Date Analyzed: 07/01/19 17:46 Lab File ID: 07010015.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.64	Baseline Smoothing	fiedlerh	07/01/19 18:32

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: CHHPLC_X3 Analysis Batch Number: 463276

Lab Sample ID: IC 280-463276/26 Client Sample ID:

Date Analyzed: 07/01/19 22:00 Lab File ID: 07010026.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
TNX	6.56	Baseline Smoothing	fiedlerh	07/02/19 09:04
DNX	6.89	Baseline Smoothing	fiedlerh	07/02/19 09:04

Lab Sample ID: IC 280-463276/27 Client Sample ID:

Date Analyzed: 07/01/19 22:23 Lab File ID: 07010027.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
TNX	6.55	Baseline Smoothing	fiedlerh	07/02/19 09:03
DNX	6.89	Baseline Smoothing	fiedlerh	07/02/19 09:03

Lab Sample ID: IC 280-463276/28 Client Sample ID:

Date Analyzed: 07/01/19 22:46 Lab File ID: 07010028.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
TNX	6.55	Baseline Smoothing	fiedlerh	07/02/19 09:03
DNX	6.88	Baseline Smoothing	fiedlerh	07/02/19 09:03

Lab Sample ID: IC 280-463276/29 Client Sample ID:

Date Analyzed: 07/01/19 23:09 Lab File ID: 07010029.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
TNX	6.55	Baseline Smoothing	fiedlerh	07/02/19 09:03

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: CHHPLC_X3 Analysis Batch Number: 463276

Lab Sample ID: IC 280-463276/30 Client Sample ID:

Date Analyzed: 07/01/19 23:32 Lab File ID: 07010030.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
TNX	6.55	Baseline Smoothing	fiedlerh	07/02/19 09:04

Lab Sample ID: IC 280-463276/31 Client Sample ID:

Date Analyzed: 07/01/19 23:55 Lab File ID: 07010031.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
TNX	6.55	Baseline Smoothing	fiedlerh	07/02/19 09:04

Lab Sample ID: ICV 280-463276/33 Client Sample ID:

Date Analyzed: 07/02/19 00:41 Lab File ID: 07010033.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
TNX	6.55	Baseline Smoothing	fiedlerh	07/02/19 09:05
DNX	6.88	Baseline Smoothing	fiedlerh	07/02/19 09:05

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: CHHPLC_X3 Analysis Batch Number: 475188

Lab Sample ID: MB 280-475090/1-A Client Sample ID:

Date Analyzed: 10/24/19 12:19 Lab File ID: 10240010.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
3-Nitrotoluene		Invalid Compound ID	beckerc	10/25/19 08:21
MNX		Invalid Compound ID	beckerc	10/25/19 08:21

Lab Sample ID: LCS 280-475090/2-A Client Sample ID:

Date Analyzed: 10/24/19 12:42 Lab File ID: 10240011.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Nitrotoluene	12.84	Baseline Smoothing	beckerc	10/25/19 08:22
4-Nitrotoluene	13.28	Baseline Smoothing	beckerc	10/25/19 08:22
3-Nitrotoluene	13.88	Baseline Smoothing	beckerc	10/25/19 08:22

Lab Sample ID: 280-129830-1 Client Sample ID: EW7-PM23A-1-25

Date Analyzed: 10/24/19 15:45 Lab File ID: 10240019.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.67	Baseline Smoothing	beckerc	10/25/19 11:22
1,3-Dinitrobenzene		Invalid Compound ID	beckerc	10/25/19 11:23
4-Nitrotoluene		Invalid Compound ID	beckerc	10/25/19 11:23
Nitrobenzene		Invalid Compound ID	beckerc	10/25/19 11:23
Tetryl		Invalid Compound ID	beckerc	10/25/19 11:23

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: CHHPLC_X3 Analysis Batch Number: 475188

Lab Sample ID: 280-129830-2 Client Sample ID: EW7-PM25A-1-25

Date Analyzed: 10/24/19 17:17 Lab File ID: 10240023.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.68	Baseline Smoothing	beckerc	10/25/19 11:59
RDX	7.76	Baseline Smoothing	beckerc	10/25/19 11:59
1,2-Dinitrobenzene	8.72	Baseline Smoothing	beckerc	10/25/19 11:59
1,3,5-Trinitrobenzene	8.89	Baseline Smoothing	beckerc	10/25/19 11:59
1,3-Dinitrobenzene		Invalid Compound ID	beckerc	10/25/19 11:59
4-Nitrotoluene		Invalid Compound ID	beckerc	10/25/19 11:59
MNX		Invalid Compound ID	beckerc	10/25/19 11:59
Tetryl		Invalid Compound ID	beckerc	10/25/19 11:59

Lab Sample ID: 280-129830-3 Client Sample ID: EW7-PM25B-1-35

Date Analyzed: 10/24/19 17:40 Lab File ID: 10240024.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3-Dinitrobenzene		Invalid Compound ID	beckerc	10/25/19 12:33
3-Nitrotoluene		Invalid Compound ID	beckerc	10/25/19 12:33
4-Nitrotoluene		Invalid Compound ID	beckerc	10/25/19 12:33
MNX		Invalid Compound ID	beckerc	10/25/19 12:33

Lab Sample ID: 280-129830-3 MS Client Sample ID: EW7-PM25B-1-35 MS

Date Analyzed: 10/24/19 18:03 Lab File ID: 10240025.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.67	Baseline Smoothing	beckerc	10/25/19 12:33
RDX	7.76	Baseline Smoothing	beckerc	10/25/19 12:34
Tetryl	10.15	Baseline Smoothing	beckerc	10/25/19 12:35

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: CHHPLC_X3 Analysis Batch Number: 475188

Lab Sample ID: 280-129830-3 MSD Client Sample ID: EW7-PM25B-1-35 MSD

Date Analyzed: 10/24/19 18:26 Lab File ID: 10240026.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.67	Baseline Smoothing	beckerc	10/25/19 12:35
RDX	7.75	Baseline Smoothing	beckerc	10/25/19 12:35
Tetryl	10.14	Baseline Smoothing	beckerc	10/25/19 12:36

Lab Sample ID: 280-129830-3 MS Client Sample ID: EW7-PM25B-1-35 MS

Date Analyzed: 10/24/19 18:48 Lab File ID: 10240027.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
MNX	7.35	Baseline Smoothing	beckerc	10/25/19 12:37
1,3-Dinitrobenzene		Invalid Compound ID	beckerc	10/25/19 12:37
4-Nitrotoluene		Invalid Compound ID	beckerc	10/25/19 12:37

Lab Sample ID: 280-129830-3 MSD Client Sample ID: EW7-PM25B-1-35 MSD

Date Analyzed: 10/24/19 19:11 Lab File ID: 10240028.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
MNX	7.35	Baseline Smoothing	beckerc	10/25/19 12:50
1,3-Dinitrobenzene		Invalid Compound ID	beckerc	10/25/19 12:50
3-Nitrotoluene		Invalid Compound ID	beckerc	10/25/19 12:51
4-Nitrotoluene		Invalid Compound ID	beckerc	10/25/19 12:51

Lab Sample ID: CCV 280-475188/35 Client Sample ID:

Date Analyzed: 10/24/19 21:52 Lab File ID: 10240035.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
TNX	6.59	Baseline Smoothing	beckerc	10/25/19 12:59

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: CHHPLC_X3 Analysis Batch Number: 475589

Lab Sample ID: CCV 280-475589/66 Client Sample ID:

Date Analyzed: 10/29/19 11:34 Lab File ID: 10280066.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
TNX	6.59	Baseline Smoothing	beckerc	10/29/19 13:29
DNX	6.91	Baseline Smoothing	beckerc	10/29/19 13:30

Lab Sample ID: 280-129830-1 DL Client Sample ID: EW7-PM23A-1-25 DL

Date Analyzed: 10/29/19 13:52 Lab File ID: 10280072.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
MNX		Invalid Compound ID	beckerc	10/29/19 16:02
Tetryl		Invalid Compound ID	beckerc	10/29/19 16:02

Lab Sample ID: CCV 280-475589/76 Client Sample ID:

Date Analyzed: 10/29/19 15:23 Lab File ID: 10280076.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
TNX	6.59	Baseline Smoothing	beckerc	10/29/19 16:04
DNX	6.91	Baseline Smoothing	beckerc	10/29/19 16:04

GENERAL CHEMISTRY MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Batch Number: 477274

Lab Sample ID: CCV 280-477274/1 Client Sample ID:

Date Analyzed: 11/12/19 13:03 Lab File ID: Info 2_DENPC179_Anions_20 GC Column: Metrosepp A S ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	3.23	Peak Tail	pedrickj	11/12/19 13:56

Lab Sample ID: CCV 280-477274/65 Client Sample ID:

Date Analyzed: 11/13/19 23:05 Lab File ID: Info 2_DENPC179_Anions_20 GC Column: Metrosepp A S ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Fluoride	3.22	Incomplete Integration	pedrickj	11/14/19 08:16

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
350.1 cal_00391	11/06/19	10/30/19	Di Water, Lot na	100 mL	NH3 CAL STD_00031	10 mL	Ammonia	100 mg/L
.NH3 CAL STD_00031	08/31/20	Ricca, Lot 2902E25			(Purchased Reagent)		Ammonia	1000 mg/L
350.1 ICV_00375	10/31/19	10/30/19	na, Lot na	100 mL	NH3 ICV STD_00026	10 mL	Ammonia	99.6 mg/L
.NH3 ICV STD_00026	04/01/20	Inorganic Ventures, Lot M2-NH662533			(Purchased Reagent)		Ammonia	996 mg/L
8330 DMT_00002	12/31/19	03/13/19	Acetonitrile, Lot 184936	5 mL	MNX,TNX,DNX_00027	1 mL	DNX	20.02 ug/mL
							MNX	23.34 ug/mL
							TNX	20.02 ug/mL
.MNX,TNX,DNX_00027	12/31/19	ULTRA Scientific, Lot CS-5628			(Purchased Reagent)		DNX	100.1 ug/mL
							MNX	116.7 ug/mL
							TNX	100.1 ug/mL
8330 LCS_00089	11/08/19	05/08/19	Acetonitrile, Lot ACN_00030	100 mL	8330LCSMix1_00109	1 mL	1,3,5-Trinitrobenzene	10 ug/mL
							1,3-Dinitrobenzene	10 ug/mL
							2,4,6-Trinitrotoluene	10 ug/mL
							2,4-Dinitrotoluene	10 ug/mL
							HMX	10 ug/mL
							Nitrobenzene	10 ug/mL
							RDX	10 ug/mL
					8330LCSmix2_00008	1 mL	2,6-Dinitrotoluene	10 ug/mL
							2-Amino-4,6-dinitrotoluene	10 ug/mL
							2-Nitrotoluene	10 ug/mL
							3-Nitrotoluene	10 ug/mL
							4-Amino-2,6-dinitrotoluene	10 ug/mL
							4-Nitrotoluene	10 ug/mL
							Tetryl	10 ug/mL
.8330LCSMix1_00109	10/31/22	Restek, Lot A0131772			(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
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
.8330LCSmix2_00008	08/31/23	Restek, Lot A0141002			(Purchased Reagent)		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
							Tetryl	1000 ug/mL
8330 LCS_00094	04/03/20	10/03/19	Acetonitrile, Lot ACN_00039	100 mL	8330 LCSMix2_00105	1 mL	2,6-Dinitrotoluene	10 ug/mL
							2-Amino-4,6-dinitrotoluene	10 ug/mL
							2-Nitrotoluene	10 ug/mL
							3-Nitrotoluene	10 ug/mL
							4-Amino-2,6-dinitrotoluene	10 ug/mL

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Nitrotoluene	10 ug/mL
							Tetryl	10 ug/mL
					8330_NG_Stk_00077	1 mL	Nitroglycerin	100 ug/mL
					8330_NG_Stk_00078	1 mL	Nitroglycerin	100 ug/mL
					8330_PETN_Stk_00083	1 mL	PETN	100 ug/mL
					8330_PETN_Stk_00084	1 mL	PETN	100 ug/mL
					EXP-SS-MIX1_00008	1 mL	1,3,5-Trinitrobenzene	10 ug/mL
							1,3-Dinitrobenzene	10 ug/mL
							2,4,6-Trinitrotoluene	10 ug/mL
							2,4-Dinitrotoluene	10 ug/mL
							HMX	10 ug/mL
							Nitrobenzene	10 ug/mL
							RDX	10 ug/mL
					PicricARestek_00085	1 mL	2,4,6-Trinitrophenol	10 ug/mL
.8330 LCSMix2_00105	08/07/23	Restek, Lot A0141002			(Purchased Reagent)		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
							Tetryl	1000 ug/mL
.8330_NG_Stk_00077	08/31/22	Restek, Lot A0151571			(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_NG_Stk_00078	08/31/22	Restek, Lot A0151571			(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_PETN_Stk_00083	09/30/22	Restek, Lot A0152514			(Purchased Reagent)		PETN	5000 ug/mL
.8330_PETN_Stk_00084	09/30/22	Restek, Lot A0152514			(Purchased Reagent)		PETN	5000 ug/mL
.EXP-SS-MIX1_00008	07/31/24	Restek, Lot A0151407			(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
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
.PicricARestek_00085	11/30/23	Restek, Lot A0148431			(Purchased Reagent)		2,4,6-Trinitrophenol	1000 ug/mL
8330_OP_DMT_00002	12/31/19	03/12/19	Acetonitrile, Lot 00222	10 mL	MNX,TNX,DNX_00026	1 mL	MNX	11.67 ug/mL
.MNX,TNX,DNX_00026	12/31/19	ULTRA Scientific, Lot CS-5628			(Purchased Reagent)		MNX	116.7 ug/mL
8330_OP_DMT_00003	12/31/19	07/16/19	Acetonitrile, Lot 00226	10 mL	MNX,TNX,DNX_00036	1 mL	DNX	10.01 ug/mL
							MNX	11.67 ug/mL
							TNX	10.01 ug/mL
.MNX,TNX,DNX_00036	12/31/19	ULTRA Scientific, Lot CS-5628			(Purchased Reagent)		DNX	100.1 ug/mL
							MNX	116.7 ug/mL
							TNX	100.1 ug/mL
8330IntermStk_00058	07/19/19	05/07/19	Acetonitrile, Lot 200488	5 mL	8330_NG_Stk_00052	200 uL	Nitroglycerin	200 ug/mL
					8330_PETN_Stk_00056	200 uL	PETN	200 ug/mL
					8330ICALStock_00029	1 mL	1,3,5-Trinitrobenzene	20 ug/mL
							1,3-Dinitrobenzene	20.02 ug/mL
							2,4,6-Trinitrotoluene	20.08 ug/mL

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4-Dinitrotoluene	20.04 ug/mL
							2,6-Dinitrotoluene	20.06 ug/mL
							2-Amino-4,6-dinitrotoluene	20.06 ug/mL
							2-Nitrotoluene	20.06 ug/mL
							3-Nitrotoluene	20.08 ug/mL
							4-Amino-2,6-dinitrotoluene	20.06 ug/mL
							4-Nitrotoluene	20.08 ug/mL
							HMX	20 ug/mL
							Nitrobenzene	20.04 ug/mL
							RDX	20 ug/mL
							Tetryl	20 ug/mL
							1,2-Dinitrobenzene	20 ug/mL
					8330PAStkPS_00058	1 mL	2,4,6-Trinitrophenol	20 ug/mL
.8330_NG_Stk_00052	01/01/20	Restek, Lot A0124122			(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_PETN_Stk_00056	01/01/20	Restek, Lot A0124124			(Purchased Reagent)		PETN	5000 ug/mL
.8330ICALStock_00029	11/30/19	11/30/18	Acetonitrile, Lot 200488	10 mL	8330 Stock_TS_00012	1 mL	1,3,5-Trinitrobenzene	100 ug/mL
							1,3-Dinitrobenzene	100.1 ug/mL
							2,4,6-Trinitrotoluene	100.4 ug/mL
							2,4-Dinitrotoluene	100.2 ug/mL
							2,6-Dinitrotoluene	100.3 ug/mL
							2-Amino-4,6-dinitrotoluene	100.3 ug/mL
							2-Nitrotoluene	100.3 ug/mL
							3-Nitrotoluene	100.4 ug/mL
							4-Amino-2,6-dinitrotoluene	100.3 ug/mL
							4-Nitrotoluene	100.4 ug/mL
							HMX	100 ug/mL
							Nitrobenzene	100.2 ug/mL
							RDX	100 ug/mL
							Tetryl	100 ug/mL
					8330SurrStock_00163	1 mL	1,2-Dinitrobenzene	100 ug/mL
..8330 Stock_TS_00012	04/30/20	Ultra Scientific, Lot CR-1002			(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1001 ug/mL
							2,4,6-Trinitrotoluene	1004 ug/mL
							2,4-Dinitrotoluene	1002 ug/mL
							2,6-Dinitrotoluene	1003 ug/mL
							2-Amino-4,6-dinitrotoluene	1003 ug/mL
							2-Nitrotoluene	1003 ug/mL
							3-Nitrotoluene	1004 ug/mL
							4-Amino-2,6-dinitrotoluene	1003 ug/mL
							4-Nitrotoluene	1004 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1002 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..8330SurrStock_00163	08/15/24	AccuStandard, Lot 216071012			(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330PAStkPS_00058	07/19/19	AccuStandard, Lot 216061376-01			(Purchased Reagent)		2,4,6-Trinitrophenol	100 ug/mL

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
8330IntermStk_00059	11/30/19	07/22/19	Acetonitrile, Lot 200488	10 mL	8330_NG_Stk_00052	200 uL	Nitroglycerin	100 ug/mL
					8330_PETN_Stk_00056	200 uL	PETN	100 ug/mL
					8330ICALStock_00029	1 mL	1,3,5-Trinitrobenzene	10 ug/mL
							1,3-Dinitrobenzene	10.01 ug/mL
							2,4,6-Trinitrotoluene	10.04 ug/mL
							2,4-Dinitrotoluene	10.02 ug/mL
							2,6-Dinitrotoluene	10.03 ug/mL
							2-Amino-4,6-dinitrotoluene	10.03 ug/mL
							2-Nitrotoluene	10.03 ug/mL
							3-Nitrotoluene	10.04 ug/mL
							4-Amino-2,6-dinitrotoluene	10.03 ug/mL
							4-Nitrotoluene	10.04 ug/mL
							HMX	10 ug/mL
							Nitrobenzene	10.02 ug/mL
							RDX	10 ug/mL
							Tetryl	10 ug/mL
							1,2-Dinitrobenzene	10 ug/mL
					8330PAStkPS_00059	1 mL	2,4,6-Trinitrophenol	10 ug/mL
.8330_NG_Stk_00052	01/01/20		Restek, Lot A0124122		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_PETN_Stk_00056	01/01/20		Restek, Lot A0124124		(Purchased Reagent)		PETN	5000 ug/mL
.8330ICALStock_00029	11/30/19	11/30/18	Acetonitrile, Lot 200488	10 mL	8330 Stock_TS_00012	1 mL	1,3,5-Trinitrobenzene	100 ug/mL
							1,3-Dinitrobenzene	100.1 ug/mL
							2,4,6-Trinitrotoluene	100.4 ug/mL
							2,4-Dinitrotoluene	100.2 ug/mL
							2,6-Dinitrotoluene	100.3 ug/mL
							2-Amino-4,6-dinitrotoluene	100.3 ug/mL
							2-Nitrotoluene	100.3 ug/mL
							3-Nitrotoluene	100.4 ug/mL
							4-Amino-2,6-dinitrotoluene	100.3 ug/mL
							4-Nitrotoluene	100.4 ug/mL
							HMX	100 ug/mL
							Nitrobenzene	100.2 ug/mL
							RDX	100 ug/mL
							Tetryl	100 ug/mL
					8330SurrStock_00163	1 mL	1,2-Dinitrobenzene	100 ug/mL
..8330 Stock_TS_00012	04/30/20		Ultra Scientific, Lot CR-1002		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1001 ug/mL
							2,4,6-Trinitrotoluene	1004 ug/mL
							2,4-Dinitrotoluene	1002 ug/mL
							2,6-Dinitrotoluene	1003 ug/mL
							2-Amino-4,6-dinitrotoluene	1003 ug/mL
							2-Nitrotoluene	1003 ug/mL
							3-Nitrotoluene	1004 ug/mL
							4-Amino-2,6-dinitrotoluene	1003 ug/mL
							4-Nitrotoluene	1004 ug/mL
							HMX	1000 ug/mL

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Nitrobenzene	1002 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..8330SurrStock_00163	08/15/24	AccuStandard, Lot 216071012			(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330PAStkPS_00059	04/12/20	AccuStandard, Lot 218031154			(Purchased Reagent)		2,4,6-Trinitrophenol	100 ug/mL
8330Surrogate_00103	12/04/19	03/17/19	Acetonitrile, Lot ACN_00219	500 mL	8330SurrStkSS_00134	1.25 mL	1,2-Dinitrobenzene	10 ug/mL
					8330SurrStkSS_00135	1.25 mL	1,2-Dinitrobenzene	10 ug/mL
					8330SurrStkSS_00152	1.25 mL	1,2-Dinitrobenzene	10 ug/mL
					8330SurrStkSS_00153	1.25 mL	1,2-Dinitrobenzene	10 ug/mL
.8330SurrStkSS_00134	02/28/22	Restek, Lot A0124792			(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330SurrStkSS_00135	02/28/22	Restek, Lot A0124792			(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330SurrStkSS_00152	07/31/23	Restek, Lot A0139489			(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330SurrStkSS_00153	07/31/23	Restek, Lot A0139489			(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
8330Surrogate_00109	03/20/20	09/20/19	Acetonitrile, Lot ACN_00223	250 mL	8330SurrStkSS_00147	0.5 mL	1,2-Dinitrobenzene	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00155	1 mL	1,2-Dinitrobenzene	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00158	1 mL	1,2-Dinitrobenzene	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
.8330SurrStkSS_00147	03/31/23	Restek, Lot A0135839			(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00155	07/31/23	Restek, Lot A0139489			(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00158	07/31/24	Restek, Lot A0146866			(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL
Alk daily lcs_00860	10/31/19	10/24/19	Di Water, Lot na	1000 mL	Alk stk std_00017	4 mL	Total Alkalinity as CaCO3	200 mg/L
.Alk stk std_00017	03/30/21	Fischer, Lot 191517			(Purchased Reagent)		Total Alkalinity as CaCO3	50 g/L
IC CAL cl/so4_00279	10/18/19	10/11/19	Di Water, Lot na	100 mL	IC CL cal_00058	25 mL	Chloride	250 mg/L
					IC sulfatecal_00057	25 mL	Sulfate	250 mg/L
.IC CL cal_00058	04/30/20	SPEX CertiPrep, Lot 4-154CL-2X			(Purchased Reagent)		Chloride	1000 mg/L
.IC sulfatecal_00057	06/30/20	SPEX CertiPrep, Lot 4-197SO4-2X			(Purchased Reagent)		Sulfate	1000 mg/L
IC CAL cl/so4_00283	11/14/19	11/07/19	Di Water, Lot na	100 mL	IC sulfatecal_00057	25 mL	Sulfate	250 mg/L
.IC sulfatecal_00057	06/30/20	SPEX CertiPrep, Lot 4-197SO4-2X			(Purchased Reagent)		Sulfate	1000 mg/L
IC Cal low_00488	10/22/19	10/15/19	Di Water, Lot NA	100 mL	IC BR ICV_00017	5 mL	Bromide	50 mg/L
					IC FL cal_00013	5 mL	Fluoride	50 mg/L
.IC BR ICV_00017	06/30/20	ricca, Lot 1804F11			(Purchased Reagent)		Bromide	1000 mg/L
.IC FL cal_00013	10/31/19	Ricca, Lot 4805C89			(Purchased Reagent)		Fluoride	1000 mg/L
IC LCS_01709	11/19/19	11/12/19	Di Water, Lot 27	200 mL	IC sulfatecal_00057	20 mL	Sulfate	100 mg/L as N
.IC sulfatecal_00057	06/30/20	SPEX CertiPrep, Lot 4-197SO4-2X			(Purchased Reagent)		Sulfate	1000 mg/L
IC SO4 ICV_00020	08/31/20	ERA, Lot 180818			(Purchased Reagent)		Sulfate	1000 mg/L
ICMS/MSD WEEK_00622	11/18/19	11/11/19	Di Water, Lot NA	10 mL	IC SPK 6 ANIO_00022	5 mL	Sulfate	5000.51 mg/L
.IC SPK 6 ANIO_00022	09/29/20	10/01/19	Di Water, Lot NA	1000 mL	IC MS/MSD S04_00005	18.1408 g	Sulfate	10001 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..IC MS/MSD S04_00005	09/29/20	FISHER, Lot 147276			(Purchased Reagent)		Sulfate	0.5513 g/g
NXN CAL INT_00511	11/05/19	10/29/19	Di Water, Lot NA	100 mL	NOXT Cal STD_00023	10 mL	Nitrate Nitrite as N	100 mg/L
.NOXT Cal STD_00023	12/31/20	RICCA, Lot 1906A84			(Purchased Reagent)		Nitrate Nitrite as N	1000 mg/L
NXN ICV INT_00492	11/05/19	10/29/19	Di Water, Lot NA	100 mL	NOXT ICV STD_00022	10 mL	Nitrate Nitrite as N	100 mg/L
.NOXT ICV STD_00022	12/31/19	ERA, Lot 031217			(Purchased Reagent)		Nitrate Nitrite as N	1000 mg/L
RSK175methane_00009	05/18/19	Supelco Analytical, Lot 403-191386			(Purchased Reagent)		Methane	650500 ug/L
RSK7gasMathes_00025	12/01/19	Matheson, Lot 9307628511			(Purchased Reagent)		Methane	6570.3 ug/L
RSK7gasMathes_00026	04/03/20	Matheson, Lot 9308630516			(Purchased Reagent)		Acetylene	10667 ug/L
							Ethane	12317 ug/L
							Ethylene	11490 ug/L
							Methane	6570.3 ug/L
RSK7gasMathes_00027	10/24/20	Matheson, Lot 9308634170			(Purchased Reagent)		Methane	6570.3 ug/L
SFD ICV INT_01626	01/09/20	10/09/19	Di Water, Lot N/A	500 mL	50% NaOH_00017	2 mL	Sodium Hydroxide	2000 mg/L
					SFD ICV STK_00007	4.09 g	Sulfide	1092.03 mg/L
.50% NaOH_00017	10/01/20	Fisher, Lot 186215			(Purchased Reagent)		Sodium Hydroxide	50 %
.SFD ICV STK_00007	06/28/23	Acros, Lot B0132482A			(Purchased Reagent)		Sulfide	0.1335 g/g
TKN 25ppm_00799	11/18/19	10/17/19	Di Water, Lot 1	100 mL	TKN 100PPM_00113	25 mL	Nitrogen, Total Kjeldahl	25 mg/L
.TKN 100PPM_00113	11/18/19	10/17/19	Di Water, Lot 1	500 mL	TKN CAL STD_00017	50 mL	Nitrogen, Total Kjeldahl	100 mg/L
..TKN CAL STD_00017	01/31/21	nsi lab solutions, Lot 010617			(Purchased Reagent)		Nitrogen, Total Kjeldahl	1000 mg/L
TKN ICV 25_00084	11/18/19	10/17/19	DI water, Lot 1	100 mL	TKN ICV 100_00075	25 mL	Nitrogen, Total Kjeldahl	25 mg/L
.TKN ICV 100_00075	11/18/19	10/17/19	Di Water, Lot 1	500 mL	TKN ICV_00011	50 mL	Nitrogen, Total Kjeldahl	100 mg/L
..TKN ICV_00011	11/30/20	ERA, Lot 281018			(Purchased Reagent)		Nitrogen, Total Kjeldahl	1000 mg/L
TOC ICV Std_00041	05/31/20	Ricca, Lot 4905J38			(Purchased Reagent)		Dissolved Organic Carbon - Quad	1000 ppm
							DOC Result 1	1000 ppm
							DOC Result 2	1000 ppm
							DOC Result 3	1000 ppm
							DOC Result 4	1000 ppm
TOC LCS Std_00048	06/30/21	Agilent, Lot 0006465171			(Purchased Reagent)		Dissolved Organic Carbon	1001 ppm
							Dissolved Organic Carbon - Duplicate	1001 ppm
							Dissolved Organic Carbon - Quad	1001 ppm
							DOC Result 1	1001 ppm
							DOC Result 2	1001 ppm
							DOC Result 3	1001 ppm
							DOC Result 4	1001 ppm
							TOC Result 1	1001 ppm
							TOC Result 2	1001 ppm
							TOC Result 3	1001 ppm
							TOC Result 4	1001 ppm
							Total Carbon	1001 ppm
							Total Carbon Res 1	1001 ppm
							Total Carbon Res 2	1001 ppm

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Total Carbon Res 3	1001 ppm
							Total Carbon Res 4	1001 ppm
							Total Organic Carbon	1001 ppm
							Total Organic Carbon - Duplicates	1001 ppm
							Total Organic Carbon - Quad	1001 ppm

Reagent

50% NaOH_00017

ThermoFisher SCIENTIFIC

Certificate of Analysis

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

ThermoFisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2008 standard by SAI Global Certificate Number CERT - 0090918

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. ThermoFisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Certain products (USP/FCC/NF/EP/BP/JP grades) are sold for use in food, drug, or medical device manufacturing.ThermoFisher does not maintain DMF's with the FDA. The following are the actual analytical results obtained:

Catalog Number	SS254	Quality Test / Release Date	10/03/2018
Lot Number	186215	Expiration Date	Oct/2020
Description	SODIUM HYDROXIDE, 50%, CERTIFIED		
Country of Origin	United States		
Chemical Origin	Inorganic-non animal		
BSE/TSE Comment	This product is of mineral origin, not animal origin, and to the best of our knowledge, does not contribute to BSE or TSE.		
Chemical Comment	This product is not manufactured with natural latex rubber or genetically modified organisms. Also it is not manufactured using allergenic materials, including dyes/food dyes, eggs/egg products, fish/shellfish/crustaceans, flavors, glutens, legumes, milk, mollusks, MSG, mustards, plant nuts/seeds/oils, peanuts/peanut products, protein hydrolysates, soybean products, spices, sulfites, sulfates, tree nuts or oils, and wheat.		

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	CLEAR, COLORLESS LIQUID HAVING NO SEDIMENT OR PARTICULATES
ASSAY	%	Inclusive Between 50 - 52	50.5
CARBONATE	%	<= 0.10	0.07
CHLORIDE	%	<= 0.005	<0.005
HEAVY METALS (as Ag)	%	<= 0.001	<0.001
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
SULFATE (SO4)	%	<= 0.002	<0.002
AMMONIUM HYDROX. PPT	%	<= 0.010	<0.010
NITROGEN COMPOUNDS	ppm	<= 5	<5
PHOSPHATE (PO4)	ppm	<= 5	<5
POTASSIUM (K)	%	<= 0.025	<0.003
SILICA (SiO2)	%	<= 0.01	<0.01
IRON (Fe)	ppm	<= 5	<5

Teresa Bailey-Wyche

Quality Assurance Specialist - Certificate of Analysis Bridgewater

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

Reagent

8330 LCSMix2_00105

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Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

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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. : 31451 **Lot No.:** A0141002

Description : 8330 Calibration Mix #2

8330 Calibration Std #2 1000µg/mL, Acetonitrile, 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	Tetryl **CAS #** 479-45-8 **Purity** 99% (Lot 091120JLM)	1,000.0 µg/mL	+/- 5.9397 +/- 54.7830 +/- 63.8824	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	4-Amino-2,6-dinitrotoluene **CAS #** 19406-51-0 **Purity** 99% (Lot ER070908-01)	1,002.0 µg/mL	+/- 5.9516 +/- 54.8926 +/- 64.0101	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	2-Amino-4,6-dinitrotoluene **CAS #** 35572-78-2 **Purity** 98% (Lot 29550-55)	1,007.4 µg/mL	+/- 5.9839 +/- 55.1906 +/- 64.3577	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	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
5	2-Nitrotoluene **CAS #** 88-72-2 **Purity** 99% (Lot GA01)	1,004.0 µg/mL	+/- 5.9635 +/- 55.0021 +/- 64.1379	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	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
7	3-Nitrotoluene **CAS #** 99-08-1 **Purity** 98% (Lot FBO01)	1,003.5 µg/mL	+/- 5.9606 +/- 54.9758 +/- 64.1072	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)

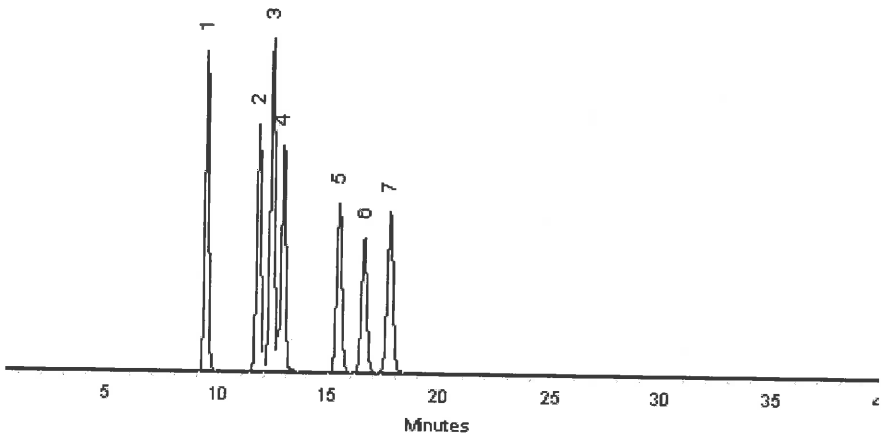
Flow Rate:
1.0 ml/min.

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.

Matt Fragassi - Mix Technician

Date Mixed: 23-Aug-2018 **Balance:** B345965662

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 28-Aug-2018

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

8330 Stock_TS_00012

Certificate of Analysis

Agilent

Combined Stock Solution

Product Number: NAIM-833E **Page:** 1 of 1

Lot Number: CR-1002 **Lot Issue Date:** 10-Mar-2017 **Expiration Date:** 30-Apr-2020

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
HMX	002691-41-0	RM06237	1000 ± 5 µg/mL
RDX	000121-82-4	RM10915	1000 ± 5 µg/mL
1,3,5-trinitrobenzene	000099-35-4	RM06608	1000 ± 5 µg/mL
m-dinitrobenzene	000099-65-0	RM04448	1001 ± 5 µg/mL
nitrobenzene	000098-95-3	RM11472	1002 ± 5 µg/mL
2,4,6-trinitrotoluene (TNT)	000118-96-7	RM11972	1004 ± 5 µg/mL
2,4-dinitrotoluene	000121-14-2	RM01209	1002 ± 5 µg/mL
tetryl	000479-45-8	RM12295	1000 ± 5 µg/mL
2,6-dinitrotoluene	000606-20-2	RM10763	1003 ± 5 µg/mL
2-nitrotoluene	000088-72-2	NT01996	1003 ± 5 µg/mL
3-nitrotoluene	000099-08-1	NT02212	1004 ± 5 µg/mL
4-nitrotoluene	000099-99-0	NT02096	1004 ± 5 µg/mL
2-amino-4,6-dinitrotoluene	035572-78-2	RM04229	1003 ± 5 µg/mL
4-amino-2,6-dinitrotoluene	019406-51-0	RM04226	1003 ± 5 µg/mL

Matrix: acetonitrile

Storage: Store at Room Temperature (15° to 30°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

Monica Bourgeois
Director of QA/RA

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 9001
Registered
TUV USA, Inc.

250 Smith Street North Kingstown, Rhode Island 02852 **www.ultrasci.com**

Reagent

8330_NG_Stk_00052

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Bellefonte, PA 16823-8812
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Fax: (814)353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Composition

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. : 568871 **Lot No.:** A0124122

Description : Custom Nitroglycerin Standard

Custom Nitroglycerin Standard 5,000µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2020 **Storage:** 10°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	Nitroglycerin	5,016.0 µg/mL	+/- 46.6461 µg/mL	Gravimetric
	CAS # 55-63-0 (Lot 150612JLM)		+/- 277.1256 µg/mL	Unstressed
	Purity 99%		+/- 322.4378 µg/mL	Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Column:
250mm x 4.6mm
Ultra C18 (cat.# 9174575)

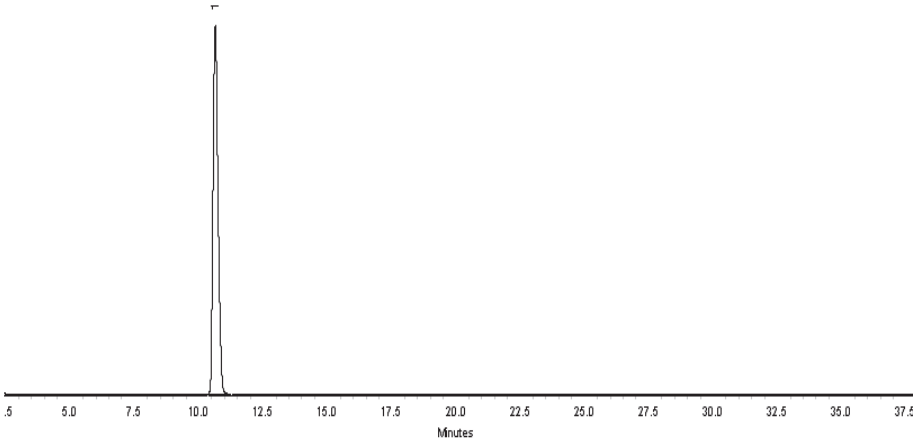
Flow Rate:
1.0 ml/min.

Mobile Phase A:
-

Mobile Phase B:
water:methanol (44:56 V/V)

Mobile Phase Composition:
100%B

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.

Kendra Jozefick - Mix Technician **Date Mixed:** 12-Jan-2017 **Balance:** B442140311

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 17-Jan-2017 REVIEWED

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

8330_NG_Stk_00077

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
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www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Composition

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. : 568871 **Lot No.:** A0151571

Description : Custom Nitroglycerin Standard

Custom Nitroglycerin Standard 5,000µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : August 31, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Nitroglycerin	5,036.0 µg/mL	+/- 46.8321	µg/mL	Gravimetric
	CAS # 55-63-0 (Lot 170616JLM)		+/- 278.2306	µg/mL	Unstressed
	Purity 99%		+/- 323.7234	µg/mL	Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Column:
250mm x 4.6mm
Ultra C18 (cat.# 9174575)

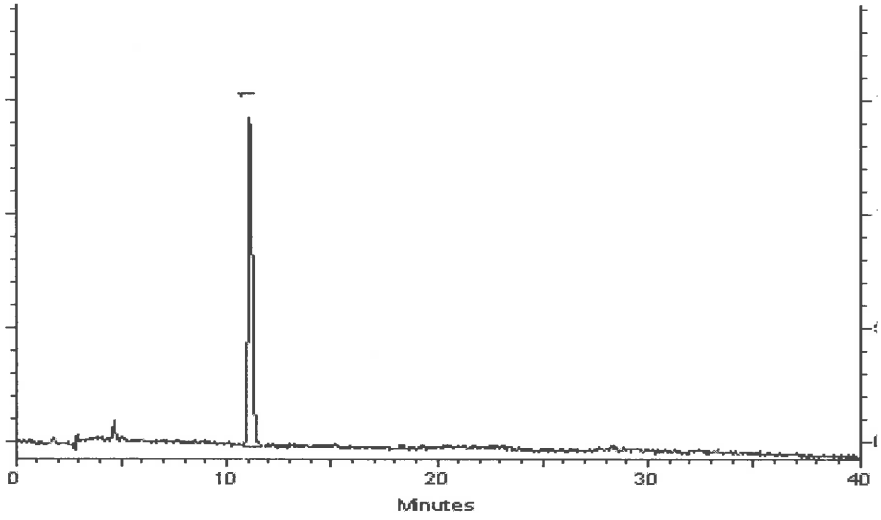
Flow Rate:
1.0 ml/min.

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.

Joseph A Jaglowski
Joseph Jaglowski - Mix Technician

Date Mixed: 05-Aug-2019 **Balance:** B707717271

Jennifer A Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 09-Aug-2019

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

8330_NG_Stk_00078

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Description : Custom Nitroglycerin Standard

Custom Nitroglycerin Standard 5,000µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : August 31, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Nitroglycerin	5,036.0 µg/mL	+/- 46.8321	µg/mL	Gravimetric
	CAS # 55-63-0 (Lot 170616JLM)		+/- 278.2306	µg/mL	Unstressed
	Purity 99%		+/- 323.7234	µg/mL	Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Column:
250mm x 4.6mm
Ultra C18 (cat.# 9174575)

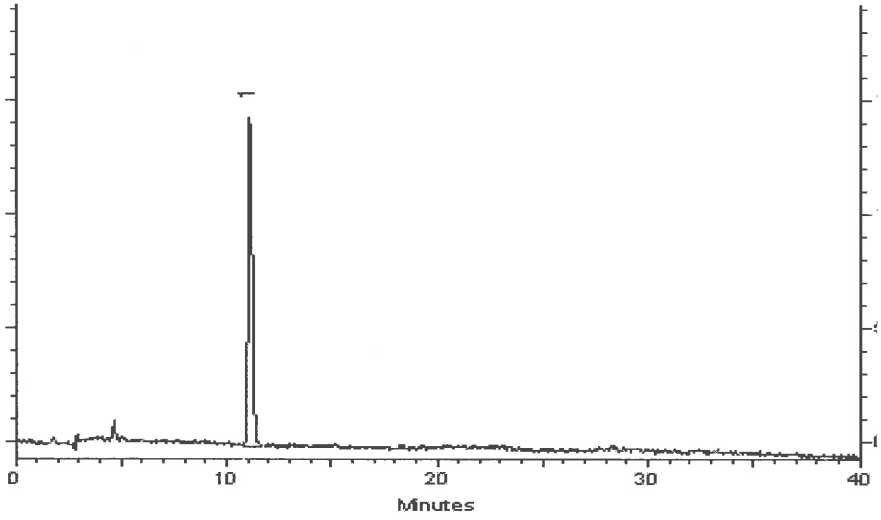
Flow Rate:
1.0 ml/min.

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.

Joseph A Jaglowski
Joseph Jaglowski - Mix Technician

Date Mixed: 05-Aug-2019 **Balance:** B707717271

Jennifer A Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 09-Aug-2019

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

8330_OP_DMT_00002

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

8330_OP_DMT_00002

Reagent ID: 8330_OP_DMT_00002

		Expiration Date:	12/31/2019
Description:	Use for MNX, DNX, TNX spike	Laboratory:	TestAmerica Denver
No. of Bottles:	1	Prepared By:	Becker, Chad B
Storage Location:	_Pick Storage Location	Solvent:	Acetonitrile
Reagent Volume:	10.000 mL	Solvent Lot:	00222
Creation Date:	03/12/2019		
Open Date:			
Container(s):	5580180		
Comment:	Add 1 mL of MNX_TNX_DNX to 5 mL of acetonitrile. quantitative fill to 10 mL with ACN.		

Reagent Analyte Information

Analyte	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
DNX	MNX,TNX,DNX_00026	12/31/2019	100.10000	ug/mL	10.01000	ug/mL
MNX	MNX,TNX,DNX_00026	12/31/2019	116.70000	ug/mL	11.67000	ug/mL
TNX	MNX,TNX,DNX_00026	12/31/2019	100.10000	ug/mL	10.01000	ug/mL

Source Reagents

Reagent	Description	Type	Expiration	Vendor	Vendor Lot #	Vendor Cat Lot #	Volume Used	Volume Units
MNX,TNX,DNX_00026	Custom MNX,TNX,DNX 8321 exp ULTRA	ASTD	12/31/19	ULTRA Scientific	CS-5628	CUS-23984	1.00000	mL

HF 3/19/19

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

This section to be completed by the analyst creating the standard:		
Standard Name	8330_OP_DMT	
Analyst name (and trainer if applicable)	CB	
Creation Date		
Checklist	Initial each item:	
	✓	Stock standard catalog # in TALS matches the catalog # on the vendor label.
	✓	All stock standards have a correct open date in TALS.
	✓	All stock standards have a correct expiration date in TALS.
Verification status	Initial one of the following:	
		Requires MeCl2 exchange prior to verification. Paperwork submitted to concentrations. Date/time submitted to concentrations:
		Requires esterification priot to verification. Paperwork submitted to concentrations. Date/time submitted to concentrations:
	CB	No exchange needed; aliquot submitted to analytical group for analysis. Date/time submitted to analytical group for analysis:
		No verification required. Submit to group leader.
		Other (specify and submit to group leader):

This section to be completed by concentrations analyst, if applicable:	
Volume of standard used:	Initials:
Final volume after exchange:	
Date/time submitted for analysis:	
Submitted with batch # (or other designated location):	
Volume of standard used:	Initials:
Final volume after esterification:	
Date/time submitted for analysis:	
Submitted with batch # (or other designated location):	

Page 273 of 303

11/19/2019

Preliminary Report

TestAmerica Denver

LCS, Lab Control Sample Report

Sample Path: \\chromna\Denver\ChromData\G2_LUNA\20190317-79923.b\03170039.D

Lims ID: LCS 280-450627/4-A Inj. Date: 18-Mar-2019 12:13:51

Worklist ID: 280-0079923-039 Instrument: CHHPLC_G2_LUNA

Method: G2_8330_Luna

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 3535	Limits 2 3535
3 TNX	0.2002	0.2314	115.6	50-150	
4 DNX	0.2002	0.2029	101.4	66-119	50-150
7 MNX	0.2334	0.2434	104.3	57-132	68-123
$ 10 1,2-Dinitrobenzene	0.2000	0.2190	109.5	83-119	63-127

Samples for Limit Group: 1, Lims Prep Method: 3535

280-120959-B-1-A	280-120959-A-2-A	280-120959-A-3-A
280-120959-B-4-A	280-120959-B-5-A	280-120959-A-6-A
280-120959-A-7-A	280-120959-A-8-A	280-120959-A-9-A
280-121028-A-1-A	280-121028-B-2-A	280-121028-A-7-A
280-121028-A-8-A	280-121028-B-9-A	280-121028-A-10-A
280-121028-A-11-A	280-121068-A-1-A	280-121068-B-2-A
280-121068-A-3-A	280-121068-B-5-A	280-121068-A-6-A
280-121068-A-7-A	280-121068-A-9-A	280-121068-B-10-A
280-121068-B-13-A		

Samples for Limit Group: 2, Lims Prep Method: 3535

680-165694-D-7-A	680-165694-E-8-A	680-165755-D-1-A
680-165755-E-2-A	680-165755-D-3-A	680-165755-E-4-A

Reagent

8330_PETN_Stk_00056

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CERTIFIED REFERENCE MATERIAL

Certificate of Composition

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. : 568872 **Lot No.:** A0124124

Description : Custom PETN Standard

Custom PETN Standard 5000 µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2020 **Storage:** 10°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	PETN	5,024.0 µg/mL	+/- 46.7205 µg/mL	Gravimetric
	CAS # 78-11-5 (Lot 051108JLM)		+/- 277.5676 µg/mL	Unstressed
	Purity 99%		+/- 322.9521 µg/mL	Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Column:
250mm x 4.6mm
Ultra C18 (cat.# 9174575)

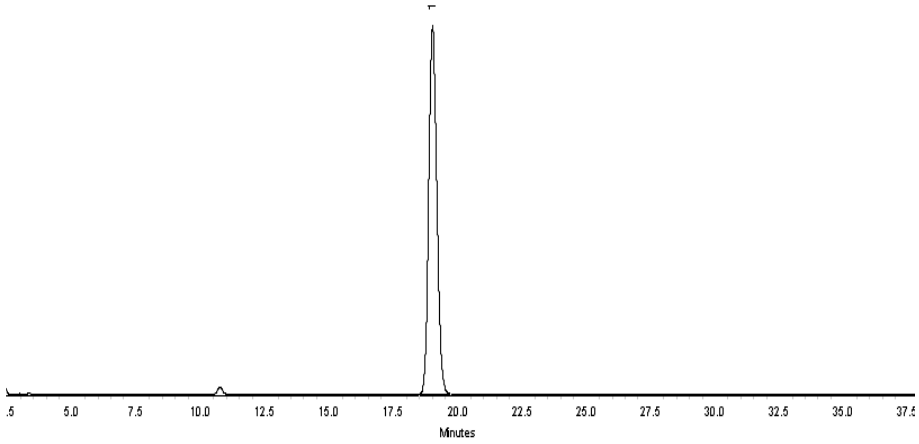
Flow Rate:
1.0 ml/min.

Mobile Phase A:
-

Mobile Phase B:
water:methanol (44:56 V/V)

Mobile Phase Composition:
100%B

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.

Kendra Jozefick - Mix Technician

Date Mixed: 12-Jan-2017 **Balance:** B442140311

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 17-Jan-2017

REVIEWED
By Amanda Miller at 3:54 pm, Jan 17, 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

8330_PETN_Stk_00083

RESTEK
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Fax: (814)353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Composition

ACCREDITED
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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. : 568872 **Lot No.:** A0152514

Description : Custom PETN Standard

Custom PETN Standard 5,000µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : September 30, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	PETN	5,004.0 µg/mL	+/- 46.5345 µg/mL	Gravimetric
	CAS # 78-11-5 (Lot 051108JLM)		+/- 276.4626 µg/mL	Unstressed
	Purity 99%		+/- 321.6664 µg/mL	Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Column:
250mm x 4.6mm
Ultra C18 (cat.# 9174575)

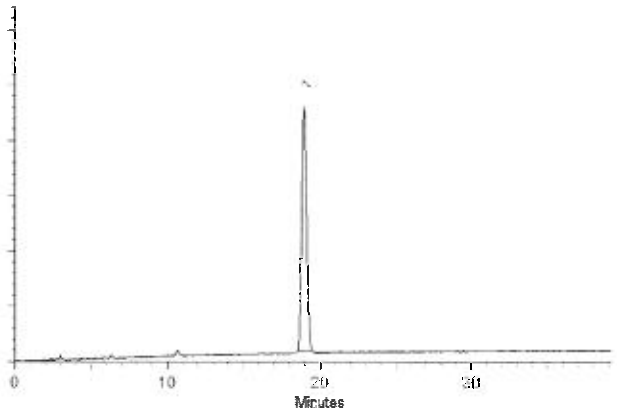
Flow Rate:
1.0 ml/min.

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.

Matt Fragassi - Mix Technician

Date Mixed: 03-Sep-2019 **Balance:** 1127510105

Justine Albertson - Operations Tech-ARM QC

Date Passed: 06-Sep-2019

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

8330_PETN_Stk_00084

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Certificate #3222.01

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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. : 568872 **Lot No.:** A0152514

Description : Custom PETN Standard

Custom PETN Standard 5,000µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : September 30, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	PETN	5,004.0 µg/mL	+/- 46.5345 µg/mL	Gravimetric
	CAS # 78-11-5 (Lot 051108JLM)		+/- 276.4626 µg/mL	Unstressed
	Purity 99%		+/- 321.6664 µg/mL	Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Column:
250mm x 4.6mm
Ultra C18 (cat.# 9174575)

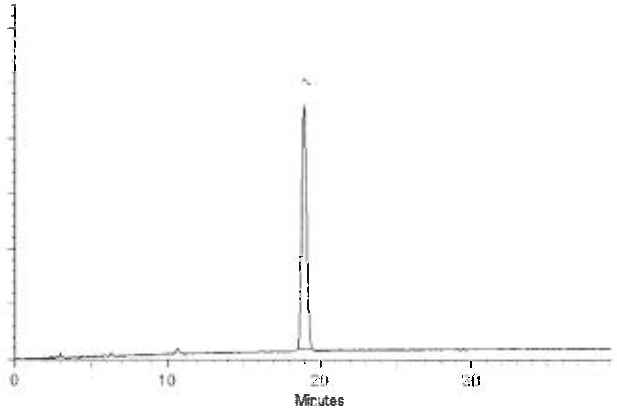
Flow Rate:
1.0 ml/min.

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.

Matt Fragassi - Mix Technician

Date Mixed: 03-Sep-2019 **Balance:** 1127510105

Justine Albertson - Operations Tech-ARM QC

Date Passed: 06-Sep-2019

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

8330LCSMix1_00109

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Certificate #3222.01

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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. : 31450 **Lot No.:** A0131772

Description : 8330 Calibration Mix #1

8330 Calibration Std #1 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	HMX **CAS #** 2691-41-0 (Lot 111005JLM) **Purity** 98%	1,009.4 µg/mL	+/- 5.9955 µg/mL +/- 55.2980 µg/mL +/- 64.4829 µg/mL	Gravimetric Unstressed Stressed
2	RDX **CAS #** 121-82-4 (Lot 080220JLM) **Purity** 99%	1,005.0 µg/mL	+/- 5.9694 µg/mL +/- 55.0569 µg/mL +/- 64.2018 µg/mL	Gravimetric Unstressed Stressed
3	1,3,5-Trinitrobenzene **CAS #** 99-35-4 (Lot DJ5QO) **Purity** 97%	1,009.8 µg/mL	+/- 5.9977 µg/mL +/- 55.3182 µg/mL +/- 64.5065 µg/mL	Gravimetric Unstressed Stressed
4	1,3-Dinitrobenzene **CAS #** 99-65-0 (Lot BCBB1436V) **Purity** 99%	1,008.0 µg/mL	+/- 5.9872 µg/mL +/- 55.2213 µg/mL +/- 64.3934 µg/mL	Gravimetric Unstressed Stressed
5	Nitrobenzene **CAS #** 98-95-3 (Lot SHBF2348V) **Purity** 99%	1,002.0 µg/mL	+/- 5.9516 µg/mL +/- 54.8926 µg/mL +/- 64.0101 µg/mL	Gravimetric Unstressed Stressed
6	2,4,6-Trinitrotoluene **CAS #** 118-96-7 (Lot 2554100) **Purity** 99%	1,008.0 µg/mL	+/- 5.9872 µg/mL +/- 55.2213 µg/mL +/- 64.3934 µg/mL	Gravimetric Unstressed Stressed
7	2,4-Dinitrotoluene **CAS #** 121-14-2 (Lot MKAA0690V) **Purity** 99%	1,005.0 µg/mL	+/- 5.9694 µg/mL +/- 55.0569 µg/mL +/- 64.2018 µg/mL	Gravimetric Unstressed Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Column:
250mm x 4.6mm
Ultra C18 (cat.# 9174575)

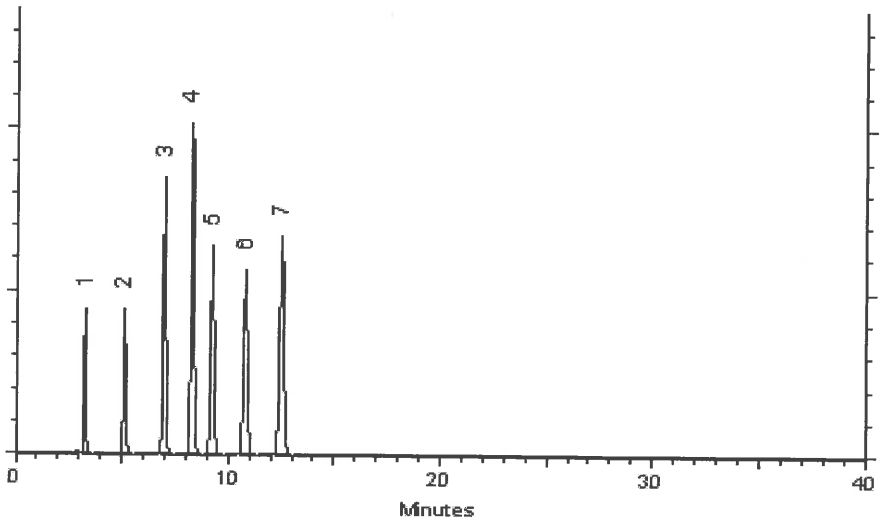
Flow Rate:
1.0 ml/min.

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.

Dawn Brownson - Mix Technician **Date Mixed:** 19-Oct-2017 **Balance:** B707717271

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 23-Oct-2017

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Reagent

8330LCSmix2_00008

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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. : 31451 **Lot No.:** A0141002

Description : 8330 Calibration Mix #2

8330 Calibration Std #2 1000µg/mL, Acetonitrile, 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	Tetryl **CAS #** 479-45-8 **Purity** 99%	(Lot 091120JLM)	1,000.0 µg/mL	+/- 5.9397 µg/mL +/- 54.7830 µg/mL +/- 63.8824 µg/mL		Gravimetric Unstressed Stressed
2	4-Amino-2,6-dinitrotoluene **CAS #** 19406-51-0 **Purity** 99%	(Lot ER070908-01)	1,002.0 µg/mL	+/- 5.9516 µg/mL +/- 54.8926 µg/mL +/- 64.0101 µg/mL		Gravimetric Unstressed Stressed
3	2-Amino-4,6-dinitrotoluene **CAS #** 35572-78-2 **Purity** 98%	(Lot 29550-55)	1,007.4 µg/mL	+/- 5.9839 µg/mL +/- 55.1906 µg/mL +/- 64.3577 µg/mL		Gravimetric Unstressed Stressed
4	2,6-Dinitrotoluene **CAS #** 606-20-2 **Purity** 99%	(Lot BCBB8606V)	1,000.0 µg/mL	+/- 5.9397 µg/mL +/- 54.7830 µg/mL +/- 63.8824 µg/mL		Gravimetric Unstressed Stressed
5	2-Nitrotoluene **CAS #** 88-72-2 **Purity** 99%	(Lot GA01)	1,004.0 µg/mL	+/- 5.9635 µg/mL +/- 55.0021 µg/mL +/- 64.1379 µg/mL		Gravimetric Unstressed Stressed
6	4-Nitrotoluene **CAS #** 99-99-0 **Purity** 99%	(Lot FAU01)	1,002.0 µg/mL	+/- 5.9516 µg/mL +/- 54.8926 µg/mL +/- 64.0101 µg/mL		Gravimetric Unstressed Stressed
7	3-Nitrotoluene **CAS #** 99-08-1 **Purity** 98%	(Lot FBO01)	1,003.5 µg/mL	+/- 5.9606 µg/mL +/- 54.9758 µg/mL +/- 64.1072 µg/mL		Gravimetric Unstressed Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Column:
250mm x 4.6mm
Ultra C18 (cat.# 9174575)

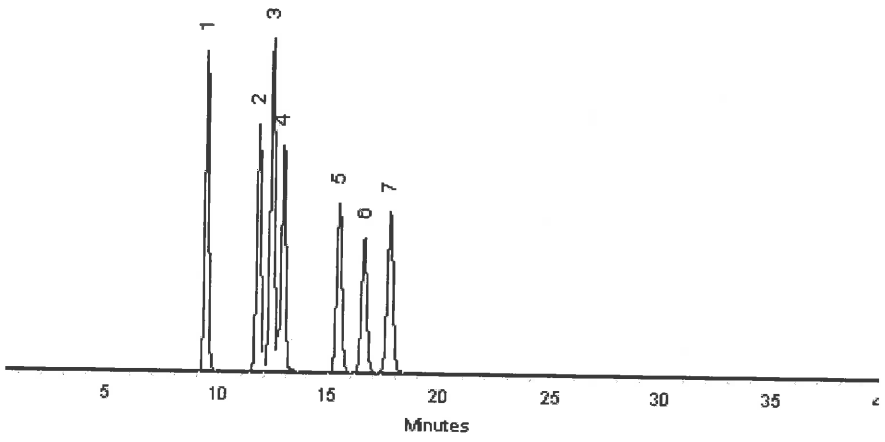
Flow Rate:
1.0 ml/min.

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.

Matt Fragassi - Mix Technician **Date Mixed:** 23-Aug-2018 **Balance:** B345965662

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 28-Aug-2018

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

Reagent

8330PAStkPS_00058

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: M-8330-ADD-3
Description: Picric acid
Lot: 216061376-01
Solvent: Acetonitrile (50%)
Methanol (50%)
Hazards: *Refer to SDS for complete safety information*



Signal Word: Danger

Date Certified: Jun 19, 2017
Expiration: Jul 19, 2019
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 % (HPLC)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
Picric acid	88-89-1	99.1	100.1	99.2

Superseded

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 Guide 34, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/INO-001
Rev. 4/17

Reagent

8330PAStkPS_00059

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: M-8330-ADD-3
Description: Picric acid
Lot: 218031154
Solvent: Acetonitrile (50%)
Methanol (50%)
Hazards: *Refer to SDS for complete safety information*



Signal Word: Danger

Date Certified: Mar 12, 2018
Expiration: Apr 12, 2020
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 % (HPLC)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
Picric acid	88-89-1	99.1	100.1	99.2

R 9/25/18 TP

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 17034, ISO/IEC 17025 and certified to ISO 9001:2015

Reagent

8330SurrStkSS_00134

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Tel: (800)356-1688
Fax: (814)353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
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. : 31453 **Lot No.:** A0124792

Description : 8330 Surrogate Mix

8330 Surrogate Std 1, 2-Dinitrobenzene 1000µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.4187	µg/mL	Unstressed
	Purity 99%		+/- 57.7382	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStkSS_00135

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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. : 31453 **Lot No.:** A0124792

Description : 8330 Surrogate Mix

8330 Surrogate Std 1, 2-Dinitrobenzene 1000µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.4187	µg/mL	Unstressed
	Purity 99%		+/- 57.7382	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStkSS_00147

RESTEK
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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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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. : 31453 **Lot No.:** A0135839

Description : 8330 Surrogate Mix

8330 Surrogate Mix 1000 µg/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	1,2-Dinitrobenzene	1,000.0 µg/mL	+/- 5.9397	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.0822	µg/mL	Unstressed
	Purity 99%		+/- 57.3938	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Column:
250mm x 4.6mm
Ultra C18 (cat.# 9174575)

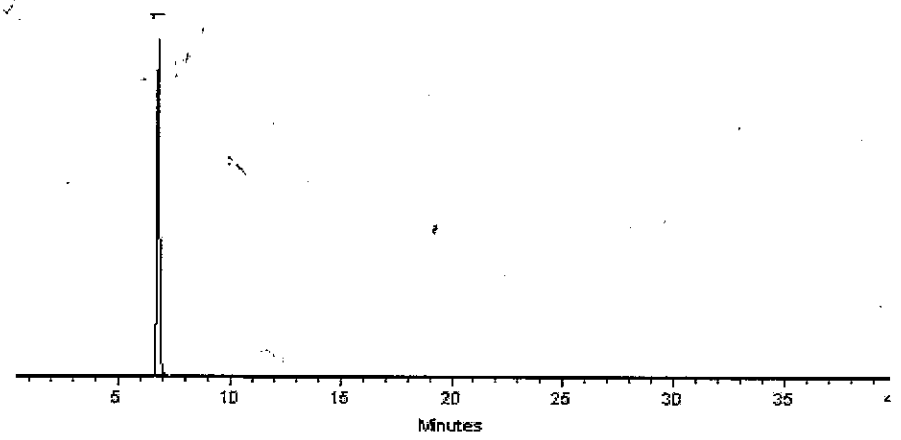
Flow Rate:
1.0 ml/min.

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.

Dustin J Lidgett

Dustin Lidgett - Mix Technician **Date Mixed:** 05-Mar-2018 **Balance:** 1128360905

Jennifer J Pollino

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 09-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

Reagent

8330SurrStkSS_00152

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Fax: (814)353-1309

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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. : 31453 **Lot No.:** A0139489

Description : 8330 Surrogate Mix

8330 Surrogate Mix 1000 µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : July 31, 2023 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L., K=2)	
1	1,2-Dinitrobenzene	1,001.0 µg/mL	+/- 5.9456 µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.1383 µg/mL	Unstressed
	Purity 99%		+/- 57.4512 µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

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.

Column:
250mm x 4.6mm
Ultra C18 (cat.# 9174575)

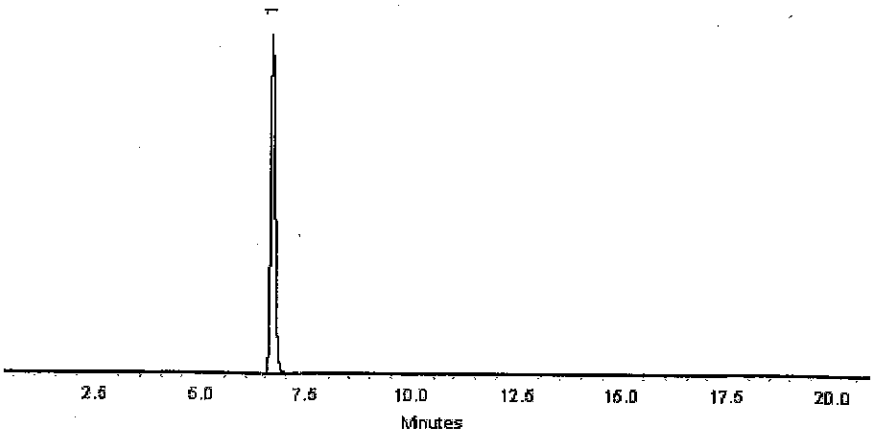
Flow Rate:
1.0 ml/min.

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.

Joseph Jaglowski - Mix Technician **Date Mixed:** 10-Jul-2018 **Balance:** B707717271

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 17-Jul-2018

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

Reagent

8330SurrStkSS_00153

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Fax: (814)353-1309

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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. : 31453 **Lot No.:** A0139489

Description : 8330 Surrogate Mix

8330 Surrogate Mix 1000 µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : July 31, 2023 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L., K=2)	
1	1,2-Dinitrobenzene	1,001.0 µg/mL	+/- 5.9456 µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.1383 µg/mL	Unstressed
	Purity 99%		+/- 57.4512 µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

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.

Column:
250mm x 4.6mm
Ultra C18 (cat.# 9174575)

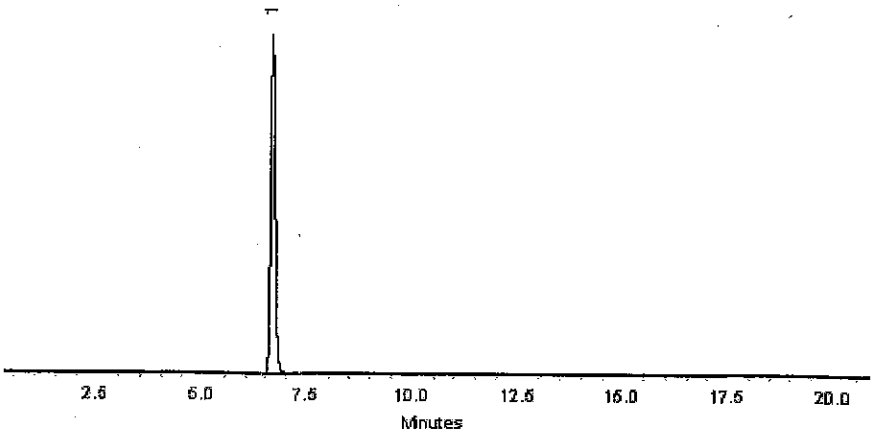
Flow Rate:
1.0 ml/min.

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.

Joseph Jaglowski - Mix Technician **Date Mixed:** 10-Jul-2018 **Balance:** B707717271

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 17-Jul-2018

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

Reagent

8330SurrStkSS_00155

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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. : 31453 **Lot No.:** A0139489

Description : 8330 Surrogate Mix

8330 Surrogate Mix 1000 µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : July 31, 2023 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L., K=2)	
1	1,2-Dinitrobenzene	1,001.0 µg/mL	+/- 5.9456 µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.1383 µg/mL	Unstressed
	Purity 99%		+/- 57.4512 µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

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.

Column:
250mm x 4.6mm
Ultra C18 (cat.# 9174575)

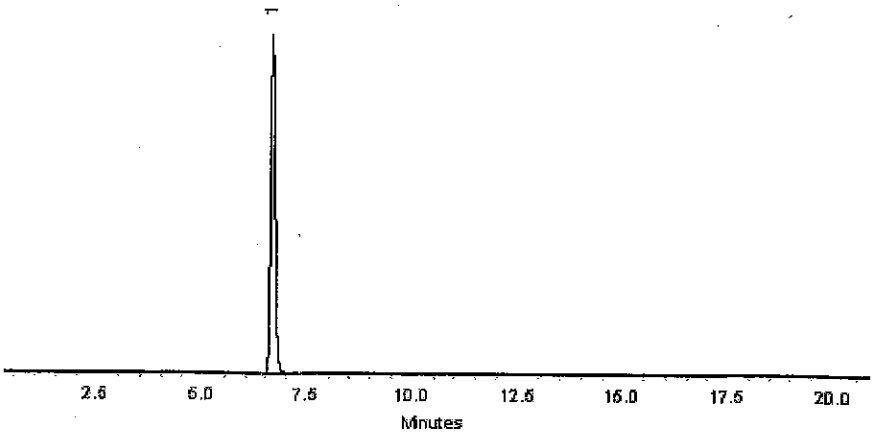
Flow Rate:
1.0 ml/min.

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.

Joseph Jaglowski - Mix Technician **Date Mixed:** 10-Jul-2018 **Balance:** B707717271

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 17-Jul-2018

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

Reagent

8330SurrStkSS_00158

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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. : 31453 **Lot No.:** A0150790

Description : 8330 Surrogate Mix

8330 Surrogate Mix 1000 µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : July 31, 2024 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene	1,003.0 µg/mL	+/- 5.9575	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKCH6067)		+/- 56.2504	µg/mL	Unstressed
	Purity 99%		+/- 57.5660	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Column:
250mm x 4.6mm
Ultra C18 (cat.# 9174575)

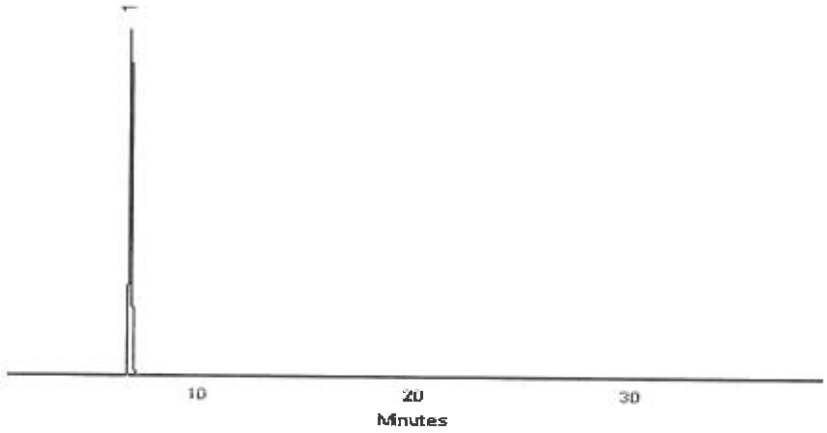
Flow Rate:
1.0 ml/min.

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.

Walker Workman - Operations Technician I

Date Mixed: 12-Jul-2019 **Balance:** 1128360905

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 16-Jul-2019

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

Reagent

8330SurrStock_00163

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: M-8330-SS
Description: 1,2-Dinitrobenzene
Lot: 216071012
Solvent: Methanol
Hazards: **HIGHLY FLAMMABLE** - *Refer to SDS for safety info*



Danger 2

Date Certified: Jul 1, 2016
Expiration: Jul 1, 2026
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/FID)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
1,2-Dinitrobenzene	528-29-0	100.0	100.1	1001

Sample

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%. The CRM Uncertainty calculated for this product is ±5%. These values are the expanded uncertainty and represent 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

Page 1 of 1

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

Alk stk std_00017

ThermoFisher SCIENTIFIC

Certificate of Analysis

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120632

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	SS148	Quality Test / Release Date	03/20/2019
Lot Number	191517	Expiration Date	Mar/2021
Description	SODIUM CARBONATE SOLUTION, 1N		
Country of Origin	United States		
Chemical Origin			
BSE/TSE Comment			
Chemical Comment			

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Clear, Colorless liquid
NORMALITY		Inclusive Between 0.995 - 1.000	0.999
COLOR	APHA	<= 5	<5
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST

Teresa Bailey-Wyche

Quality Assurance Specialist - Certificate of Analysis Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

Reagent

EXP-SS-MIX1_00008

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. : 31450 **Lot No.:** A0151407

Description : 8330 Calibration Mix #1

8330 Calibration Std #1 1000µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : July 31, 2024 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	HMX		1,004.9 µg/mL	+/- 5.9689	µg/mL	Gravimetric
	CAS # 2691-41-0	(Lot 190402JLM)		+/- 55.0525	µg/mL	Unstressed
	Purity 97%			+/- 64.1967	µg/mL	Stressed
2	RDX		1,005.0 µg/mL	+/- 5.9694	µg/mL	Gravimetric
	CAS # 121-82-4	(Lot 080228JLM)		+/- 55.0569	µg/mL	Unstressed
	Purity 99%			+/- 64.2018	µg/mL	Stressed
3	1,3,5-Trinitrobenzene		1,003.0 µg/mL	+/- 5.9574	µg/mL	Gravimetric
	CAS # 99-35-4	(Lot DJ5QO)		+/- 54.9463	µg/mL	Unstressed
	Purity 97%			+/- 64.0727	µg/mL	Stressed
4	1,3-Dinitrobenzene		1,001.0 µg/mL	+/- 5.9456	µg/mL	Gravimetric
	CAS # 99-65-0	(Lot BCBN4329V)		+/- 54.8378	µg/mL	Unstressed
	Purity 99%			+/- 63.9463	µg/mL	Stressed
5	Nitrobenzene		1,001.0 µg/mL	+/- 5.9456	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBJ3622)		+/- 54.8378	µg/mL	Unstressed
	Purity 99%			+/- 63.9463	µg/mL	Stressed
6	2,4,6-Trinitrotoluene		1,005.0 µg/mL	+/- 5.9694	µg/mL	Gravimetric
	CAS # 118-96-7	(Lot 5737200)		+/- 55.0569	µg/mL	Unstressed
	Purity 99%			+/- 64.2018	µg/mL	Stressed
7	2,4-Dinitrotoluene		1,001.0 µg/mL	+/- 5.9456	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690)		+/- 54.8378	µg/mL	Unstressed
	Purity 99%			+/- 63.9463	µg/mL	Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Column:
250mm x 4.6mm
Ultra C18 (cat.# 9174575)

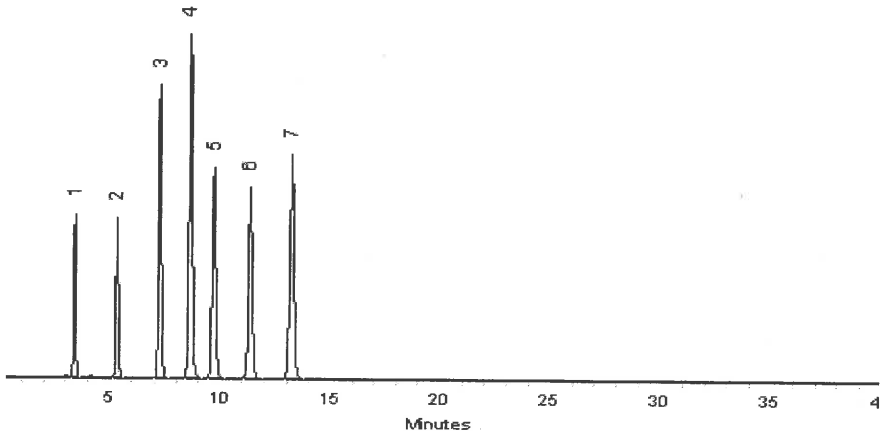
Flow Rate:
1.0 ml/min.

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.

Matt Fragassi - Mix Technician

Date Mixed: 30-Jul-2019 **Balance:** 1127510105

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 01-Aug-2019

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

Reagent

IC BR ICV_00017

Standard Verification Form

Standard Information			
Vendor Standard Name	BROMIDE 1000 mg/L		
Vendor	RICCA		
Lot number	1804F11		
Initial Verification	☐	Re-Verification	☒

TALS "Reagent" Information	
TALS Standard ID	IC BR ICV 1000 mg/L
COA Reviewed against what is in TALS	☒

Verification Information and Data			
Verified by	JP	Instrument ID	IC11
Verification Date	9/30/19	Method Reference	300.0 ANIONS
ID of Standard Used for Verification	IC ICV 5_00248	Batch # / Chrom Work List #	470931 85335
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:	+2/31/19 06/30/20 JP 9/30/19	JP 9/30/19	

1st Level Review: JP Date: 9/30/19

2nd Level Review: [signature] Date: 9/30/19

QA Review (Re-verification only)	[signature]	Date: 9/30/19

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.

DV-F0038–9-1-2015 Rev0

TALS Raw Data Report

Job Number: 280-127984-1
LIMS Batch: 470931
Equipment: WC_IonChrom11

Laboratory: Eurofins TestAmerica, Denver

IC BR ICV_ 00013 INORGANIC VENTURES

RS# 8 Lab ID: **ICV 280-470931/8** Inj Date: 9/17/2019 5:15:00PM Dil: 1.0 Meth: 9056A_28D

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Fluoride		326087446 ug/mL	mg/L	101	90 110		
Sulfate		513177614 ug/mL	mg/L	97	90 110		
Chloride		562198627 ug/mL	mg/L	98	90 110		
Bromide		335770599 ug/mL	mg/L	105	90 110		

RS# 9 Lab ID: **ICB 280-470931/9** Inj Date: 9/17/2019 5:31:00PM Dil: 1.0 Meth: 9056A_28D

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Fluoride		538152227 ug/mL	mg/L				
Sulfate		ND ug/mL	mg/L				
Chloride		ND ug/mL	mg/L				
Bromide		ND ug/mL	mg/L				

TALS Raw Data Report

Job Number: 280-128788-1
LIMS Batch: 472004
Equipment: WC_IonChrom11

Laboratory: Eurofins TestAmerica, Denver

IC BR ICV_00017 RICLA

RS# 1 Lab ID: **CCV 280-472004/1** Inj Date: 9/26/2019 10:26:00AM Dil: 1.0 Meth: 9056A_28D_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Bromide		378723886 ug/mL	mg/L	100	90 110		
Fluoride		474521679 ug/mL	mg/L	101	90 110		
Sulfate		457171622 ug/mL	mg/L	100	90 110		
Chloride		453919791 ug/mL	mg/L	99	90 110		

RS# 2 Lab ID: **CCB 280-472004/2** Inj Date: 9/26/2019 10:42:00AM Dil: 1.0 Meth: 9056A_28D_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Bromide		ND ug/mL	0.50 U mg/L				
Fluoride		126258159 ug/mL	0.50 U mg/L				
Sulfate		950391078 ug/mL	2.5 U mg/L				
Chloride		ND ug/mL	2.5 U mg/L				

RS# 3 Lab ID: **MRL 280-472004/3** Inj Date: 9/26/2019 10:58:00AM Dil: 1.0 Meth: 9056A_28D_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Bromide		464051419 ug/mL	mg/L	109	50 150		
Fluoride		738847983 ug/mL	0.574 J mg/L	115	50 150		
Sulfate		586210798 ug/mL	4.48 J mg/L	90	50 150		
Chloride		398424907 ug/mL	mg/L	82	50 150		

RS# 4 Lab ID: **LCS 280-472004/4** Inj Date: 9/26/2019 11:15:00AM Dil: 1.0 Meth: 9056A_28D_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Bromide		599114194 ug/mL	mg/L	100	91 110		
Fluoride		512427147 ug/mL	mg/L	100	88 112		
Sulfate		415430054 ug/mL	mg/L	99	87 112		
Chloride		389947419 ug/mL	mg/L	99	87 111		

RS# 5 Lab ID: **LCSD 280-472004/5** Inj Date: 9/26/2019 11:31:00AM Dil: 1.0 Meth: 9056A_28D_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Bromide		242213319 ug/mL	mg/L	100	91 110	0	10
Fluoride		745510552 ug/mL	mg/L	100	88 112	0	10
Sulfate		017601849 ug/mL	mg/L	100	87 112	0	10
Chloride		265784938 ug/mL	mg/L	99	87 111	0	10

RS# 6 Lab ID: **MB 280-472004/6** Inj Date: 9/26/2019 11:48:00AM Dil: 1.0 Meth: 9056A_28D_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Bromide		ND ug/mL	0.50 U mg/L				
Fluoride		ND ug/mL	0.50 U mg/L				
Sulfate		096458054 ug/mL	3.0 U mg/L				
Chloride		ND ug/mL	3.0 U mg/L				

RS# 7 Lab ID: **280-128788-D-1** Inj Date: 9/26/2019 6:06:00PM Dil: 1.0 Meth: 9056A_28D_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Fluoride		393697342 ug/mL	0.34 J mg/L				
Sulfate		766656671 ug/mL	mg/L				
Chloride		043879112 ug/mL	mg/L				
Bromide		439183912 ug/mL	0.50 U mg/L				

RS# 8 Lab ID: **280-128788-D-1** Inj Date: 9/26/2019 6:22:00PM Dil: 20.0 Meth: 9056A_28D_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Fluoride		777758385 ug/mL	10 U mg/L				

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Arlington, TX 76012
http://www.riccachemical.com
1-888-GO-RICCA
customerservice@riccachemical.com

Certificate of Analysis

Bromide Standard, 1000 ppm Br^-

Lot Number: 1804F11 **Product Number:** 1180

Manufacture Date: APR 06, 2018
Expiration Date: SEP 2019

The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is based upon the volumetric method of preparation.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Sodium Bromide	7647-15-6	High Purity

Test	Specification	Result
Appearance	Colorless liquid	Passed
Bromide (Br)	995-1005 ppm	1000 ppm

Specification	Reference
Bromide Solution, Standard (1 mL = 1 mg Br^-)	ASTM (D 3869 D)
Standard Bromide Solution, 1000 mg/L	APHA (4110 B)
Bromide Stock Solution (1.00 mL = 1.00 mg Br^-)	EPA (SW-846) (9056)
Sodium Bromide Standard Solution, 1000 mg/L	ASTM (D 1246)
Bromide Stock Solution (1.00 mL = 1.00 mg Br?)	ASTM (D 4327)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
1180-16	500 mL natural poly	18 months
1180-4	120 mL natural poly	18 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

Israel Alamudun (04/06/2018)
Quality Control Supervisor
This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

This test report shall not be reproduced, except in full, without the written approval of Ricca Chemical Company.

Reagent

IC CL cal_00058

Reference Materials Producer
Cert #2495.01

SPEXertificate®

Certificate of Reference Material

Chemical Testing
Cert #2495.02

Catalog Number: AS-CL9-2X **Lot No.** 4-154CL-2X

Description: 1000 µg/mL Chloride

Matrix: H_2O

This **Ion Chromatography** Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for ion chromatography instrumentation. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Value: 997 µg/mL ±5 µg/mL

Certified Value is Traceable to: 3182*

* - indicates NIST SRM † - indicates SPEX CertiPrep CRM (when NIST SRM is not available) ‡ - prepared gravimetrically

The CRM is prepared gravimetrically using high purity Sodium Chloride, Lot# 07131A. The certified value listed is the average of values obtained by classical wet assay and ion chromatography analysis.

Refer to side 2 for details of measurement uncertainties.

Classical Wet Assay: 998 µg/mL

Method: Precipitation using Silver Nitrate. Filter, dry and weigh as AgCl.

Instrumental Analysis by Ion Chromatography: 996 µg/mL

Uncertified Properties

Trace Ionic Impurities in the Actual Solution via IC Analysis:

Element	µg/mL	Element	µg/mL
Br^-	<0.05	NO_3^-	<0.04
F^-	<0.006	$PO4^{-3}$	<0.06
NO_2^-	<0.03	$SO4^{-2}$	<0.05

Balances are calibrated regularly with weight sets traceable to NIST #32856, #32867 and others. This CRM is guaranteed stable and accurate to +/- 0.5% of the certified value. This includes uncertainty components due to preparation, homogeneity by the most precise method, and short-term and long-term stability. This guarantee is valid for a period of one year from the date of certification only when the material is kept tightly capped and stored under ambient laboratory conditions.

Date of Certification: APR - - 2019

Certifying Officer: Katherine Cullinan

Katherine Cullinan, QC Manager

© 2018 SPEX CertiPrep, LLC

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.

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Your Science is Our Passion®

203 Norcross Ave, Metuchen, NJ 08840
www.spexcertiprep.com • E-mail: crmsales@spexcsp.com
Phone: 1-800-LAB-SPEX • Fax: 732-603-9647

Reagent

IC FL cal_00013

RICCA CHEMICAL COMPANY®

1490 Lammers Pike
Batesville, IN 47006
http://www.riccachemical.com
1-888-GO-RICCA
customerservice@riccachemical.com

Certificate of Analysis

Fluoride Standard, 1000 ppm F⁻

Lot Number: 4805C89 **Product Number:** 3173

Manufacture Date: MAY 07, 2018
Expiration Date: OCT 2019

The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is based upon the volumetric method of preparation.
The concentration is confirmed by Fluoride ISE and is certified traceable to NIST SRM 2203.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Sodium Fluoride	7681-49-4	High Purity

Test	Specification	Result
Appearance	Colorless liquid	Passed
Fluoride (F)	995-1005 ppm	1000 ppm

Specification	Reference
Fluoride Solution, Stock (1.00 mL = 1.00 mg F)	ASTM (D 5542)
Fluoride Stock Solution (1.00 mL = 1.00 mg F-)	EPA (SW-846) (9056)
Fluoride Calibration Stock Solution (1,000 mg/L F-)	EPA (SW-846) (9214)
Stock Solution, 1.0 mL = 1.0 mg F	EPA (340.3)
Fluoride Solution, Stock (1.00 mL = 1.00 mg F)	ASTM (D 5996)
Fluoride Stock Solution (1.00 mL = 1.00 mg F?)	ASTM (D 4327)
Fluoride Stock Standard Solution (1 mg of F in 1 mL)	ACS (N/A)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
3173-16	500 mL natural poly	18 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

Jim Gibbs
Quality Control Supervisor
This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

This test report shall not be reproduced, except in full, without the written approval of Ricca Chemical Company.

Reagent

IC MS/MSD S04_00005

Fisher Scientific

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

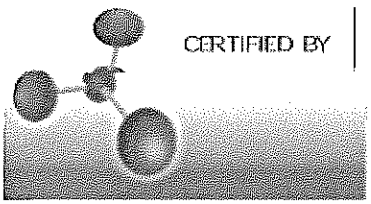
Certificate of Analysis

Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2008 standard by SAI Global Certificate Number CERT - 0064970

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Certain products (USP/FCC/NF/EP/BP/JP grades) are sold for use in food, drug, or medical device manufacturing. Fisher does not claim regulatory coverage under 21 CFR nor maintain DMF's with the FDA. The following are the actual analytical results obtained:

Catalog Number	**P304**	**Quality Test / Release Date**	**3/2/2015**
Lot Number	**147276**		
Description	**POTASSIUM SULFATE, CRYSTAL, CERTIFIED, A.C.S.**		
Country of Origin	**India**	*** Suggested Retest Date**	**Feb-2020**
Chemical Origin	**Inorganic-non animal**		
BSE/TSE Comment	This product is not manufactured from, or with, any type of animal product, nor any derivative of an animal product. As such, this product should not be considered a vector for BSE or TSE.		

Result name	Units	Specifications	Test Value
APPEARANCE		REPORT	FINE WHITE CRYSTALS
ASSAY	%	>= 99	99.4
CALCIUM	%	<= 0.01	<0.010
CHLORIDE	%	<= 0.001	<0.0010
HEAVY METALS (as Pb)	ppm	<= 5	<5.0
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
INSOLUBLE MATTER	%	<= 0.01	<0.010
IRON (Fe)	ppm	<= 5	<5.0
MAGNESIUM	%	<= 0.005	<0.0050
NITROGEN COMPOUNDS	ppm	<= 5	<5
PH 5% SOLUTION @ 25 DEG C		Inclusive Between 5.5 - 8.5	5.5
SODIUM (Na)	%	<= 0.02	<0.020



Lab Manager Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as a extension of this catalog number listed above. If there are any questions with this certificate, please call Chemical Services at (800) 227-6701.
*Based on suggested storage condition.

Reagent

IC SO4 ICV_00020

ERA

A Waters Company

Certificate of Analysis

PRODUCT:	1000 mg/L Sulfate (SO_4)
CATALOG NUMBER:	062 -125 mL; 995 - 500 mL
LOT NUMBER:	180818
ISSUE DATE:	August 16, 2018
REVISION DATE:	Original
STARTING MATERIAL:	Potassium Sulfate (K_2SO_4)
CERTIFIED CONCENTRATION[1]:	1000 mg/L
UNCERTAINTY[2]:	0.6%
MATRIX:	18 megohm deionized water
DENSITY:	0.9985 ± 0.0008 g/mL at 19.8°C and 755 mm Hg
TRACEABILITY[3]:	99.2%
NIST/SRM:	3181 Sulfate
VERIFICATION METHOD:	Ion Chromatography
STORAGE:	Store at 20-25°C

1. The **Certified Concentration** is the actual made-to concentration confirmed by ERA analytical verification.

2. The stated **Uncertainty** is the total propagated uncertainty at the 95% confidence interval. The uncertainty is based on the preparation of the product and includes uncertainty related to the starting material used and the volumetric and gravimetric measurements made. The method of calculating uncertainty is taken from the ISO Guide to the Expression of Uncertainty in Measurement (current version). The uncertainty applies to the product as supplied and does not take into account any required or optional dilutions and/or preparations the laboratory may perform while using this product.

3. Traceability ((% Recovery Certified Standard)/(% Recovery NIST SRM))* 100.

The traceability data shown were compiled by analyzing the ERA standards or their associated stock solutions against the applicable NIST SRMs. Where a NIST SRM is not available, the product is metrologically traceable through an unbroken chain of calibrations to NIST weights, each having stated uncertainties and utilizing measurement standards that are appropriate for the physical and/or chemical property being measured.

This standard **expires 8/2020**. The certified values are monitored and purchasers will be notified of any significant changes resulting in recertification or withdrawal of this certified reference material during the period of validity of this certificate.

This product is intended to be used as either a calibration standard or a quality control check of the entire analytical process for the analytes/matrix included in the standard.

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or email to info@eraqc.com

Certifying Officer: Brian Miller - Product Line Manager

ISO/IEC GUIDE 34:2009 ACCREDITED
REFERENCE MATERIAL PRODUCER
CERTIFICATE NO. 1539.03

ISO/IEC 17025:2005 ACCREDITED
CHEMICAL TESTING LABORATORY
CERTIFICATE NO. 1539.02

16341 Table Mtn Pkwy, Golden, CO 80403 800-372-0122 fax: 303-421-0159 www.eraqc.com

Reagent

IC sulfatecal_00057

ACCREDITED
Reference Materials Producer
Cert #2495.01

SPEXertificate®

Certificate of Reference Material

ACCREDITED
Chemical Testing
Cert #2495.02

Catalog Number: AS-SO49-2X **Lot No.** 4-197SO4-2X

Description: 1000 µg/mL Sulfate

EXPIRES JUN. 30, 2020

Matrix: H_2O

This **Ion Chromatography** Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for ion chromatography instrumentation. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Value: 1001 µg/mL ±5 µg/mL

Certified Value is Traceable to: 3181*

* - indicates NIST SRM † - indicates SPEX CertiPrep CRM (when NIST SRM is not available) ‡ - prepared gravimetrically

The CRM is prepared gravimetrically using high purity Potassium Sulfate, Lot# MAN1018SO4. The certified value listed is the average of values obtained by classical wet assay and ion chromatography analysis.

Refer to side 2 for details of measurement uncertainties.

Classical Wet Assay: 1002 µg/mL

Method: Precipitation using Barium Chloride. Filter, ignite, and weigh as BaSO4.

Instrumental Analysis by Ion Chromatography: 999 µg/mL

Uncertified Properties

Trace Ionic Impurities in the Actual Solution via IC Analysis:

Element	µg/mL	Element	µg/mL
Br^-	<0.006	NO_2^-	<0.004
Cl^-	<0.01	NO_3^-	<0.006
F^-	<0.008	$PO4^{-3}$	<0.01

Balances are calibrated regularly with weight sets traceable to NIST #32856, #32867 and others. This CRM is guaranteed stable and accurate to +/- 0.5% of the certified value. This includes uncertainty components due to preparation, homogeneity by the most precise method, and short-term and long-term stability. This guarantee is valid for a period of one year from the date of certification only when the material is kept tightly capped and stored under ambient laboratory conditions.

Date of Certification: JUN -- 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

MNX,TNX,DNX_00026

Agilent

Certificate of Analysis
ISO Guide 34

Custom Standard

Product Number: CUS-23984 **Page:** 1 of 1

Lot Number: CS-5628 **Lot Issue Date:** 16-Nov-2018 **Expiration Date:** 31-Dec-2019

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with Agilent Technologies ISO 9001 registered quality system. A review of the gravimetric preparation data by our ISO 17025 accredited laboratory serves to verify the concentration of each analyte. 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
1,3,5-trinitroso-1,3,5-triazacyclohexane (TNX)		RM12428	100.3 ± 0.5 µg/mL
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

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

ANAB ACCREDITED ISO GUIDE 34 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 ISO/IEC 17025 TESTING LABORATORY
ISO17025 Cert No. AT-1937

ORG ver 1.1

250 Smith Street North Kingstown, Rhode Island 02852 **www.ultrasci.com**

Reagent

MNX,TNX,DNX_00027

Agilent

Certificate of Analysis
ISO Guide 34

Custom Standard

Product Number: CUS-23984 **Page:** 1 of 1

Lot Number: CS-5628 **Lot Issue Date:** 16-Nov-2018 **Expiration Date:** 31-Dec-2019

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with Agilent Technologies ISO 9001 registered quality system. A review of the gravimetric preparation data by our ISO 17025 accredited laboratory serves to verify the concentration of each analyte. 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
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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

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

ANAB ACCREDITED ISO GUIDE 34 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 ISO/IEC 17025 TESTING LABORATORY
ISO17025 Cert No. AT-1937

ORG ver 1.1

250 Smith Street North Kingstown, Rhode Island 02852 **www.ultrasci.com**

Reagent

MNX,TNX,DNX_00036

Agilent

Certificate of Analysis
ISO Guide 34

Custom Standard

Product Number: CUS-23984 **Page:** 1 of 1

Lot Number: CS-5628 **Lot Issue Date:** 16-Nov-2018 **Expiration Date:** 31-Dec-2019

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with Agilent Technologies ISO 9001 registered quality system. A review of the gravimetric preparation data by our ISO 17025 accredited laboratory serves to verify the concentration of each analyte. 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
1,3,5-trinitroso-1,3,5-triazacyclohexane (TNX)		RM12428	100.3 ± 0.5 µg/mL
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

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

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

250 Smith Street North Kingstown, Rhode Island 02852 www.ultrasci.com

Reagent

NH3 ICV STD_00026

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 Ion Chromatography Solution
Catalog Number:	ICNNH41
Lot Number:	M2-NH662533
Matrix:	H2O
Value / Analyte(s):	1 000 µg/mL ea: Ammonium as N
Starting Material:	Ammonium Chloride
Starting Material Lot#:	1736
Starting Material Purity:	99.8500%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 996 ± 3 µg/mL

Density: 0.999 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **993 ± 3 µg/mL**
Fajans NIST SRM 999c Lot Number: 999c

Assay Method #2 **997 ± 2 µg/mL**
IC Assay NIST SRM 194a Lot Number: 194a

- 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.

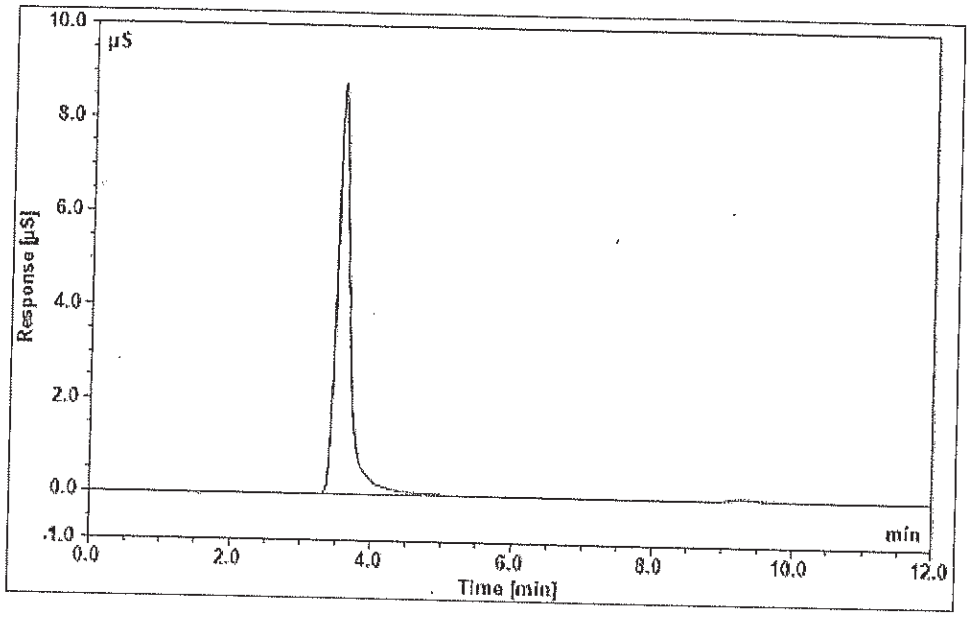
4.2 Balance Calibration

- 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 CHROMATOGRAM



Dionex ICS-2000 Ion Chromatograph

Analytical Column:	IonPac CS12A-5µm 3x150mm	**Eluent:**	20 mM MSA
Guard Column:	IonPac CG12A-5µm 3x30mm	**Eluent Flow Rate:**	0.50 mL/min
Anion Self Regen Suppressor/ Chemical Suppression:	N/A	**Column Temp:**	35° C
		Cell Temp:	35° C
Cation Self Regen Suppressor/ Chemical Suppression:	CERS 500 2mm	**Scale X-Axis:**	minutes
		Scale Y-Axis:	10 µS/cm
		Concentration:	10 µg/g
Suppressor Current/ Chemical Suppressant:	30 mA		

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**

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

November 03, 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 03, 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

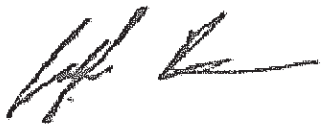
- Sealed TCT Bag Open Date: _____

- 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

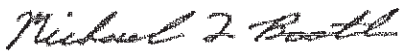
Certificate Prepared By:

Joseph Burns
Supervisor, Product Documentation



Certificate Approved By:

Michael Booth
Supervisor, Quality Control



Certifying Officer:

Paul Gaines
CEO, Senior Technical Director



Reagent

NOXT ICV STD_00022

ERA

A Waters Company

Certificate of Analysis

PRODUCT:	1000 mg/L Nitrate as N (NO_3-N)
CATALOG NUMBER:	052 -125 mL; 991 - 500 mL
LOT NUMBER:	031217
ISSUE DATE:	January 8, 2018
REVISION DATE:	Original
STARTING MATERIAL:	Potassium Nitrate (KNO_3)
CERTIFIED CONCENTRATION[1]:	1000 mg/L
UNCERTAINTY[2]:	0.6%
MATRIX:	18 megohm deionized water
DENSITY:	1.0028 ± 0.0008 g/mL at 21.5°C and 627 mm Hg
TRACEABILITY[3]:	102%
NIST/SRM:	3185 Nitrate
VERIFICATION METHOD:	Ion Chromatography
STORAGE:	Store at 20-25°C

1. The **Certified Concentration** is the actual made-to concentration confirmed by ERA analytical verification.

2. The stated **Uncertainty** is the total propagated uncertainty at the 95% confidence interval. The uncertainty is based on the preparation of the product and includes uncertainty related to the starting material used and the volumetric and gravimetric measurements made. The method of calculating uncertainty is taken from the ISO Guide to the Expression of Uncertainty in Measurement (current version). The uncertainty applies to the product as supplied and does not take into account any required or optional dilutions and/or preparations the laboratory may perform while using this product.

3. Traceability ((% Recovery Certified Standard)/(% Recovery NIST SRM))* 100.

   The traceability data shown were compiled by analyzing the ERA standards or their associated stock solutions against the applicable NIST SRMs. Where a NIST SRM is not available, the product is metrologically traceable through an unbroken chain of calibrations to NIST weights, each having stated uncertainties and utilizing measurement standards that are appropriate for the physical and/or chemical property being measured.

This standard **expires 12/2019**. The certified values are monitored and purchasers will be notified of any significant changes resulting in recertification or withdrawal of this certified reference material during the period of validity of this certificate.

This product is intended to be used as either a calibration standard or a quality control check of the entire analytical process for the analytes/matrix included in the standard.

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or email to info@eraqc.com

Certifying Officer: Brian Miller - Product Line Manager

ISO/IEC GUIDE 34:2009
ACCREDITED
REFERENCE MATERIAL PRODUCER
CERTIFICATE NO. 1539.03

ISO/IEC 17025:2005
ACCREDITED
CHEMICAL TESTING LABORATORY
CERTIFICATE NO. 1539.02

16341 Table Mtn Pkwy, Golden, CO 80403 800-372-0122 fax: 303-421-0159 www.eraqc.com

Reagent

PicricARestek_00085

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. : 31499 **Lot No.:** A0148431

Description : Picric Acid Standard

Picric Acid Standard 1000µg/mL, Methanol, 1mL/1000µg/mL *PGI BOX REQUIRED* SHIP FED EX GROUND ONLY

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2024 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Picric Acid	1,001.0 µg/mL	+/- 5.9459	µg/mL	Gravimetric
	CAS # 88-89-1 (Lot 06130CU)		+/- 54.8400	µg/mL	Unstressed
	Purity 97%		+/- 63.9488	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Specific Reference Material Notes:
This is a derivatized analysis.

Column:
250mm x 4.6mm
Ultra C18 (cat.# 9174575)

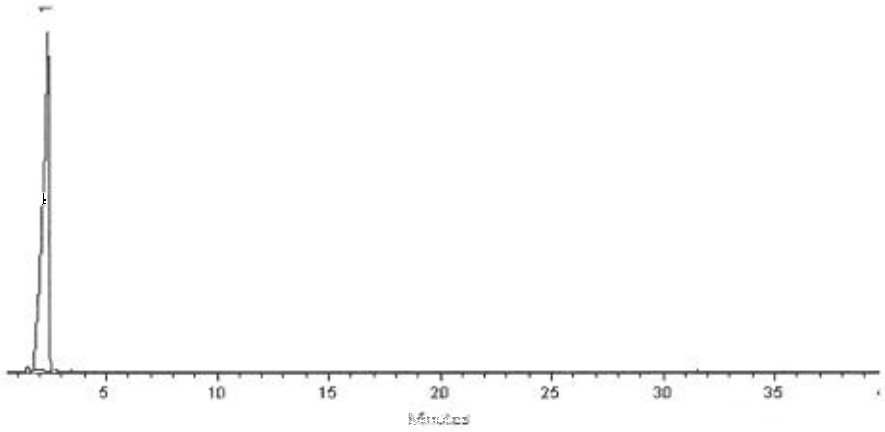
Flow Rate:
1.0 ml/min.

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.

Dustin J Lidgett

Dustin Lidgett - Mix Technician **Date Mixed:** 22-Apr-2019 **Balance:** 1127510105

Jennifer J Pollino

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 25-Apr-2019

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

RSK7gasMathes_00025

MATHESON
ask. . .The Gas Professionals™

Analysis Report

To: MATHESON LINWELD
4705 NOME ST
P O BOX 39126
DENVER, CO 80239

MTG Customer No: 504445

Manufacturing Location
1700 SCEPTER ROAD
WAVERLY, TN 37185

Product: Multi-Component Mixture

Grade: CERTIFIED
MTG Part No: G2682238

Cylinder Size: 4
Valve: CGA 350 SS

Contents:
Net: 7.57 ft³; 0.21 m³

Pressure: 1400 psia @ 70°F; 9653 kPa @ 21°C

CYLINDER NUMBER(S)
*DM016894

	Requested Concentration	Certified Concentration	Units	Blend Tolerance	Certified Accuracy
Butane	1.00	1.00	%	±10%	±2%
Acetylene	1.00	1.00	%	±10%	±2%
Isobutylene	1.00	1.00	%	±10%	±2%
Propane	1.00	1.00	%	±10%	±2%
Ethane	1.00	0.995	%	±10%	±2%
Ethylene	1.00	0.973	%	±10%	±2%
Methane	1.00	1.00	%	±10%	±2%
Nitrogen	Balance	Balance			

TRACEABILITY

COMMENTS

*** Indicates the actual cylinder(s) analyzed.**

Lot No: 9307628511
Fill Date: 11/30/2017
Expiration Date: 12/01/2019

Analysis Date: 12/01/2017

Unless otherwise indicated, Matheson Tri-Gas terms and conditions govern the product data contained herein. This document was issued electronically and data validated by electronic signature. For further information visit www.matheson-trigas.com.

Andrew L. Couch — 12/01/2017
Andrew Couch - Analyst — Date

Jesse Hayes — 12/04/2017
Jesse Hayes - QA Approval — Date

Reagent

TKN CAL STD_00017

nsi lab solutions
protect more. test more.
7212 ACC Blvd. | Raleigh, NC 27617 | 800.234.7837

Certificate of Analysis

TKN Calibration Standard - 1000 mg/L

Catalog Number: IS-009, IS-009-500
Lot Number: 010617
Manufacture Date: 01/06/17
Certified Date: 01/12/17

Expiration: 01/31/2021
Matrix: Water
Hazards: Irritant
(See MSDS)

Bulk Number	Analyte	CAS #	Purity	Certified Concentration (mg/L TKN)
W-1477-25	TKN from Glycine	56-40-6	99.4%	1000 ± 4.60

Packaging, Storage, Instructions For Use

Store at room temperature (15-30°C). After opening, this solution should be stored tightly capped at 2-8°C.

This certified reference material (CRM) is packaged in low density polyethylene. Allow to equilibrate to room temperature before use. Small aliquots should be poured out of the bottle rather than directly pipetted out of bottle in order to prevent contamination or premature degradation. A 1 mL sample size is recommended. Smaller sample volumes may negatively affect estimated uncertainty.

Traceability Information

Analyte Source Materials: The highest purity analyte source materials are used in the manufacture of this CRM. The actual purity is referenced above. Analyte source material purity and associated uncertainty has been analytically verified against appropriate NIST SRMs, if available.

Method: Certified concentration confirmed by HPLC analysis against an independent reference standard with n=3.

Balance: All analytical balances are calibrated on a semiannual basis by an ISO 17025 accredited calibration laboratory and are traceable to NIST. Traceable Calibration Certificate available upon request.

All balances are checked daily by an in-house standard operating procedure. The weights used for this daily verification are calibrated annually by an ISO 17025 accredited calibration laboratory and are certified traceable to NIST. Certificate of Calibration and Traceability available upon request.

Thermometer: All thermometers are NIST traceable through thermometers that are calibrated annually by an ISO 17025 accredited calibration laboratory.

Glassware: All glassware used in the manufacture of our CRMs is Class A. An in-house standard operating procedure is used to verify all glassware prior to it being placed into service. Volumetric pipetors are calibrated every four months by an ISO 17025 accredited calibration laboratory.

Catalog Number: IS-009, IS-009-500
Lot Number: 010617

Intended Uses

- Calibration of analytical instruments
- Validation of analytical methods
- Preparation of working level reference materials, i.e. "check standards"
- Detection limit studies

Uncertainty

The ± uncertainty associated with the certified concentration is the expanded uncertainty at 95% confidence interval (CI) with K=2. This expanded uncertainty incorporates contributions from manufacturing, homogeneity, and stability.

Homogeneity

This CRM was thoroughly mixed in production. Batch homogeneity was established through analysis of samples chosen at random. A minimum 1 mL sample size is recommended.

Stability/Expiration

The stability of this CRM is based on short-term and long-term monitoring of the certified concentration. The expiration date is guaranteed to be valid from the manufacture date and is based on results of long-term monitoring.

Ewart Morris

Ewart Morris, Inorganics Technical Manager

Mark Hammersla

Mark Hammersla, President

Reagent

TKN ICV_00011

ERA

A Waters Company

Certificate of Analysis

PRODUCT:	1000 mg/L Total Kjeldahl Nitrogen (TKN)
CATALOG NUMBER:	043 -125 mL; 996 - 500 mL
LOT NUMBER:	281018
ISSUE DATE:	December 7, 2018
REVISION DATE:	Original
STARTING MATERIAL:	Glycine (NH_2CH_2COOH)
CERTIFIED CONCENTRATION[1]:	1000 mg/L
UNCERTAINTY[2]:	0.6%
MATRIX:	18 megohm deionized water and 1% (v/v) HCl
DENSITY:	1.0055 ± 0.0010 g/mL at 16.6°C and 754 mm Hg
TRACEABILITY[3]:	100%
NIST/SRM:	194a Ammonium Dihydrogen Phosphate
VERIFICATION METHOD:	Ion Selective Electrode (ISE)
STORAGE:	Store at 20-25°C

1. The **Certified Concentration** is the actual made-to concentration confirmed by ERA analytical verification.

2. The stated **Uncertainty** is the total propagated uncertainty at the 95% confidence interval. The uncertainty is based on the preparation of the product and includes uncertainty related to the starting material used and the volumetric and gravimetric measurements made. The method of calculating uncertainty is taken from the ISO Guide to the Expression of Uncertainty in Measurement (current version). The uncertainty applies to the product as supplied and does not take into account any required or optional dilutions and/or preparations the laboratory may perform while using this product.

3. Traceability ((% Recovery Certified Standard)/(% Recovery NIST SRM))* 100.

   The traceability data shown were compiled by analyzing the ERA standards or their associated stock solutions against the applicable NIST SRMs. Where a NIST SRM is not available, the product is metrologically traceable through an unbroken chain of calibrations to NIST weights, each having stated uncertainties and utilizing measurement standards that are appropriate for the physical and/or chemical property being measured.

This standard **expires 10/2020**. The certified values are monitored and purchasers will be notified of any significant changes resulting in recertification or withdrawal of this certified reference material during the period of validity of this certificate.

This product is intended to be used as either a calibration standard or a quality control check of the entire analytical process for the analytes/matrix included in the standard.

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or email to info@eraqc.com

Certifying Officer: Brian Miller - Product Line Manager

ISO/IEC GUIDE 34:2009

ACCREDITED

REFERENCE MATERIAL PRODUCER
CERTIFICATE NO. 1539.03

ISO/IEC 17025:2005

ACCREDITED

CHEMICAL TESTING LABORATORY
CERTIFICATE NO. 1439.02

16341 Table Mtn Pkwy, Golden, CO 80403 800-372-0122 fax: 303-421-0159 www.eraqc.com

Reagent

TOC LCS Std_00048

Agilent

Certificate of Analysis
ISO Guide 34

Product Number: IQC-106
Lot Number: 0006465171

Lot Issue Date: 10-May 2019
Expiration Date: 30-Jun 2021

Product Name: Total Organic Carbon (TOC) Standard

Description:
This Reference Material (RM) was gravimetrically prepared in accordance with ISO Guide 34 and under Agilent's ISO 9001 registered quality system. The neat materials used for this product have been verified by Agilent's ISO 17025 laboratory and under Agilent's ISO Guide 34 accreditation. The analyte concentrations were verified by Agilent's ISO 17025 accredited laboratory. For each analyte, the true value, with its uncertainty value calculated at the 95% confidence level, is reported below.

Analyte	Starting Material	Lot Number	Purity (%)	Analyte Concentration	Traceability & Method
TOC	potassium hydrogen phthalate	RM14067	99.97	1001 ± 5 µg/mL	NAA02099; TOC Analyzer

Solvent: water (low TOC, <50 ppb)

Storage: Store at Room Temperature (15° to 30°C).

Traceability:
Traceability has been established through an unbroken chain of comparisons, each having stated uncertainties. Comparisons are based on appropriate physical or chemical measurements, including gravimetric or volumetric dilution, where the mass or volume of a solution before and after dilution is measured. The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1, ISO 9001, ISO 17025, and ISO Guide 34. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 819.

Estimation of Uncertainties:
The true value is reported, with its uncertainty value calculated at the 95% confidence level.

Homogeneity:
This RM was formulated and unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening and should be processed without delay for the true value to be valid within the stated uncertainties. Do not pipet from the bottle. Do not return any material removed for pipetting to the bottle. Tightly cap the bottle after removing any material and store according to the instructions noted above.

Hazards:
Refer to the Safety Data Sheet for information regarding this RM.

Expiration of Certification:
The certification of this RM is valid, within the measurement uncertainty specified, until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

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 Management System

ANAB ACCREDITED TESTING LABORATORY
ISO17025 Cert No. AT-1937

250 Smith Street North Kingstown, Rhode Island 02852 www.agilent.com/quality

Certificate of Analysis
ISO Guide 34

Product Number: IQC-106
Lot Number: 0006465171

Lot Issue Date: 10-May 2019
Expiration Date: 30-Jun 2021

Maintenance of Certification:
The real-time, long term stability of the RM may be monitored over the lifetime of the certification. If substantive changes occur that affect the certification before the expiration of this certificate, Agilent Technologies will notify the purchaser.

Monica Bourgeois
QMS Representative

ISO Guide 34 Cert No.
AR-1936

Produced in accordance with TUV USA Inc 56 100 18560026
registered ISO 9001 Quality Management System

Page 2 of 2

ISO17025 Cert No.
AT-1937

RSK_175_DOD5

Dissolved Gases (GC)

FORM III
GC VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 002F0201.D

Lab ID: LCS 280-475070/2 Client ID:

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC	QC LIMITS REC	#
Methane	0.0730	0.0735	101	73-125	

Column to be used to flag recovery and RPD values

FORM III RSK-175

FORM III
GC VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 003F0301.D

Lab ID: LCSD 280-475070/3 Client ID:

COMPOUND	SPIKE ADDED (mg/L)	LCSD CONCENTRATION (mg/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Methane	0.0730	0.0719	98	2	20	73-125	

Column to be used to flag recovery and RPD values

FORM III RSK-175

FORM III
GC VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 021F1701.D

Lab ID: 280-129830-3 MS Client ID: EW7-PM25B-1-35 MS

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENTRATION (mg/L)	MS CONCENTRATION (mg/L)	MS % REC	QC LIMITS REC	#
Methane	0.0730	3.9	4.79	1285	73-125	4

Column to be used to flag recovery and RPD values

FORM III RSK-175

FORM III
GC VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 022F1801.D

Lab ID: 280-129830-3 MSD Client ID: EW7-PM25B-1-35 MSD

COMPOUND	SPIKE ADDED (mg/L)	MSD CONCENTRATION (mg/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Methane	0.0730	4.48	859	7	20	73-125	4

Column to be used to flag recovery and RPD values

FORM III RSK-175

FORM IV
GC VOA METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: MB 280-475070/4

Matrix: Water Date Extracted:

Lab File ID:(1) 004F0401.D Lab File ID:(2) 004F0401.D

Date Analyzed:(1) 10/23/2019 10:41 Date Analyzed:(2) 10/23/2019 10:41

Instrument ID:(1) VGC_J Instrument ID:(2) VGC_J

GC Column:(1) HP-Plot Q ID: 0.53(mm) GC Column:(2) Rt-Alumina K ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 280-475070/2	10/23/2019 10:14	10/23/2019 10:14
	LCSD 280-475070/3	10/23/2019 10:28	10/23/2019 10:28
EW7-PM25B-1-35	280-129830-3	10/23/2019 17:33	10/23/2019 17:33
EW7-PM25B-1-35 DU	280-129830-3 DU	10/23/2019 17:46	10/23/2019 17:46
EW7-PM25B-1-35 MS	280-129830-3 MS	10/23/2019 18:00	10/23/2019 18:00
EW7-PM25B-1-35 MSD	280-129830-3 MSD	10/23/2019 18:13	10/23/2019 18:13
EW7-PM23A-1-25	280-129830-1	10/23/2019 19:07	10/23/2019 19:07
EW7-PM25A-1-25	280-129830-2	10/23/2019 19:21	10/23/2019 19:21

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Client Sample ID: EW7-PM23A-1-25 Lab Sample ID: 280-129830-1

Instrument ID (1): VGC_J Instrument ID (2): VGC_J

Date Analyzed (1): 10/23/2019 19:07 Date Analyzed (2): 10/23/2019 19:07

GC Column (1): HP-Plot Q ID: 0.53(mm) GC Column (2): Rt-Alumina KC ID: 0.53(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
Methane	1		1.68	1.65	1.73	0.42		1.4
	2		1.26	1.24	1.32	0.42		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Client Sample ID: EW7-PM25A-1-25 Lab Sample ID: 280-129830-2

Instrument ID (1): VGC_J Instrument ID (2): VGC_J

Date Analyzed (1): 10/23/2019 19:21 Date Analyzed (2): 10/23/2019 19:21

GC Column (1): HP-Plot Q ID: 0.53(mm) GC Column (2): Rt-Alumina KC ID: 0.53(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
Methane	1		1.68	1.65	1.73	0.59		1.4
	2		1.26	1.24	1.32	0.60		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Client Sample ID: EW7-PM25B-1-35 Lab Sample ID: 280-129830-3

Instrument ID (1): VGC_J Instrument ID (2): VGC_J

Date Analyzed (1): 10/23/2019 17:33 Date Analyzed (2): 10/23/2019 17:33

GC Column (1): HP-Plot Q ID: 0.53(mm) GC Column (2): Rt-Alumina KC ID: 0.53(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
Methane	1		1.67	1.65	1.73	3.9		1.6
	2		1.26	1.24	1.32	3.9		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Client Sample ID: EW7-PM25B-1-35 MS Lab Sample ID: 280-129830-3 MS

Instrument ID (1): VGC_J Instrument ID (2): VGC_J

Date Analyzed (1): 10/23/2019 18:00 Date Analyzed (2): 10/23/2019 18:00

GC Column (1): HP-Plot Q ID: 0.53(mm) GC Column (2): Rt-Alumina KC ID: 0.53(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
Methane	1		1.67	1.65	1.73	4.79		2.0
	2		1.25	1.24	1.32	4.89		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Client Sample ID: EW7-PM25B-1-35 MSD Lab Sample ID: 280-129830-3 MSD

Instrument ID (1): VGC_J Instrument ID (2): VGC_J

Date Analyzed (1): 10/23/2019 18:13 Date Analyzed (2): 10/23/2019 18:13

GC Column (1): HP-Plot Q ID: 0.53(mm) GC Column (2): Rt-Alumina KC ID: 0.53(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
Methane	1		1.67	1.65	1.73	4.48		1.9
	2		1.25	1.24	1.32	4.57		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Client Sample ID: EW7-PM25B-1-35 DU Lab Sample ID: 280-129830-3 DU

Instrument ID (1): VGC_J Instrument ID (2): VGC_J

Date Analyzed (1): 10/23/2019 17:46 Date Analyzed (2): 10/23/2019 17:46

GC Column (1): HP-Plot Q ID: 0.53(mm) GC Column (2): Rt-Alumina KC ID: 0.53(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
Methane	1		1.67	1.65	1.73	4.39		1.9
	2		1.26	1.24	1.32	4.47		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 280-475070/2

Instrument ID (1): VGC_J Instrument ID (2): VGC_J

Date Analyzed (1): 10/23/2019 10:14 Date Analyzed (2): 10/23/2019 10:14

GC Column (1): HP-Plot Q ID: 0.53(mm) GC Column (2): Rt-Alumina KC ID: 0.53(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
Methane	1		1.70	1.65	1.73	0.0735		0.5
	2		1.28	1.24	1.32	0.0732		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 280-475070/3

Instrument ID (1): VGC_J Instrument ID (2): VGC_J

Date Analyzed (1): 10/23/2019 10:28 Date Analyzed (2): 10/23/2019 10:28

GC Column (1): HP-Plot Q ID: 0.53(mm) GC Column (2): Rt-Alumina KC ID: 0.53(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
Methane	1		1.70	1.65	1.73	0.0719		0.4
	2		1.27	1.24	1.32	0.0716		

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Client Sample ID: EW7-PM23A-1-25 Lab Sample ID: 280-129830-1

Matrix: Water Lab File ID: 026F2201.D

Analysis Method: RSK-175 Date Collected: 10/16/2019 10:45

Sample wt/vol: 18(mL) Date Analyzed: 10/23/2019 19:07

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: HP-Plot Q ID: 0.53(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 475070 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
74-82-8	Methane	0.42		0.0050	0.0020	0.00063

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\026F2201.D
Lims ID: 280-129830-H-1
Client ID: EW7-PM23A-1-25
Sample Type: Client
Inject. Date: 23-Oct-2019 19:07:48 ALS Bottle#: 26 Worklist Smp#: 26
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: 280-129830-h-1
Operator ID: GM Instrument ID: VGC_J

Method: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 24-Oct-2019 08:56:41 Calib Date: 15-Apr-2019 12:11:08
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151909.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0332

First Level Reviewer: sciannac Date: 24-Oct-2019 08:51:46

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
1 Methane						
1	1.256	1.276	-0.020	56876669	424.4	
2	1.680	1.690	-0.010	47964871	418.5	
					RPD = 1.40	
2 Ethane						
1		1.554			ND	
2		2.891				
3 Ethylene						
1		1.871			ND	
2		2.515				
4 Propane						
1		2.603			ND	
2		4.685				
5 Acetylene						
1		4.032			ND	
2		2.665				
6 Butane						
1		4.349			ND	
2		6.146				
7 isobutylene						
1		5.283			ND	
2		5.999				

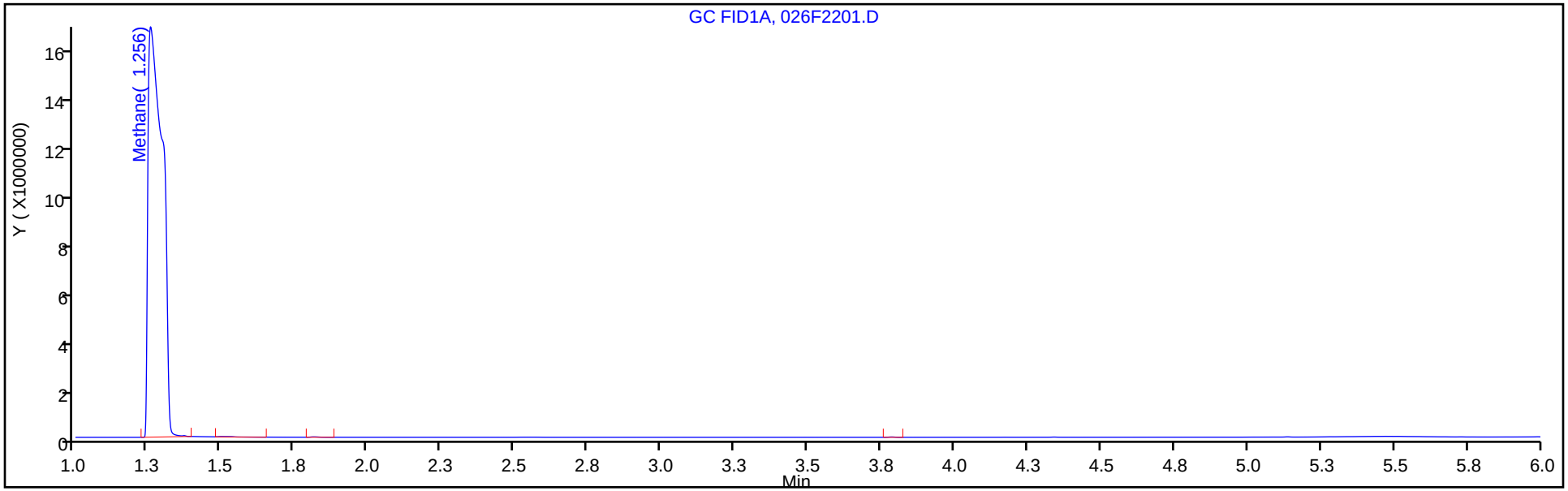
Report Date: 24-Oct-2019 08:56:48 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

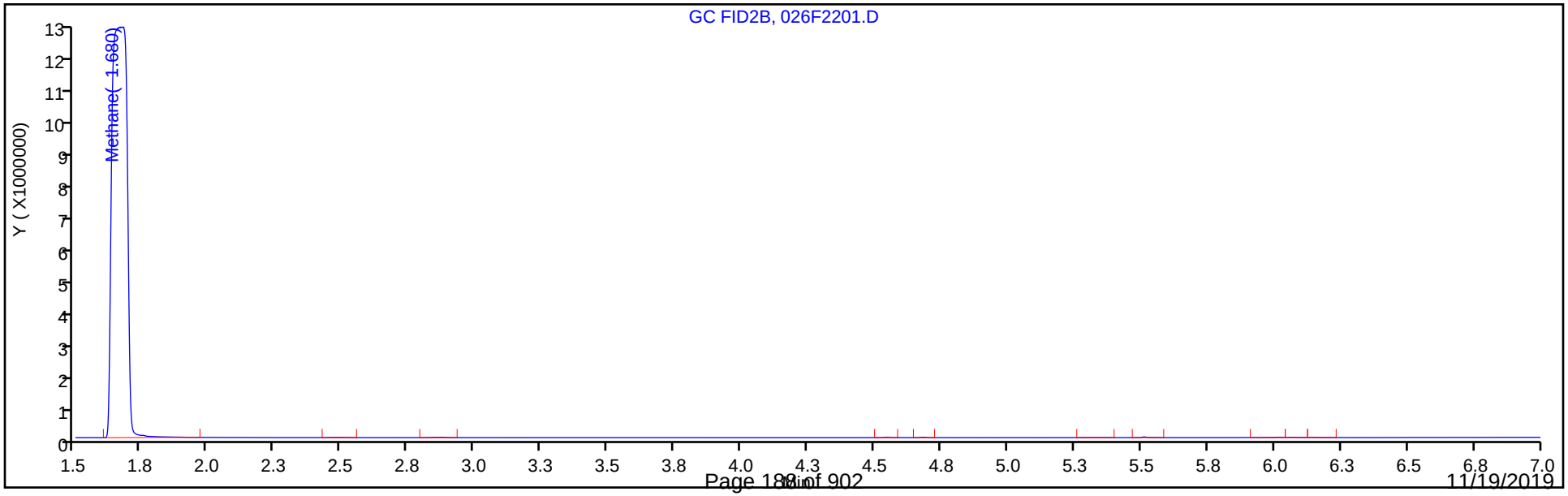
Data File: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\026F2201.D

Injection Date:	23-Oct-2019 19:07:48	Instrument ID:	VGC_J	Operator ID:	GM
Lims ID:	280-129830-H-1	Lab Sample ID:	280-129830-1	Worklist Smp#:	26
Client ID:	EW7-PM23A-1-25				
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Client Sample ID: EW7-PM25A-1-25 Lab Sample ID: 280-129830-2

Matrix: Water Lab File ID: 027F2301.D

Analysis Method: RSK-175 Date Collected: 10/16/2019 12:50

Sample wt/vol: 18(mL) Date Analyzed: 10/23/2019 19:21

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: HP-Plot Q ID: 0.53(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 475070 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
74-82-8	Methane	0.59		0.0050	0.0020	0.00063

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\027F2301.D
Lims ID: 280-129830-I-2
Client ID: EW7-PM25A-1-25
Sample Type: Client
Inject. Date: 23-Oct-2019 19:21:25 ALS Bottle#: 27 Worklist Smp#: 27
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: 280-129830-i-2
Operator ID: GM Instrument ID: VGC_J

Method: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 24-Oct-2019 08:56:41 Calib Date: 15-Apr-2019 12:11:08
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151909.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0332

First Level Reviewer: sciannac Date: 24-Oct-2019 08:51:54

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
1 Methane						
1	1.255	1.276	-0.021	80003921	597.1	
2	1.677	1.690	-0.013	67487784	588.9	
					RPD = 1.37	
2 Ethane						
1		1.554			ND	
2		2.891				
3 Ethylene						
1		1.871			ND	
2		2.515				
4 Propane						
1		2.603			ND	
2		4.685				
5 Acetylene						
1		4.032			ND	
2		2.665				
6 Butane						
1		4.349			ND	
2		6.146				
7 isobutylene						
1		5.283			ND	
2		5.999				

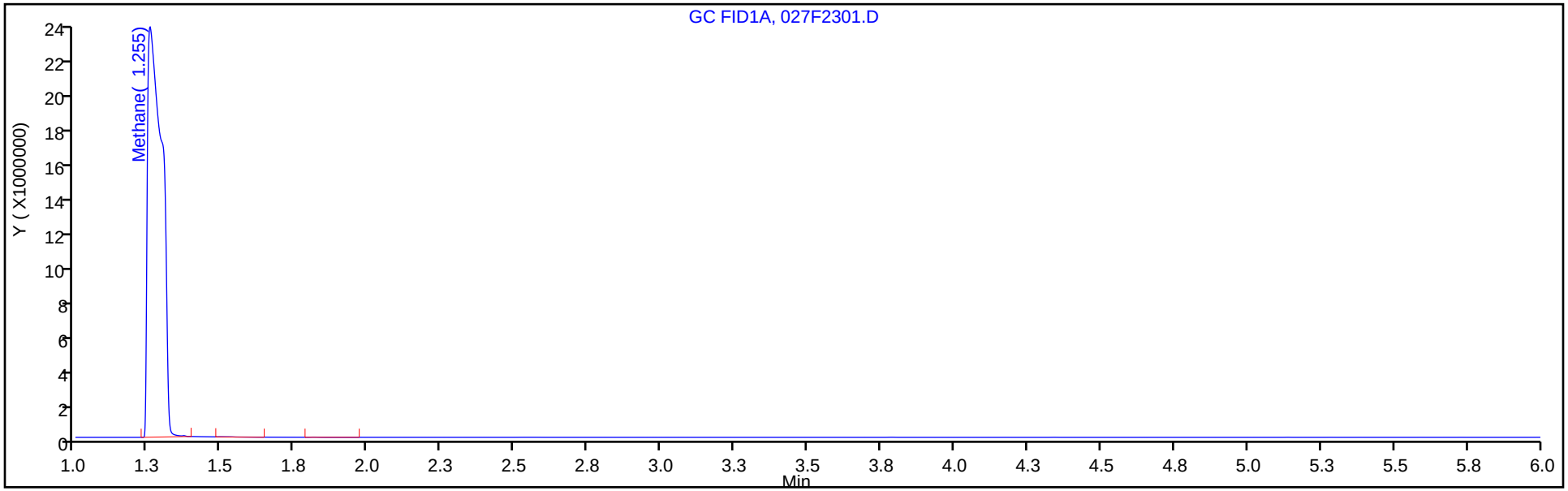
Report Date: 24-Oct-2019 08:56:48 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

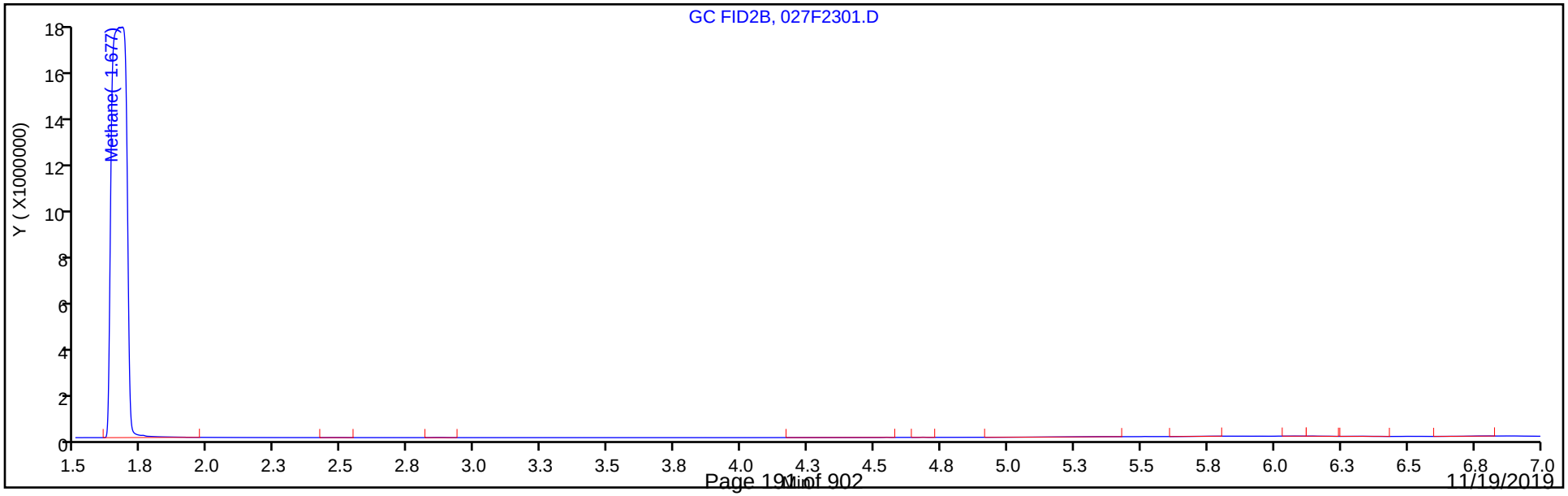
Data File: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\027F2301.D

Injection Date:	23-Oct-2019 19:21:25	Instrument ID:	VGC_J	Operator ID:	GM
Lims ID:	280-129830-I-2	Lab Sample ID:	280-129830-2	Worklist Smp#:	27
Client ID:	EW7-PM25A-1-25				
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	27
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Client Sample ID: EW7-PM25B-1-35 Lab Sample ID: 280-129830-3

Matrix: Water Lab File ID: 019F1501.D

Analysis Method: RSK-175 Date Collected: 10/16/2019 14:55

Sample wt/vol: 18(mL) Date Analyzed: 10/23/2019 17:33

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: HP-Plot Q ID: 0.53(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 475070 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
74-82-8	Methane	3.9	J1	0.0050	0.0020	0.00063

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\019F1501.D
Lims ID: 280-129830-H-3
Client ID: EW7-PM25B-1-35
Sample Type: Client
Inject. Date: 23-Oct-2019 17:33:06 ALS Bottle#: 19 Worklist Smp#: 19
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: 280-129830-h-3
Operator ID: GM Instrument ID: VGC_J

Method: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 24-Oct-2019 08:56:41 Calib Date: 15-Apr-2019 12:11:08
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151909.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0332

First Level Reviewer: sciannac Date: 24-Oct-2019 08:42:35

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
1 Methane						
1	1.257	1.276	-0.019	524616863	3916.6	
2	1.674	1.690	-0.016	441709542	3855.8	
					RPD = 1.56	
2 Ethane						
1		1.554			ND	
2		2.891				
3 Ethylene						
1		1.871			ND	
2		2.515				
4 Propane						
1		2.603			ND	
2		4.685				
5 Acetylene						
1		4.032			ND	
2		2.665				
6 Butane						
1		4.349			ND	
2		6.146				
7 isobutylene						
1		5.283			ND	
2		5.999				

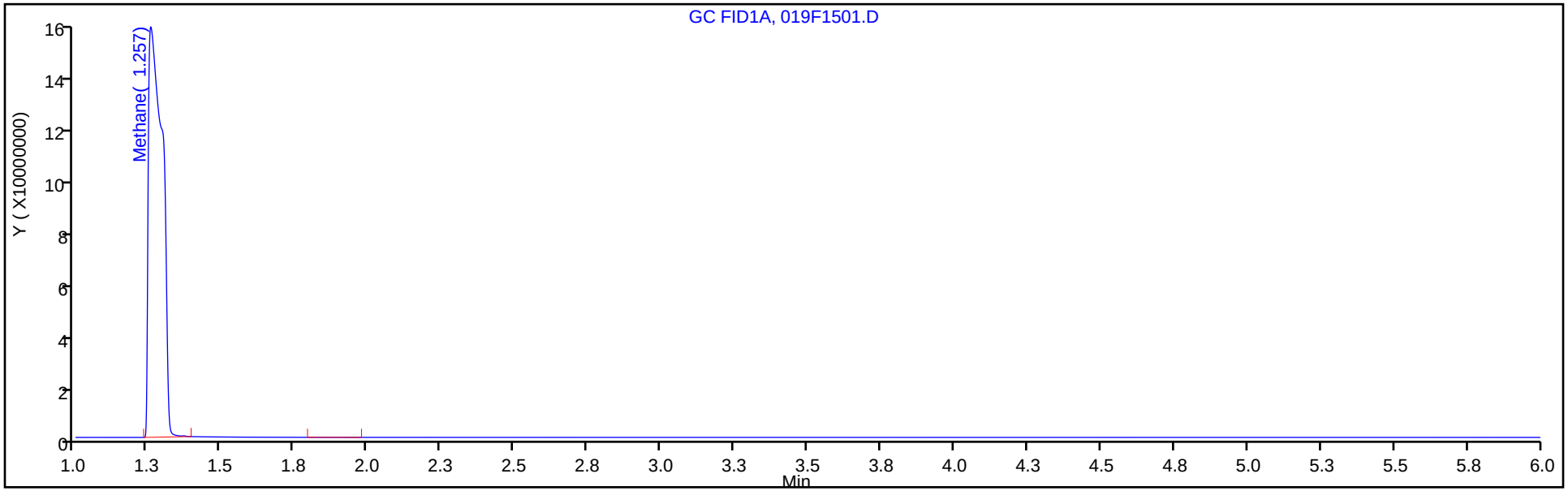
Report Date: 24-Oct-2019 08:56:42 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

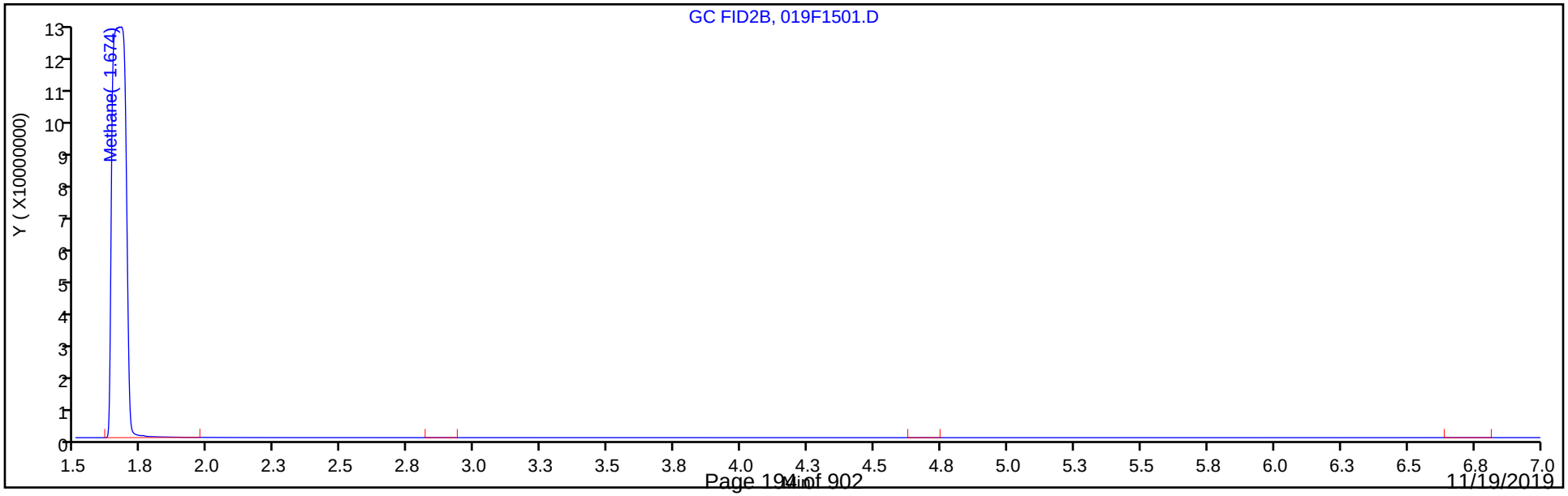
Data File: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\019F1501.D

Injection Date:	23-Oct-2019 17:33:06	Instrument ID:	VGC_J	Operator ID:	GM
Lims ID:	280-129830-H-3	Lab Sample ID:	280-129830-3	Worklist Smp#:	19
Client ID:	EW7-PM25B-1-35				
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VI
GC VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1 Analy Batch No.: 454595

SDG No.:

Instrument ID: VGC_J GC Column: Rt-Alumina ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/15/2019 10:23 Calibration End Date: 04/15/2019 12:11 Calibration ID: 36051

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-454595/1	04151901.D
Level 2	IC 280-454595/2	04151902.D
Level 3	IC 280-454595/3	04151903.D
Level 4	IC 280-454595/4	04151904.D
Level 5	ICRT 280-454595/5	04151905.D
Level 6	IC 280-454595/6	04151906.D
Level 7	IC 280-454595/7	04151907.D
Level 8	IC 280-454595/8	04151908.D
Level 9	IC 280-454595/9	04151909.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8	LVL 9		RT WINDOW	AVG RT
Methane	1.278	1.279	1.278	1.275	1.271	1.267	1.263	1.265	1.263		1.231 - 1.311	1.271
Ethane	1.543	1.556	1.563	1.544	1.556	1.549	1.549				1.506 - 1.606	1.551
Ethylene	1.877	1.890	1.889	1.885	1.880	1.866	1.870				1.830 - 1.930	1.880
Acetylene	4.091	4.095	4.094	4.089	4.078	4.070	4.057				3.998 - 4.158	4.082

FORM VI
GC VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1 Analy Batch No.: 454595

SDG No.:

Instrument ID: VGC_J GC Column: Rt-Alumina ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/15/2019 10:23 Calibration End Date: 04/15/2019 12:11 Calibration ID: 36051

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-454595/1	04151901.D
Level 2	IC 280-454595/2	04151902.D
Level 3	IC 280-454595/3	04151903.D
Level 4	IC 280-454595/4	04151904.D
Level 5	ICRT 280-454595/5	04151905.D
Level 6	IC 280-454595/6	04151906.D
Level 7	IC 280-454595/7	04151907.D
Level 8	IC 280-454595/8	04151908.D
Level 9	IC 280-454595/9	04151909.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 2 LVL 6	LVL 3 LVL 7	LVL 4 LVL 8		B	M1	M2								
Methane	204398 131881 131842	184432 123000	160460 138803	145282 125426	Lin2	35657.0530	133937.900							0.9950		0.9900
Ethane	106648 126474	133252 117971	131481 131045	137677	Ave		126364.118				8.4		20.0			
Ethylene	92446 106296	109949 99762	109227 107387	115582	Ave		105806.995				7.1		20.0			
Acetylene	26743 33864	32134 32487	32468 33051	34153	Ave		32128.5566				7.8		20.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
GC VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1 Analy Batch No.: 454595

SDG No.:

Instrument ID: VGC_J GC Column: Rt-Alumina ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/15/2019 10:23 Calibration End Date: 04/15/2019 12:11 Calibration ID: 36051

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-454595/1	04151901.D
Level 2	IC 280-454595/2	04151902.D
Level 3	IC 280-454595/3	04151903.D
Level 4	IC 280-454595/4	04151904.D
Level 5	ICRT 280-454595/5	04151905.D
Level 6	IC 280-454595/6	04151906.D
Level 7	IC 280-454595/7	04151907.D
Level 8	IC 280-454595/8	04151908.D
Level 9	IC 280-454595/9	04151909.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Methane	Lin2	93261 17958876	168302 40532226	292852 226637342	2121207 952923785	9627756	0.456 146	0.913 292	1.83 1807	14.6 7228	73.0
Ethane	Ave	91221 32290083	227953 71736807	449849	3768385	17308693	0.855 274	1.71 547	3.42	27.4	137
Ethylene	Ave	73764 25472652	175461 54838846	348615	2951189	13570482	0.798 255	1.60 511	3.19	25.5	128
Acetylene	Ave	19810 7700889	47607 15668916	96205	809586	4013672	0.741 237	1.48 474	2.96	23.7	119

Curve Type Legend:

Ave = Average
Lin2 = Linear 1/conc^2

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151901.D
Lims ID: IC L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 15-Apr-2019 10:23:57 ALS Bottle#: 1 Worklist Smp#: 1
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: IC L1
Misc. Info.: 280-0080933-001
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 15-May-2019 11:57:50 Calib Date: 15-Apr-2019 12:11:08
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151909.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0333

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.278	1.271	0.007	93261	0.4563	0.4301	
2	1.692	1.692	0.000	75515	0.4563	0.4314	
						RPD = 0.31	
2 Ethane							
1	1.543	1.556	-0.013	91221	0.8553	0.7219	
2	2.890	2.889	0.001	77042	0.8553	0.7173	
						RPD = 0.64	
3 Ethylene							
1	1.877	1.880	-0.003	73764	0.7979	0.6972	
2	2.514	2.512	0.002	61480	0.7979	0.6831	
						RPD = 2.04	
4 Propane							
1	2.651	2.632	0.019	147932	1.25	1.09	
2	4.691	4.687	0.004	125161	1.25	1.09	
						RPD = 0.25	
5 Acetylene							
1	4.091	4.078	0.013	19810	0.7408	0.6166	
2	2.667	2.652	0.015	18179	0.7408	0.6418	
						RPD = 4.01	
6 Butane							M
1	4.410	4.381	0.029	211953	1.65	1.51	
2	6.155	6.146	0.009	195662	1.65	1.63	M
						RPD = 7.68	
7 isobutylene							
1	5.333	5.311	0.022	147116	1.60	1.52	
2	6.003	5.998	0.005	121709	1.60	1.50	
						RPD = 1.22	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

RSK7gasMathes_00026 Amount Added: 1.25 Units: uL

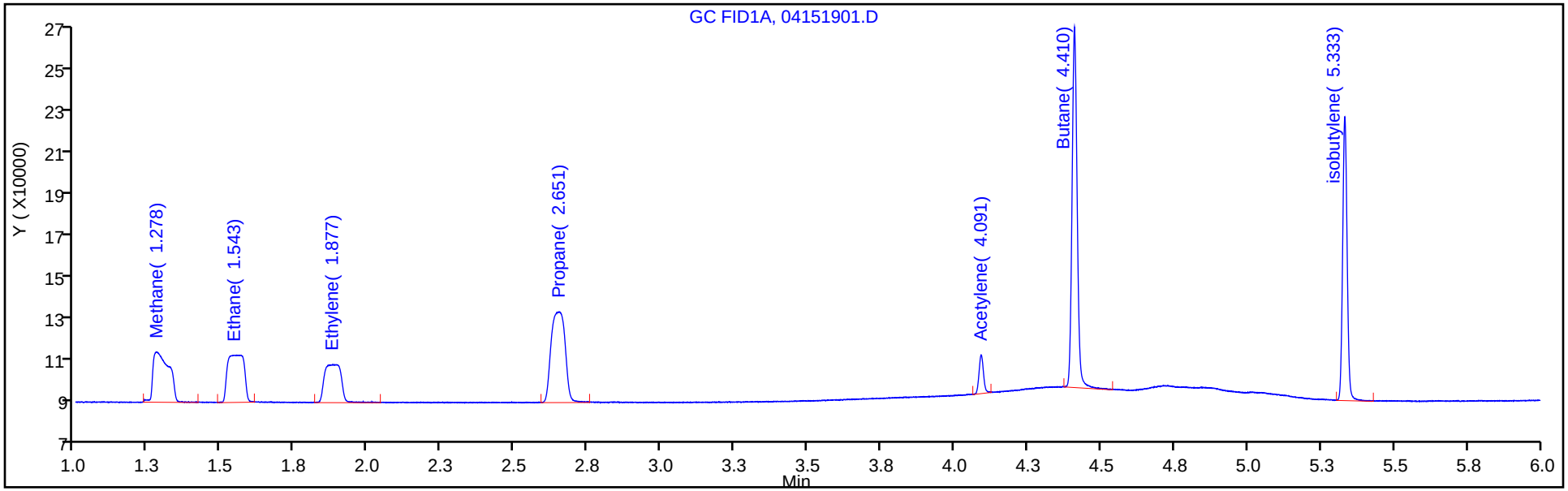
Report Date: 15-May-2019 11:57:50 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

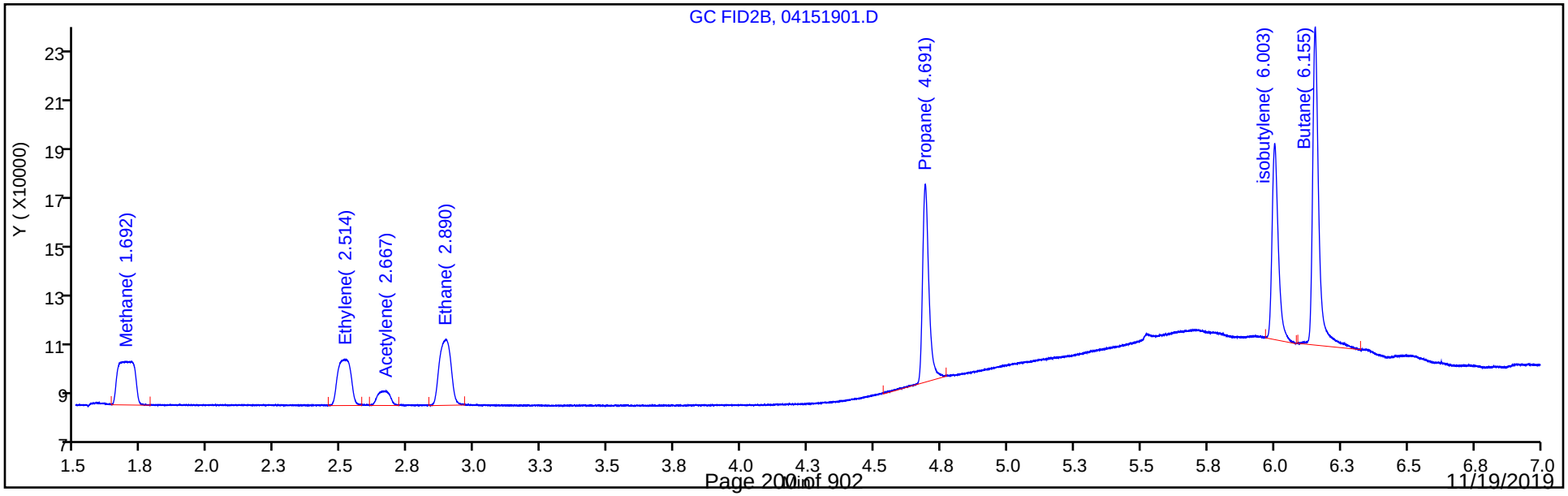
Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151901.D

Injection Date:	15-Apr-2019 10:23:57	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	IC L1			Worklist Smp#:	1
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151902.D
Lims ID: IC L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 15-Apr-2019 10:37:05 ALS Bottle#: 2 Worklist Smp#: 2
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: IC L2
Misc. Info.: 280-0080933-002
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 15-May-2019 11:57:51 Calib Date: 15-Apr-2019 12:11:08
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151909.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0333

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.279	1.271	0.008	168302	0.9125	0.99	
2	1.699	1.692	0.007	139116	0.9125	0.9867	
						RPD = 0.37	
2 Ethane							
1	1.556	1.556	0.000	227953	1.71	1.80	
2	2.899	2.889	0.010	191594	1.71	1.78	
						RPD = 1.12	
3 Ethylene							
1	1.890	1.880	0.010	175461	1.60	1.66	
2	2.524	2.512	0.012	149728	1.60	1.66	
						RPD = 0.31	
4 Propane							
1	2.645	2.632	0.013	363474	2.51	2.69	
2	4.696	4.687	0.009	306879	2.51	2.67	
						RPD = 0.46	
5 Acetylene							
1	4.095	4.078	0.017	47607	1.48	1.48	
2	2.667	2.652	0.015	41972	1.48	1.48	
						RPD = 0.00	
6 Butane							
1	4.401	4.381	0.020	519750	3.31	3.69	
2	6.158	6.146	0.012	435009	3.31	3.61	
						RPD = 2.11	
7 isobutylene							
1	5.327	5.311	0.016	344778	3.19	3.56	
2	6.006	5.998	0.008	288028	3.19	3.55	
						RPD = 0.25	

Reagents:

RSK7gasMathes_00026 Amount Added: 2.50 Units: uL

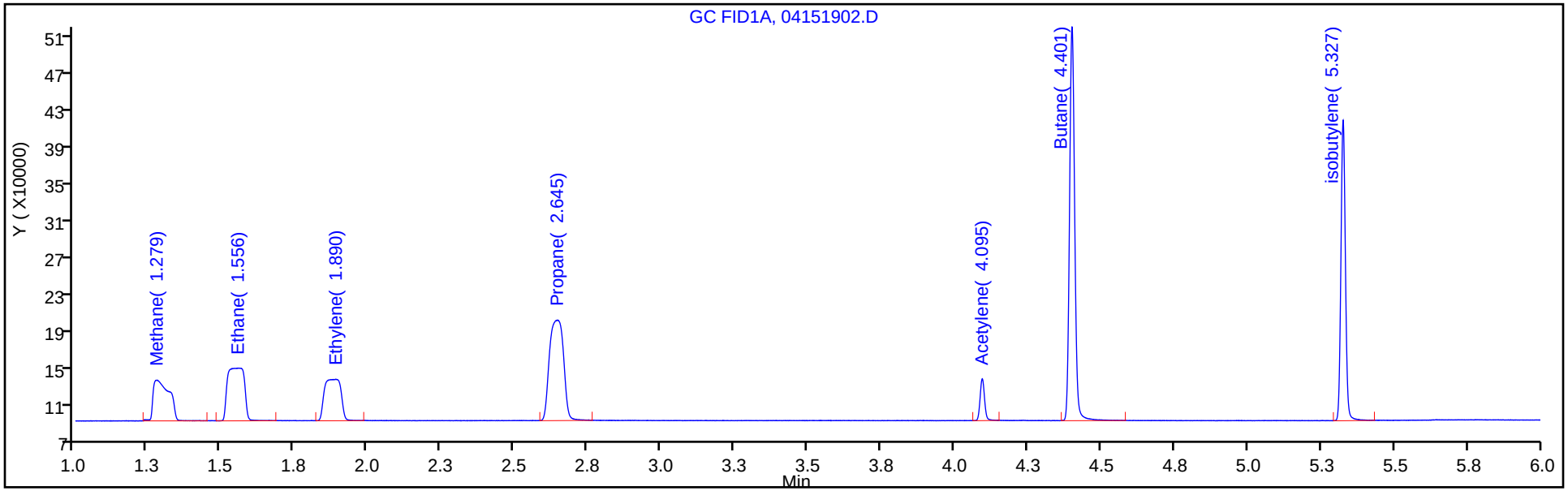
Report Date: 15-May-2019 11:57:51 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

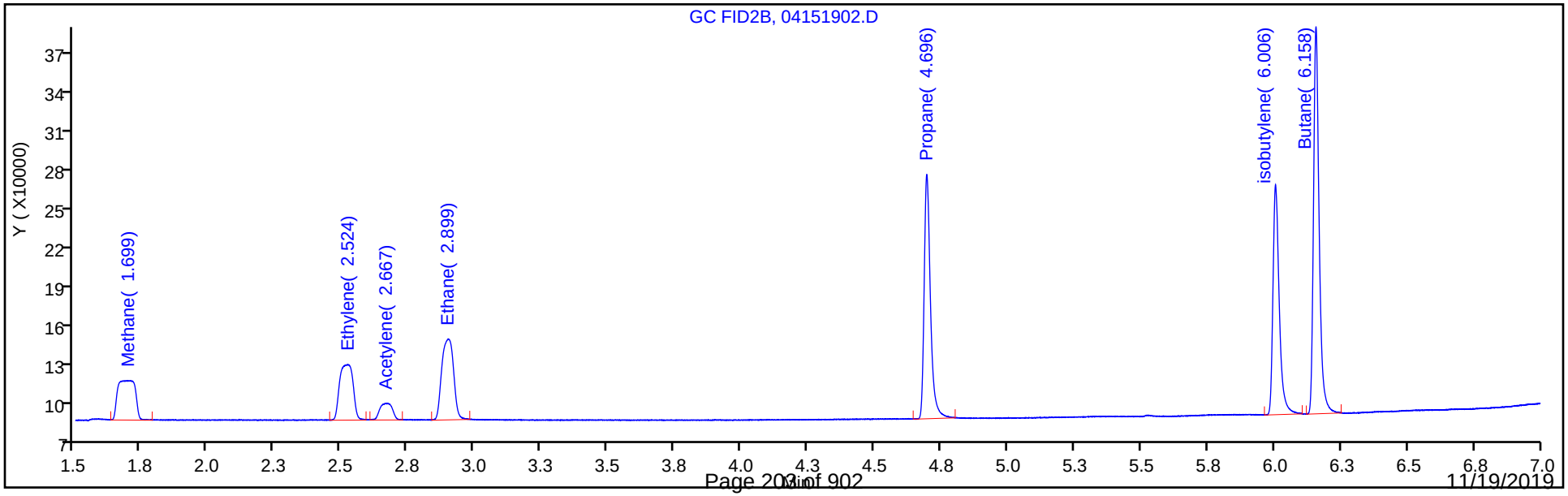
Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151902.D

Injection Date:	15-Apr-2019 10:37:05	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	IC L2			Worklist Smp#:	2
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151903.D
Lims ID: IC L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 15-Apr-2019 10:50:22 ALS Bottle#: 3 Worklist Smp#: 3
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: IC L3
Misc. Info.: 280-0080933-003
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 15-May-2019 11:57:52 Calib Date: 15-Apr-2019 12:11:08
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151909.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0333

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.278	1.271	0.007	292852	1.83	1.92	
2	1.688	1.692	-0.004	245139	1.83	1.91	
						RPD = 0.42	
2 Ethane							
1	1.563	1.556	0.007	449849	3.42	3.56	
2	2.900	2.889	0.011	380840	3.42	3.55	
						RPD = 0.40	
3 Ethylene							
1	1.889	1.880	0.009	348615	3.19	3.29	
2	2.516	2.512	0.004	297902	3.19	3.31	
						RPD = 0.45	
4 Propane							
1	2.645	2.632	0.013	706582	5.02	5.22	
2	4.696	4.687	0.009	601744	5.02	5.24	
						RPD = 0.40	
5 Acetylene							
1	4.094	4.078	0.016	96205	2.96	2.99	
2	2.674	2.652	0.022	82868	2.96	2.93	
						RPD = 2.32	
6 Butane							
1	4.400	4.381	0.019	993917	6.61	7.06	
2	6.157	6.146	0.011	836646	6.61	6.95	
						RPD = 1.54	
7 isobutylene							
1	5.326	5.311	0.015	655607	6.38	6.78	
2	6.005	5.998	0.007	552886	6.38	6.82	
						RPD = 0.70	

Reagents:

RSK7gasMathes_00026 Amount Added: 5.00 Units: uL

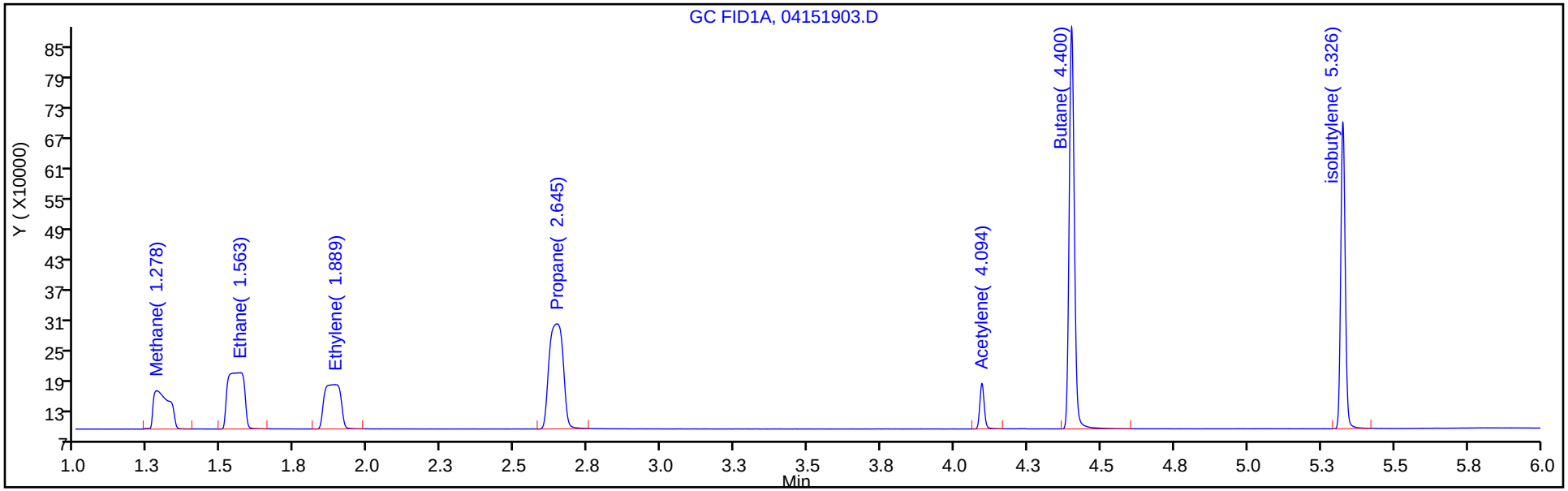
Report Date: 15-May-2019 11:57:53 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

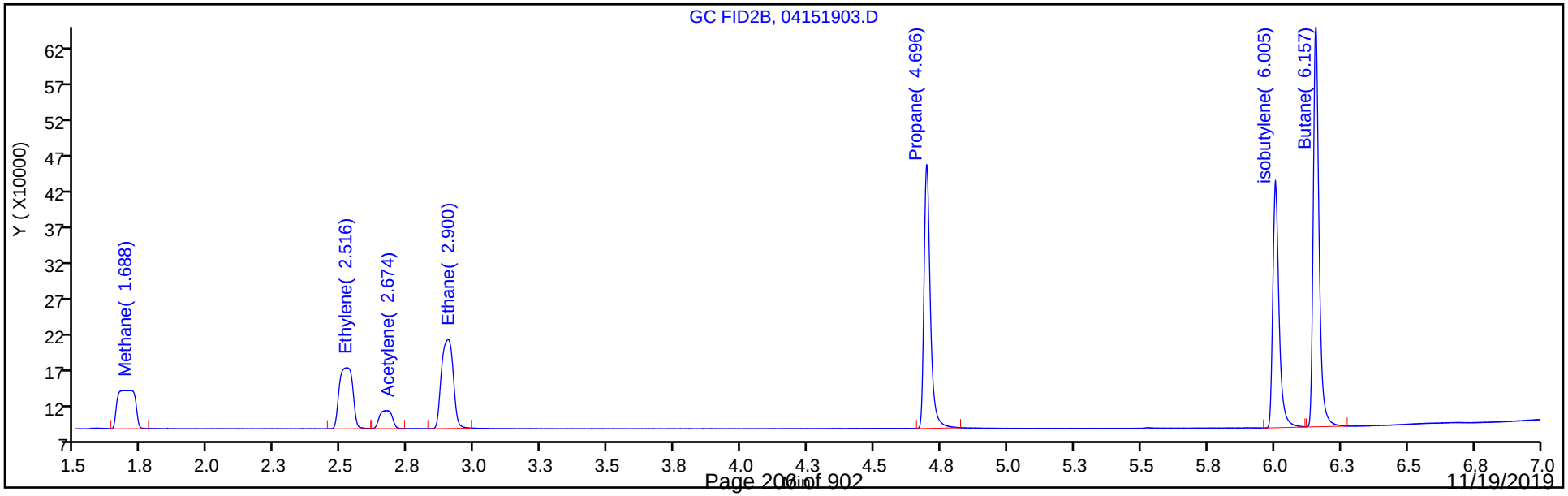
Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151903.D

Injection Date:	15-Apr-2019 10:50:22	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	IC L3			Worklist Smp#:	3
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151904.D
Lims ID: IC L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 15-Apr-2019 11:03:41 ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: IC L4
Misc. Info.: 280-0080933-004
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 15-May-2019 11:57:54 Calib Date: 15-Apr-2019 12:11:08
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151909.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0333

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.275	1.271	0.004	2121207	14.6	15.6	
2	1.701	1.692	0.009	1817240	14.6	15.6	
						RPD = 0.42	
2 Ethane							
1	1.544	1.556	-0.012	3768385	27.4	29.8	
2	2.896	2.889	0.007	3198231	27.4	29.8	
						RPD = 0.15	
3 Ethylene							
1	1.885	1.880	0.005	2951189	25.5	27.9	
2	2.516	2.512	0.004	2513192	25.5	27.9	
						RPD = 0.11	
4 Propane							
1	2.641	2.632	0.009	5812465	40.1	43.0	
2	4.694	4.687	0.007	4940027	40.1	43.1	
						RPD = 0.20	
5 Acetylene							
1	4.089	4.078	0.011	809586	23.7	25.2	
2	2.668	2.652	0.016	709490	23.7	25.0	
						RPD = 0.60	
6 Butane							
1	4.395	4.381	0.014	7767068	52.9	55.2	
2	6.155	6.146	0.009	6590566	52.9	54.7	
						RPD = 0.74	
7 isobutylene							
1	5.322	5.311	0.011	5189017	51.1	53.6	
2	6.004	5.998	0.006	4363220	51.1	53.8	
						RPD = 0.40	

Reagents:

RSK7gasMathes_00026 Amount Added: 40.00 Units: uL

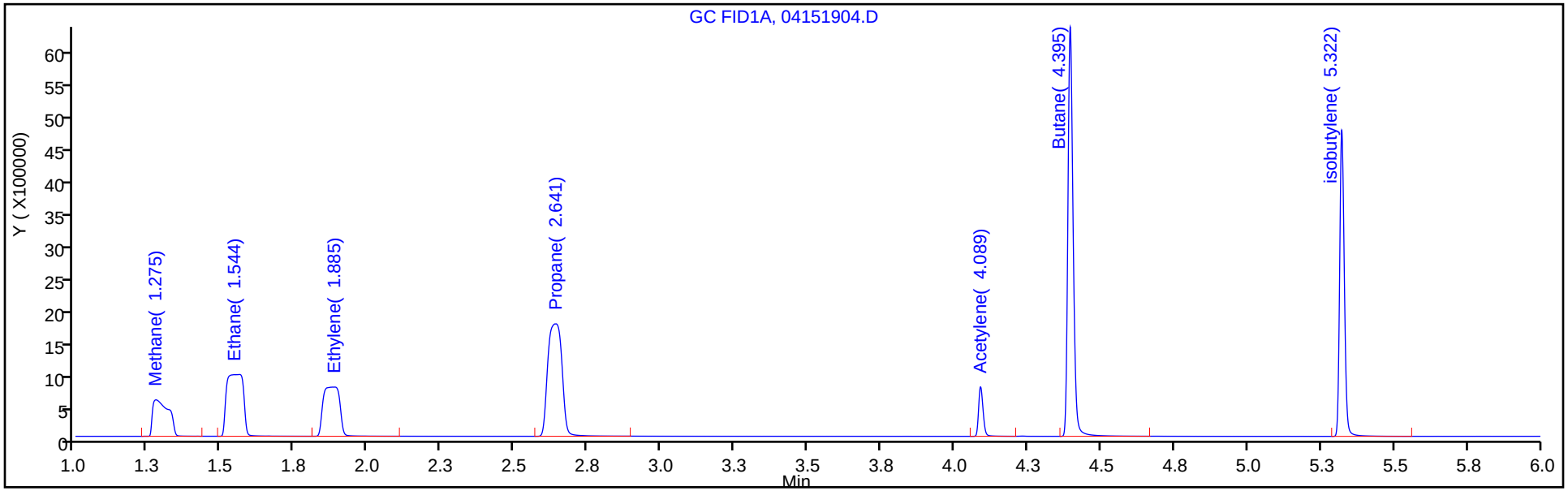
Report Date: 15-May-2019 11:57:55 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

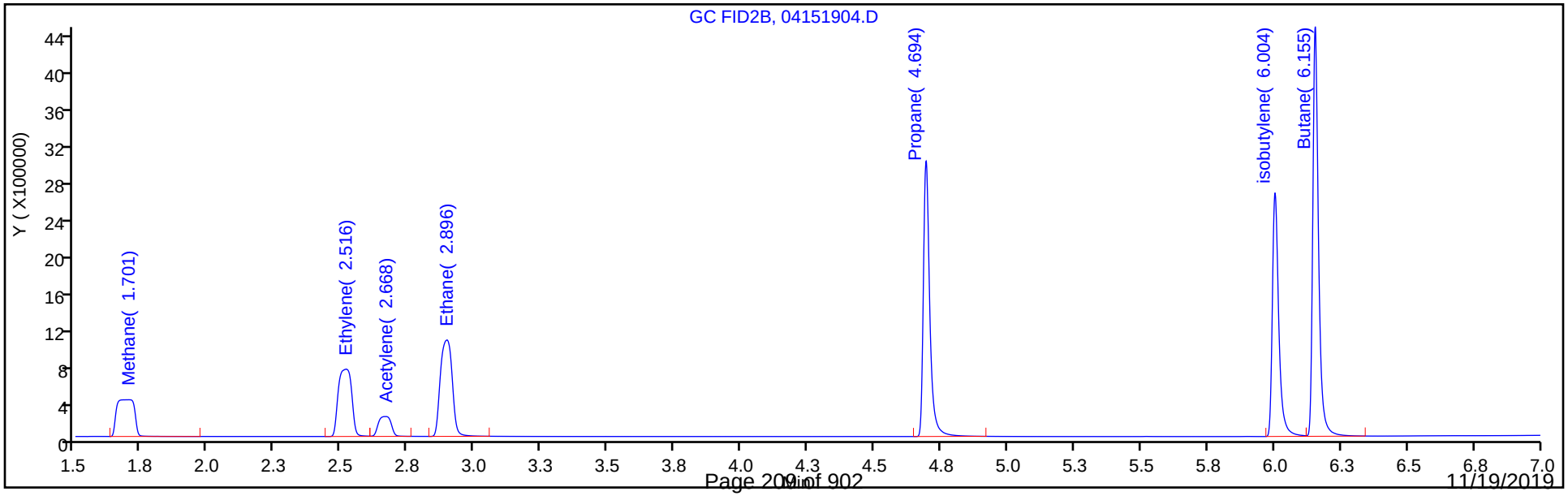
Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151904.D

Injection Date:	15-Apr-2019 11:03:41	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	IC L4			Worklist Smp#:	4
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151905.D
Lims ID: ICRT L5
Client ID:
Sample Type: ICRT Calib Level: 5
Inject. Date: 15-Apr-2019 11:17:11 ALS Bottle#: 5 Worklist Smp#: 5
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: ICRT L5
Misc. Info.: 280-0080933-005
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 15-May-2019 11:57:56 Calib Date: 15-Apr-2019 12:11:08
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151909.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0333

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.271	1.271	0.000	9627756	73.0	71.6	
2	1.692	1.692	0.000	8233442	73.0	71.6	
						RPD = 0.05	
2 Ethane							
1	1.556	1.556	0.000	17308693	136.9	137.0	
2	2.889	2.889	0.000	14756883	136.9	137.4	
						RPD = 0.30	
3 Ethylene							
1	1.880	1.880	0.000	13570482	127.7	128.3	
2	2.512	2.512	0.000	11530864	127.7	128.1	
						RPD = 0.11	
4 Propane							
1	2.632	2.632	0.000	26866377	200.7	198.6	
2	4.687	4.687	0.000	22779443	200.7	198.5	
						RPD = 0.04	
5 Acetylene							
1	4.078	4.078	0.000	4013672	118.5	124.9	
2	2.652	2.652	0.000	3536969	118.5	124.9	
						RPD = 0.04	
6 Butane							
1	4.381	4.381	0.000	35922157	264.5	255.1	
2	6.146	6.146	0.000	30367524	264.5	252.3	
						RPD = 1.11	
7 isobutylene							
1	5.311	5.311	0.000	23677727	255.4	244.7	
2	5.998	5.998	0.000	19852679	255.4	245.0	
						RPD = 0.12	

Reagents:

RSK7gasMathes_00026 Amount Added: 200.00 Units: uL

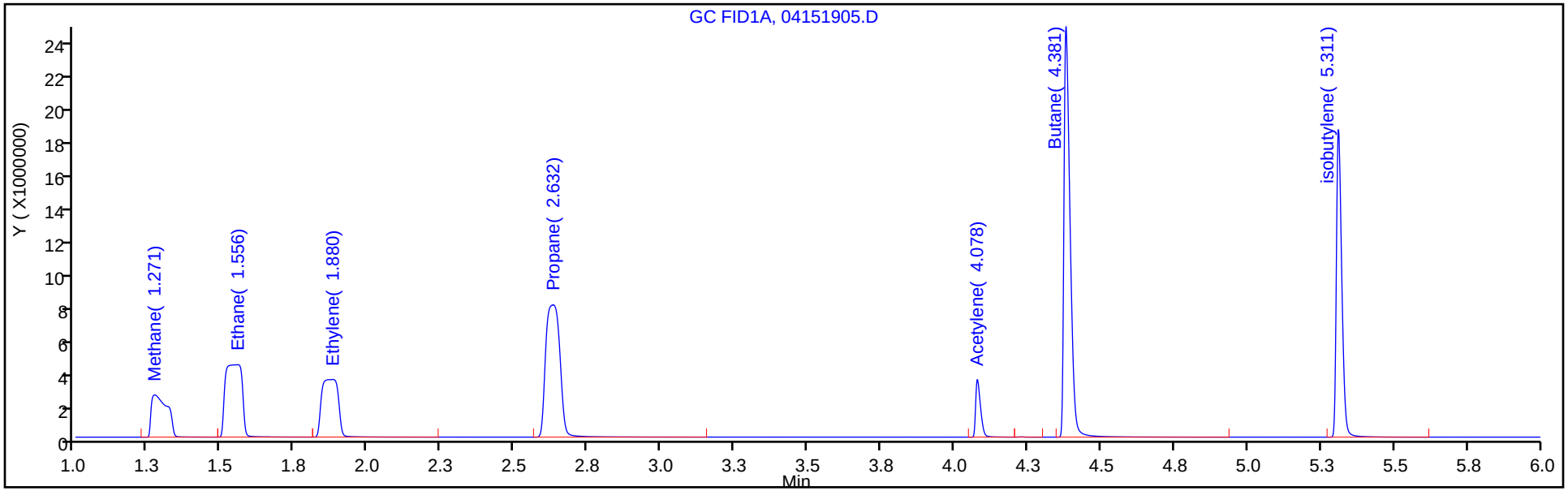
Report Date: 15-May-2019 11:57:56 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

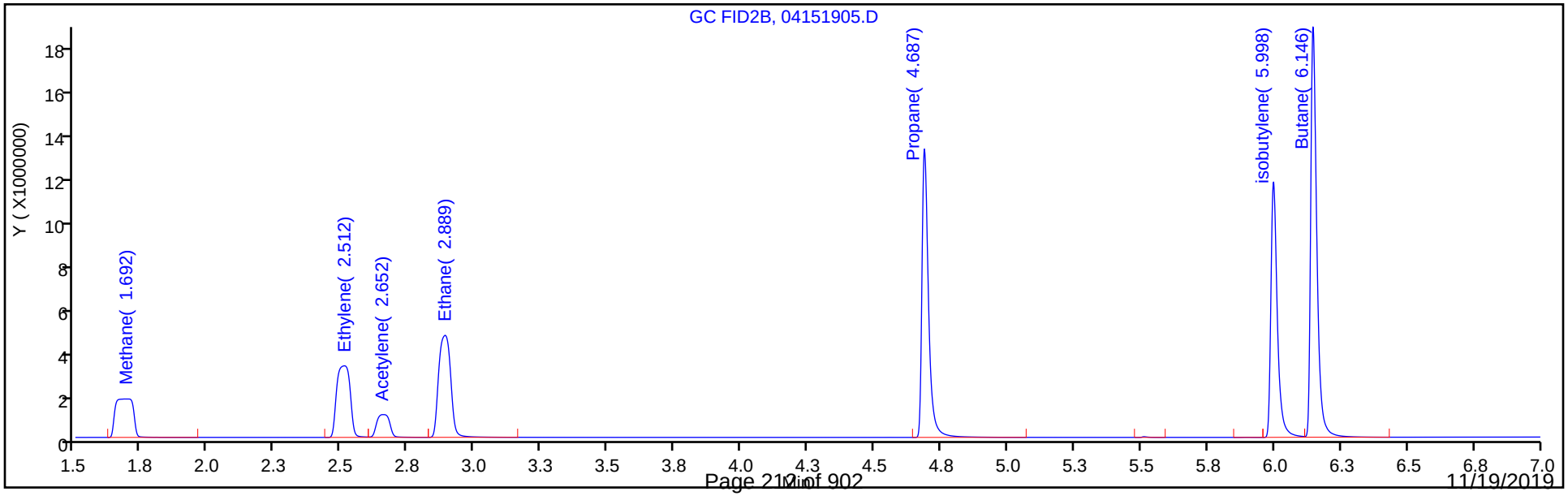
Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151905.D

Injection Date:	15-Apr-2019 11:17:11	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	ICRT L5			Worklist Smp#:	5
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151906.D
Lims ID: IC L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 15-Apr-2019 11:30:32 ALS Bottle#: 6 Worklist Smp#: 6
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: IC L6
Misc. Info.: 280-0080933-006
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 15-May-2019 11:57:57 Calib Date: 15-Apr-2019 12:11:08
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151909.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0333

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.267	1.271	-0.004	17958876	146.0	133.8	
2	1.681	1.692	-0.011	15386436	146.0	134.1	
						RPD = 0.21	
2 Ethane							
1	1.549	1.556	-0.007	32290083	273.7	255.5	
2	2.882	2.889	-0.007	27708010	273.7	258.0	
						RPD = 0.95	
3 Ethylene							M
1	1.866	1.880	-0.014	25472652	255.3	240.7	M
2	2.503	2.512	-0.009	21746052	255.3	241.6	
						RPD = 0.36	
4 Propane							
1	2.625	2.632	-0.007	50278684	401.4	371.7	
2	4.683	4.687	-0.004	42698075	401.4	372.2	
						RPD = 0.12	
5 Acetylene							
1	4.070	4.078	-0.008	7700889	237.0	239.7	
2	2.656	2.652	0.004	6771875	237.0	239.1	
						RPD = 0.25	
6 Butane							
1	4.370	4.381	-0.011	67375523	529.0	478.5	
2	6.140	6.146	-0.006	57174968	529.0	475.0	
						RPD = 0.73	
7 isobutylene							
1	5.302	5.311	-0.009	44689590	510.8	461.9	
2	5.992	5.998	-0.006	37488004	510.8	462.6	
						RPD = 0.16	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

RSK7gasMathes_00026 Amount Added: 400.00 Units: uL

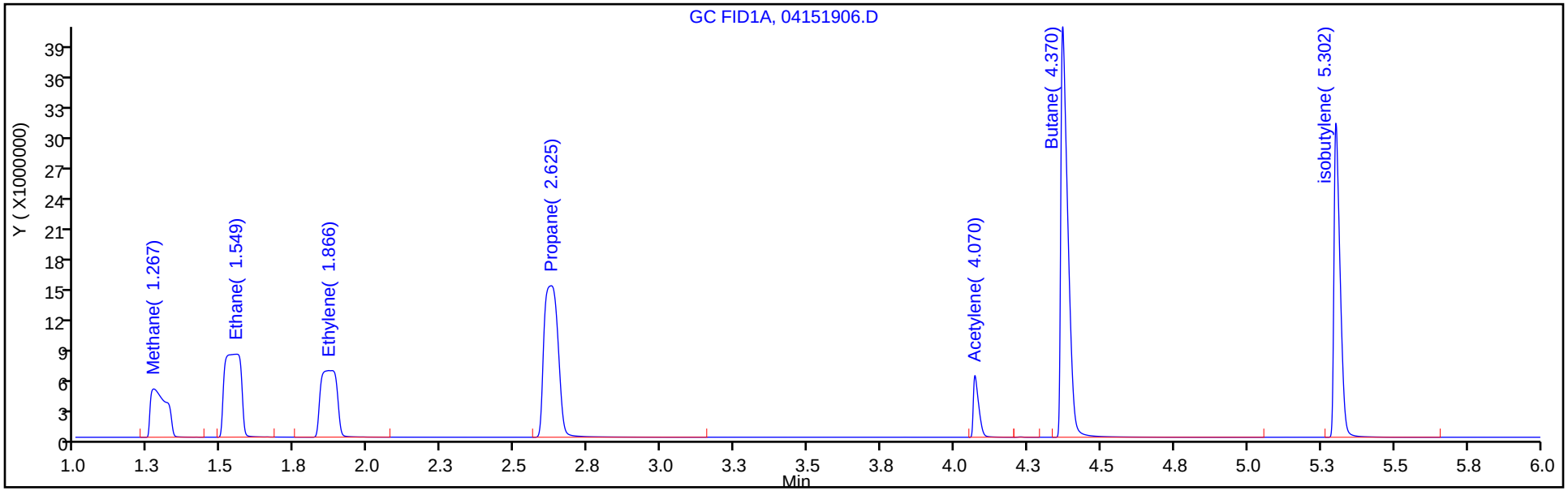
Report Date: 15-May-2019 11:57:57 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

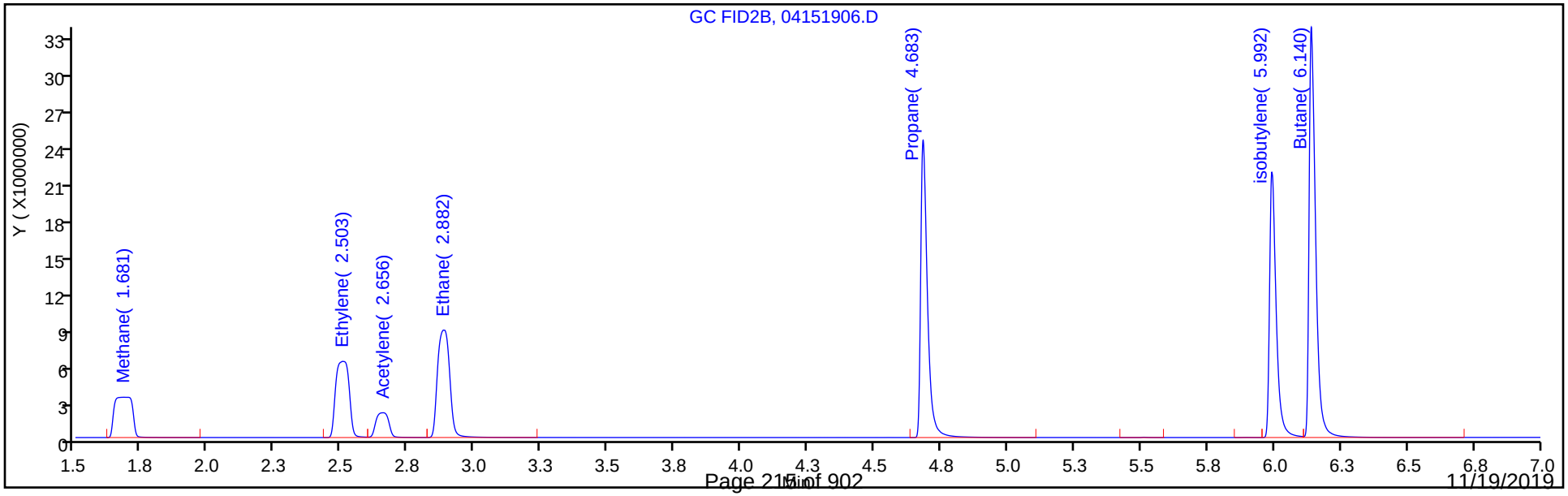
Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151906.D

Injection Date:	15-Apr-2019 11:30:32	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	IC L6			Worklist Smp#:	6
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

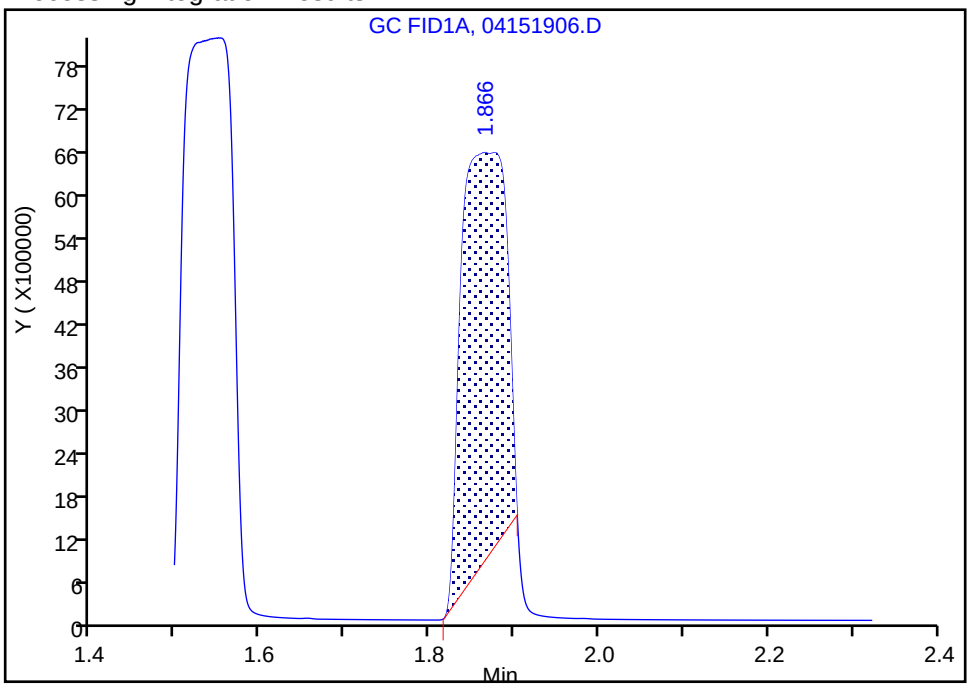
Data File:	\\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151906.D				
Injection Date:	15-Apr-2019 11:30:32	Instrument ID:	VGC_J		
Lims ID:	IC L6				
Client ID:					
Operator ID:	ms	ALS Bottle#:	6	Worklist Smp#:	6
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

3 Ethylene, CAS: 74-85-1

Signal: 1

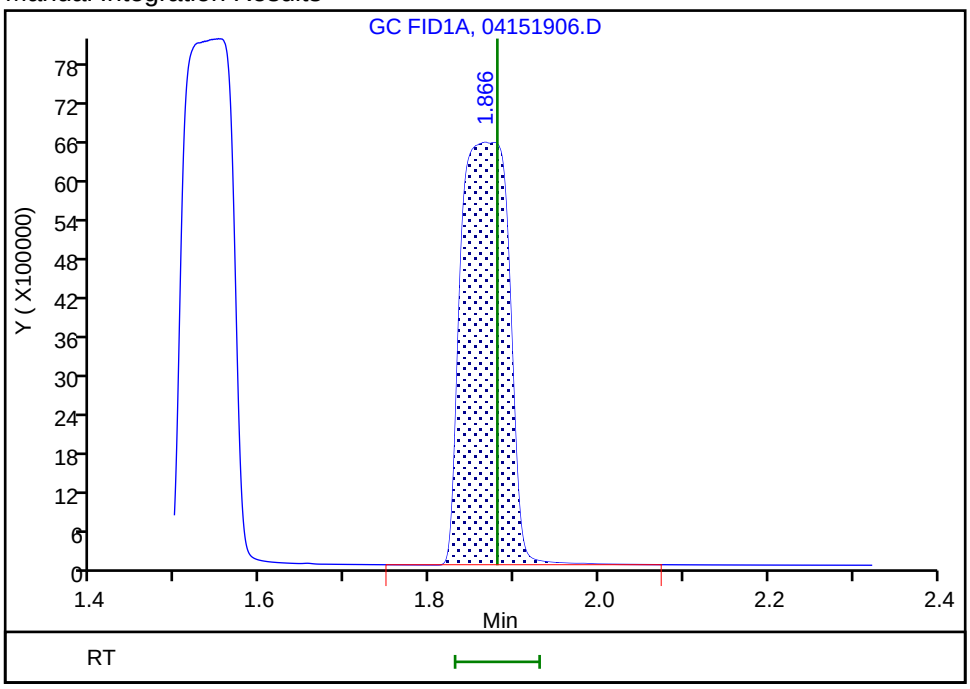
Processing Integration Results

RT: 1.87
Area: 21017489
Amount: 203.4324
Amount Units: ug/l



Manual Integration Results

RT: 1.87
Area: 25472652
Amount: 240.7464
Amount Units: ug/l



Reviewer: meierg, 15-Apr-2019 13:21:06

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151907.D
Lims ID: IC L7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 15-Apr-2019 11:44:06 ALS Bottle#: 7 Worklist Smp#: 7
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: IC L7
Misc. Info.: 280-0080933-007
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 15-May-2019 11:57:58 Calib Date: 15-Apr-2019 12:11:08
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151909.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0333

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.263	1.271	-0.008	40532226	292.0	302.4	
2	1.686	1.692	-0.006	34652624	292.0	302.3	
						RPD = 0.02	
2 Ethane							
1	1.549	1.556	-0.007	71736807	547.4	567.7	
2	2.876	2.889	-0.013	61621639	547.4	573.7	
						RPD = 1.05	
3 Ethylene							M
1	1.870	1.880	-0.010	54838846	510.7	518.3	M
2	2.503	2.512	-0.009	46940879	510.7	521.5	
						RPD = 0.62	
4 Propane							
1	2.611	2.632	-0.021	111846125	802.8	826.9	
2	4.672	4.687	-0.015	94884692	802.8	827.0	
						RPD = 0.02	
5 Acetylene							
1	4.057	4.078	-0.021	15668916	474.1	487.7	
2	2.651	2.652	-0.001	13791861	474.1	486.9	
						RPD = 0.16	
6 Butane							
1	4.350	4.381	-0.031	148225690	1058.1	1052.6	
2	6.128	6.146	-0.018	125686225	1058.1	1044.1	
						RPD = 0.81	
7 isobutylene							
1	5.288	5.311	-0.023	94615791	1021.5	977.9	
2	5.984	5.998	-0.014	79245111	1021.5	978.0	
						RPD = 0.01	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

RSK7gasMathes_00026 Amount Added: 800.00 Units: uL

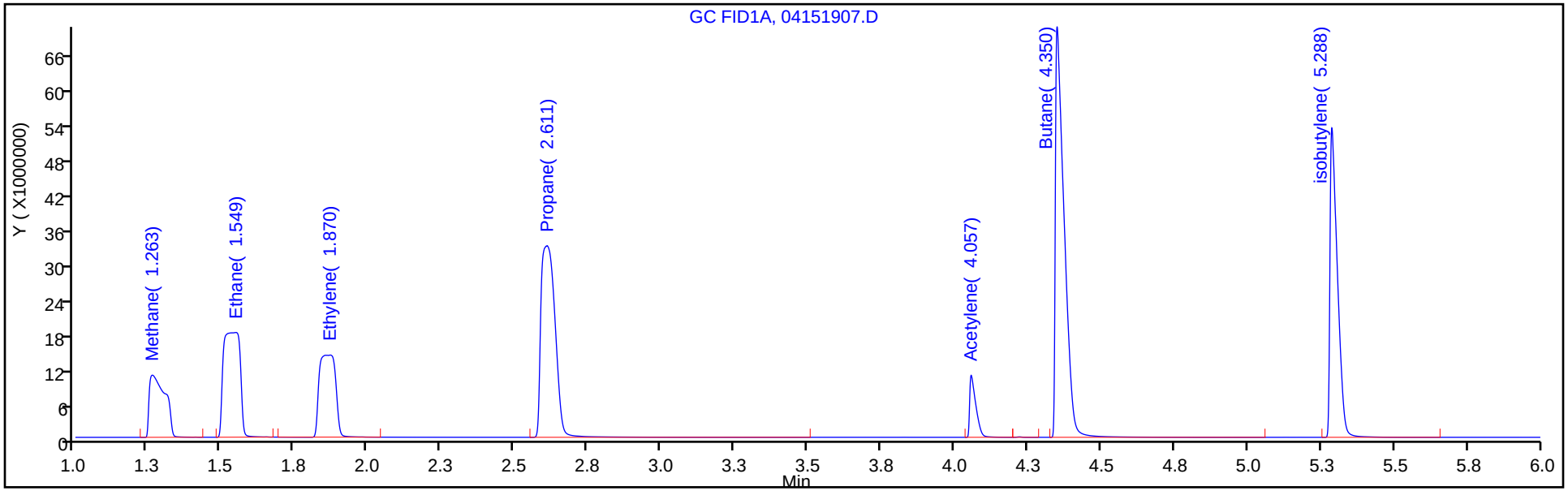
Report Date: 15-May-2019 11:57:59 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

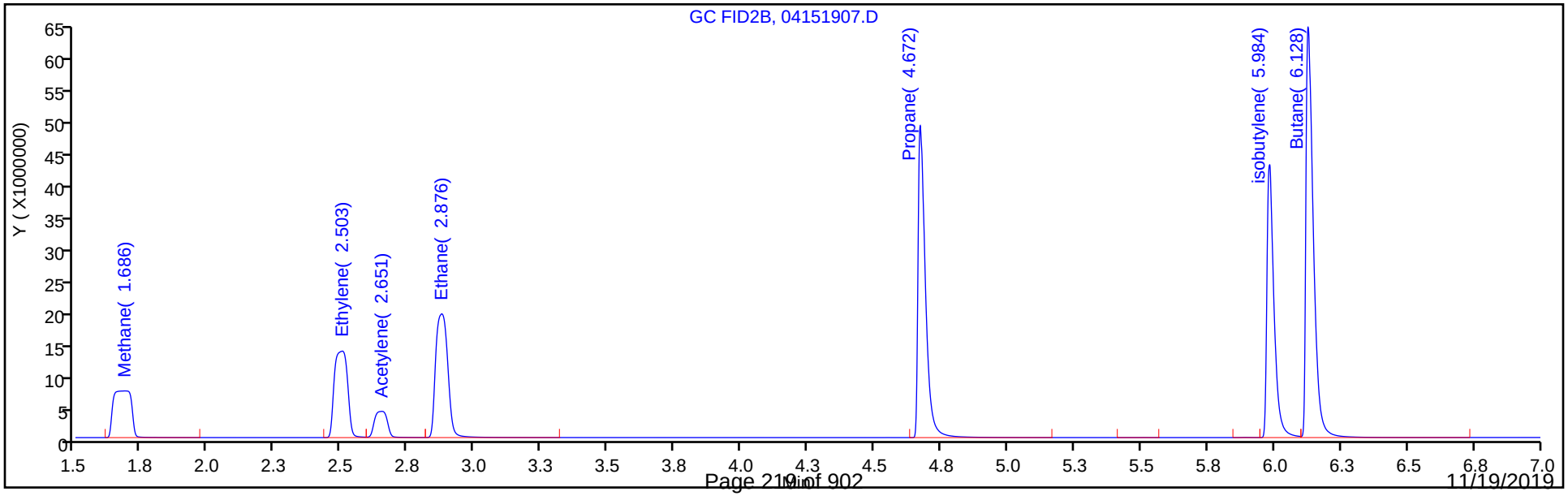
Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151907.D

Injection Date:	15-Apr-2019 11:44:06	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	IC L7			Worklist Smp#:	7
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

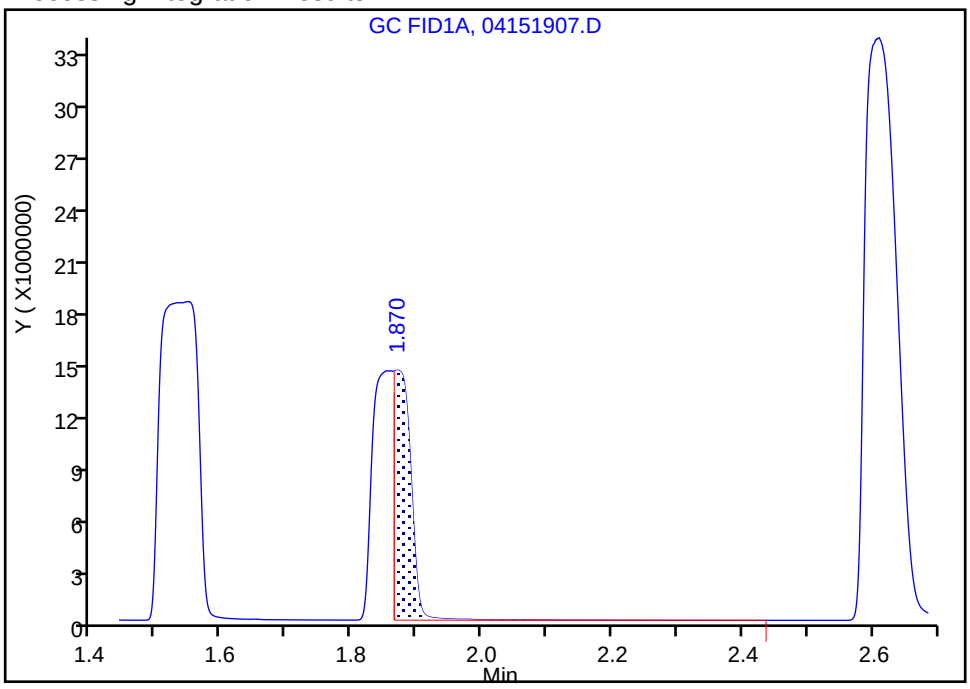
Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151907.D
Injection Date: 15-Apr-2019 11:44:06 Instrument ID: VGC_J
Lims ID: IC L7
Client ID:
Operator ID: ms ALS Bottle#: 7 Worklist Smp#: 7
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Method: RSK_J Limit Group: GCV - RSK 175
Column: Rt-Alumina BOND/KCl (0.53 mm) Detector GC FID1A

3 Ethylene, CAS: 74-85-1

Signal: 1

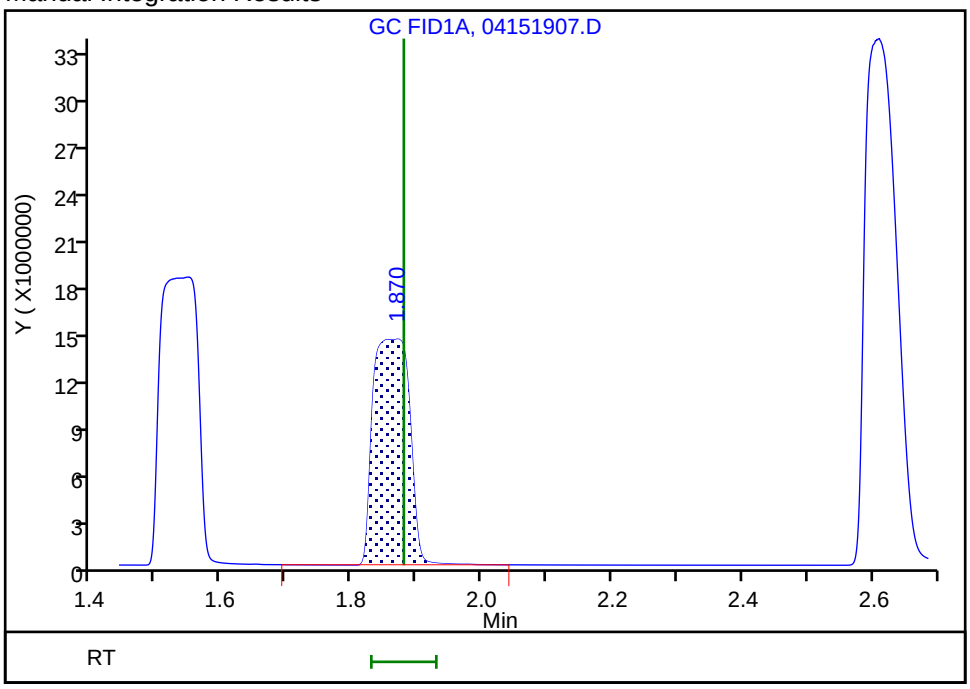
Processing Integration Results

RT: 1.87
Area: 24366908
Amount: 337.8607
Amount Units: ug/l



Manual Integration Results

RT: 1.87
Area: 54838846
Amount: 518.2913
Amount Units: ug/l



Reviewer: meierg, 15-Apr-2019 13:20:30
Audit Action: Manually Integrated Audit Reason: Split Peak

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151908.D
Lims ID: IC L8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 15-Apr-2019 11:57:32 ALS Bottle#: 8 Worklist Smp#: 8
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: IC L8
Misc. Info.: 280-0080933-008
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 15-May-2019 11:58:00 Calib Date: 15-Apr-2019 12:11:08
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151909.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0333

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.265	1.271	-0.006	226637342	1806.9	1691.8	
2	1.692	1.692	0.000	193042781	1806.9	1685.0	
						RPD =	0.41

Reagents:

RSK175methane_00009 Amount Added: 50.00 Units: uL

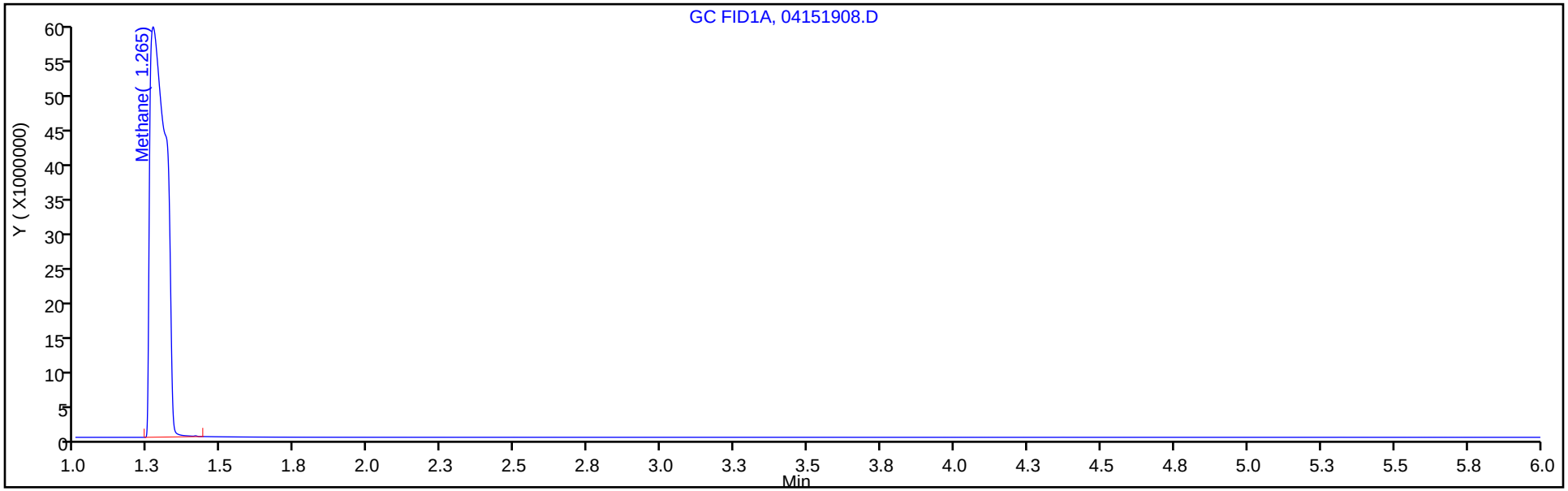
Report Date: 15-May-2019 11:58:00 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

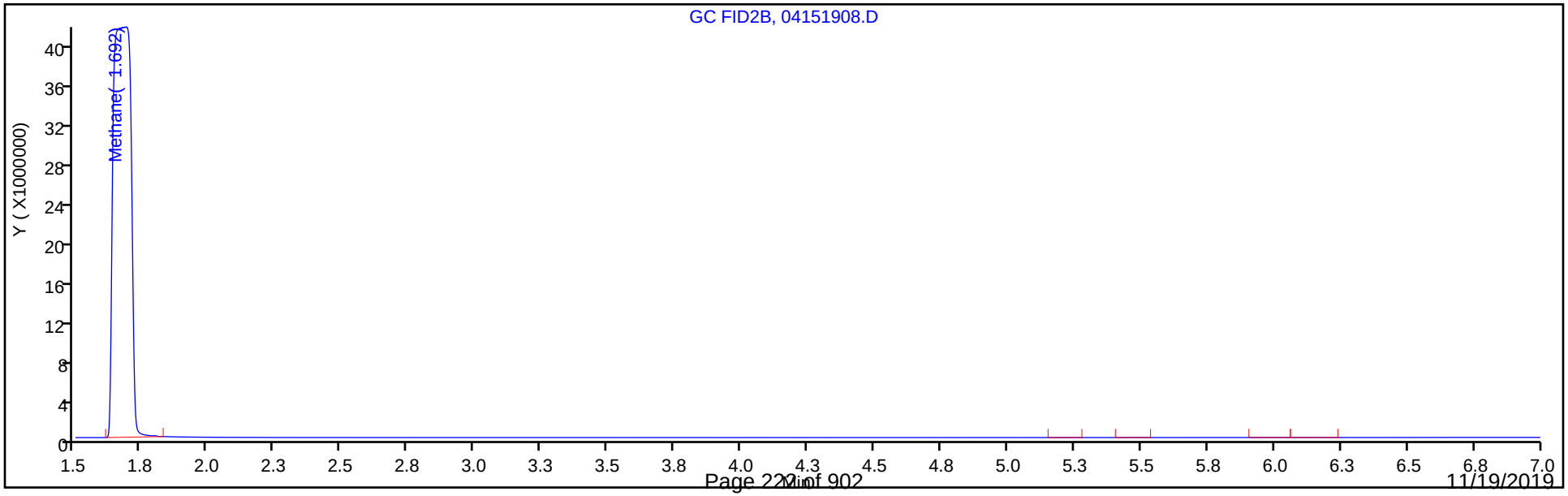
Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151908.D

Injection Date:	15-Apr-2019 11:57:32	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	IC L8			Worklist Smp#:	8
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151909.D
Lims ID: IC L9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 15-Apr-2019 12:11:08 ALS Bottle#: 9 Worklist Smp#: 9
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: IC L9
Misc. Info.: 280-0080933-009
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 15-May-2019 11:58:02 Calib Date: 15-Apr-2019 12:11:08
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151909.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0333

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.263	1.271	-0.008	952923785	7227.8	7114.4	
2	1.668	1.692	-0.024	817202335	7227.8	7133.8	
						RPD = 0.27	

Reagents:

RSK175methane_00009 Amount Added: 200.00 Units: uL

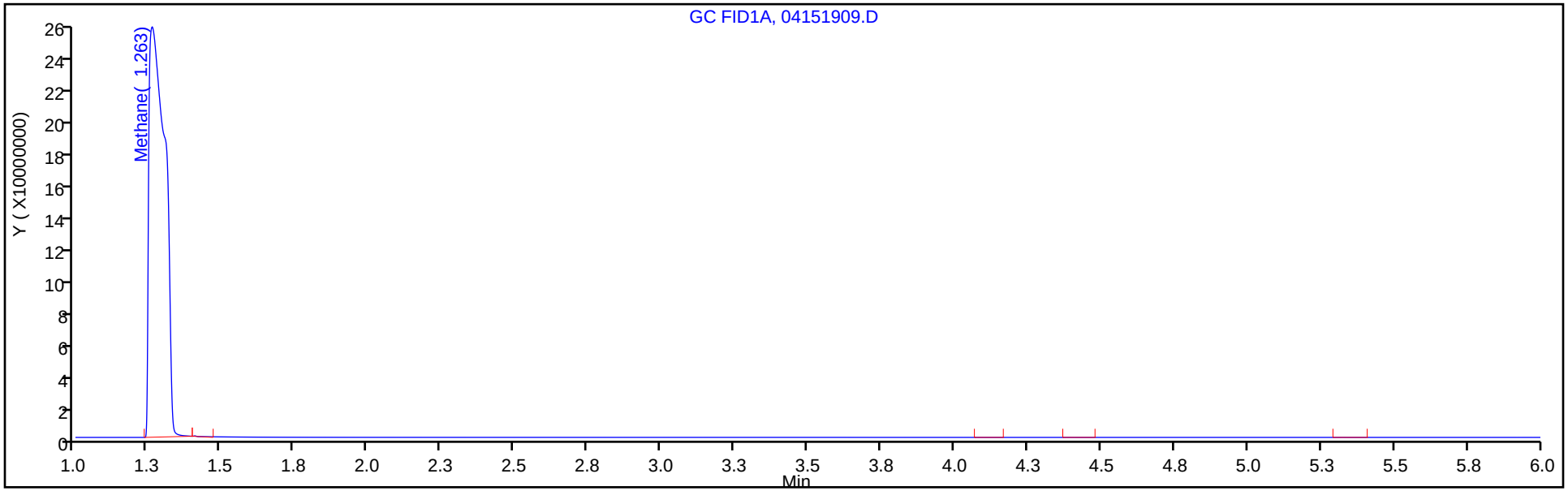
Report Date: 15-May-2019 11:58:02 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

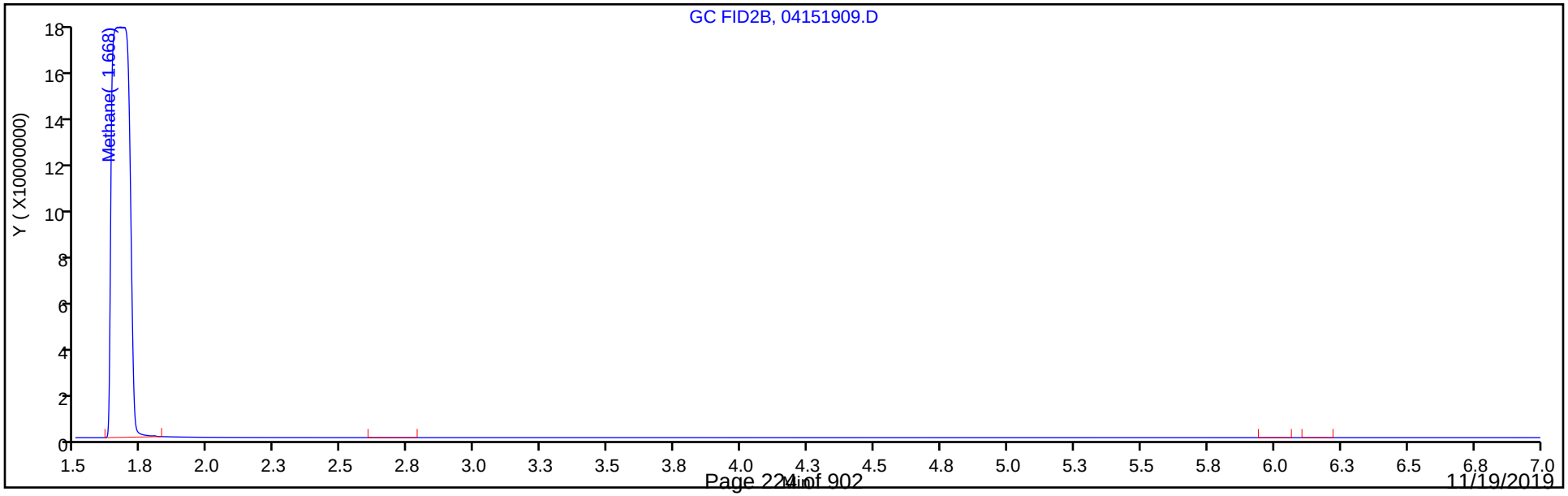
Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151909.D

Injection Date:	15-Apr-2019 12:11:08	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	IC L9			Worklist Smp#:	9
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VI
GC VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1 Analy Batch No.: 454595

SDG No.:

Instrument ID: VGC_J GC Column: HP-Plot Q ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/15/2019 10:23 Calibration End Date: 04/15/2019 12:11 Calibration ID: 36052

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-454595/1	04151901.D
Level 2	IC 280-454595/2	04151902.D
Level 3	IC 280-454595/3	04151903.D
Level 4	IC 280-454595/4	04151904.D
Level 5	ICRT 280-454595/5	04151905.D
Level 6	IC 280-454595/6	04151906.D
Level 7	IC 280-454595/7	04151907.D
Level 8	IC 280-454595/8	04151908.D
Level 9	IC 280-454595/9	04151909.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8	LVL 9		RT WINDOW	AVG RT
Methane	1.692	1.699	1.688	1.701	1.692	1.681	1.686	1.692	1.668		1.652 - 1.732	1.689
Ethylene	2.514	2.524	2.516	2.516	2.512	2.503	2.503				2.462 - 2.562	2.513
Acetylene	2.667	2.667	2.674	2.668	2.652	2.656	2.651				2.572 - 2.732	2.662
Ethane	2.890	2.899	2.900	2.896	2.889	2.882	2.876				2.839 - 2.939	2.890

FORM VI
GC VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1 Analy Batch No.: 454595

SDG No.:

Instrument ID: VGC_J GC Column: HP-Plot Q ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/15/2019 10:23 Calibration End Date: 04/15/2019 12:11 Calibration ID: 36052

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-454595/1	04151901.D
Level 2	IC 280-454595/2	04151902.D
Level 3	IC 280-454595/3	04151903.D
Level 4	IC 280-454595/4	04151904.D
Level 5	ICRT 280-454595/5	04151905.D
Level 6	IC 280-454595/6	04151906.D
Level 7	IC 280-454595/7	04151907.D
Level 8	IC 280-454595/8	04151908.D
Level 9	IC 280-454595/9	04151909.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 2 LVL 6	LVL 3 LVL 7	LVL 4 LVL 8		B	M1	M2								
Methane	165505 112782 113064	152449 105382	134317 118668	124463 106834	Lin2	26094.0563	114549.945							0.9950		0.9900
Ethylene	77051 90320	93824 85167	93337 91921	98428	Ave		90006.9262				7.7		20.0			
Acetylene	24541 29842	28330 28568	27967 29091	29931	Ave		28324.3348				6.4		20.0			
Ethane	90071 107828	111998 101231	111312 112567	116847	Ave		107407.606				8.4		20.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
GC VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1 Analy Batch No.: 454595

SDG No.:

Instrument ID: VGC_J GC Column: HP-Plot Q ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/15/2019 10:23 Calibration End Date: 04/15/2019 12:11 Calibration ID: 36052

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-454595/1	04151901.D
Level 2	IC 280-454595/2	04151902.D
Level 3	IC 280-454595/3	04151903.D
Level 4	IC 280-454595/4	04151904.D
Level 5	ICRT 280-454595/5	04151905.D
Level 6	IC 280-454595/6	04151906.D
Level 7	IC 280-454595/7	04151907.D
Level 8	IC 280-454595/8	04151908.D
Level 9	IC 280-454595/9	04151909.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Methane	Lin2	75515 15386436	139116 34652624	245139 193042781	1817240 817202335	8233442	0.456 146	0.913 292	1.83 1807	14.6 7228	73.0
Ethylene	Ave	61480 21746052	149728 46940879	297902	2513192	11530864	0.798 255	1.60 511	3.19	25.5	128
Acetylene	Ave	18179 6771875	41972 13791861	82868	709490	3536969	0.741 237	1.48 474	2.96	23.7	119
Ethane	Ave	77042 27708010	191594 61621639	380840	3198231	14756883	0.855 274	1.71 547	3.42	27.4	137

Curve Type Legend:

Ave = Average
Lin2 = Linear 1/conc^2

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151901.D
Lims ID: IC L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 15-Apr-2019 10:23:57 ALS Bottle#: 1 Worklist Smp#: 1
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: IC L1
Misc. Info.: 280-0080933-001
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 15-May-2019 11:57:50 Calib Date: 15-Apr-2019 12:11:08
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151909.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0333

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.278	1.271	0.007	93261	0.4563	0.4301	
2	1.692	1.692	0.000	75515	0.4563	0.4314	
						RPD = 0.31	
2 Ethane							
1	1.543	1.556	-0.013	91221	0.8553	0.7219	
2	2.890	2.889	0.001	77042	0.8553	0.7173	
						RPD = 0.64	
3 Ethylene							
1	1.877	1.880	-0.003	73764	0.7979	0.6972	
2	2.514	2.512	0.002	61480	0.7979	0.6831	
						RPD = 2.04	
4 Propane							
1	2.651	2.632	0.019	147932	1.25	1.09	
2	4.691	4.687	0.004	125161	1.25	1.09	
						RPD = 0.25	
5 Acetylene							
1	4.091	4.078	0.013	19810	0.7408	0.6166	
2	2.667	2.652	0.015	18179	0.7408	0.6418	
						RPD = 4.01	
6 Butane							M
1	4.410	4.381	0.029	211953	1.65	1.51	
2	6.155	6.146	0.009	195662	1.65	1.63	M
						RPD = 7.68	
7 isobutylene							
1	5.333	5.311	0.022	147116	1.60	1.52	
2	6.003	5.998	0.005	121709	1.60	1.50	
						RPD = 1.22	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

RSK7gasMathes_00026 Amount Added: 1.25 Units: uL

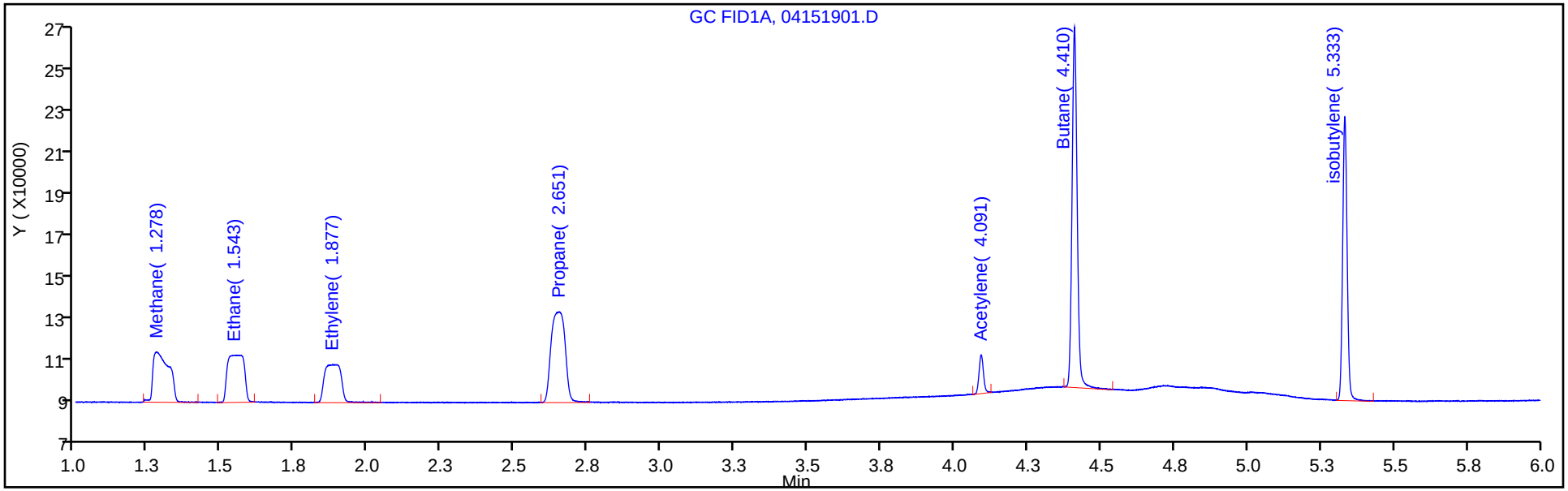
Report Date: 15-May-2019 11:57:50 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

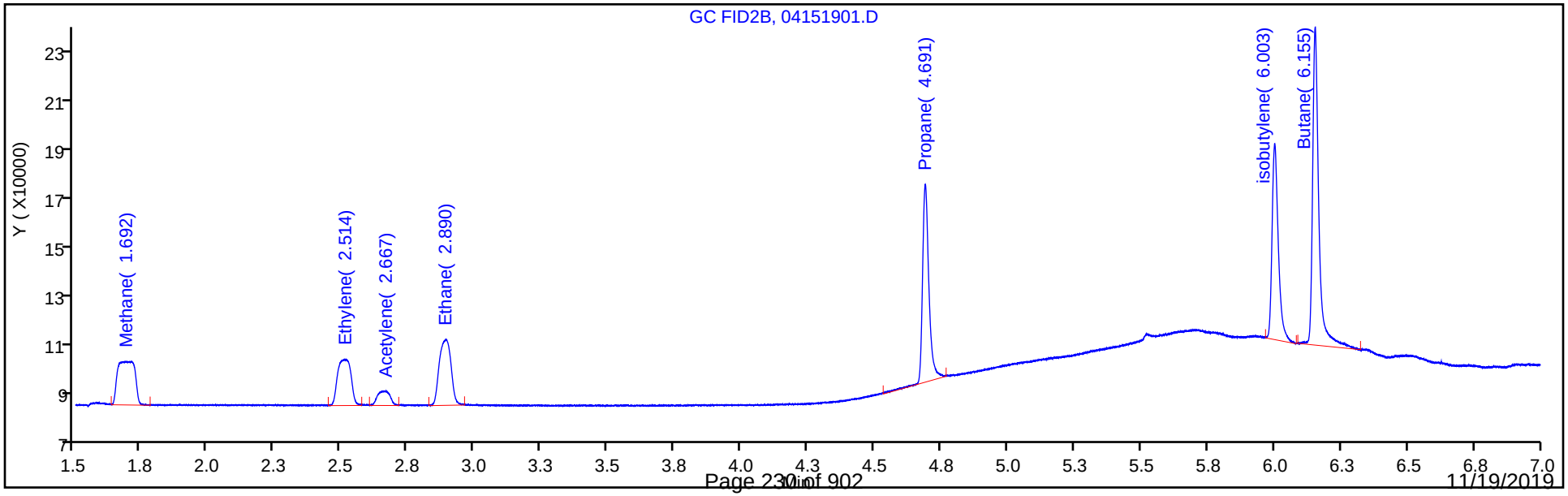
Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151901.D

Injection Date:	15-Apr-2019 10:23:57	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	IC L1			Worklist Smp#:	1
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151902.D
Lims ID: IC L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 15-Apr-2019 10:37:05 ALS Bottle#: 2 Worklist Smp#: 2
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: IC L2
Misc. Info.: 280-0080933-002
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 15-May-2019 11:57:51 Calib Date: 15-Apr-2019 12:11:08
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151909.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0333

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.279	1.271	0.008	168302	0.9125	0.99	
2	1.699	1.692	0.007	139116	0.9125	0.9867	
						RPD = 0.37	
2 Ethane							
1	1.556	1.556	0.000	227953	1.71	1.80	
2	2.899	2.889	0.010	191594	1.71	1.78	
						RPD = 1.12	
3 Ethylene							
1	1.890	1.880	0.010	175461	1.60	1.66	
2	2.524	2.512	0.012	149728	1.60	1.66	
						RPD = 0.31	
4 Propane							
1	2.645	2.632	0.013	363474	2.51	2.69	
2	4.696	4.687	0.009	306879	2.51	2.67	
						RPD = 0.46	
5 Acetylene							
1	4.095	4.078	0.017	47607	1.48	1.48	
2	2.667	2.652	0.015	41972	1.48	1.48	
						RPD = 0.00	
6 Butane							
1	4.401	4.381	0.020	519750	3.31	3.69	
2	6.158	6.146	0.012	435009	3.31	3.61	
						RPD = 2.11	
7 isobutylene							
1	5.327	5.311	0.016	344778	3.19	3.56	
2	6.006	5.998	0.008	288028	3.19	3.55	
						RPD = 0.25	

Reagents:

RSK7gasMathes_00026 Amount Added: 2.50 Units: uL

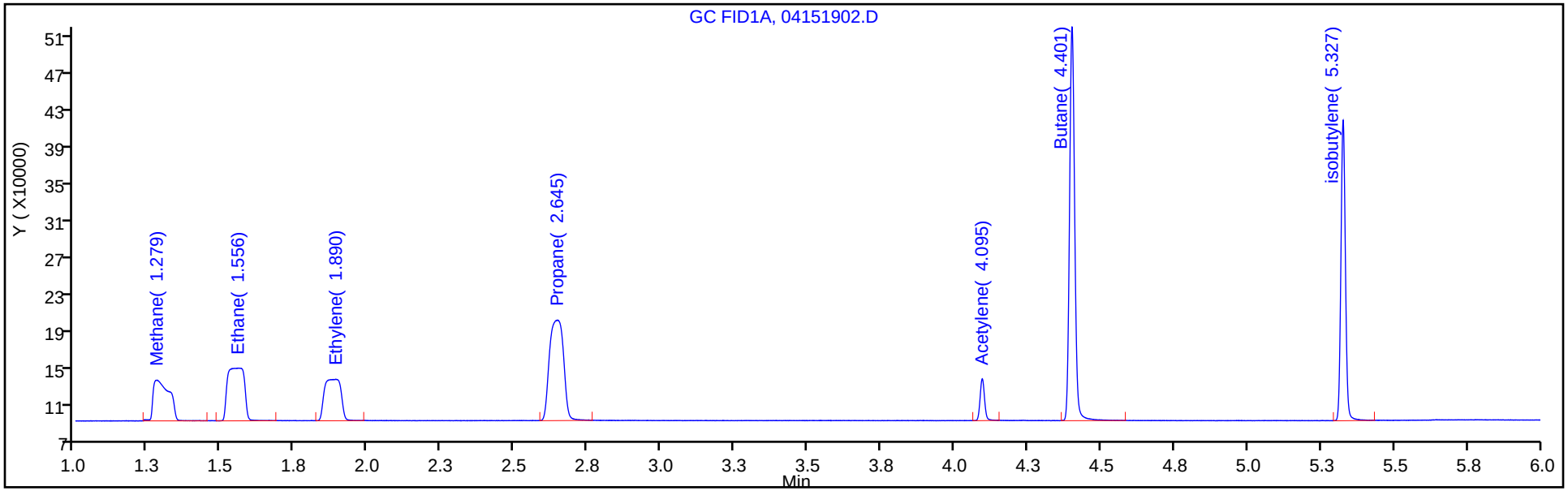
Report Date: 15-May-2019 11:57:52 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

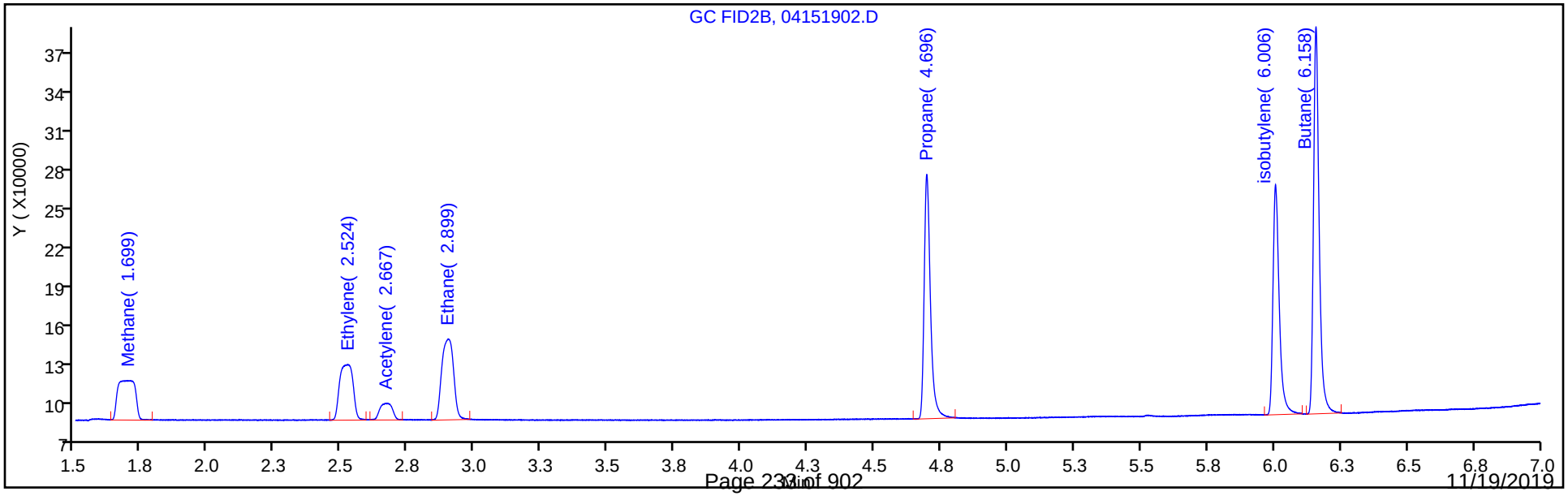
Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151902.D

Injection Date:	15-Apr-2019 10:37:05	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	IC L2			Worklist Smp#:	2
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151903.D
Lims ID: IC L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 15-Apr-2019 10:50:22 ALS Bottle#: 3 Worklist Smp#: 3
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: IC L3
Misc. Info.: 280-0080933-003
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 15-May-2019 11:57:52 Calib Date: 15-Apr-2019 12:11:08
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151909.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0333

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.278	1.271	0.007	292852	1.83	1.92	
2	1.688	1.692	-0.004	245139	1.83	1.91	
						RPD = 0.42	
2 Ethane							
1	1.563	1.556	0.007	449849	3.42	3.56	
2	2.900	2.889	0.011	380840	3.42	3.55	
						RPD = 0.40	
3 Ethylene							
1	1.889	1.880	0.009	348615	3.19	3.29	
2	2.516	2.512	0.004	297902	3.19	3.31	
						RPD = 0.45	
4 Propane							
1	2.645	2.632	0.013	706582	5.02	5.22	
2	4.696	4.687	0.009	601744	5.02	5.24	
						RPD = 0.40	
5 Acetylene							
1	4.094	4.078	0.016	96205	2.96	2.99	
2	2.674	2.652	0.022	82868	2.96	2.93	
						RPD = 2.32	
6 Butane							
1	4.400	4.381	0.019	993917	6.61	7.06	
2	6.157	6.146	0.011	836646	6.61	6.95	
						RPD = 1.54	
7 isobutylene							
1	5.326	5.311	0.015	655607	6.38	6.78	
2	6.005	5.998	0.007	552886	6.38	6.82	
						RPD = 0.70	

Reagents:

RSK7gasMathes_00026 Amount Added: 5.00 Units: uL

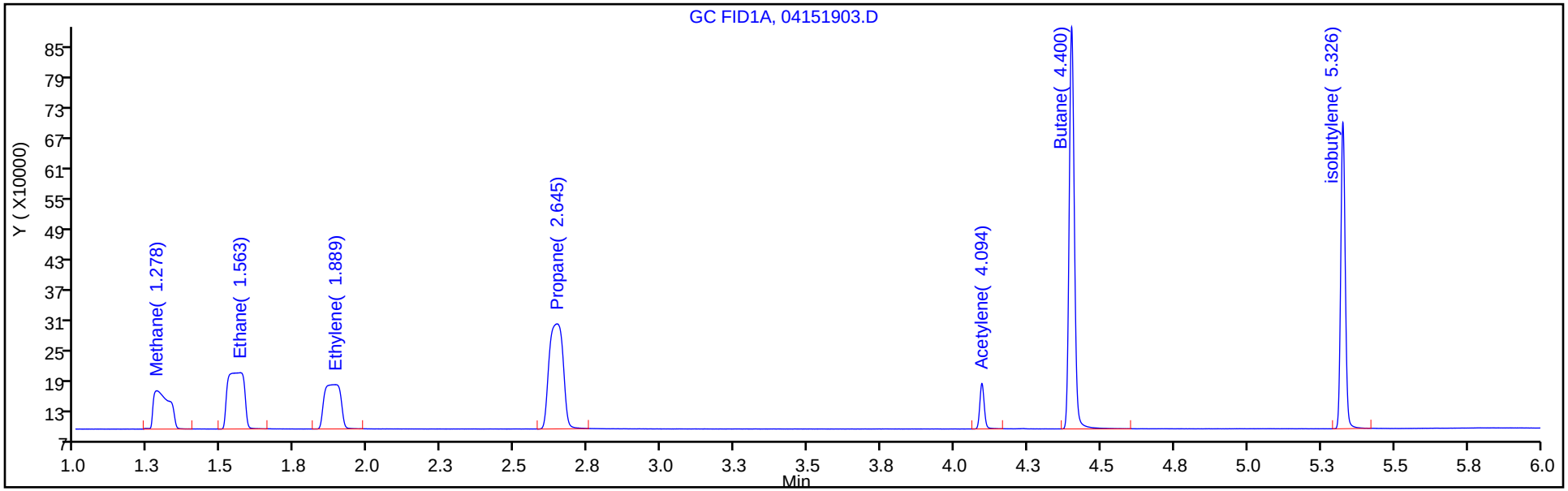
Report Date: 15-May-2019 11:57:53 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

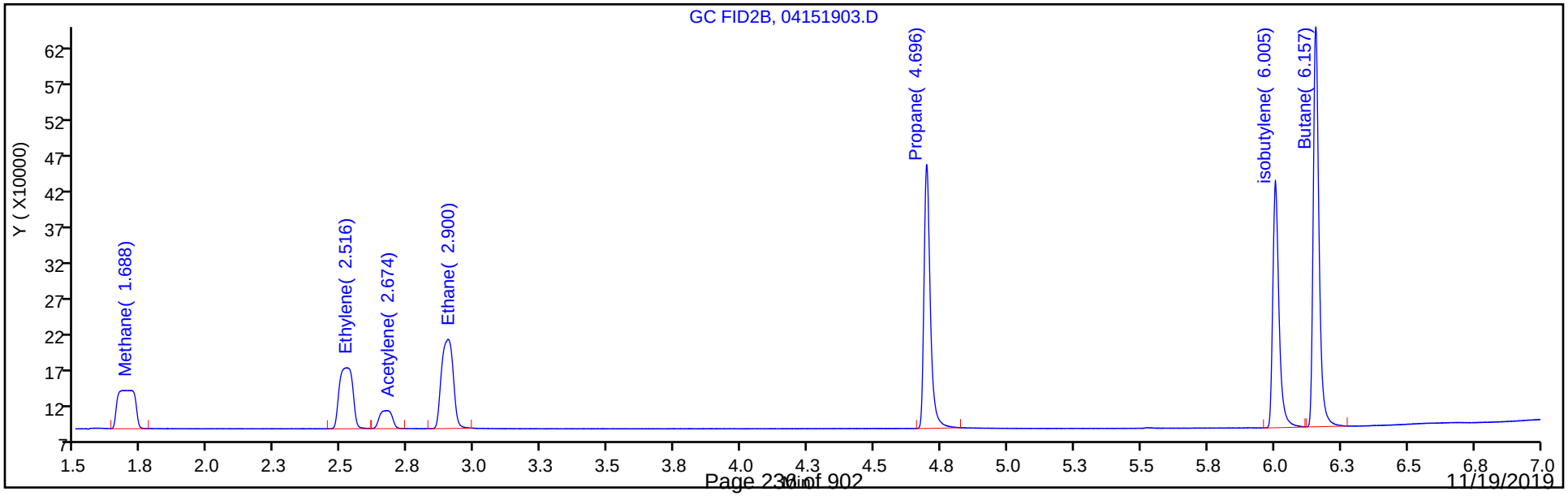
Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151903.D

Injection Date:	15-Apr-2019 10:50:22	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	IC L3			Worklist Smp#:	3
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151904.D
Lims ID: IC L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 15-Apr-2019 11:03:41 ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: IC L4
Misc. Info.: 280-0080933-004
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 15-May-2019 11:57:54 Calib Date: 15-Apr-2019 12:11:08
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151909.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0333

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.275	1.271	0.004	2121207	14.6	15.6	
2	1.701	1.692	0.009	1817240	14.6	15.6	
						RPD = 0.42	
2 Ethane							
1	1.544	1.556	-0.012	3768385	27.4	29.8	
2	2.896	2.889	0.007	3198231	27.4	29.8	
						RPD = 0.15	
3 Ethylene							
1	1.885	1.880	0.005	2951189	25.5	27.9	
2	2.516	2.512	0.004	2513192	25.5	27.9	
						RPD = 0.11	
4 Propane							
1	2.641	2.632	0.009	5812465	40.1	43.0	
2	4.694	4.687	0.007	4940027	40.1	43.1	
						RPD = 0.20	
5 Acetylene							
1	4.089	4.078	0.011	809586	23.7	25.2	
2	2.668	2.652	0.016	709490	23.7	25.0	
						RPD = 0.60	
6 Butane							
1	4.395	4.381	0.014	7767068	52.9	55.2	
2	6.155	6.146	0.009	6590566	52.9	54.7	
						RPD = 0.74	
7 isobutylene							
1	5.322	5.311	0.011	5189017	51.1	53.6	
2	6.004	5.998	0.006	4363220	51.1	53.8	
						RPD = 0.40	

Reagents:

RSK7gasMathes_00026 Amount Added: 40.00 Units: uL

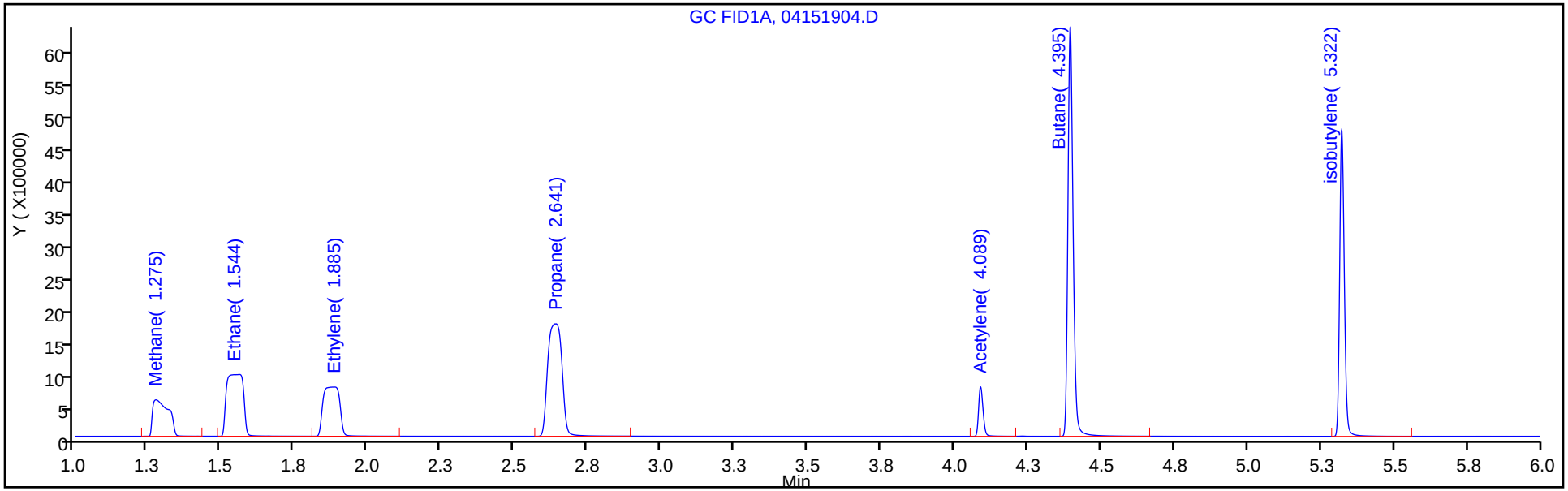
Report Date: 15-May-2019 11:57:55 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

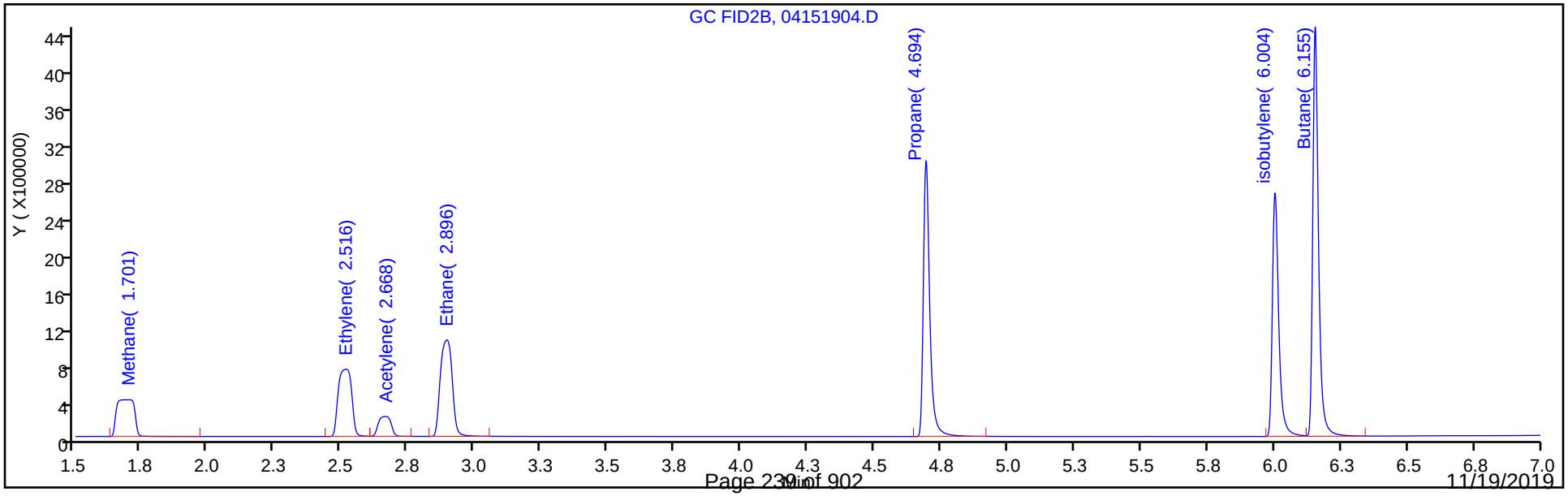
Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151904.D

Injection Date:	15-Apr-2019 11:03:41	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	IC L4			Worklist Smp#:	4
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151905.D
Lims ID: ICRT L5
Client ID:
Sample Type: ICRT Calib Level: 5
Inject. Date: 15-Apr-2019 11:17:11 ALS Bottle#: 5 Worklist Smp#: 5
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: ICRT L5
Misc. Info.: 280-0080933-005
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 15-May-2019 11:57:56 Calib Date: 15-Apr-2019 12:11:08
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151909.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0333

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.271	1.271	0.000	9627756	73.0	71.6	
2	1.692	1.692	0.000	8233442	73.0	71.6	
						RPD = 0.05	
2 Ethane							
1	1.556	1.556	0.000	17308693	136.9	137.0	
2	2.889	2.889	0.000	14756883	136.9	137.4	
						RPD = 0.30	
3 Ethylene							
1	1.880	1.880	0.000	13570482	127.7	128.3	
2	2.512	2.512	0.000	11530864	127.7	128.1	
						RPD = 0.11	
4 Propane							
1	2.632	2.632	0.000	26866377	200.7	198.6	
2	4.687	4.687	0.000	22779443	200.7	198.5	
						RPD = 0.04	
5 Acetylene							
1	4.078	4.078	0.000	4013672	118.5	124.9	
2	2.652	2.652	0.000	3536969	118.5	124.9	
						RPD = 0.04	
6 Butane							
1	4.381	4.381	0.000	35922157	264.5	255.1	
2	6.146	6.146	0.000	30367524	264.5	252.3	
						RPD = 1.11	
7 isobutylene							
1	5.311	5.311	0.000	23677727	255.4	244.7	
2	5.998	5.998	0.000	19852679	255.4	245.0	
						RPD = 0.12	

Reagents:

RSK7gasMathes_00026 Amount Added: 200.00 Units: uL

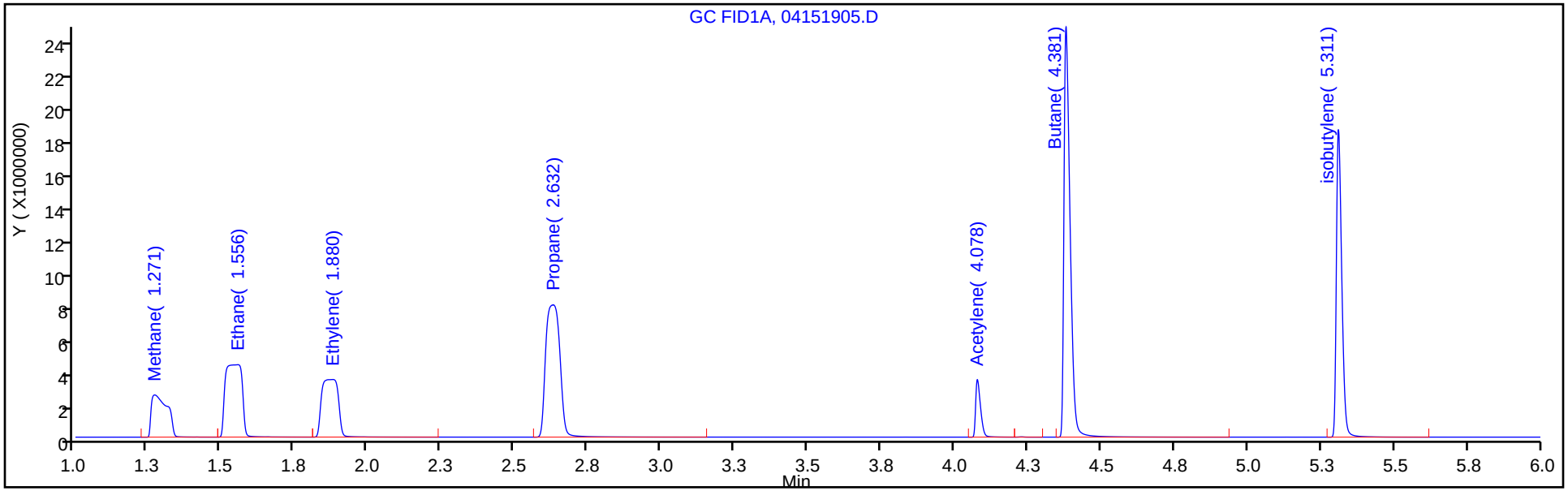
Report Date: 15-May-2019 11:57:56 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

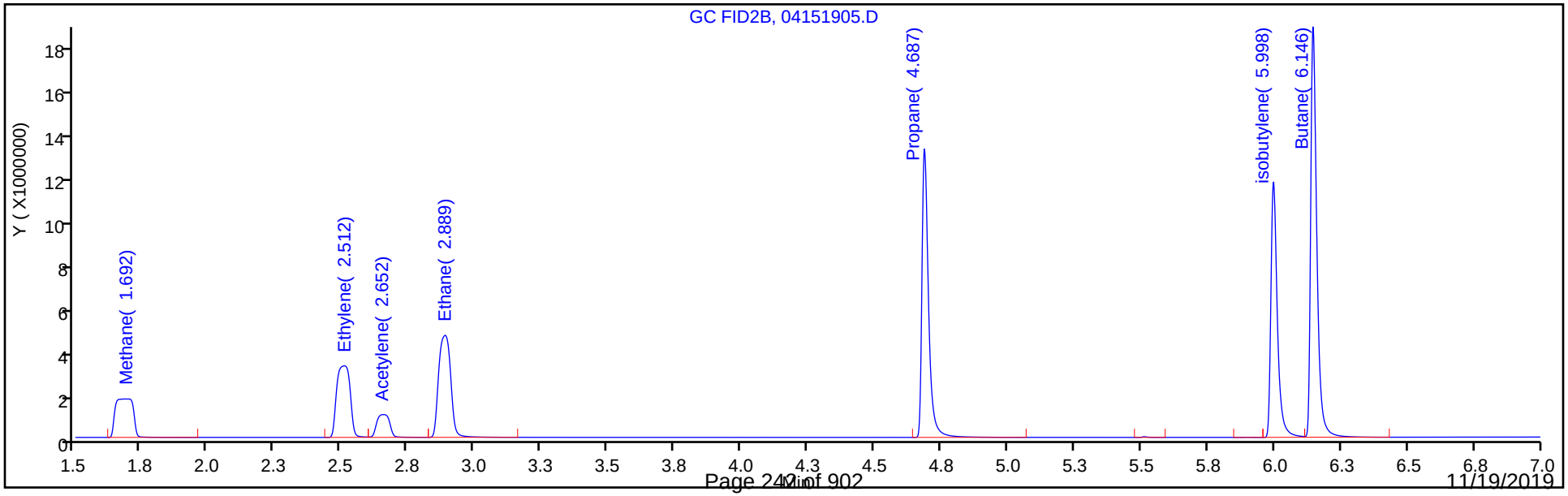
Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151905.D

Injection Date:	15-Apr-2019 11:17:11	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	ICRT L5			Worklist Smp#:	5
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151906.D
Lims ID: IC L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 15-Apr-2019 11:30:32 ALS Bottle#: 6 Worklist Smp#: 6
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: IC L6
Misc. Info.: 280-0080933-006
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 15-May-2019 11:57:57 Calib Date: 15-Apr-2019 12:11:08
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151909.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0333

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.267	1.271	-0.004	17958876	146.0	133.8	
2	1.681	1.692	-0.011	15386436	146.0	134.1	
						RPD = 0.21	
2 Ethane							
1	1.549	1.556	-0.007	32290083	273.7	255.5	
2	2.882	2.889	-0.007	27708010	273.7	258.0	
						RPD = 0.95	
3 Ethylene							M
1	1.866	1.880	-0.014	25472652	255.3	240.7	M
2	2.503	2.512	-0.009	21746052	255.3	241.6	
						RPD = 0.36	
4 Propane							
1	2.625	2.632	-0.007	50278684	401.4	371.7	
2	4.683	4.687	-0.004	42698075	401.4	372.2	
						RPD = 0.12	
5 Acetylene							
1	4.070	4.078	-0.008	7700889	237.0	239.7	
2	2.656	2.652	0.004	6771875	237.0	239.1	
						RPD = 0.25	
6 Butane							
1	4.370	4.381	-0.011	67375523	529.0	478.5	
2	6.140	6.146	-0.006	57174968	529.0	475.0	
						RPD = 0.73	
7 isobutylene							
1	5.302	5.311	-0.009	44689590	510.8	461.9	
2	5.992	5.998	-0.006	37488004	510.8	462.6	
						RPD = 0.16	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

RSK7gasMathes_00026 Amount Added: 400.00 Units: uL

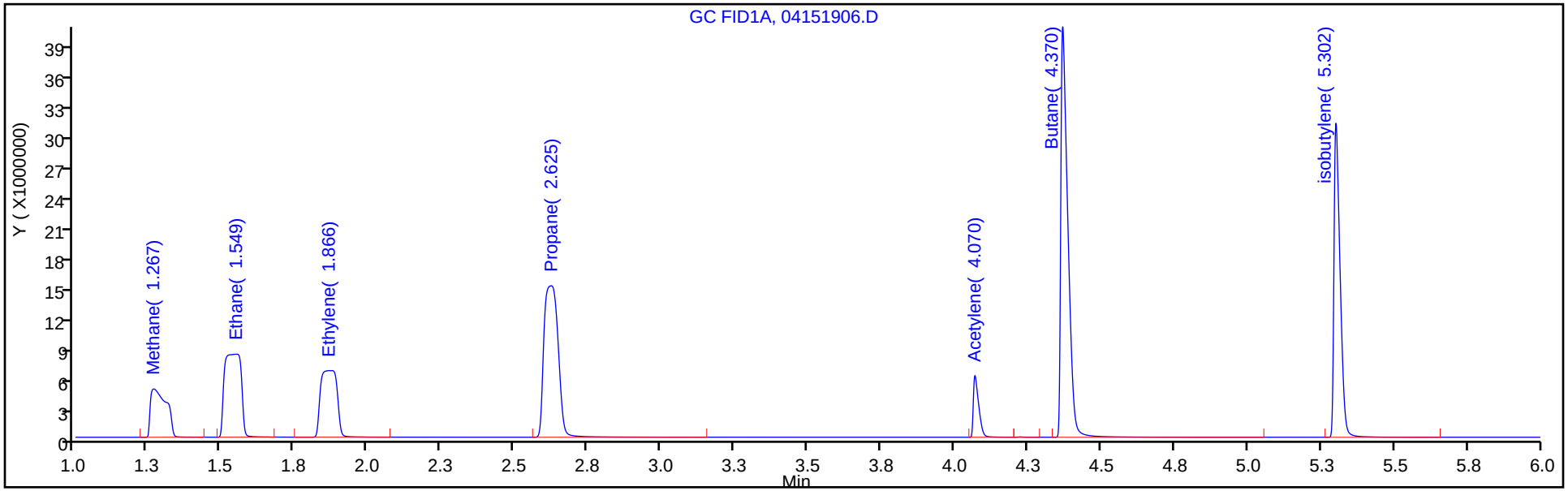
Report Date: 15-May-2019 11:57:58 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

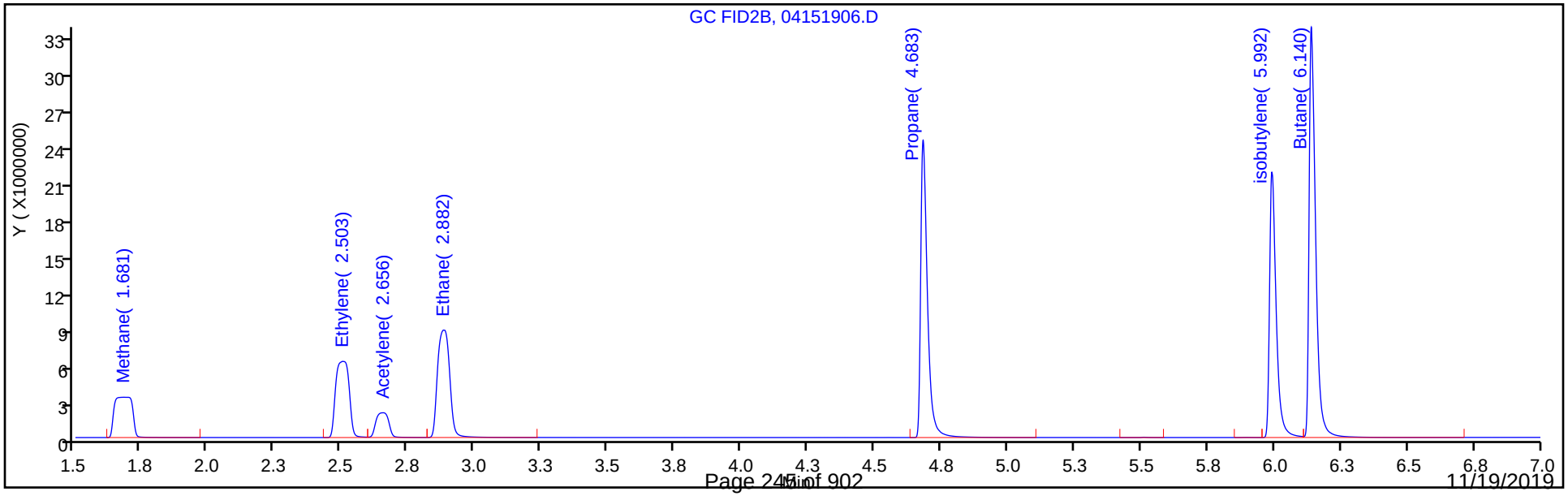
Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151906.D

Injection Date:	15-Apr-2019 11:30:32	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	IC L6			Worklist Smp#:	6
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151907.D
Lims ID: IC L7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 15-Apr-2019 11:44:06 ALS Bottle#: 7 Worklist Smp#: 7
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: IC L7
Misc. Info.: 280-0080933-007
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 15-May-2019 11:57:58 Calib Date: 15-Apr-2019 12:11:08
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151909.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0333

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.263	1.271	-0.008	40532226	292.0	302.4	
2	1.686	1.692	-0.006	34652624	292.0	302.3	
						RPD = 0.02	
2 Ethane							
1	1.549	1.556	-0.007	71736807	547.4	567.7	
2	2.876	2.889	-0.013	61621639	547.4	573.7	
						RPD = 1.05	
3 Ethylene							M
1	1.870	1.880	-0.010	54838846	510.7	518.3	M
2	2.503	2.512	-0.009	46940879	510.7	521.5	
						RPD = 0.62	
4 Propane							
1	2.611	2.632	-0.021	111846125	802.8	826.9	
2	4.672	4.687	-0.015	94884692	802.8	827.0	
						RPD = 0.02	
5 Acetylene							
1	4.057	4.078	-0.021	15668916	474.1	487.7	
2	2.651	2.652	-0.001	13791861	474.1	486.9	
						RPD = 0.16	
6 Butane							
1	4.350	4.381	-0.031	148225690	1058.1	1052.6	
2	6.128	6.146	-0.018	125686225	1058.1	1044.1	
						RPD = 0.81	
7 isobutylene							
1	5.288	5.311	-0.023	94615791	1021.5	977.9	
2	5.984	5.998	-0.014	79245111	1021.5	978.0	
						RPD = 0.01	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

RSK7gasMathes_00026 Amount Added: 800.00 Units: uL

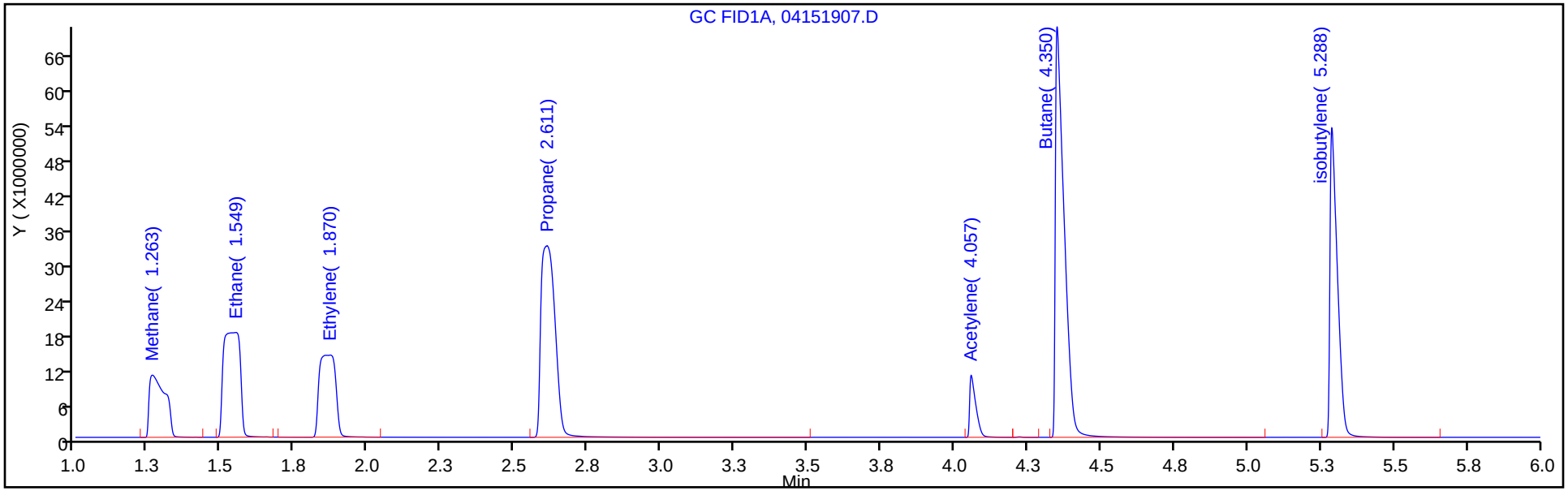
Report Date: 15-May-2019 11:57:59 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

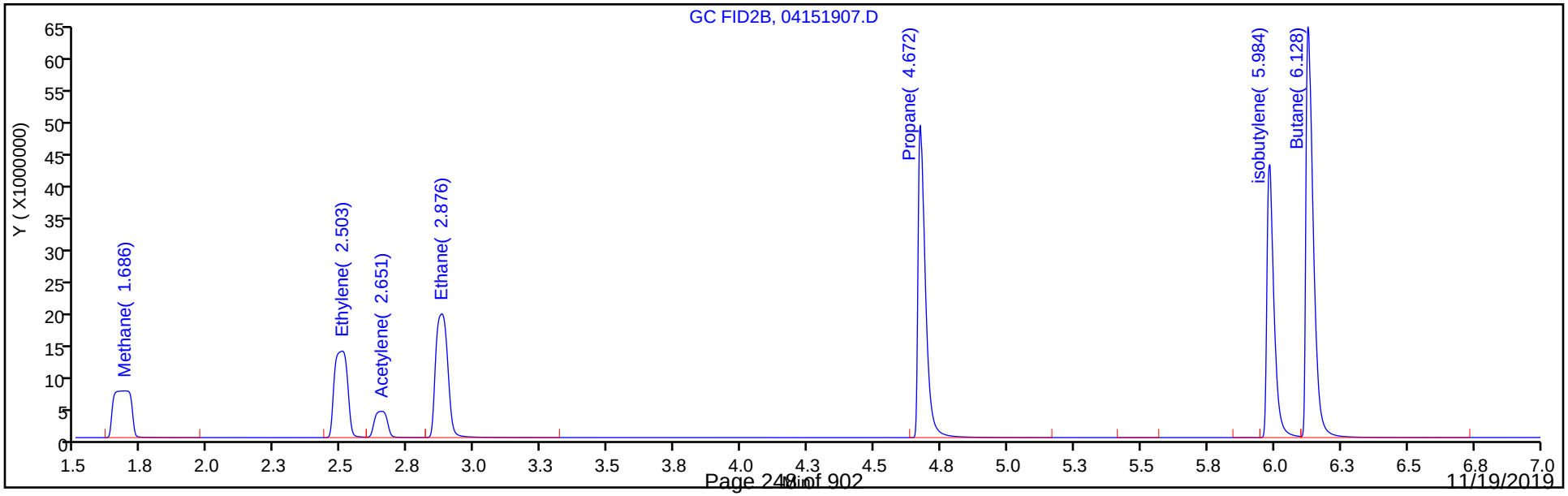
Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151907.D

Injection Date:	15-Apr-2019 11:44:06	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	IC L7			Worklist Smp#:	7
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151908.D
Lims ID: IC L8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 15-Apr-2019 11:57:32 ALS Bottle#: 8 Worklist Smp#: 8
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: IC L8
Misc. Info.: 280-0080933-008
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 15-May-2019 11:58:00 Calib Date: 15-Apr-2019 12:11:08
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151909.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0333

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.265	1.271	-0.006	226637342	1806.9	1691.8	
2	1.692	1.692	0.000	193042781	1806.9	1685.0	
						RPD = 0.41	

Reagents:

RSK175methane_00009 Amount Added: 50.00 Units: uL

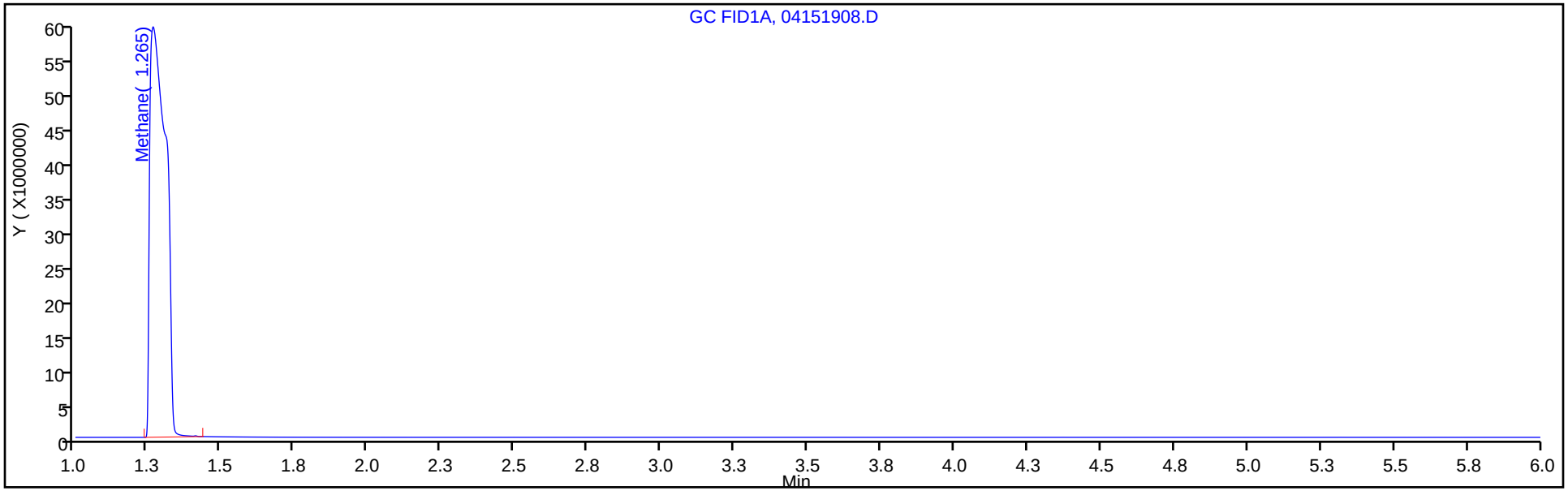
Report Date: 15-May-2019 11:58:01 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

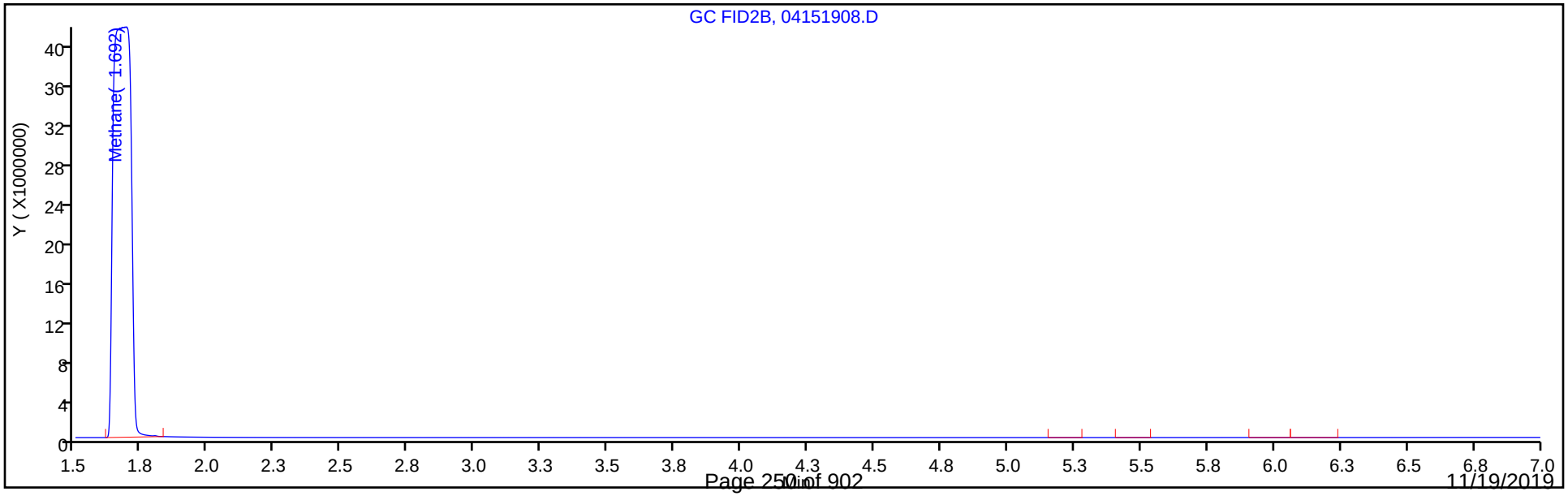
Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151908.D

Injection Date:	15-Apr-2019 11:57:32	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	IC L8			Worklist Smp#:	8
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151909.D
Lims ID: IC L9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 15-Apr-2019 12:11:08 ALS Bottle#: 9 Worklist Smp#: 9
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: IC L9
Misc. Info.: 280-0080933-009
Operator ID: ms Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 15-May-2019 11:58:02 Calib Date: 15-Apr-2019 12:11:08
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151909.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0333

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.263	1.271	-0.008	952923785	7227.8	7114.4	
2	1.668	1.692	-0.024	817202335	7227.8	7133.8	
						RPD = 0.27	

Reagents:

RSK175methane_00009 Amount Added: 200.00 Units: uL

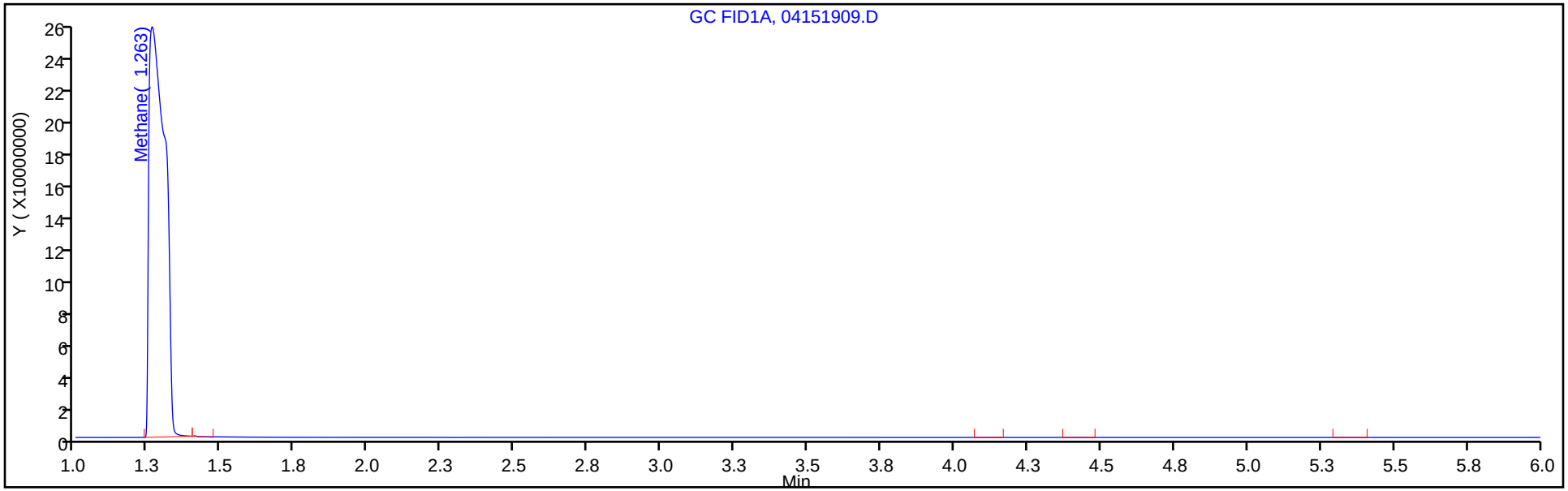
Report Date: 15-May-2019 11:58:02 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

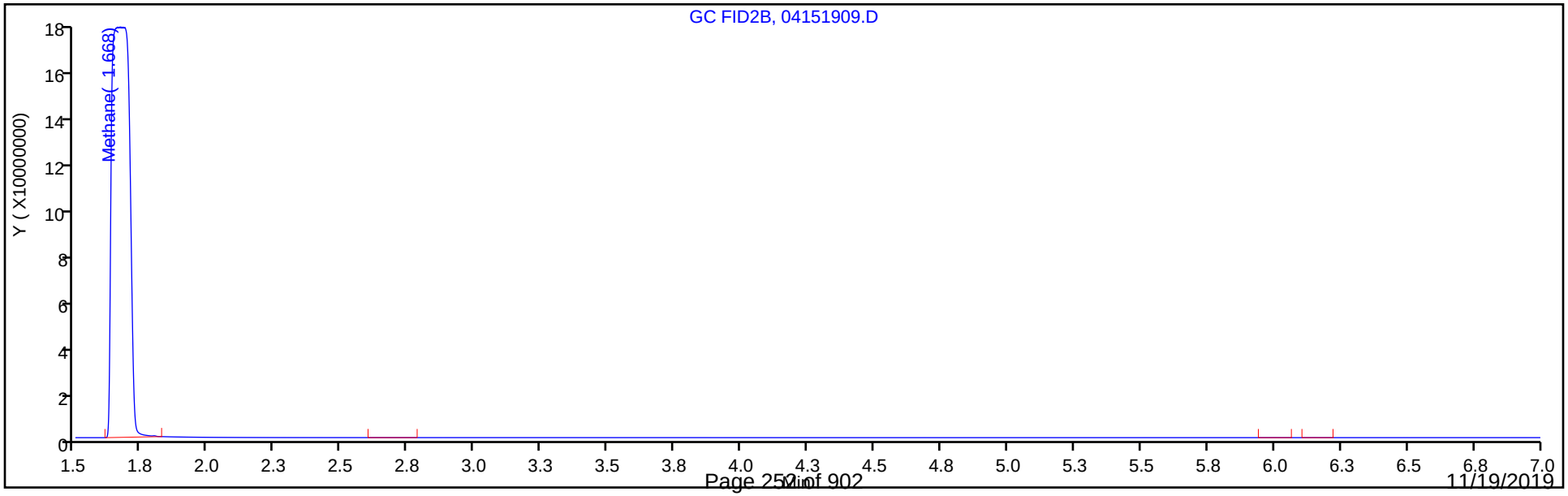
Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151909.D

Injection Date:	15-Apr-2019 12:11:08	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	IC L9			Worklist Smp#:	9
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: ICV 280-454595/11 Calibration Date: 04/15/2019 12:38

Instrument ID: VGC_J Calib Start Date: 04/15/2019 10:23

GC Column: Rt-Alumina KCl ID: 0.53(mm) Calib End Date: 04/15/2019 12:11

Lab File ID: 04151911.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Lin2		128138		139	146	-4.5	20.0
Ethane	Ave	126364	121882		264	274	-3.5	20.0
Ethylene	Ave	105807	101365		245	255	-4.2	20.0
Acetylene	Ave	32129	31404		232	237	-2.3	20.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: ICV 280-454595/11 Calibration Date: 04/15/2019 12:38

Instrument ID: VGC_J Calib Start Date: 04/15/2019 10:23

GC Column: Rt-Alumina KCl ID: 0.53(mm) Calib End Date: 04/15/2019 12:11

Lab File ID: 04151911.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	1.26	1.23	1.31
Ethane	1.55	1.51	1.61
Ethylene	1.86	1.83	1.93
Acetylene	4.07	4.00	4.16

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151911.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 15-Apr-2019 12:38:15 ALS Bottle#: 11 Worklist Smp#: 11
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0080933-011
Operator ID: ms Instrument ID: VGC_J
Sublist:

Method: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 15-May-2019 11:58:03 Calib Date: 15-Apr-2019 12:11:08
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151909.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0333

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.264	1.271	-0.007	18709056	146.0	139.4	
2	1.678	1.692	-0.014	16025653	146.0	139.7	
						RPD = 0.18	
2 Ethane							
1	1.546	1.556	-0.010	33360415	273.7	264.0	
2	2.873	2.889	-0.016	28632577	273.7	266.6	
						RPD = 0.97	
3 Ethylene							
1	1.857	1.880	-0.023	25881738	255.3	244.6	
2	2.496	2.512	-0.016	21995109	255.3	244.4	
						RPD = 0.10	
4 Propane							
1	2.616	2.632	-0.016	51982286	401.4	384.3	
2	4.678	4.687	-0.009	44136454	401.4	384.7	
						RPD = 0.10	
5 Acetylene							
1	4.068	4.078	-0.010	7444173	237.0	231.7	
2	2.646	2.652	-0.006	6535820	237.0	230.7	
						RPD = 0.41	
6 Butane							
1	4.367	4.381	-0.014	69174084	529.0	491.2	
2	6.136	6.146	-0.010	58709409	529.0	487.7	
						RPD = 0.72	
7 isobutylene							
1	5.301	5.311	-0.010	44288925	510.8	457.7	
2	5.989	5.998	-0.009	37131909	510.8	458.2	
						RPD = 0.11	

Reagents:

RSK7gasMathes_00025 Amount Added: 400.00 Units: uL

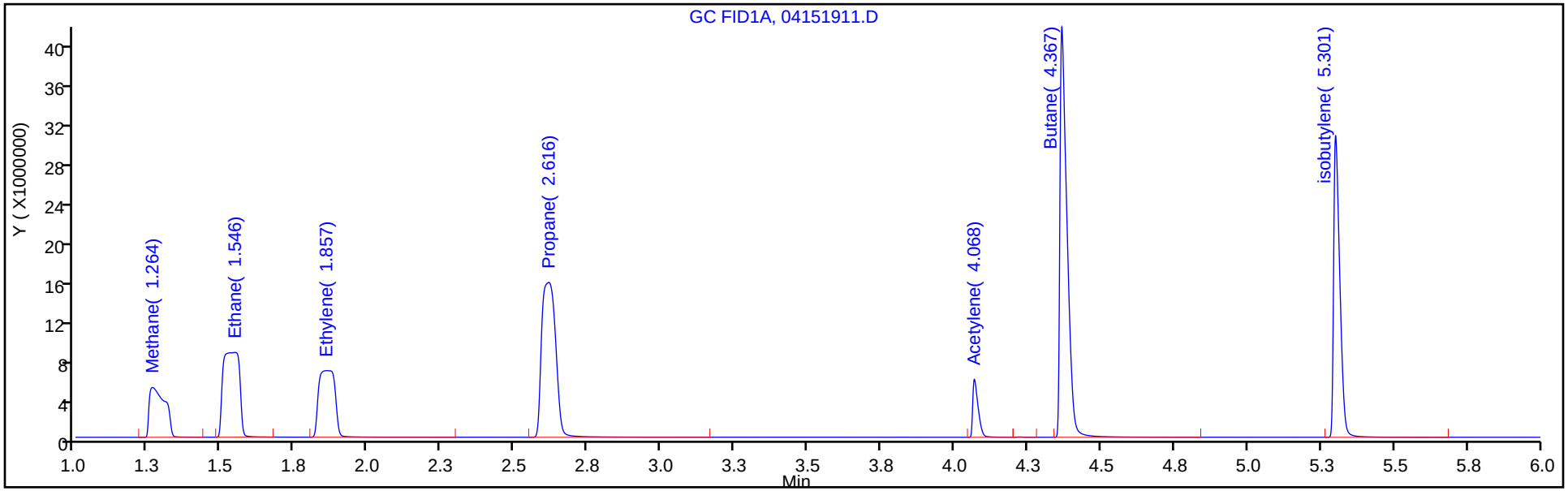
Report Date: 15-May-2019 11:58:04 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

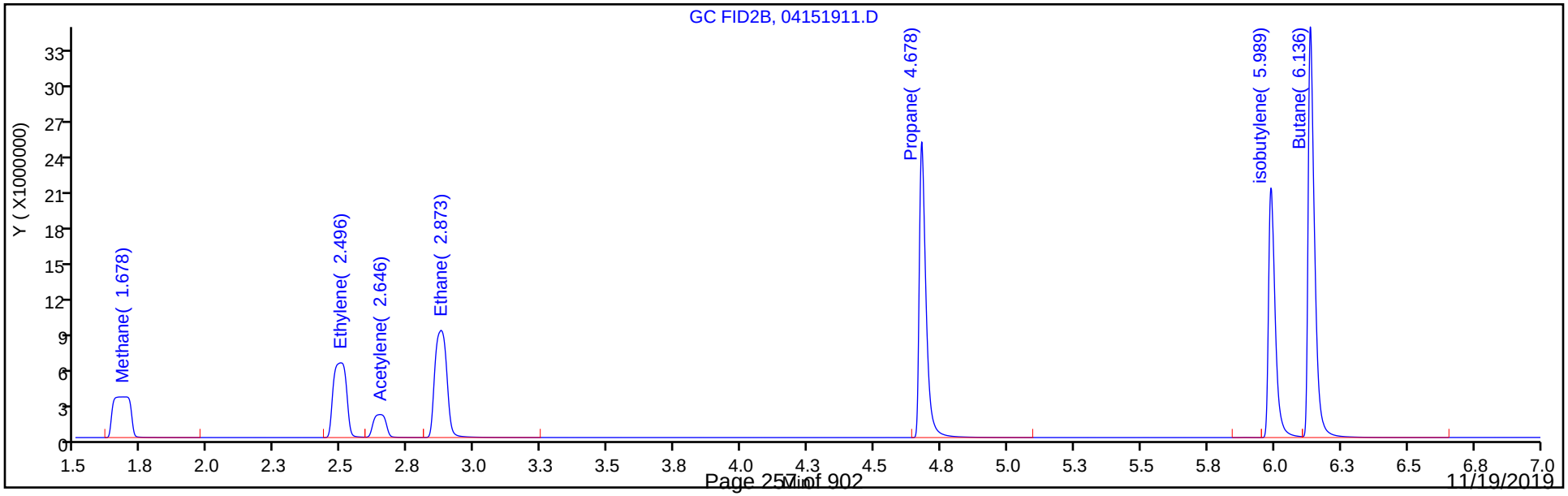
Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151911.D

Injection Date:	15-Apr-2019 12:38:15	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	ICV			Worklist Smp#:	11
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: ICV 280-454595/11 Calibration Date: 04/15/2019 12:38

Instrument ID: VGC_J Calib Start Date: 04/15/2019 10:23

GC Column: HP-Plot Q ID: 0.53(mm) Calib End Date: 04/15/2019 12:11

Lab File ID: 04151911.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Lin2		109760		140	146	-4.3	20.0
Ethylene	Ave	90007	86143		244	255	-4.3	20.0
Acetylene	Ave	28324	27572		231	237	-2.7	20.0
Ethane	Ave	107408	104609		267	274	-2.6	20.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: ICV 280-454595/11 Calibration Date: 04/15/2019 12:38

Instrument ID: VGC_J Calib Start Date: 04/15/2019 10:23

GC Column: HP-Plot Q ID: 0.53(mm) Calib End Date: 04/15/2019 12:11

Lab File ID: 04151911.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	1.68	1.65	1.73
Ethylene	2.50	2.46	2.56
Acetylene	2.65	2.57	2.73
Ethane	2.87	2.84	2.94

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151911.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 15-Apr-2019 12:38:15 ALS Bottle#: 11 Worklist Smp#: 11
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0080933-011
Operator ID: ms Instrument ID: VGC_J
Sublist:

Method: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 15-May-2019 11:58:03 Calib Date: 15-Apr-2019 12:11:08
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151909.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0333

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.264	1.271	-0.007	18709056	146.0	139.4	
2	1.678	1.692	-0.014	16025653	146.0	139.7	
						RPD = 0.18	
2 Ethane							
1	1.546	1.556	-0.010	33360415	273.7	264.0	
2	2.873	2.889	-0.016	28632577	273.7	266.6	
						RPD = 0.97	
3 Ethylene							
1	1.857	1.880	-0.023	25881738	255.3	244.6	
2	2.496	2.512	-0.016	21995109	255.3	244.4	
						RPD = 0.10	
4 Propane							
1	2.616	2.632	-0.016	51982286	401.4	384.3	
2	4.678	4.687	-0.009	44136454	401.4	384.7	
						RPD = 0.10	
5 Acetylene							
1	4.068	4.078	-0.010	7444173	237.0	231.7	
2	2.646	2.652	-0.006	6535820	237.0	230.7	
						RPD = 0.41	
6 Butane							
1	4.367	4.381	-0.014	69174084	529.0	491.2	
2	6.136	6.146	-0.010	58709409	529.0	487.7	
						RPD = 0.72	
7 isobutylene							
1	5.301	5.311	-0.010	44288925	510.8	457.7	
2	5.989	5.998	-0.009	37131909	510.8	458.2	
						RPD = 0.11	

Reagents:

RSK7gasMathes_00025 Amount Added: 400.00 Units: uL

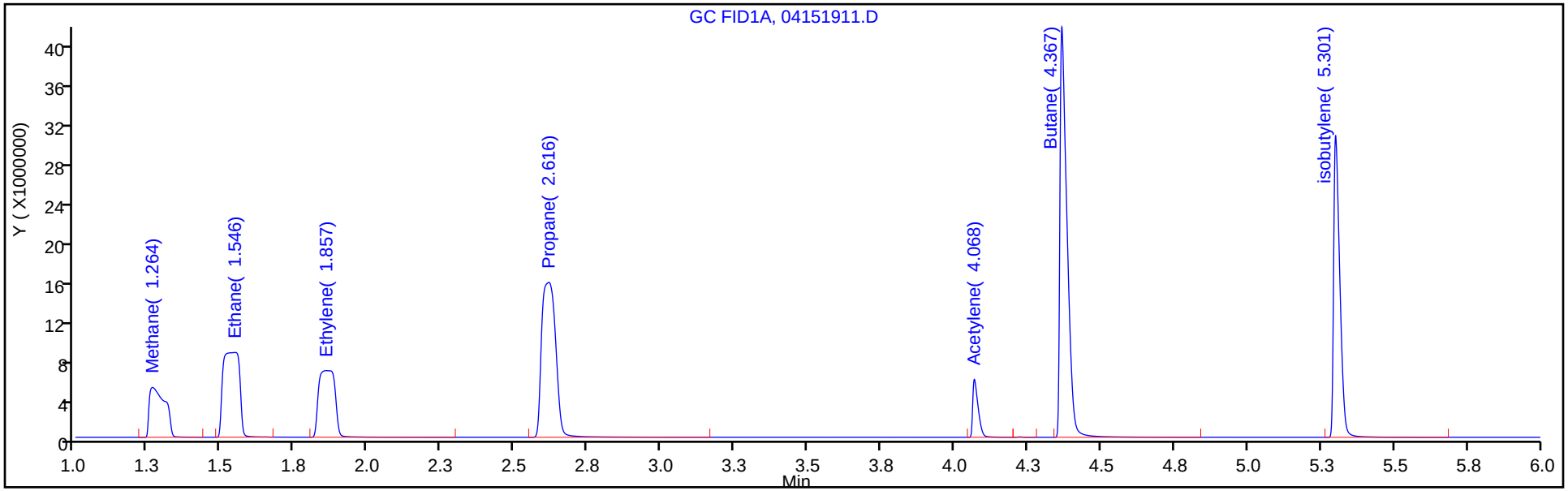
Report Date: 15-May-2019 11:58:04 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

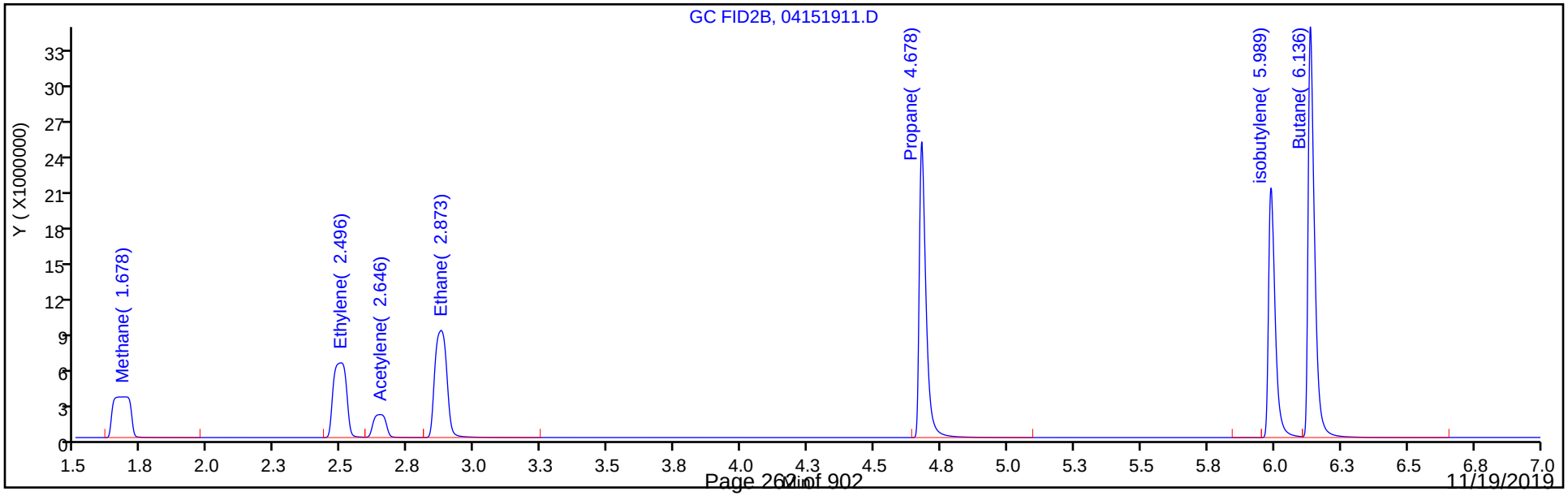
Data File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151911.D

Injection Date:	15-Apr-2019 12:38:15	Instrument ID:	VGC_J	Operator ID:	ms
Lims ID:	ICV			Worklist Smp#:	11
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: CCVRT 280-475070/1 Calibration Date: 10/23/2019 10:01

Instrument ID: VGC_J Calib Start Date: 04/15/2019 10:23

GC Column: Rt-Alumina KCl ID: 0.53(mm) Calib End Date: 04/15/2019 12:11

Lab File ID: 001F0101.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Lin2		132005		71.7	73.0	-1.8	20.0
Ethane	Ave	126364	121188		131	137	-4.1	20.0
Ethylene	Ave	105807	100900		122	128	-4.6	20.0
Acetylene	Ave	32129	33981		125	119	5.8	20.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: CCVRT 280-475070/1 Calibration Date: 10/23/2019 10:01

Instrument ID: VGC_J Calib Start Date: 04/15/2019 10:23

GC Column: Rt-Alumina KCl ID: 0.53(mm) Calib End Date: 04/15/2019 12:11

Lab File ID: 001F0101.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	1.28	1.24	1.32
Ethane	1.55	1.50	1.60
Ethylene	1.87	1.82	1.92
Acetylene	4.03	3.95	4.11

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\001F0101.D
Lims ID: CCVRT
Client ID:
Sample Type: CCVRT
Inject. Date: 23-Oct-2019 10:01:17 ALS Bottle#: 1 Worklist Smp#: 1
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: CCVRT
Operator ID: GM Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 24-Oct-2019 08:56:23 Calib Date: 15-Apr-2019 12:11:08
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151909.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0332

First Level Reviewer: sciannac Date: 24-Oct-2019 08:07:34

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.276	1.276	0.000	9636838	73.0	71.7	
2	1.690	1.690	0.000	8272686	73.0	72.0	
						RPD = 0.43	
2 Ethane							
1	1.554	1.554	0.000	16585251	136.9	131.2	
2	2.891	2.891	0.000	14186127	136.9	132.1	
						RPD = 0.63	
3 Ethylene							
1	1.871	1.871	0.000	12881509	127.7	121.7	
2	2.515	2.515	0.000	10985150	127.7	122.0	
						RPD = 0.25	
4 Propane							
1	2.603	2.603	0.000	25037204	200.7	185.1	
2	4.685	4.685	0.000	21299146	200.7	185.6	
						RPD = 0.29	
5 Acetylene							
1	4.032	4.032	0.000	4027510	118.5	125.4	
2	2.665	2.665	0.000	3592020	118.5	126.8	
						RPD = 1.16	
6 Butane							
1	4.349	4.349	0.000	31262994	264.5	222.0	
2	6.146	6.146	0.000	26610901	264.5	221.1	
						RPD = 0.43	
7 isobutylene							
1	5.283	5.283	0.000	21376687	255.4	220.9	
2	5.999	5.999	0.000	17960693	255.4	221.7	
						RPD = 0.32	

Reagents:

RSK7gasMathes_00027 Amount Added: 200.00 Units: uL

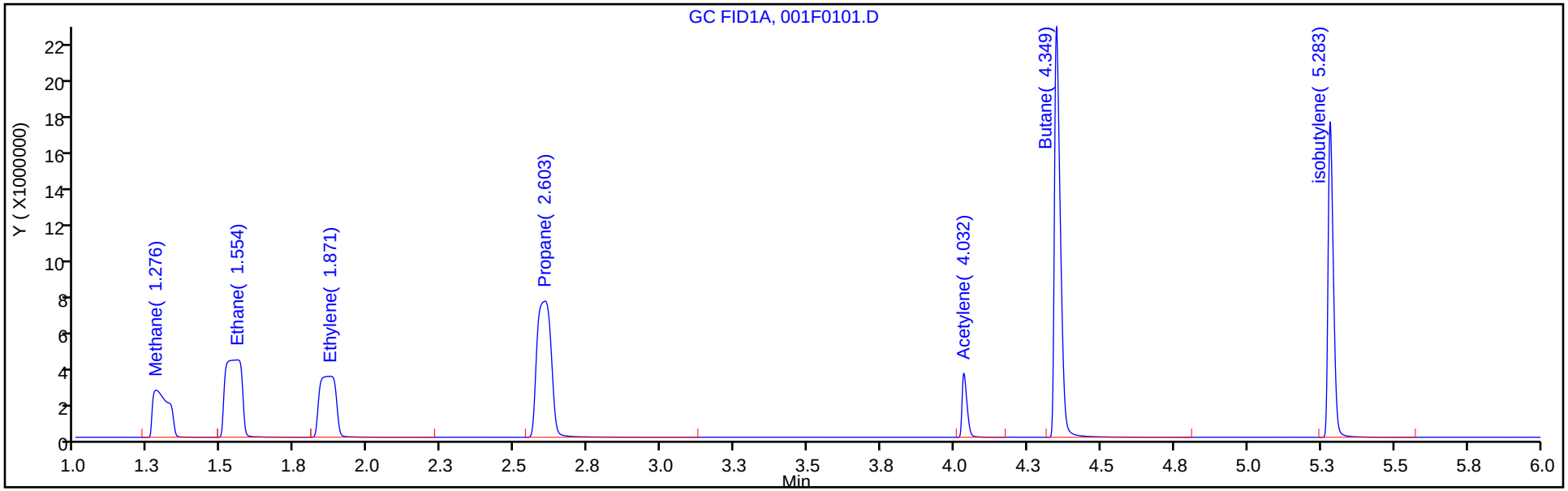
Report Date: 24-Oct-2019 08:56:23 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

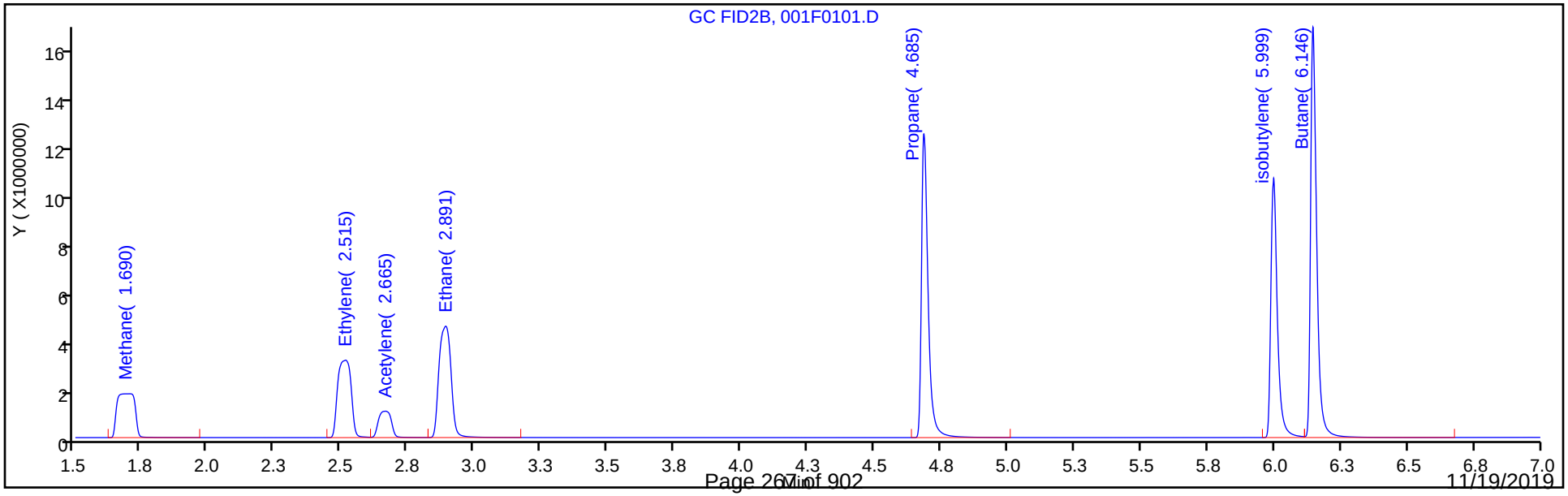
Data File: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\001F0101.D

Injection Date:	23-Oct-2019 10:01:17	Instrument ID:	VGC_J	Operator ID:	GM
Lims ID:	CCVRT			Worklist Smp#:	1
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: CCVRT 280-475070/1 Calibration Date: 10/23/2019 10:01

Instrument ID: VGC_J Calib Start Date: 04/15/2019 10:23

GC Column: HP-Plot Q ID: 0.53(mm) Calib End Date: 04/15/2019 12:11

Lab File ID: 001F0101.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Lin2		113319		72.0	73.0	-1.4	20.0
Ethylene	Ave	90007	86046		122	128	-4.4	20.0
Acetylene	Ave	28324	30307		127	119	7.0	20.0
Ethane	Ave	107408	103658		132	137	-3.5	20.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: CCVRT 280-475070/1 Calibration Date: 10/23/2019 10:01

Instrument ID: VGC_J Calib Start Date: 04/15/2019 10:23

GC Column: HP-Plot Q ID: 0.53(mm) Calib End Date: 04/15/2019 12:11

Lab File ID: 001F0101.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	1.69	1.65	1.73
Ethylene	2.52	2.47	2.57
Acetylene	2.67	2.59	2.75
Ethane	2.89	2.84	2.94

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\001F0101.D
Lims ID: CCVRT
Client ID:
Sample Type: CCVRT
Inject. Date: 23-Oct-2019 10:01:17 ALS Bottle#: 1 Worklist Smp#: 1
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: CCVRT
Operator ID: GM Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 24-Oct-2019 08:56:23 Calib Date: 15-Apr-2019 12:11:08
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151909.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0332

First Level Reviewer: sciannac Date: 24-Oct-2019 08:07:34

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.276	1.276	0.000	9636838	73.0	71.7	
2	1.690	1.690	0.000	8272686	73.0	72.0	
						RPD = 0.43	
2 Ethane							
1	1.554	1.554	0.000	16585251	136.9	131.2	
2	2.891	2.891	0.000	14186127	136.9	132.1	
						RPD = 0.63	
3 Ethylene							
1	1.871	1.871	0.000	12881509	127.7	121.7	
2	2.515	2.515	0.000	10985150	127.7	122.0	
						RPD = 0.25	
4 Propane							
1	2.603	2.603	0.000	25037204	200.7	185.1	
2	4.685	4.685	0.000	21299146	200.7	185.6	
						RPD = 0.29	
5 Acetylene							
1	4.032	4.032	0.000	4027510	118.5	125.4	
2	2.665	2.665	0.000	3592020	118.5	126.8	
						RPD = 1.16	
6 Butane							
1	4.349	4.349	0.000	31262994	264.5	222.0	
2	6.146	6.146	0.000	26610901	264.5	221.1	
						RPD = 0.43	
7 isobutylene							
1	5.283	5.283	0.000	21376687	255.4	220.9	
2	5.999	5.999	0.000	17960693	255.4	221.7	
						RPD = 0.32	

Reagents:

RSK7gasMathes_00027 Amount Added: 200.00 Units: uL

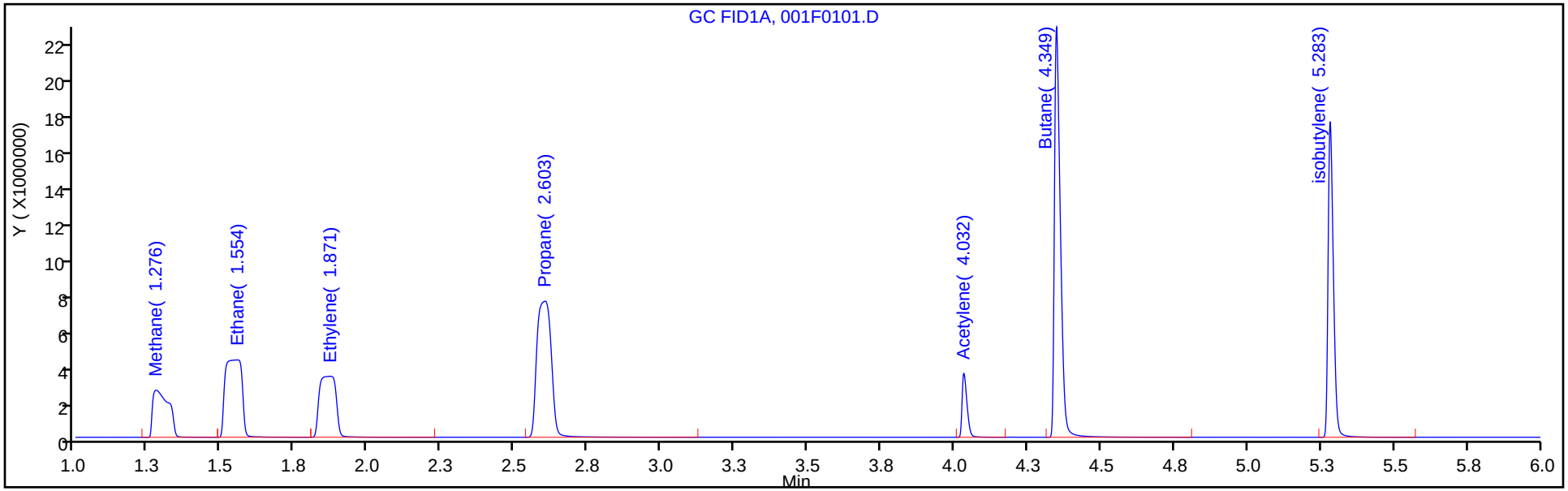
Report Date: 24-Oct-2019 08:56:23 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

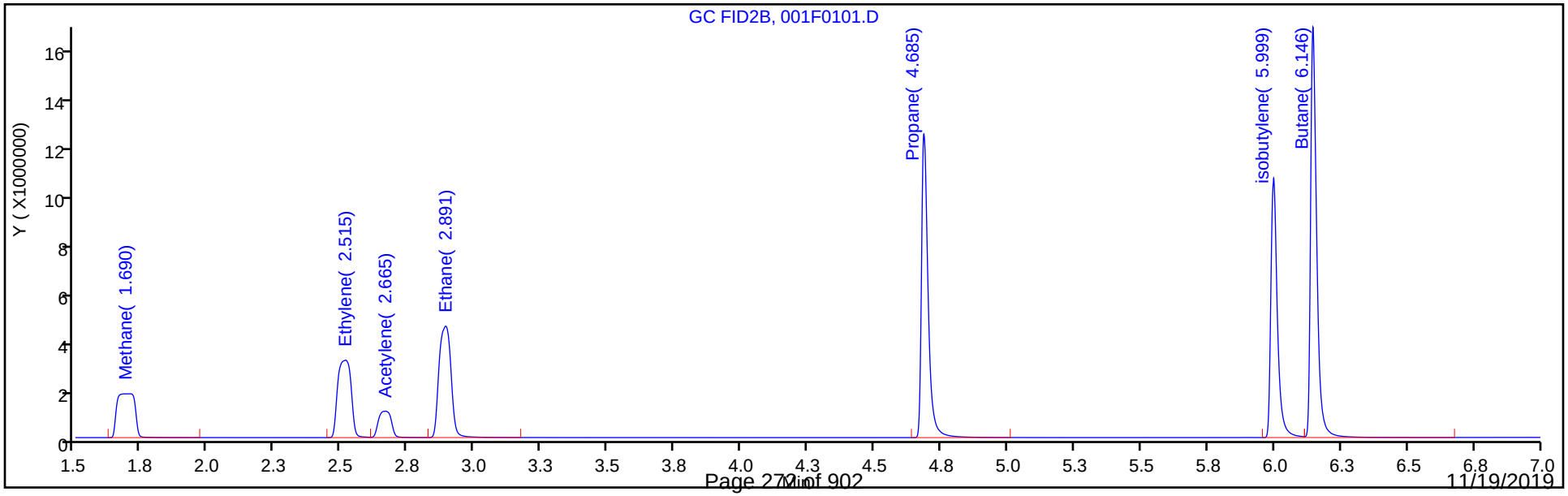
Data File: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\001F0101.D

Injection Date:	23-Oct-2019 10:01:17	Instrument ID:	VGC_J	Operator ID:	GM
Lims ID:	CCVRT			Worklist Smp#:	1
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: CCV 280-475070/18 Calibration Date: 10/23/2019 17:19

Instrument ID: VGC_J Calib Start Date: 04/15/2019 10:23

GC Column: Rt-Alumina KCl ID: 0.53(mm) Calib End Date: 04/15/2019 12:11

Lab File ID: 018F1401.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Lin2		133638		72.6	73.0	-0.6	20.0
Ethane	Ave	126364	125398		136	137	-0.8	20.0
Ethylene	Ave	105807	103521		125	128	-2.2	20.0
Acetylene	Ave	32129	37216		137	119	15.8	20.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: CCV 280-475070/18 Calibration Date: 10/23/2019 17:19

Instrument ID: VGC_J Calib Start Date: 04/15/2019 10:23

GC Column: Rt-Alumina KCl ID: 0.53(mm) Calib End Date: 04/15/2019 12:11

Lab File ID: 018F1401.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	1.26	1.24	1.32
Ethane	1.54	1.50	1.60
Ethylene	1.84	1.82	1.92
Acetylene	4.02	3.95	4.11

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\018F1401.D
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 23-Oct-2019 17:19:32 ALS Bottle#: 18 Worklist Smp#: 18
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: GM Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 24-Oct-2019 08:56:41 Calib Date: 15-Apr-2019 12:11:08
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151909.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0332

First Level Reviewer: sciannac Date: 24-Oct-2019 08:42:30

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.262	1.276	-0.014	9756049	73.0	72.6	
2	1.685	1.690	-0.005	8386584	73.0	73.0	
						RPD = 0.57	
2 Ethane							
1	1.535	1.554	-0.019	17161379	136.9	135.8	
2	2.876	2.891	-0.015	14706371	136.9	136.9	
						RPD = 0.82	
3 Ethylene							
1	1.842	1.871	-0.029	13216134	127.7	124.9	
2	2.493	2.515	-0.022	11287799	127.7	125.4	
						RPD = 0.40	
4 Propane							
1	2.572	2.603	-0.031	26730782	200.7	197.6	
2	4.681	4.685	-0.004	22802823	200.7	198.7	
						RPD = 0.57	
5 Acetylene							
1	4.023	4.032	-0.009	4410930	118.5	137.3	
2	2.650	2.665	-0.015	3845457	118.5	135.8	
						RPD = 1.12	
6 Butane							
1	4.328	4.349	-0.021	35835121	264.5	254.5	
2	6.140	6.146	-0.006	30498570	264.5	253.4	
						RPD = 0.44	
7 isobutylene							
1	5.268	5.283	-0.015	23867905	255.4	246.7	
2	5.992	5.999	-0.007	20052615	255.4	247.5	
						RPD = 0.32	

Reagents:

RSK7gasMathes_00027 Amount Added: 200.00 Units: uL

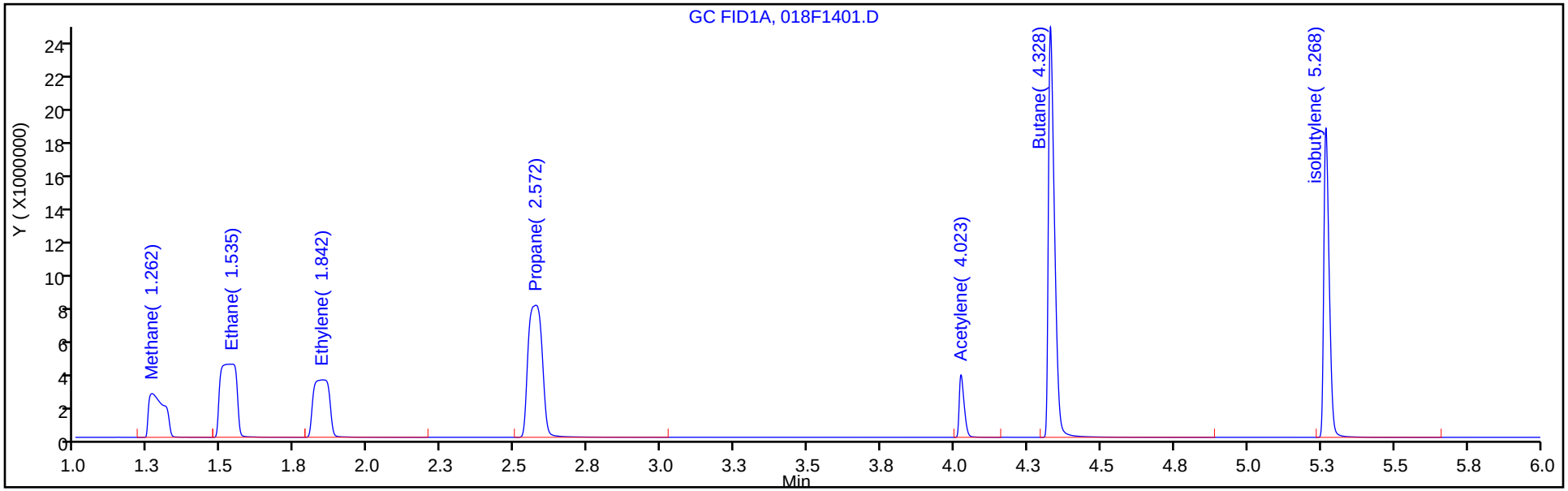
Report Date: 24-Oct-2019 08:56:41 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

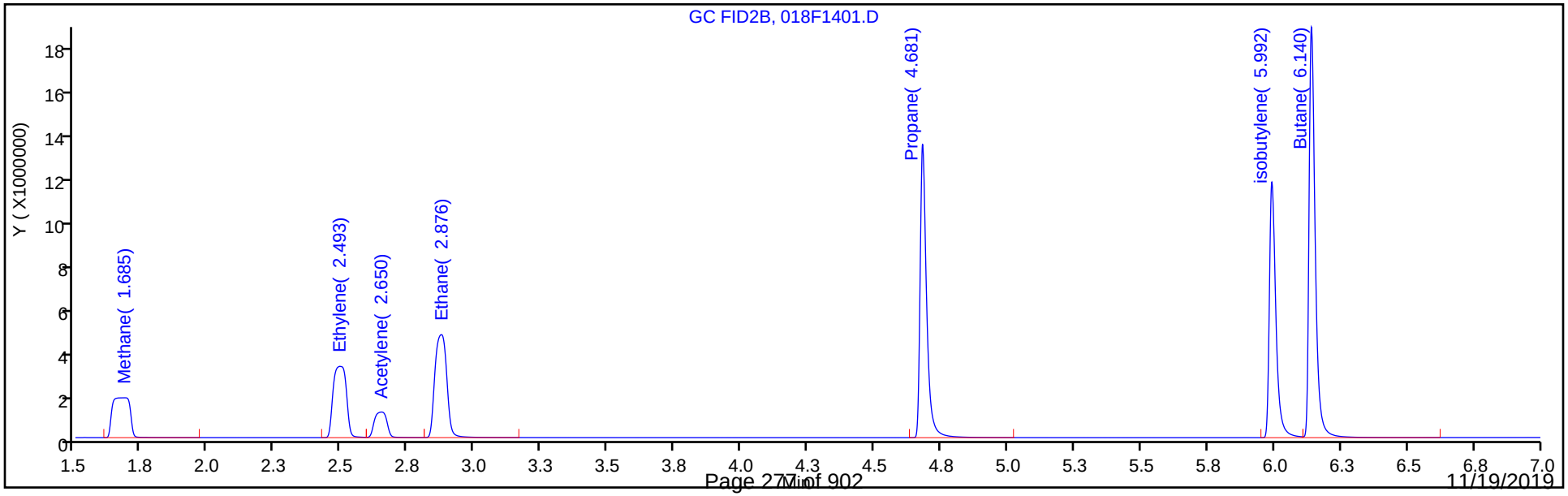
Data File: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\018F1401.D

Injection Date:	23-Oct-2019 17:19:32	Instrument ID:	VGC_J	Operator ID:	GM
Lims ID:	ccv			Worklist Smp#:	18
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: CCV 280-475070/18 Calibration Date: 10/23/2019 17:19

Instrument ID: VGC_J Calib Start Date: 04/15/2019 10:23

GC Column: HP-Plot Q ID: 0.53(mm) Calib End Date: 04/15/2019 12:11

Lab File ID: 018F1401.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Lin2		114879		73.0	73.0	-0.0	20.0
Ethylene	Ave	90007	88416		125	128	-1.8	20.0
Acetylene	Ave	28324	32445		136	119	14.5	20.0
Ethane	Ave	107408	107459		137	137	0.0	20.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: CCV 280-475070/18 Calibration Date: 10/23/2019 17:19

Instrument ID: VGC_J Calib Start Date: 04/15/2019 10:23

GC Column: HP-Plot Q ID: 0.53(mm) Calib End Date: 04/15/2019 12:11

Lab File ID: 018F1401.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	1.69	1.65	1.73
Ethylene	2.49	2.47	2.57
Acetylene	2.65	2.59	2.75
Ethane	2.88	2.84	2.94

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\018F1401.D
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 23-Oct-2019 17:19:32 ALS Bottle#: 18 Worklist Smp#: 18
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: GM Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 24-Oct-2019 08:56:41 Calib Date: 15-Apr-2019 12:11:08
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151909.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0332

First Level Reviewer: sciannac Date: 24-Oct-2019 08:42:30

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.262	1.276	-0.014	9756049	73.0	72.6	
2	1.685	1.690	-0.005	8386584	73.0	73.0	
						RPD = 0.57	
2 Ethane							
1	1.535	1.554	-0.019	17161379	136.9	135.8	
2	2.876	2.891	-0.015	14706371	136.9	136.9	
						RPD = 0.82	
3 Ethylene							
1	1.842	1.871	-0.029	13216134	127.7	124.9	
2	2.493	2.515	-0.022	11287799	127.7	125.4	
						RPD = 0.40	
4 Propane							
1	2.572	2.603	-0.031	26730782	200.7	197.6	
2	4.681	4.685	-0.004	22802823	200.7	198.7	
						RPD = 0.57	
5 Acetylene							
1	4.023	4.032	-0.009	4410930	118.5	137.3	
2	2.650	2.665	-0.015	3845457	118.5	135.8	
						RPD = 1.12	
6 Butane							
1	4.328	4.349	-0.021	35835121	264.5	254.5	
2	6.140	6.146	-0.006	30498570	264.5	253.4	
						RPD = 0.44	
7 isobutylene							
1	5.268	5.283	-0.015	23867905	255.4	246.7	
2	5.992	5.999	-0.007	20052615	255.4	247.5	
						RPD = 0.32	

Reagents:

RSK7gasMathes_00027 Amount Added: 200.00 Units: uL

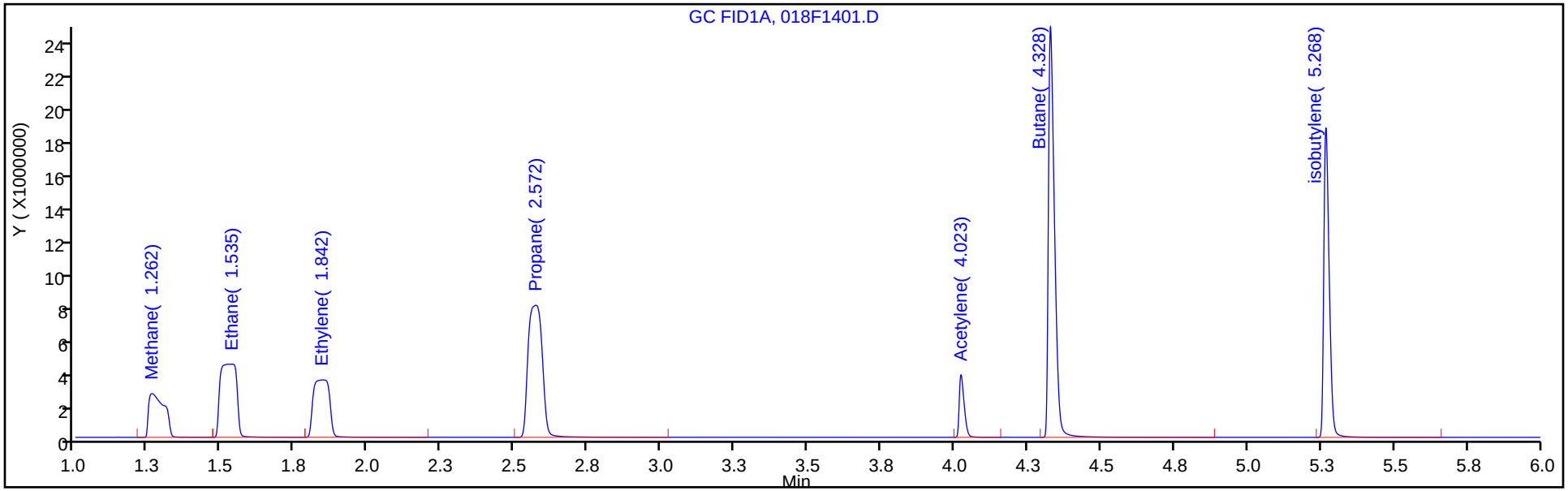
Report Date: 24-Oct-2019 08:56:42 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

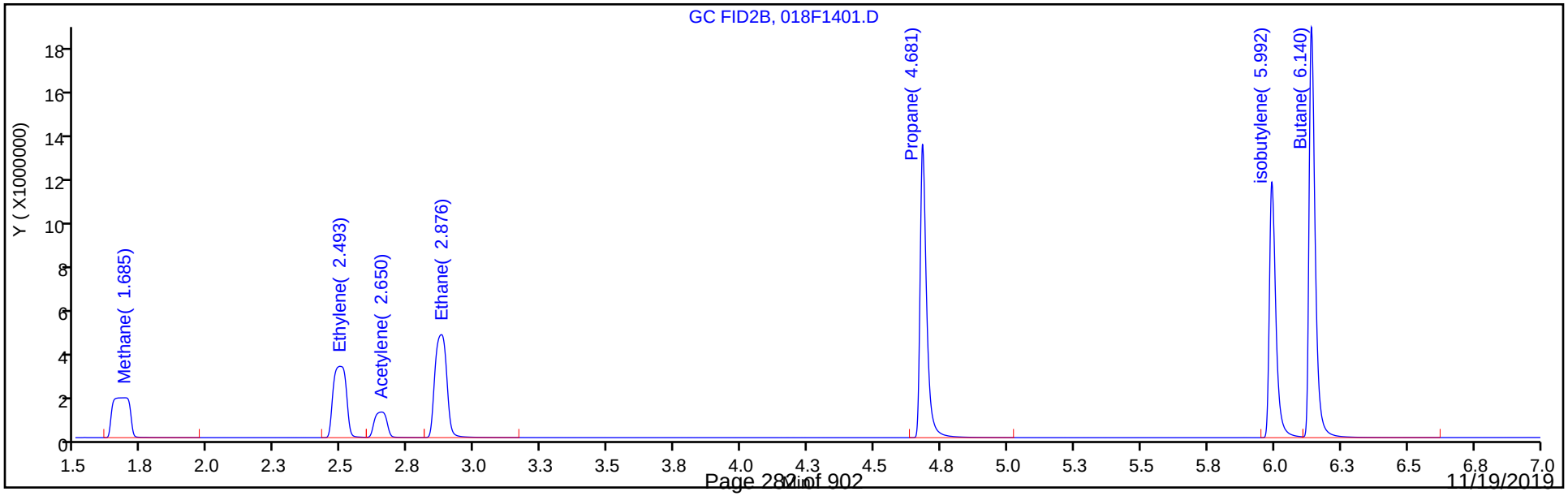
Data File: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\018F1401.D

Injection Date:	23-Oct-2019 17:19:32	Instrument ID:	VGC_J	Operator ID:	GM
Lims ID:	ccv			Worklist Smp#:	18
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: CCV 280-475070/32 Calibration Date: 10/23/2019 20:29

Instrument ID: VGC_J Calib Start Date: 04/15/2019 10:23

GC Column: Rt-Alumina KCl ID: 0.53(mm) Calib End Date: 04/15/2019 12:11

Lab File ID: 032F2801.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Lin2		133564		72.5	73.0	-0.6	20.0
Ethane	Ave	126364	125865		136	137	-0.4	20.0
Ethylene	Ave	105807	98835		119	128	-6.6	20.0
Acetylene	Ave	32129	38768		143	119	20.7*	20.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: CCV 280-475070/32 Calibration Date: 10/23/2019 20:29

Instrument ID: VGC_J Calib Start Date: 04/15/2019 10:23

GC Column: Rt-Alumina KCl ID: 0.53(mm) Calib End Date: 04/15/2019 12:11

Lab File ID: 032F2801.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	1.26	1.24	1.32
Ethane	1.52	1.50	1.60
Ethylene	1.84	1.82	1.92
Acetylene	4.02	3.95	4.11

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\032F2801.D
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 23-Oct-2019 20:29:05 ALS Bottle#: 32 Worklist Smp#: 32
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: GM Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 24-Oct-2019 09:05:06 Calib Date: 15-Apr-2019 12:11:08
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151909.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0332

First Level Reviewer: sciannac Date: 24-Oct-2019 09:02:03

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.256	1.276	-0.020	9750596	73.0	72.5	
2	1.669	1.690	-0.021	8381349	73.0	72.9	
						RPD = 0.56	
2 Ethane							
1	1.523	1.554	-0.031	17225276	136.9	136.3	
2	2.865	2.891	-0.026	14767968	136.9	137.5	
						RPD = 0.86	
3 Ethylene							M
1	1.837	1.871	-0.034	12617986	127.7	119.3	M
2	2.488	2.515	-0.027	11408790	127.7	126.8	
						RPD = 6.10	
4 Propane							
1	2.562	2.603	-0.041	26898891	200.7	198.9	
2	4.679	4.685	-0.006	22930118	200.7	199.9	
						RPD = 0.50	
5 Acetylene							
1	4.018	4.032	-0.014	4594868	118.5	143.0	
2	2.640	2.665	-0.025	4007589	118.5	141.5	
						RPD = 1.07	
6 Butane							
1	4.324	4.349	-0.025	36269692	264.5	257.6	
2	6.138	6.146	-0.008	30894036	264.5	256.6	
						RPD = 0.36	
7 isobutylene							
1	5.265	5.283	-0.018	24407181	255.4	252.3	
2	5.991	5.999	-0.008	20516122	255.4	253.2	
						RPD = 0.37	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

RSK7gasMathes_00027 Amount Added: 200.00 Units: uL

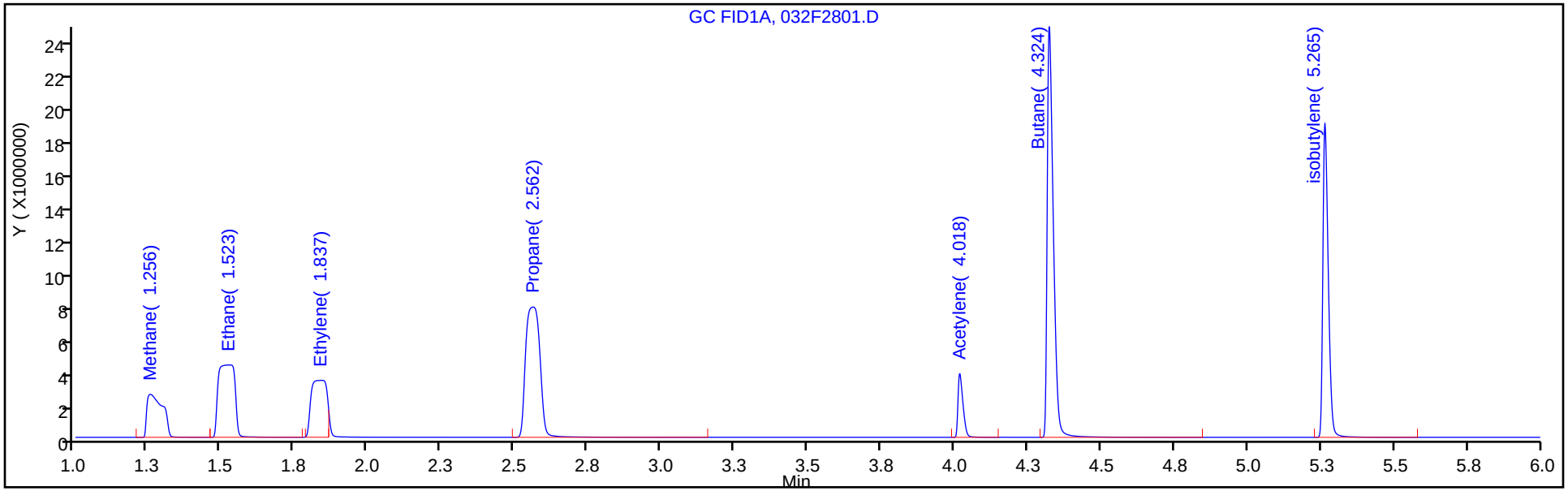
Report Date: 24-Oct-2019 09:05:07 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

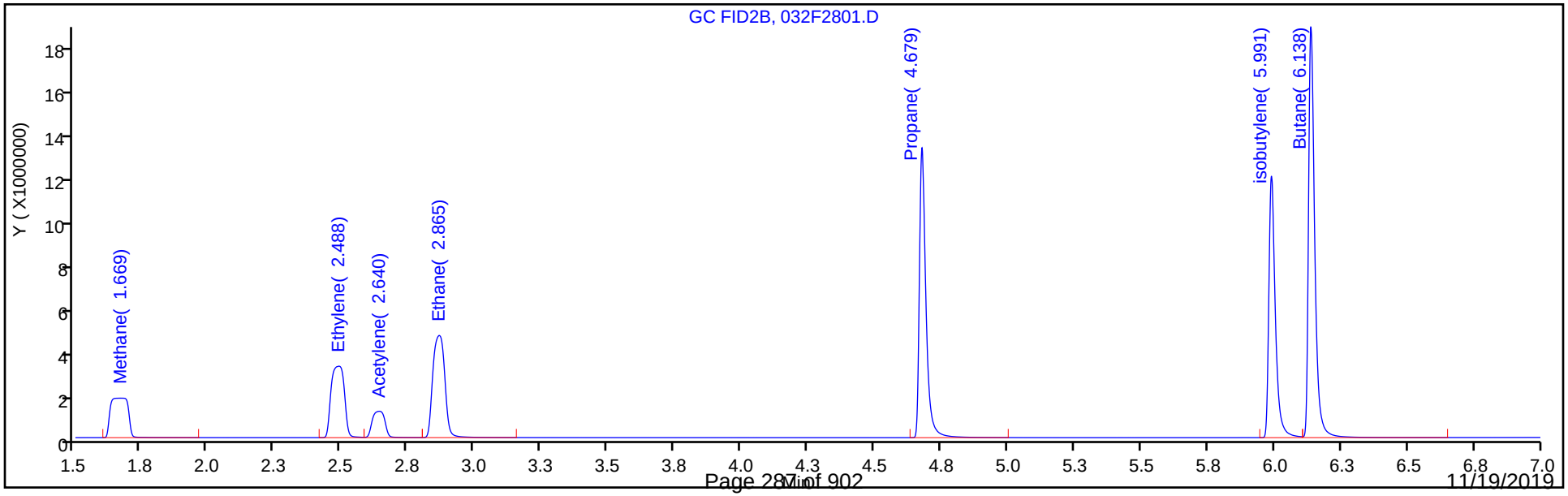
Data File: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\032F2801.D

Injection Date:	23-Oct-2019 20:29:05	Instrument ID:	VGC_J	Operator ID:	GM
Lims ID:	ccv			Worklist Smp#:	32
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	32
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

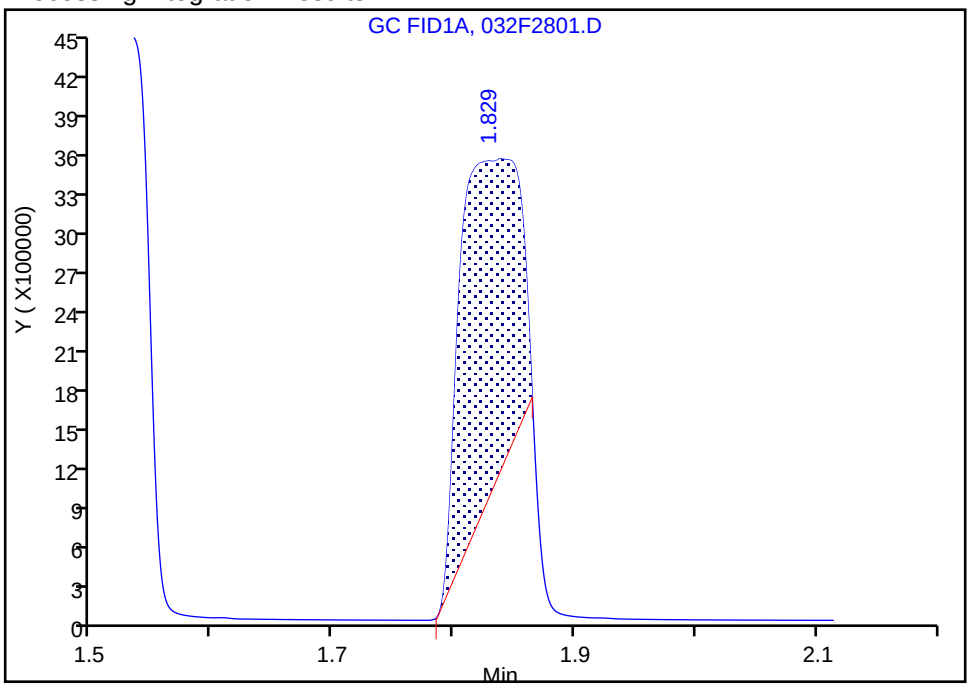
Data File:	\\chromna\Denver\ChromData\VGC_J\20191023-86426.b\032F2801.D				
Injection Date:	23-Oct-2019 20:29:05	Instrument ID:	VGC_J		
Lims ID:	ccv				
Client ID:					
Operator ID:	GM	ALS Bottle#:	32	Worklist Smp#:	32
Purge Vol:	18.000 mL	Dil. Factor:	1.0000		
Method:	RSK_J	Limit Group:	GCV - RSK 175		
Column:	Rt-Alumina BOND/KCl (0.53 mm)	Detector	GC FID1A		

3 Ethylene, CAS: 74-85-1

Signal: 1

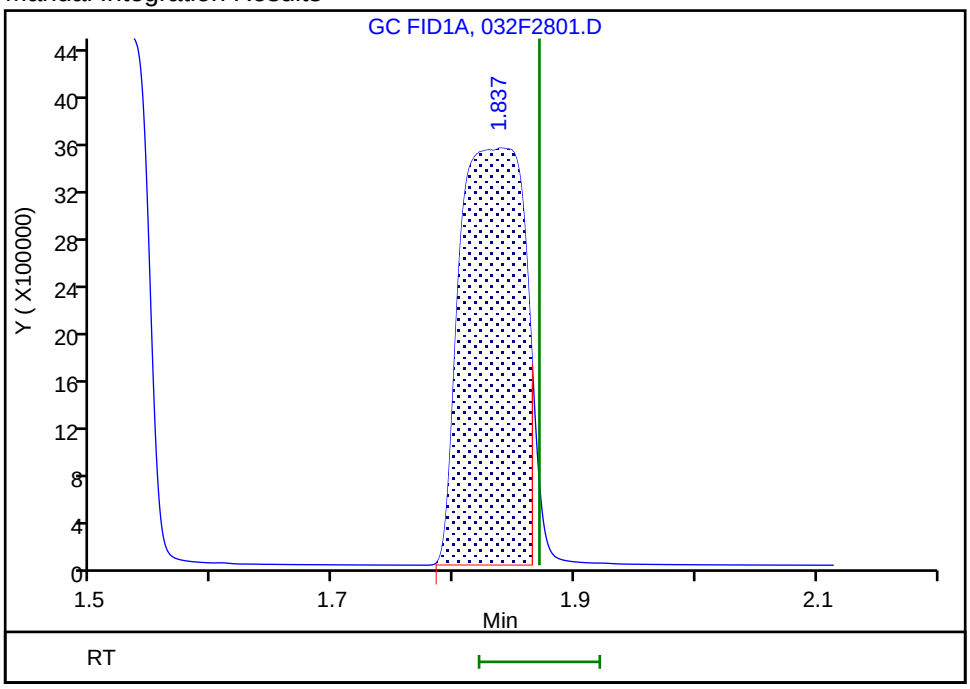
Processing Integration Results

RT: 1.83
Area: 8641201
Amount: 81.669468
Amount Units: ug/l



Manual Integration Results

RT: 1.84
Area: 12617986
Amount: 119.2547
Amount Units: ug/l



Reviewer: sciannac, 24-Oct-2019 09:01:58

Audit Action: Assigned New Baseline Audit Reason: Split Peak

FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: CCV 280-475070/32 Calibration Date: 10/23/2019 20:29

Instrument ID: VGC_J Calib Start Date: 04/15/2019 10:23

GC Column: HP-Plot Q ID: 0.53(mm) Calib End Date: 04/15/2019 12:11

Lab File ID: 032F2801.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Lin2		114808		72.9	73.0	-0.0	20.0
Ethylene	Ave	90007	89364		127	128	-0.7	20.0
Acetylene	Ave	28324	33813		141	119	19.4	20.0
Ethane	Ave	107408	107909		137	137	0.5	20.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: CCV 280-475070/32 Calibration Date: 10/23/2019 20:29

Instrument ID: VGC_J Calib Start Date: 04/15/2019 10:23

GC Column: HP-Plot Q ID: 0.53(mm) Calib End Date: 04/15/2019 12:11

Lab File ID: 032F2801.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	1.67	1.65	1.73
Ethylene	2.49	2.47	2.57
Acetylene	2.64	2.59	2.75
Ethane	2.87	2.84	2.94

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\032F2801.D
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 23-Oct-2019 20:29:05 ALS Bottle#: 32 Worklist Smp#: 32
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: GM Instrument ID: VGC_J
Sublist: chrom-RSK_J*sub5

Method: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 24-Oct-2019 09:05:06 Calib Date: 15-Apr-2019 12:11:08
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151909.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0332

First Level Reviewer: sciannac Date: 24-Oct-2019 09:02:03

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.256	1.276	-0.020	9750596	73.0	72.5	
2	1.669	1.690	-0.021	8381349	73.0	72.9	
						RPD = 0.56	
2 Ethane							
1	1.523	1.554	-0.031	17225276	136.9	136.3	
2	2.865	2.891	-0.026	14767968	136.9	137.5	
						RPD = 0.86	
3 Ethylene							M
1	1.837	1.871	-0.034	12617986	127.7	119.3	M
2	2.488	2.515	-0.027	11408790	127.7	126.8	
						RPD = 6.10	
4 Propane							
1	2.562	2.603	-0.041	26898891	200.7	198.9	
2	4.679	4.685	-0.006	22930118	200.7	199.9	
						RPD = 0.50	
5 Acetylene							
1	4.018	4.032	-0.014	4594868	118.5	143.0	
2	2.640	2.665	-0.025	4007589	118.5	141.5	
						RPD = 1.07	
6 Butane							
1	4.324	4.349	-0.025	36269692	264.5	257.6	
2	6.138	6.146	-0.008	30894036	264.5	256.6	
						RPD = 0.36	
7 isobutylene							
1	5.265	5.283	-0.018	24407181	255.4	252.3	
2	5.991	5.999	-0.008	20516122	255.4	253.2	
						RPD = 0.37	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

RSK7gasMathes_00027 Amount Added: 200.00 Units: uL

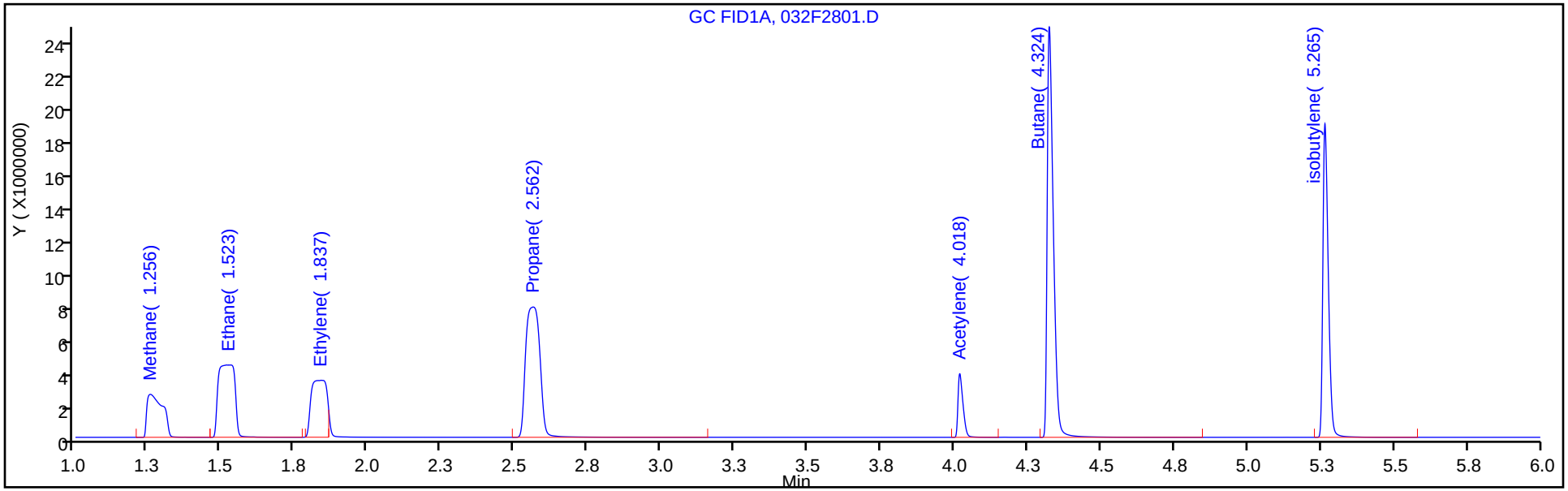
Report Date: 24-Oct-2019 09:05:07 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

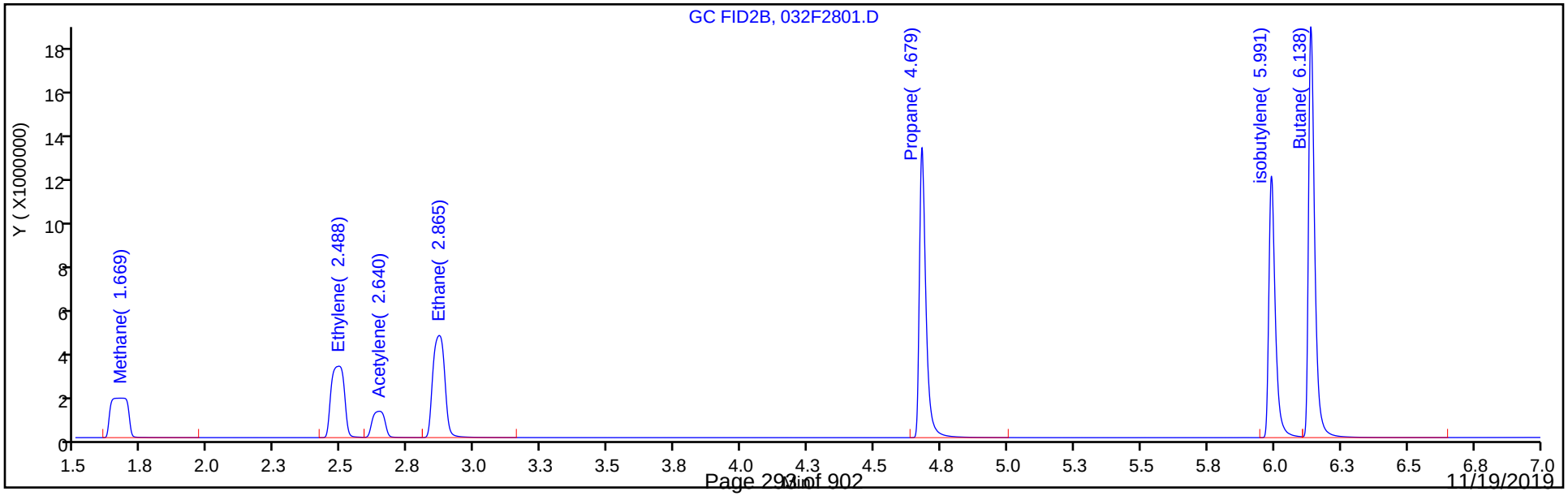
Data File: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\032F2801.D

Injection Date:	23-Oct-2019 20:29:05	Instrument ID:	VGC_J	Operator ID:	GM
Lims ID:	ccv			Worklist Smp#:	32
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	32
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 280-475070/4

Matrix: Water Lab File ID: 004F0401.D

Analysis Method: RSK-175 Date Collected:

Sample wt/vol: 18(mL) Date Analyzed: 10/23/2019 10:41

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: HP-Plot Q ID: 0.53(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 475070 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
74-82-8	Methane	0.0020	U	0.0050	0.0020	0.00063

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\004F0401.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 23-Oct-2019 10:41:38 ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: MB
Operator ID: GM Instrument ID: VGC_J

Method: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 24-Oct-2019 08:56:23 Calib Date: 15-Apr-2019 12:11:08
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151909.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0332

First Level Reviewer: sciannac Date: 24-Oct-2019 08:35:33

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1		1.276				ND	
2		1.690					
2 Ethane							
1		1.554				ND	
2		2.891					
3 Ethylene							
1		1.871				ND	
2		2.515					
4 Propane							
1		2.603				ND	
2		4.685					
5 Acetylene							
1		4.032				ND	
2		2.665					
6 Butane							
1		4.349				ND	
2		6.146					
7 isobutylene							
1		5.283				ND	
2		5.999					

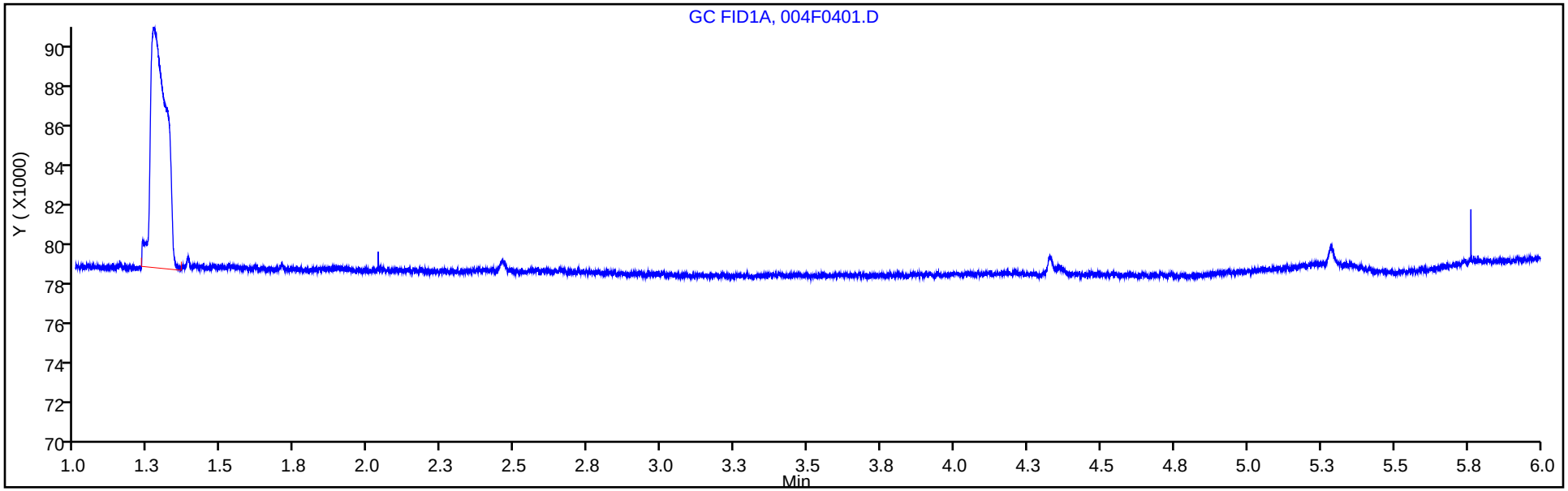
Report Date: 24-Oct-2019 08:56:27 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

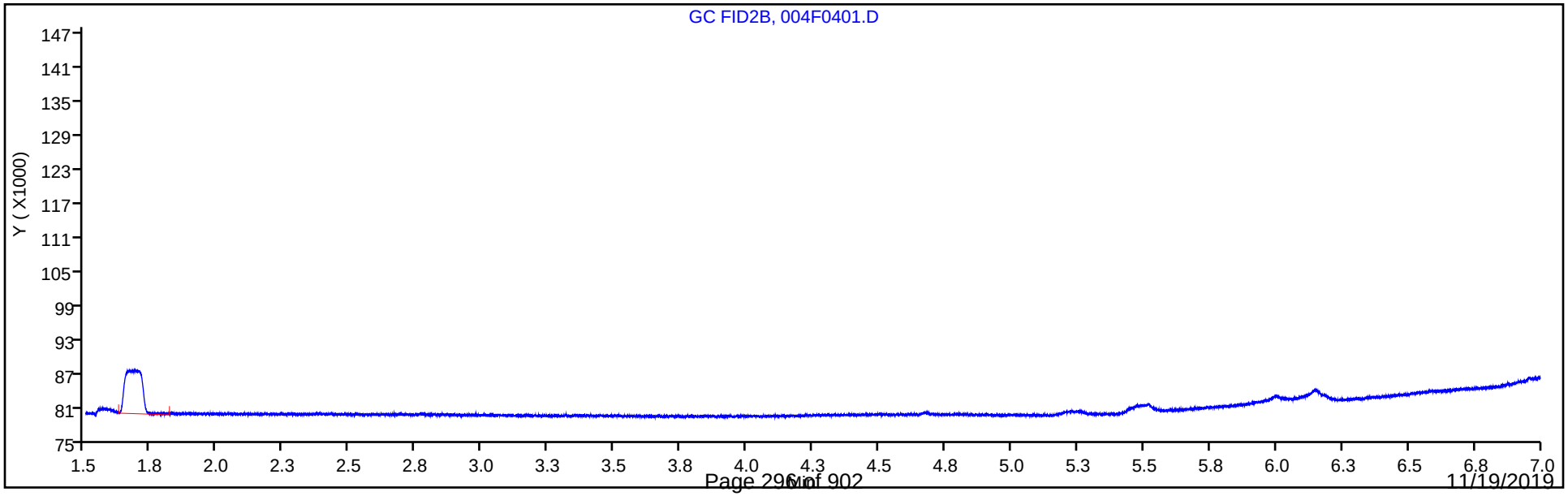
Data File: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\004F0401.D

Injection Date:	23-Oct-2019 10:41:38	Instrument ID:	VGC_J	Operator ID:	GM
Lims ID:	MB			Worklist Smp#:	4
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 280-475070/2

Matrix: Water Lab File ID: 002F0201.D

Analysis Method: RSK-175 Date Collected:

Sample wt/vol: 18(mL) Date Analyzed: 10/23/2019 10:14

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: HP-Plot Q ID: 0.53(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 475070 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
74-82-8	Methane	0.0735		0.0050	0.0020	0.00063

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\002F0201.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 23-Oct-2019 10:14:36 ALS Bottle#: 2 Worklist Smp#: 2
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: LCS
Operator ID: GM Instrument ID: VGC_J

Method: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 24-Oct-2019 08:56:23 Calib Date: 15-Apr-2019 12:11:08
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151909.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0332

First Level Reviewer: meierg Date: 23-Oct-2019 11:14:25

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.275	1.276	-0.001	9836884	73.0	73.2	
2	1.699	1.690	0.009	8450556	73.0	73.5	
						RPD = 0.50	
2 Ethane							
1	1.551	1.554	-0.003	16844476	136.9	133.3	
2	2.896	2.891	0.005	14444112	136.9	134.5	
						RPD = 0.88	
3 Ethylene							
1	1.866	1.871	-0.005	13028603	127.7	123.1	
2	2.518	2.515	0.003	11123756	127.7	123.6	
						RPD = 0.37	
4 Propane							
1	2.598	2.603	-0.005	25415984	200.7	187.9	
2	4.692	4.685	0.007	21636073	200.7	188.6	
						RPD = 0.36	
5 Acetylene							
1	4.036	4.032	0.004	4146839	118.5	129.1	
2	2.672	2.665	0.007	3674940	118.5	129.7	
						RPD = 0.52	
6 Butane							
1	4.342	4.349	-0.007	31550989	264.5	224.1	
2	6.150	6.146	0.004	26870388	264.5	223.2	
						RPD = 0.37	
7 isobutylene							
1	5.278	5.283	-0.005	21388059	255.4	221.0	
2	6.001	5.999	0.002	17979892	255.4	221.9	
						RPD = 0.38	

Reagents:

RSK7gasMathes_00027 Amount Added: 200.00 Units: uL

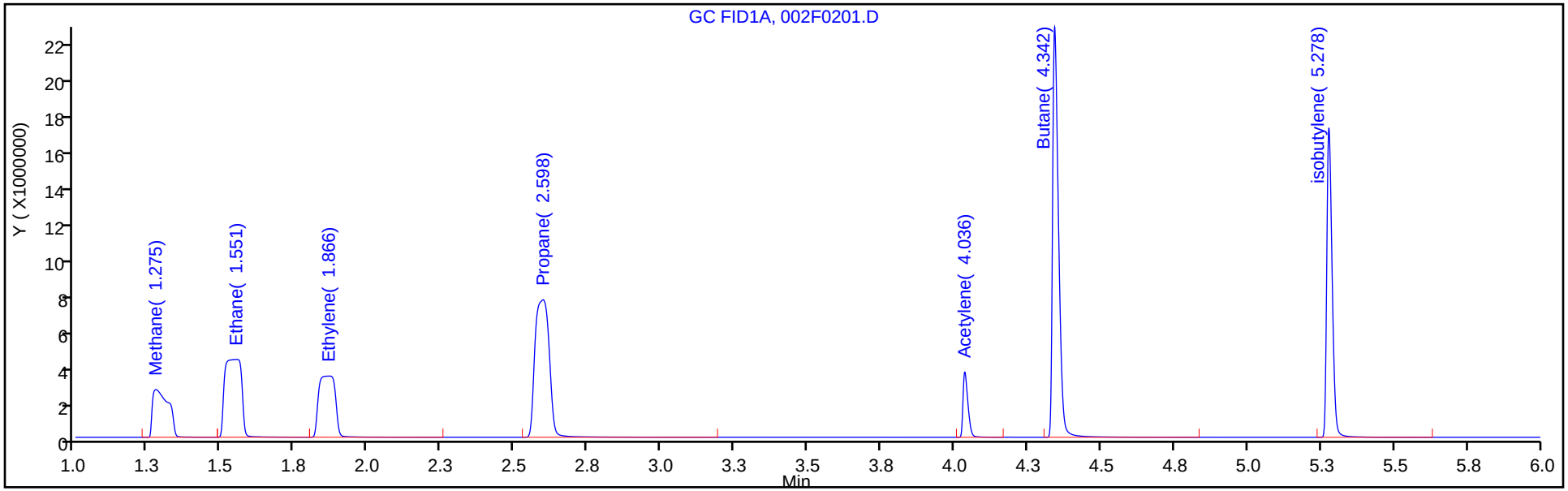
Report Date: 24-Oct-2019 08:56:25 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

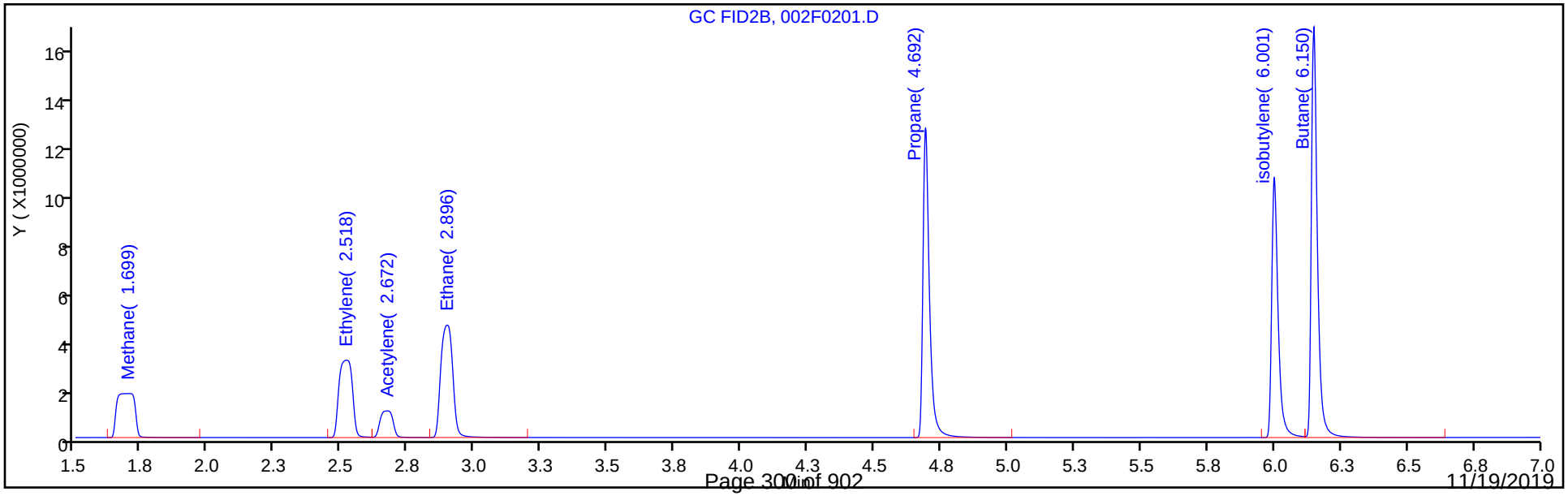
Data File: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\002F0201.D

Injection Date:	23-Oct-2019 10:14:36	Instrument ID:	VGC_J	Operator ID:	GM
Lims ID:	LCS			Worklist Smp#:	2
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 280-475070/3

Matrix: Water Lab File ID: 003F0301.D

Analysis Method: RSK-175 Date Collected:

Sample wt/vol: 18(mL) Date Analyzed: 10/23/2019 10:28

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: HP-Plot Q ID: 0.53(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 475070 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
74-82-8	Methane	0.0719		0.0050	0.0020	0.00063

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\003F0301.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 23-Oct-2019 10:28:06 ALS Bottle#: 3 Worklist Smp#: 3
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: LCSD
Operator ID: GM Instrument ID: VGC_J

Method: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 24-Oct-2019 08:56:23 Calib Date: 15-Apr-2019 12:11:08
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151909.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0332

First Level Reviewer: sciannac Date: 24-Oct-2019 08:35:24

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.270	1.276	-0.006	9619896	73.0	71.6	
2	1.700	1.690	0.010	8259358	73.0	71.9	
						RPD = 0.44	
2 Ethane							
1	1.549	1.554	-0.005	16504633	136.9	130.6	
2	2.891	2.891	0.000	14120608	136.9	131.5	
						RPD = 0.65	
3 Ethylene							
1	1.861	1.871	-0.010	12854893	127.7	121.5	
2	2.512	2.515	-0.003	10968886	127.7	121.9	
						RPD = 0.31	
4 Propane							
1	2.587	2.603	-0.016	24886762	200.7	184.0	
2	4.688	4.685	0.003	21169081	200.7	184.5	
						RPD = 0.28	
5 Acetylene							
1	4.033	4.032	0.001	4225497	118.5	131.5	
2	2.664	2.665	-0.001	3707525	118.5	130.9	
						RPD = 0.47	
6 Butane							
1	4.339	4.349	-0.010	30908462	264.5	219.5	
2	6.147	6.146	0.001	26331476	264.5	218.7	
						RPD = 0.34	
7 isobutylene							
1	5.277	5.283	-0.006	21167612	255.4	218.8	
2	5.999	5.999	0.000	17785268	255.4	219.5	
						RPD = 0.33	

Reagents:

RSK7gasMathes_00027 Amount Added: 200.00 Units: uL

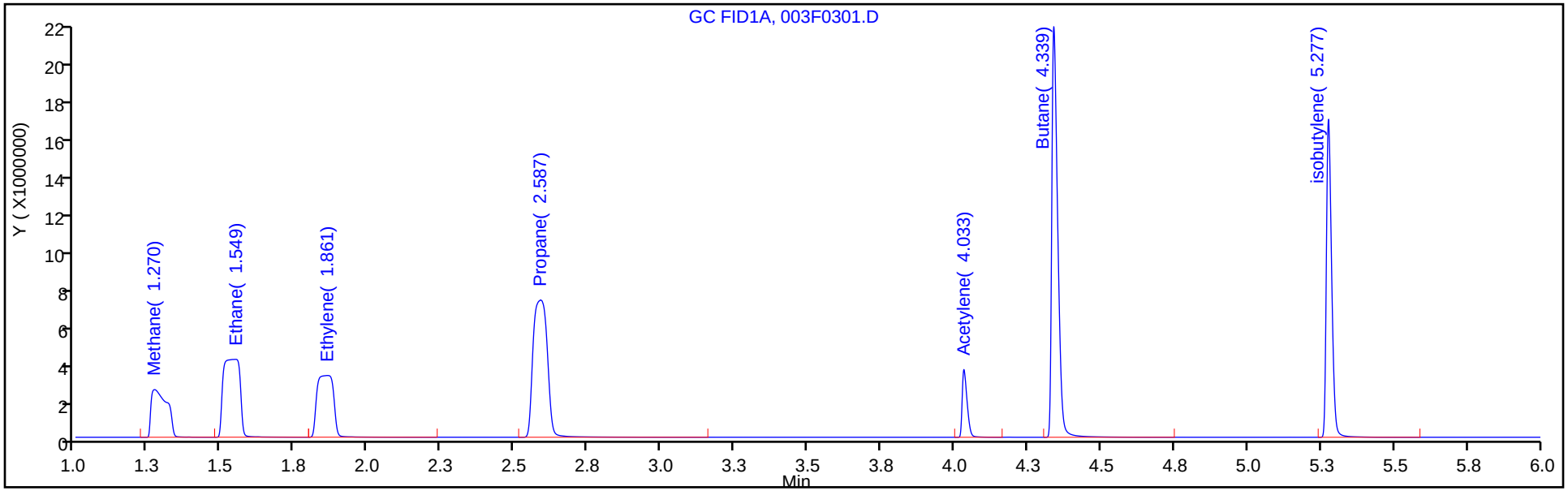
Report Date: 24-Oct-2019 08:56:26 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

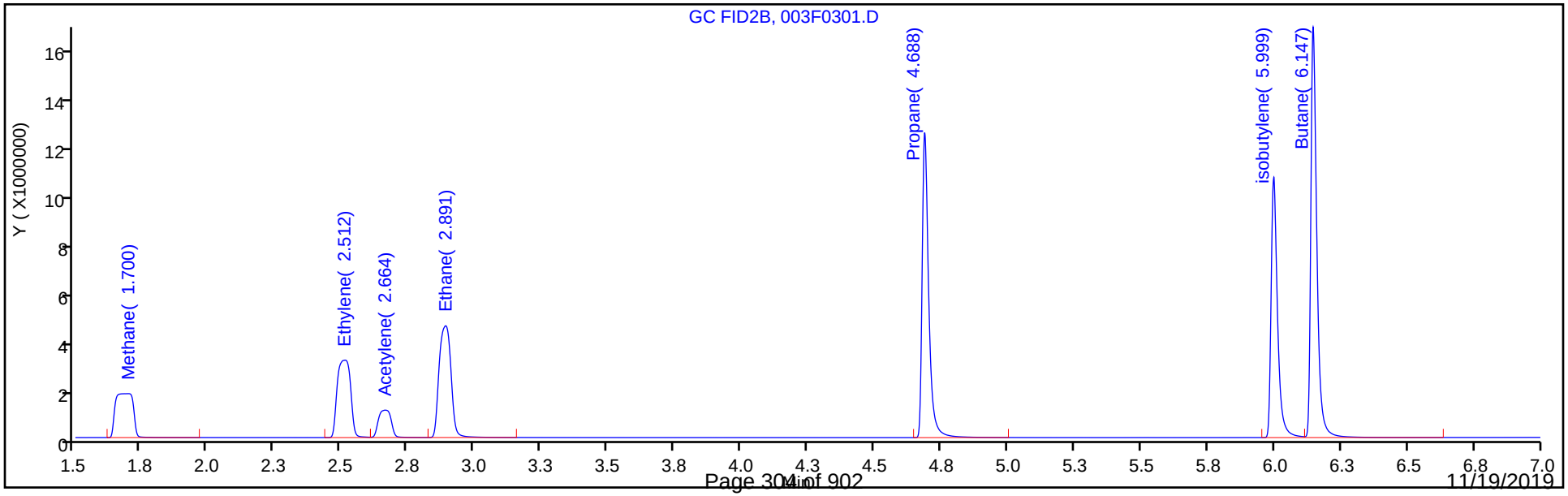
Data File: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\003F0301.D

Injection Date:	23-Oct-2019 10:28:06	Instrument ID:	VGC_J	Operator ID:	GM
Lims ID:	LCSD			Worklist Smp#:	3
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Client Sample ID: EW7-PM25B-1-35 MS Lab Sample ID: 280-129830-3 MS

Matrix: Water Lab File ID: 021F1701.D

Analysis Method: RSK-175 Date Collected: 10/16/2019 14:55

Sample wt/vol: 18(mL) Date Analyzed: 10/23/2019 18:00

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: HP-Plot Q ID: 0.53(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 475070 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
74-82-8	Methane	4.79	4	0.0050	0.0020	0.00063

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\021F1701.D
Lims ID: 280-129830-H-3 MS
Client ID: EW7-PM25B-1-35
Sample Type: MS
Inject. Date: 23-Oct-2019 18:00:15 ALS Bottle#: 21 Worklist Smp#: 21
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: 280-129830-h-3ms
Operator ID: GM Instrument ID: VGC_J

Method: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 27-Oct-2019 12:32:51 Calib Date: 15-Apr-2019 12:11:08
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151909.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0311

First Level Reviewer: sciannac Date: 27-Oct-2019 12:32:51

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.252	1.276	-0.024	655079796	73.0	4890.7	
2	1.669	1.690	-0.021	549128519	73.0	4793.6	
						RPD = 2.01	
2 Ethane							a
1	1.503	1.554	-0.051	14961903	136.9	118.4	a
2	2.870	2.891	-0.021	12563613	136.9	117.0	a
						RPD = 1.22	
3 Ethylene							a
1	1.803	1.871	-0.068	11830767	127.7	111.8	a
2	2.492	2.515	-0.023	9900128	127.7	110.0	a
						RPD = 1.64	
4 Propane							a
1	2.535	2.603	-0.068	22990680	200.7	170.0	a
2	4.680	4.685	-0.005	19172866	200.7	167.1	a
						RPD = 1.70	
5 Acetylene							
1	4.019	4.032	-0.013	4107136	118.5	127.8	
2	2.643	2.665	-0.022	3451952	118.5	121.9	
						RPD = 4.78	
6 Butane							
1	4.328	4.349	-0.021	29885387	264.5	212.2	
2	6.141	6.146	-0.005	24834455	264.5	206.3	
						RPD = 2.83	
7 isobutylene							
1	5.272	5.283	-0.011	20406089	255.4	210.9	
2	5.993	5.999	-0.006	16722344	255.4	206.4	
						RPD = 2.17	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

RSK7gasMathes_00027 Amount Added: 200.00 Units: uL

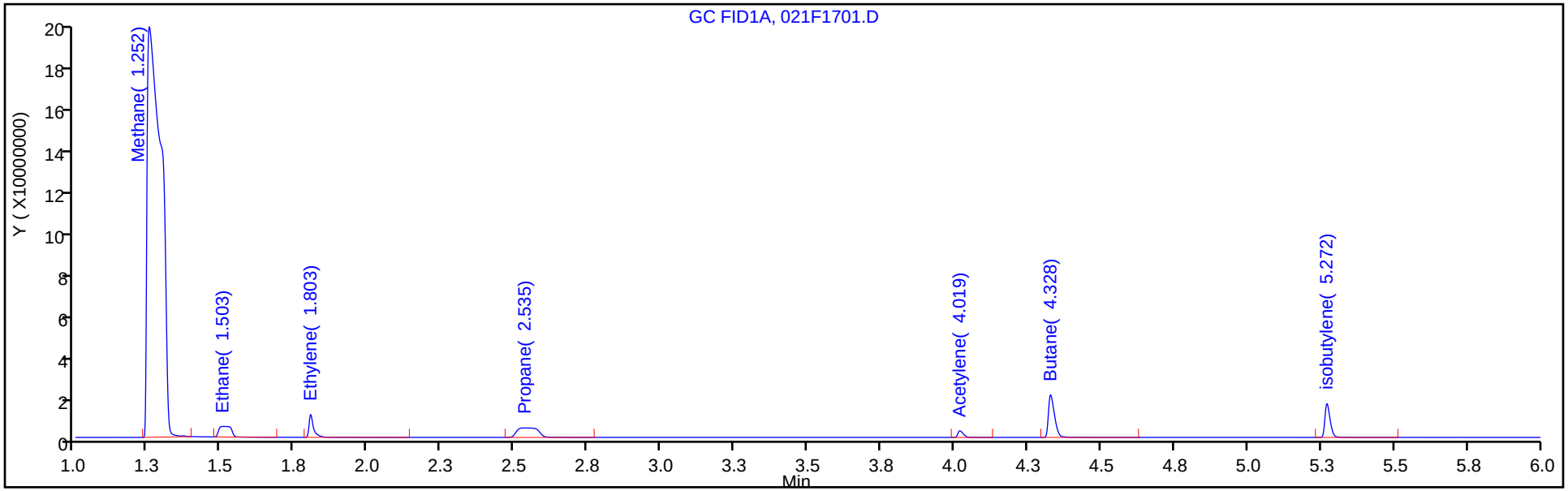
Report Date: 27-Oct-2019 12:33:30 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

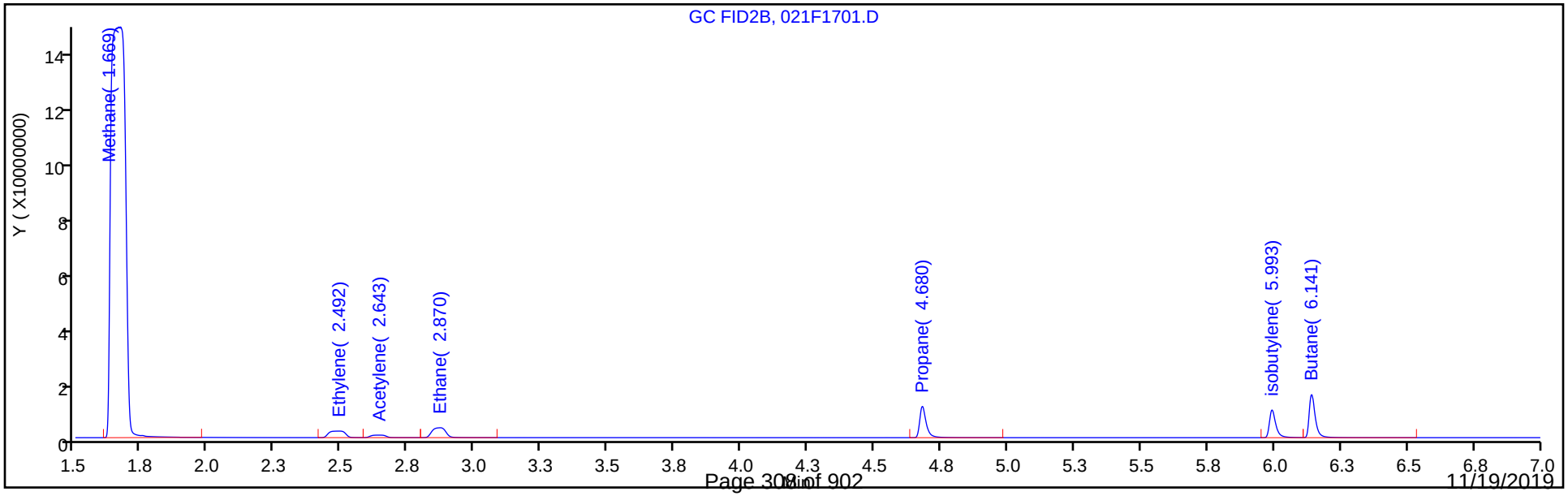
Data File: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\021F1701.D

Injection Date:	23-Oct-2019 18:00:15	Instrument ID:	VGC_J	Operator ID:	GM
Lims ID:	280-129830-H-3 MS			Worklist Smp#:	21
Client ID:	EW7-PM25B-1-35				
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	21
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Client Sample ID: EW7-PM25B-1-35 MSD Lab Sample ID: 280-129830-3 MSD

Matrix: Water Lab File ID: 022F1801.D

Analysis Method: RSK-175 Date Collected: 10/16/2019 14:55

Sample wt/vol: 18(mL) Date Analyzed: 10/23/2019 18:13

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: HP-Plot Q ID: 0.53(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 475070 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
74-82-8	Methane	4.48	4	0.0050	0.0020	0.00063

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\022F1801.D
Lims ID: 280-129830-H-3 MSD
Client ID: EW7-PM25B-1-35
Sample Type: MSD
Inject. Date: 23-Oct-2019 18:13:39 ALS Bottle#: 22 Worklist Smp#: 22
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: 280-129830-h-3ms
Operator ID: GM Instrument ID: VGC_J

Method: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 27-Oct-2019 12:32:51 Calib Date: 15-Apr-2019 12:11:08
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151909.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0311

First Level Reviewer: sciannac Date: 27-Oct-2019 12:32:26

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.254	1.276	-0.022	612256164	73.0	4570.9	
2	1.665	1.690	-0.025	513545885	73.0	4482.9	
						RPD = 1.94	
2 Ethane							
1	1.507	1.554	-0.047	14731679	136.9	116.6	
2	2.870	2.891	-0.021	12341550	136.9	114.9	
						RPD = 1.45	
3 Ethylene							a
1	1.804	1.871	-0.067	11767072	127.7	111.2	a
2	2.493	2.515	-0.022	9844370	127.7	109.4	a
						RPD = 1.67	
4 Propane							a
1	2.534	2.603	-0.069	22787417	200.7	168.5	a
2	4.679	4.685	-0.006	18971784	200.7	165.4	a
						RPD = 1.86	
5 Acetylene							
1	4.018	4.032	-0.014	4279232	118.5	133.2	
2	2.644	2.665	-0.021	3579750	118.5	126.4	
						RPD = 5.24	
6 Butane							
1	4.328	4.349	-0.021	29914766	264.5	212.4	
2	6.141	6.146	-0.005	24867647	264.5	206.6	
						RPD = 2.79	
7 isobutylene							
1	5.272	5.283	-0.011	20879814	255.4	215.8	
2	5.993	5.999	-0.006	17108639	255.4	211.1	
						RPD = 2.18	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

RSK7gasMathes_00027 Amount Added: 200.00 Units: uL

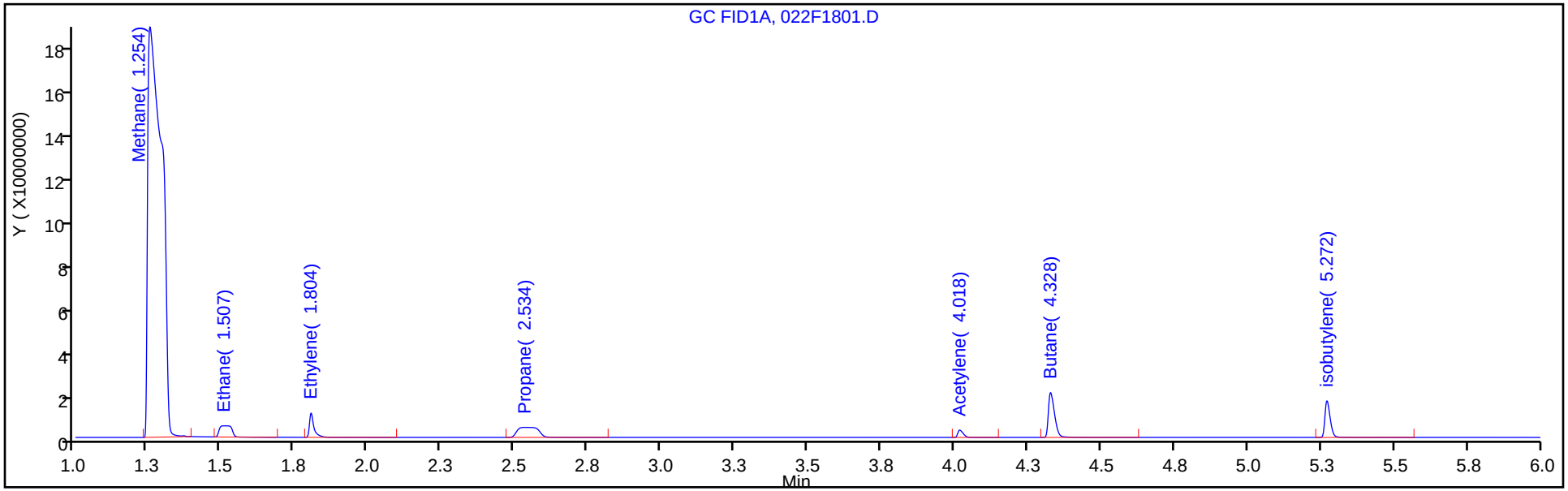
Report Date: 27-Oct-2019 12:33:33 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

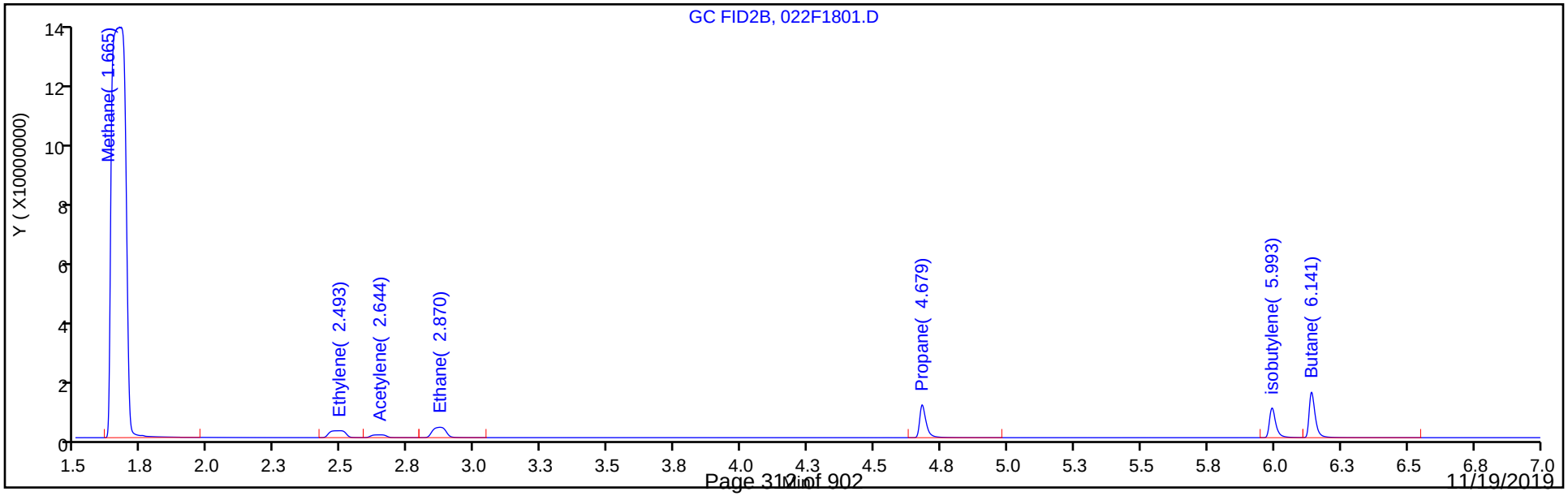
Data File: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\022F1801.D

Injection Date:	23-Oct-2019 18:13:39	Instrument ID:	VGC_J	Operator ID:	GM
Lims ID:	280-129830-H-3 MSD			Worklist Smp#:	22
Client ID:	EW7-PM25B-1-35				
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Client Sample ID: EW7-PM25B-1-35 DU Lab Sample ID: 280-129830-3 DU

Matrix: Water Lab File ID: 020F1601.D

Analysis Method: RSK-175 Date Collected: 10/16/2019 14:55

Sample wt/vol: 18(mL) Date Analyzed: 10/23/2019 17:46

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: HP-Plot Q ID: 0.53(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 475070 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
74-82-8	Methane	4.39		0.0050	0.0020	0.00063

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\020F1601.D
Lims ID: 280-129830-H-3 DU
Client ID:
Sample Type: DU
Inject. Date: 23-Oct-2019 17:46:41 ALS Bottle#: 20 Worklist Smp#: 20
Purge Vol: 18.000 mL Dil. Factor: 1.0000
Sample Info: 280-129830-h-3ms
Operator ID: GM Instrument ID: VGC_J

Method: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\RSK_J.m
Limit Group: GCV - RSK 175
Method Label: DV-GC-0025: Dissolved Gases in Water by RSK-175
Last Update: 24-Oct-2019 08:56:41 Calib Date: 15-Apr-2019 12:11:08
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VGC_J\20190415-80933.b\04151909.D

Column 1 : Rt-Alumina BOND/KCl (0.53 mm) Det: GC FID1A
Column 2 : HP-PLOT/Q (0.53 mm) Det: GC FID2B
Process Host: CTX0332

First Level Reviewer: sciannac Date: 24-Oct-2019 08:50:49

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Methane							
1	1.257	1.276	-0.019	598782087		4470.3	
2	1.671	1.690	-0.019	502640231		4387.7	
						RPD = 1.86	
2 Ethane							
1		1.554				ND	
2		2.891					
3 Ethylene							
1		1.871				ND	
2		2.515					
4 Propane							
1		2.603				ND	
2		4.685					
5 Acetylene							
1		4.032				ND	
2		2.665					
6 Butane							
1		4.349				ND	
2		6.146					
7 isobutylene							
1		5.283				ND	
2		5.999					

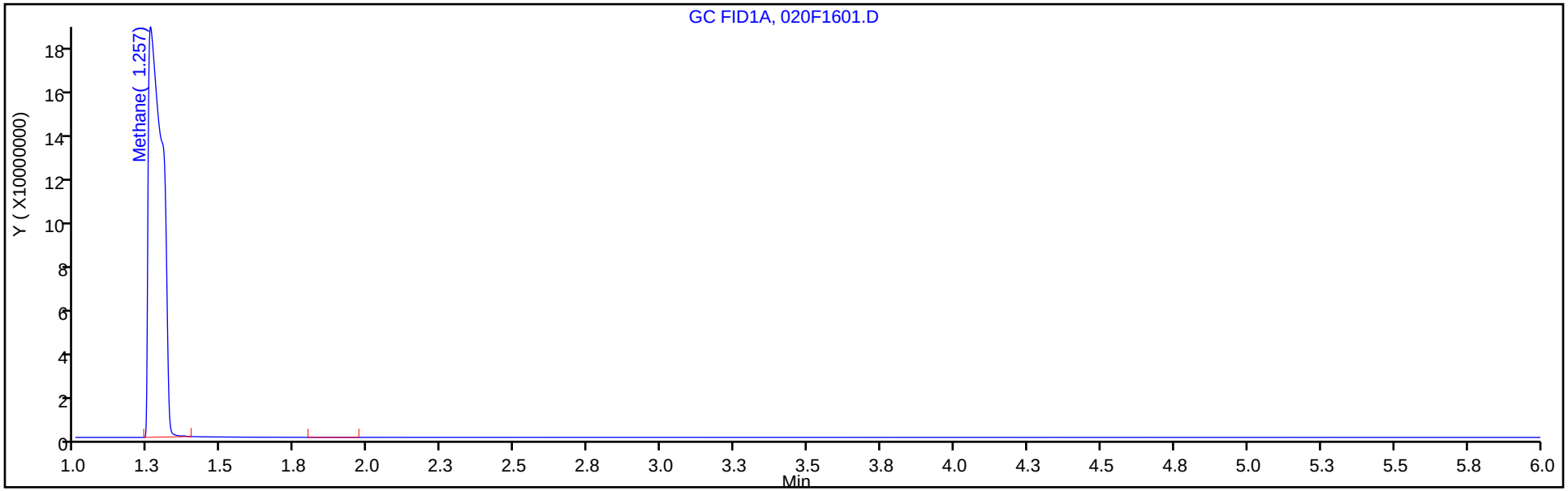
Report Date: 24-Oct-2019 08:56:43 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

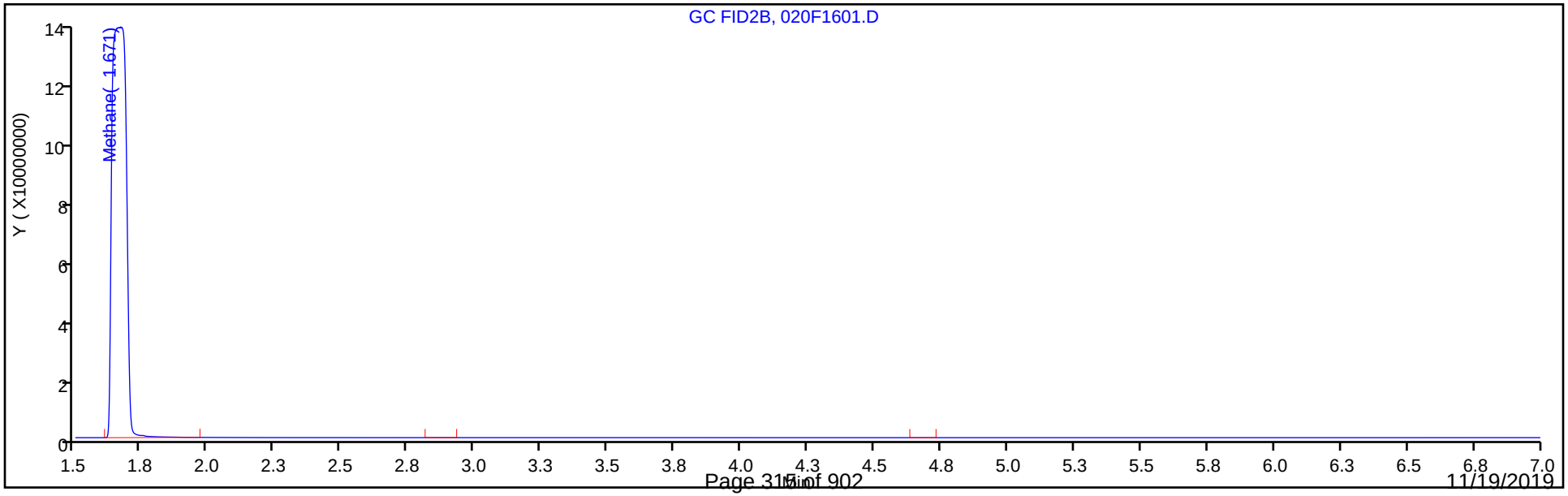
Data File: \\chromna\Denver\ChromData\VGC_J\20191023-86426.b\020F1601.D

Injection Date:	23-Oct-2019 17:46:41	Instrument ID:	VGC_J	Operator ID:	GM
Lims ID:	280-129830-H-3 DU			Worklist Smp#:	20
Client ID:					
Purge Vol:	18.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	RSK_J	Limit Group:	GCV - RSK 175		

Column: Rt-Alumina BOND/KCl (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: HP-PLOT/Q (0.53 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



GC VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: VGC_J Start Date: 04/15/2019 10:23

Analysis Batch Number: 454595 End Date: 04/15/2019 22:38

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 280-454595/1		04/15/2019 10:23	1	04151901.D	Rt-Alumina KCl 0.53(mm)
IC 280-454595/1		04/15/2019 10:23	1	04151901.D	HP-Plot Q 0.53(mm)
IC 280-454595/2		04/15/2019 10:37	1	04151902.D	Rt-Alumina KCl 0.53(mm)
IC 280-454595/2		04/15/2019 10:37	1	04151902.D	HP-Plot Q 0.53(mm)
IC 280-454595/3		04/15/2019 10:50	1	04151903.D	Rt-Alumina KCl 0.53(mm)
IC 280-454595/3		04/15/2019 10:50	1	04151903.D	HP-Plot Q 0.53(mm)
IC 280-454595/4		04/15/2019 11:03	1	04151904.D	Rt-Alumina KCl 0.53(mm)
IC 280-454595/4		04/15/2019 11:03	1	04151904.D	HP-Plot Q 0.53(mm)
ICRT 280-454595/5		04/15/2019 11:17	1	04151905.D	Rt-Alumina KCl 0.53(mm)
ICRT 280-454595/5		04/15/2019 11:17	1	04151905.D	HP-Plot Q 0.53(mm)
IC 280-454595/6		04/15/2019 11:30	1	04151906.D	Rt-Alumina KCl 0.53(mm)
IC 280-454595/6		04/15/2019 11:30	1	04151906.D	HP-Plot Q 0.53(mm)
IC 280-454595/7		04/15/2019 11:44	1	04151907.D	Rt-Alumina KCl 0.53(mm)
IC 280-454595/7		04/15/2019 11:44	1	04151907.D	HP-Plot Q 0.53(mm)
IC 280-454595/8		04/15/2019 11:57	1	04151908.D	Rt-Alumina KCl 0.53(mm)
IC 280-454595/8		04/15/2019 11:57	1	04151908.D	HP-Plot Q 0.53(mm)
IC 280-454595/9		04/15/2019 12:11	1	04151909.D	Rt-Alumina KCl 0.53(mm)
IC 280-454595/9		04/15/2019 12:11	1	04151909.D	HP-Plot Q 0.53(mm)
ZZZZZ		04/15/2019 12:24	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/15/2019 12:24	1		HP-Plot Q 0.53(mm)
ICV 280-454595/11		04/15/2019 12:38	1	04151911.D	Rt-Alumina KCl 0.53(mm)
ICV 280-454595/11		04/15/2019 12:38	1	04151911.D	HP-Plot Q 0.53(mm)
ZZZZZ		04/15/2019 15:58	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/15/2019 15:58	1		HP-Plot Q 0.53(mm)
ZZZZZ		04/15/2019 16:11	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/15/2019 16:11	1		HP-Plot Q 0.53(mm)
ZZZZZ		04/15/2019 16:25	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/15/2019 16:25	1		HP-Plot Q 0.53(mm)
ZZZZZ		04/15/2019 16:38	3		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/15/2019 16:38	3		HP-Plot Q 0.53(mm)
ZZZZZ		04/15/2019 16:51	3		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/15/2019 16:51	3		HP-Plot Q 0.53(mm)
ZZZZZ		04/15/2019 17:05	3		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/15/2019 17:05	3		HP-Plot Q 0.53(mm)
ZZZZZ		04/15/2019 17:18	3		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/15/2019 17:18	3		HP-Plot Q 0.53(mm)
ZZZZZ		04/15/2019 17:32	3		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/15/2019 17:32	3		HP-Plot Q 0.53(mm)
ZZZZZ		04/15/2019 17:45	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/15/2019 17:45	1		HP-Plot Q 0.53(mm)
ZZZZZ		04/15/2019 17:59	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/15/2019 17:59	1		HP-Plot Q 0.53(mm)
ZZZZZ		04/15/2019 18:12	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/15/2019 18:12	1		HP-Plot Q 0.53(mm)
ZZZZZ		04/15/2019 18:26	1		Rt-Alumina KCl 0.53(mm)

GC VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: VGC_J Start Date: 04/15/2019 10:23

Analysis Batch Number: 454595 End Date: 04/15/2019 22:38

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		04/15/2019 18:26	1		HP-Plot Q 0.53(mm)
ZZZZZ		04/15/2019 18:39	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/15/2019 18:39	1		HP-Plot Q 0.53(mm)
ZZZZZ		04/15/2019 18:52	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/15/2019 18:52	1		HP-Plot Q 0.53(mm)
ZZZZZ		04/15/2019 19:06	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/15/2019 19:06	1		HP-Plot Q 0.53(mm)
ZZZZZ		04/15/2019 19:19	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/15/2019 19:19	1		HP-Plot Q 0.53(mm)
ZZZZZ		04/15/2019 19:32	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/15/2019 19:32	1		HP-Plot Q 0.53(mm)
CCV 280-454595/29		04/15/2019 19:46	1		Rt-Alumina KCl 0.53(mm)
CCV 280-454595/29		04/15/2019 19:46	1		HP-Plot Q 0.53(mm)
ZZZZZ		04/15/2019 19:59	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/15/2019 19:59	1		HP-Plot Q 0.53(mm)
ZZZZZ		04/15/2019 20:13	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/15/2019 20:13	1		HP-Plot Q 0.53(mm)
ZZZZZ		04/15/2019 21:04	3		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/15/2019 21:04	3		HP-Plot Q 0.53(mm)
ZZZZZ		04/15/2019 21:17	3		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/15/2019 21:17	3		HP-Plot Q 0.53(mm)
ZZZZZ		04/15/2019 21:58	3		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/15/2019 21:58	3		HP-Plot Q 0.53(mm)
ZZZZZ		04/15/2019 22:12	3		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/15/2019 22:12	3		HP-Plot Q 0.53(mm)
ZZZZZ		04/15/2019 22:25	3		Rt-Alumina KCl 0.53(mm)
ZZZZZ		04/15/2019 22:25	3		HP-Plot Q 0.53(mm)
CCV 280-454595/37		04/15/2019 22:38	1		Rt-Alumina KCl 0.53(mm)
CCV 280-454595/37		04/15/2019 22:38	1		HP-Plot Q 0.53(mm)

GC VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: VGC_J Start Date: 10/23/2019 10:01

Analysis Batch Number: 475070 End Date: 10/23/2019 23:45

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 280-475070/1		10/23/2019 10:01	1	001F0101.D	Rt-Alumina KCl 0.53(mm)
CCVRT 280-475070/1		10/23/2019 10:01	1	001F0101.D	HP-Plot Q 0.53(mm)
LCS 280-475070/2		10/23/2019 10:14	1	002F0201.D	Rt-Alumina KCl 0.53(mm)
LCS 280-475070/2		10/23/2019 10:14	1	002F0201.D	HP-Plot Q 0.53(mm)
LCSD 280-475070/3		10/23/2019 10:28	1	003F0301.D	Rt-Alumina KCl 0.53(mm)
LCSD 280-475070/3		10/23/2019 10:28	1	003F0301.D	HP-Plot Q 0.53(mm)
MB 280-475070/4		10/23/2019 10:41	1	004F0401.D	Rt-Alumina KCl 0.53(mm)
MB 280-475070/4		10/23/2019 10:41	1	004F0401.D	HP-Plot Q 0.53(mm)
ZZZZZ		10/23/2019 14:24	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		10/23/2019 14:24	1		HP-Plot Q 0.53(mm)
ZZZZZ		10/23/2019 14:37	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		10/23/2019 14:37	1		HP-Plot Q 0.53(mm)
ZZZZZ		10/23/2019 14:50	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		10/23/2019 14:50	1		HP-Plot Q 0.53(mm)
ZZZZZ		10/23/2019 15:04	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		10/23/2019 15:04	1		HP-Plot Q 0.53(mm)
ZZZZZ		10/23/2019 15:17	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		10/23/2019 15:17	1		HP-Plot Q 0.53(mm)
ZZZZZ		10/23/2019 15:31	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		10/23/2019 15:31	1		HP-Plot Q 0.53(mm)
ZZZZZ		10/23/2019 15:44	3		Rt-Alumina KCl 0.53(mm)
ZZZZZ		10/23/2019 15:44	3		HP-Plot Q 0.53(mm)
ZZZZZ		10/23/2019 15:58	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		10/23/2019 15:58	1		HP-Plot Q 0.53(mm)
ZZZZZ		10/23/2019 16:11	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		10/23/2019 16:11	1		HP-Plot Q 0.53(mm)
ZZZZZ		10/23/2019 16:25	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		10/23/2019 16:25	1		HP-Plot Q 0.53(mm)
ZZZZZ		10/23/2019 16:39	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		10/23/2019 16:39	1		HP-Plot Q 0.53(mm)
ZZZZZ		10/23/2019 16:52	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		10/23/2019 16:52	1		HP-Plot Q 0.53(mm)
ZZZZZ		10/23/2019 17:06	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		10/23/2019 17:06	1		HP-Plot Q 0.53(mm)
CCV 280-475070/18		10/23/2019 17:19	1	018F1401.D	Rt-Alumina KCl 0.53(mm)
CCV 280-475070/18		10/23/2019 17:19	1	018F1401.D	HP-Plot Q 0.53(mm)
280-129830-3		10/23/2019 17:33	1	019F1501.D	Rt-Alumina KCl 0.53(mm)
280-129830-3		10/23/2019 17:33	1	019F1501.D	HP-Plot Q 0.53(mm)
280-129830-3 DU		10/23/2019 17:46	1	020F1601.D	Rt-Alumina KCl 0.53(mm)
280-129830-3 DU		10/23/2019 17:46	1	020F1601.D	HP-Plot Q 0.53(mm)
280-129830-3 MS		10/23/2019 18:00	1	021F1701.D	Rt-Alumina KCl 0.53(mm)
280-129830-3 MS		10/23/2019 18:00	1	021F1701.D	HP-Plot Q 0.53(mm)
280-129830-3 MSD		10/23/2019 18:13	1	022F1801.D	Rt-Alumina KCl 0.53(mm)
280-129830-3 MSD		10/23/2019 18:13	1	022F1801.D	HP-Plot Q 0.53(mm)
ZZZZZ		10/23/2019 18:27	1		Rt-Alumina KCl 0.53(mm)

GC VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: VGC_J Start Date: 10/23/2019 10:01

Analysis Batch Number: 475070 End Date: 10/23/2019 23:45

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		10/23/2019 18:27	1		HP-Plot Q 0.53(mm)
ZZZZZ		10/23/2019 18:40	3		Rt-Alumina KCl 0.53(mm)
ZZZZZ		10/23/2019 18:40	3		HP-Plot Q 0.53(mm)
ZZZZZ		10/23/2019 18:54	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		10/23/2019 18:54	1		HP-Plot Q 0.53(mm)
280-129830-1		10/23/2019 19:07	1	026F2201.D	Rt-Alumina KCl 0.53(mm)
280-129830-1		10/23/2019 19:07	1	026F2201.D	HP-Plot Q 0.53(mm)
280-129830-2		10/23/2019 19:21	1	027F2301.D	Rt-Alumina KCl 0.53(mm)
280-129830-2		10/23/2019 19:21	1	027F2301.D	HP-Plot Q 0.53(mm)
ZZZZZ		10/23/2019 19:34	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		10/23/2019 19:34	1		HP-Plot Q 0.53(mm)
ZZZZZ		10/23/2019 19:48	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		10/23/2019 19:48	1		HP-Plot Q 0.53(mm)
ZZZZZ		10/23/2019 20:02	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		10/23/2019 20:02	1		HP-Plot Q 0.53(mm)
ZZZZZ		10/23/2019 20:15	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		10/23/2019 20:15	1		HP-Plot Q 0.53(mm)
CCV 280-475070/32		10/23/2019 20:29	1	032F2801.D	Rt-Alumina KCl 0.53(mm)
CCV 280-475070/32		10/23/2019 20:29	1	032F2801.D	HP-Plot Q 0.53(mm)
ZZZZZ		10/23/2019 21:38	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		10/23/2019 21:38	1		HP-Plot Q 0.53(mm)
ZZZZZ		10/23/2019 22:52	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		10/23/2019 22:52	1		HP-Plot Q 0.53(mm)
ZZZZZ		10/23/2019 23:32	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		10/23/2019 23:32	1		HP-Plot Q 0.53(mm)
ZZZZZ		10/23/2019 23:45	1		Rt-Alumina KCl 0.53(mm)
ZZZZZ		10/23/2019 23:45	1		HP-Plot Q 0.53(mm)

GC VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Batch Number: 475070 Batch Start Date: 10/23/19 10:01 Batch Analyst: Scianna, Charles A

Batch Method: RSK-175 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	RSK7gasMathes 00027		
CCVRT 280-475070/1		RSK-175		18 mL	18 mL	5 SU	200 uL		
LCS 280-475070/2		RSK-175		18 mL	18 mL	5 SU	200 uL		
LCSD 280-475070/3		RSK-175		18 mL	18 mL	5 SU	200 uL		
MB 280-475070/4		RSK-175		18 mL	18 mL	5 SU			
CCV 280-475070/18		RSK-175		18 mL	18 mL	5 SU	200 uL		
280-129830-H-3	EW7-PM25B-1-35	RSK-175	T	18 mL	18 mL	< 2 SU			
280-129830-H-3 DU	EW7-PM25B-1-35	RSK-175	T	18 mL	18 mL	< 2 SU			
280-129830-H-3 MS	EW7-PM25B-1-35	RSK-175	T	18 mL	18 mL	< 2 SU	200 uL		
280-129830-H-3 MSD	EW7-PM25B-1-35	RSK-175	T	18 mL	18 mL	< 2 SU	200 uL		
280-129830-H-1	EW7-PM23A-1-25	RSK-175	T	18 mL	18 mL	< 2 SU			
280-129830-I-2	EW7-PM25A-1-25	RSK-175	T	18 mL	18 mL	< 2 SU			
CCV 280-475070/32		RSK-175		18 mL	18 mL	5 SU	200 uL		

Batch Notes	

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, Denver Job No.: 280-129830-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): UltraCarb5u ID: 4.6 (mm) GC Column (2): Luna-phenyl 4.6 (mm)

Client Sample ID	Lab Sample ID	12DNB1 #	12DNB2 #
EW7-PM23A-1-25	280-129830-1		85
EW7-PM23A-1-25	280-129830-1	70 Q	
EW7-PM23A-1-25 DL	280-129830-1 DL		0 Q
EW7-PM23A-1-25 DL	280-129830-1 DL	87 D	
EW7-PM25A-1-25	280-129830-2		90
EW7-PM25A-1-25	280-129830-2	79 Q M	
EW7-PM25B-1-35	280-129830-3		97
EW7-PM25B-1-35	280-129830-3	83	
	MB 280-475090/1-A	92	
	LCS 280-475090/2-A	86	
	LCS 280-475090/3-A	93	
EW7-PM25B-1-35 MS	280-129830-3 MS	80 Q	
EW7-PM25B-1-35 MS	280-129830-3 MS	72 Q	
EW7-PM25B-1-35 MSD	280-129830-3 MSD	86	
EW7-PM25B-1-35 MSD	280-129830-3 MSD	83	

	QC LIMITS
12DNB = 1,2-Dinitrobenzene	83-119

Column to be used to flag recovery values

FORM II 8330A

FORM III
HPLC/IC LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 10240011.D

Lab ID: LCS 280-475090/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,3,5-Trinitrobenzene	2.00	1.96	98	73-125	
1,3-Dinitrobenzene	2.00	1.92	96	78-120	
2,4,6-Trinitrotoluene	2.00	1.84	92	71-123	
2,4-Dinitrotoluene	2.00	1.87	93	78-120	
2,6-Dinitrotoluene	2.00	1.82	91	77-127	
2-Amino-4,6-dinitrotoluene	2.00	1.86	93	79-120	
2-Nitrotoluene	2.00	1.59	80	70-127	M
3-Nitrotoluene	2.00	1.81	90	73-125	M
4-Amino-2,6-dinitrotoluene	2.00	1.72	86	76-125	
4-Nitrotoluene	2.00	1.78	89	71-127	M
HMX	2.00	1.89	95	65-135	
Nitrobenzene	2.00	1.78	89	65-134	
RDX	2.00	1.94	97	68-130	
Tetryl	2.00	2.06	103	64-128	

Column to be used to flag recovery and RPD values

FORM III 8330A

FORM III
HPLC/IC LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 10240012.D

Lab ID: LCS 280-475090/3-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
MNX	2.33	2.56	110	57-132	

Column to be used to flag recovery and RPD values

FORM III 8330A

FORM III
HPLC/IC MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 10240025.D

Lab ID: 280-129830-3 MS Client ID: EW7-PM25B-1-35 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,3,5-Trinitrobenzene	1.91	20	22.1	100	73-125	Q 4
1,3-Dinitrobenzene	1.91	0.19 U	1.98	103	78-120	Q
2,4,6-Trinitrotoluene	1.91	4.1	5.68	83	71-123	Q
2,4-Dinitrotoluene	1.91	0.19 U	1.70	89	78-120	Q
2,6-Dinitrotoluene	1.91	0.19 U	1.58	83	77-127	Q
2-Amino-4,6-dinitrotoluene	1.91	1.5	3.03	81	79-120	Q
2-Nitrotoluene	1.91	0.19 U	1.20	63	70-127	Q J1
3-Nitrotoluene	1.91	0.38 U	1.34	70	73-125	Q J1
4-Amino-2,6-dinitrotoluene	1.91	1.1	2.62	77	76-125	Q
4-Nitrotoluene	1.91	0.38 U	1.55	81	71-127	Q
HMX	1.91	0.19 U	1.57	82	65-135	Q M
Nitrobenzene	1.91	0.19 U	1.28	67	65-134	Q
RDX	1.91	0.38 U	1.75	91	68-130	Q M
Tetryl	1.91	0.19 U	23.5	1229	64-128	Q J1 M

Column to be used to flag recovery and RPD values

FORM III 8330A

FORM III
HPLC/IC MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 10240027.D

Lab ID: 280-129830-3 MS Client ID: EW7-PM25B-1-35 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
MNX	2.23	0.38 U	2.05	92	57-132	M

Column to be used to flag recovery and RPD values

FORM III 8330A

FORM III
HPLC/IC MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 10240026.D

Lab ID: 280-129830-3 MSD Client ID: EW7-PM25B-1-35 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,3,5-Trinitrobenzene	2.00	21.4	62	3	30	73-125	4
1,3-Dinitrobenzene	2.00	2.14	107	8	30	78-120	
2,4,6-Trinitrotoluene	2.00	5.78	84	2	30	71-123	
2,4-Dinitrotoluene	2.00	1.87	94	9	30	78-120	
2,6-Dinitrotoluene	2.00	1.75	87	10	30	77-127	
2-Amino-4,6-dinitrotoluene	2.00	3.18	86	5	30	79-120	
2-Nitrotoluene	2.00	1.47	73	20	30	70-127	
3-Nitrotoluene	2.00	1.61	81	18	30	73-125	
4-Amino-2,6-dinitrotoluene	2.00	2.75	80	5	30	76-125	
4-Nitrotoluene	2.00	1.82	91	16	30	71-127	
HMX	2.00	1.75	88	11	30	65-135	M
Nitrobenzene	2.00	1.54	77	19	30	65-134	
RDX	2.00	1.85	93	6	30	68-130	M
Tetryl	2.00	22.7	1136	4	30	64-128	J1 M

Column to be used to flag recovery and RPD values

FORM III 8330A

FORM III
HPLC/IC MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 10240028.D

Lab ID: 280-129830-3 MSD Client ID: EW7-PM25B-1-35 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
MNX	2.30	2.05	89	0	30	57-132	M

Column to be used to flag recovery and RPD values

FORM III 8330A

FORM IV
HPLC/IC METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: MB 280-475090/1-A

Matrix: Water Date Extracted: 10/23/2019 15:47

Lab File ID:(1) 10240010.D Lab File ID:(2)

Date Analyzed:(1) 10/24/2019 12:19 Date Analyzed:(2)

Instrument ID:(1) CHHPLC_X3 Instrument ID:(2) CHHPLC_G2_LUNA

GC Column:(1) UltraCarb5uO ID: 4.6(mm) GC Column:(2) Luna-phenylh ID: 4.6(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 280-475090/2-A	10/24/2019 12:42	
	LCS 280-475090/3-A	10/24/2019 13:05	
EW7-PM23A-1-25	280-129830-1	10/24/2019 15:45	10/30/2019 05:05
EW7-PM25A-1-25	280-129830-2	10/24/2019 17:17	11/01/2019 18:57
EW7-PM25B-1-35	280-129830-3	10/24/2019 17:40	11/01/2019 19:32
EW7-PM25B-1-35 MS	280-129830-3 MS	10/24/2019 18:03	
EW7-PM25B-1-35 MSD	280-129830-3 MSD	10/24/2019 18:26	
EW7-PM25B-1-35 MS	280-129830-3 MS	10/24/2019 18:48	
EW7-PM25B-1-35 MSD	280-129830-3 MSD	10/24/2019 19:11	
EW7-PM23A-1-25 DL	280-129830-1 DL	10/29/2019 13:52	10/30/2019 05:40

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Client Sample ID: EW7-PM23A-1-25 Lab Sample ID: 280-129830-1

Instrument ID (1): CHHPLC_X3 Instrument ID (2): CHHPLC_G2_LUNA

Date Analyzed (1): 10/24/2019 15:45 Date Analyzed (2): 10/30/2019 05:05

GC Column (1): UltraCarb5uOD ID: 4.6(mm) GC Column (2): Luna-phenylhe ID: 4.6(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
HMX	1		6.67	6.52	6.82	0.93		28.0
	2		7.07	6.91	7.21	1.2		
RDX	1		7.75	7.60	7.90	1.0		8.4
	2		9.27	9.11	9.41	1.1		
2-Amino-4,6-dinitrotoluene	1		11.63	11.53	11.73	3.3		4.7
	2		18.20	18.06	18.36	3.2		
2,4-Dinitrotoluene	1		11.98	11.89	12.09	0.24		4.7
	2		20.49	20.33	20.63	0.25		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Client Sample ID: EW7-PM23A-1-25 DL Lab Sample ID: 280-129830-1 DL

Instrument ID (1): CHHPLC_X3 Instrument ID (2): CHHPLC_G2_LUNA

Date Analyzed (1): 10/29/2019 13:52 Date Analyzed (2): 10/30/2019 05:40

GC Column (1): UltraCarb5uOD ID: 4.6(mm) GC Column (2): Luna-phenylhe ID: 4.6(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
1,3,5-Trinitrobenzene	1		8.88	8.73	9.03	70		0.0
	2		19.09	18.92	19.22	70		
2,4,6-Trinitrotoluene	1		11.19	11.10	11.30	28		21.3
	2		24.86	24.70	25.00	22		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Client Sample ID: EW7-PM25A-1-25 Lab Sample ID: 280-129830-2

Instrument ID (1): CHHPLC_X3 Instrument ID (2): CHHPLC_G2_LUNA

Date Analyzed (1): 10/24/2019 17:17 Date Analyzed (2): 11/01/2019 18:57

GC Column (1): UltraCarb5uOD ID: 4.6(mm) GC Column (2): Luna-phenylhe ID: 4.6(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
HMX	1		6.68	6.52	6.82	1.6		4.2
	2		7.00	6.87	7.17	1.5		
RDX	1		7.76	7.60	7.90	1.6		31.8
	2		9.18	9.06	9.36	2.2		
1,3,5-Trinitrobenzene	1		8.89	8.74	9.04	1.9		4.1
	2		18.97	18.85	19.15	1.9		
2,4,6-Trinitrotoluene	1		11.19	11.09	11.29	13		0.1
	2		24.75	24.61	24.91	13		
4-Amino-2,6-dinitrotoluene	1		11.34	11.25	11.45	2.4		2.8
	2		17.20	17.09	17.39	2.4		
2-Amino-4,6-dinitrotoluene	1		11.64	11.53	11.73	2.4		5.2
	2		18.08	17.95	18.25	2.5		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Client Sample ID: EW7-PM25B-1-35 Lab Sample ID: 280-129830-3

Instrument ID (1): CHHPLC_X3 Instrument ID (2): CHHPLC_G2_LUNA

Date Analyzed (1): 10/24/2019 17:40 Date Analyzed (2): 11/01/2019 19:32

GC Column (1): UltraCarb5uOD ID: 4.6(mm) GC Column (2): Luna-phenylhe ID: 4.6(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
1,3,5-Trinitrobenzene	1		8.89	8.74	9.04	20		6.5
	2		18.97	18.85	19.15	19		
2,4,6-Trinitrotoluene	1		11.19	11.09	11.29	4.1		0.6
	2		24.75	24.61	24.91	4.1		
4-Amino-2,6-dinitrotoluene	1		11.35	11.25	11.45	1.1		31.2
	2		17.22	17.09	17.39	1.6		
2-Amino-4,6-dinitrotoluene	1		11.65	11.53	11.73	1.5		5.9
	2		18.11	17.95	18.25	1.6		

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Client Sample ID: EW7-PM23A-1-25 Lab Sample ID: 280-129830-1

Matrix: Water Lab File ID: 10240019.D

Analysis Method: 8330A Date Collected: 10/16/2019 10:45

Extraction Method: 3535 Date Extracted: 10/23/2019 15:47

Sample wt/vol: 506.4(mL) Date Analyzed: 10/24/2019 15:45

Con. Extract Vol.: 5(mL) Dilution Factor: 1

Injection Volume: 100(uL) GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 475188 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-65-0	1,3-Dinitrobenzene	0.20	U M	0.39	0.20	0.088
121-14-2	2,4-Dinitrotoluene	0.24	J	0.39	0.20	0.083
606-20-2	2,6-Dinitrotoluene	0.20	U	0.20	0.20	0.064
35572-78-2	2-Amino-4,6-dinitrotoluene	3.3	Q	0.20	0.12	0.050
88-72-2	2-Nitrotoluene	0.20	U	0.39	0.20	0.084
99-08-1	3-Nitrotoluene	0.39	U	0.39	0.39	0.19
19406-51-0	4-Amino-2,6-dinitrotoluene	0.12	U	0.20	0.12	0.057
99-99-0	4-Nitrotoluene	0.39	U M	0.99	0.39	0.20
2691-41-0	HMX	0.93	Q M	0.39	0.20	0.086
98-95-3	Nitrobenzene	0.20	U M	0.39	0.20	0.090
121-82-4	RDX	1.0	Q	0.39	0.39	0.16
479-45-8	Tetryl	0.20	U M	0.24	0.20	0.078

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	70	Q	83-119

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240019.D
Lims ID: 280-129830-A-1-A
Client ID: EW7-PM23A-1-25
Sample Type: Client
Inject. Date: 24-Oct-2019 15:45:34 ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-129830-A-1-A
Misc. Info.: 280-0086464-019
Operator ID: CB Instrument ID: CHHPLC_X3

Method: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 25-Oct-2019 13:02:22 Calib Date: 02-Jul-2019 00:18:07
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0317

First Level Reviewer: beckerc Date: 25-Oct-2019 11:24:00

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/mL	Flags
3 HMX	1	6.671	6.667	0.004	8618	0.0938	M
6 MNX	1	7.444	7.367	0.077	29507	0.2107	
7 RDX	1	7.751	7.747	0.004	11456	0.1031	
$ 9 1,2-Dinitrobenzene	1	8.717	8.721	-0.004	19615	0.1408	
10 1,3,5-Trinitrobenzene	1	8.884	8.887	-0.003	1815742	7.41	E
11 1,3-Dinitrobenzene	1		9.534			ND	U
12 Nitrobenzene	1		9.920			ND	U
14 Tetryl	1		10.227			ND	U
16 2,4,6-Trinitrotoluene	1	11.184	11.187	-0.003	721086	3.17	E
17 4-Amino-2,6-dinitrotoluene	1		11.347			ND	
18 2-Amino-4,6-dinitrotoluene	1	11.631	11.634	-0.003	68636	0.3344	
19 2,6-Dinitrotoluene	1		11.794			ND	
20 2,4-Dinitrotoluene	1	11.984	11.994	-0.010	7157	0.0238	
21 o-Nitrotoluene	1		12.840			ND	
22 p-Nitrotoluene	1		13.280			ND	U
23 m-Nitrotoluene	1		13.880			ND	

QC Flag Legend

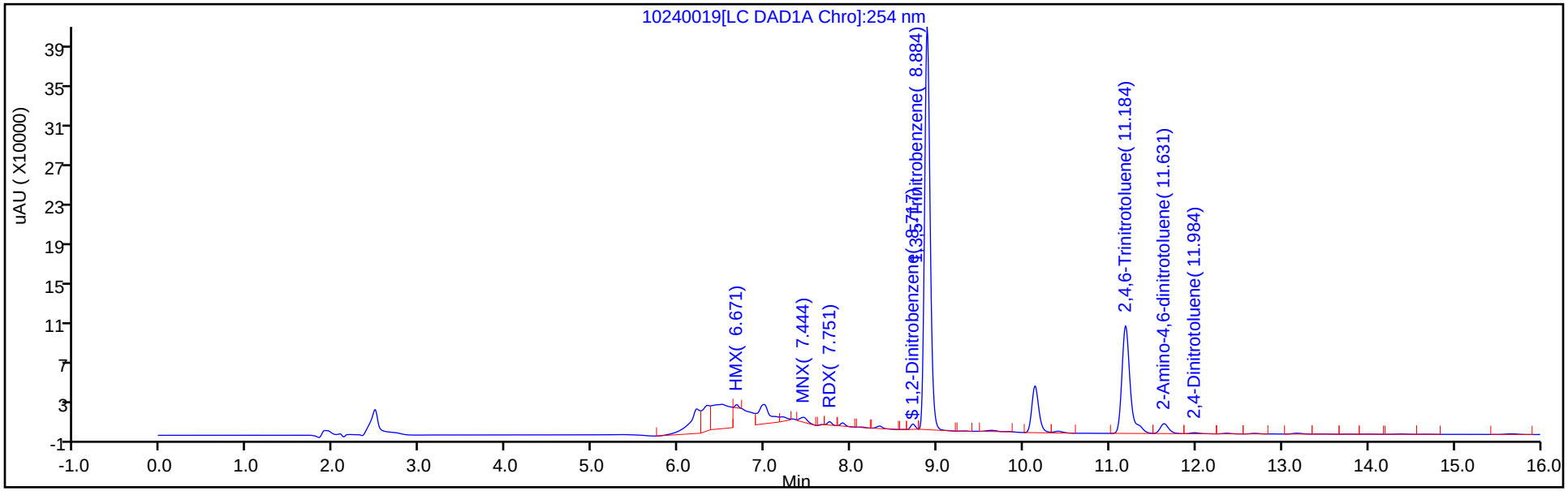
Processing Flags
E - Exceeded Maximum Amount
Review Flags
M - Manually Integrated
U - Marked Undetected

Report Date: 25-Oct-2019 13:02:52 Chrom Revision: 2.3 09-Oct-2019 11:13:36

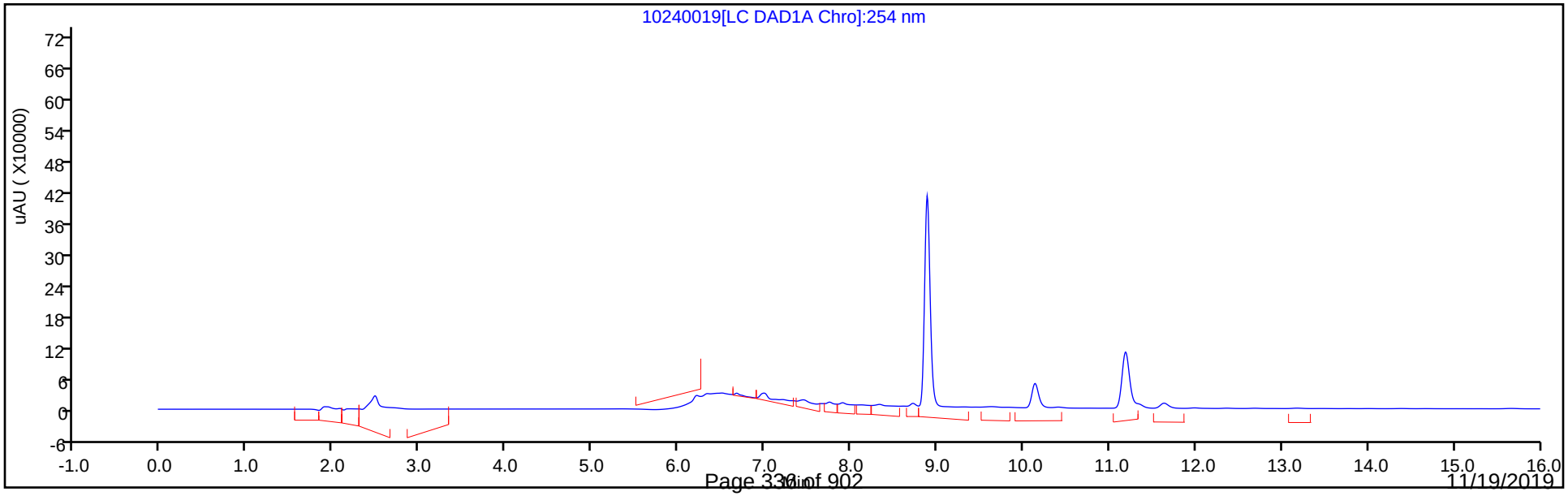
Eurofins TestAmerica, Denver

Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240019.D				
Injection Date:	24-Oct-2019 15:45:34	Instrument ID:	CHHPLC_X3	Operator ID:	CB
Lims ID:	280-129830-A-1-A	Lab Sample ID:	280-129830-1	Worklist Smp#:	19
Client ID:	EW7-PM23A-1-25				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Recovery Report

Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240019.D				
Lims ID:	280-129830-A-1-A				
Client ID:	EW7-PM23A-1-25				
Sample Type:	Client				
Inject. Date:	24-Oct-2019 15:45:34	ALS Bottle#:	19	Worklist Smp#:	19
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-129830-A-1-A				
Misc. Info.:	280-0086464-019				
Operator ID:	CB	Instrument ID:	CHHPLC_X3		
Method:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	25-Oct-2019 13:02:22	Calib Date:	02-Jul-2019 00:18:07		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX0317				
First Level Reviewer: beckerc		Date:	25-Oct-2019 11:24:00		

Compound	Amount Added	Amount Recovered	% Rec.
$ 9 1,2-Dinitrobenzene	0.2000	0.1408	70.39

User Disabled Compound Report

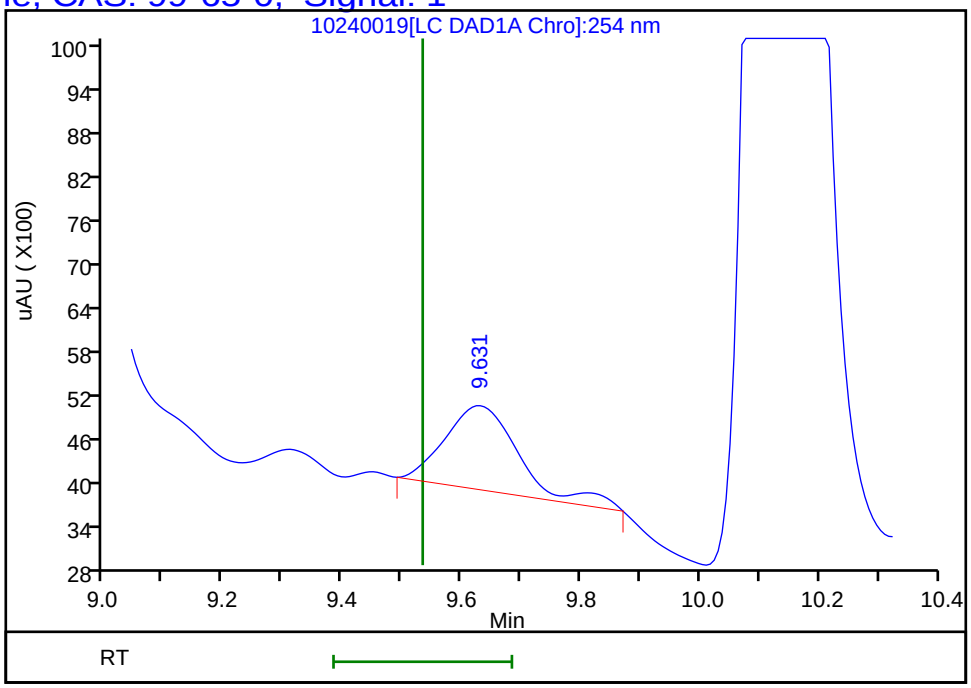
Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240019.D
Injection Date: 24-Oct-2019 15:45:34 Instrument ID: CHHPLC_X3
Lims ID: 280-129830-A-1-A Lab Sample ID: 280-129830-1
Client ID: EW7-PM23A-1-25
Operator ID: CB ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330

Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

11 1,3-Dinitrobenzene, CAS: 99-65-0, Signal: 1

RT: 9.63
Response: 10037
Amount: 0.032255



Reviewer: beckerc, 25-Oct-2019 11:24:00
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

User Disabled Compound Report

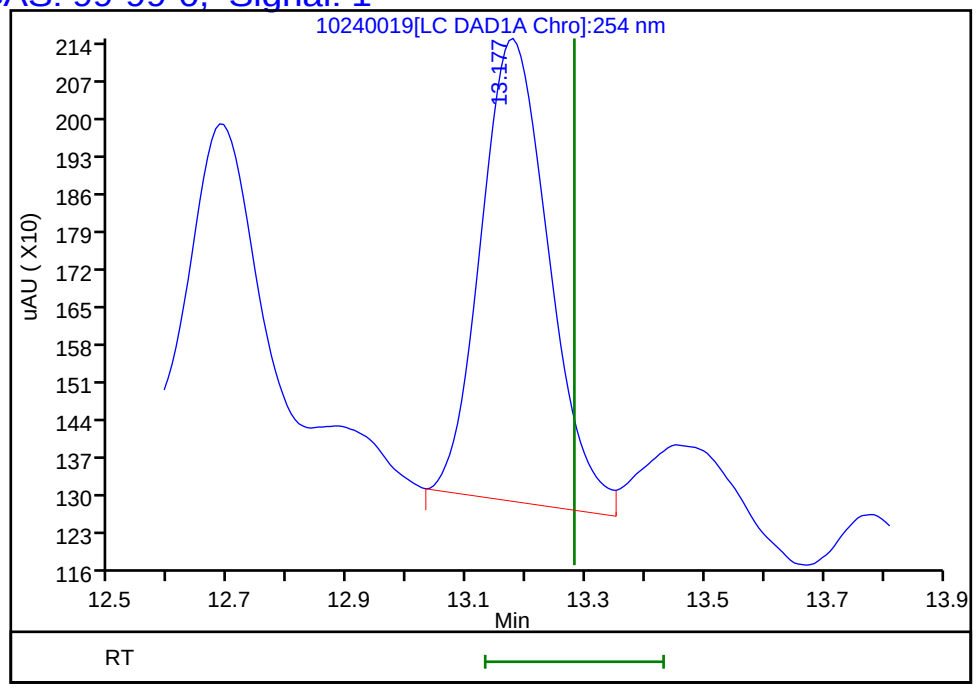
Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240019.D

Injection Date:	24-Oct-2019 15:45:34	Instrument ID:	CHHPLC_X3		
Lims ID:	280-129830-A-1-A	Lab Sample ID:	280-129830-1		
Client ID:	EW7-PM23A-1-25				
Operator ID:	CB	ALS Bottle#:	19	Worklist Smp#:	19
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

22 p-Nitrotoluene, CAS: 99-99-0, Signal: 1

RT: 13.18
Response: 6850
Amount: 0.062129



Reviewer: beckerc, 25-Oct-2019 11:24:00
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

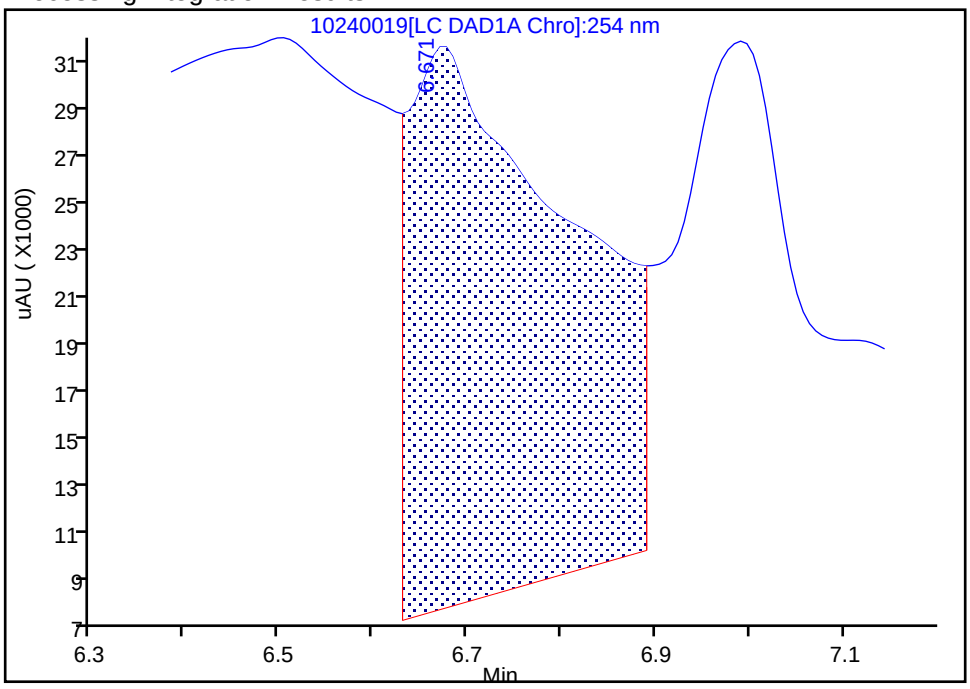
Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240019.D				
Injection Date:	24-Oct-2019 15:45:34	Instrument ID:	CHHPLC_X3		
Lims ID:	280-129830-A-1-A	Lab Sample ID:	280-129830-1		
Client ID:	EW7-PM23A-1-25				
Operator ID:	CB	ALS Bottle#:	19	Worklist Smp#:	19
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

3 HMX, CAS: 2691-41-0

Signal: 1

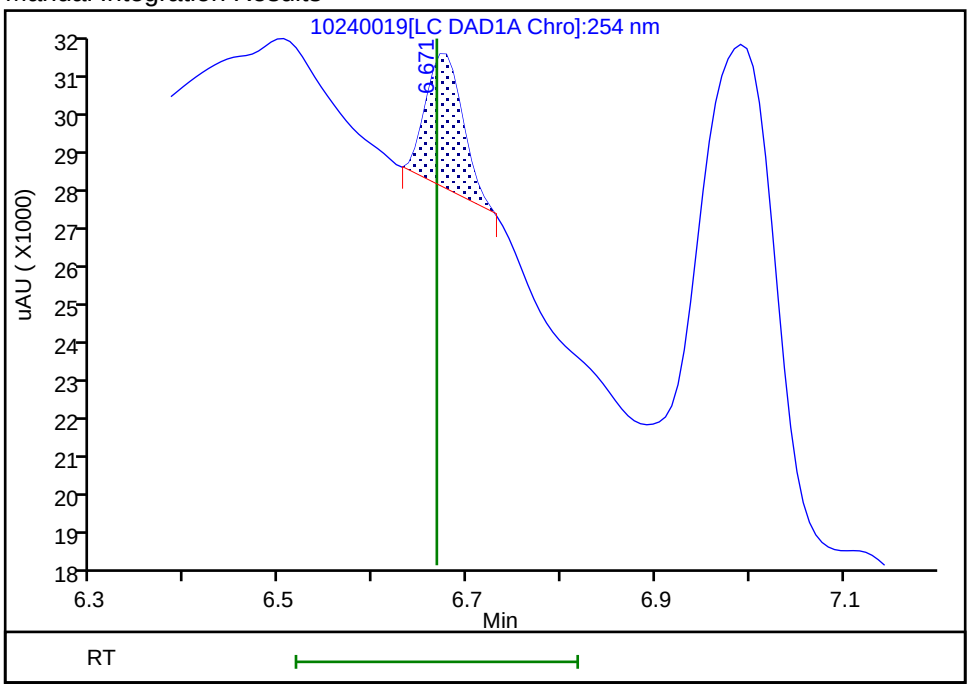
Processing Integration Results

RT: 6.67
Area: 261082
Amount: 2.843001
Amount Units: ug/mL



Manual Integration Results

RT: 6.67
Area: 8618
Amount: 0.093844
Amount Units: ug/mL



Reviewer: beckerc, 25-Oct-2019 11:22:43

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

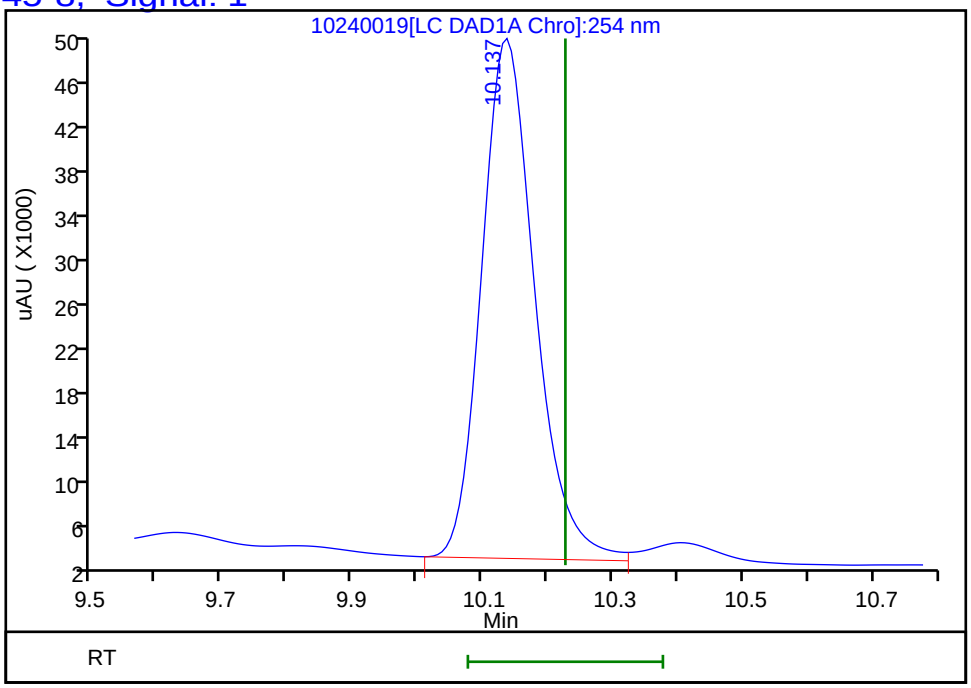
User Disabled Compound Report

Eurofins TestAmerica, Denver

Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240019.D				
Injection Date:	24-Oct-2019 15:45:34	Instrument ID:	CHHPLC_X3		
Lims ID:	280-129830-A-1-A	Lab Sample ID:	280-129830-1		
Client ID:	EW7-PM23A-1-25				
Operator ID:	CB	ALS Bottle#:	19	Worklist Smp#:	19
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

14 Tetryl, CAS: 479-45-8, Signal: 1

RT: 10.14
Response: 266590
Amount: 1.646052



Reviewer: beckerc, 25-Oct-2019 11:24:00
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Client Sample ID: EW7-PM23A-1-25 Lab Sample ID: 280-129830-1

Matrix: Water Lab File ID: 10290028.D

Analysis Method: 8330A Date Collected: 10/16/2019 10:45

Extraction Method: 3535 Date Extracted: 10/23/2019 15:47

Sample wt/vol: 506.4(mL) Date Analyzed: 10/30/2019 05:05

Con. Extract Vol.: 5(mL) Dilution Factor: 1

Injection Volume: 100(uL) GC Column: Luna-phenylhex ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 475783 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
5755-27-1	MNX	0.39	U	2.0	0.39	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	85		83-119

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\G2_LUNA\20191029-86611.b\10290028.D
Lims ID: 280-129830-A-1-A
Client ID: EW7-PM23A-1-25
Sample Type: Client
Inject. Date: 30-Oct-2019 05:05:11 ALS Bottle#: 28 Worklist Smp#: 28
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-129830-A-1-A
Misc. Info.: 280-0086611-028
Operator ID: CB Instrument ID: CHHPLC_G2_LUNA

Method: \\chromna\Denver\ChromData\G2_LUNA\20191029-86611.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 30-Oct-2019 15:11:10 Calib Date: 25-Oct-2019 23:35:16
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250014.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0329

First Level Reviewer: beckerc Date: 30-Oct-2019 15:04:45

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
	6 HMX	1	7.072	7.057	0.015	26844	0.1244	M
	7 MNX	1		7.989			ND	
	8 RDX	1	9.265	9.257	0.008	28871	0.1122	
	9 Nitrobenzene	1	12.312	12.230	0.082	37805	0.0793	M
$	10 1,2-Dinitrobenzene	1	13.185	13.170	0.015	53254	0.1701	
	12 1,3-Dinitrobenzene	1		15.717			ND	U
	14 o-Nitrotoluene	1		16.704			ND	U
	15 p-Nitrotoluene	1		16.990			ND	
	16 4-Amino-2,6-dinitrotoluene	1	17.319	17.324	-0.005	93237	0.2869	
	17 m-Nitrotoluene	1		17.924			ND	U
	18 2-Amino-4,6-dinitrotoluene	1	18.199	18.210	-0.011	146692	0.3191	
	19 1,3,5-Trinitrobenzene	1	19.079	19.070	0.009	3414861	6.91	E
	20 2,6-Dinitrotoluene	1		19.997			ND	U
	21 2,4-Dinitrotoluene	1	20.485	20.484	0.001	15208	0.0250	
	22 Tetryl	1		23.751			ND	U
	23 2,4,6-Trinitrotoluene	1	24.865	24.851	0.014	1280115	2.91	E

QC Flag Legend

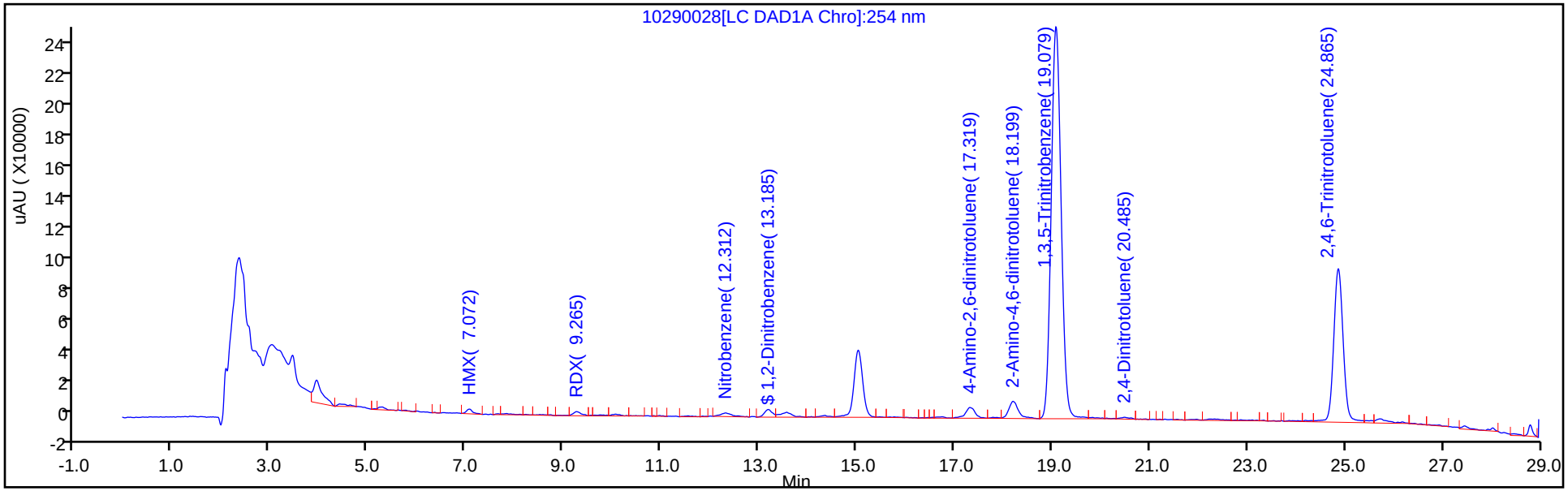
Processing Flags
E - Exceeded Maximum Amount
Review Flags
M - Manually Integrated
U - Marked Undetected

Report Date: 30-Oct-2019 15:11:14 Chrom Revision: 2.3 09-Oct-2019 11:13:36

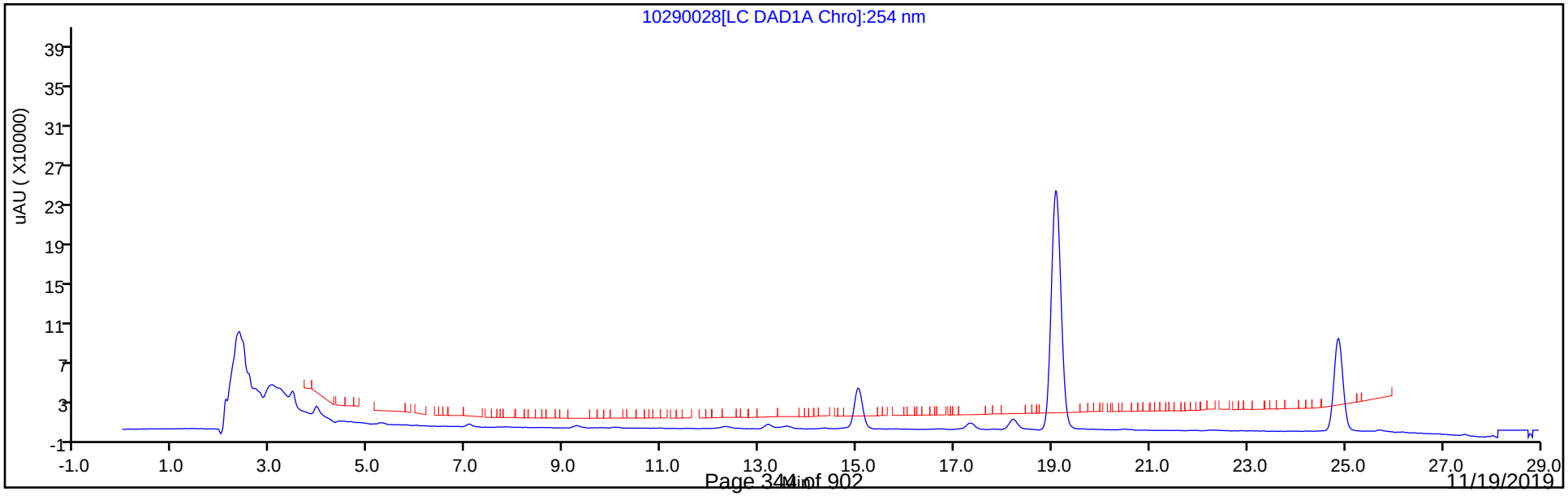
Eurofins TestAmerica, Denver

Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191029-86611.b\10290028.D				
Injection Date:	30-Oct-2019 05:05:11	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	CB
Lims ID:	280-129830-A-1-A	Lab Sample ID:	280-129830-1	Worklist Smp#:	28
Client ID:	EW7-PM23A-1-25				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	28
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins TestAmerica, Denver
Recovery Report

Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191029-86611.b\10290028.D				
Lims ID:	280-129830-A-1-A				
Client ID:	EW7-PM23A-1-25				
Sample Type:	Client				
Inject. Date:	30-Oct-2019 05:05:11	ALS Bottle#:	28	Worklist Smp#:	28
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-129830-A-1-A				
Misc. Info.:	280-0086611-028				
Operator ID:	CB	Instrument ID:	CHHPLC_G2_LUNA		
Method:	\\chromna\Denver\ChromData\G2_LUNA\20191029-86611.b\G2_8330_Luna.m				
Limit Group:	GCSV - 8330				
Last Update:	30-Oct-2019 15:11:10	Calib Date:	25-Oct-2019 23:35:16		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250014.D				
Column 1 :	Luna-Phenyl hexyl (4.60 mm)		Det: LC DAD1A, 254 nm		
Process Host:	CTX0329				
First Level Reviewer: beckerc		Date:	30-Oct-2019 15:04:45		

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2000	0.1701	85.05

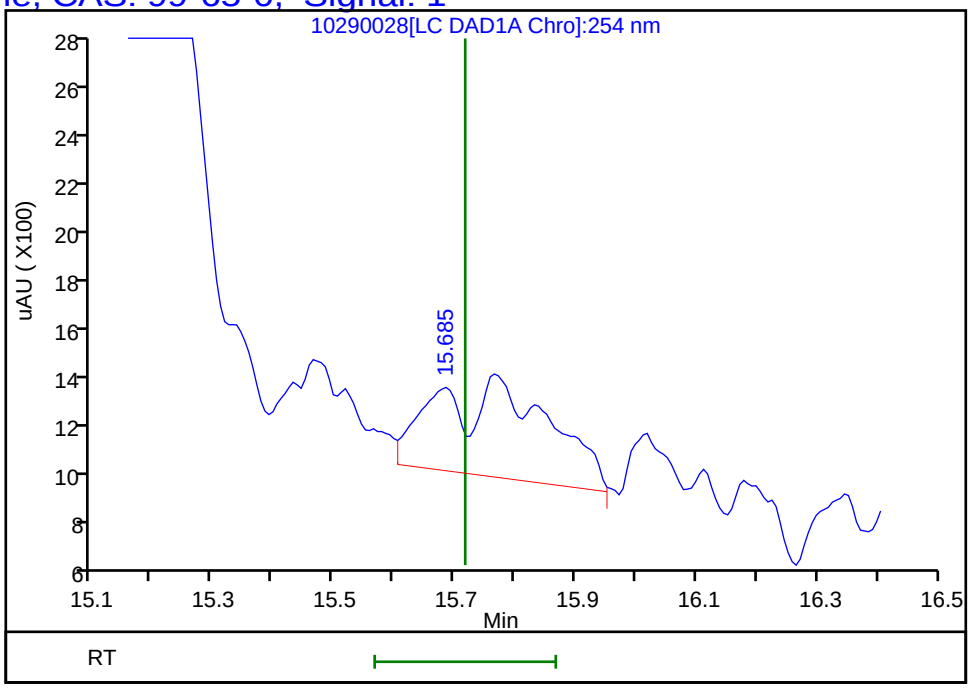
User Disabled Compound Report

Eurofins TestAmerica, Denver

Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191029-86611.b\10290028.D				
Injection Date:	30-Oct-2019 05:05:11	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-129830-A-1-A	Lab Sample ID:	280-129830-1		
Client ID:	EW7-PM23A-1-25				
Operator ID:	CB	ALS Bottle#:	28	Worklist Smp#:	28
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

12 1,3-Dinitrobenzene, CAS: 99-65-0, Signal: 1

RT: 15.69
Response: 4890
Amount: 0.007435



Reviewer: beckerc, 30-Oct-2019 15:04:45
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

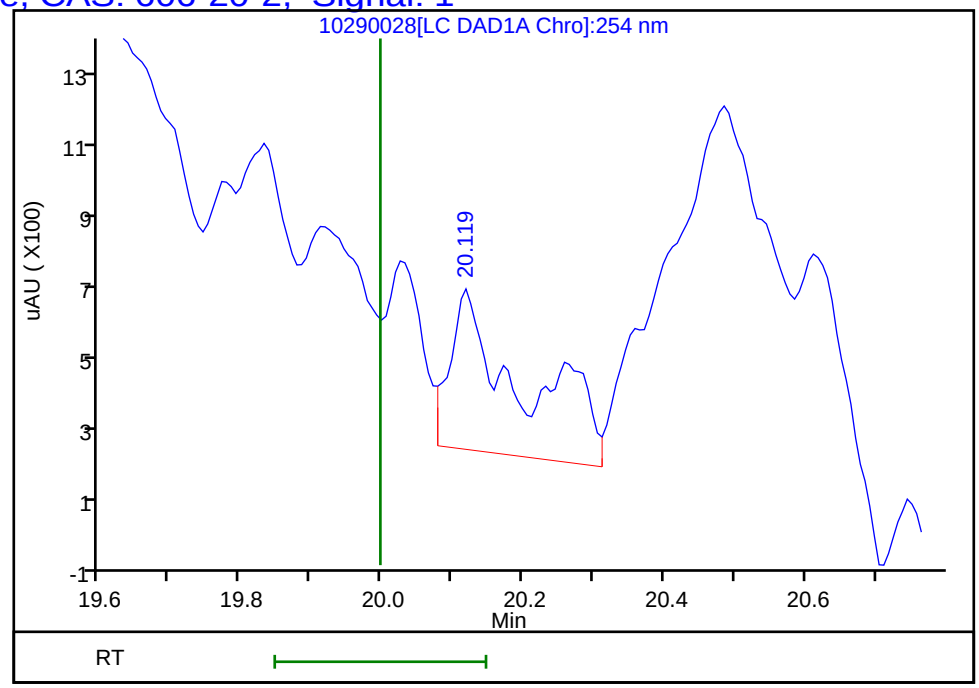
User Disabled Compound Report

Eurofins TestAmerica, Denver

Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191029-86611.b\10290028.D				
Injection Date:	30-Oct-2019 05:05:11	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-129830-A-1-A	Lab Sample ID:	280-129830-1		
Client ID:	EW7-PM23A-1-25				
Operator ID:	CB	ALS Bottle#:	28	Worklist Smp#:	28
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

20 2,6-Dinitrotoluene, CAS: 606-20-2, Signal: 1

RT: 20.12
Response: 3155
Amount: 0.009770



Reviewer: beckerc, 30-Oct-2019 15:04:45
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

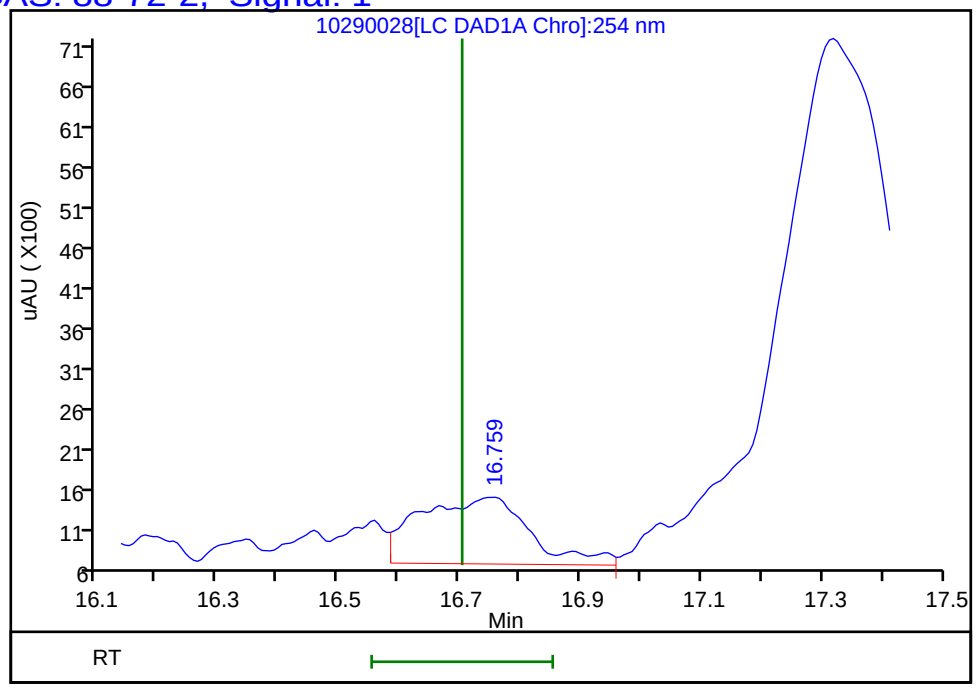
User Disabled Compound Report

Eurofins TestAmerica, Denver

Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191029-86611.b\10290028.D				
Injection Date:	30-Oct-2019 05:05:11	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-129830-A-1-A	Lab Sample ID:	280-129830-1		
Client ID:	EW7-PM23A-1-25				
Operator ID:	CB	ALS Bottle#:	28	Worklist Smp#:	28
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

14 o-Nitrotoluene, CAS: 88-72-2, Signal: 1

RT: 16.76
Response: 10590
Amount: 0.037937



Reviewer: beckerc, 30-Oct-2019 15:04:45
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

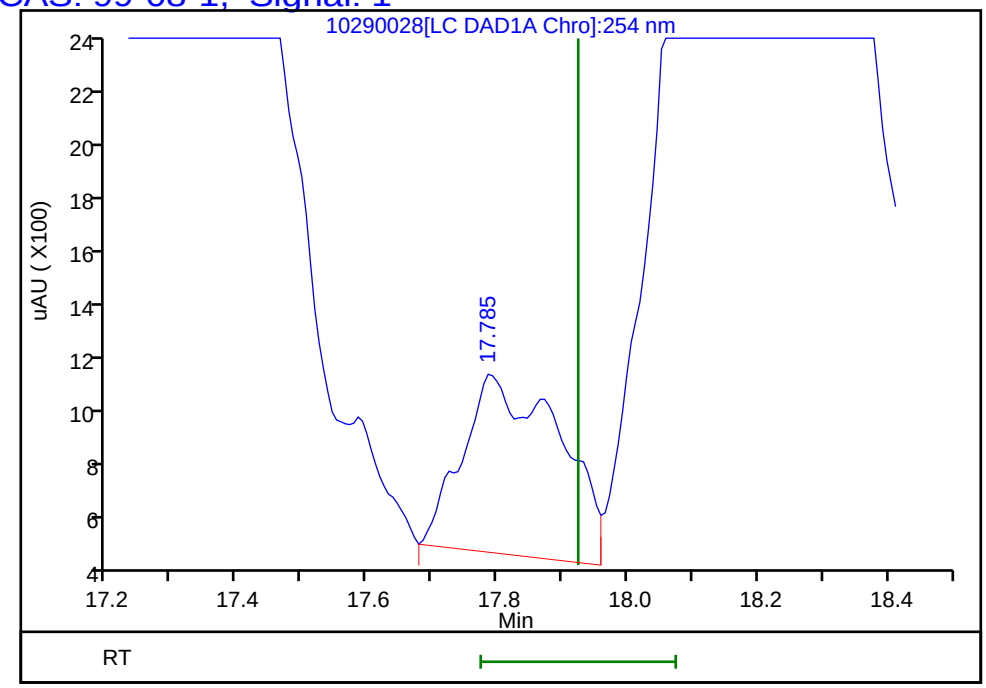
User Disabled Compound Report

Eurofins TestAmerica, Denver

Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191029-86611.b\10290028.D				
Injection Date:	30-Oct-2019 05:05:11	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-129830-A-1-A	Lab Sample ID:	280-129830-1		
Client ID:	EW7-PM23A-1-25				
Operator ID:	CB	ALS Bottle#:	28	Worklist Smp#:	28
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

17 m-Nitrotoluene, CAS: 99-08-1, Signal: 1

RT: 17.79
Response: 6402
Amount: NaN



Reviewer: beckerc, 30-Oct-2019 15:04:45
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

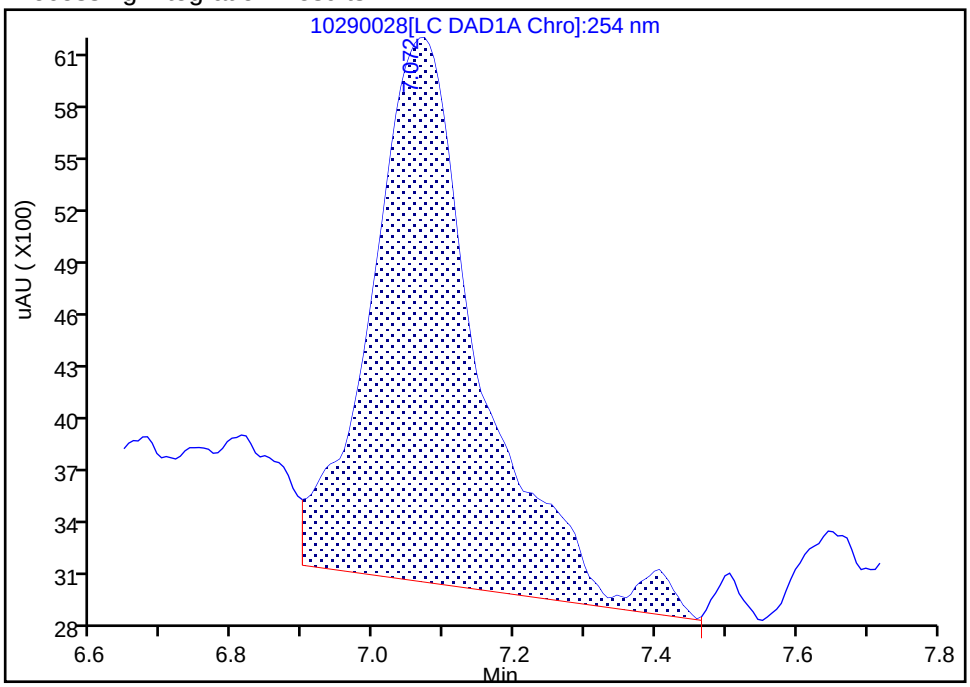
Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191029-86611.b\10290028.D				
Injection Date:	30-Oct-2019 05:05:11	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-129830-A-1-A	Lab Sample ID:	280-129830-1		
Client ID:	EW7-PM23A-1-25				
Operator ID:	CB	ALS Bottle#:	28	Worklist Smp#:	28
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

6 HMX, CAS: 2691-41-0

Signal: 1

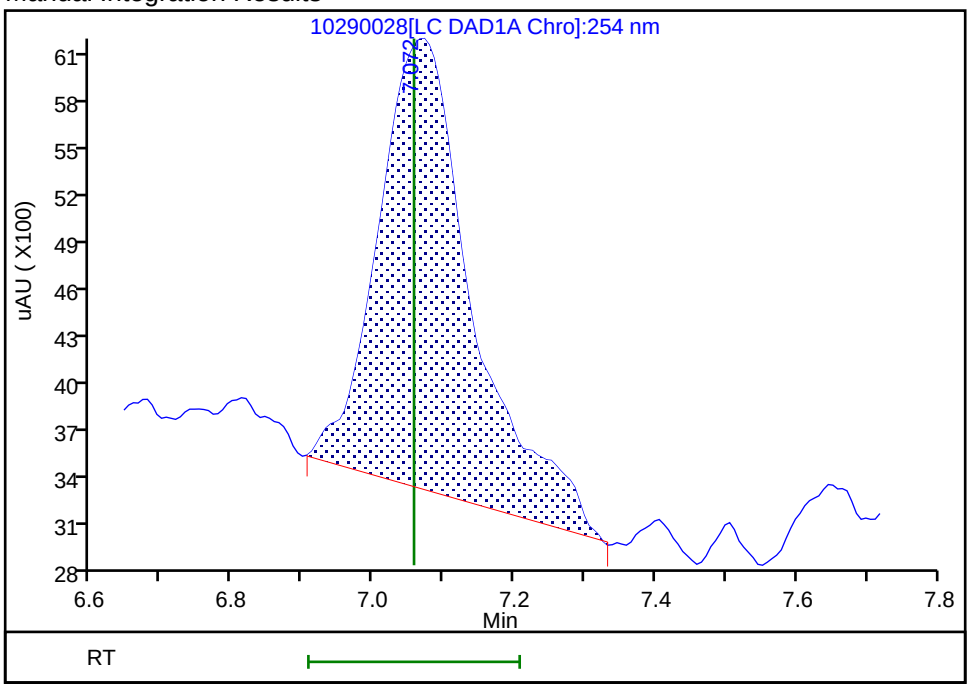
Processing Integration Results

RT: 7.07
Area: 33821
Amount: 0.156719
Amount Units: ug/ml



Manual Integration Results

RT: 7.07
Area: 26844
Amount: 0.124389
Amount Units: ug/ml



Reviewer: beckerc, 30-Oct-2019 15:02:30

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

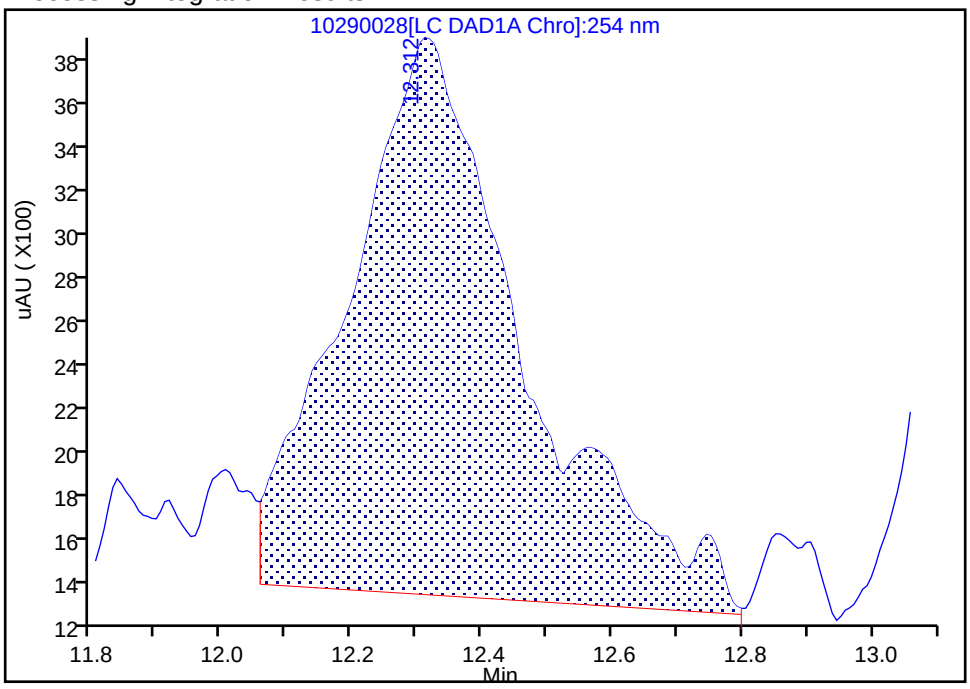
Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191029-86611.b\10290028.D				
Injection Date:	30-Oct-2019 05:05:11	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-129830-A-1-A	Lab Sample ID:	280-129830-1		
Client ID:	EW7-PM23A-1-25				
Operator ID:	CB	ALS Bottle#:	28	Worklist Smp#:	28
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

9 Nitrobenzene, CAS: 98-95-3

Signal: 1

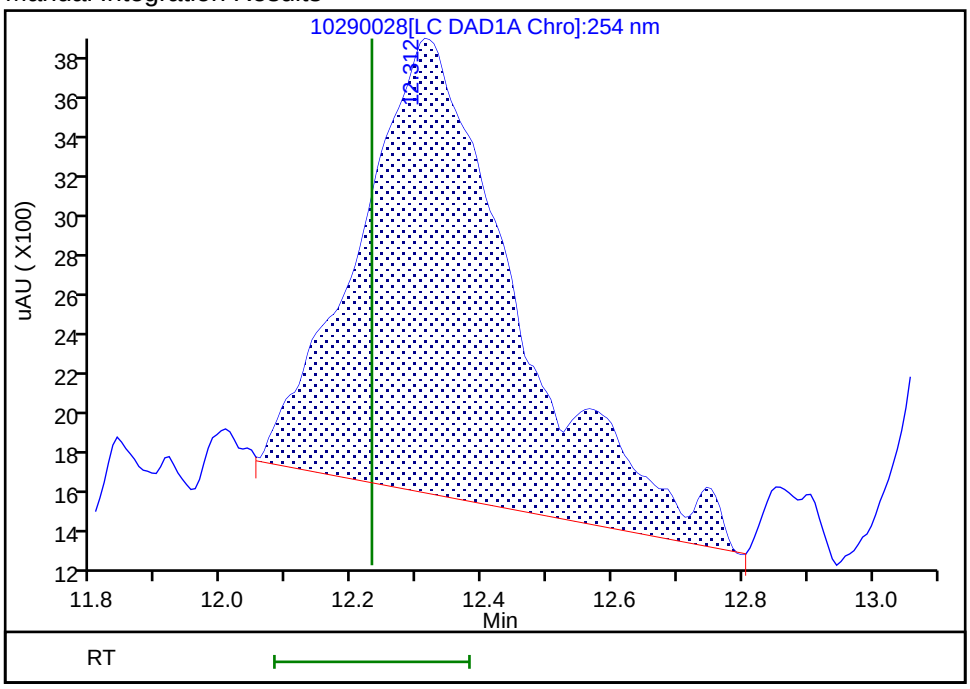
Processing Integration Results

RT: 12.31
Area: 46236
Amount: 0.100920
Amount Units: ug/ml



Manual Integration Results

RT: 12.31
Area: 37805
Amount: 0.079309
Amount Units: ug/ml



Reviewer: beckerc, 30-Oct-2019 15:02:52

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

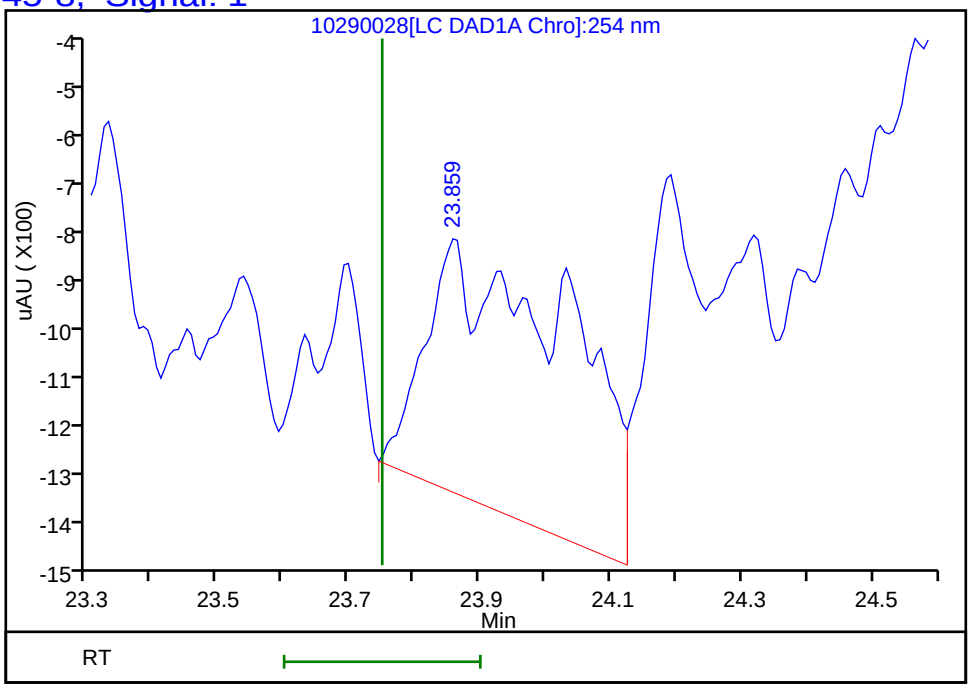
User Disabled Compound Report

Eurofins TestAmerica, Denver

Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191029-86611.b\10290028.D				
Injection Date:	30-Oct-2019 05:05:11	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-129830-A-1-A	Lab Sample ID:	280-129830-1		
Client ID:	EW7-PM23A-1-25				
Operator ID:	CB	ALS Bottle#:	28	Worklist Smp#:	28
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

22 Tetryl, CAS: 479-45-8, Signal: 1

RT: 23.86
Response: 7899
Amount: 0.022323



Reviewer: beckerc, 30-Oct-2019 15:04:45
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Client Sample ID: EW7-PM23A-1-25 DL Lab Sample ID: 280-129830-1 DL

Matrix: Water Lab File ID: 10280072.D

Analysis Method: 8330A Date Collected: 10/16/2019 10:45

Extraction Method: 3535 Date Extracted: 10/23/2019 15:47

Sample wt/vol: 506.4(mL) Date Analyzed: 10/29/2019 13:52

Con. Extract Vol.: 5(mL) Dilution Factor: 25

Injection Volume: 100(uL) GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 475589 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	70	D	25	9.9	4.9
118-96-7	2,4,6-Trinitrotoluene	28	D	9.9	9.9	3.9

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	87	D	83-119

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191028-86569.b\10280072.D
Lims ID: 280-129830-A-1-A
Client ID: EW7-PM23A-1-25
Sample Type: Client
Inject. Date: 29-Oct-2019 13:52:02 ALS Bottle#: 72 Worklist Smp#: 72
Injection Vol: 100.0 ul Dil. Factor: 25.0000
Sample Info: 280-129830-A-1-A
Misc. Info.: 280-0086569-072
Operator ID: CB Instrument ID: CHHPLC_X3

Method: \\chromna\Denver\ChromData\CHHPLC_X\20191028-86569.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 29-Oct-2019 16:05:04 Calib Date: 02-Jul-2019 00:18:07
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0329

First Level Reviewer: beckerc Date: 29-Oct-2019 16:03:03

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/mL	Flags
	3 HMX	1		6.675			ND	
	6 MNX	1		7.367			ND	U
	7 RDX	1		7.761			ND	
$	9 1,2-Dinitrobenzene	1	8.714	8.715	-0.001	966	0.006933	
	10 1,3,5-Trinitrobenzene	1	8.880	8.881	-0.001	69644	0.2842	
	11 1,3-Dinitrobenzene	1		9.534			ND	
	12 Nitrobenzene	1		9.921			ND	
	14 Tetryl	1		10.228			ND	U
	16 2,4,6-Trinitrotoluene	1	11.194	11.201	-0.007	25645	0.1128	
	17 4-Amino-2,6-dinitrotoluene	1		11.368			ND	
	18 2-Amino-4,6-dinitrotoluene	1	11.654	11.661	-0.007	2419	0.0118	
	19 2,6-Dinitrotoluene	1		11.814			ND	
	20 2,4-Dinitrotoluene	1		12.008			ND	
	21 o-Nitrotoluene	1		12.854			ND	
	22 p-Nitrotoluene	1		13.301			ND	
	23 m-Nitrotoluene	1		13.901			ND	

QC Flag Legend

Review Flags
U - Marked Undetected

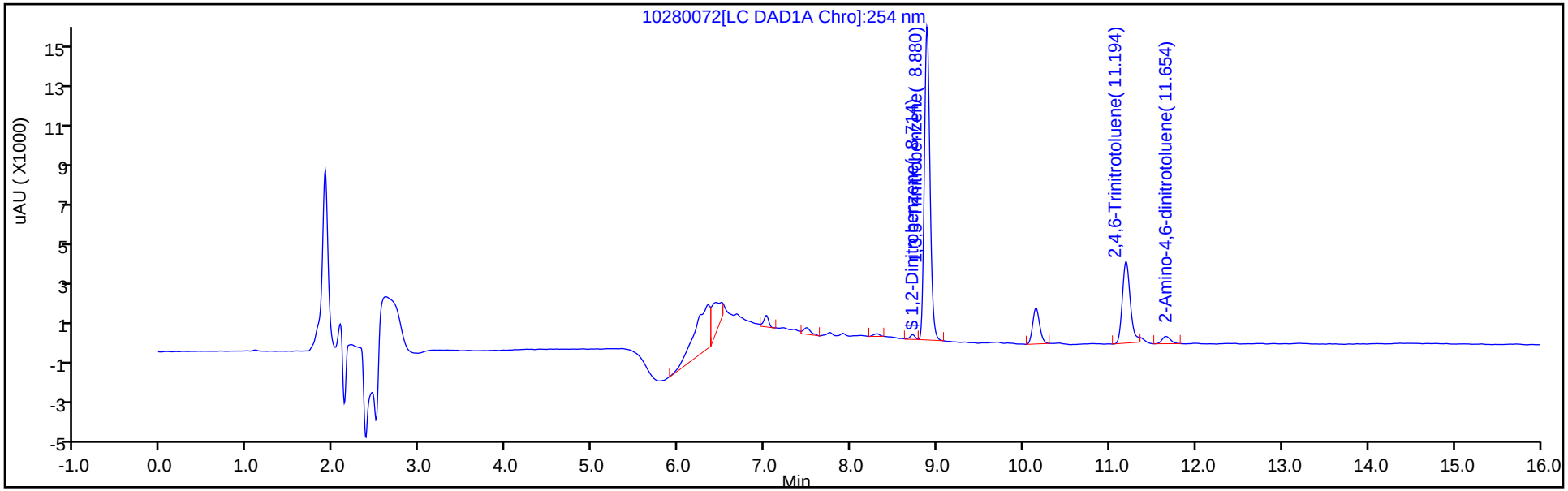
Report Date: 29-Oct-2019 16:05:11 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

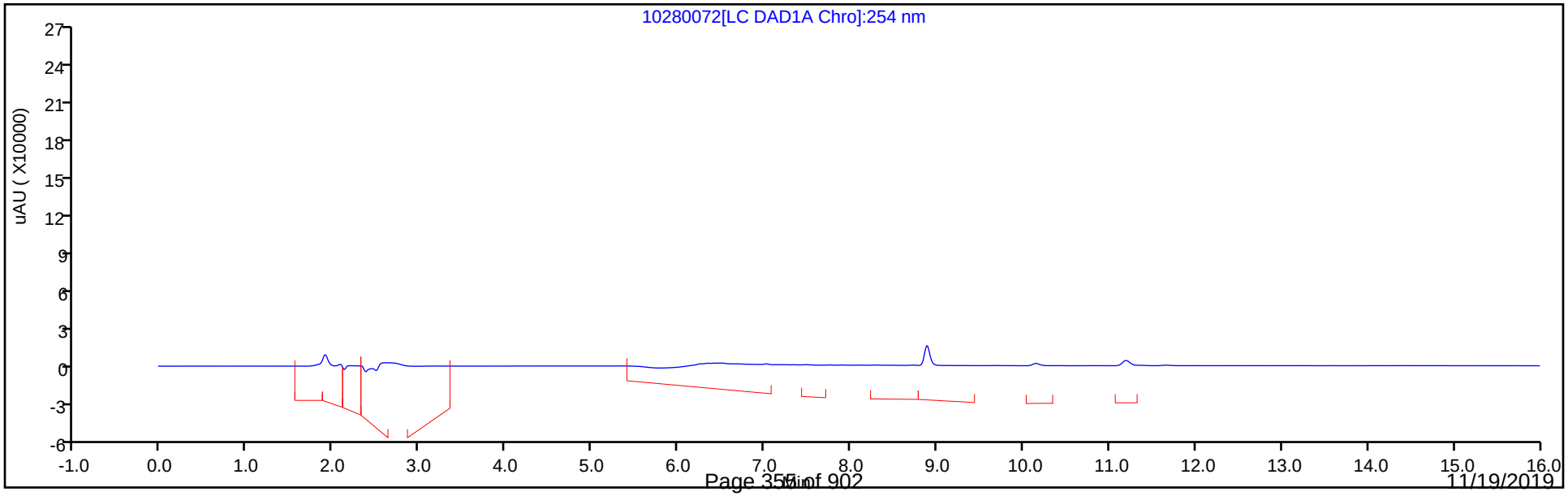
Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191028-86569.b\10280072.D

Injection Date:	29-Oct-2019 13:52:02	Instrument ID:	CHHPLC_X3	Operator ID:	CB
Lims ID:	280-129830-A-1-A	Lab Sample ID:	280-129830-1	Worklist Smp#:	72
Client ID:	EW7-PM23A-1-25				
Injection Vol:	100.0 ul	Dil. Factor:	25.0000	ALS Bottle#:	72
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Recovery Report

Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20191028-86569.b\10280072.D				
Lims ID:	280-129830-A-1-A				
Client ID:	EW7-PM23A-1-25				
Sample Type:	Client				
Inject. Date:	29-Oct-2019 13:52:02	ALS Bottle#:	72	Worklist Smp#:	72
Injection Vol:	100.0 ul	Dil. Factor:	25.0000		
Sample Info:	280-129830-A-1-A				
Misc. Info.:	280-0086569-072				
Operator ID:	CB	Instrument ID:	CHHPLC_X3		
Method:	\\chromna\Denver\ChromData\CHHPLC_X\20191028-86569.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	29-Oct-2019 16:05:04	Calib Date:	02-Jul-2019 00:18:07		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX0329				
First Level Reviewer: beckerc		Date:	29-Oct-2019 16:03:03		

Compound	Amount Added	Amount Recovered	% Rec.
$ 9 1,2-Dinitrobenzene	0.2000	0.006933	3.47

User Disabled Compound Report

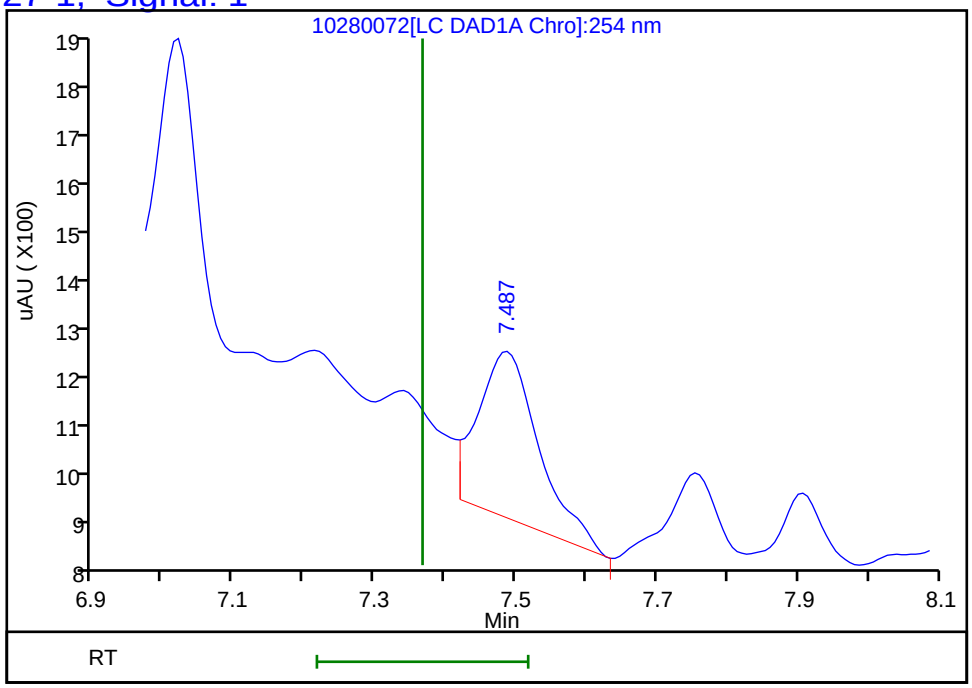
Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191028-86569.b\10280072.D

Injection Date:	29-Oct-2019 13:52:02	Instrument ID:	CHHPLC_X3		
Lims ID:	280-129830-A-1-A	Lab Sample ID:	280-129830-1		
Client ID:	EW7-PM23A-1-25				
Operator ID:	CB	ALS Bottle#:	72	Worklist Smp#:	72
Injection Vol:	100.0 ul	Dil. Factor:	25.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

6 MNX, CAS: 5755-27-1, Signal: 1

RT: 7.49
Response: 1895
Amount: 0.013532



Reviewer: beckerc, 29-Oct-2019 16:03:03
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

User Disabled Compound Report

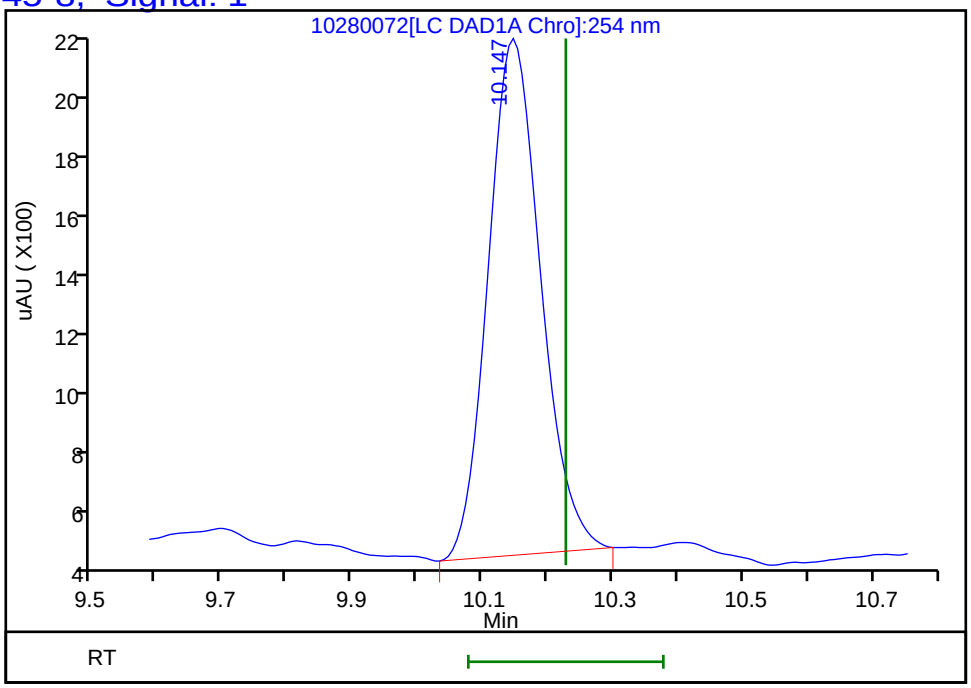
Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191028-86569.b\10280072.D

Injection Date:	29-Oct-2019 13:52:02	Instrument ID:	CHHPLC_X3		
Lims ID:	280-129830-A-1-A	Lab Sample ID:	280-129830-1		
Client ID:	EW7-PM23A-1-25				
Operator ID:	CB	ALS Bottle#:	72	Worklist Smp#:	72
Injection Vol:	100.0 ul	Dil. Factor:	25.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

14 Tetryl, CAS: 479-45-8, Signal: 1

RT: 10.15
Response: 9885
Amount: 0.061035



Reviewer: beckerc, 29-Oct-2019 16:03:03
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Client Sample ID: EW7-PM23A-1-25 DL Lab Sample ID: 280-129830-1 DL

Matrix: Water Lab File ID: 10290029.D

Analysis Method: 8330A Date Collected: 10/16/2019 10:45

Extraction Method: 3535 Date Extracted: 10/23/2019 15:47

Sample wt/vol: 506.4(mL) Date Analyzed: 10/30/2019 05:40

Con. Extract Vol.: 5(mL) Dilution Factor: 25

Injection Volume: 100(uL) GC Column: Luna-phenylhex ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 475783 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	0	Q	83-119

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\G2_LUNA\20191029-86611.b\10290029.D
Lims ID: 280-129830-A-1-A
Client ID: EW7-PM23A-1-25
Sample Type: Client
Inject. Date: 30-Oct-2019 05:40:09 ALS Bottle#: 29 Worklist Smp#: 29
Injection Vol: 100.0 ul Dil. Factor: 25.0000
Sample Info: 280-129830-A-1-A
Misc. Info.: 280-0086611-029
Operator ID: CB Instrument ID: CHHPLC_G2_LUNA

Method: \\chromna\Denver\ChromData\G2_LUNA\20191029-86611.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 30-Oct-2019 15:11:10 Calib Date: 25-Oct-2019 23:35:16
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250014.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0329

First Level Reviewer: beckerc Date: 30-Oct-2019 15:05:24

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
	6 HMX	1		7.057			ND	U
	7 MNX	1	7.948	7.989	-0.041	2154	NC	
	8 RDX	1		9.257			ND	U
	9 Nitrobenzene	1		12.230			ND	
$	10 1,2-Dinitrobenzene	1		13.170			ND(<0)	
	12 1,3-Dinitrobenzene	1		15.717			ND	U
	14 o-Nitrotoluene	1		16.704			ND	
	15 p-Nitrotoluene	1		16.990			ND	
	16 4-Amino-2,6-dinitrotoluene	1		17.324			ND	U
	17 m-Nitrotoluene	1		17.924			ND	U
	18 2-Amino-4,6-dinitrotoluene	1		18.210			ND	U
	19 1,3,5-Trinitrobenzene	1	19.094	19.070	0.024	140420	0.2841	
	20 2,6-Dinitrotoluene	1		19.997			ND	
	21 2,4-Dinitrotoluene	1		20.484			ND	U
	22 Tetryl	1		23.751			ND	U
	23 2,4,6-Trinitrotoluene	1	24.861	24.851	0.010	56624	0.0911	M

QC Flag Legend

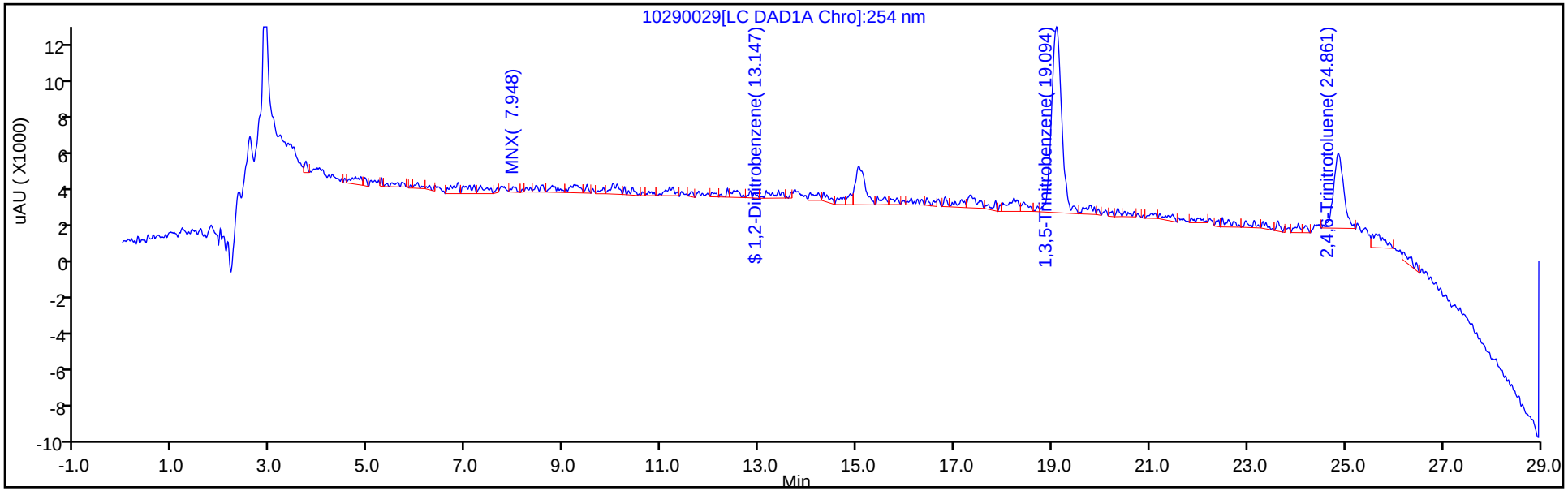
Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
U - Marked Undetected

Report Date: 30-Oct-2019 15:11:15 Chrom Revision: 2.3 09-Oct-2019 11:13:36

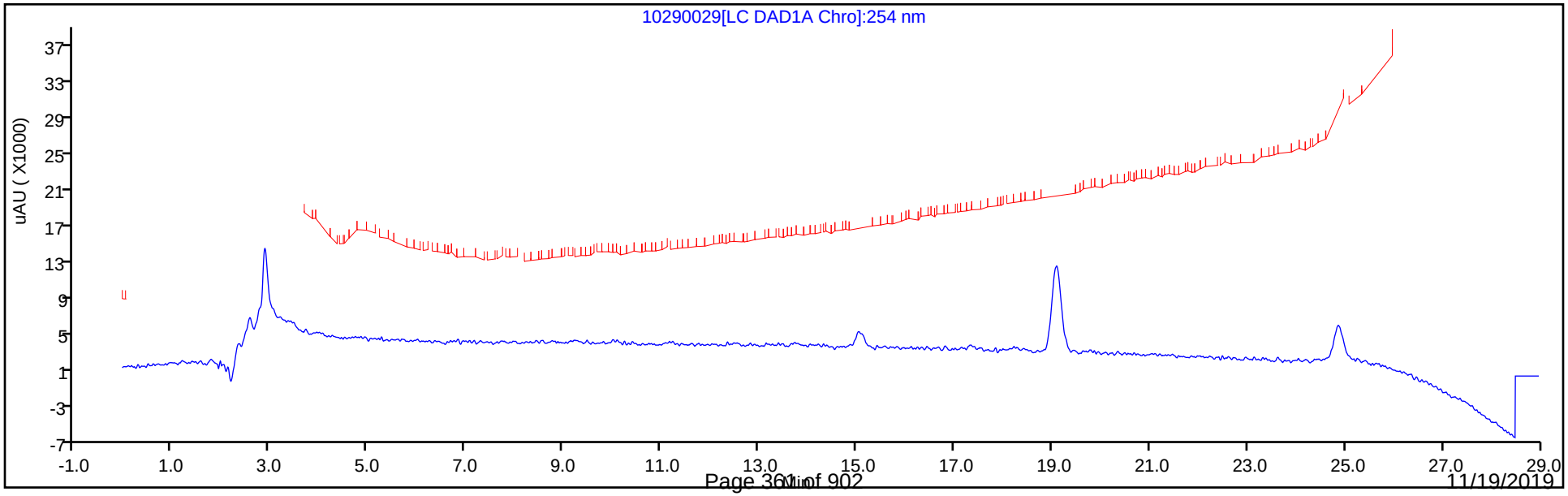
Eurofins TestAmerica, Denver

Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191029-86611.b\10290029.D				
Injection Date:	30-Oct-2019 05:40:09	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	CB
Lims ID:	280-129830-A-1-A	Lab Sample ID:	280-129830-1	Worklist Smp#:	29
Client ID:	EW7-PM23A-1-25				
Injection Vol:	100.0 ul	Dil. Factor:	25.0000	ALS Bottle#:	29
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



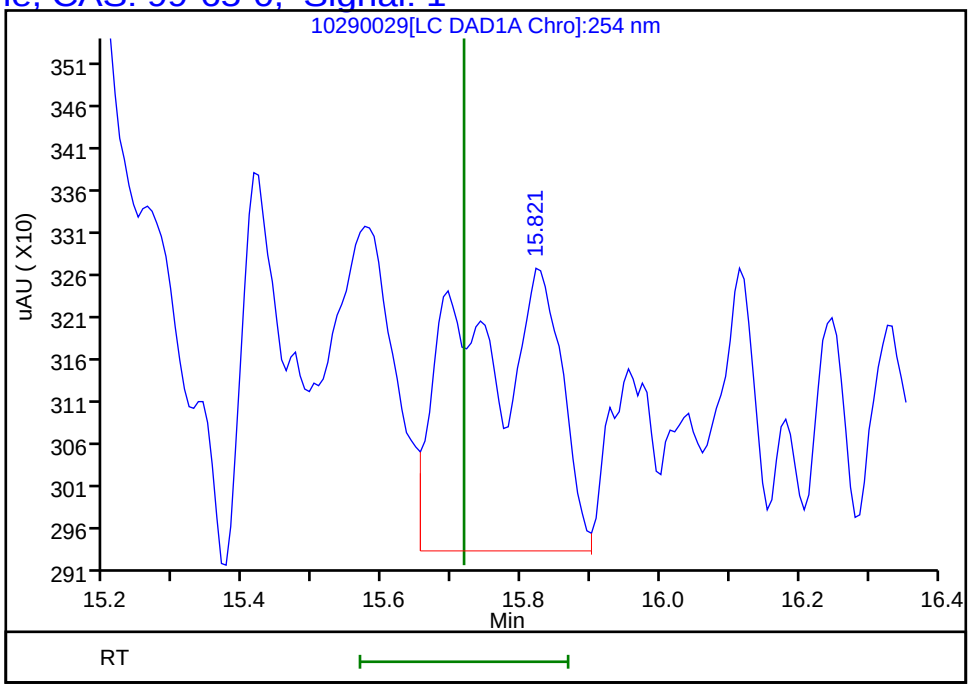
User Disabled Compound Report

Eurofins TestAmerica, Denver

Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191029-86611.b\10290029.D				
Injection Date:	30-Oct-2019 05:40:09	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-129830-A-1-A	Lab Sample ID:	280-129830-1		
Client ID:	EW7-PM23A-1-25				
Operator ID:	CB	ALS Bottle#:	29	Worklist Smp#:	29
Injection Vol:	100.0 ul	Dil. Factor:	25.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

12 1,3-Dinitrobenzene, CAS: 99-65-0, Signal: 1

RT: 15.82
Response: 3254
Amount: 0.004948



Reviewer: beckerc, 30-Oct-2019 15:05:24
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

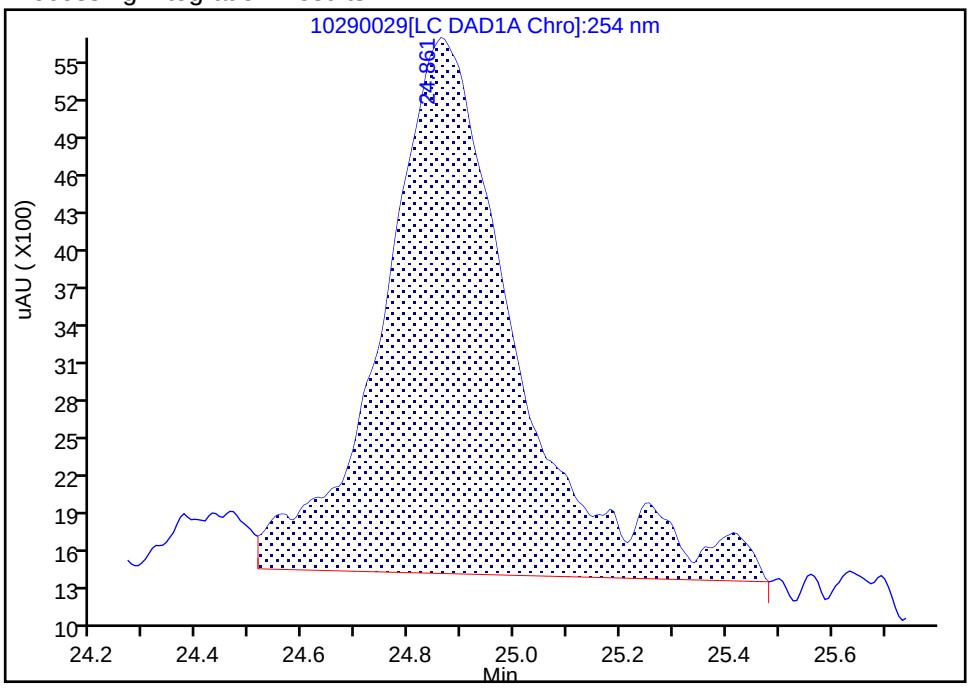
Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191029-86611.b\10290029.D				
Injection Date:	30-Oct-2019 05:40:09	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-129830-A-1-A	Lab Sample ID:	280-129830-1		
Client ID:	EW7-PM23A-1-25				
Operator ID:	CB	ALS Bottle#:	29	Worklist Smp#:	29
Injection Vol:	100.0 ul	Dil. Factor:	25.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

23 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

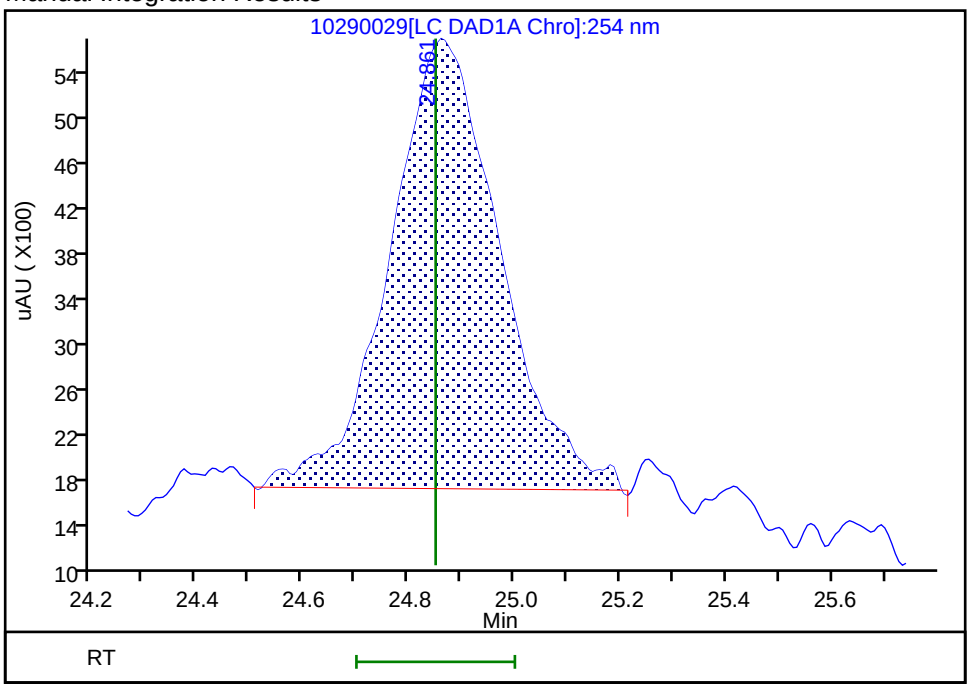
Processing Integration Results

RT: 24.86
Area: 74248
Amount: 0.131737
Amount Units: ug/ml



Manual Integration Results

RT: 24.86
Area: 56624
Amount: 0.091086
Amount Units: ug/ml



Reviewer: beckerc, 30-Oct-2019 15:05:20

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

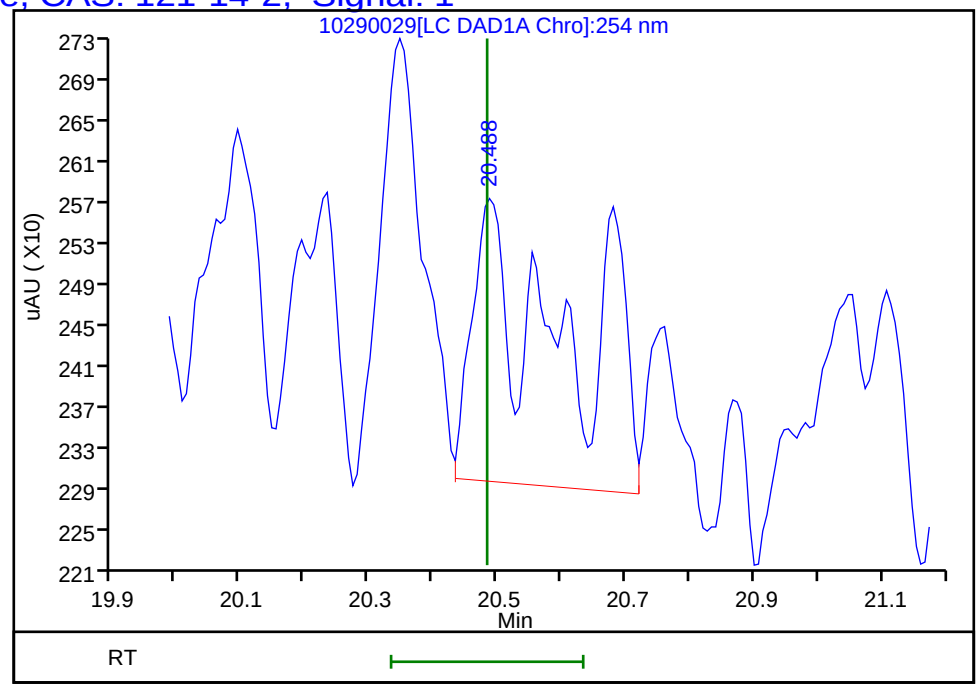
User Disabled Compound Report

Eurofins TestAmerica, Denver

Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191029-86611.b\10290029.D				
Injection Date:	30-Oct-2019 05:40:09	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-129830-A-1-A	Lab Sample ID:	280-129830-1		
Client ID:	EW7-PM23A-1-25				
Operator ID:	CB	ALS Bottle#:	29	Worklist Smp#:	29
Injection Vol:	100.0 ul	Dil. Factor:	25.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

21 2,4-Dinitrotoluene, CAS: 121-14-2, Signal: 1

RT: 20.49
Response: 2682
Amount: 0.004403



Reviewer: beckerc, 30-Oct-2019 15:05:24
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

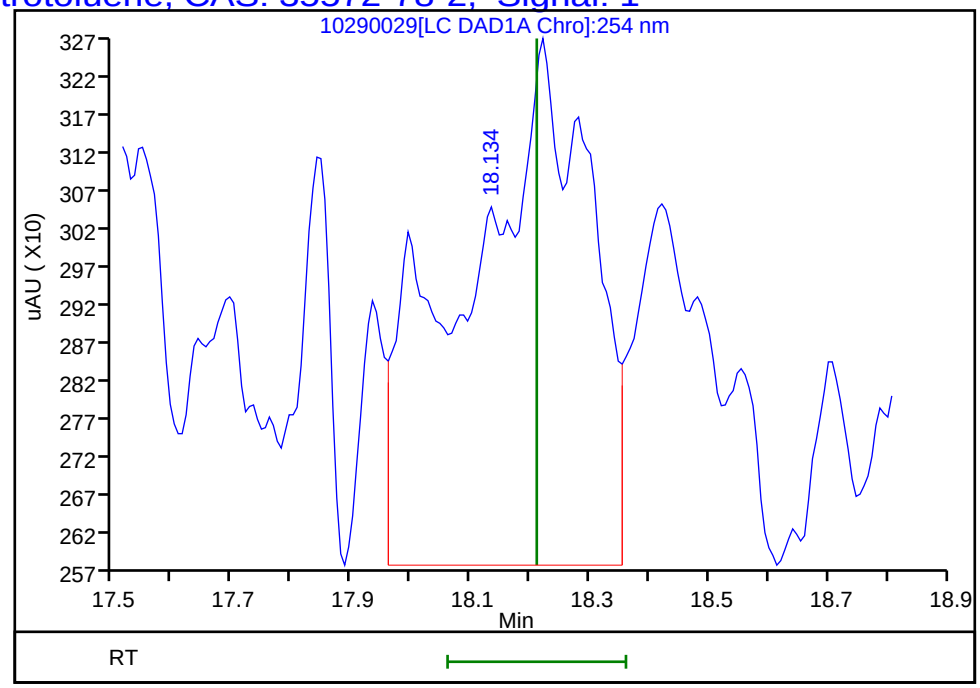
User Disabled Compound Report

Eurofins TestAmerica, Denver

Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191029-86611.b\10290029.D				
Injection Date:	30-Oct-2019 05:40:09	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-129830-A-1-A	Lab Sample ID:	280-129830-1		
Client ID:	EW7-PM23A-1-25				
Operator ID:	CB	ALS Bottle#:	29	Worklist Smp#:	29
Injection Vol:	100.0 ul	Dil. Factor:	25.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

18 2-Amino-4,6-dinitrotoluene, CAS: 35572-78-2, Signal: 1

RT: 18.13
Response: 10214
Amount: 0.022215



Reviewer: beckerc, 30-Oct-2019 15:05:24
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

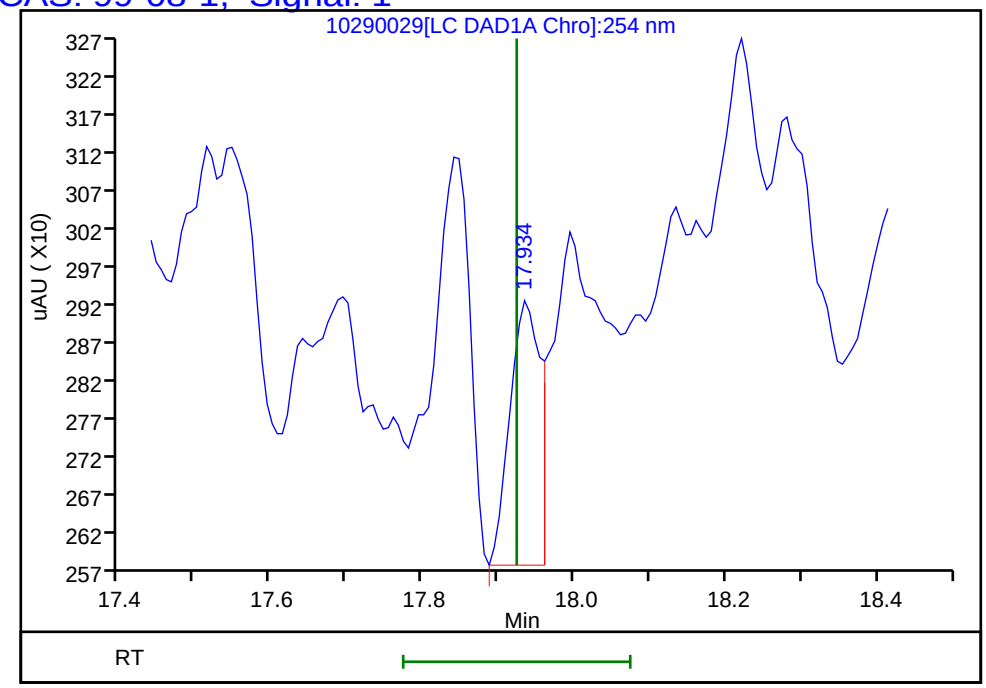
User Disabled Compound Report

Eurofins TestAmerica, Denver

Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191029-86611.b\10290029.D				
Injection Date:	30-Oct-2019 05:40:09	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-129830-A-1-A	Lab Sample ID:	280-129830-1		
Client ID:	EW7-PM23A-1-25				
Operator ID:	CB	ALS Bottle#:	29	Worklist Smp#:	29
Injection Vol:	100.0 ul	Dil. Factor:	25.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

17 m-Nitrotoluene, CAS: 99-08-1, Signal: 1

RT: 17.93
Response: 959
Amount: NaN



Reviewer: beckerc, 30-Oct-2019 15:05:24
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

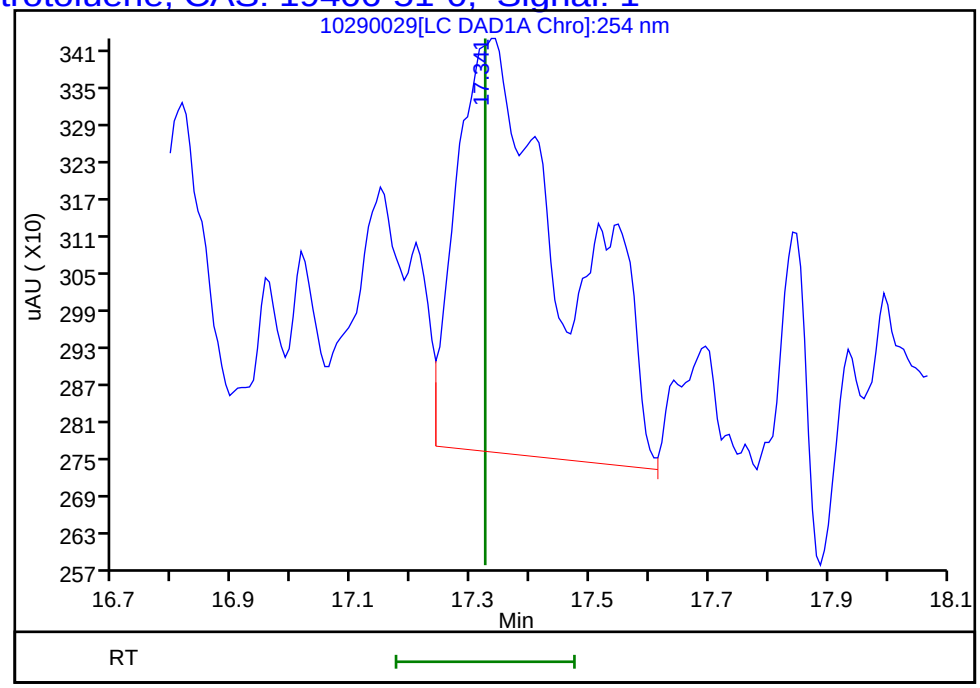
User Disabled Compound Report

Eurofins TestAmerica, Denver

Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191029-86611.b\10290029.D				
Injection Date:	30-Oct-2019 05:40:09	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-129830-A-1-A	Lab Sample ID:	280-129830-1		
Client ID:	EW7-PM23A-1-25				
Operator ID:	CB	ALS Bottle#:	29	Worklist Smp#:	29
Injection Vol:	100.0 ul	Dil. Factor:	25.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

16 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0, Signal: 1

RT: 17.34
Response: 8607
Amount: 0.026485



Reviewer: beckerc, 30-Oct-2019 15:05:24
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

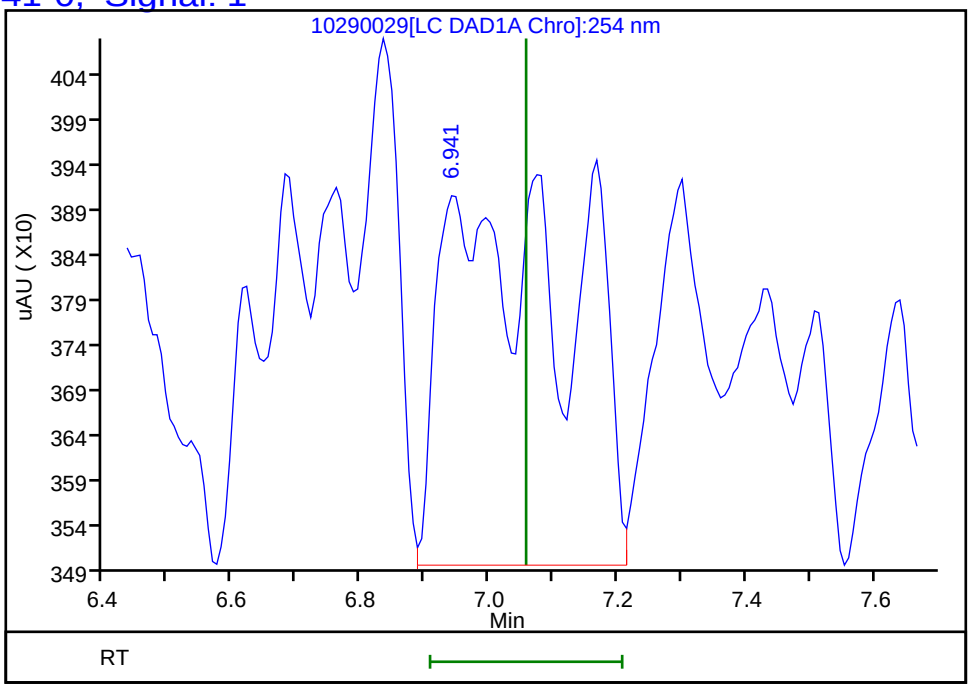
User Disabled Compound Report

Eurofins TestAmerica, Denver

Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191029-86611.b\10290029.D				
Injection Date:	30-Oct-2019 05:40:09	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-129830-A-1-A	Lab Sample ID:	280-129830-1		
Client ID:	EW7-PM23A-1-25				
Operator ID:	CB	ALS Bottle#:	29	Worklist Smp#:	29
Injection Vol:	100.0 ul	Dil. Factor:	25.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

6 HMX, CAS: 2691-41-0, Signal: 1

RT: 6.94
Response: 5790
Amount: 0.026830



Reviewer: beckerc, 30-Oct-2019 15:05:24
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

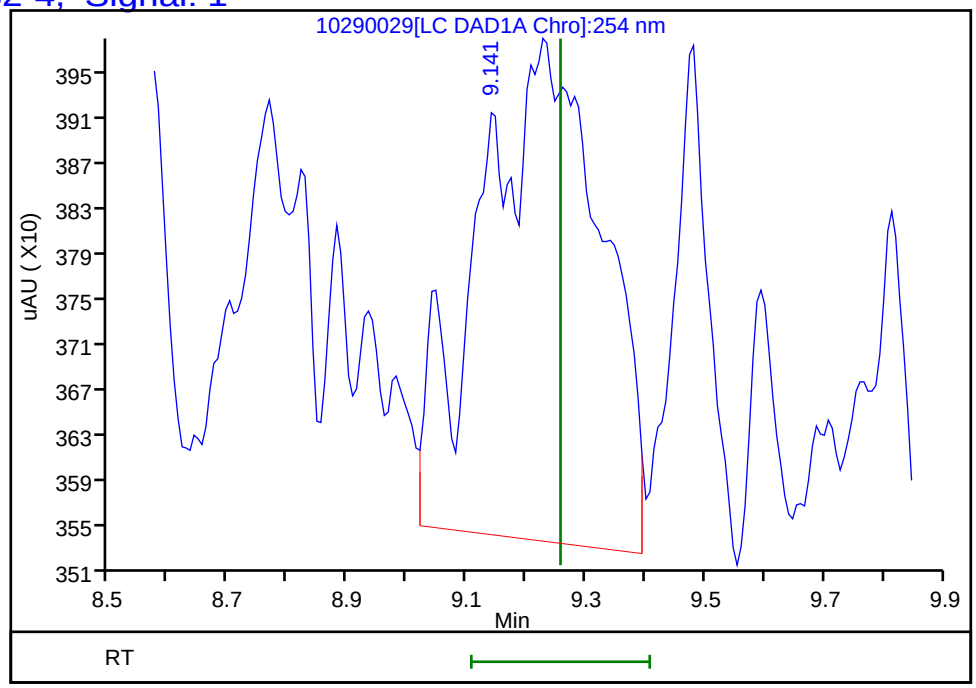
User Disabled Compound Report

Eurofins TestAmerica, Denver

Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191029-86611.b\10290029.D				
Injection Date:	30-Oct-2019 05:40:09	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-129830-A-1-A	Lab Sample ID:	280-129830-1		
Client ID:	EW7-PM23A-1-25				
Operator ID:	CB	ALS Bottle#:	29	Worklist Smp#:	29
Injection Vol:	100.0 ul	Dil. Factor:	25.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

8 RDX, CAS: 121-82-4, Signal: 1

RT: 9.14
Response: 6132
Amount: 0.010848



Reviewer: beckerc, 30-Oct-2019 15:05:24
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

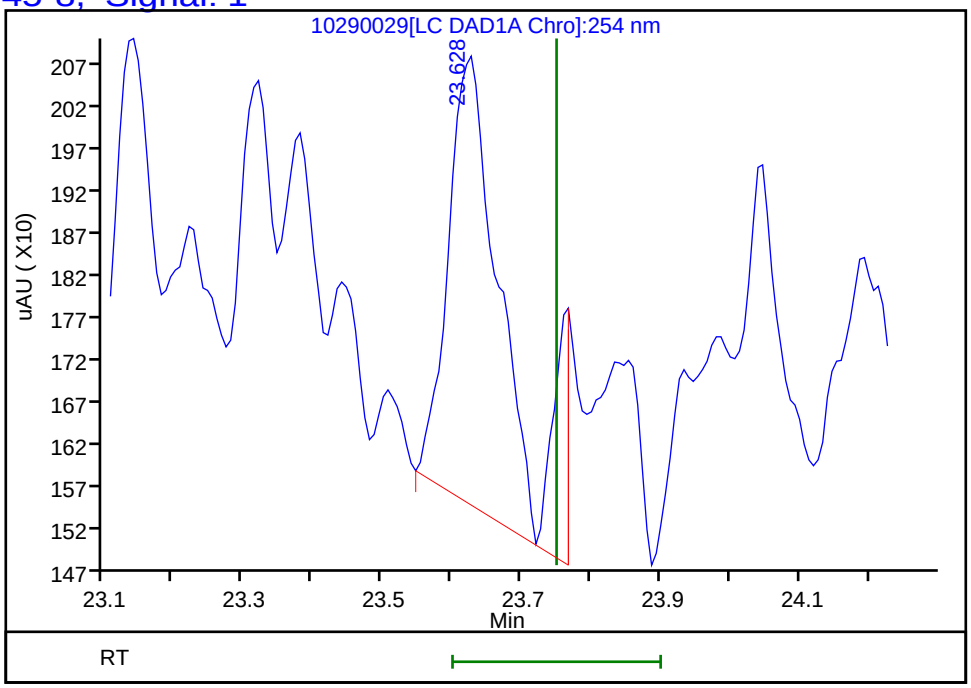
User Disabled Compound Report

Eurofins TestAmerica, Denver

Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191029-86611.b\10290029.D				
Injection Date:	30-Oct-2019 05:40:09	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-129830-A-1-A	Lab Sample ID:	280-129830-1		
Client ID:	EW7-PM23A-1-25				
Operator ID:	CB	ALS Bottle#:	29	Worklist Smp#:	29
Injection Vol:	100.0 ul	Dil. Factor:	25.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

22 Tetryl, CAS: 479-45-8, Signal: 1

RT: 23.63
Response: 3057
Amount: 0.008639



Reviewer: beckerc, 30-Oct-2019 15:05:24
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Client Sample ID: EW7-PM25A-1-25 Lab Sample ID: 280-129830-2

Matrix: Water Lab File ID: 10240023.D

Analysis Method: 8330A Date Collected: 10/16/2019 12:50

Extraction Method: 3535 Date Extracted: 10/23/2019 15:47

Sample wt/vol: 518.6(mL) Date Analyzed: 10/24/2019 17:17

Con. Extract Vol.: 5(mL) Dilution Factor: 1

Injection Volume: 100(uL) GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 475188 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	1.9	Q M	0.96	0.39	0.19
99-65-0	1,3-Dinitrobenzene	0.19	U M	0.39	0.19	0.086
118-96-7	2,4,6-Trinitrotoluene	13	Q	0.39	0.39	0.15
121-14-2	2,4-Dinitrotoluene	0.19	U	0.39	0.19	0.081
606-20-2	2,6-Dinitrotoluene	0.19	U	0.19	0.19	0.062
35572-78-2	2-Amino-4,6-dinitrotoluene	2.4	Q	0.19	0.12	0.049
88-72-2	2-Nitrotoluene	0.19	U	0.39	0.19	0.082
99-08-1	3-Nitrotoluene	0.39	U	0.39	0.39	0.19
19406-51-0	4-Amino-2,6-dinitrotoluene	2.4	Q	0.19	0.12	0.056
99-99-0	4-Nitrotoluene	0.39	U M	0.96	0.39	0.19
2691-41-0	HMX	1.6	Q M	0.39	0.19	0.084
5755-27-1	MNX	0.39	U M	1.9	0.39	0.15
98-95-3	Nitrobenzene	0.19	U	0.39	0.19	0.088
121-82-4	RDX	1.6	Q M	0.39	0.39	0.15
479-45-8	Tetryl	0.19	U M	0.23	0.19	0.076

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	79	Q M	83-119

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240023.D
Lims ID: 280-129830-A-2-A
Client ID: EW7-PM25A-1-25
Sample Type: Client
Inject. Date: 24-Oct-2019 17:17:18 ALS Bottle#: 23 Worklist Smp#: 23
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-129830-A-2-A
Misc. Info.: 280-0086464-023
Operator ID: CB Instrument ID: CHHPLC_X3

Method: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 25-Oct-2019 13:02:59 Calib Date: 02-Jul-2019 00:18:07
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0317

First Level Reviewer: beckerc Date: 25-Oct-2019 12:00:00

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/mL	Flags
	3 HMX	1	6.677	6.667	0.010	15153	0.1650	M
	6 MNX	1		7.367			ND	U
	7 RDX	1	7.757	7.747	0.010	18754	0.1688	M
$	9 1,2-Dinitrobenzene	1	8.724	8.721	0.003	22044	0.1582	M
	10 1,3,5-Trinitrobenzene	1	8.890	8.887	0.003	49389	0.2015	M
	11 1,3-Dinitrobenzene	1		9.534			ND	U
	12 Nitrobenzene	1		9.920			ND	
	14 Tetryl	1		10.227			ND	U
	16 2,4,6-Trinitrotoluene	1	11.190	11.187	0.003	295722	1.30	
	17 4-Amino-2,6-dinitrotoluene	1	11.344	11.347	-0.003	40724	0.2448	
	18 2-Amino-4,6-dinitrotoluene	1	11.637	11.634	0.003	50676	0.2469	
	19 2,6-Dinitrotoluene	1		11.794			ND	
	20 2,4-Dinitrotoluene	1		11.994			ND	
	21 o-Nitrotoluene	1		12.840			ND	
	22 p-Nitrotoluene	1		13.280			ND	U
	23 m-Nitrotoluene	1		13.880			ND	

QC Flag Legend

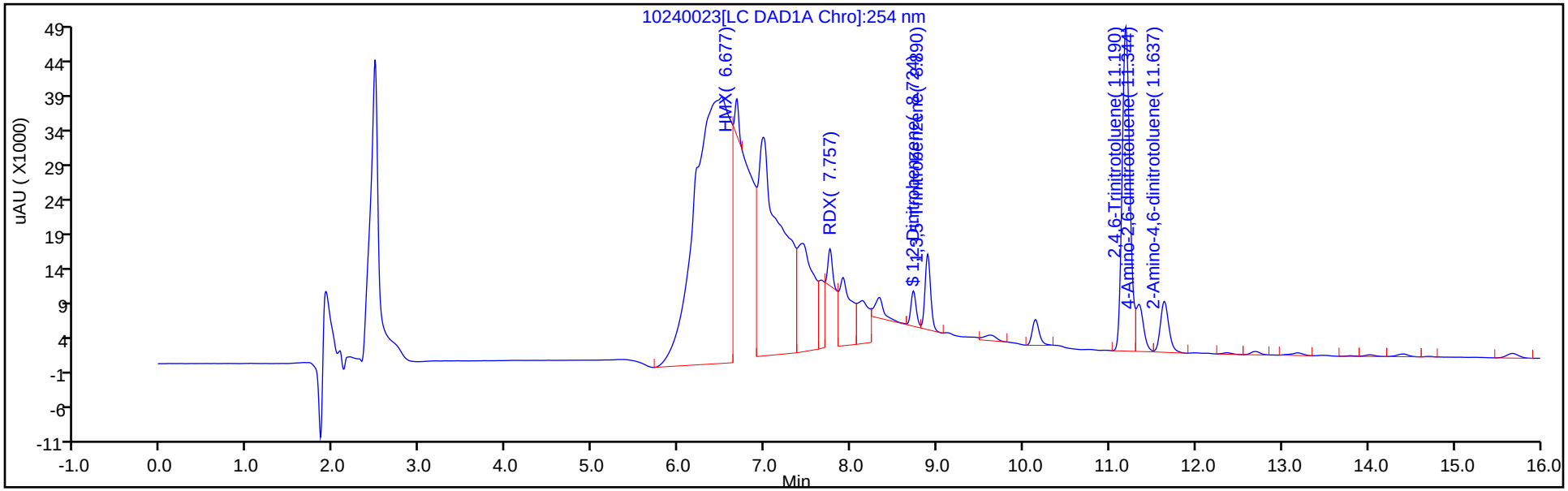
Review Flags
M - Manually Integrated
U - Marked Undetected

Report Date: 25-Oct-2019 13:03:03 Chrom Revision: 2.3 09-Oct-2019 11:13:36

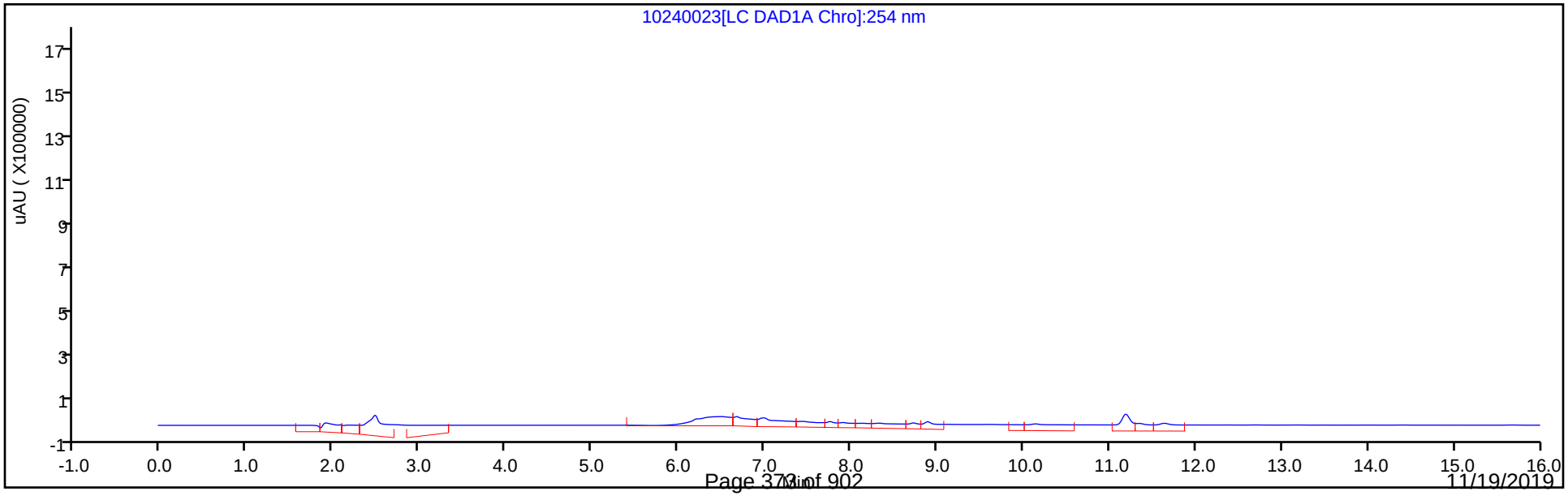
Eurofins TestAmerica, Denver

Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240023.D				
Injection Date:	24-Oct-2019 17:17:18	Instrument ID:	CHHPLC_X3	Operator ID:	CB
Lims ID:	280-129830-A-2-A	Lab Sample ID:	280-129830-2	Worklist Smp#:	23
Client ID:	EW7-PM25A-1-25				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Recovery Report

Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240023.D				
Lims ID:	280-129830-A-2-A				
Client ID:	EW7-PM25A-1-25				
Sample Type:	Client				
Inject. Date:	24-Oct-2019 17:17:18	ALS Bottle#:	23	Worklist Smp#:	23
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-129830-A-2-A				
Misc. Info.:	280-0086464-023				
Operator ID:	CB	Instrument ID:	CHHPLC_X3		
Method:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	25-Oct-2019 13:02:59	Calib Date:	02-Jul-2019 00:18:07		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX0317				
First Level Reviewer: beckerc		Date:	25-Oct-2019 12:00:00		

Compound	Amount Added	Amount Recovered	% Rec.
$ 9 1,2-Dinitrobenzene	0.2000	0.1582	79.11

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

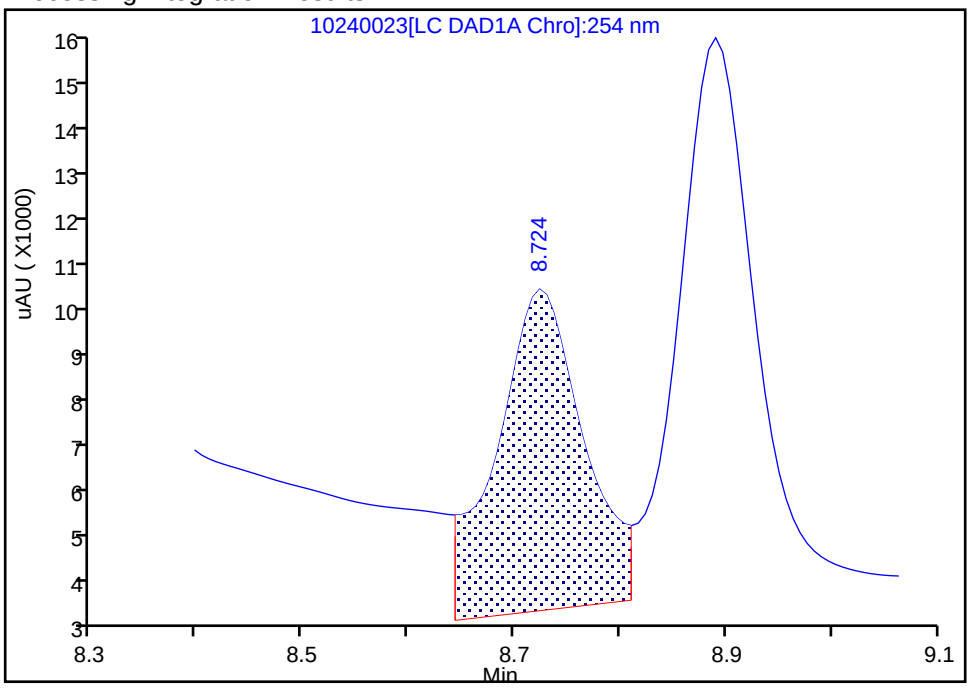
Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240023.D				
Injection Date:	24-Oct-2019 17:17:18	Instrument ID:	CHHPLC_X3		
Lims ID:	280-129830-A-2-A	Lab Sample ID:	280-129830-2		
Client ID:	EW7-PM25A-1-25				
Operator ID:	CB	ALS Bottle#:	23	Worklist Smp#:	23
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

$ 9 1,2-Dinitrobenzene, CAS: 528-29-0

Signal: 1

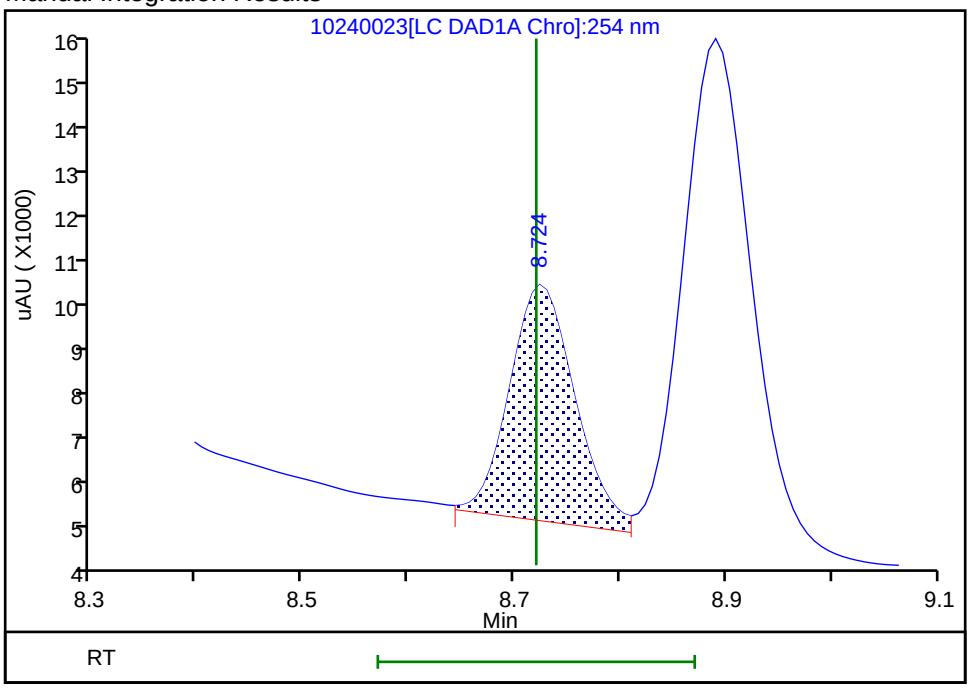
Processing Integration Results

RT: 8.72
Area: 38914
Amount: 0.279297
Amount Units: ug/mL



Manual Integration Results

RT: 8.72
Area: 22044
Amount: 0.158216
Amount Units: ug/mL



Reviewer: beckerc, 25-Oct-2019 11:59:37

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

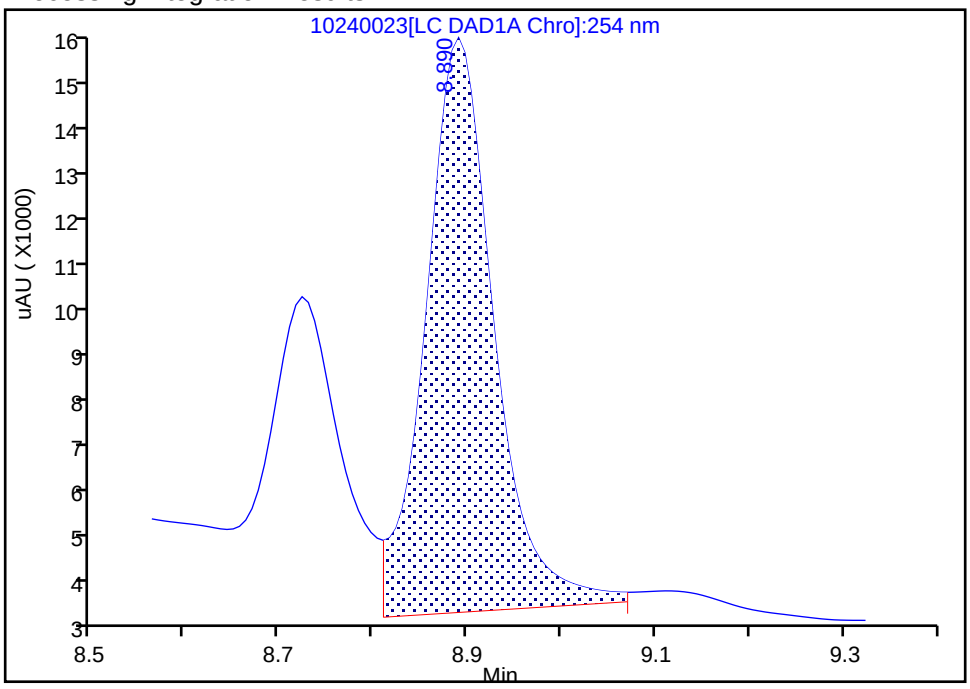
Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240023.D				
Injection Date:	24-Oct-2019 17:17:18	Instrument ID:	CHHPLC_X3		
Lims ID:	280-129830-A-2-A	Lab Sample ID:	280-129830-2		
Client ID:	EW7-PM25A-1-25				
Operator ID:	CB	ALS Bottle#:	23	Worklist Smp#:	23
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

10 1,3,5-Trinitrobenzene, CAS: 99-35-4

Signal: 1

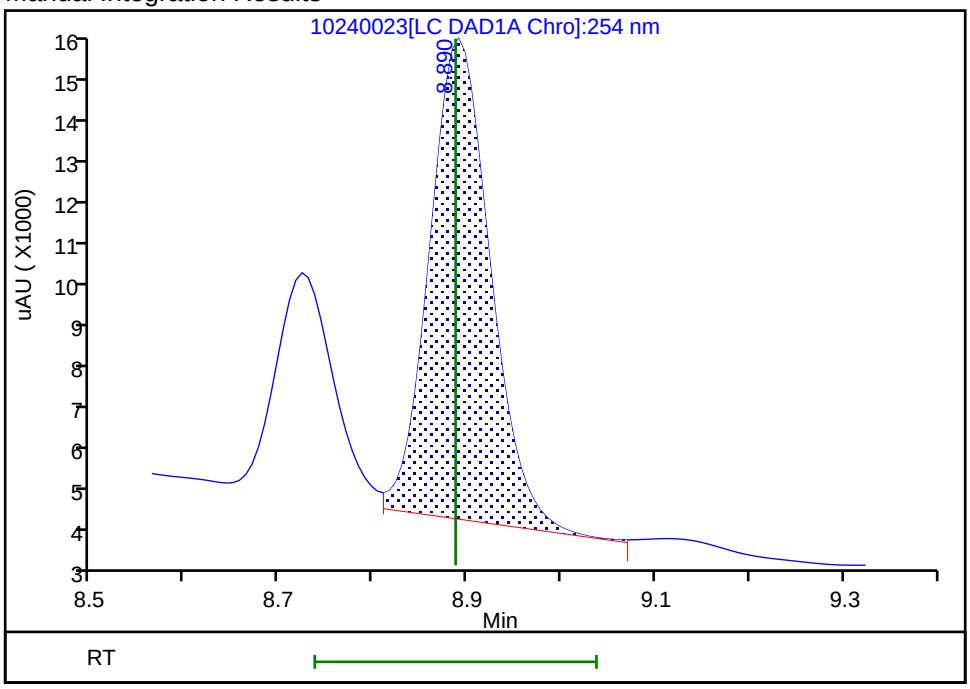
Processing Integration Results

RT: 8.89
Area: 59958
Amount: 0.244650
Amount Units: ug/mL



Manual Integration Results

RT: 8.89
Area: 49389
Amount: 0.201525
Amount Units: ug/mL



Reviewer: beckerc, 25-Oct-2019 11:59:37

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

User Disabled Compound Report

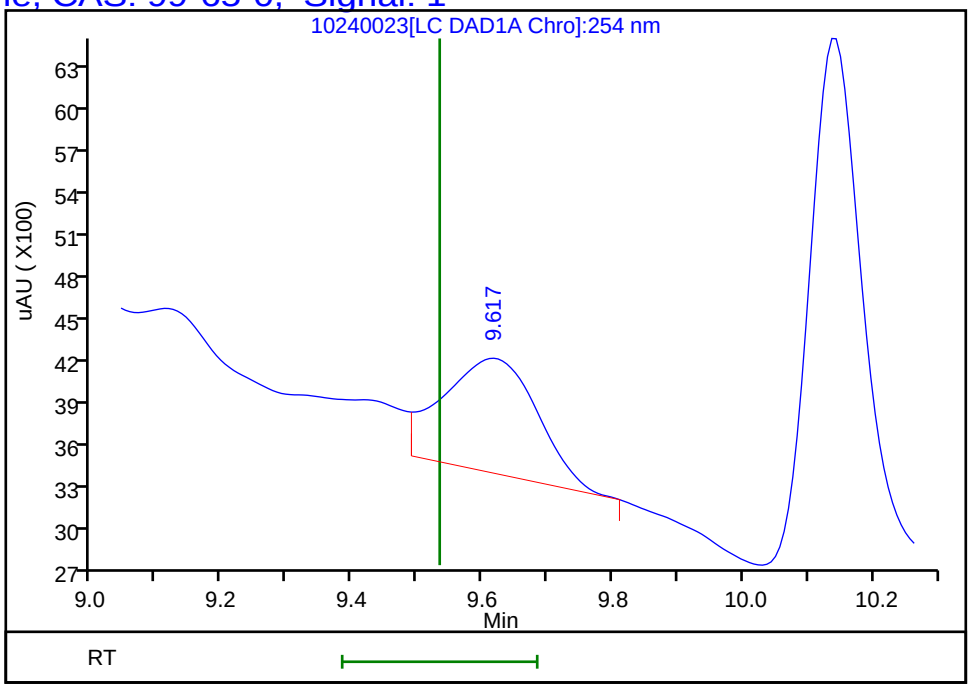
Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240023.D
Injection Date: 24-Oct-2019 17:17:18 Instrument ID: CHHPLC_X3
Lims ID: 280-129830-A-2-A Lab Sample ID: 280-129830-2
Client ID: EW7-PM25A-1-25
Operator ID: CB ALS Bottle#: 23 Worklist Smp#: 23
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330

Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

11 1,3-Dinitrobenzene, CAS: 99-65-0, Signal: 1

RT: 9.62
Response: 8061
Amount: 0.025905



Reviewer: beckerc, 25-Oct-2019 12:00:00
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

User Disabled Compound Report

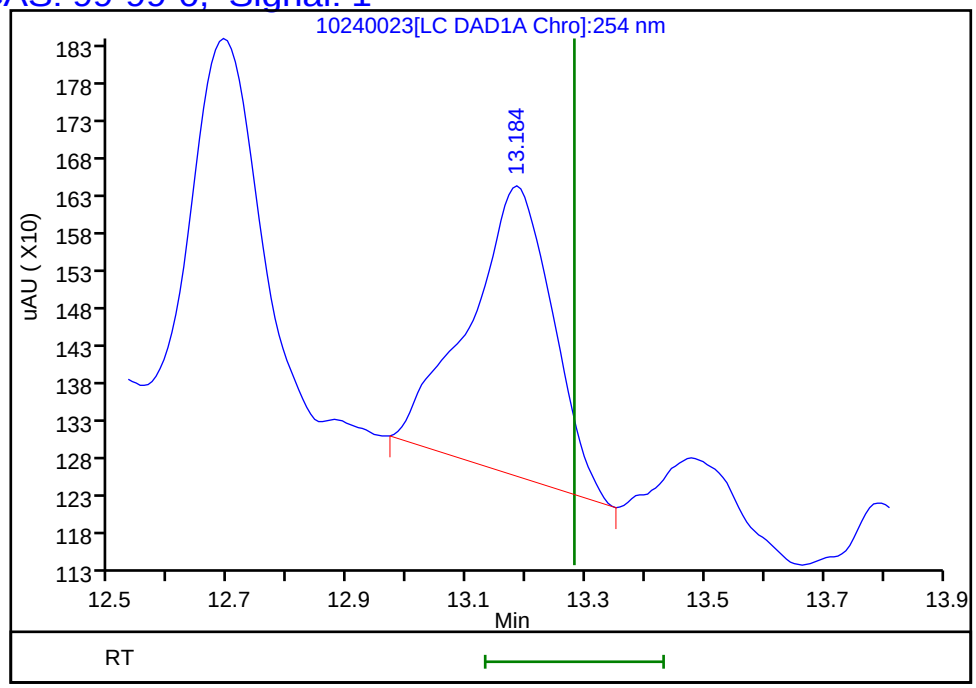
Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240023.D

Injection Date:	24-Oct-2019 17:17:18	Instrument ID:	CHHPLC_X3		
Lims ID:	280-129830-A-2-A	Lab Sample ID:	280-129830-2		
Client ID:	EW7-PM25A-1-25				
Operator ID:	CB	ALS Bottle#:	23	Worklist Smp#:	23
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

22 p-Nitrotoluene, CAS: 99-99-0, Signal: 1

RT: 13.18
Response: 3751
Amount: 0.034021



Reviewer: beckerc, 25-Oct-2019 12:00:00
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

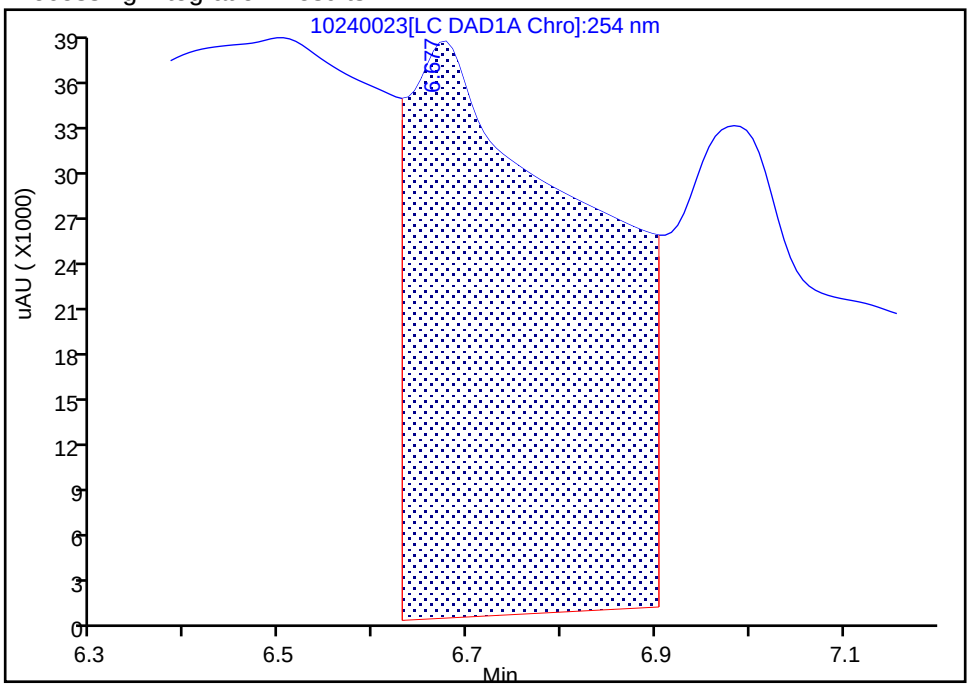
Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240023.D				
Injection Date:	24-Oct-2019 17:17:18	Instrument ID:	CHHPLC_X3		
Lims ID:	280-129830-A-2-A	Lab Sample ID:	280-129830-2		
Client ID:	EW7-PM25A-1-25				
Operator ID:	CB	ALS Bottle#:	23	Worklist Smp#:	23
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

3 HMX, CAS: 2691-41-0

Signal: 1

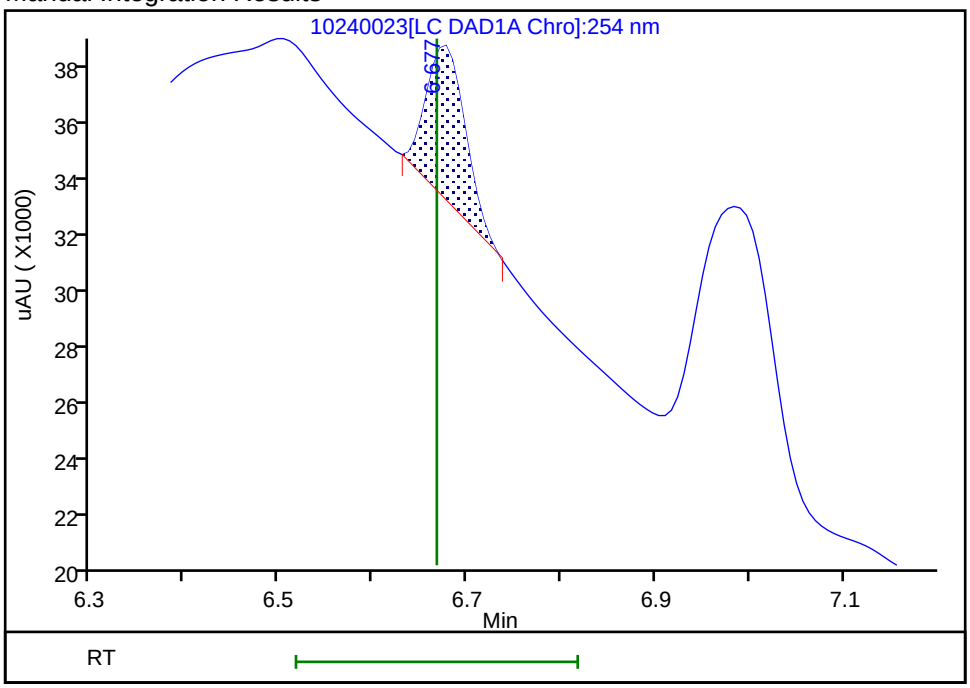
Processing Integration Results

RT: 6.68
Area: 495367
Amount: 5.394201
Amount Units: ug/mL



Manual Integration Results

RT: 6.68
Area: 15153
Amount: 0.165006
Amount Units: ug/mL



Reviewer: beckerc, 25-Oct-2019 11:59:08
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

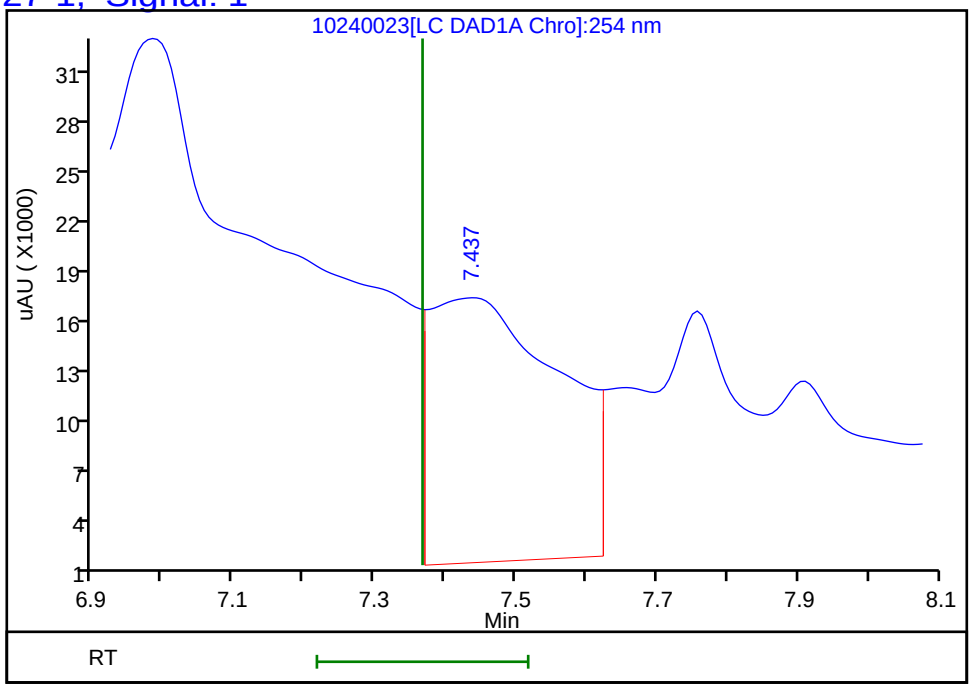
User Disabled Compound Report

Eurofins TestAmerica, Denver

Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240023.D				
Injection Date:	24-Oct-2019 17:17:18	Instrument ID:	CHHPLC_X3		
Lims ID:	280-129830-A-2-A	Lab Sample ID:	280-129830-2		
Client ID:	EW7-PM25A-1-25				
Operator ID:	CB	ALS Bottle#:	23	Worklist Smp#:	23
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

6 MNX, CAS: 5755-27-1, Signal: 1

RT: 7.44
Response: 200634
Amount: 1.432681



Reviewer: beckerc, 25-Oct-2019 12:00:00
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

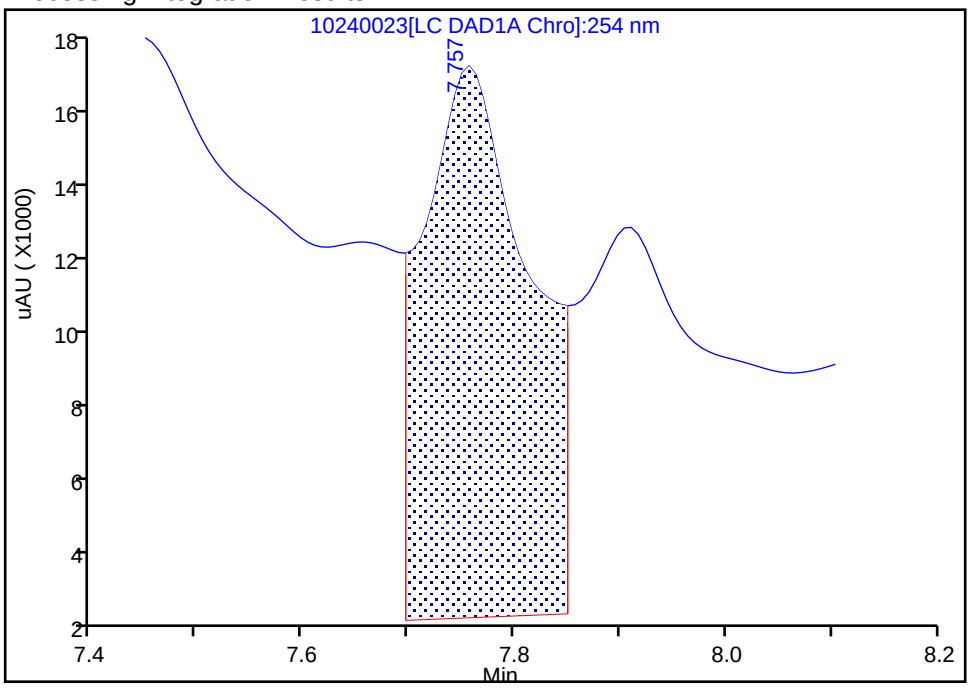
Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240023.D				
Injection Date:	24-Oct-2019 17:17:18	Instrument ID:	CHHPLC_X3		
Lims ID:	280-129830-A-2-A	Lab Sample ID:	280-129830-2		
Client ID:	EW7-PM25A-1-25				
Operator ID:	CB	ALS Bottle#:	23	Worklist Smp#:	23
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

7 RDX, CAS: 121-82-4

Signal: 1

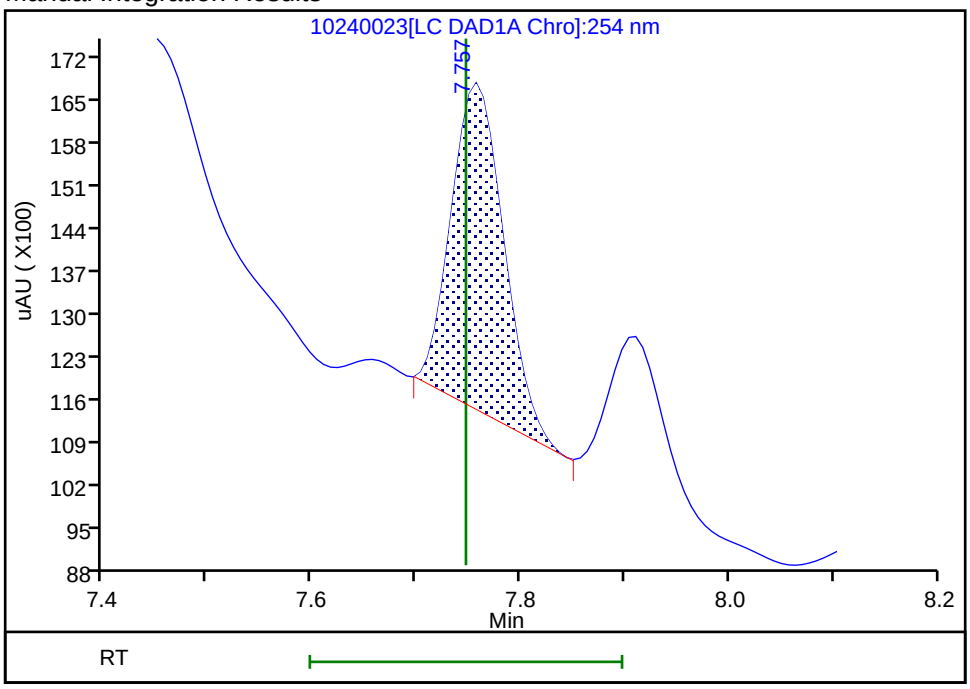
Processing Integration Results

RT: 7.76
Area: 98840
Amount: 0.889485
Amount Units: ug/mL



Manual Integration Results

RT: 7.76
Area: 18754
Amount: 0.168772
Amount Units: ug/mL



Reviewer: beckerc, 25-Oct-2019 11:59:21

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

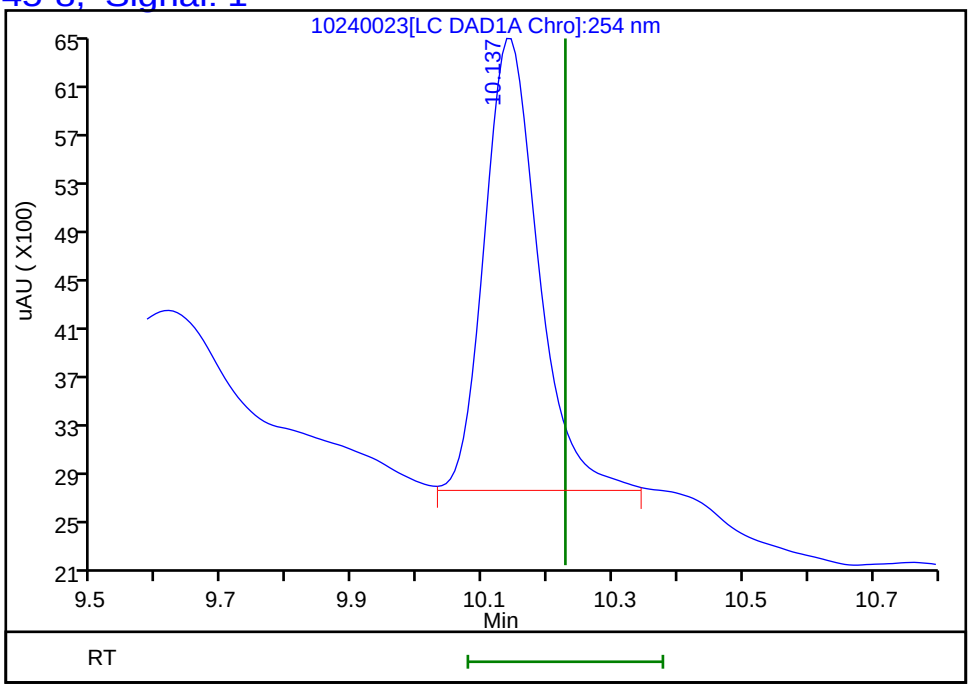
User Disabled Compound Report

Eurofins TestAmerica, Denver

Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240023.D				
Injection Date:	24-Oct-2019 17:17:18	Instrument ID:	CHHPLC_X3		
Lims ID:	280-129830-A-2-A	Lab Sample ID:	280-129830-2		
Client ID:	EW7-PM25A-1-25				
Operator ID:	CB	ALS Bottle#:	23	Worklist Smp#:	23
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

14 Tetryl, CAS: 479-45-8, Signal: 1

RT: 10.14
Response: 21607
Amount: 0.133412



Reviewer: beckerc, 25-Oct-2019 12:00:00
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Client Sample ID: EW7-PM25A-1-25 Lab Sample ID: 280-129830-2

Matrix: Water Lab File ID: 11010011.D

Analysis Method: 8330A Date Collected: 10/16/2019 12:50

Extraction Method: 3535 Date Extracted: 10/23/2019 15:47

Sample wt/vol: 518.6(mL) Date Analyzed: 11/01/2019 18:57

Con. Extract Vol.: 5(mL) Dilution Factor: 1

Injection Volume: 100(uL) GC Column: Luna-phenylhex ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 476190 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	90		83-119

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\G2_LUNA\20191101-86717.b\11010011.D
Lims ID: 280-129830-A-2-A
Client ID: EW7-PM25A-1-25
Sample Type: Client
Inject. Date: 01-Nov-2019 18:57:02 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-129830-A-2-A
Misc. Info.: 280-0086717-011
Operator ID: CB Instrument ID: CHHPLC_G2_LUNA

Method: \\chromna\Denver\ChromData\G2_LUNA\20191101-86717.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 04-Nov-2019 18:04:14 Calib Date: 25-Oct-2019 23:35:16
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250014.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0324

First Level Reviewer: beckerc Date: 04-Nov-2019 17:02:27

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
	6 HMX	1	6.995	7.022	-0.027	34133	0.1582	M
	7 MNX	1	7.962	7.989	-0.027	745	NC	
	8 RDX	1	9.182	9.209	-0.027	55926	0.2327	
	9 Nitrobenzene	1		12.202			ND	
$	10 1,2-Dinitrobenzene	1	13.108	13.122	-0.014	55813	0.1794	
	12 1,3-Dinitrobenzene	1		15.655			ND	U
	14 o-Nitrotoluene	1		16.655			ND	
	15 p-Nitrotoluene	1		16.955			ND	U
	16 4-Amino-2,6-dinitrotoluene	1	17.202	17.235	-0.033	81793	0.2517	
	17 m-Nitrotoluene	1		17.875			ND	
	18 2-Amino-4,6-dinitrotoluene	1	18.075	18.095	-0.020	119608	0.2601	
	19 1,3,5-Trinitrobenzene	1	18.968	18.995	-0.027	95592	0.1934	
	20 2,6-Dinitrotoluene	1	19.948	19.915	0.033	5493	0.0170	
	21 2,4-Dinitrotoluene	1		20.402			ND	U
	22 Tetryl	1		23.649			ND	U
	23 2,4,6-Trinitrotoluene	1	24.748	24.762	-0.014	580552	1.30	

QC Flag Legend

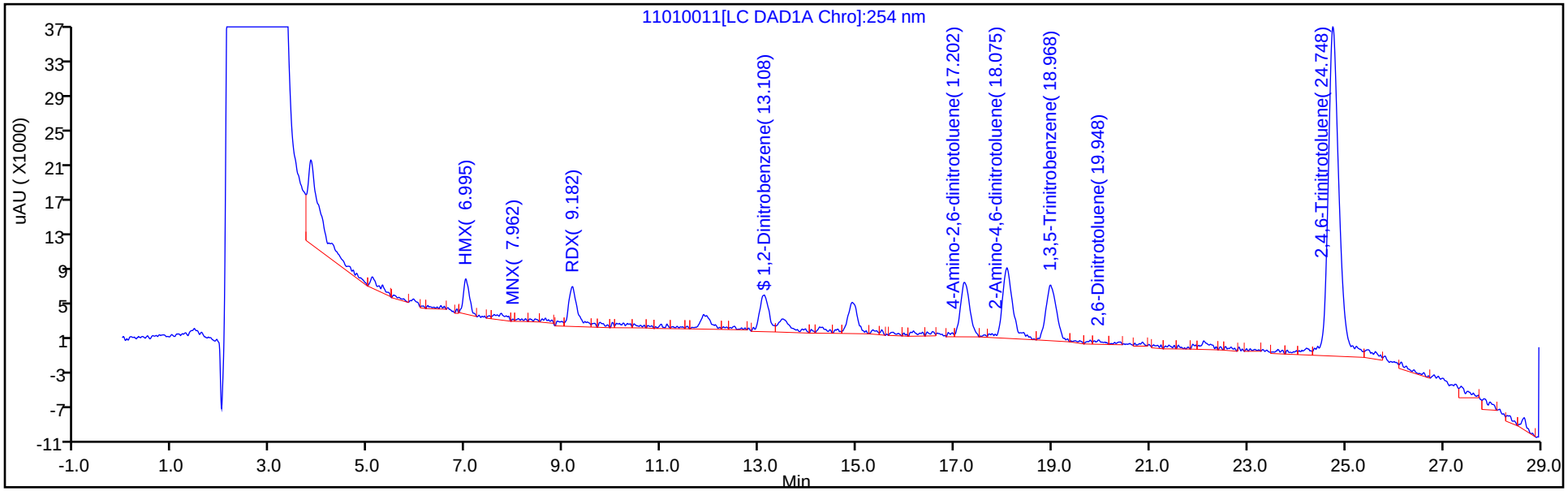
Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated
U - Marked Undetected

Report Date: 04-Nov-2019 18:04:20 Chrom Revision: 2.3 09-Oct-2019 11:13:36

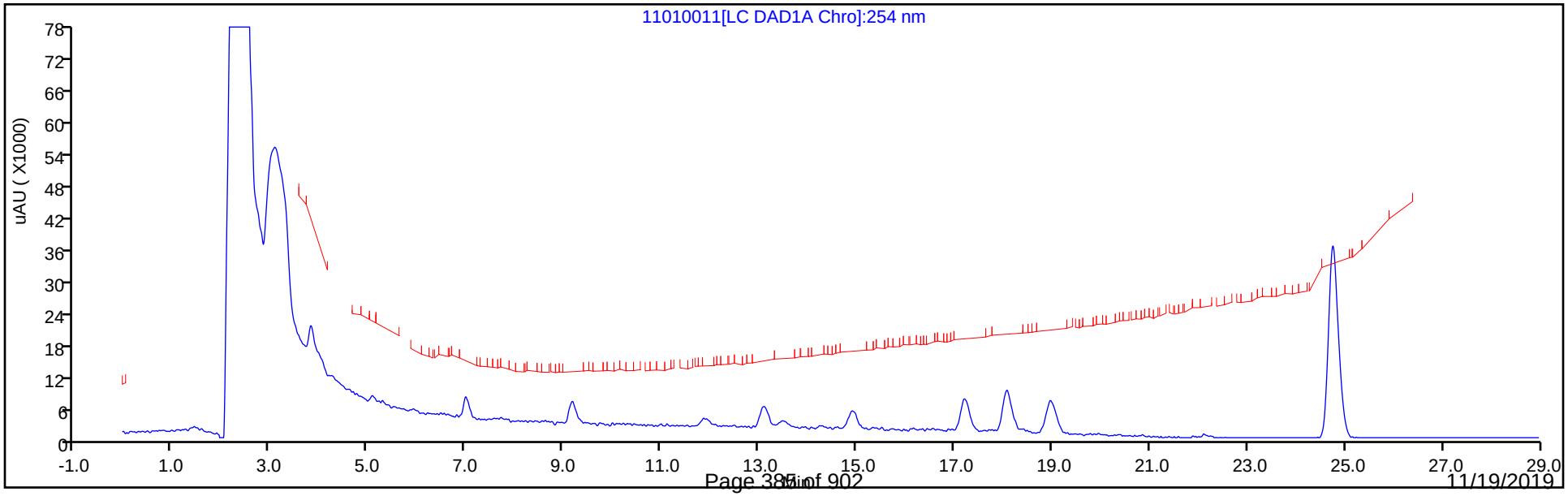
Eurofins TestAmerica, Denver

Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191101-86717.b\11010011.D				
Injection Date:	01-Nov-2019 18:57:02	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	CB
Lims ID:	280-129830-A-2-A	Lab Sample ID:	280-129830-2	Worklist Smp#:	11
Client ID:	EW7-PM25A-1-25				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins TestAmerica, Denver
Recovery Report

Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191101-86717.b\11010011.D				
Lims ID:	280-129830-A-2-A				
Client ID:	EW7-PM25A-1-25				
Sample Type:	Client				
Inject. Date:	01-Nov-2019 18:57:02	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-129830-A-2-A				
Misc. Info.:	280-0086717-011				
Operator ID:	CB	Instrument ID:	CHHPLC_G2_LUNA		
Method:	\\chromna\Denver\ChromData\G2_LUNA\20191101-86717.b\G2_8330_Luna.m				
Limit Group:	GCSV - 8330				
Last Update:	04-Nov-2019 18:04:14	Calib Date:	25-Oct-2019 23:35:16		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250014.D				
Column 1 :	Luna-Phenyl hexyl (4.60 mm)		Det: LC DAD1A, 254 nm		
Process Host:	CTX0324				
First Level Reviewer: beckerc		Date:	04-Nov-2019 17:02:27		

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2000	0.1794	89.72

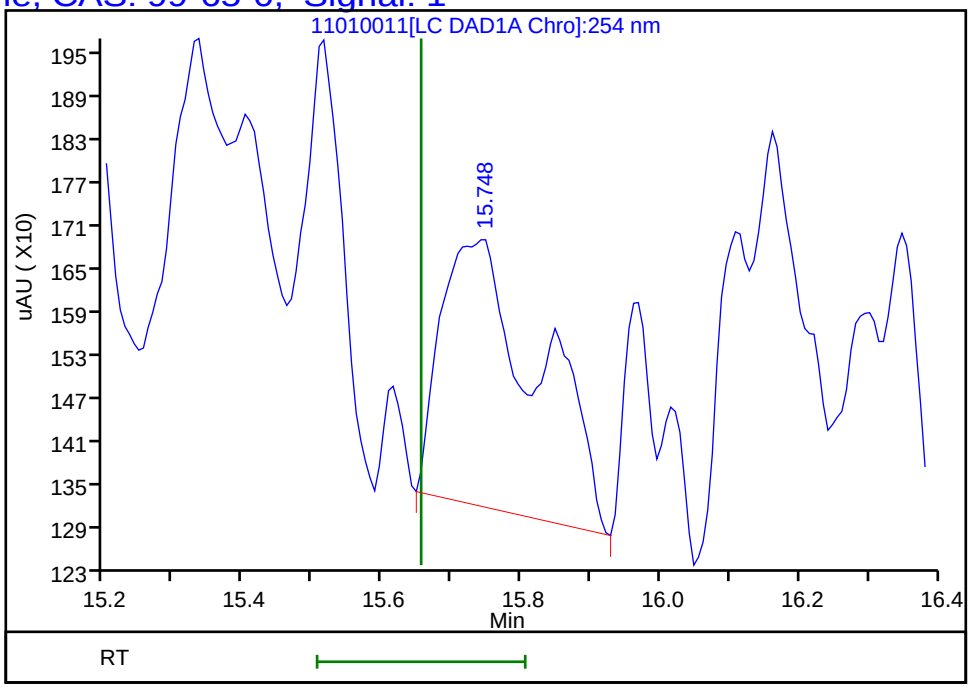
User Disabled Compound Report

Eurofins TestAmerica, Denver

Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191101-86717.b\11010011.D				
Injection Date:	01-Nov-2019 18:57:02	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-129830-A-2-A	Lab Sample ID:	280-129830-2		
Client ID:	EW7-PM25A-1-25				
Operator ID:	CB	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

12 1,3-Dinitrobenzene, CAS: 99-65-0, Signal: 1

RT: 15.75
Response: 3618
Amount: 0.005501



Reviewer: beckerc, 04-Nov-2019 17:02:27
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

User Disabled Compound Report

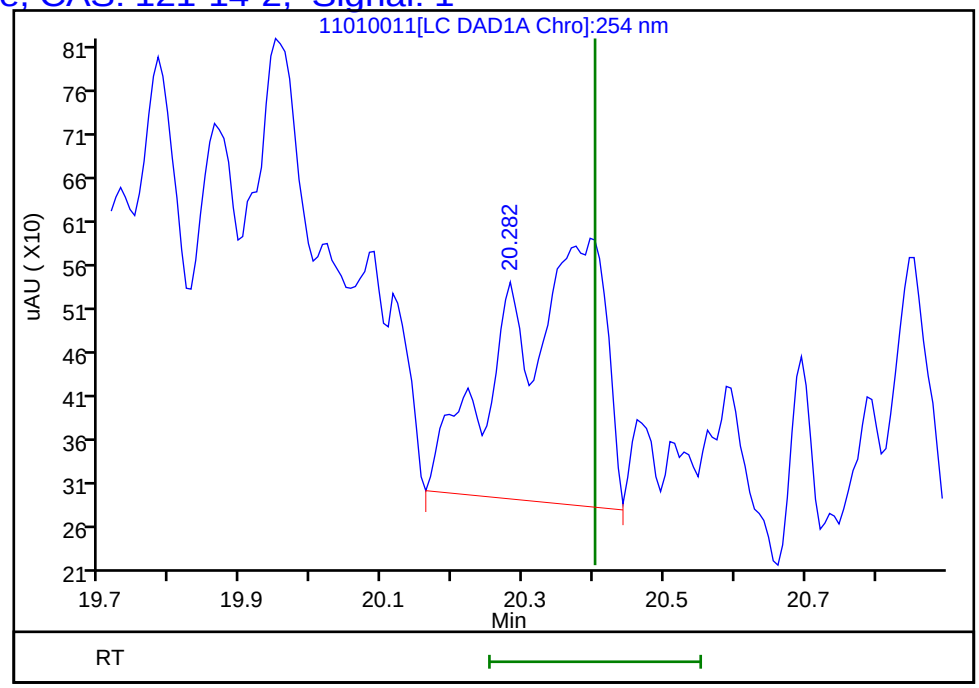
Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\G2_LUNA\20191101-86717.b\11010011.D
Injection Date: 01-Nov-2019 18:57:02 Instrument ID: CHHPLC_G2_LUNA
Lims ID: 280-129830-A-2-A Lab Sample ID: 280-129830-2
Client ID: EW7-PM25A-1-25
Operator ID: CB ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330

Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

21 2,4-Dinitrotoluene, CAS: 121-14-2, Signal: 1

RT: 20.28
Response: 2841
Amount: 0.004664



Reviewer: beckerc, 04-Nov-2019 17:02:27
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

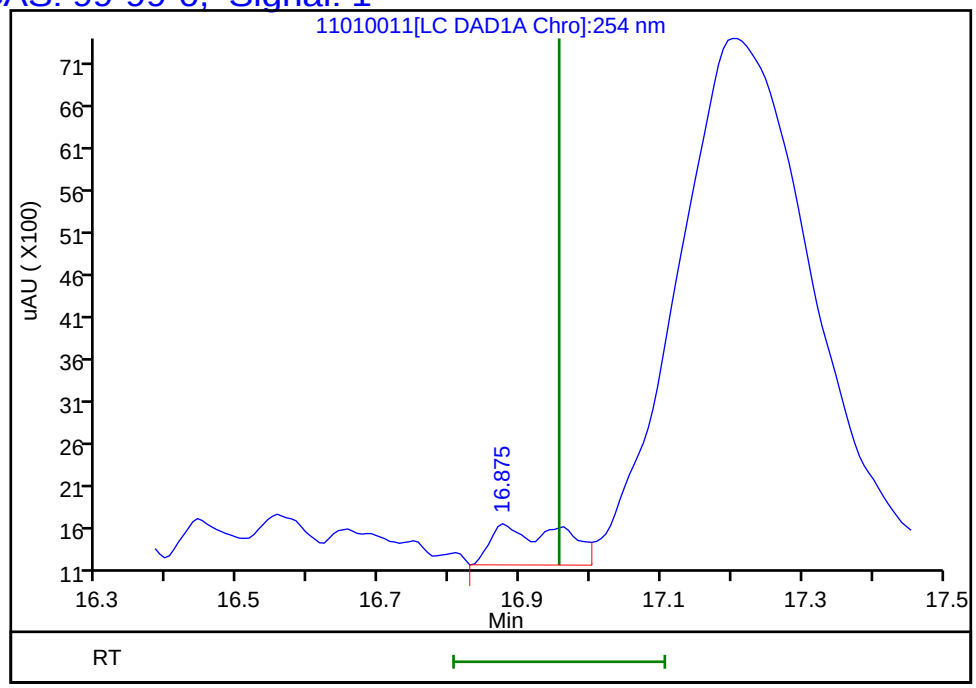
User Disabled Compound Report

Eurofins TestAmerica, Denver

Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191101-86717.b\11010011.D				
Injection Date:	01-Nov-2019 18:57:02	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-129830-A-2-A	Lab Sample ID:	280-129830-2		
Client ID:	EW7-PM25A-1-25				
Operator ID:	CB	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

15 p-Nitrotoluene, CAS: 99-99-0, Signal: 1

RT: 16.87
Response: 3331
Amount: 0.014904



Reviewer: beckerc, 04-Nov-2019 17:02:27
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

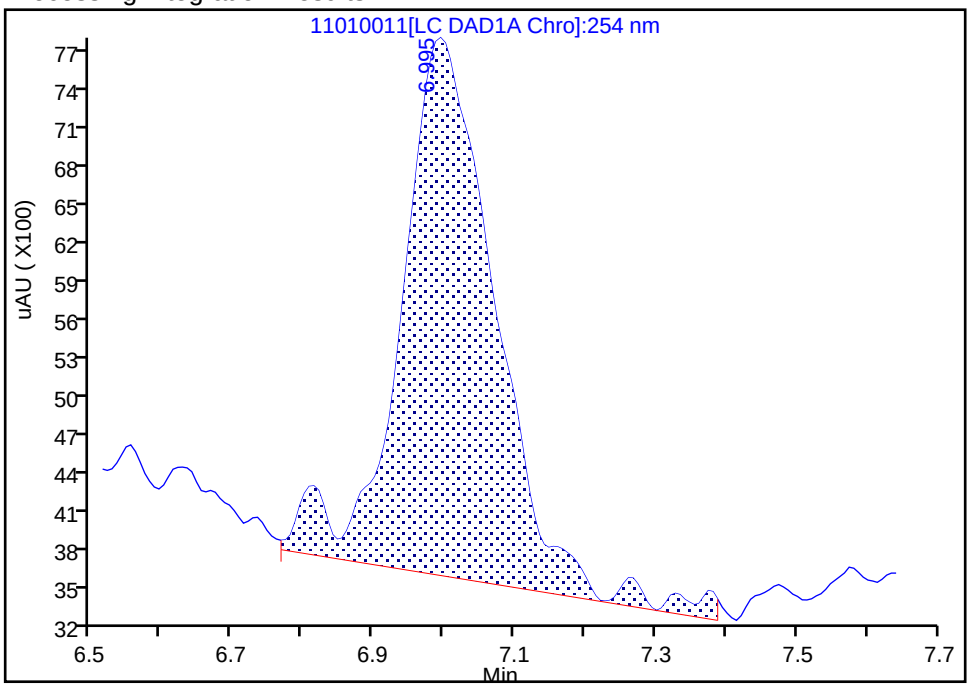
Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191101-86717.b\11010011.D				
Injection Date:	01-Nov-2019 18:57:02	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-129830-A-2-A	Lab Sample ID:	280-129830-2		
Client ID:	EW7-PM25A-1-25				
Operator ID:	CB	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

6 HMX, CAS: 2691-41-0

Signal: 1

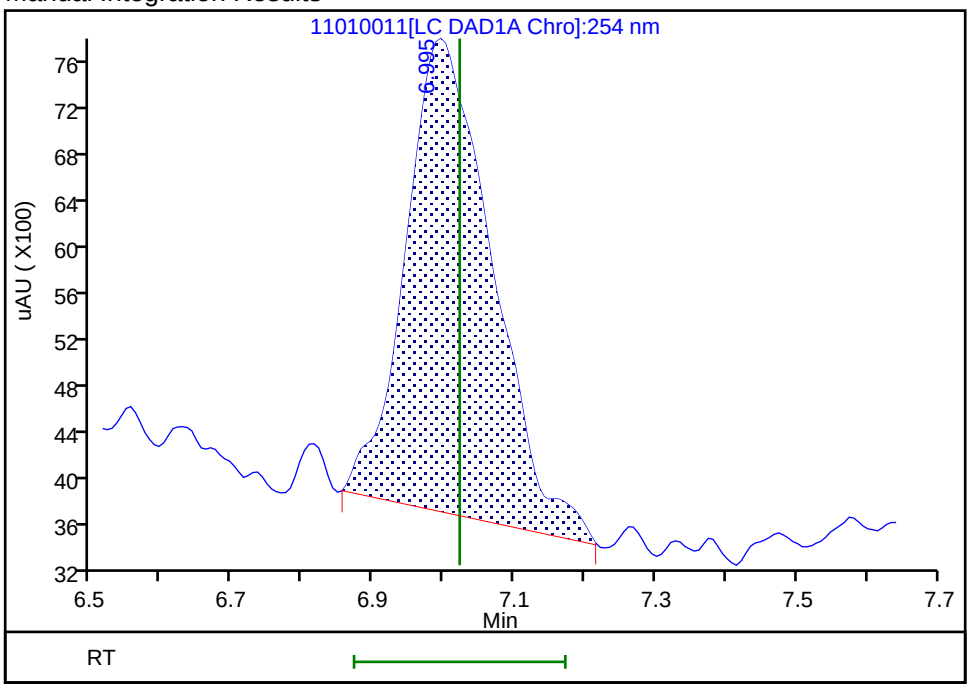
Processing Integration Results

RT: 7.00
Area: 38820
Amount: 0.179883
Amount Units: ug/ml



Manual Integration Results

RT: 7.00
Area: 34133
Amount: 0.158165
Amount Units: ug/ml



Reviewer: beckerc, 04-Nov-2019 17:01:39
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

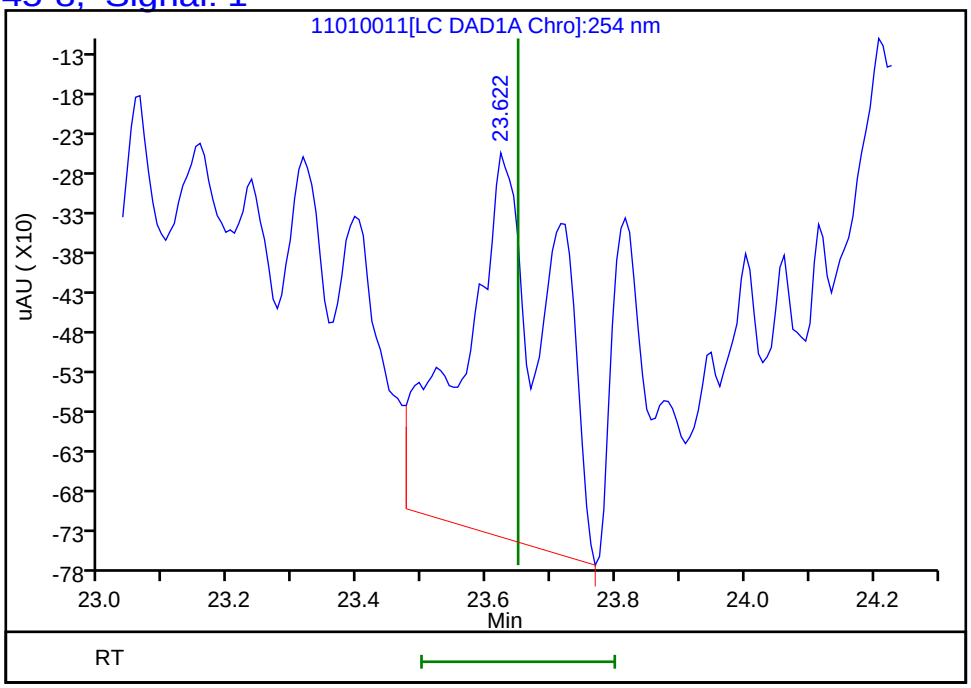
User Disabled Compound Report

Eurofins TestAmerica, Denver

Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191101-86717.b\11010011.D				
Injection Date:	01-Nov-2019 18:57:02	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-129830-A-2-A	Lab Sample ID:	280-129830-2		
Client ID:	EW7-PM25A-1-25				
Operator ID:	CB	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

22 Tetryl, CAS: 479-45-8, Signal: 1

RT: 23.62
Response: 4611
Amount: 0.013031



Reviewer: beckerc, 04-Nov-2019 17:02:27
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Client Sample ID: EW7-PM25B-1-35 Lab Sample ID: 280-129830-3

Matrix: Water Lab File ID: 10240024.D

Analysis Method: 8330A Date Collected: 10/16/2019 14:55

Extraction Method: 3535 Date Extracted: 10/23/2019 15:47

Sample wt/vol: 523.9(mL) Date Analyzed: 10/24/2019 17:40

Con. Extract Vol.: 5(mL) Dilution Factor: 1

Injection Volume: 100(uL) GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 475188 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	20	J1	0.95	0.38	0.19
99-65-0	1,3-Dinitrobenzene	0.19	U M	0.38	0.19	0.085
118-96-7	2,4,6-Trinitrotoluene	4.1		0.38	0.38	0.15
121-14-2	2,4-Dinitrotoluene	0.19	U	0.38	0.19	0.080
606-20-2	2,6-Dinitrotoluene	0.19	U	0.19	0.19	0.062
35572-78-2	2-Amino-4,6-dinitrotoluene	1.5		0.19	0.11	0.048
88-72-2	2-Nitrotoluene	0.19	U J1	0.38	0.19	0.082
99-08-1	3-Nitrotoluene	0.38	U J1 M	0.38	0.38	0.19
19406-51-0	4-Amino-2,6-dinitrotoluene	1.1		0.19	0.11	0.055
99-99-0	4-Nitrotoluene	0.38	U M	0.95	0.38	0.19
2691-41-0	HMX	0.19	U	0.38	0.19	0.084
5755-27-1	MNX	0.38	U M	1.9	0.38	0.15
98-95-3	Nitrobenzene	0.19	U	0.38	0.19	0.087
121-82-4	RDX	0.38	U	0.38	0.38	0.15
479-45-8	Tetryl	0.19	U J1	0.23	0.19	0.076

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	83		83-119

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240024.D
Lims ID: 280-129830-A-3-A
Client ID: EW7-PM25B-1-35
Sample Type: Client
Inject. Date: 24-Oct-2019 17:40:13 ALS Bottle#: 24 Worklist Smp#: 24
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-129830-A-3-A
Misc. Info.: 280-0086464-024
Operator ID: CB Instrument ID: CHHPLC_X3

Method: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 25-Oct-2019 13:02:59 Calib Date: 02-Jul-2019 00:18:07
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0317

First Level Reviewer: beckerc Date: 25-Oct-2019 12:33:31

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/mL	Flags
	1 2,6-diamino-4-nitrotoluene	1		6.540			ND	
	2 TNX	1		6.587			ND	
	3 HMX	1		6.667			ND	
	4 2,4-diamino-6-nitrotoluene	1		6.727			ND	
	5 DNX	1		6.907			ND	U
	6 MNX	1		7.367			ND	U
	7 RDX	1		7.747			ND	
	8 2,4,6-Trinitrophenol	1		8.127			ND	
$	9 1,2-Dinitrobenzene	1	8.721	8.721	0.000	23163	0.1662	
	10 1,3,5-Trinitrobenzene	1	8.887	8.887	0.000	518399	2.12	
	11 1,3-Dinitrobenzene	1		9.534			ND	U
	12 Nitrobenzene	1		9.920			ND	
	13 3,5-Dinitroaniline	1	10.147	10.173	-0.026	386900	1.63	
	14 Tetryl	1		10.227			ND	
	15 Nitroglycerin	2		10.740			ND	
	16 2,4,6-Trinitrotoluene	1	11.194	11.187	0.007	97740	0.4300	
	17 4-Amino-2,6-dinitrotoluene	1	11.354	11.347	0.007	20032	0.1204	
	18 2-Amino-4,6-dinitrotoluene	1	11.647	11.634	0.013	31613	0.1540	
	19 2,6-Dinitrotoluene	1		11.794			ND	
	20 2,4-Dinitrotoluene	1		11.994			ND	
	21 o-Nitrotoluene	1		12.840			ND	
	22 p-Nitrotoluene	1		13.280			ND	U
	23 m-Nitrotoluene	1		13.880			ND	U
	24 PETN	2		14.987			ND	
	25 Ammonium Picrate	1		0.000			ND	

QC Flag Legend

Review Flags

U - Marked Undetected

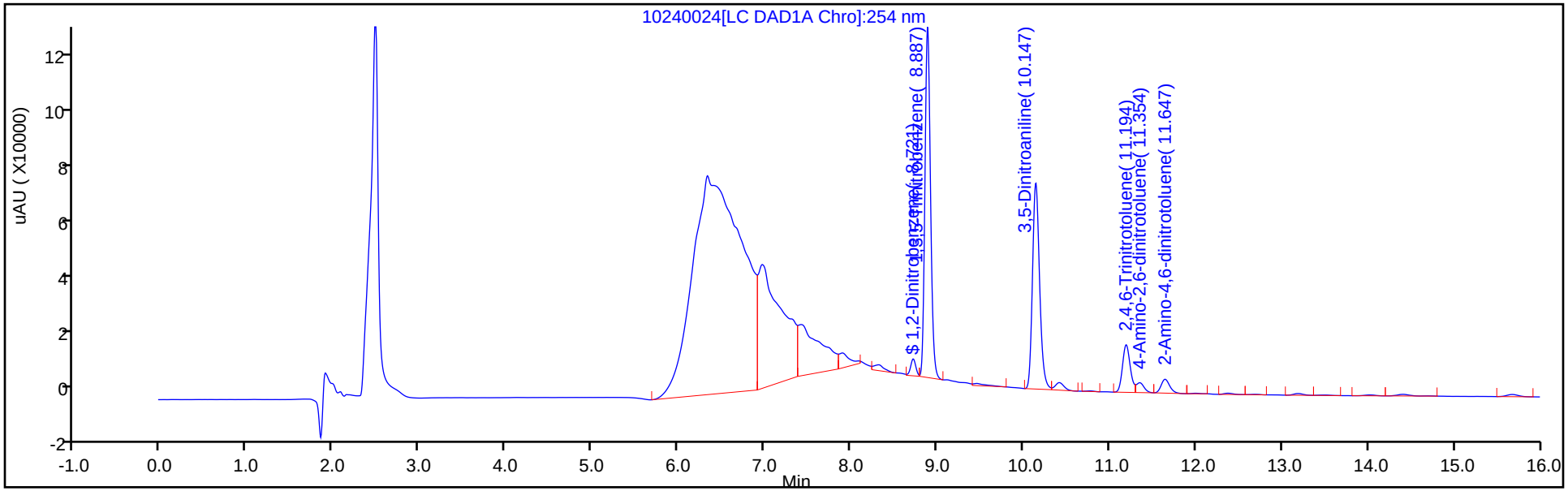
Report Date: 25-Oct-2019 13:03:06 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

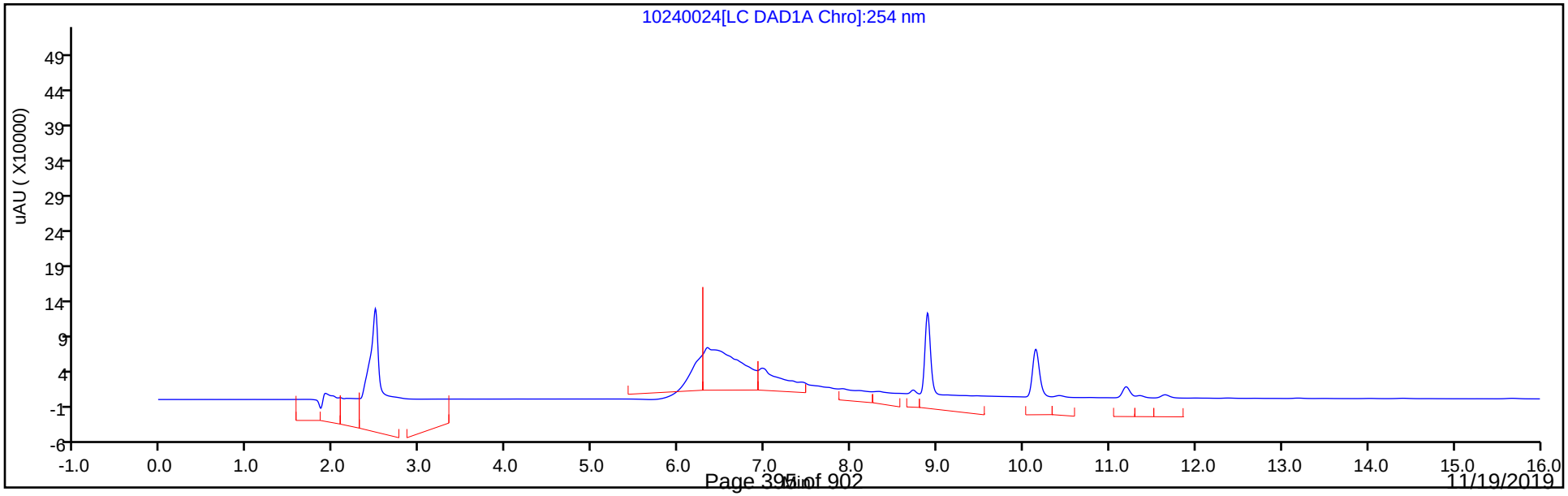
Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240024.D

Injection Date:	24-Oct-2019 17:40:13	Instrument ID:	CHHPLC_X3	Operator ID:	CB
Lims ID:	280-129830-A-3-A	Lab Sample ID:	280-129830-3	Worklist Smp#:	24
Client ID:	EW7-PM25B-1-35				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Recovery Report

Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240024.D				
Lims ID:	280-129830-A-3-A				
Client ID:	EW7-PM25B-1-35				
Sample Type:	Client				
Inject. Date:	24-Oct-2019 17:40:13	ALS Bottle#:	24	Worklist Smp#:	24
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-129830-A-3-A				
Misc. Info.:	280-0086464-024				
Operator ID:	CB	Instrument ID:	CHHPLC_X3		
Method:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	25-Oct-2019 13:02:59	Calib Date:	02-Jul-2019 00:18:07		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX0317				
First Level Reviewer: beckerc		Date:	25-Oct-2019 12:33:31		

Compound	Amount Added	Amount Recovered	% Rec.
$ 9 1,2-Dinitrobenzene	0.2000	0.1662	83.12

User Disabled Compound Report

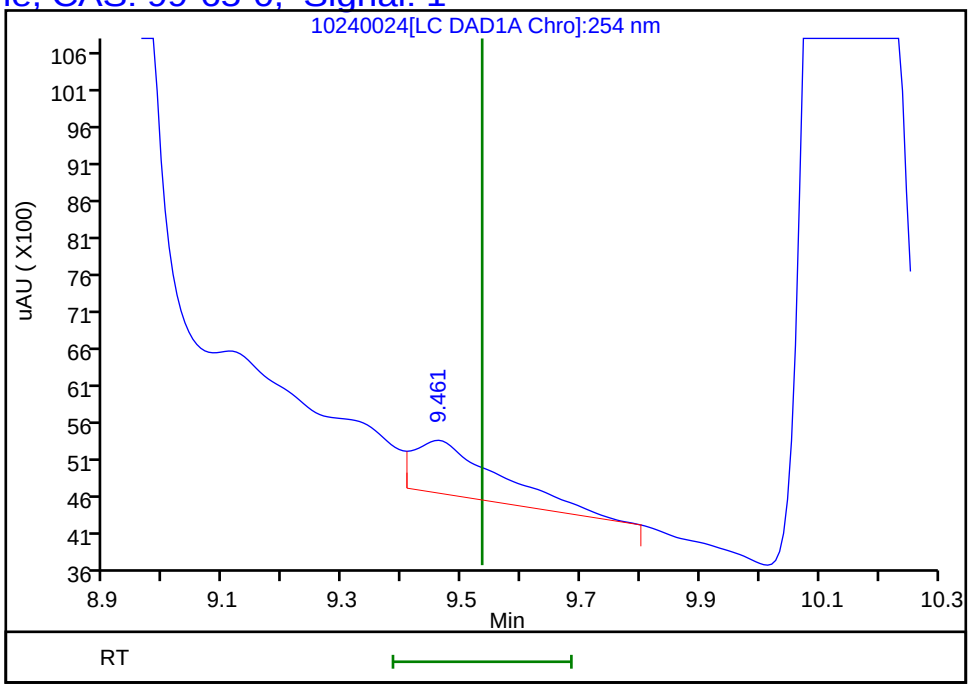
Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240024.D

Injection Date:	24-Oct-2019 17:40:13	Instrument ID:	CHHPLC_X3		
Lims ID:	280-129830-A-3-A	Lab Sample ID:	280-129830-3		
Client ID:	EW7-PM25B-1-35				
Operator ID:	CB	ALS Bottle#:	24	Worklist Smp#:	24
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

11 1,3-Dinitrobenzene, CAS: 99-65-0, Signal: 1

RT: 9.46
Response: 7282
Amount: 0.023402



Reviewer: beckerc, 25-Oct-2019 12:33:31
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

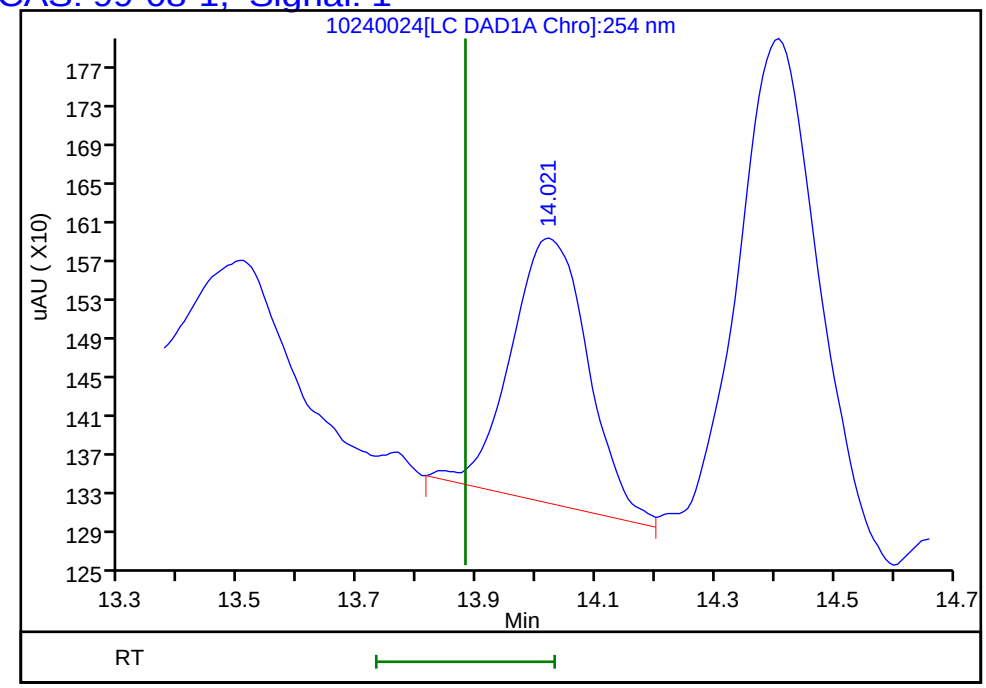
User Disabled Compound Report

Eurofins TestAmerica, Denver

Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240024.D				
Injection Date:	24-Oct-2019 17:40:13	Instrument ID:	CHHPLC_X3		
Lims ID:	280-129830-A-3-A	Lab Sample ID:	280-129830-3		
Client ID:	EW7-PM25B-1-35				
Operator ID:	CB	ALS Bottle#:	24	Worklist Smp#:	24
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

23 m-Nitrotoluene, CAS: 99-08-1, Signal: 1

RT: 14.02
Response: 2474
Amount: 0.017048



Reviewer: beckerc, 25-Oct-2019 12:33:31
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

User Disabled Compound Report

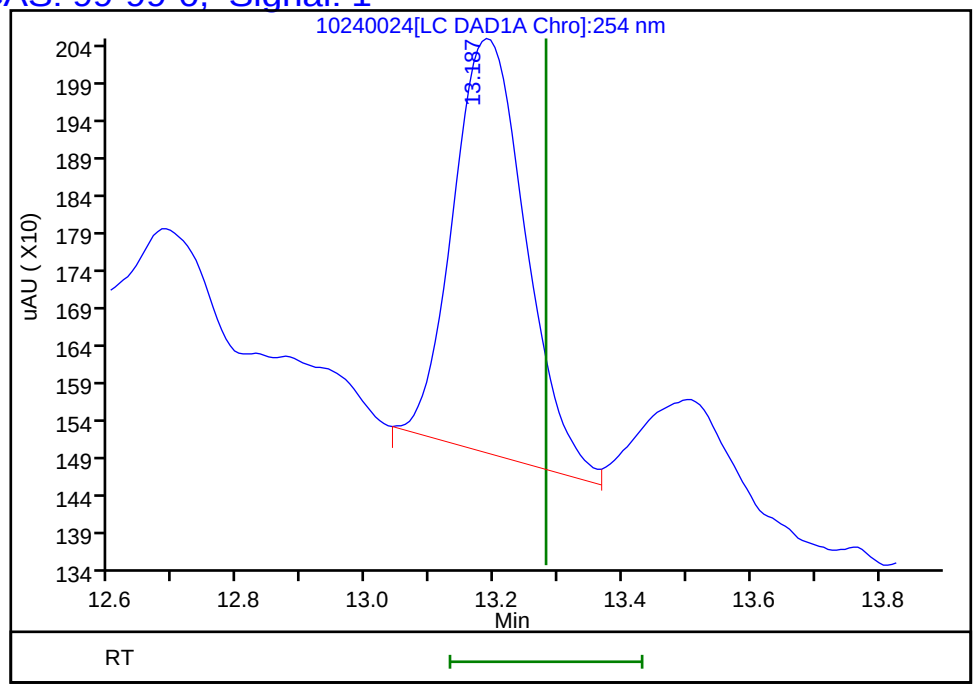
Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240024.D

Injection Date:	24-Oct-2019 17:40:13	Instrument ID:	CHHPLC_X3		
Lims ID:	280-129830-A-3-A	Lab Sample ID:	280-129830-3		
Client ID:	EW7-PM25B-1-35				
Operator ID:	CB	ALS Bottle#:	24	Worklist Smp#:	24
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

22 p-Nitrotoluene, CAS: 99-99-0, Signal: 1

RT: 13.19
Response: 4385
Amount: 0.039771



Reviewer: beckerc, 25-Oct-2019 12:33:31
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

User Disabled Compound Report

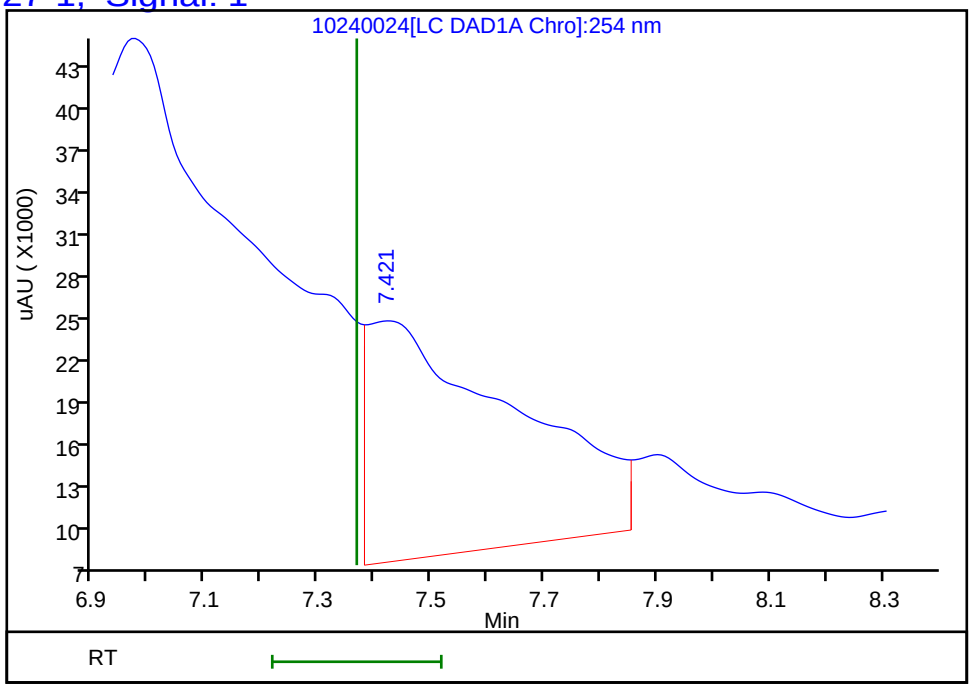
Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240024.D

Injection Date:	24-Oct-2019 17:40:13	Instrument ID:	CHHPLC_X3		
Lims ID:	280-129830-A-3-A	Lab Sample ID:	280-129830-3		
Client ID:	EW7-PM25B-1-35				
Operator ID:	CB	ALS Bottle#:	24	Worklist Smp#:	24
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

6 MNX, CAS: 5755-27-1, Signal: 1

RT: 7.42
Response: 299267
Amount: 2.136996



Reviewer: beckerc, 25-Oct-2019 12:33:31
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Client Sample ID: EW7-PM25B-1-35 Lab Sample ID: 280-129830-3

Matrix: Water Lab File ID: 11010012.D

Analysis Method: 8330A Date Collected: 10/16/2019 14:55

Extraction Method: 3535 Date Extracted: 10/23/2019 15:47

Sample wt/vol: 523.9(mL) Date Analyzed: 11/01/2019 19:32

Con. Extract Vol.: 5(mL) Dilution Factor: 1

Injection Volume: 100(uL) GC Column: Luna-phenylhex ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 476190 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	97		83-119

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\G2_LUNA\20191101-86717.b\11010012.D
Lims ID: 280-129830-A-3-A
Client ID: EW7-PM25B-1-35
Sample Type: Client
Inject. Date: 01-Nov-2019 19:32:06 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-129830-A-3-A
Misc. Info.: 280-0086717-012
Operator ID: CB Instrument ID: CHHPLC_G2_LUNA

Method: \\chromna\Denver\ChromData\G2_LUNA\20191101-86717.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 04-Nov-2019 18:04:14 Calib Date: 25-Oct-2019 23:35:16
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250014.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0324

First Level Reviewer: beckerc Date: 04-Nov-2019 17:03:41

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
	1 2,6-diamino-4-nitrotoluene	1		4.415			ND	
	2 2,4-diamino-6-nitrotoluene	1		4.982			ND	U
	3 TNX	1		5.533			ND	
	5 2,4,6-Trinitrophenol	1		5.662			ND	
	4 DNX	1	6.326	6.302	0.024	2884	NC	
	6 HMX	1	7.006	7.022	-0.016	10718	0.0497	M
	7 MNX	1	7.920	7.989	-0.069	1976	NC	
	8 RDX	1	9.153	9.209	-0.056	10217	0.0290	
	9 Nitrobenzene	1		12.202			ND	
$	10 1,2-Dinitrobenzene	1	13.086	13.122	-0.036	59674	0.1935	
	11 3,5-Dinitroaniline	1	14.913	14.942	-0.029	751077	1.42	
	12 1,3-Dinitrobenzene	1		15.655			ND	U
	13 Nitroglycerin	2		15.895			ND	
	14 o-Nitrotoluene	1	16.633	16.655	-0.022	7289	0.0261	
	15 p-Nitrotoluene	1		16.955			ND	U
	16 4-Amino-2,6-dinitrotoluene	1	17.219	17.235	-0.016	53577	0.1649	
	17 m-Nitrotoluene	1		17.875			ND	
	18 2-Amino-4,6-dinitrotoluene	1	18.106	18.095	0.011	75150	0.1634	
	19 1,3,5-Trinitrobenzene	1	18.973	18.995	-0.022	980024	1.98	
	20 2,6-Dinitrotoluene	1		19.915			ND	
	21 2,4-Dinitrotoluene	1	20.339	20.402	-0.063	10869	0.0178	
	22 Tetryl	1		23.649			ND	U
	23 2,4,6-Trinitrotoluene	1	24.753	24.762	-0.009	204734	0.4327	
	24 PETN	2		25.335			ND	
	25 Ammonium Picrate	1		0.000			ND	

QC Flag Legend

Processing Flags
NC - Not Calibrated

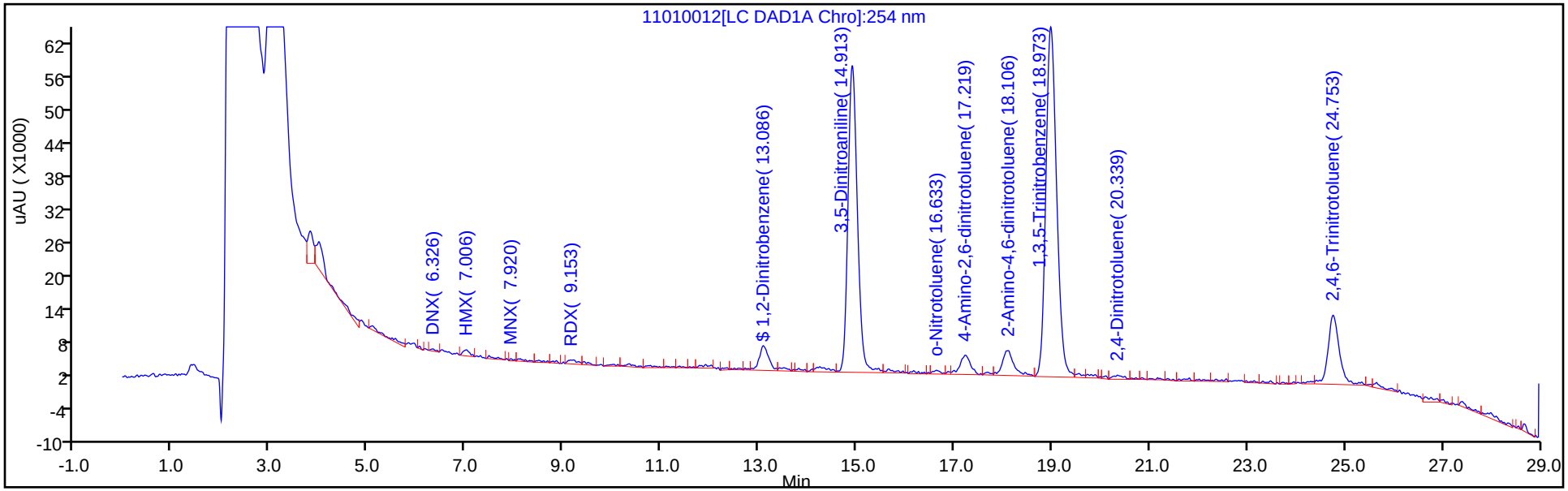
Review Flags
M - Manually Integrated
U - Marked Undetected

Report Date: 04-Nov-2019 18:04:22 Chrom Revision: 2.3 09-Oct-2019 11:13:36

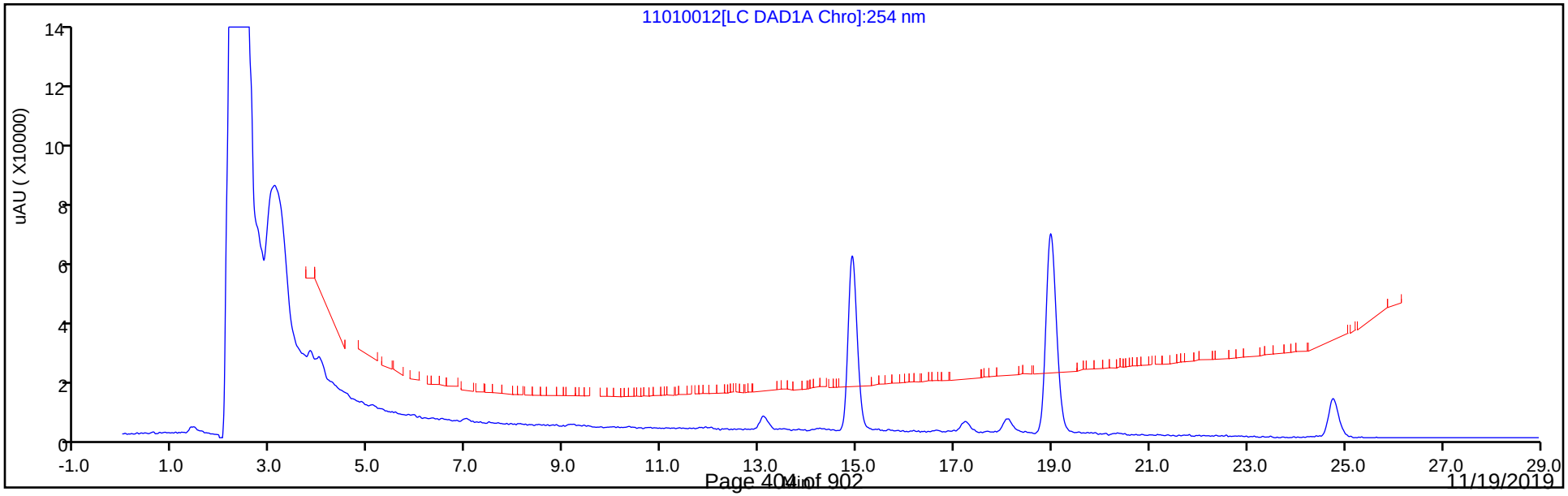
Eurofins TestAmerica, Denver

Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191101-86717.b\11010012.D				
Injection Date:	01-Nov-2019 19:32:06	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	CB
Lims ID:	280-129830-A-3-A	Lab Sample ID:	280-129830-3	Worklist Smp#:	12
Client ID:	EW7-PM25B-1-35				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins TestAmerica, Denver
Recovery Report

Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191101-86717.b\11010012.D				
Lims ID:	280-129830-A-3-A				
Client ID:	EW7-PM25B-1-35				
Sample Type:	Client				
Inject. Date:	01-Nov-2019 19:32:06	ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-129830-A-3-A				
Misc. Info.:	280-0086717-012				
Operator ID:	CB	Instrument ID:	CHHPLC_G2_LUNA		
Method:	\\chromna\Denver\ChromData\G2_LUNA\20191101-86717.b\G2_8330_Luna.m				
Limit Group:	GCSV - 8330				
Last Update:	04-Nov-2019 18:04:14	Calib Date:	25-Oct-2019 23:35:16		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250014.D				
Column 1 :	Luna-Phenyl hexyl (4.60 mm)		Det: LC DAD1A, 254 nm		
Process Host:	CTX0324				
First Level Reviewer: beckerc		Date:	04-Nov-2019 17:03:41		

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2000	0.1935	96.77

User Disabled Compound Report

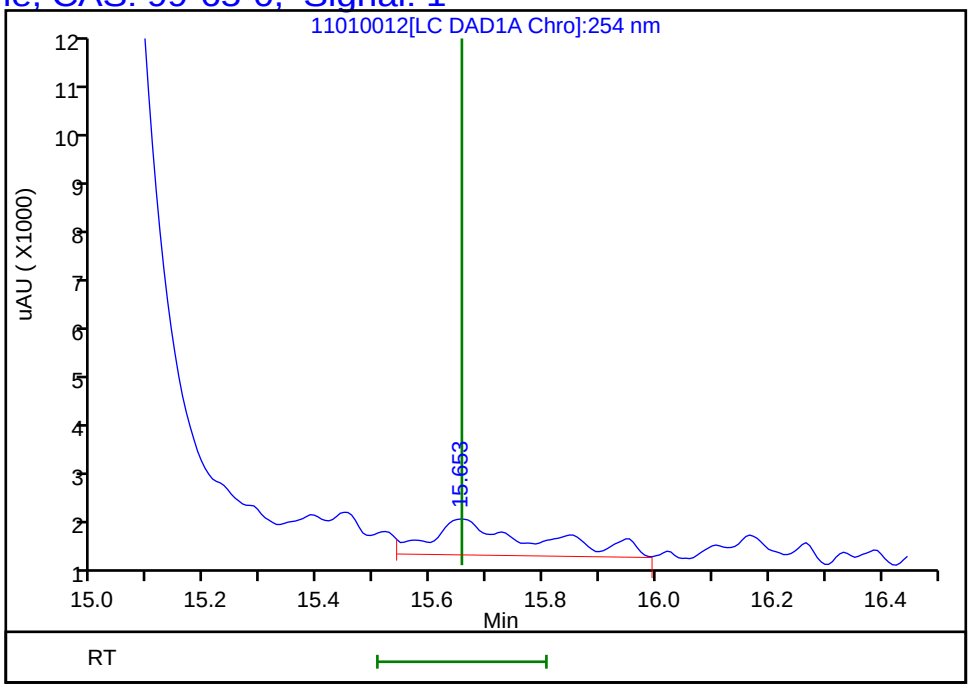
Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\G2_LUNA\20191101-86717.b\11010012.D

Injection Date:	01-Nov-2019 19:32:06	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-129830-A-3-A	Lab Sample ID:	280-129830-3		
Client ID:	EW7-PM25B-1-35				
Operator ID:	CB	ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

12 1,3-Dinitrobenzene, CAS: 99-65-0, Signal: 1

RT: 15.65
Response: 8802
Amount: 0.013384



Reviewer: beckerc, 04-Nov-2019 17:03:41

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

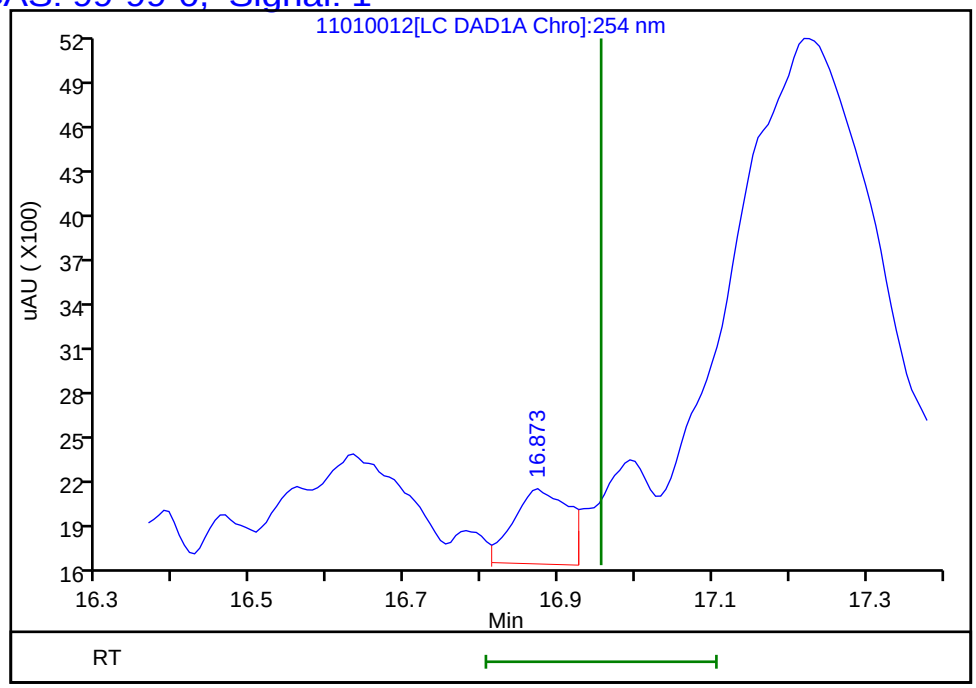
User Disabled Compound Report

Eurofins TestAmerica, Denver

Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191101-86717.b\11010012.D				
Injection Date:	01-Nov-2019 19:32:06	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-129830-A-3-A	Lab Sample ID:	280-129830-3		
Client ID:	EW7-PM25B-1-35				
Operator ID:	CB	ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

15 p-Nitrotoluene, CAS: 99-99-0, Signal: 1

RT: 16.87
Response: 2440
Amount: 0.010917



Reviewer: beckerc, 04-Nov-2019 17:03:41
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Denver

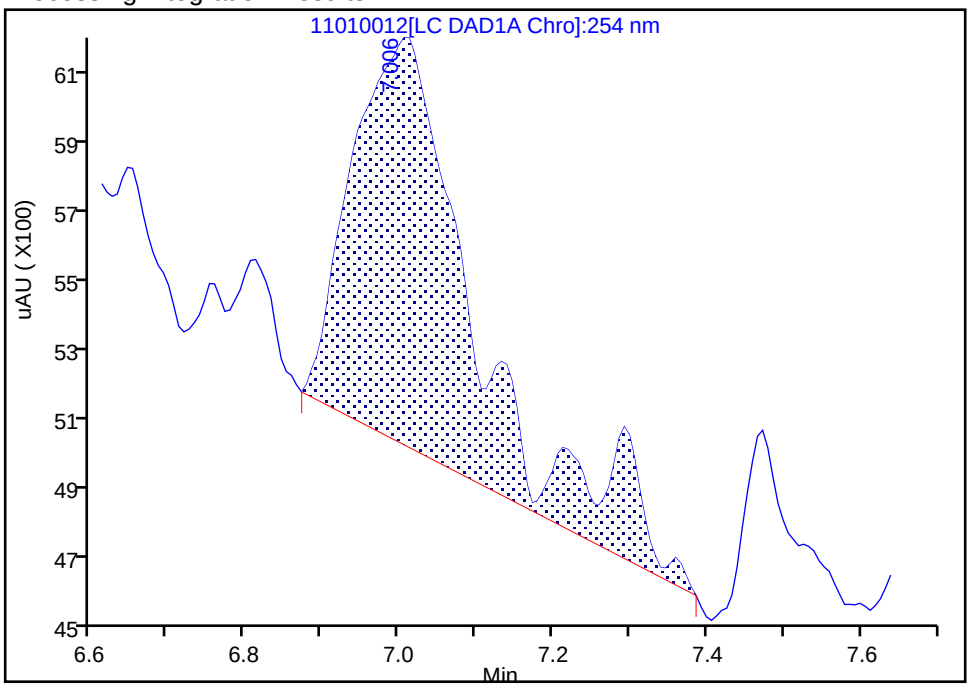
Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191101-86717.b\11010012.D				
Injection Date:	01-Nov-2019 19:32:06	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-129830-A-3-A	Lab Sample ID:	280-129830-3		
Client ID:	EW7-PM25B-1-35				
Operator ID:	CB	ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

6 HMX, CAS: 2691-41-0

Signal: 1

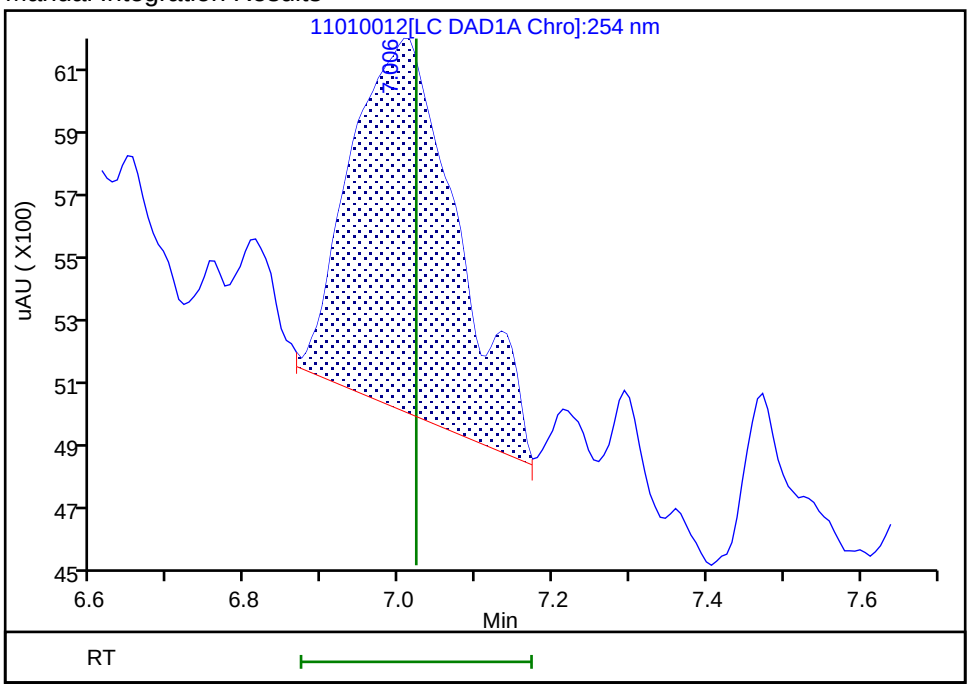
Processing Integration Results

RT: 7.01
Area: 12273
Amount: 0.056870
Amount Units: ug/ml



Manual Integration Results

RT: 7.01
Area: 10718
Amount: 0.049665
Amount Units: ug/ml



Reviewer: beckerc, 04-Nov-2019 17:02:45
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

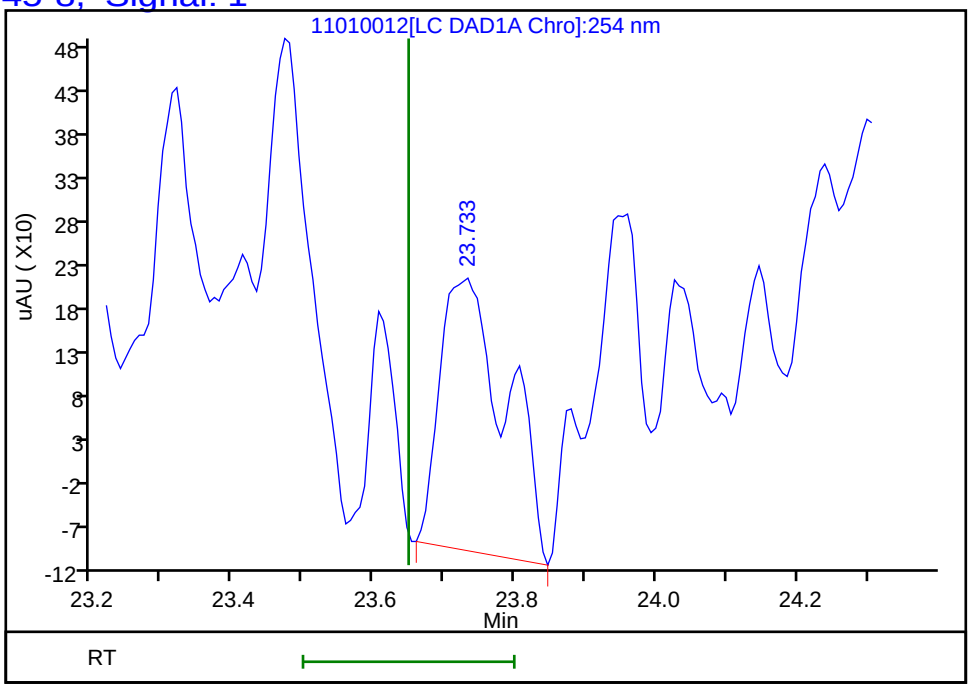
User Disabled Compound Report

Eurofins TestAmerica, Denver

Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191101-86717.b\11010012.D				
Injection Date:	01-Nov-2019 19:32:06	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-129830-A-3-A	Lab Sample ID:	280-129830-3		
Client ID:	EW7-PM25B-1-35				
Operator ID:	CB	ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

22 Tetryl, CAS: 479-45-8, Signal: 1

RT: 23.73
Response: 2023
Amount: 0.005717



Reviewer: beckerc, 04-Nov-2019 17:03:41
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, Denver Job No.: 280-129830-1 Analy Batch No.: 475429

SDG No.:

Instrument ID: CHHPLC_G2_LUNA GC Column: Luna-phenyl ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2019 19:30 Calibration End Date: 10/25/2019 23:35 Calibration ID: 39062

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-475429/14	10250014.D
Level 2	IC 280-475429/13	10250013.D
Level 3	IC 280-475429/12	10250012.D
Level 4	IC 280-475429/11	10250011.D
Level 5	IC 280-475429/10	10250010.D
Level 6	IC 280-475429/9	10250009.D
Level 7	IC 280-475429/8	10250008.D
Level 8	IC 280-475429/7	10250007.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8			RT WINDOW	AVG RT
Picric acid	5.807	5.697	5.785	5.736	5.680	5.605	5.520	5.422			5.530 - 5.830	5.657
HMX	7.067	7.070	7.098	7.082	7.080	7.085	7.060	7.002			6.930 - 7.230	7.068
RDX	9.287	9.270	9.311	9.289	9.286	9.291	9.247	9.195			9.136 - 9.436	9.272
Nitrobenzene	12.280	12.257	12.284	12.282	12.279	12.278	12.253	12.168			12.129 - 12.429	12.260
1,3-Dinitrobenzene	15.747	15.723	15.771	15.762	15.759	15.751	15.733	15.668			15.609 - 15.909	15.739
Nitroglycerin	16.027	15.997	16.018	16.016	16.019	16.011	16.000	15.948			15.869 - 16.169	16.005
2-Nitrotoluene	16.753	16.730	16.751	16.782	16.773	16.764	16.747	16.702			16.623 - 16.923	16.750
4-Nitrotoluene	17.060	16.990	17.051	17.042	17.053	17.038	17.027	16.902			16.903 - 17.203	17.020
4-Amino-2,6-dinitrotoluene	17.267	17.337	17.371	17.376	17.386	17.358	17.347	17.282			17.236 - 17.536	17.341
3-Nitrotoluene	17.873	17.943	17.958	17.982	17.979	17.971	17.960	18.035			17.829 - 18.129	17.963
2-Amino-4,6-dinitrotoluene	18.193	18.237	18.258	18.256	18.259	18.231	18.220				18.109 - 18.409	18.236
1,3,5-Trinitrobenzene	19.087	19.103	19.118	19.109	19.126	19.104	19.100	19.062			18.976 - 19.276	19.101
2,6-Dinitrotoluene	20.047	20.017	20.051	20.042	20.059	20.038	20.040	19.982			19.909 - 20.209	20.035
2,4-Dinitrotoluene	20.533	20.510	20.538	20.536	20.540	20.518	20.520	20.468			20.390 - 20.690	20.520
Tetryl	23.787	23.803	23.818	23.802	23.806	23.791	23.800	23.769			23.656 - 23.956	23.797
2,4,6-Trinitrotoluene	24.907	24.870	24.918	24.896	24.900	24.898	24.900	24.875			24.750 - 25.050	24.896
PETN	25.447	25.437	25.451	25.442	25.440	25.445	25.453	25.435			25.290 - 25.590	25.444
1,2-Dinitrobenzene	13.220	13.197	13.224	13.229	13.219	13.211	13.187	13.108			13.069 - 13.369	13.199

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1 Analy Batch No.: 475429

SDG No.:

Instrument ID: CHHPLC_G2_LUNA GC Column: Luna-phenyl ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2019 19:30 Calibration End Date: 10/25/2019 23:35 Calibration ID: 39062

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-475429/14	10250014.D
Level 2	IC 280-475429/13	10250013.D
Level 3	IC 280-475429/12	10250012.D
Level 4	IC 280-475429/11	10250011.D
Level 5	IC 280-475429/10	10250010.D
Level 6	IC 280-475429/9	10250009.D
Level 7	IC 280-475429/8	10250008.D
Level 8	IC 280-475429/7	10250007.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 LVL 8		B	M1	M2								
Picric acid	334550 181543	181160 177883	164700 173865	188756 70886	Qua	-4404.1603	235046.060	-64833.731						0.9950		0.9900
HMX	245950 188875	227860 174443	193780 178398	182364 183359	Ave		196878.632				13.1		20.0			
RDX	402000 240158	308980 226034	277120 209518	240752 221263	Lin2	3697.24649	224444.355							0.9970		0.9900
Nitrobenzene	895858 406791	419880 404605	437555 378827	385701 403751	Lin1	6864.40196	390125.682							0.9970		0.9900
1,3-Dinitrobenzene	501898 691903	789351 648808	712627 623316	659341 634018	Ave		657657.685				12.5		20.0			
Nitroglycerin	142835 137165	133886 130238	135121 129564	132050 137440	Ave		134787.340				3.2		20.0			
2-Nitrotoluene	359123 262861	320857 254863	275404 241531	252239 266302	Ave		279147.600				14.4		20.0			
4-Nitrotoluene	155080 230919	278167 222554	273416 208871	232175 186850	Ave		223504.032				18.4		20.0			
4-Amino-2,6-dinitrotoluene	270040 325847	343091 317724	371176 308398	326951 336575	Ave		324975.267				9.0		20.0			
3-Nitrotoluene	238347 281076	337211 270273	311106 258565	278550 724837	Qua	31549.8581	-12542.684	288015.175						0.9980		0.9900
2-Amino-4,6-dinitrotoluene	410419 462081	490389 439610	510877 437892	467159	Ave		459775.256				7.4		20.0			
1,3,5-Trinitrobenzene	546500 491528	519000 472567	529050 450189	478820 466667	Ave		494290.105				6.8		20.0			
2,6-Dinitrotoluene	433998 308063	341276 297463	332961 280288	297539 291697	Ave		322910.844				15.3		20.0			
2,4-Dinitrotoluene	696058 593965	638024 573685	661317 552026	585545 572680	Ave		609162.495				8.3		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, Denver Job No.: 280-129830-1 Analy Batch No.: 475429

SDG No.:

Instrument ID: CHHPLC_G2_LUNA GC Column: Luna-phenyl ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2019 19:30 Calibration End Date: 10/25/2019 23:35 Calibration ID: 39062

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 LVL 8		B	M1	M2								
Tetryl	349050 345133	398100 332869	371730 338329	358516 337087	Ave		353851.659				6.2		20.0			
2,4,6-Trinitrotoluene	1204681 506718	882072 468973	551225 440321	501665 437156	Lin1	17134.0460	433543.641							0.9980		0.9900
PETN	111595 135883	135988 131394	154093 127214	131951 123803	Ave		131490.050				9.2		20.0			
1,2-Dinitrobenzene	622700 297805	366420 288090	336710 285803	297416 290577	Lin2	6644.44402	273997.764							0.9950		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
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1 Analy Batch No.: 475429

SDG No.:

Instrument ID: CHHPLC_G2_LUNA GC Column: Luna-phenyl ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2019 19:30 Calibration End Date: 10/25/2019 23:35 Calibration ID: 39062

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-475429/14	10250014.D
Level 2	IC 280-475429/13	10250013.D
Level 3	IC 280-475429/12	10250012.D
Level 4	IC 280-475429/11	10250011.D
Level 5	IC 280-475429/10	10250010.D
Level 6	IC 280-475429/9	10250009.D
Level 7	IC 280-475429/8	10250008.D
Level 8	IC 280-475429/7	10250007.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Picric acid	Qua	6691 124518	9058 173865	16470 177215	47189	72617	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
HMX	Ave	4919 122110	11393 178398	19378 458398	45591	75550	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
RDX	Lin2	8040 158224	15449 209518	27712 553157	60188	96063	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
Nitrobenzene	Lin1	17953 283790	21036 379585	43843 1011396	96618	163042	0.0200 0.701	0.0501 1.00	0.100 2.51	0.251	0.401
1,3-Dinitrobenzene	Ave	10048 454620	39507 623939	71334 1586629	165000	277038	0.0200 0.701	0.0501 1.00	0.100 2.50	0.250	0.400
Nitroglycerin	Ave	28567 911667	66943 1295638	135121 3436007	330125	548658	0.200 7.00	0.500 10.0	1.00 25.0	2.50	4.00
2-Nitrotoluene	Ave	7204 178939	16091 242256	27623 667753	63249	105460	0.0201 0.702	0.0502 1.00	0.100 2.51	0.251	0.401
4-Nitrotoluene	Ave	3114 156411	13964 209706	27451 468994	58276	92737	0.0201 0.703	0.0502 1.00	0.100 2.51	0.251	0.402
4-Amino-2,6-dinitrotoluene	Ave	5417 223074	17206 309323	37229 843961	81983	130730	0.0201 0.702	0.0502 1.00	0.100 2.51	0.251	0.401
3-Nitrotoluene	Qua	4786 189948	16928 259599	31235 1819340	69916	112880	0.0201 0.703	0.0502 1.00	0.100 2.51	0.251	0.402
2-Amino-4,6-dinitrotoluene	Ave	8233 308650	24593 439206	51241	117140	185387	0.0201 0.702	0.0502 1.00	0.100	0.251	0.401
1,3,5-Trinitrobenzene	Ave	10930 330797	25950 450189	52905 1166668	119705	196611	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
2,6-Dinitrotoluene	Ave	8706 208849	17115 281129	33396 731431	74608	123595	0.0201 0.702	0.0502 1.00	0.100 2.51	0.251	0.401
2,4-Dinitrotoluene	Ave	13949 402383	31965 553130	66264 1434563	146679	238061	0.0200 0.701	0.0501 1.00	0.100 2.51	0.251	0.401
Tetryl	Ave	6981 233008	19905 338329	37173 842718	89629	138053	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1 Analy Batch No.: 475429

SDG No.:

Instrument ID: CHHPLC_G2_LUNA GC Column: Luna-phenyl ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/25/2019 19:30 Calibration End Date: 10/25/2019 23:35 Calibration ID: 39062

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
2,4,6-Trinitrotoluene	Lin1	24190 329594	44280 442082	55343 1097262	125918	203498	0.0201 0.703	0.0502 1.00	0.100 2.51	0.251	0.402
PETN	Ave	22319 919755	67994 1272136	154093 3095082	329878	543531	0.200 7.00	0.500 10.0	1.00 25.0	2.50	4.00
1,2-Dinitrobenzene	Lin2	12454 201663	18321 285803	33671 726442	74354	119122	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400

Curve Type Legend:

Ave = Average
Lin1 = Linear 1/conc
Lin2 = Linear 1/conc^2
Qua = Quadratic

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250007.D
Lims ID: IC FULL LV 8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 25-Oct-2019 19:30:17 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC FULL LV 8
Misc. Info.: 280-0086515-007
Operator ID: CB Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 30-Oct-2019 15:39:50 Calib Date: 25-Oct-2019 23:35:16
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250014.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0329

First Level Reviewer: beckerc Date: 26-Oct-2019 10:06:34

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 2,6-diamino-4-nitrotoluene	1	4.395	4.453	-0.058	1015073	2.50	2.53	
	2 2,4-diamino-6-nitrotoluene	1	4.862	5.006	-0.144	540922	2.50	1.68	
	5 2,4,6-Trinitrophenol	1	5.422	5.680	-0.258	177215	2.50	1.12	
	6 HMX	1	7.002	7.080	-0.078	458398	2.50	2.33	
	8 RDX	1	9.195	9.286	-0.091	553157	2.50	2.45	
	9 Nitrobenzene	1	12.168	12.279	-0.111	1011396	2.51	2.57	
$	10 1,2-Dinitrobenzene	1	13.108	13.219	-0.111	726442	2.50	2.63	
	11 3,5-Dinitroaniline	1	14.962	14.939	0.023	1167133	2.50	2.21	
	12 1,3-Dinitrobenzene	1	15.668	15.759	-0.091	1586629	2.50	2.41	
	13 Nitroglycerin	2	15.948	16.019	-0.071	3436007	25.0	25.5	M
	14 o-Nitrotoluene	1	16.702	16.773	-0.071	667753	2.51	2.39	M
	15 p-Nitrotoluene	1	16.902	17.053	-0.151	468994	2.51	2.10	M
	16 4-Amino-2,6-dinitrotoluene	1	17.282	17.386	-0.104	843961	2.51	2.60	M
	17 m-Nitrotoluene	1	18.035	17.979	0.056	1819340	2.51	2.51	M
	18 2-Amino-4,6-dinitrotoluene	1		18.259			ND	ND	
	19 1,3,5-Trinitrobenzene	1	19.062	19.126	-0.064	1166668	2.50	2.36	M
	20 2,6-Dinitrotoluene	1	19.982	20.059	-0.077	731431	2.51	2.27	
	21 2,4-Dinitrotoluene	1	20.468	20.540	-0.071	1434563	2.51	2.35	
	22 Tetryl	1	23.769	23.806	-0.037	842718	2.50	2.38	
	23 2,4,6-Trinitrotoluene	1	24.875	24.900	-0.025	1097262	2.51	2.49	
	24 PETN	2	25.435	25.440	-0.005	3095082	25.0	23.5	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND
Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00059	Amount Added: 250.00	Units: uL
8330_ADDs_00023	Amount Added: 125.00	Units: uL

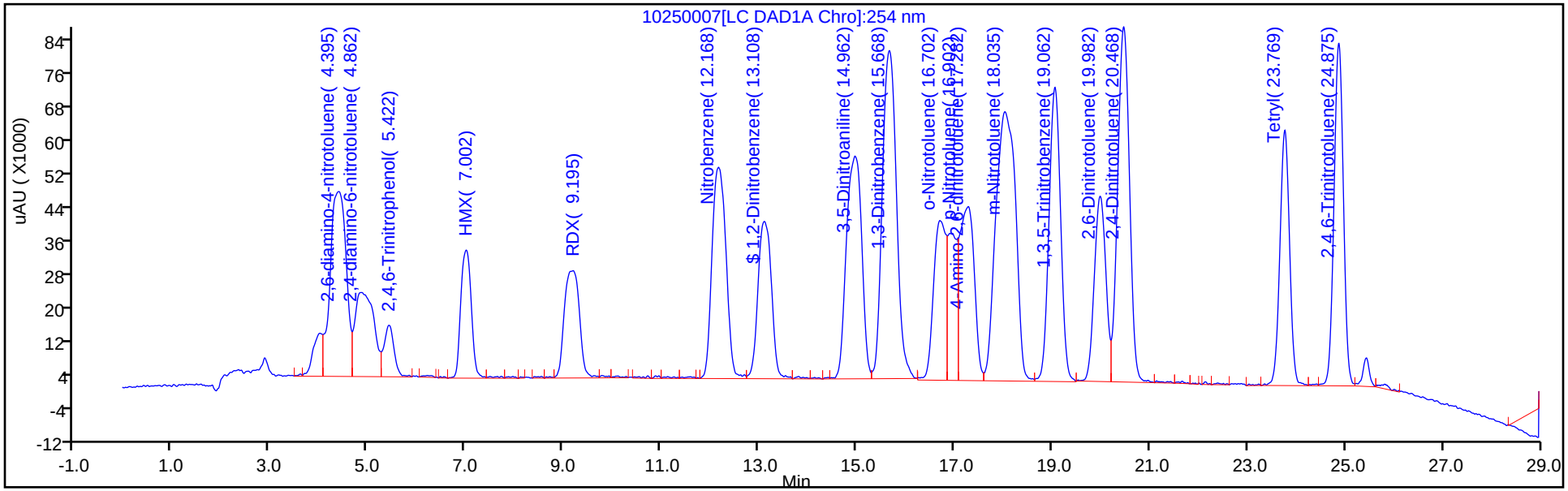
Report Date: 30-Oct-2019 15:39:51 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

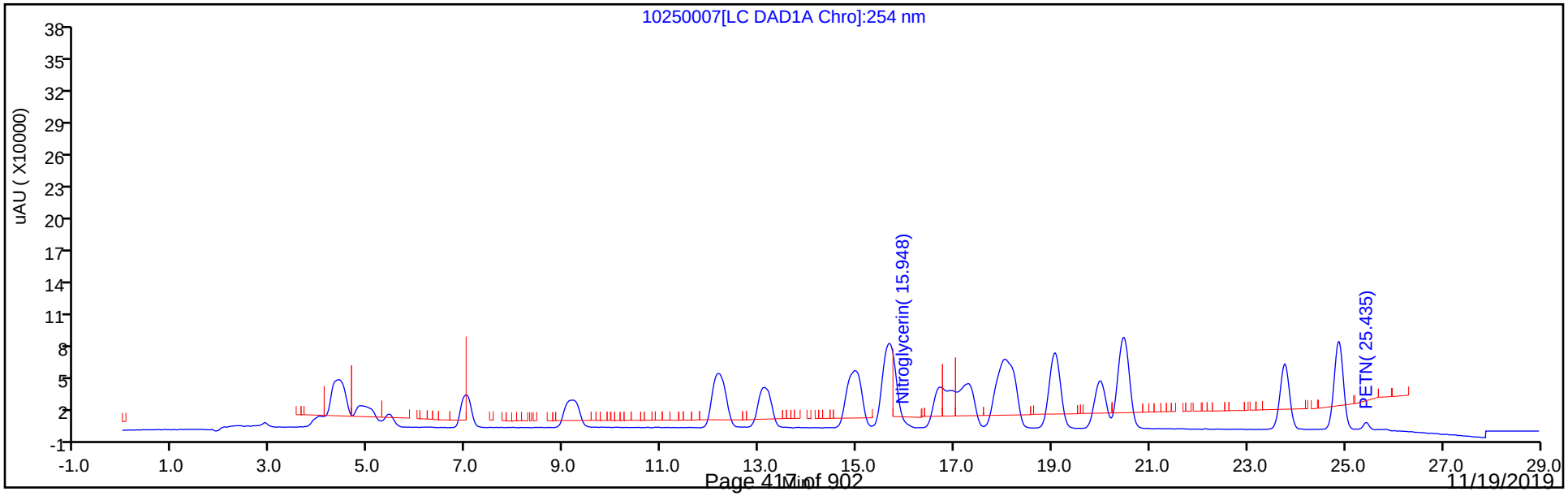
Data File: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250007.D

Injection Date:	25-Oct-2019 19:30:17	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	CB
Lims ID:	IC FULL LV 8			Worklist Smp#:	7
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

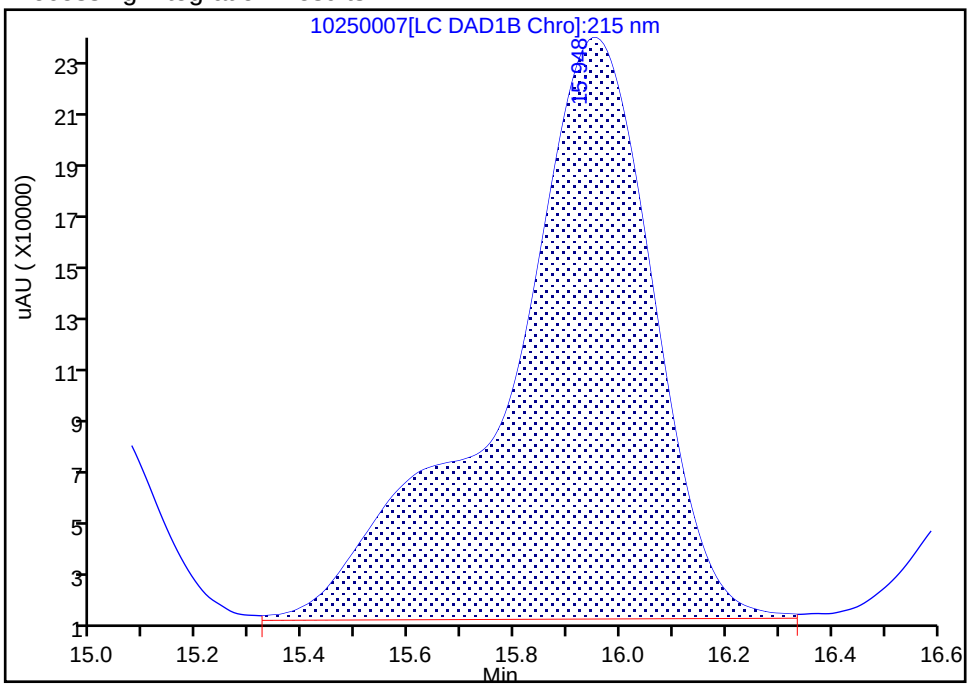
Data File: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250007.D
Injection Date: 25-Oct-2019 19:30:17 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC FULL LV 8
Client ID:
Operator ID: CB ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Detector LC DAD1B, 215 nm

13 Nitroglycerin, CAS: 55-63-0

Signal: 1

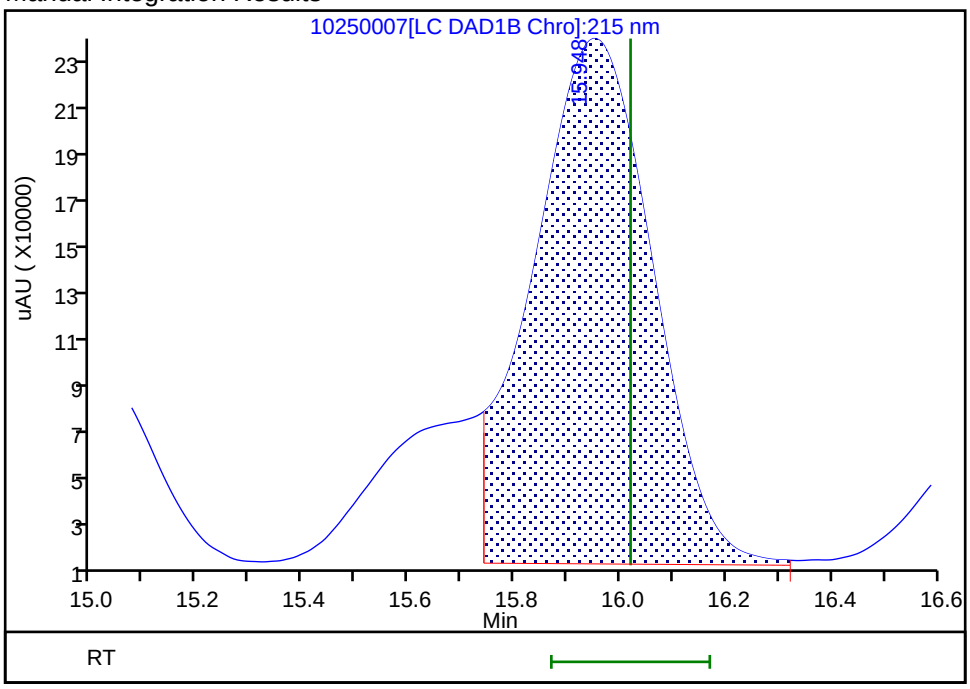
Processing Integration Results

RT: 15.95
Area: 4287695
Amount: 31.430934
Amount Units: ug/ml



Manual Integration Results

RT: 15.95
Area: 3436007
Amount: 25.492060
Amount Units: ug/ml



Reviewer: beckerc, 26-Oct-2019 10:04:43
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

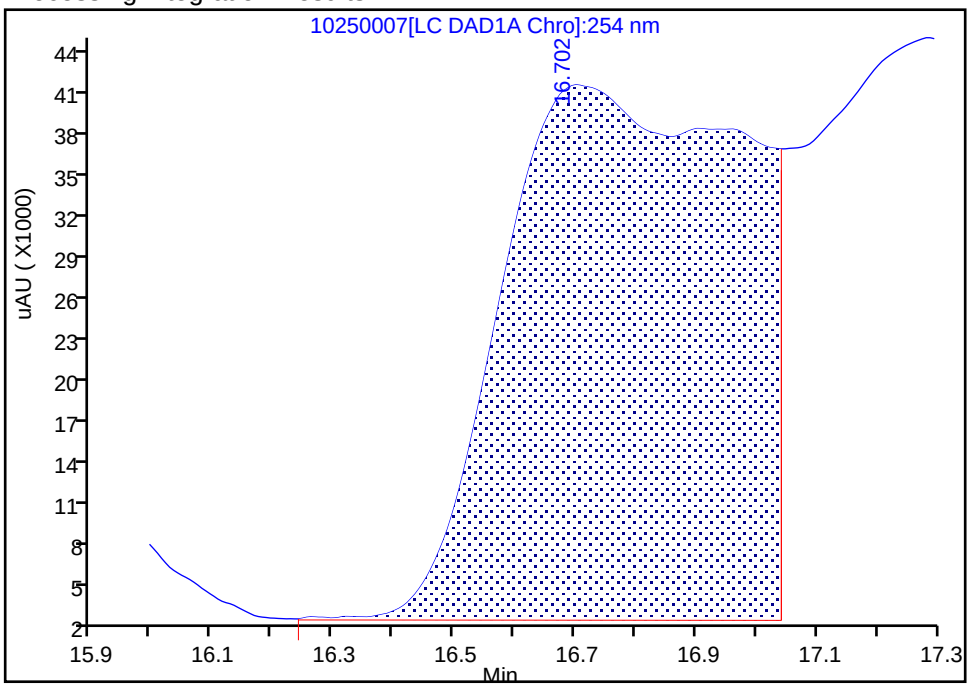
Data File: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250007.D
Injection Date: 25-Oct-2019 19:30:17 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC FULL LV 8
Client ID:
Operator ID: CB ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

14 o-Nitrotoluene, CAS: 88-72-2

Signal: 1

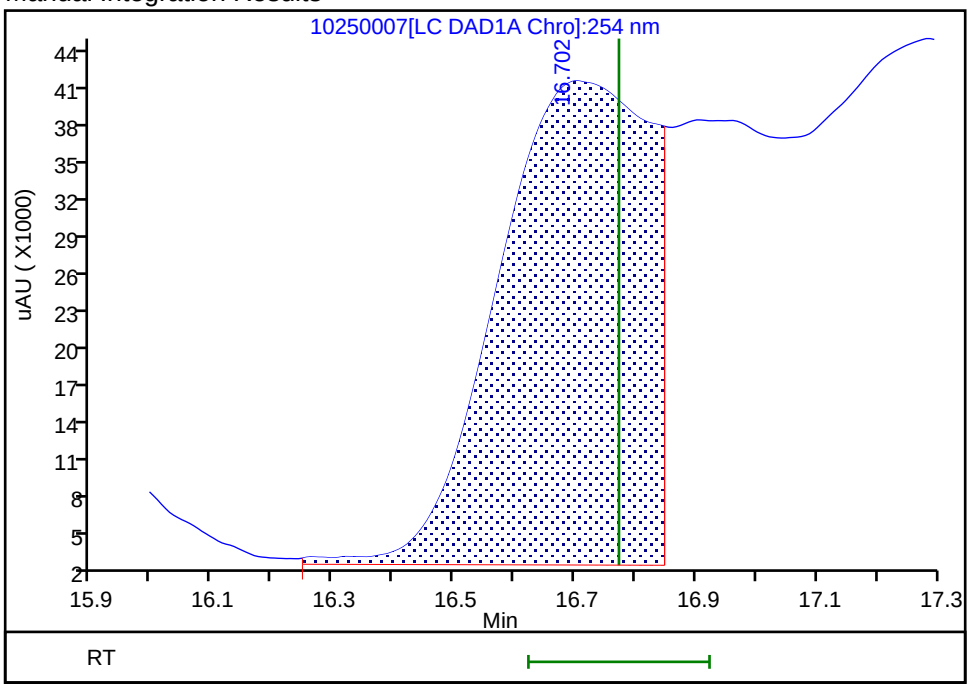
Processing Integration Results

RT: 16.70
Area: 1050487
Amount: 3.535486
Amount Units: ug/ml



Manual Integration Results

RT: 16.70
Area: 667753
Amount: 2.392114
Amount Units: ug/ml



Reviewer: beckerc, 26-Oct-2019 10:05:51
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Eurofins TestAmerica, Denver

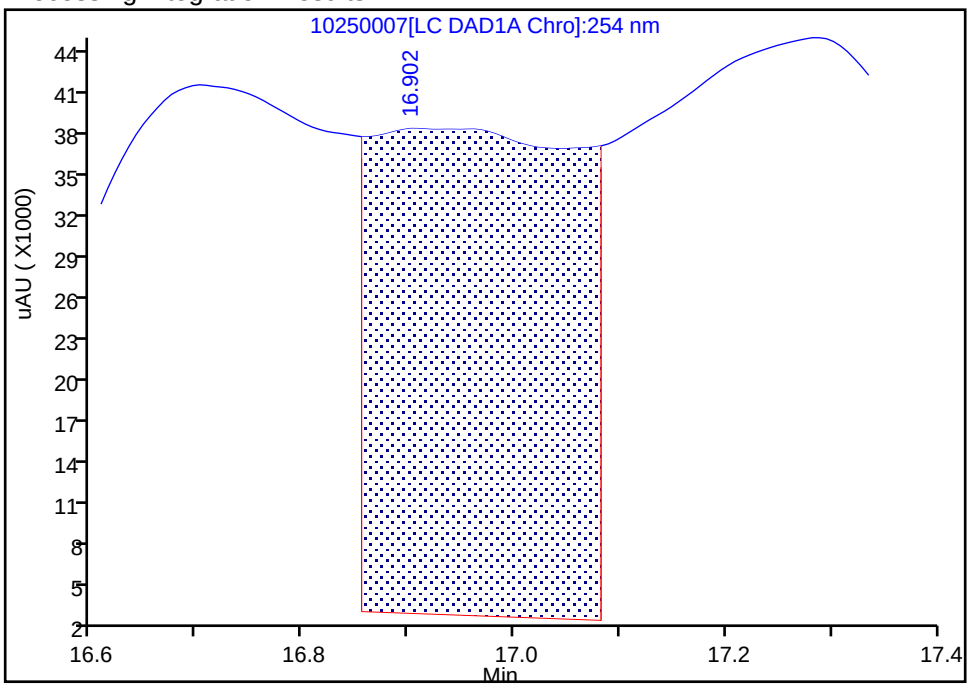
Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250007.D				
Injection Date:	25-Oct-2019 19:30:17	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC FULL LV 8				
Client ID:					
Operator ID:	CB	ALS Bottle#:	7	Worklist Smp#:	7
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

15 p-Nitrotoluene, CAS: 99-99-0

Signal: 1

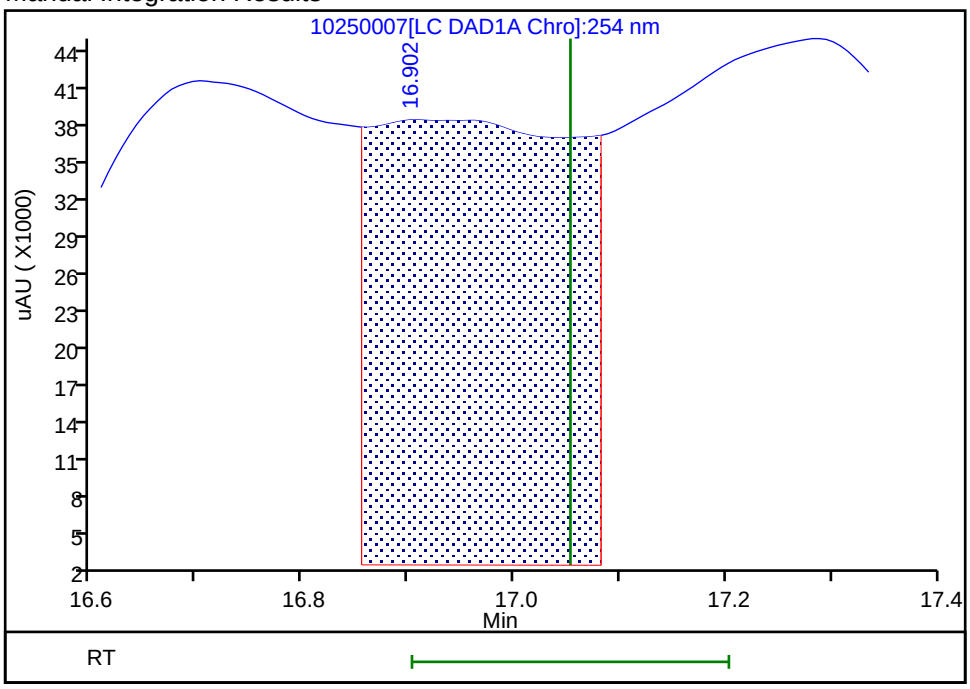
Processing Integration Results

RT: 16.90
Area: 459276
Amount: 2.066559
Amount Units: ug/ml



Manual Integration Results

RT: 16.90
Area: 468994
Amount: 2.098369
Amount Units: ug/ml



Reviewer: beckerc, 26-Oct-2019 10:05:51
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

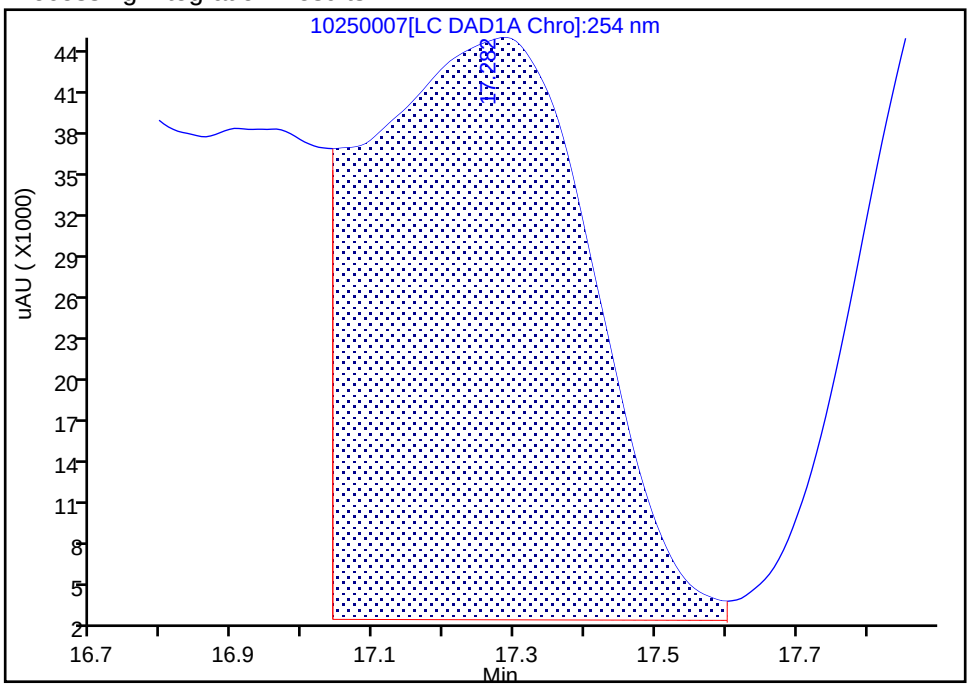
Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250007.D				
Injection Date:	25-Oct-2019 19:30:17	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC FULL LV 8				
Client ID:					
Operator ID:	CB	ALS Bottle#:	7	Worklist Smp#:	7
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

16 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

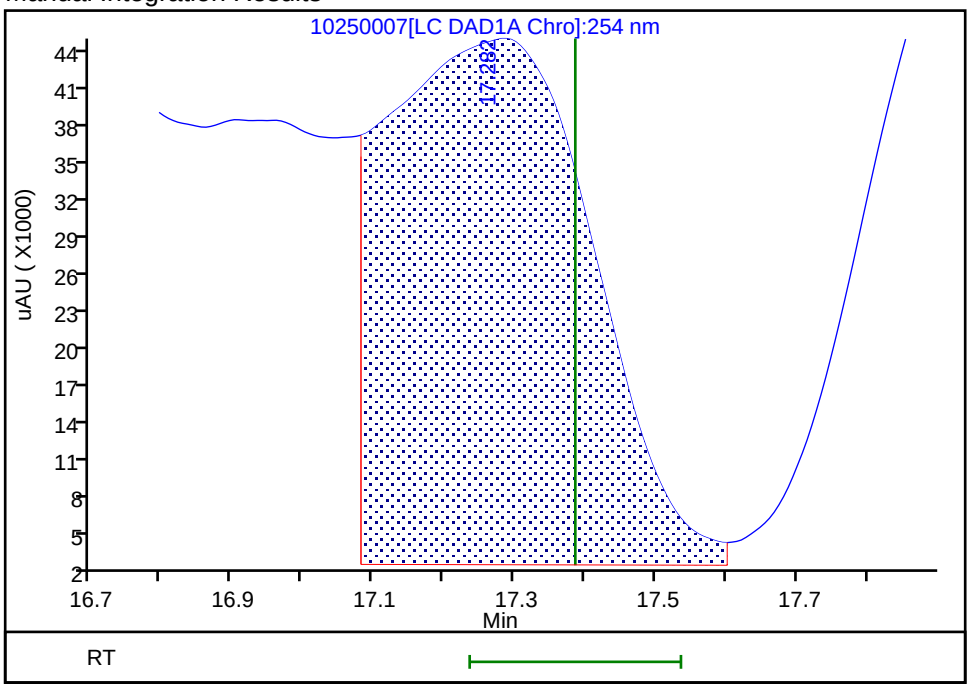
Processing Integration Results

RT: 17.28
Area: 910241
Amount: 2.775503
Amount Units: ug/ml



Manual Integration Results

RT: 17.28
Area: 843961
Amount: 2.597001
Amount Units: ug/ml



Reviewer: beckerc, 26-Oct-2019 10:05:51

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

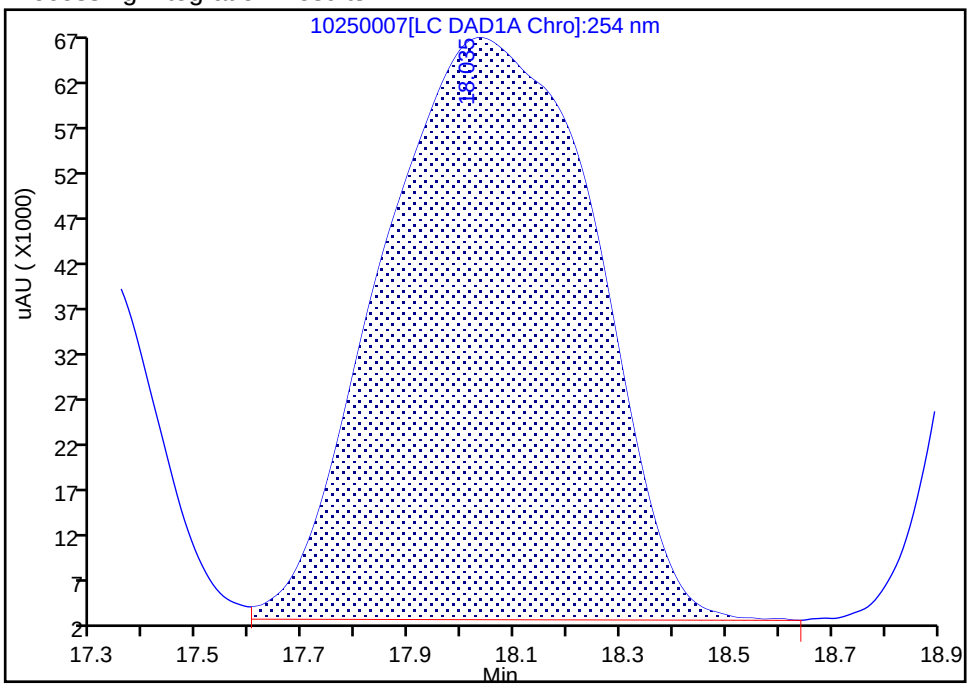
Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250007.D				
Injection Date:	25-Oct-2019 19:30:17	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC FULL LV 8				
Client ID:					
Operator ID:	CB	ALS Bottle#:	7	Worklist Smp#:	7
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

17 m-Nitrotoluene, CAS: 99-08-1

Signal: 1

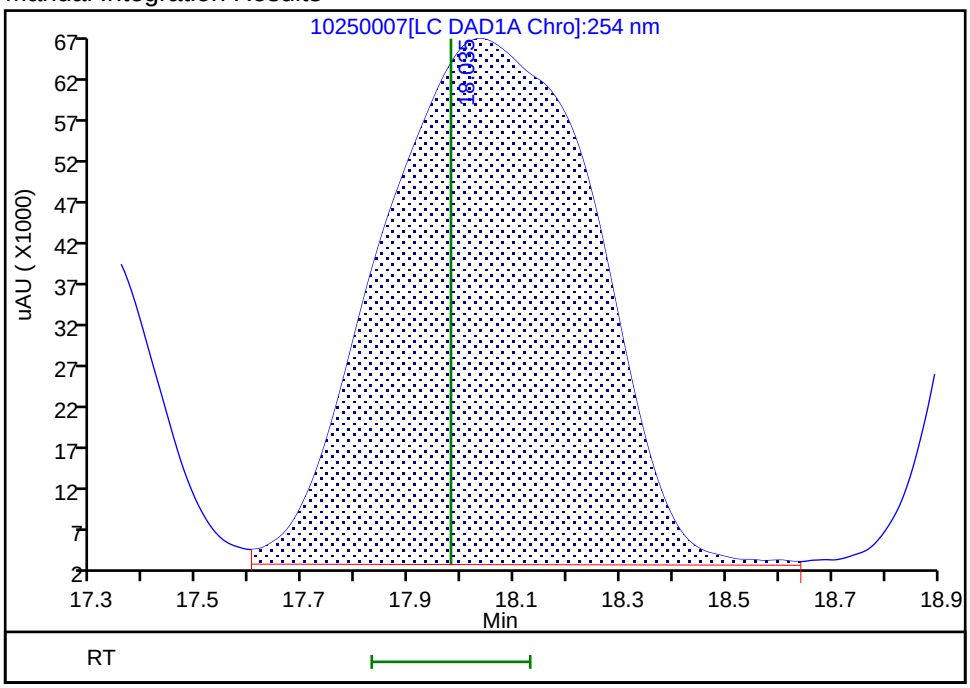
Processing Integration Results

RT: 18.04
Area: 1791884
Amount: 2.513306
Amount Units: ug/ml



Manual Integration Results

RT: 18.04
Area: 1819340
Amount: 2.513310
Amount Units: ug/ml



Reviewer: beckerc, 26-Oct-2019 10:05:51

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

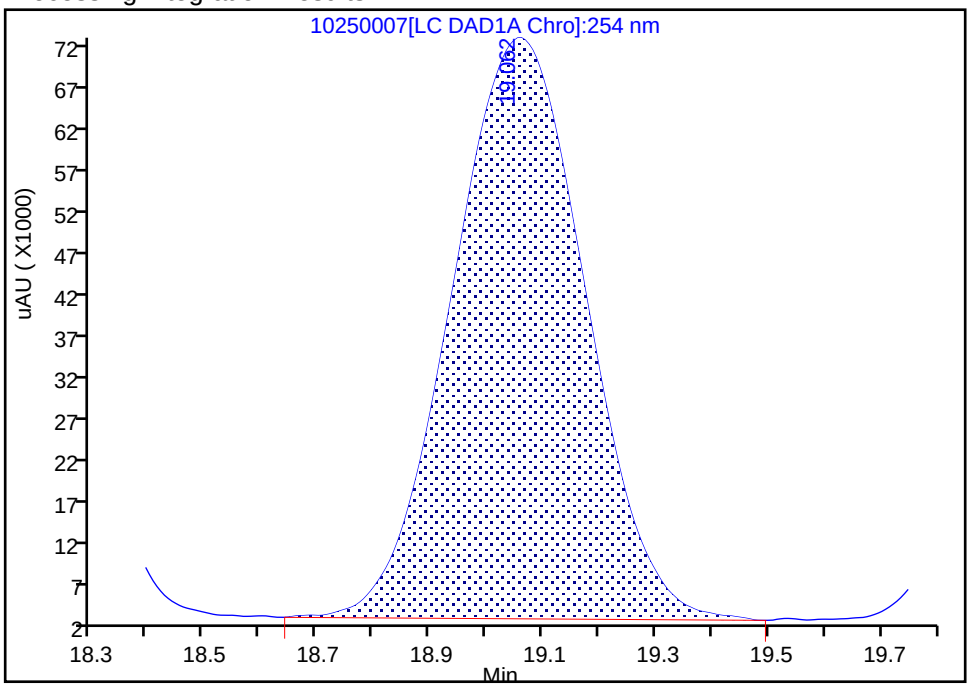
Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250007.D				
Injection Date:	25-Oct-2019 19:30:17	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC FULL LV 8				
Client ID:					
Operator ID:	CB	ALS Bottle#:	7	Worklist Smp#:	7
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

19 1,3,5-Trinitrobenzene, CAS: 99-35-4

Signal: 1

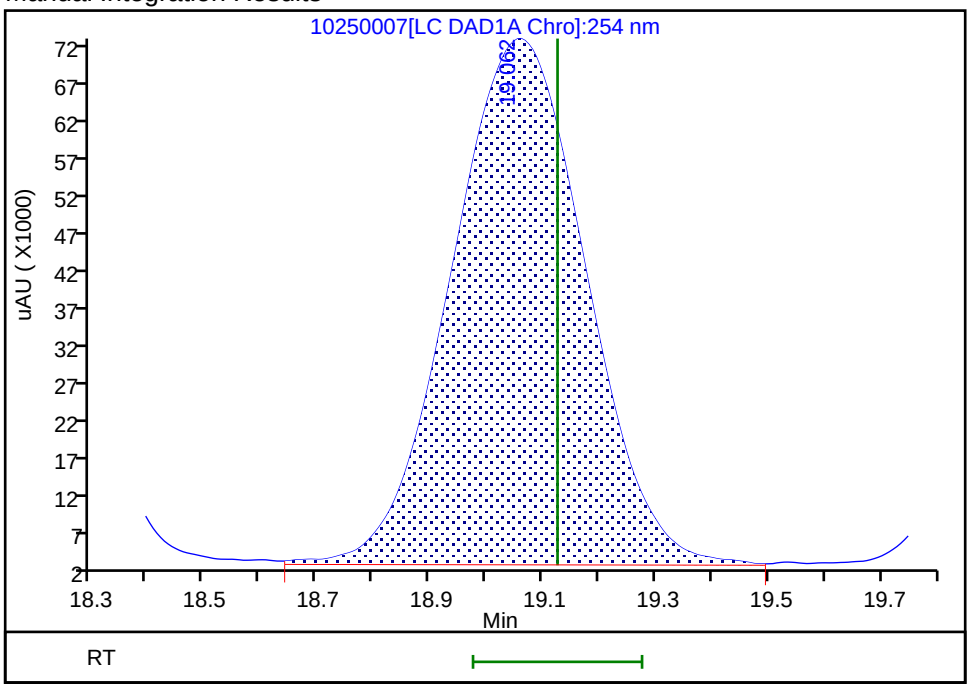
Processing Integration Results

RT: 19.06
Area: 1150643
Amount: 2.344345
Amount Units: ug/ml



Manual Integration Results

RT: 19.06
Area: 1166668
Amount: 2.360290
Amount Units: ug/ml



Reviewer: beckerc, 26-Oct-2019 10:05:51

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250008.D
Lims ID: IC FULL LV 7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 25-Oct-2019 20:05:18 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC FULL LV 7
Misc. Info.: 280-0086515-008
Operator ID: CB Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 30-Oct-2019 15:39:52 Calib Date: 25-Oct-2019 23:35:16
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250014.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0329

First Level Reviewer: beckerc Date: 26-Oct-2019 10:07:35

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 2,6-diamino-4-nitrotoluene	1	4.380	4.453	-0.073	372398	1.00	0.9107	
	2 2,4-diamino-6-nitrotoluene	1	5.013	5.006	0.007	240674	1.00	0.7460	M
	5 2,4,6-Trinitrophenol	1	5.520	5.680	-0.160	173865	1.00	1.08	
	6 HMX	1	7.060	7.080	-0.020	178398	1.00	0.9061	
	8 RDX	1	9.247	9.286	-0.039	209518	1.00	0.9170	
	9 Nitrobenzene	1	12.253	12.279	-0.026	379585	1.00	0.9554	
$	10 1,2-Dinitrobenzene	1	13.187	13.219	-0.032	285803	1.00	1.02	
	11 3,5-Dinitroaniline	1	15.033	14.939	0.094	441163	1.00	0.8357	
	12 1,3-Dinitrobenzene	1	15.733	15.759	-0.026	623939	1.00	0.9487	
	13 Nitroglycerin	2	16.000	16.019	-0.019	1295638	10.0	9.61	
	14 o-Nitrotoluene	1	16.747	16.773	-0.026	242256	1.00	0.8678	
	15 p-Nitrotoluene	1	17.027	17.053	-0.026	209706	1.00	0.9383	
	16 4-Amino-2,6-dinitrotoluene	1	17.347	17.386	-0.039	309323	1.00	0.9518	
	17 m-Nitrotoluene	1	17.960	17.979	-0.019	259599	1.00	0.9119	
	18 2-Amino-4,6-dinitrotoluene	1	18.220	18.259	-0.039	439206	1.00	0.9553	
	19 1,3,5-Trinitrobenzene	1	19.100	19.126	-0.026	450189	1.00	0.9108	
	20 2,6-Dinitrotoluene	1	20.040	20.059	-0.019	281129	1.00	0.8706	
	21 2,4-Dinitrotoluene	1	20.520	20.540	-0.019	553130	1.00	0.9080	
	22 Tetryl	1	23.800	23.806	-0.006	338329	1.00	0.9561	
	23 2,4,6-Trinitrotoluene	1	24.900	24.900	0.000	442082	1.00	0.9802	
	24 PETN	2	25.453	25.440	0.013	1272136	10.0	9.67	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

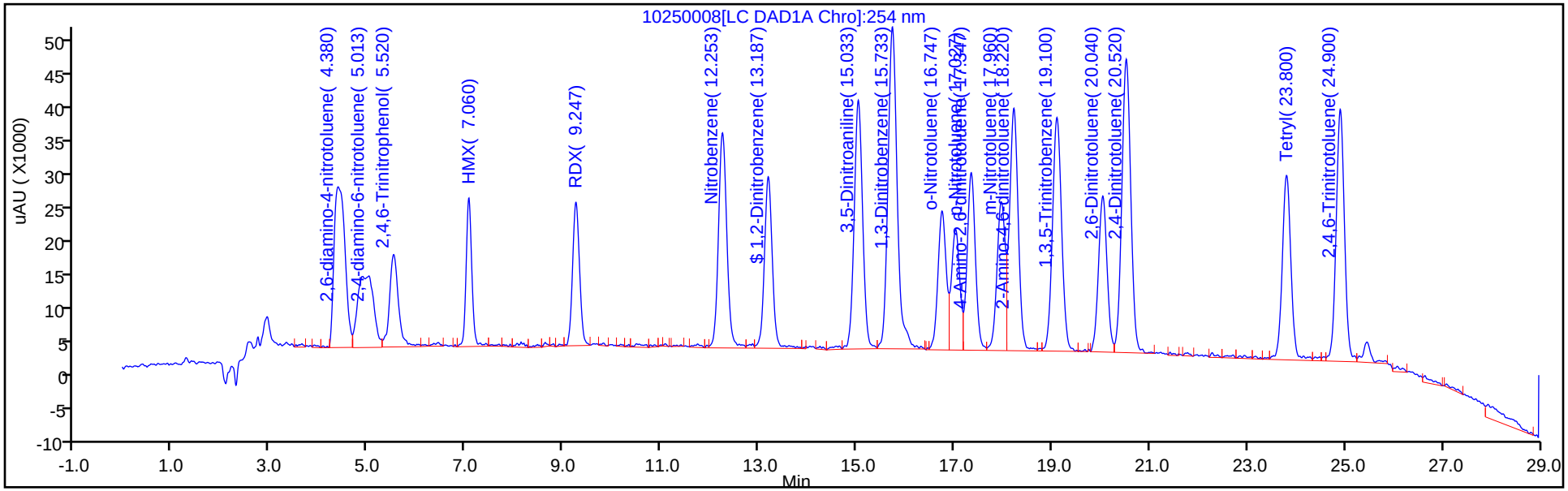
8330_ADDs_00023	Amount Added: 50.00	Units: uL
8330IntermStk_00059	Amount Added: 100.00	Units: uL

Report Date: 30-Oct-2019 15:39:52 Chrom Revision: 2.3 09-Oct-2019 11:13:36

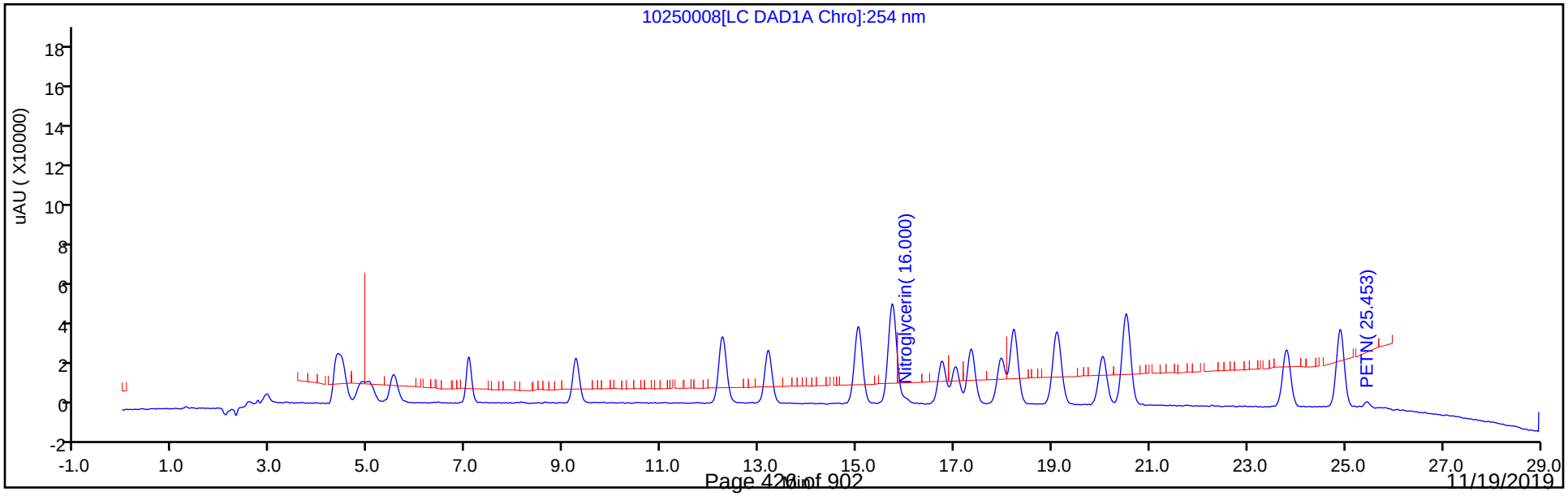
Eurofins TestAmerica, Denver

Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250008.D				
Injection Date:	25-Oct-2019 20:05:18	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	CB
Lims ID:	IC FULL LV 7			Worklist Smp#:	8
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250009.D
Lims ID: IC FULL LV 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 25-Oct-2019 20:40:21 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC FULL LV 6
Misc. Info.: 280-0086515-009
Operator ID: CB Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 30-Oct-2019 15:39:53 Calib Date: 25-Oct-2019 23:35:16
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250014.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0329

First Level Reviewer: beckerc Date: 26-Oct-2019 10:08:40

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 2,6-diamino-4-nitrotoluene	1	4.405	4.453	-0.048	282445	0.7000	0.6844	M
	2 2,4-diamino-6-nitrotoluene	1	4.925	5.006	-0.081	181895	0.7000	0.5638	M
	5 2,4,6-Trinitrophenol	1	5.605	5.680	-0.075	124518	0.7000	0.6737	Ma
	6 HMX	1	7.085	7.080	0.005	122110	0.7000	0.6202	M
	8 RDX	1	9.291	9.286	0.005	158224	0.7000	0.6885	
	9 Nitrobenzene	1	12.278	12.279	-0.001	283790	0.7014	0.7098	
$	10 1,2-Dinitrobenzene	1	13.211	13.219	-0.008	201663	0.7000	0.7118	
	11 3,5-Dinitroaniline	1	15.051	14.939	0.112	327189	0.7000	0.6196	
	12 1,3-Dinitrobenzene	1	15.751	15.759	-0.008	454620	0.7007	0.6913	
	13 Nitroglycerin	2	16.011	16.019	-0.008	911667	7.00	6.76	
	14 o-Nitrotoluene	1	16.764	16.773	-0.009	178939	0.7021	0.6410	
	15 p-Nitrotoluene	1	17.038	17.053	-0.015	156411	0.7028	0.6998	
	16 4-Amino-2,6-dinitrotoluene	1	17.358	17.386	-0.028	223074	0.7021	0.6864	
	17 m-Nitrotoluene	1	17.971	17.979	-0.008	189948	0.7028	0.7637	
	18 2-Amino-4,6-dinitrotoluene	1	18.231	18.259	-0.028	308650	0.7021	0.6713	
	19 1,3,5-Trinitrobenzene	1	19.104	19.126	-0.022	330797	0.7000	0.6692	
	20 2,6-Dinitrotoluene	1	20.038	20.059	-0.021	208849	0.7021	0.6468	
	21 2,4-Dinitrotoluene	1	20.518	20.540	-0.021	402383	0.7014	0.6606	
	22 Tetryl	1	23.791	23.806	-0.015	233008	0.7000	0.6585	
	23 2,4,6-Trinitrotoluene	1	24.898	24.900	-0.002	329594	0.7028	0.7207	
	24 PETN	2	25.445	25.440	0.005	919755	7.00	6.99	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

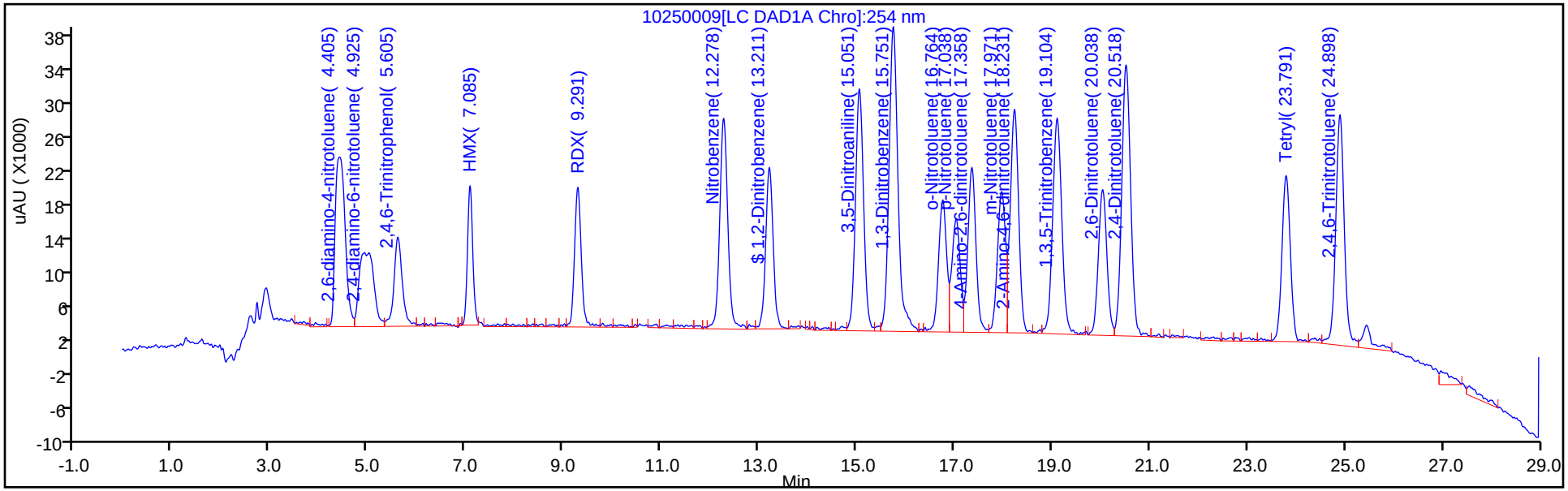
8330_ADDs_00023	Amount Added:	35.00	Units: uL
8330IntermStk_00059	Amount Added:	70.00	Units: uL

Report Date: 30-Oct-2019 15:39:53 Chrom Revision: 2.3 09-Oct-2019 11:13:36

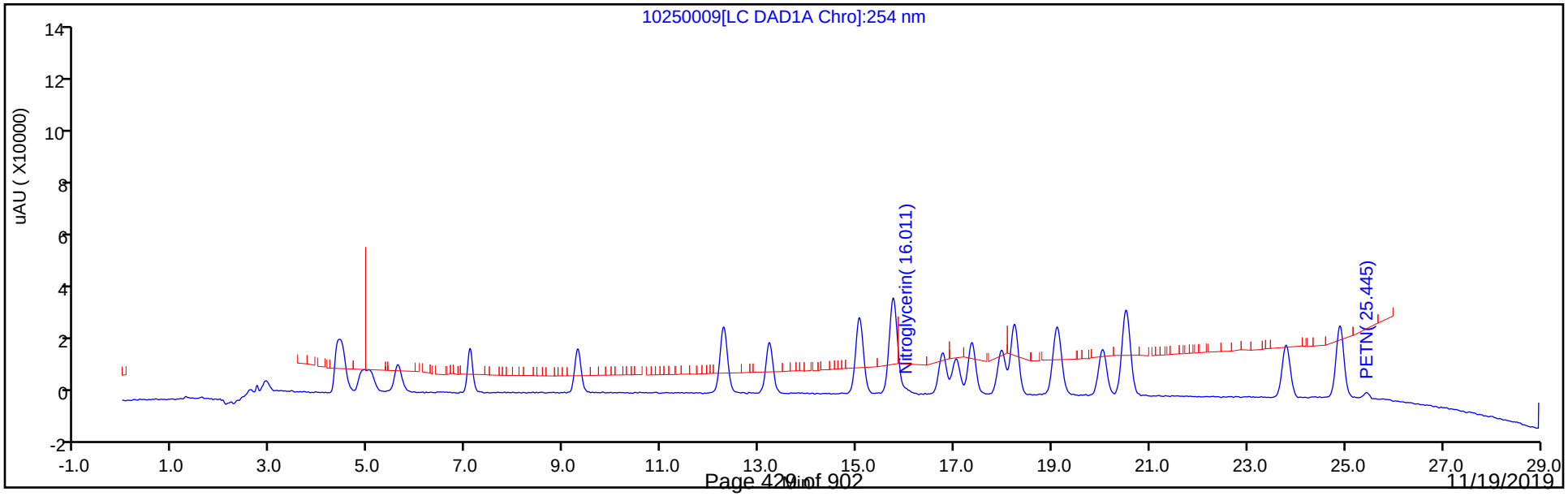
Eurofins TestAmerica, Denver

Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250009.D				
Injection Date:	25-Oct-2019 20:40:21	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	CB
Lims ID:	IC FULL LV 6			Worklist Smp#:	9
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

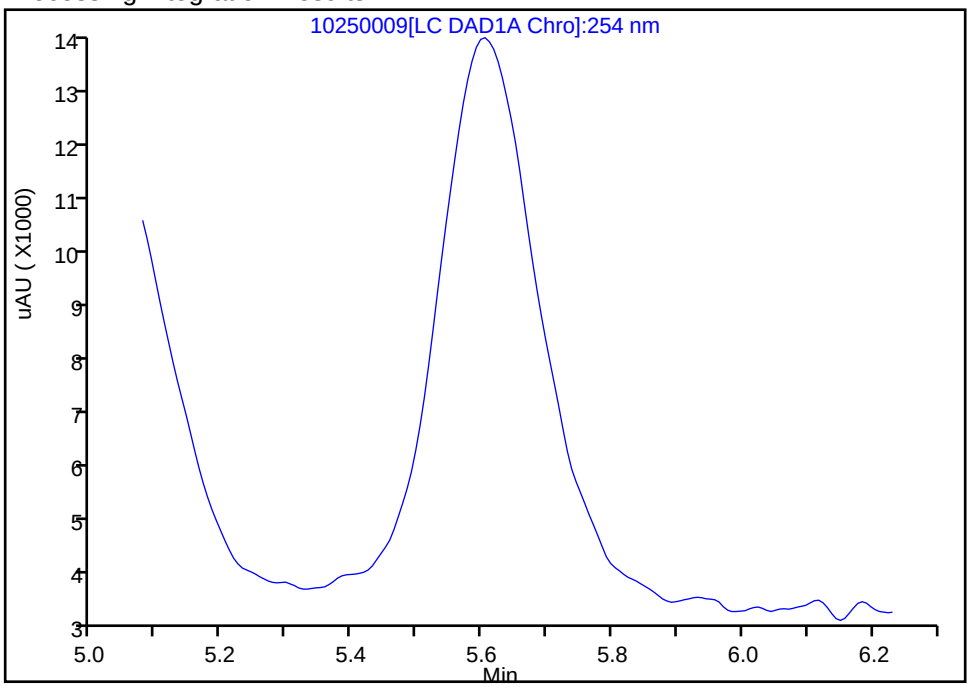
Data File: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250009.D
Injection Date: 25-Oct-2019 20:40:21 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC FULL LV 6
Client ID:
Operator ID: CB ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

5 2,4,6-Trinitrophenol, CAS: 88-89-1

Signal: 1

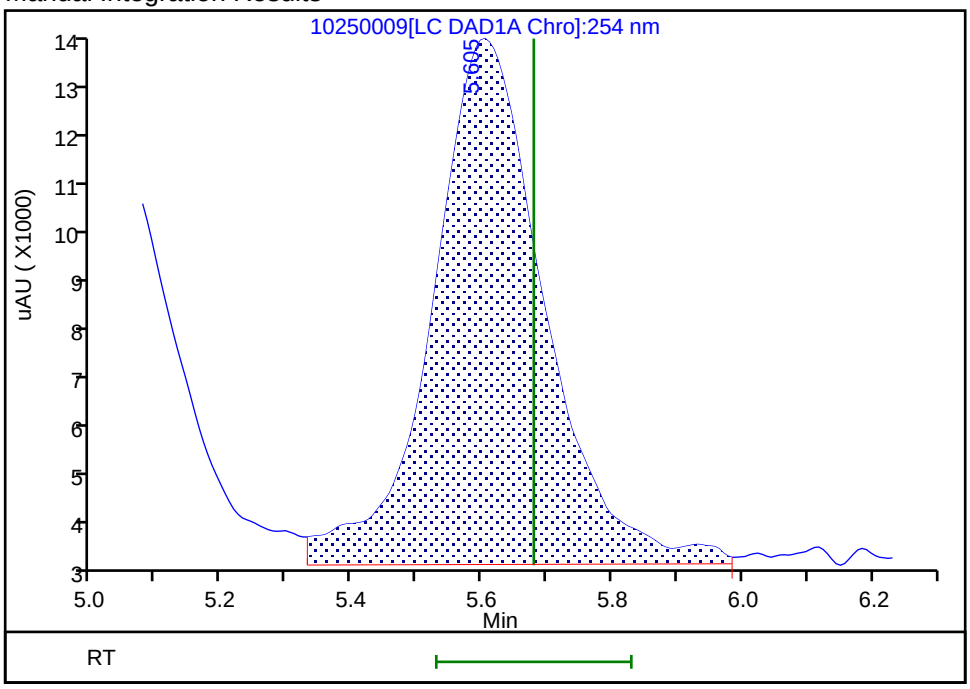
Not Detected
Expected RT: 5.68

Processing Integration Results



Manual Integration Results

RT: 5.60
Area: 124518
Amount: 0.673685
Amount Units: ug/ml



Reviewer: beckerc, 26-Oct-2019 10:08:06
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

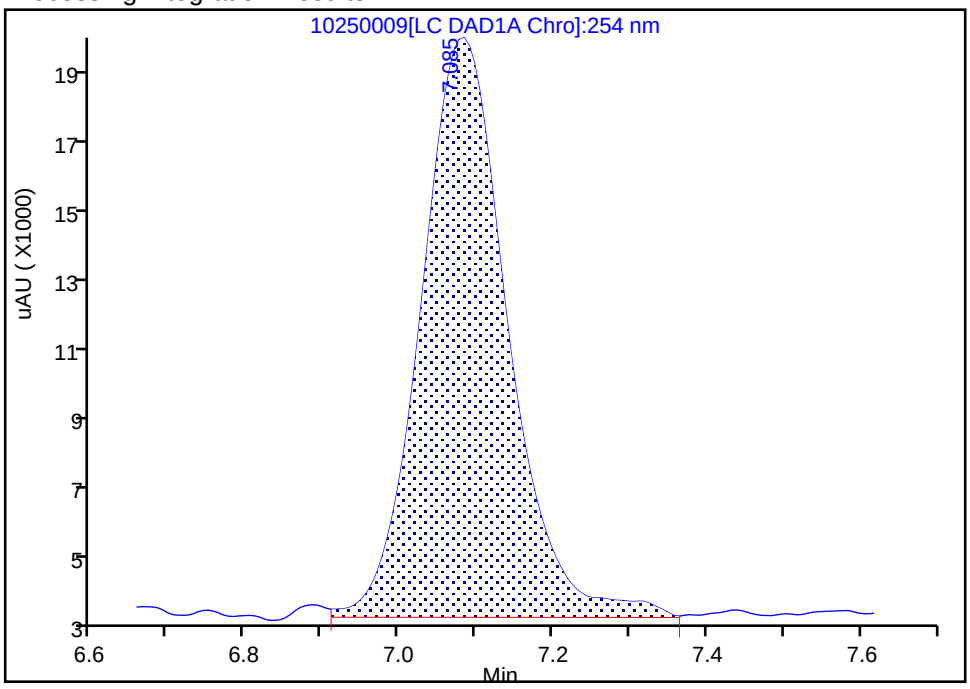
Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250009.D				
Injection Date:	25-Oct-2019 20:40:21	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC FULL LV 6				
Client ID:					
Operator ID:	CB	ALS Bottle#:	9	Worklist Smp#:	9
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

6 HMX, CAS: 2691-41-0

Signal: 1

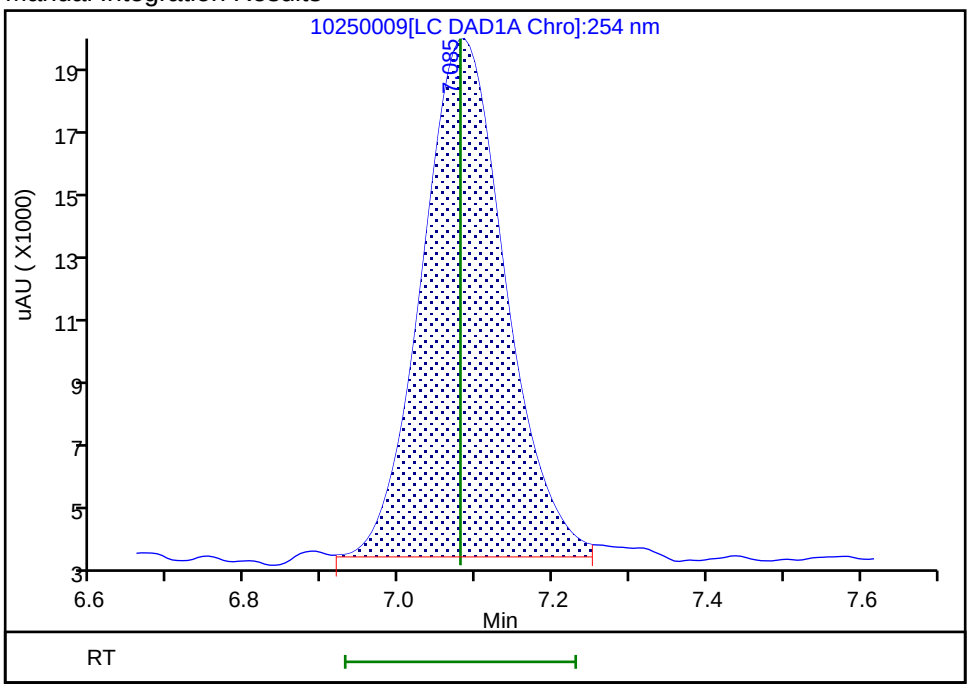
Processing Integration Results

RT: 7.08
Area: 128322
Amount: 0.648130
Amount Units: ug/ml



Manual Integration Results

RT: 7.08
Area: 122110
Amount: 0.620230
Amount Units: ug/ml



Reviewer: beckerc, 30-Oct-2019 15:38:32

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250010.D
Lims ID: IC FULL LV 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 25-Oct-2019 21:15:23 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC FULL LV 5
Misc. Info.: 280-0086515-010
Operator ID: CB Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 30-Oct-2019 15:39:54 Calib Date: 25-Oct-2019 23:35:16
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250014.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0329

First Level Reviewer: beckerc Date: 26-Oct-2019 10:03:21

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 2,6-diamino-4-nitrotoluene	1		4.453			ND	ND	U
	2 2,4-diamino-6-nitrotoluene	1		5.006			ND	ND	U
	5 2,4,6-Trinitrophenol	1	5.680	5.680	0.000	72617	0.4000	0.3643	a
	6 HMX	1	7.080	7.080	0.000	75550	0.4000	0.3837	M
	8 RDX	1	9.286	9.286	0.000	96063	0.4000	0.4115	
	9 Nitrobenzene	1	12.279	12.279	0.000	163042	0.4008	0.4003	
$	10 1,2-Dinitrobenzene	1	13.219	13.219	0.000	119122	0.4000	0.4105	
	11 3,5-Dinitroaniline	1		14.939			ND	ND	U
	12 1,3-Dinitrobenzene	1	15.759	15.759	0.000	277038	0.4004	0.4212	
	13 Nitroglycerin	2	16.019	16.019	0.000	548658	4.00	4.07	
	14 o-Nitrotoluene	1	16.773	16.773	0.000	105460	0.4012	0.3778	
	15 p-Nitrotoluene	1	17.053	17.053	0.000	92737	0.4016	0.4149	
	16 4-Amino-2,6-dinitrotoluene	1	17.386	17.386	0.000	130730	0.4012	0.4023	
	17 m-Nitrotoluene	1	17.979	17.979	0.000	112880	0.4016	0.5536	
	18 2-Amino-4,6-dinitrotoluene	1	18.259	18.259	0.000	185387	0.4012	0.4032	
	19 1,3,5-Trinitrobenzene	1	19.126	19.126	0.000	196611	0.4000	0.3978	
	20 2,6-Dinitrotoluene	1	20.059	20.059	0.000	123595	0.4012	0.3828	
	21 2,4-Dinitrotoluene	1	20.540	20.540	0.000	238061	0.4008	0.3908	
	22 Tetryl	1	23.806	23.806	0.000	138053	0.4000	0.3901	
	23 2,4,6-Trinitrotoluene	1	24.900	24.900	0.000	203498	0.4016	0.4299	
	24 PETN	2	25.440	25.440	0.000	543531	4.00	4.13	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Reagents:

8330_ADDs_00023	Amount Added:	20.00	Units: uL
8330IntermStk_00059	Amount Added:	40.00	Units: uL

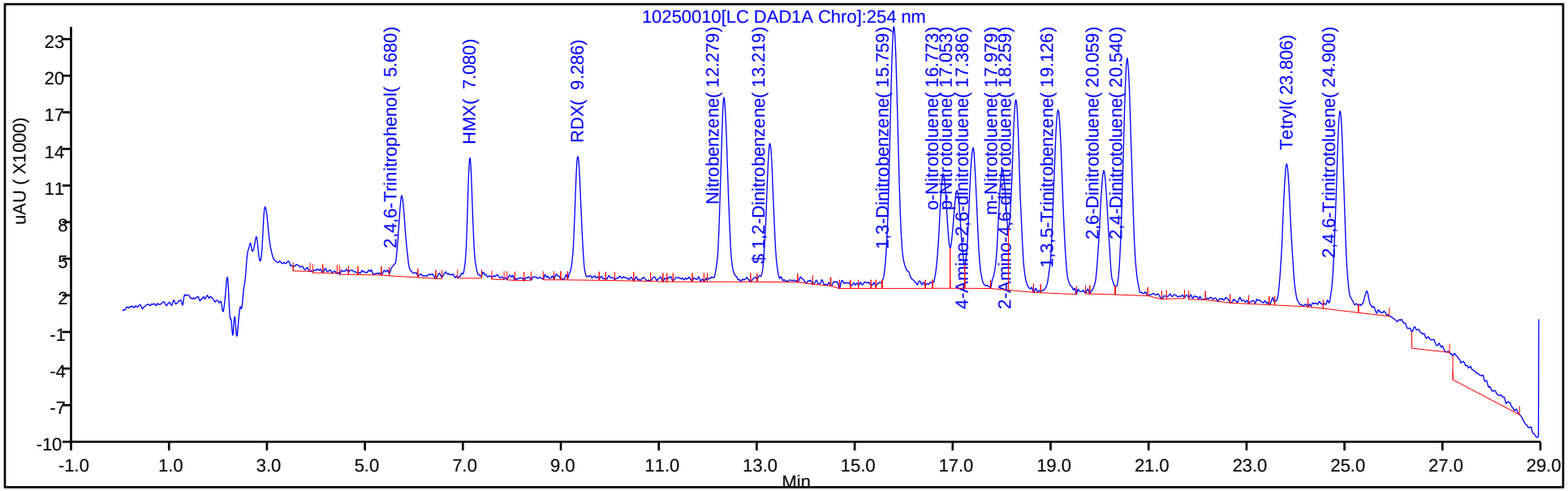
Report Date: 30-Oct-2019 15:39:54 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

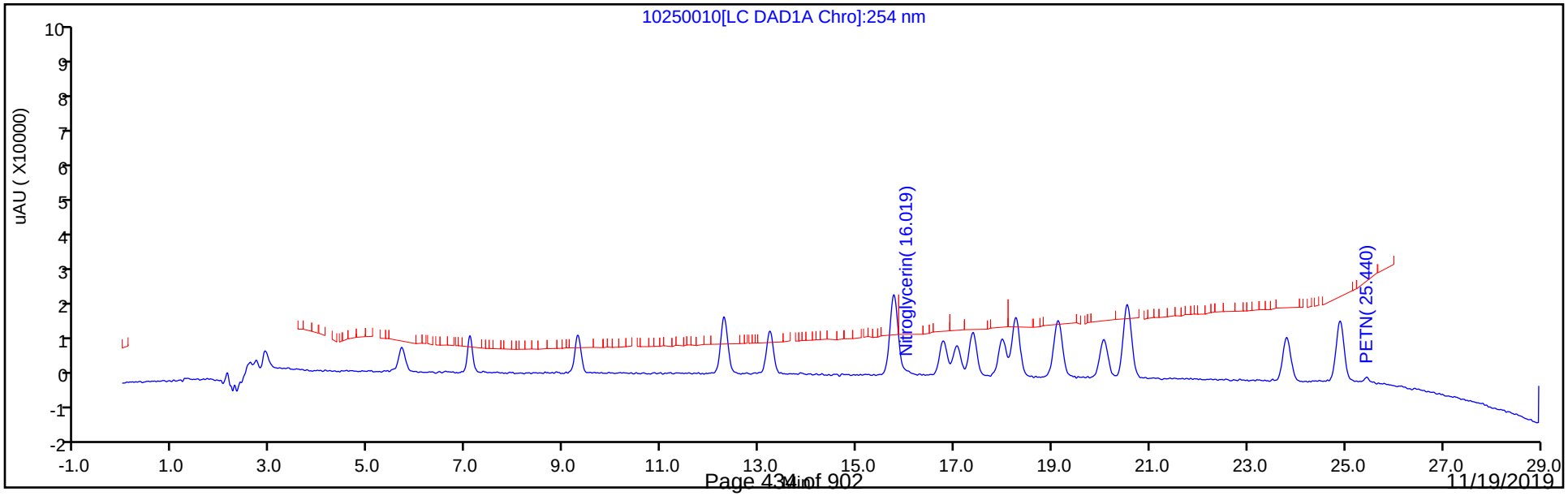
Data File: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250010.D

Injection Date:	25-Oct-2019 21:15:23	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	CB
Lims ID:	IC FULL LV 5			Worklist Smp#:	10
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

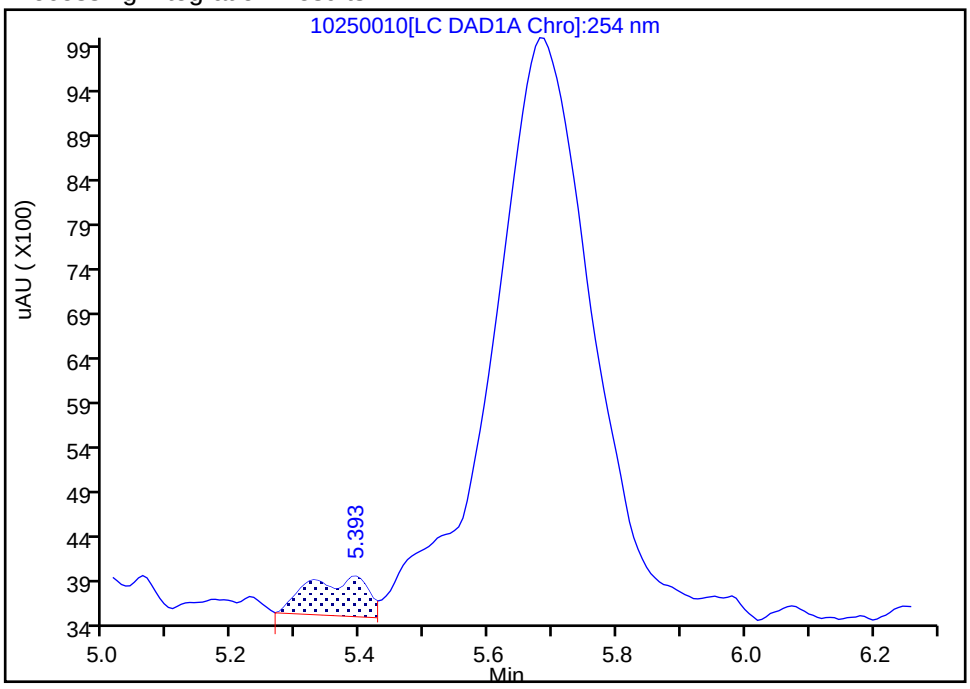
Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250010.D				
Injection Date:	25-Oct-2019 21:15:23	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC FULL LV 5				
Client ID:					
Operator ID:	CB	ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

5 2,4,6-Trinitrophenol, CAS: 88-89-1

Signal: 1

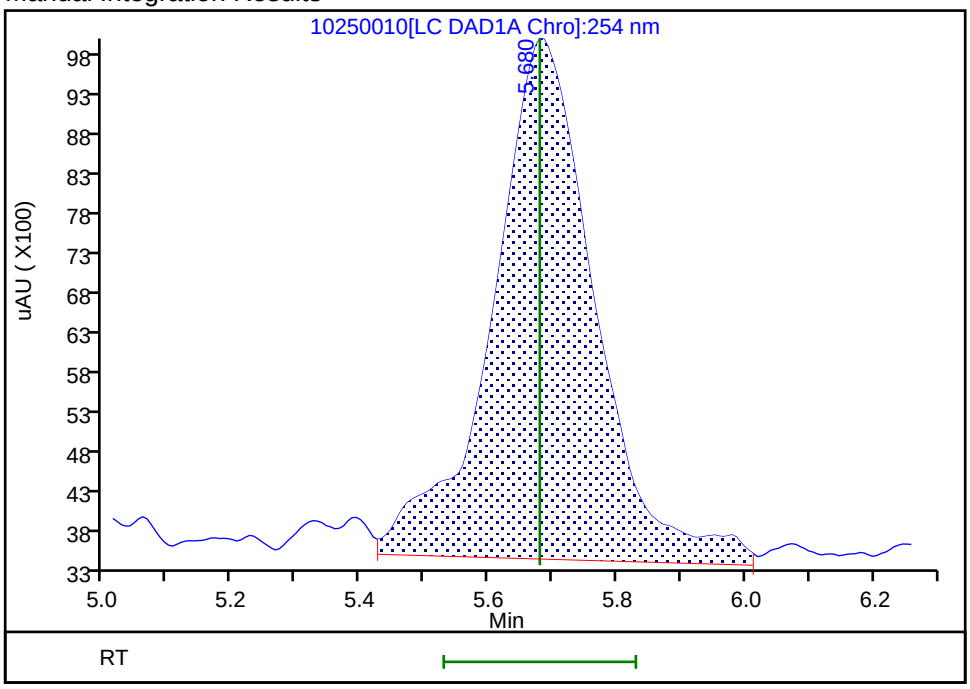
Processing Integration Results

RT: 5.39
Area: 2800
Amount: 0.017247
Amount Units: ug/ml



Manual Integration Results

RT: 5.68
Area: 72617
Amount: 0.364291
Amount Units: ug/ml



Reviewer: beckerc, 26-Oct-2019 10:09:13
Audit Action: Assigned Compound ID Audit Reason:

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

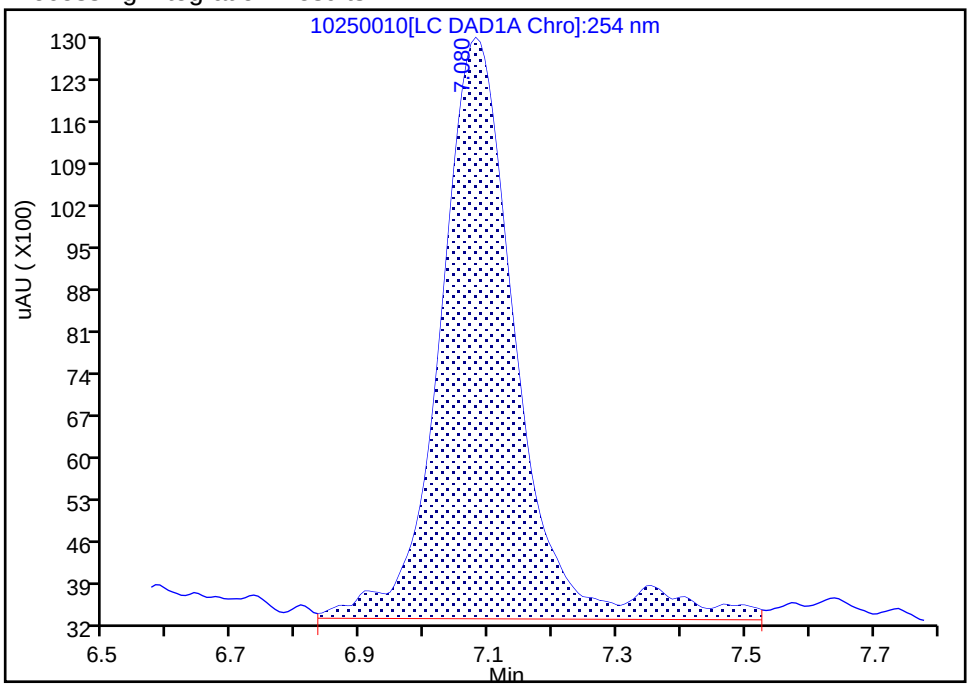
Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250010.D				
Injection Date:	25-Oct-2019 21:15:23	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC FULL LV 5				
Client ID:					
Operator ID:	CB	ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

6 HMX, CAS: 2691-41-0

Signal: 1

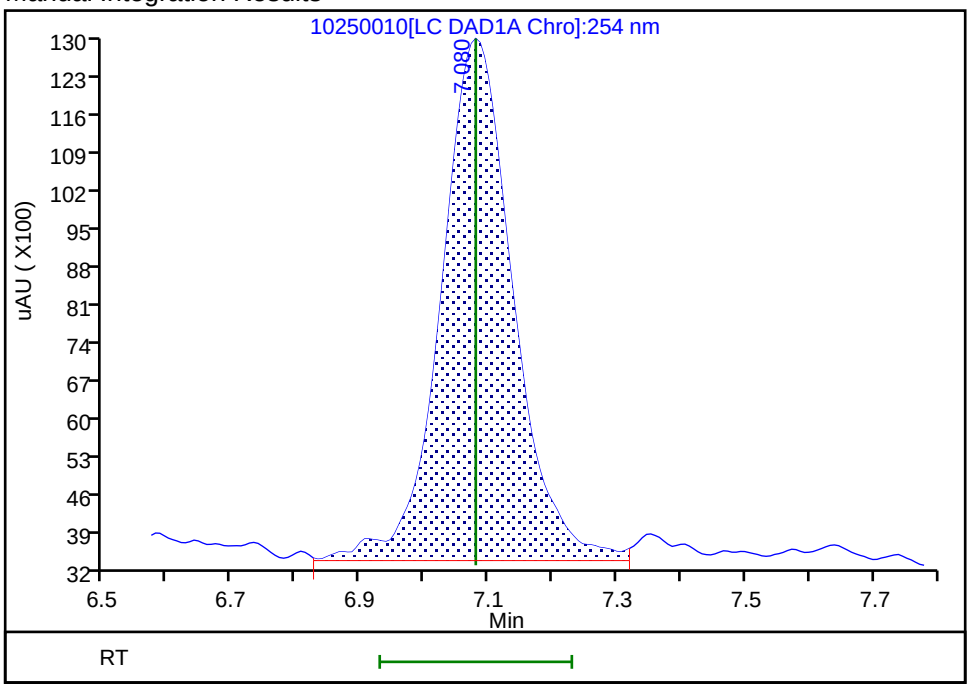
Processing Integration Results

RT: 7.08
Area: 81189
Amount: 0.406453
Amount Units: ug/ml



Manual Integration Results

RT: 7.08
Area: 75550
Amount: 0.383739
Amount Units: ug/ml



Reviewer: beckerc, 30-Oct-2019 15:38:03
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250011.D
Lims ID: IC FULL LV 4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 25-Oct-2019 21:50:18 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC FULL LV 4
Misc. Info.: 280-0086515-011
Operator ID: CB Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 30-Oct-2019 15:39:55 Calib Date: 25-Oct-2019 23:35:16
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250014.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0329

First Level Reviewer: beckerc Date: 26-Oct-2019 10:02:13

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 2,6-diamino-4-nitrotoluene	1	4.416	4.453	-0.037	164999	0.2500	0.3889	
	2 2,4-diamino-6-nitrotoluene	1	4.996	5.006	-0.010	109000	0.2500	0.3378	
	5 2,4,6-Trinitrophenol	1	5.736	5.680	0.056	47189	0.2500	0.2347	a
	6 HMX	1	7.082	7.080	0.002	45591	0.2500	0.2316	M
	8 RDX	1	9.289	9.286	0.003	60188	0.2500	0.2517	
	9 Nitrobenzene	1	12.282	12.279	0.003	96618	0.2505	0.2301	
$	10 1,2-Dinitrobenzene	1	13.229	13.219	0.010	74354	0.2500	0.2471	
	11 3,5-Dinitroaniline	1	15.076	14.939	0.137	193393	0.2500	0.3660	
	12 1,3-Dinitrobenzene	1	15.762	15.759	0.003	165000	0.2503	0.2509	
	13 Nitroglycerin	2	16.016	16.019	-0.003	330125	2.50	2.45	
	14 o-Nitrotoluene	1	16.782	16.773	0.009	63249	0.2508	0.2266	
	15 p-Nitrotoluene	1	17.042	17.053	-0.011	58276	0.2510	0.2607	
	16 4-Amino-2,6-dinitrotoluene	1	17.376	17.386	-0.010	81983	0.2508	0.2523	
	17 m-Nitrotoluene	1	17.982	17.979	0.003	69916	0.2510	0.3874	
	18 2-Amino-4,6-dinitrotoluene	1	18.256	18.259	-0.003	117140	0.2508	0.2548	
	19 1,3,5-Trinitrobenzene	1	19.109	19.126	-0.017	119705	0.2500	0.2422	
	20 2,6-Dinitrotoluene	1	20.042	20.059	-0.017	74608	0.2508	0.2310	
	21 2,4-Dinitrotoluene	1	20.536	20.540	-0.003	146679	0.2505	0.2408	
	22 Tetryl	1	23.802	23.806	-0.004	89629	0.2500	0.2533	
	23 2,4,6-Trinitrotoluene	1	24.896	24.900	-0.004	125918	0.2510	0.2509	
	24 PETN	2	25.442	25.440	0.002	329878	2.50	2.51	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

8330_ADDs_00023	Amount Added:	12.50	Units: uL
8330IntermStk_00059	Amount Added:	25.00	Units: uL

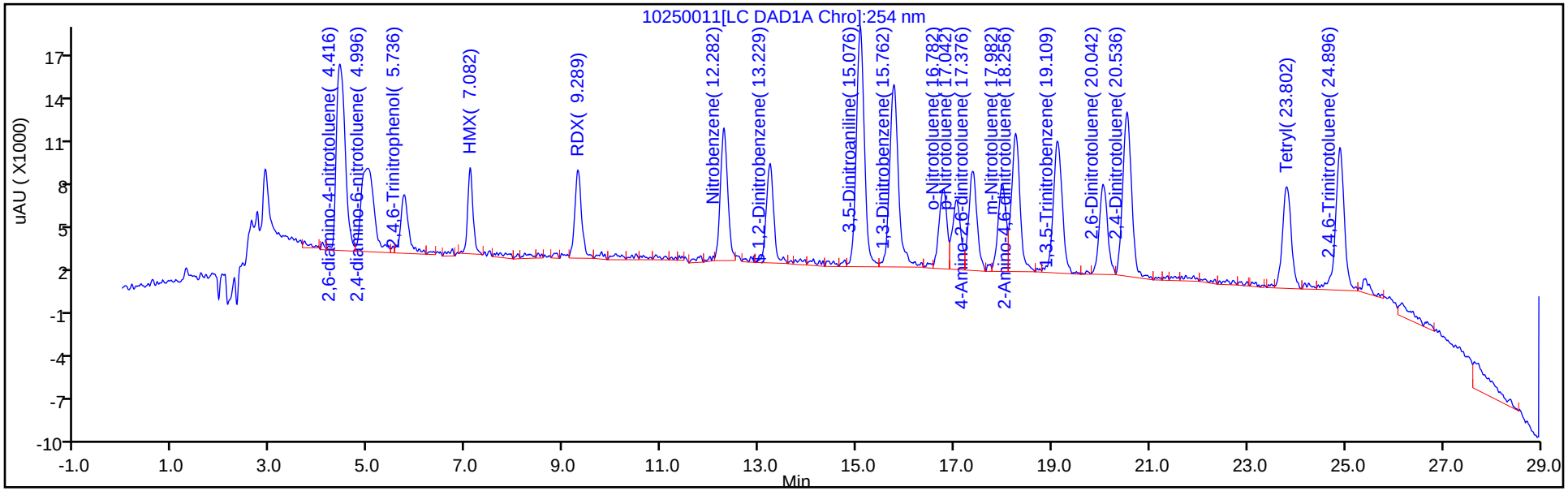
Report Date: 30-Oct-2019 15:39:55 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

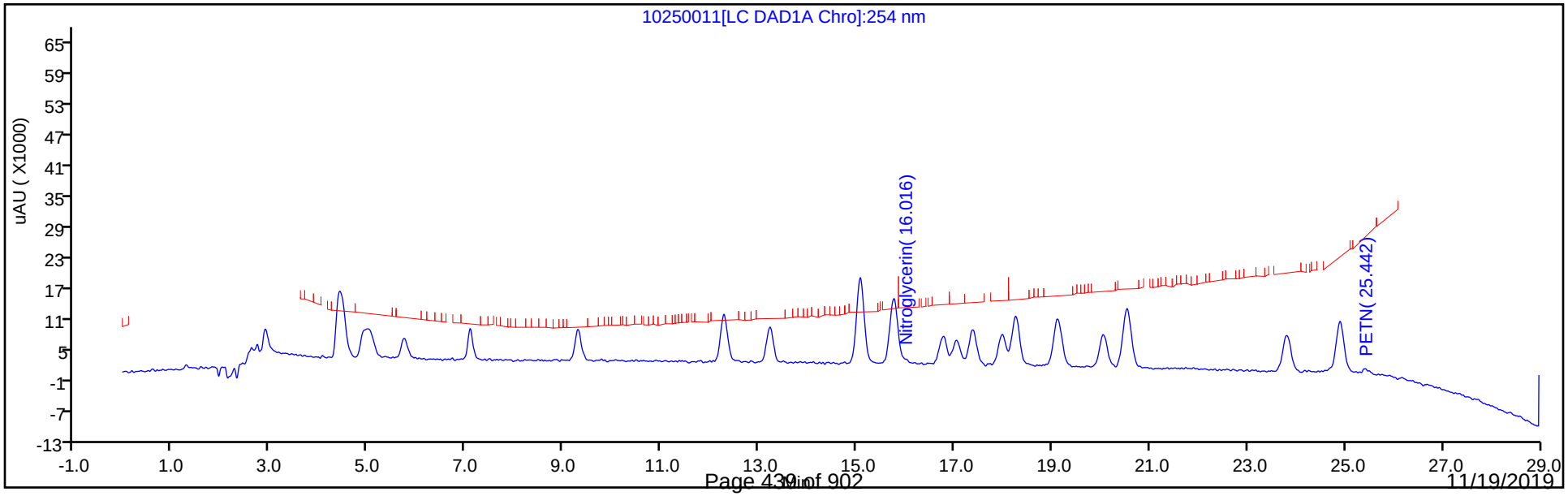
Data File: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250011.D

Injection Date:	25-Oct-2019 21:50:18	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	CB
Lims ID:	IC FULL LV 4			Worklist Smp#:	11
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

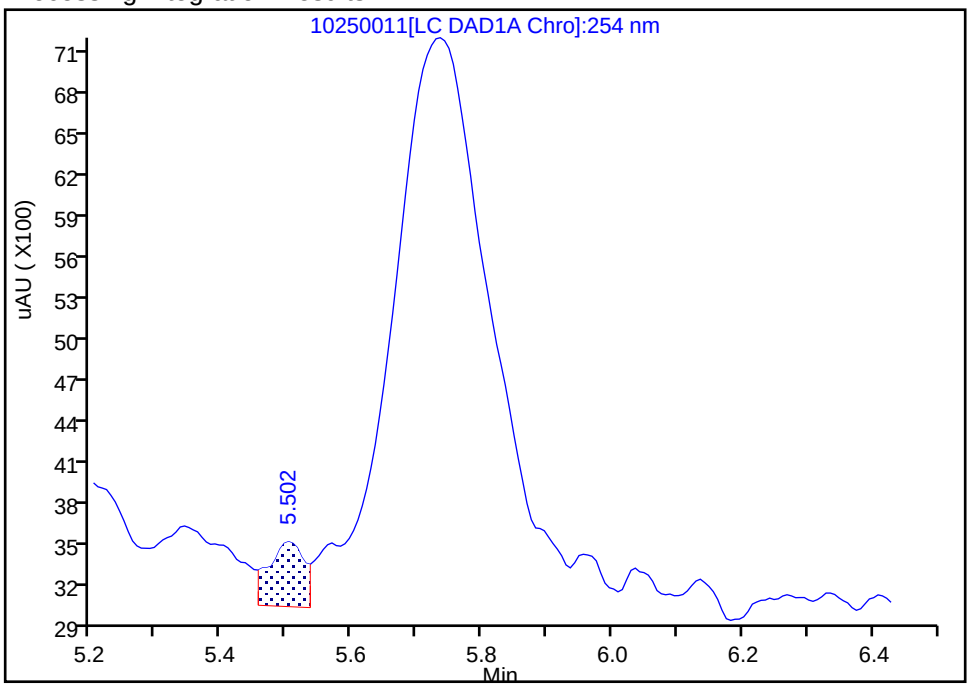
Data File: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250011.D
Injection Date: 25-Oct-2019 21:50:18 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC FULL LV 4
Client ID:
Operator ID: CB ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

5 2,4,6-Trinitrophenol, CAS: 88-89-1

Signal: 1

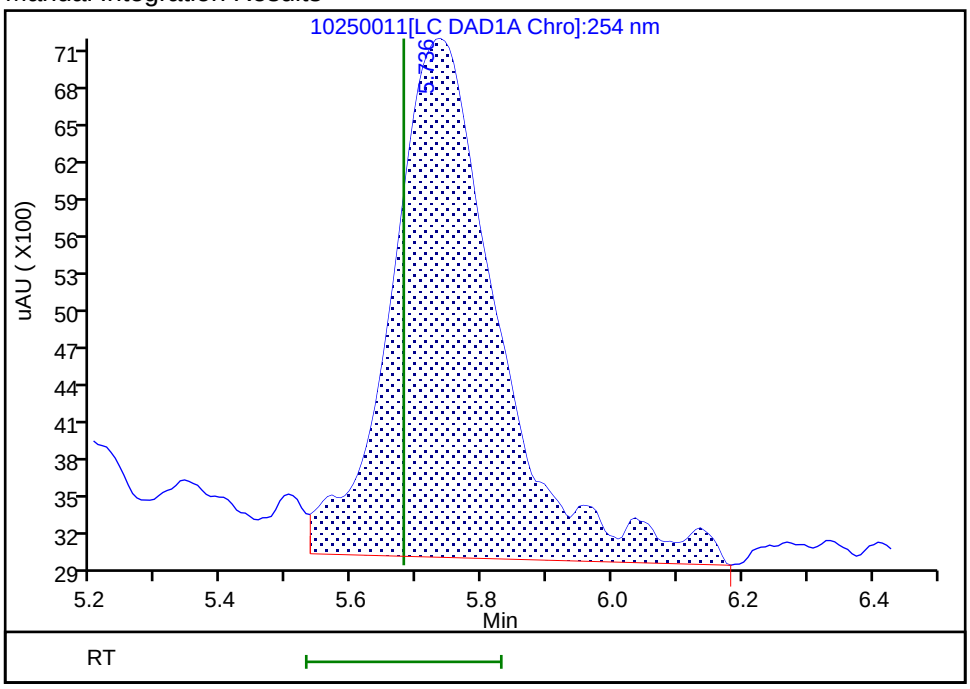
Processing Integration Results

RT: 5.50
Area: 1725
Amount: 0.027583
Amount Units: ug/ml



Manual Integration Results

RT: 5.74
Area: 47189
Amount: 0.234696
Amount Units: ug/ml



Reviewer: beckerc, 26-Oct-2019 10:01:34
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

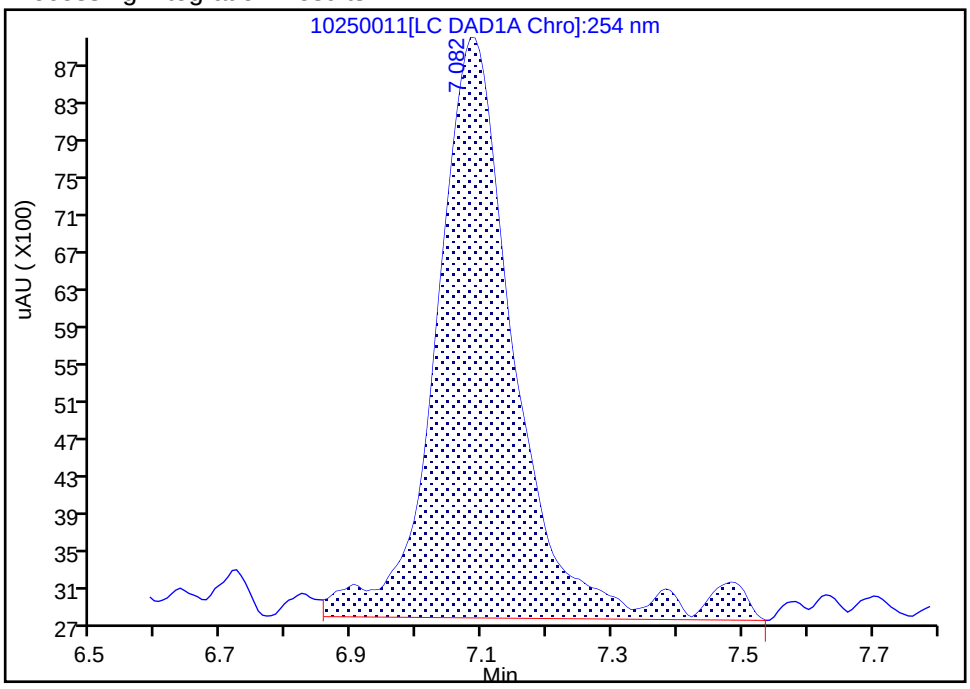
Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250011.D				
Injection Date:	25-Oct-2019 21:50:18	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC FULL LV 4				
Client ID:					
Operator ID:	CB	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

6 HMX, CAS: 2691-41-0

Signal: 1

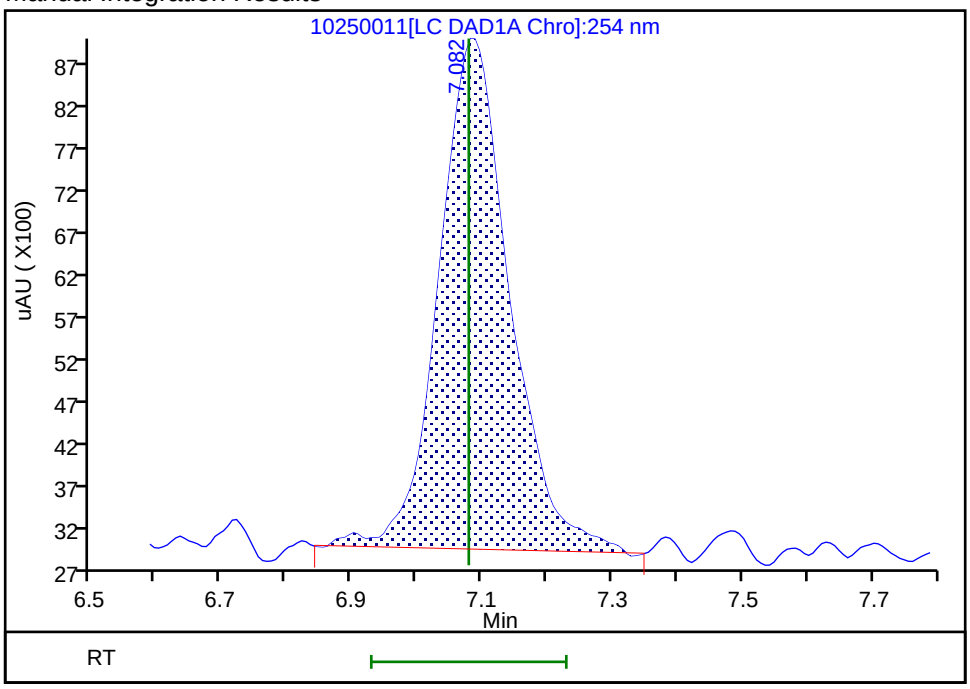
Processing Integration Results

RT: 7.08
Area: 52817
Amount: 0.259718
Amount Units: ug/ml



Manual Integration Results

RT: 7.08
Area: 45591
Amount: 0.231569
Amount Units: ug/ml



Reviewer: beckerc, 30-Oct-2019 15:36:31
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250012.D
Lims ID: IC FULL LV 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 25-Oct-2019 22:25:20 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC FULL LV 3
Misc. Info.: 280-0086515-012
Operator ID: CB Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 30-Oct-2019 15:39:56 Calib Date: 25-Oct-2019 23:35:16
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250014.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0329

First Level Reviewer: beckerc Date: 26-Oct-2019 10:13:30

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1	2,6-diamino-4-nitrotoluene	1	4.405	4.453	-0.048	41384	0.1000	0.0779	
2	2,4-diamino-6-nitrotoluene	1	4.971	5.006	-0.035	25631	0.1000	0.0794	
5	2,4,6-Trinitrophenol	1	5.785	5.680	0.105	16470	0.1000	0.0911	
6	HMX	1	7.098	7.080	0.018	19378	0.1000	0.0984	M
8	RDX	1	9.311	9.286	0.025	27712	0.1000	0.1070	
9	Nitrobenzene	1	12.284	12.279	0.005	43843	0.1002	0.0948	
$ 10	1,2-Dinitrobenzene	1	13.224	13.219	0.005	33671	0.1000	0.0986	
11	3,5-Dinitroaniline	1	15.071	14.939	0.132	51528	0.1000	0.0970	
12	1,3-Dinitrobenzene	1	15.771	15.759	0.012	71334	0.1001	0.1085	
13	Nitroglycerin	2	16.018	16.019	-0.001	135121	1.00	1.00	M
14	o-Nitrotoluene	1	16.751	16.773	-0.022	27623	0.1003	0.0990	M
15	p-Nitrotoluene	1	17.051	17.053	-0.002	27451	0.1004	0.1228	M
16	4-Amino-2,6-dinitrotoluene	1	17.371	17.386	-0.015	37229	0.1003	0.1146	M
17	m-Nitrotoluene	1	17.958	17.979	-0.021	31235	0.1004	NQ	M
18	2-Amino-4,6-dinitrotoluene	1	18.258	18.259	-0.001	51241	0.1003	0.1114	M
19	1,3,5-Trinitrobenzene	1	19.118	19.126	-0.008	52905	0.1000	0.1070	M
20	2,6-Dinitrotoluene	1	20.051	20.059	-0.008	33396	0.1003	0.1034	M
21	2,4-Dinitrotoluene	1	20.538	20.540	-0.001	66264	0.1002	0.1088	
22	Tetryl	1	23.818	23.806	0.012	37173	0.1000	0.1051	
23	2,4,6-Trinitrotoluene	1	24.918	24.900	0.018	55343	0.1004	0.0881	
24	PETN	2	25.451	25.440	0.011	154093	1.00	1.17	

QC Flag Legend

Processing Flags
NQ - Not Quantifiable
Review Flags
M - Manually Integrated

Reagents:

8330_ADDs_00023	Amount Added: 5.00	Units: uL
8330IntermStk_00059	Amount Added: 10.00	Units: uL

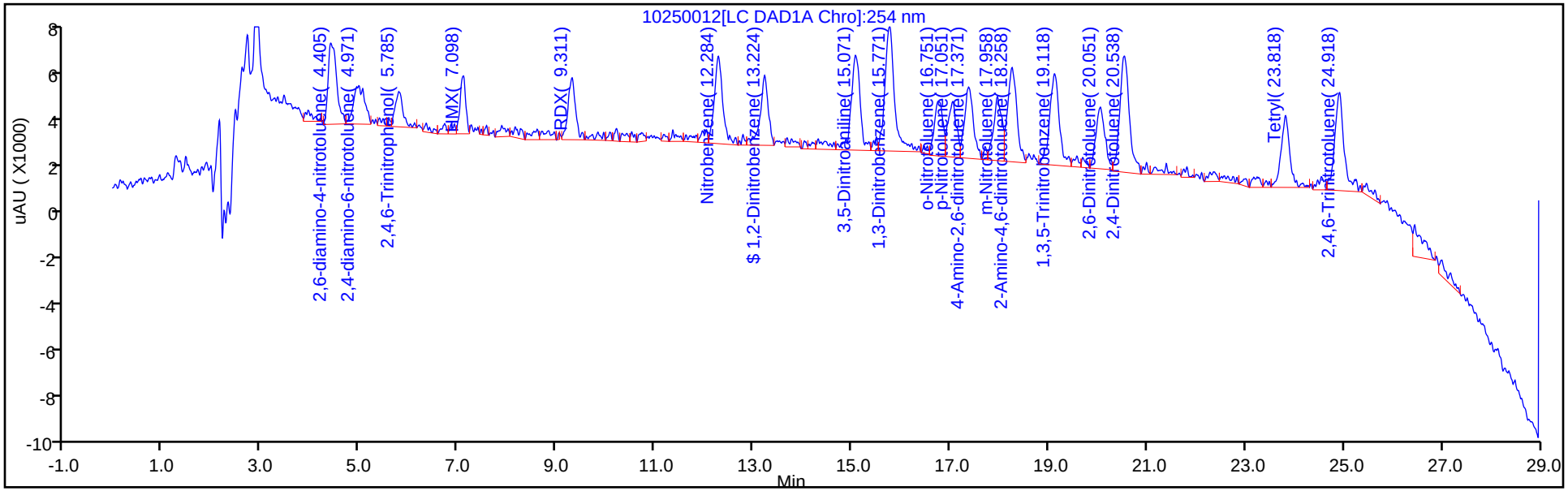
Report Date: 30-Oct-2019 15:39:56 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

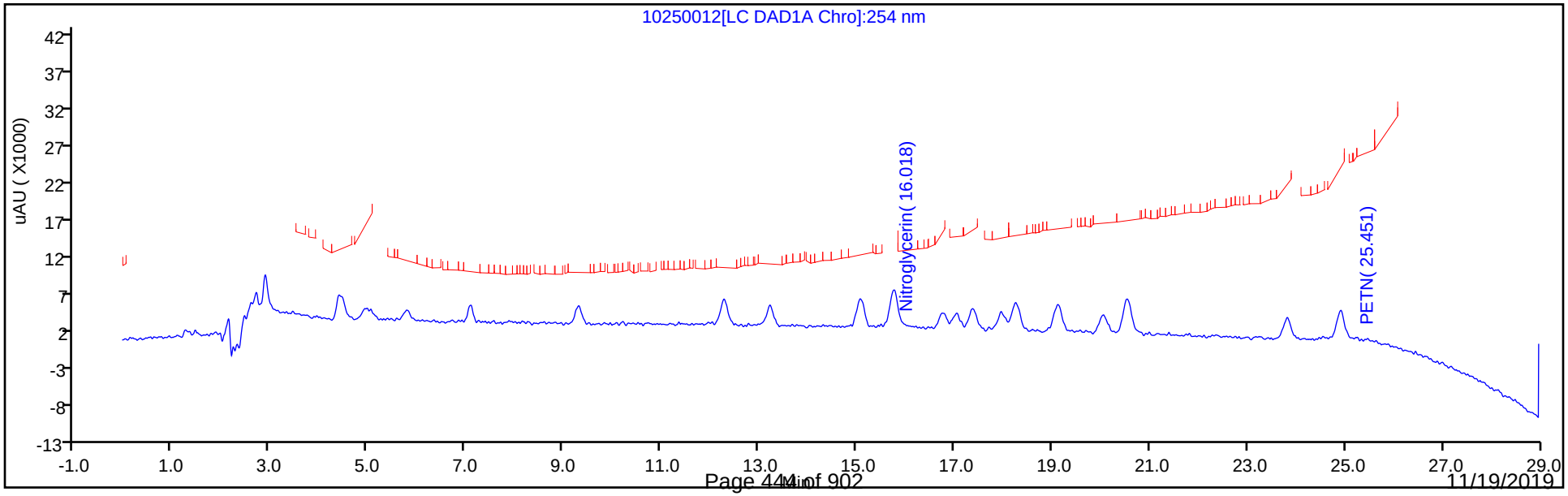
Data File: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250012.D

Injection Date:	25-Oct-2019 22:25:20	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	CB
Lims ID:	IC FULL LV 3			Worklist Smp#:	12
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

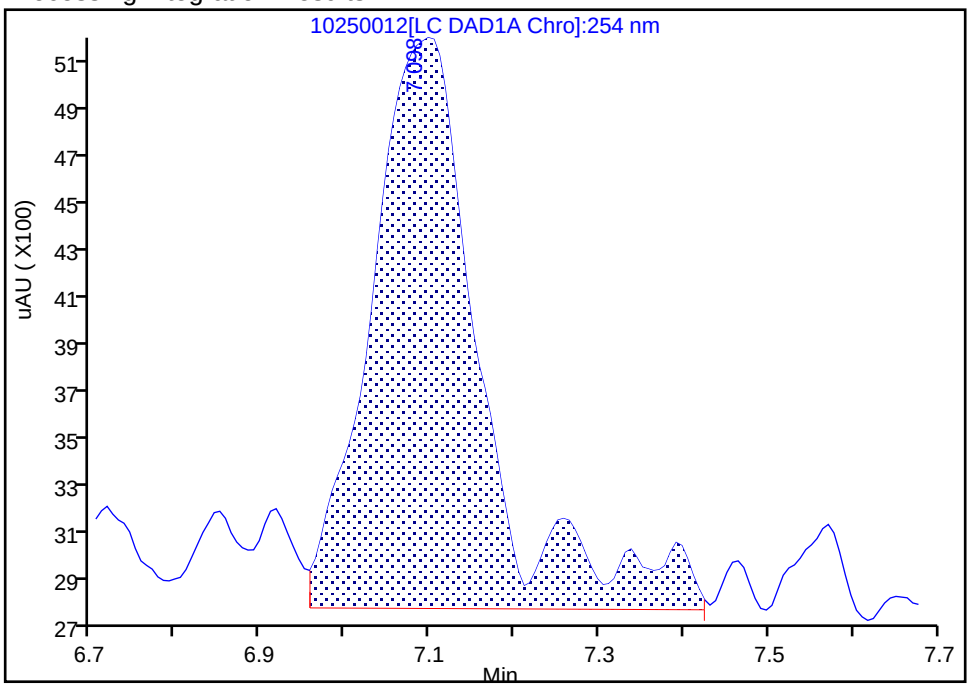
Data File: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250012.D
Injection Date: 25-Oct-2019 22:25:20 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC FULL LV 3
Client ID:
Operator ID: CB ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

6 HMX, CAS: 2691-41-0

Signal: 1

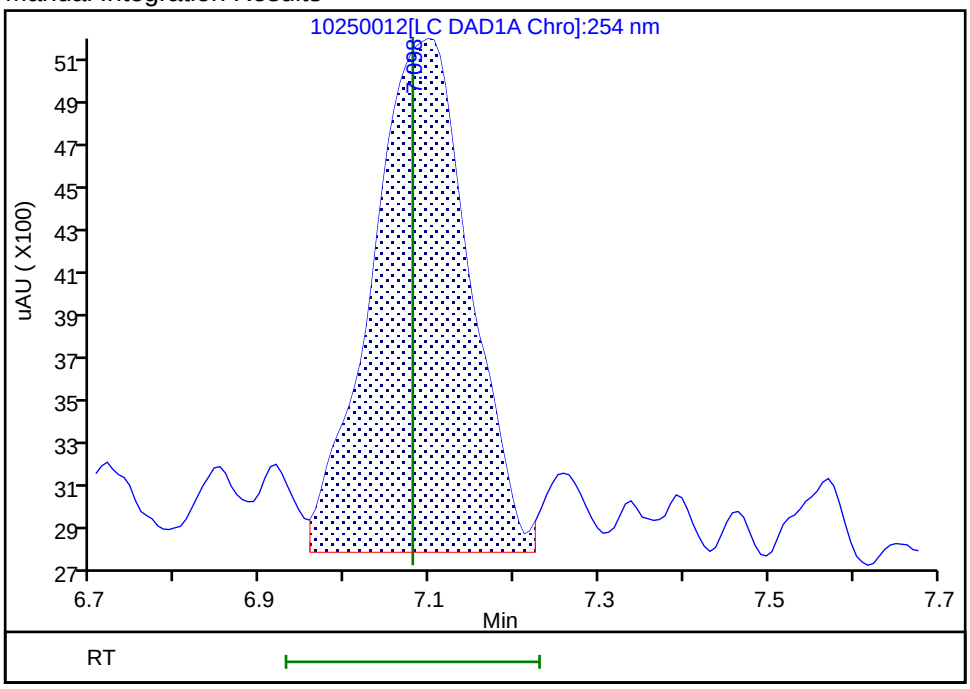
Processing Integration Results

RT: 7.10
Area: 22191
Amount: 0.107265
Amount Units: ug/ml



Manual Integration Results

RT: 7.10
Area: 19378
Amount: 0.098426
Amount Units: ug/ml



Reviewer: beckerc, 30-Oct-2019 15:35:52
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

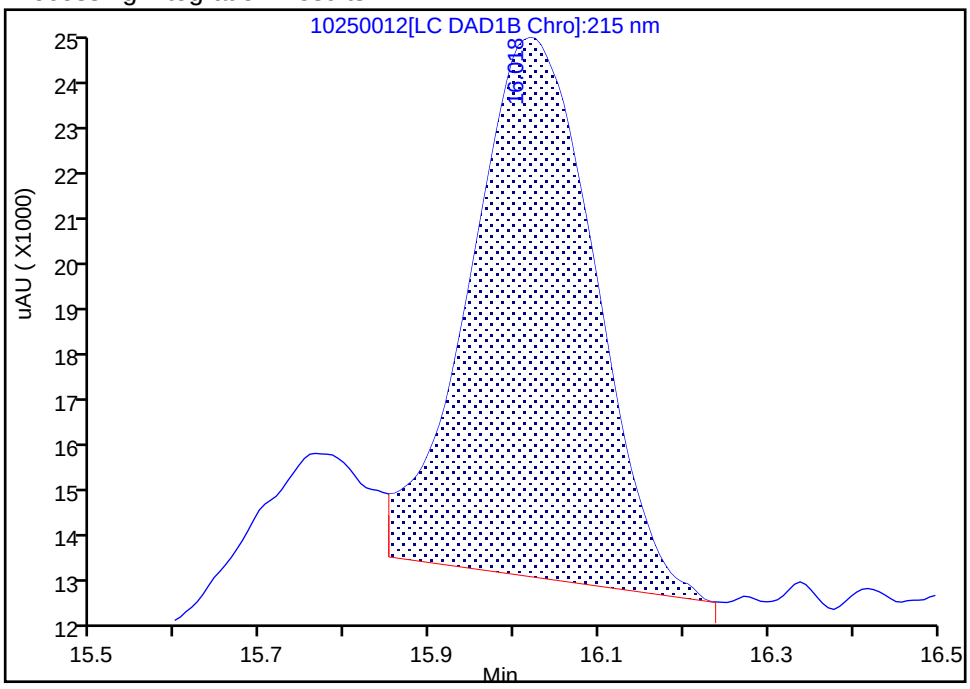
Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250012.D		
Injection Date:	25-Oct-2019 22:25:20	Instrument ID:	CHHPLC_G2_LUNA
Lims ID:	IC FULL LV 3		
Client ID:			
Operator ID:	CB	ALS Bottle#:	12 Worklist Smp#: 12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330
Column:		Detector	LC DAD1B, 215 nm

13 Nitroglycerin, CAS: 55-63-0

Signal: 1

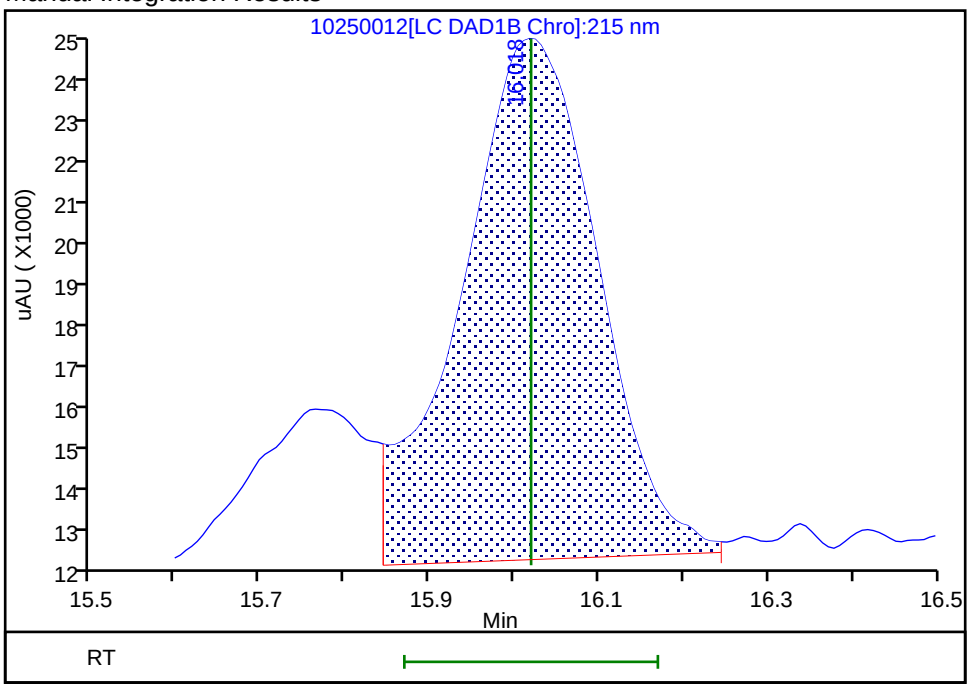
Processing Integration Results

RT: 16.02
Area: 114086
Amount: 0.863255
Amount Units: ug/ml



Manual Integration Results

RT: 16.02
Area: 135121
Amount: 1.002475
Amount Units: ug/ml



Reviewer: beckerc, 26-Oct-2019 10:12:27

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

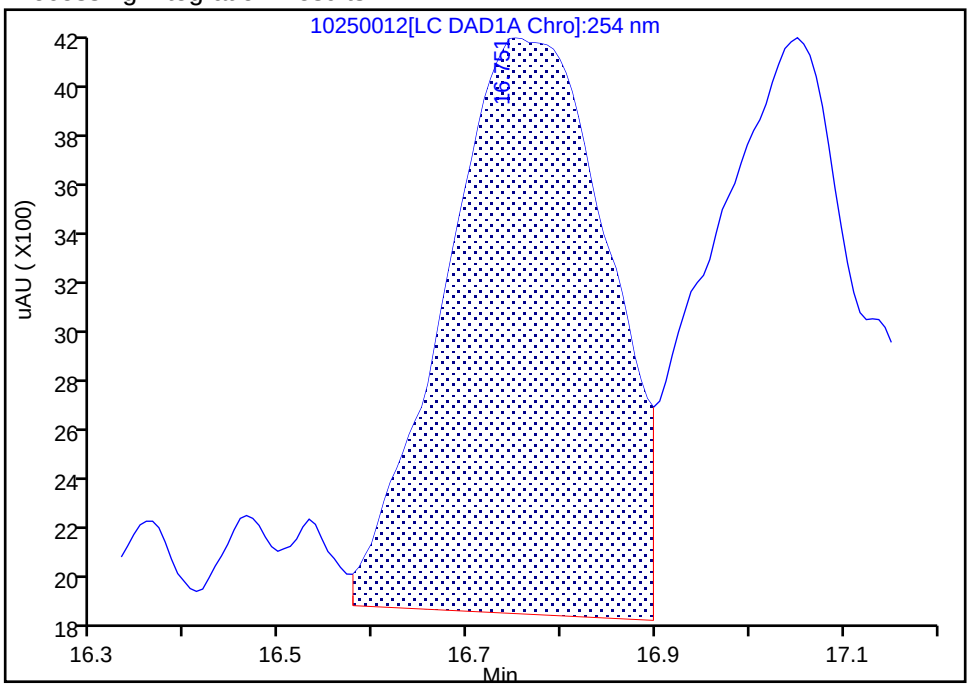
Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250012.D				
Injection Date:	25-Oct-2019 22:25:20	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC FULL LV 3				
Client ID:					
Operator ID:	CB	ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

14 o-Nitrotoluene, CAS: 88-72-2

Signal: 1

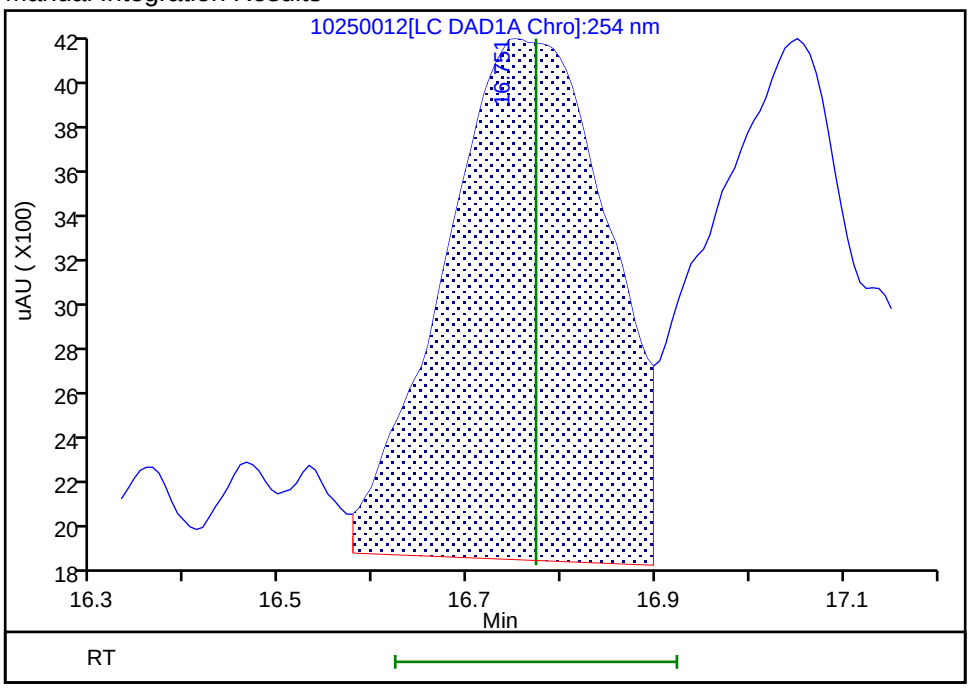
Processing Integration Results

RT: 16.75
Area: 26740
Amount: 0.096171
Amount Units: ug/ml



Manual Integration Results

RT: 16.75
Area: 27623
Amount: 0.098955
Amount Units: ug/ml



Reviewer: beckerc, 26-Oct-2019 10:13:19

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

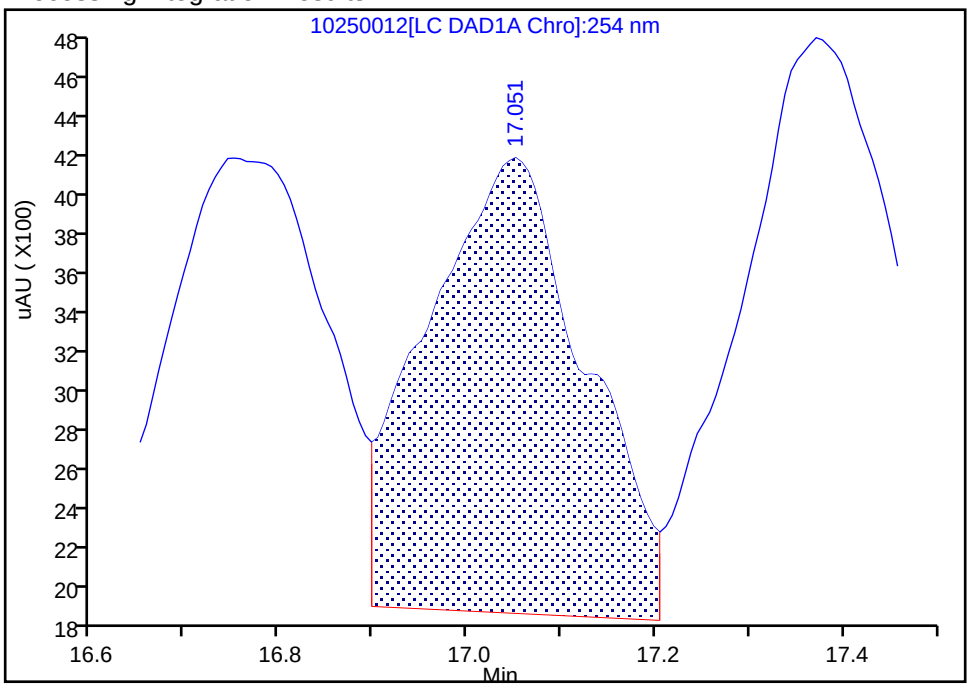
Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250012.D				
Injection Date:	25-Oct-2019 22:25:20	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC FULL LV 3				
Client ID:					
Operator ID:	CB	ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

15 p-Nitrotoluene, CAS: 99-99-0

Signal: 1

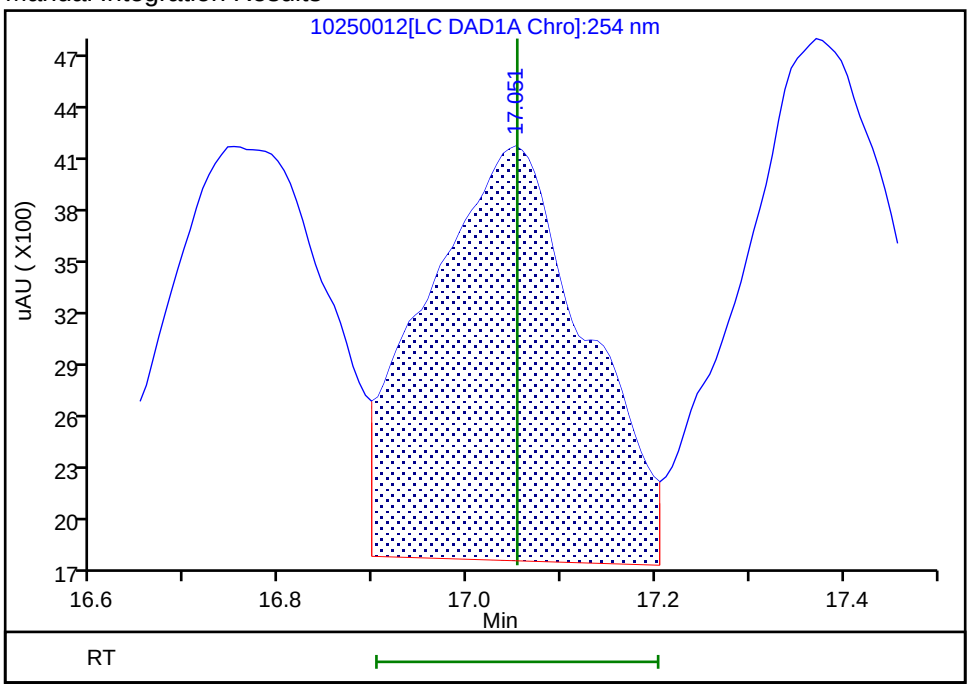
Processing Integration Results

RT: 17.05
Area: 26826
Amount: 0.120444
Amount Units: ug/ml



Manual Integration Results

RT: 17.05
Area: 27451
Amount: 0.122821
Amount Units: ug/ml



Reviewer: beckerc, 26-Oct-2019 10:13:19

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

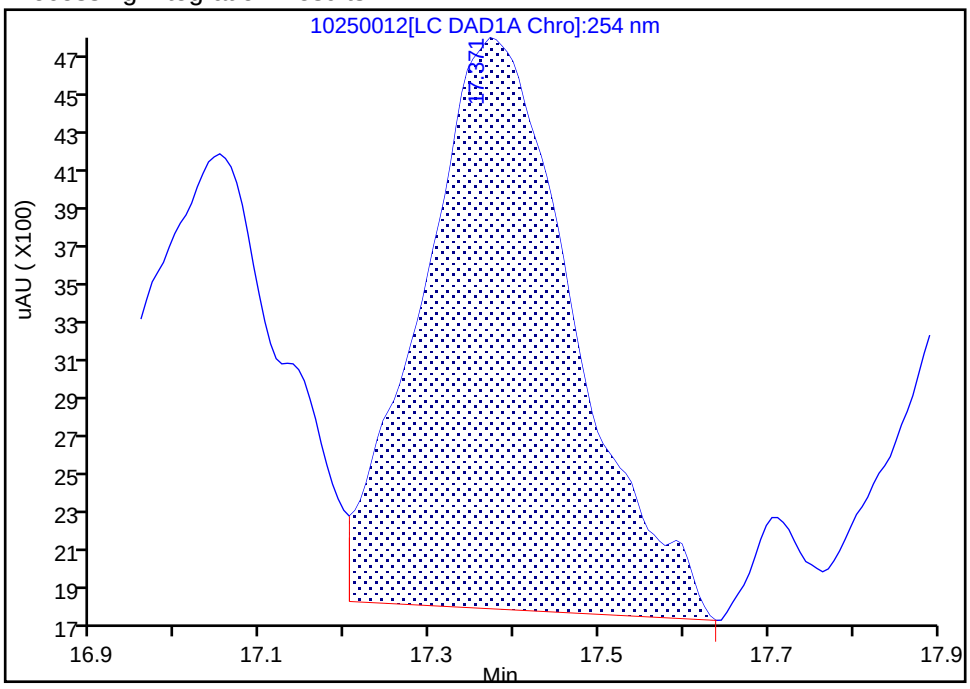
Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250012.D				
Injection Date:	25-Oct-2019 22:25:20	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC FULL LV 3				
Client ID:					
Operator ID:	CB	ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

16 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

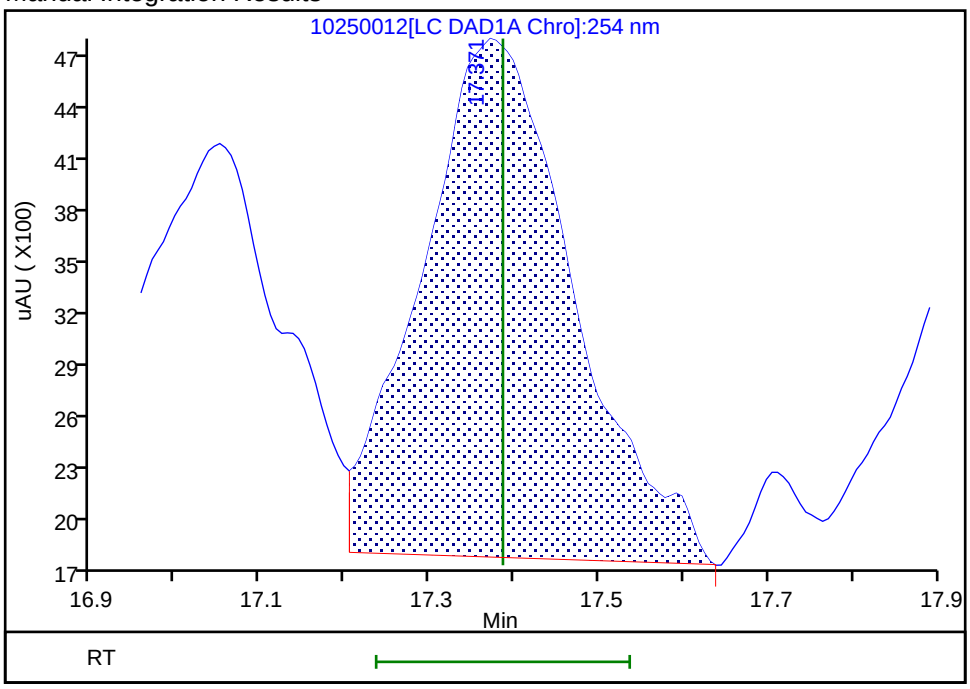
Processing Integration Results

RT: 17.37
Area: 36969
Amount: 0.113873
Amount Units: ug/ml



Manual Integration Results

RT: 17.37
Area: 37229
Amount: 0.114559
Amount Units: ug/ml



Reviewer: beckerc, 26-Oct-2019 10:13:19
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

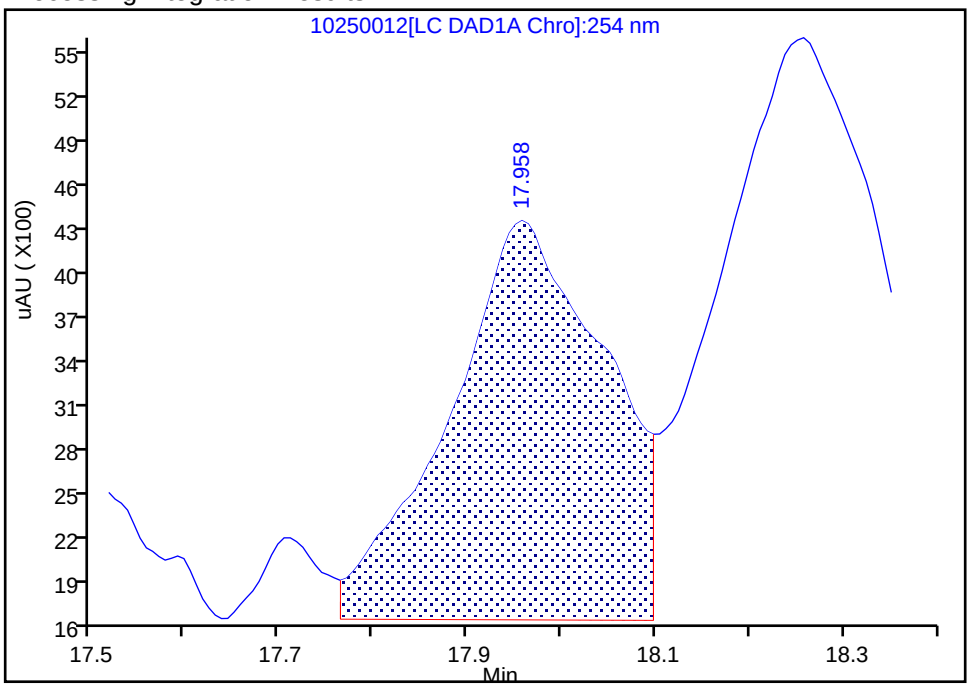
Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250012.D				
Injection Date:	25-Oct-2019 22:25:20	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC FULL LV 3				
Client ID:					
Operator ID:	CB	ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

17 m-Nitrotoluene, CAS: 99-08-1

Signal: 1

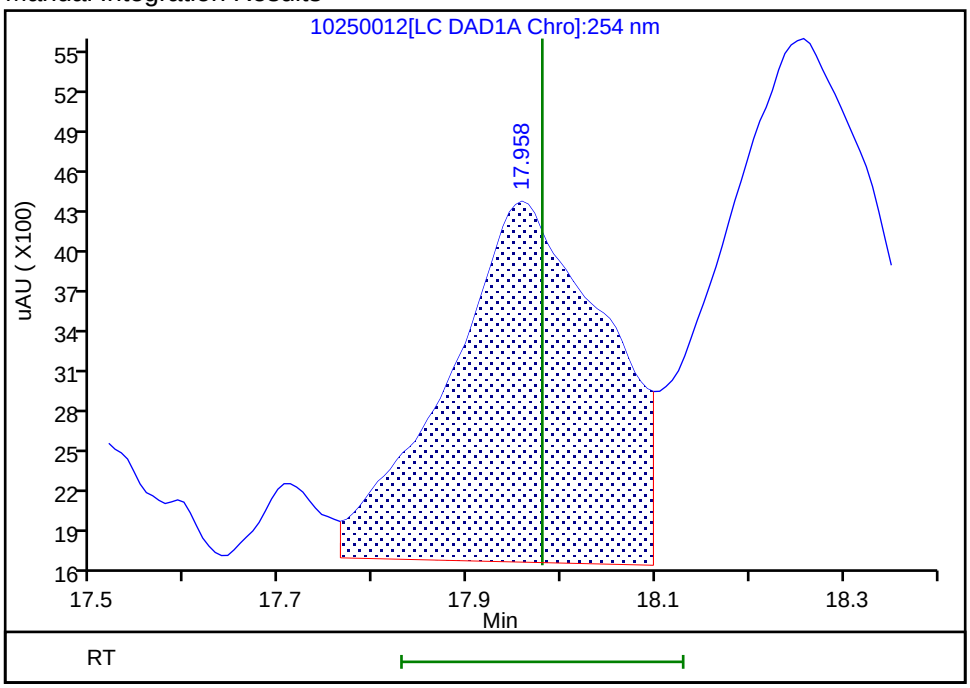
Processing Integration Results

RT: 17.96
Area: 30505
Amount: NaN
Amount Units: ug/ml



Manual Integration Results

RT: 17.96
Area: 31235
Amount: NaN
Amount Units: ug/ml



Reviewer: beckerc, 26-Oct-2019 10:13:19

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

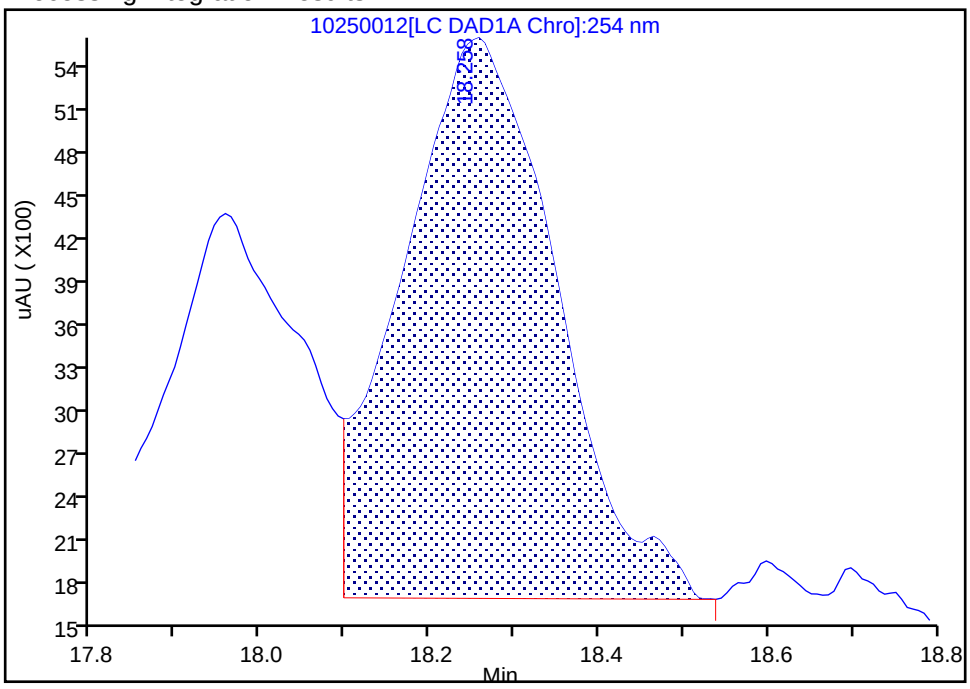
Data File: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250012.D
Injection Date: 25-Oct-2019 22:25:20 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC FULL LV 3
Client ID:
Operator ID: CB ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

18 2-Amino-4,6-dinitrotoluene, CAS: 35572-78-2

Signal: 1

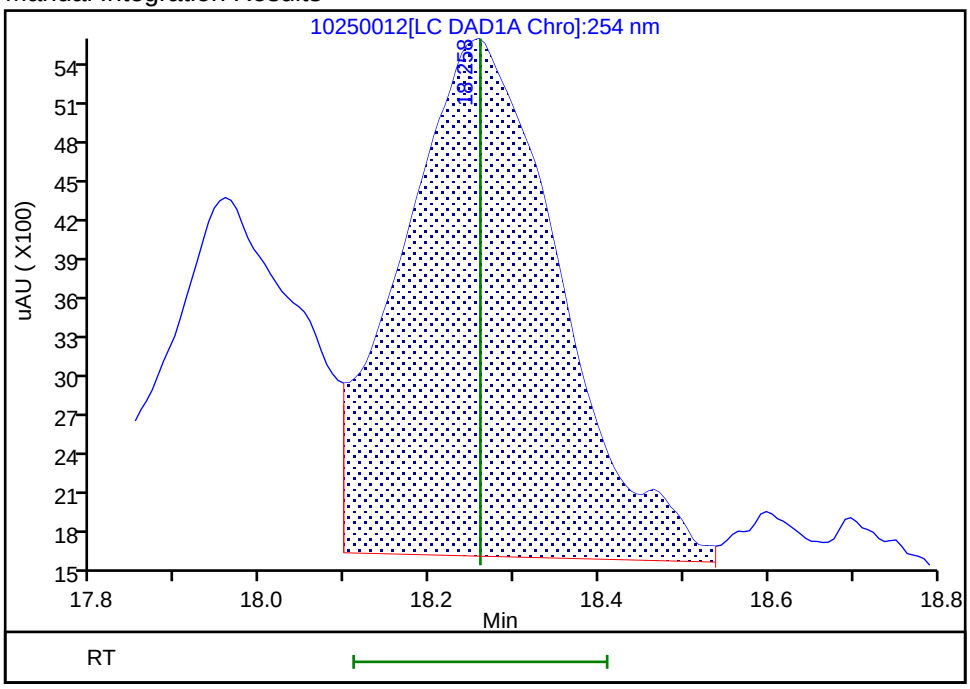
Processing Integration Results

RT: 18.26
Area: 48865
Amount: 0.107068
Amount Units: ug/ml



Manual Integration Results

RT: 18.26
Area: 51241
Amount: 0.111448
Amount Units: ug/ml



Reviewer: beckerc, 26-Oct-2019 10:13:19
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

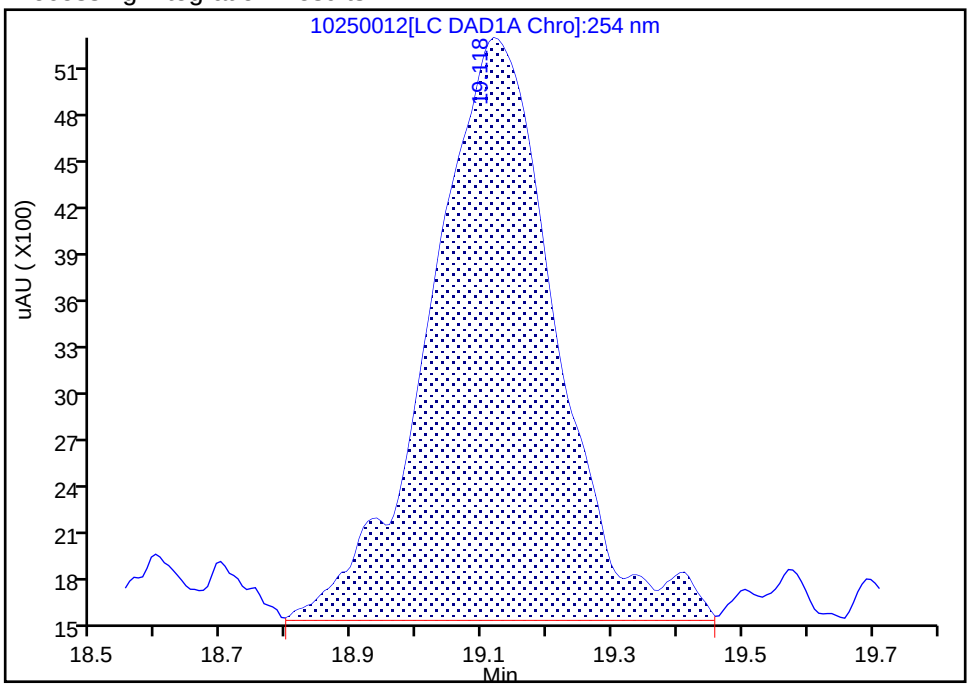
Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250012.D				
Injection Date:	25-Oct-2019 22:25:20	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC FULL LV 3				
Client ID:					
Operator ID:	CB	ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

19 1,3,5-Trinitrobenzene, CAS: 99-35-4

Signal: 1

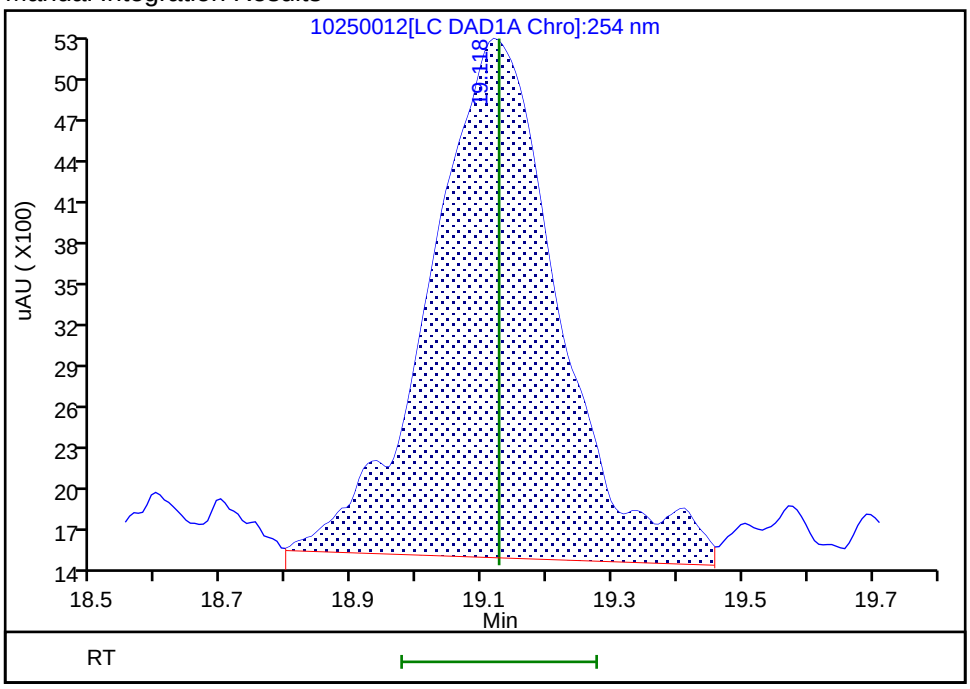
Processing Integration Results

RT: 19.12
Area: 50767
Amount: 0.103265
Amount Units: ug/ml



Manual Integration Results

RT: 19.12
Area: 52905
Amount: 0.107032
Amount Units: ug/ml



Reviewer: beckerc, 26-Oct-2019 10:13:19

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

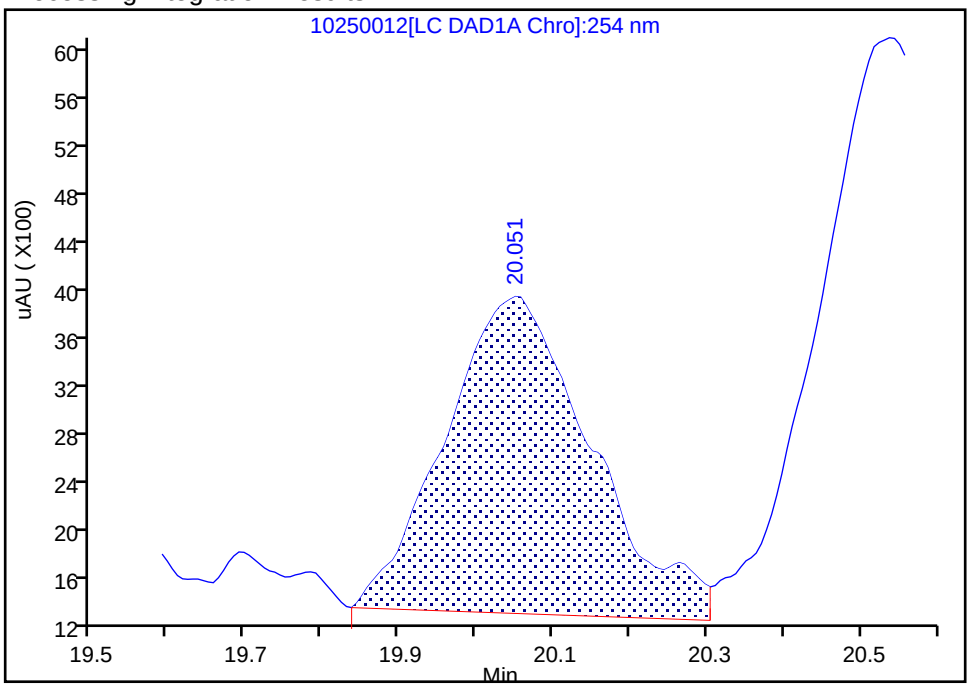
Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250012.D				
Injection Date:	25-Oct-2019 22:25:20	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC FULL LV 3				
Client ID:					
Operator ID:	CB	ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

20 2,6-Dinitrotoluene, CAS: 606-20-2

Signal: 1

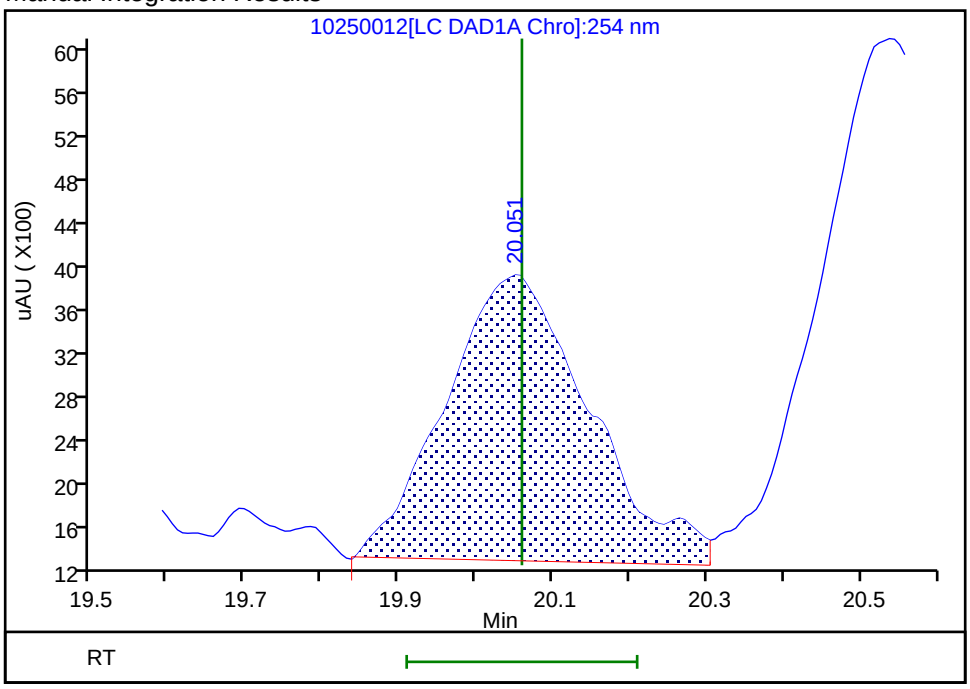
Processing Integration Results

RT: 20.05
Area: 34390
Amount: 0.106093
Amount Units: ug/ml



Manual Integration Results

RT: 20.05
Area: 33396
Amount: 0.103422
Amount Units: ug/ml



Reviewer: beckerc, 26-Oct-2019 10:13:19

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250013.D
Lims ID: IC FULL LV 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 25-Oct-2019 23:00:18 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC FULL LV 2
Misc. Info.: 280-0086515-013
Operator ID: CB Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 30-Oct-2019 15:39:57 Calib Date: 25-Oct-2019 23:35:16
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250014.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0329

First Level Reviewer: beckerc Date: 26-Oct-2019 10:14:09

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1	2,6-diamino-4-nitrotoluene	1	4.463	4.453	0.010	22117	0.0500	0.0294	
2	2,4-diamino-6-nitrotoluene	1	5.003	5.006	-0.003	14824	0.0500	0.0459	
5	2,4,6-Trinitrophenol	1	5.697	5.680	0.017	9058	0.0500	0.0582	
6	HMX	1	7.070	7.080	-0.010	11393	0.0500	0.0579	M
8	RDX	1	9.270	9.286	-0.016	15449	0.0500	0.0524	
9	Nitrobenzene	1	12.257	12.279	-0.022	21036	0.0501	0.0363	
$ 10	1,2-Dinitrobenzene	1	13.197	13.219	-0.022	18321	0.0500	0.0426	
11	3,5-Dinitroaniline	1	15.070	14.939	0.131	26041	0.0500	0.0487	
12	1,3-Dinitrobenzene	1	15.723	15.759	-0.036	39507	0.0501	0.0601	
13	Nitroglycerin	2	15.997	16.019	-0.022	66943	0.5000	0.4967	
14	o-Nitrotoluene	1	16.730	16.773	-0.043	16091	0.0502	0.0576	
15	p-Nitrotoluene	1	16.990	17.053	-0.063	13964	0.0502	0.0625	
16	4-Amino-2,6-dinitrotoluene	1	17.337	17.386	-0.049	17206	0.0502	0.0529	
17	m-Nitrotoluene	1	17.943	17.979	-0.036	16928	0.0502	NQ	
18	2-Amino-4,6-dinitrotoluene	1	18.237	18.259	-0.022	24593	0.0502	0.0535	
19	1,3,5-Trinitrobenzene	1	19.103	19.126	-0.023	25950	0.0500	0.0525	
20	2,6-Dinitrotoluene	1	20.017	20.059	-0.042	17115	0.0502	0.0530	
21	2,4-Dinitrotoluene	1	20.510	20.540	-0.029	31965	0.0501	0.0525	
22	Tetryl	1	23.803	23.806	-0.003	19905	0.0500	0.0563	M
23	2,4,6-Trinitrotoluene	1	24.870	24.900	-0.030	44280	0.0502	0.0626	M
24	PETN	2	25.437	25.440	-0.003	67994	0.5000	0.5171	

QC Flag Legend

Processing Flags
NQ - Not Quantifiable
Review Flags
M - Manually Integrated

Reagents:

8330_ADDs_00023	Amount Added:	2.50	Units: uL
8330IntermStk_00059	Amount Added:	5.00	Units: uL

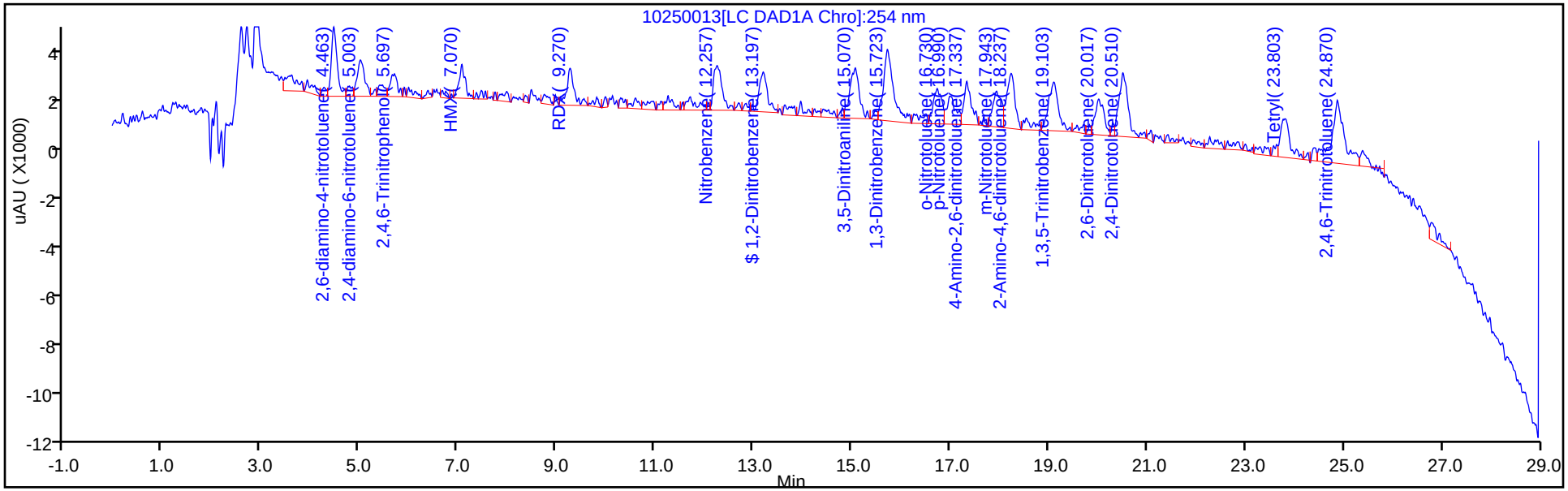
Report Date: 30-Oct-2019 15:39:57 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

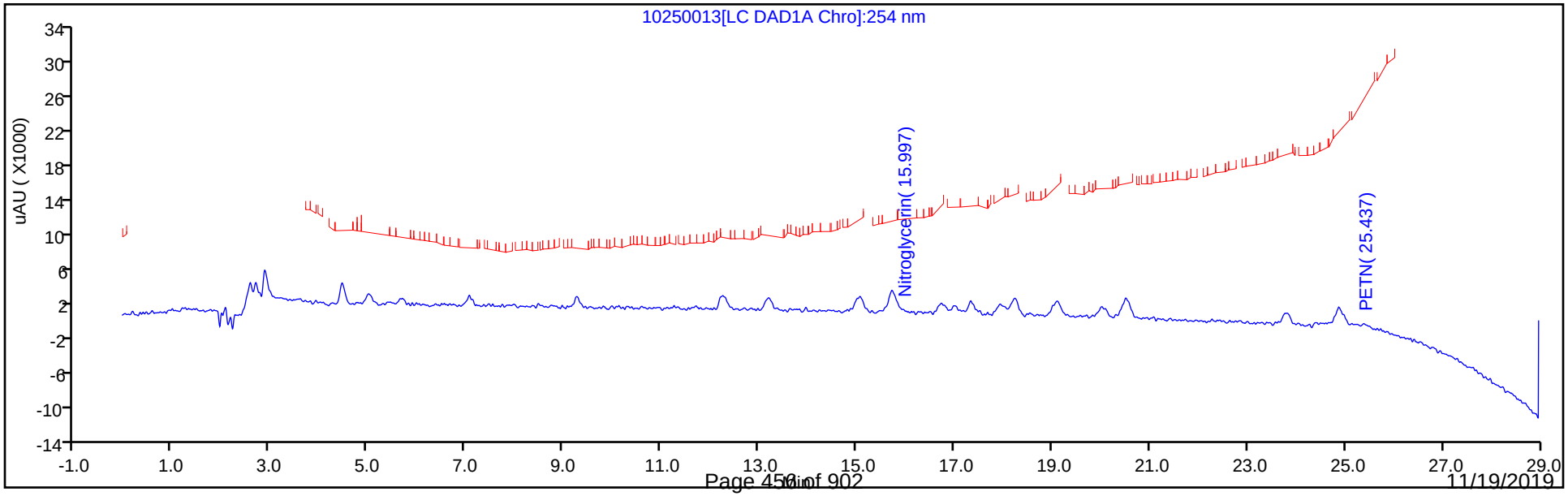
Data File: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250013.D

Injection Date:	25-Oct-2019 23:00:18	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	CB
Lims ID:	IC FULL LV 2			Worklist Smp#:	13
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

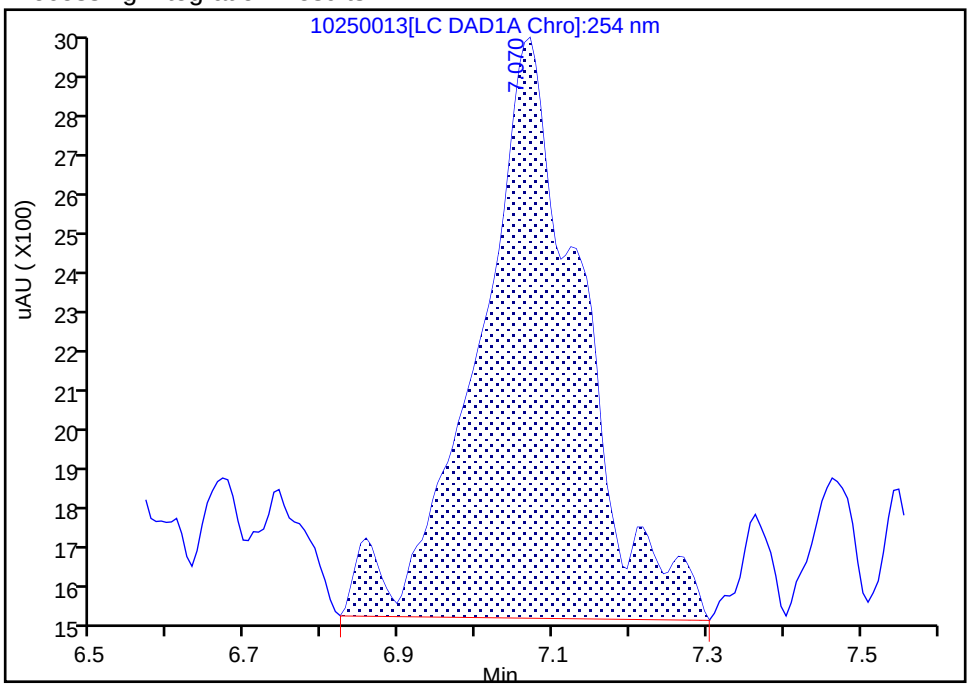
Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250013.D				
Injection Date:	25-Oct-2019 23:00:18	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC FULL LV 2				
Client ID:					
Operator ID:	CB	ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

6 HMX, CAS: 2691-41-0

Signal: 1

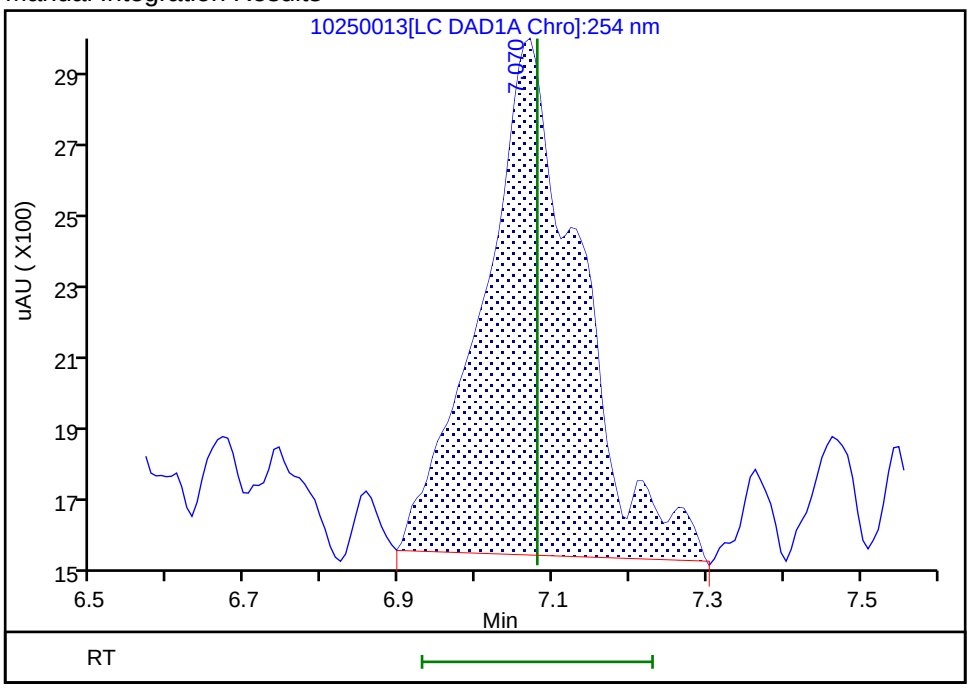
Processing Integration Results

RT: 7.07
Area: 12274
Amount: 0.058704
Amount Units: ug/ml



Manual Integration Results

RT: 7.07
Area: 11393
Amount: 0.057868
Amount Units: ug/ml



Reviewer: beckerc, 30-Oct-2019 15:35:30
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

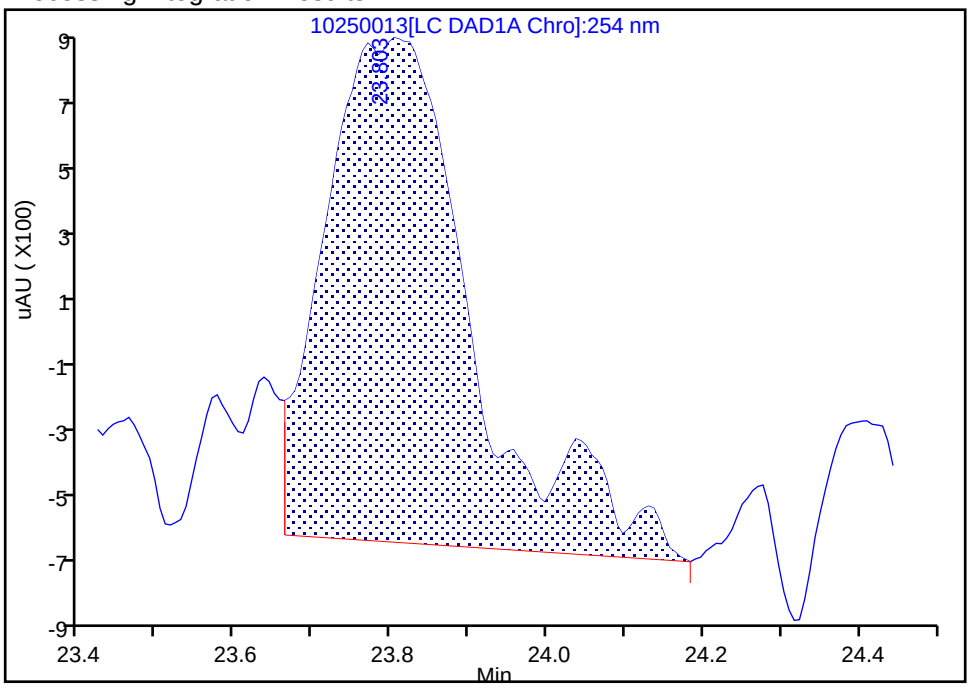
Data File: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250013.D
Injection Date: 25-Oct-2019 23:00:18 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC FULL LV 2
Client ID:
Operator ID: CB ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

22 Tetryl, CAS: 479-45-8

Signal: 1

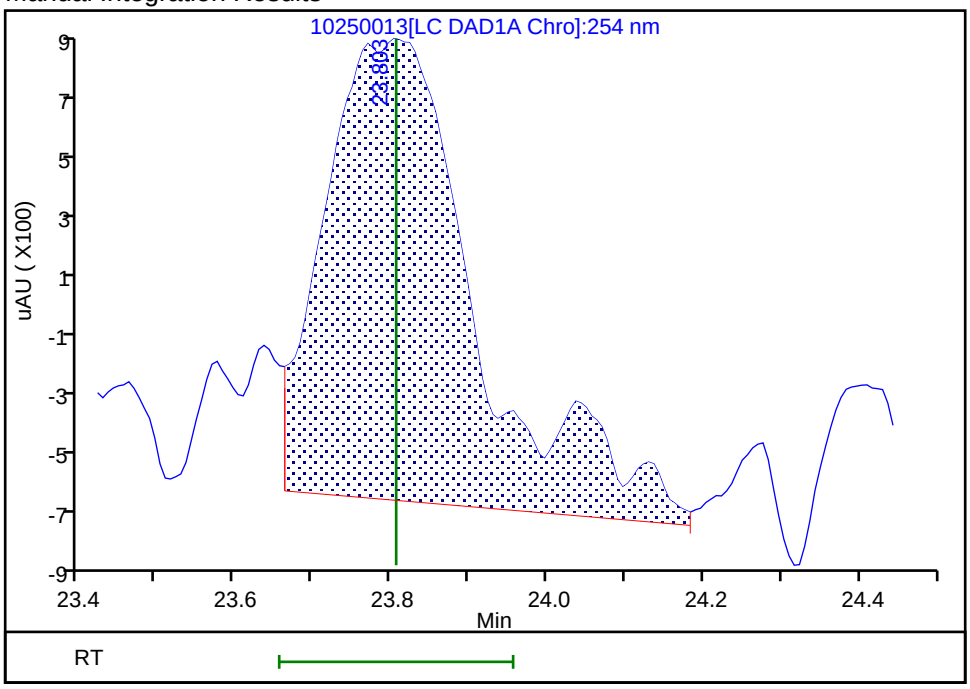
Processing Integration Results

RT: 23.80
Area: 19109
Amount: 0.054308
Amount Units: ug/ml



Manual Integration Results

RT: 23.80
Area: 19905
Amount: 0.056252
Amount Units: ug/ml



Reviewer: beckerc, 26-Oct-2019 10:14:03
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

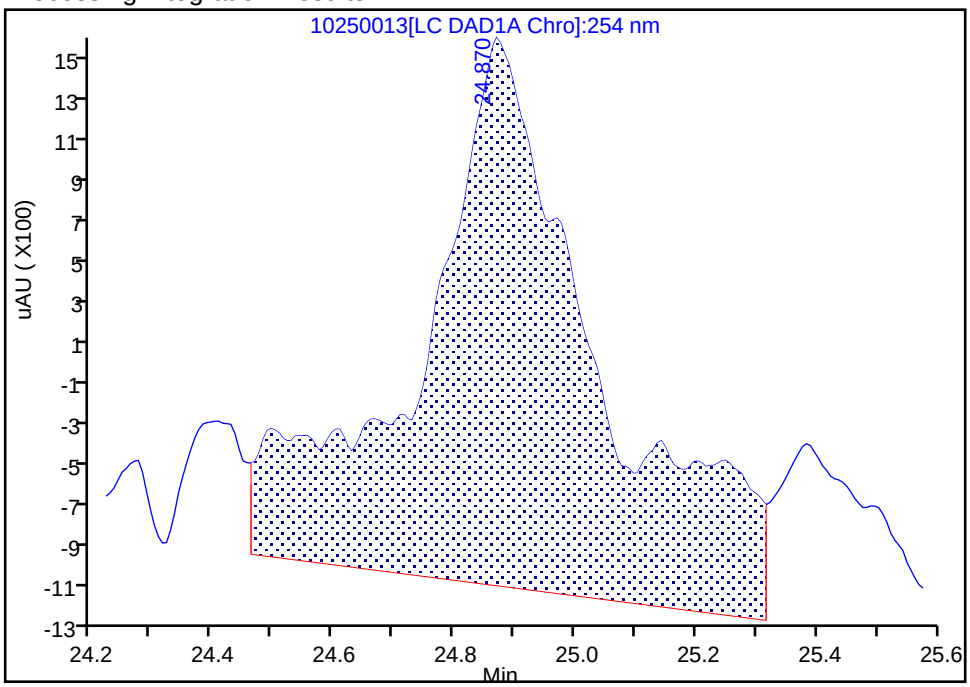
Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250013.D				
Injection Date:	25-Oct-2019 23:00:18	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC FULL LV 2				
Client ID:					
Operator ID:	CB	ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

23 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

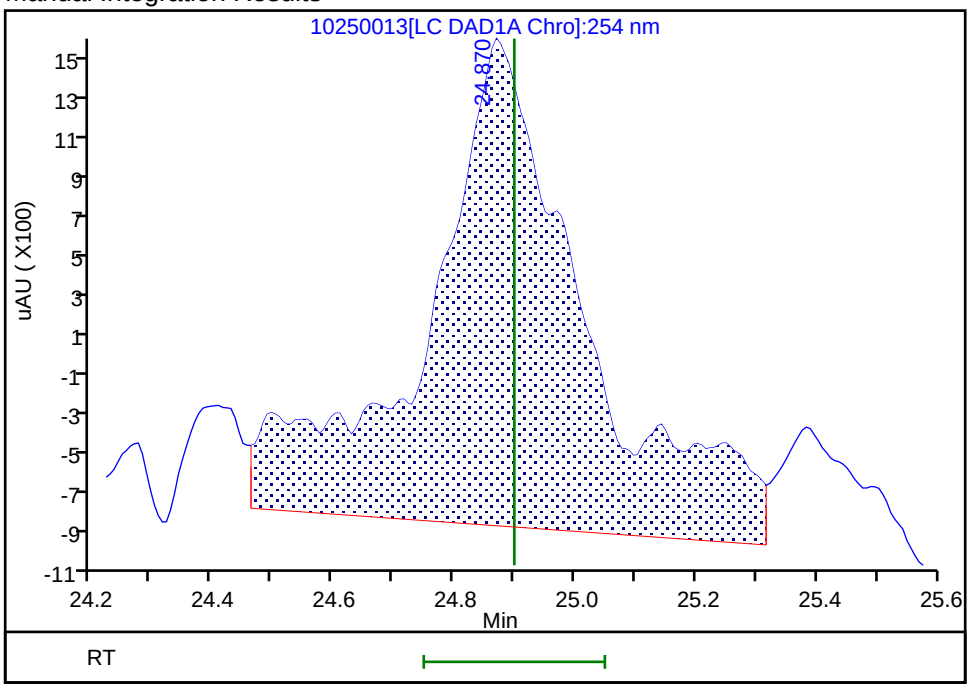
Processing Integration Results

RT: 24.87
Area: 53829
Amount: 0.079667
Amount Units: ug/ml



Manual Integration Results

RT: 24.87
Area: 44280
Amount: 0.062614
Amount Units: ug/ml



Reviewer: beckerc, 26-Oct-2019 10:14:03

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250014.D
Lims ID: IC FULL LV 1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 25-Oct-2019 23:35:16 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC FULL LV 1
Misc. Info.: 280-0086515-014
Operator ID: CB Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 30-Oct-2019 15:39:58 Calib Date: 25-Oct-2019 23:35:16
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250014.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0329

First Level Reviewer: beckerc Date: 30-Oct-2019 15:35:14

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 2,6-diamino-4-nitrotoluene	1	4.413	4.453	-0.040	10879	0.0200	0.001121	
2 2,4-diamino-6-nitrotoluene	1	4.987	5.006	-0.019	11055	0.0200	0.0343	
5 2,4,6-Trinitrophenol	1	5.807	5.680	0.127	6691	0.0200	0.0478	
6 HMX	1	7.067	7.080	-0.013	4919	0.0200	0.0250	M
8 RDX	1	9.287	9.286	0.001	8040	0.0200	0.0193	
9 Nitrobenzene	1	12.280	12.279	0.001	17953	0.0200	0.0284	
$ 10 1,2-Dinitrobenzene	1	13.220	13.219	0.001	12454	0.0200	0.0212	
11 3,5-Dinitroaniline	1	15.073	14.939	0.134	10781	0.0200	0.0197	
12 1,3-Dinitrobenzene	1	15.747	15.759	-0.012	10048	0.0200	0.0153	
13 Nitroglycerin	2	16.027	16.019	0.008	28567	0.2000	0.2119	
14 o-Nitrotoluene	1	16.753	16.773	-0.020	7204	0.0201	0.0258	
15 p-Nitrotoluene	1	17.060	17.053	0.007	3114	0.0201	0.0139	
16 4-Amino-2,6-dinitrotoluene	1	17.267	17.386	-0.119	5417	0.0201	0.0167	
17 m-Nitrotoluene	1	17.873	17.979	-0.106	4786	0.0201	NQ	
18 2-Amino-4,6-dinitrotoluene	1	18.193	18.259	-0.066	8233	0.0201	0.0179	
19 1,3,5-Trinitrobenzene	1	19.087	19.126	-0.039	10930	0.0200	0.0221	
20 2,6-Dinitrotoluene	1	20.047	20.059	-0.012	8706	0.0201	0.0270	
21 2,4-Dinitrotoluene	1	20.533	20.540	-0.006	13949	0.0200	0.0229	
22 Tetryl	1	23.787	23.806	-0.019	6981	0.0200	0.0197	
23 2,4,6-Trinitrotoluene	1	24.907	24.900	0.007	24190	0.0201	0.0163	
24 PETN	2	25.447	25.440	0.007	22319	0.2000	0.1697	

QC Flag Legend

Processing Flags
NQ - Not Quantifiable
Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00059	Amount Added:	2.00	Units: uL
8330_ADDs_00023	Amount Added:	1.00	Units: uL

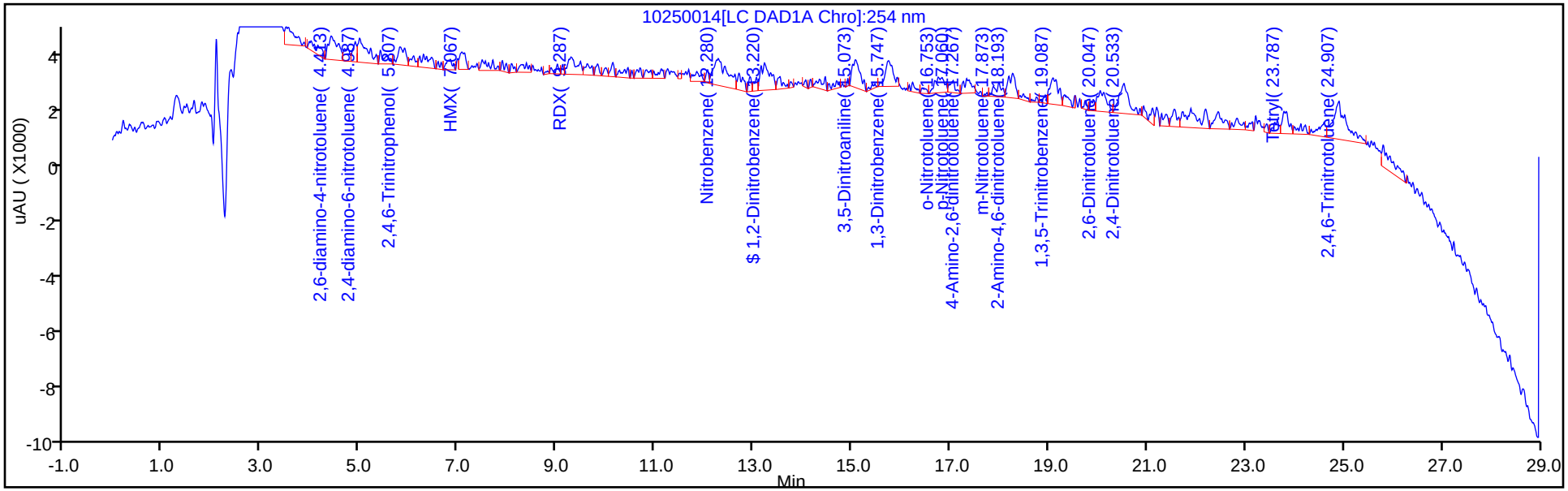
Report Date: 30-Oct-2019 15:39:58 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

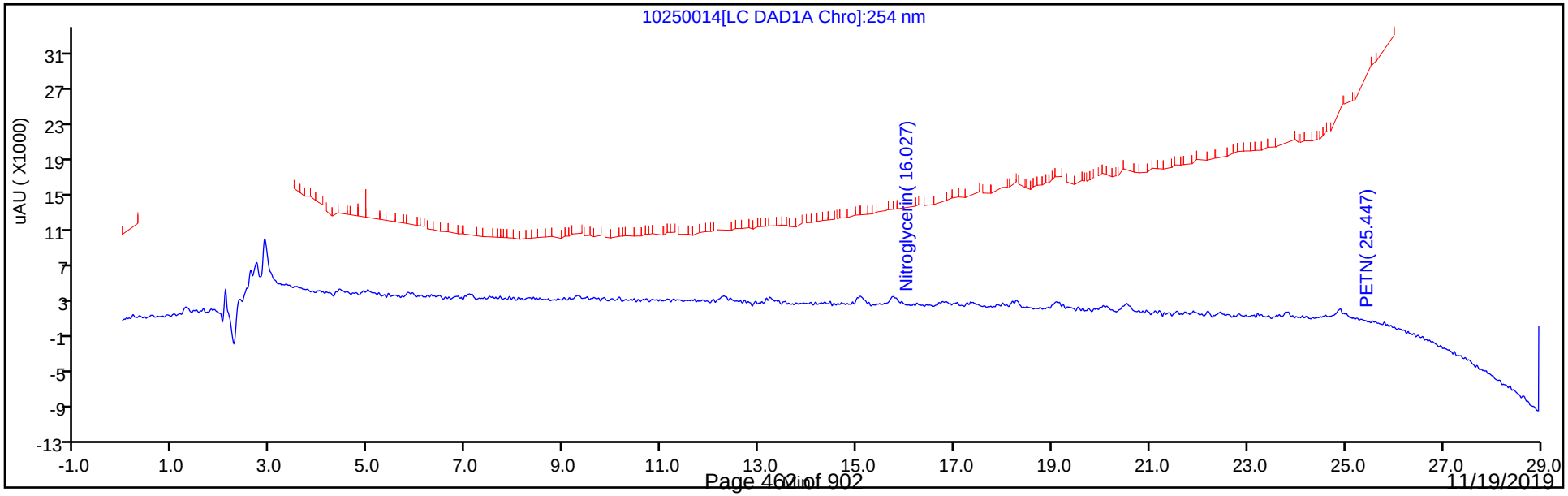
Data File: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250014.D

Injection Date:	25-Oct-2019 23:35:16	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	CB
Lims ID:	IC FULL LV 1			Worklist Smp#:	14
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

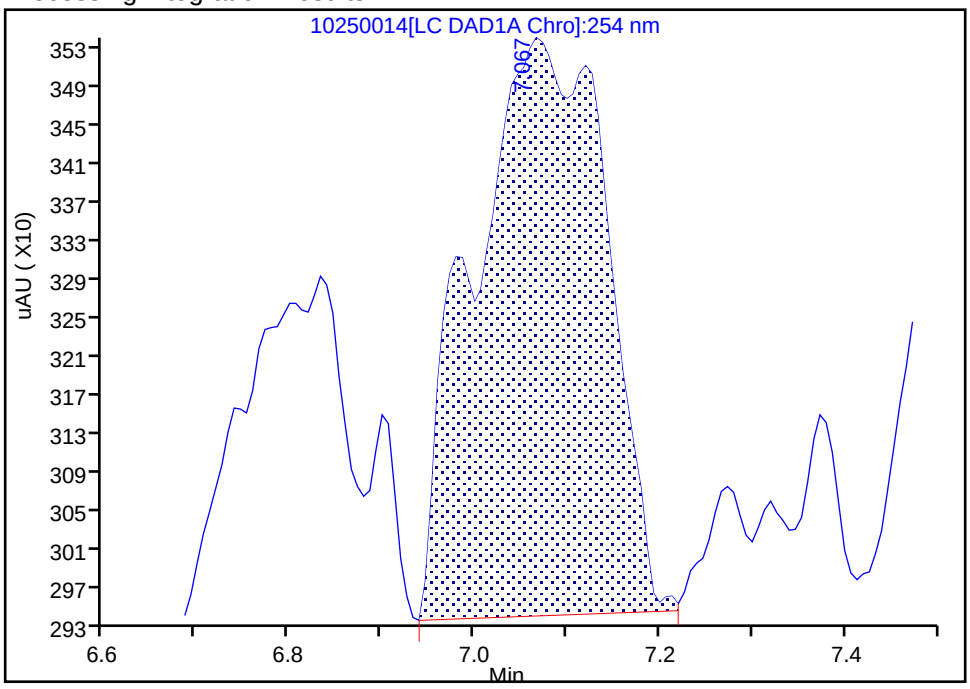
Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250014.D				
Injection Date:	25-Oct-2019 23:35:16	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC FULL LV 1				
Client ID:					
Operator ID:	CB	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

6 HMX, CAS: 2691-41-0

Signal: 1

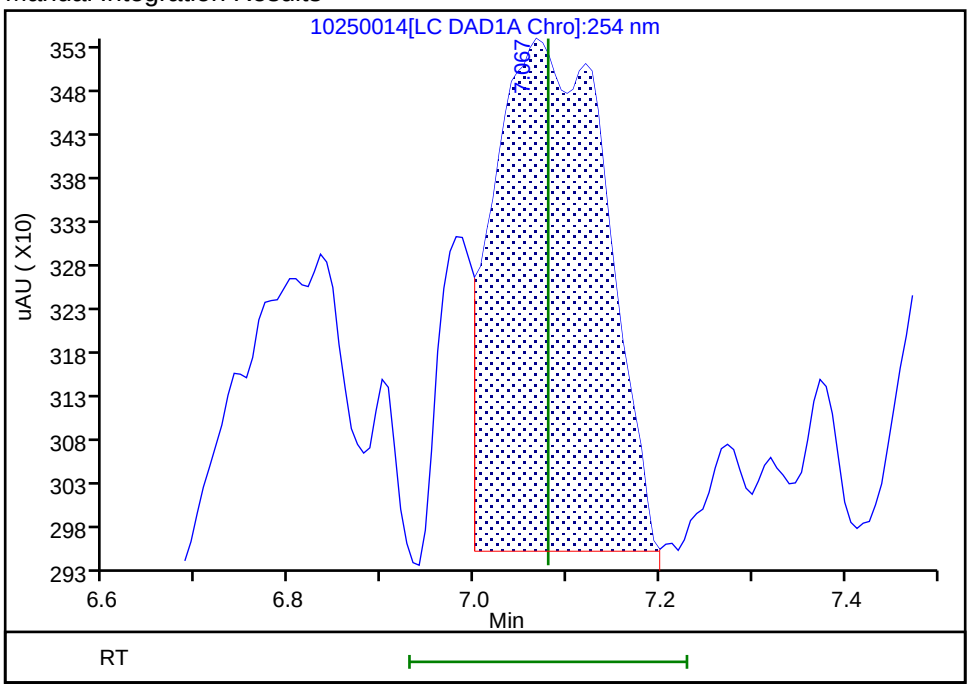
Processing Integration Results

RT: 7.07
Area: 5995
Amount: 0.027779
Amount Units: ug/ml



Manual Integration Results

RT: 7.07
Area: 4919
Amount: 0.024985
Amount Units: ug/ml



Reviewer: beckerc, 30-Oct-2019 15:35:10

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1 Analy Batch No.: 463276

SDG No.:

Instrument ID: CHHPLC_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/01/2019 14:40 Calibration End Date: 07/01/2019 17:23 Calibration ID: 37011

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-463276/14	07010014.D
Level 2	IC 280-463276/13	07010013.D
Level 3	IC 280-463276/12	07010012.D
Level 4	IC 280-463276/11	07010011.D
Level 5	IC 280-463276/10	07010010.D
Level 6	IC 280-463276/9	07010009.D
Level 7	IC 280-463276/8	07010008.D
Level 8	IC 280-463276/7	07010007.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8			RT WINDOW	AVG RT
HMX	6.642	6.648	6.645	6.638	6.646	6.644	6.645	6.639			6.493 - 6.793	6.643
RDX	7.762	7.768	7.759	7.758	7.759	7.764	7.772	7.759			7.607 - 7.907	7.763
Picric acid	8.209	8.215	8.199	8.191	8.179	8.171	8.158	8.085			8.027 - 8.327	8.176
1,3,5-Trinitrobenzene	8.902	8.908	8.899	8.898	8.899	8.904	8.912	8.899			8.747 - 9.047	8.903
1,3-Dinitrobenzene	9.562	9.568	9.565	9.565	9.559	9.571	9.578	9.565			9.407 - 9.707	9.567
Nitrobenzene	9.949	9.954	9.952	9.951	9.945	9.957	9.965	9.952			9.793 - 10.093	9.953
Tetryl	10.275	10.288	10.279	10.278	10.272	10.291	10.298	10.285			10.120 - 10.420	10.283
Nitroglycerin	10.775	10.788	10.779	10.785	10.779	10.791	10.798	10.778			10.620 - 10.920	10.784
2,4,6-Trinitrotoluene	11.229	11.241	11.232	11.238	11.232	11.244	11.252	11.238			11.123 - 11.323	11.238
4-Amino-2,6-dinitrotoluene	11.422	11.434	11.425	11.425	11.419	11.437	11.452	11.432			11.317 - 11.517	11.431
2-Amino-4,6-dinitrotoluene	11.715	11.721	11.712	11.718	11.705	11.731	11.738	11.718			11.603 - 11.803	11.720
2,6-Dinitrotoluene	11.842	11.854	11.852	11.851	11.845	11.864	11.872	11.858			11.737 - 11.937	11.855
2,4-Dinitrotoluene	12.042	12.054	12.045	12.051	12.039	12.064	12.072	12.052			11.937 - 12.137	12.052
2-Nitrotoluene	12.882	12.894	12.892	12.891	12.879	12.904	12.912	12.898			12.727 - 13.027	12.894
4-Nitrotoluene	13.329	13.334	13.332	13.331	13.325	13.344	13.358	13.338			13.167 - 13.467	13.336
3-Nitrotoluene	13.915	13.934	13.932	13.925	13.919	13.944	13.958	13.938			13.767 - 14.067	13.933
PETN	15.015	15.041	15.032	15.025	15.019	15.051	15.058	15.045			14.860 - 15.160	15.036
1,2-Dinitrobenzene	8.742	8.748	8.739	8.745	8.739	8.751	8.752	8.745			8.587 - 8.887	8.745

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1 Analy Batch No.: 463276

SDG No.:

Instrument ID: CHHPLC_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/01/2019 14:40 Calibration End Date: 07/01/2019 17:23 Calibration ID: 37011

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-463276/14	07010014.D
Level 2	IC 280-463276/13	07010013.D
Level 3	IC 280-463276/12	07010012.D
Level 4	IC 280-463276/11	07010011.D
Level 5	IC 280-463276/10	07010010.D
Level 6	IC 280-463276/9	07010009.D
Level 7	IC 280-463276/8	07010008.D
Level 8	IC 280-463276/7	07010007.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 LVL 8		B	M1	M2								
HMX	89750 95318	89840 97413	85950 97946	87784 90666	Ave		91833.2446				4.9		20.0			
RDX	116900 107183	113880 113994	106270 115333	106608 108796	Ave		111120.423				3.9		20.0			
Picric acid	115100 83438	96140 88936	86330 89601	83168 83162	Ave		90734.2268				11.9		20.0			
1,3,5-Trinitrobenzene	231900 245955	252720 254053	234380 258481	241100 242023	Ave		245076.507				3.9		20.0			
1,3-Dinitrobenzene	296204 306151	323277 320835	303966 325162	304951 308858	Ave		311175.451				3.4		20.0			
Nitrobenzene	186976 193580	206567 204311	194850 209370	195944 199625	Ave		198903.056				3.8		20.0			
Tetryl	140150 162025	164180 169667	159520 173034	159276 167806	Ave		161957.218				6.2		20.0			
Nitroglycerin	63150 71560	71662 74671	69583 75926	70987 71328	Ave		71108.3505				5.4		20.0			
2,4,6-Trinitrotoluene	226295 222398	236315 231917	222122 235332	219442 224394	Ave		227276.691				2.8		20.0			
4-Amino-2,6-dinitrotoluene	176471 161515	171785 167985	161715 170409	160291 160853	Ave		166377.838				3.7		20.0			
2-Amino-4,6-dinitrotoluene	191476 204177	207458 212138	203998 213209	201440 207996	Ave		205236.402				3.3		20.0			
2,6-Dinitrotoluene	168594 153719	165942 161295	152672 165239	153236 153578	Ave		159284.393				4.2		20.0			
2,4-Dinitrotoluene	290669 296722	305549 310537	292715 315315	293844 298227	Ave		300447.252				3.0		20.0			
2-Nitrotoluene	127617 124990	135872 132549	127368 134538	127386 127948	Ave		129783.617				3.1		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, Denver Job No.: 280-129830-1 Analy Batch No.: 463276

SDG No.:

Instrument ID: CHHPLC_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/01/2019 14:40 Calibration End Date: 07/01/2019 17:23 Calibration ID: 37011

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 LVL 8		B	M1	M2								
4-Nitrotoluene	107669 107174	111693 114057	107371 115455	108558 110063	Ave		110254.875				2.9		20.0			
3-Nitrotoluene	144721 139472	152410 147486	142161 150123	141510 143094	Ave		145122.200				3.1		20.0			
PETN	55530 76267	76864 79871	73030 80847	75248 76653	Ave		74288.8082				10.7		20.0			
1,2-Dinitrobenzene	130450 137375	142700 144760	136320 145938	137532 139553	Ave		139328.475				3.6		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, Denver Job No.: 280-129830-1 Analy Batch No.: 463276

SDG No.:

Instrument ID: CHHPLC_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/01/2019 14:40 Calibration End Date: 07/01/2019 17:23 Calibration ID: 37011

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-463276/14	07010014.D
Level 2	IC 280-463276/13	07010013.D
Level 3	IC 280-463276/12	07010012.D
Level 4	IC 280-463276/11	07010011.D
Level 5	IC 280-463276/10	07010010.D
Level 6	IC 280-463276/9	07010009.D
Level 7	IC 280-463276/8	07010008.D
Level 8	IC 280-463276/7	07010007.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
HMX	Ave	1795 68189	4492 97946	8595 226664	21946	38127	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
RDX	Ave	2338 79796	5694 115333	10627 271989	26652	42873	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
Picric acid	Ave	2302 62255	4807 89601	8633 207904	20792	33375	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
1,3,5-Trinitrobenzene	Ave	4638 177837	12636 258481	23438 605058	60275	98382	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
1,3-Dinitrobenzene	Ave	5930 224809	16180 325487	30427 772917	76314	122583	0.0200 0.701	0.0501 1.00	0.100 2.50	0.250	0.400
Nitrobenzene	Ave	3747 143304	10349 209789	19524 500061	49084	77587	0.0200 0.701	0.0501 1.00	0.100 2.51	0.251	0.401
Tetryl	Ave	2803 118767	8209 173034	15952 419514	39819	64810	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
Nitroglycerin	Ave	12630 522695	35831 759263	69583 1783196	177468	286239	0.200 7.00	0.500 10.0	1.00 25.0	2.50	4.00
2,4,6-Trinitrotoluene	Ave	4544 162991	11863 236273	22301 563229	55080	89315	0.0201 0.703	0.0502 1.00	0.100 2.51	0.251	0.402
4-Amino-2,6-dinitrotoluene	Ave	3540 117942	8615 170920	16220 403338	40193	64800	0.0201 0.702	0.0502 1.00	0.100 2.51	0.251	0.401
2-Amino-4,6-dinitrotoluene	Ave	3841 148942	10404 213849	20461 521549	50511	81916	0.0201 0.702	0.0502 1.00	0.100 2.51	0.251	0.401
2,6-Dinitrotoluene	Ave	3382 113245	8322 165735	15313 385096	38424	61672	0.0201 0.702	0.0502 1.00	0.100 2.51	0.251	0.401
2,4-Dinitrotoluene	Ave	5825 217811	15308 315946	29330 747059	73608	118926	0.0200 0.701	0.0501 1.00	0.100 2.51	0.251	0.401
2-Nitrotoluene	Ave	2560 93063	6814 134942	12775 320829	31942	50146	0.0201 0.702	0.0502 1.00	0.100 2.51	0.251	0.401
4-Nitrotoluene	Ave	2162 80159	5607 115917	10780 276257	27248	43041	0.0201 0.703	0.0502 1.00	0.100 2.51	0.251	0.402

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1 Analy Batch No.: 463276

SDG No.:

Instrument ID: CHHPLC_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/01/2019 14:40 Calibration End Date: 07/01/2019 17:23 Calibration ID: 37011

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
3-Nitrotoluene	Ave	2906 103653	7651 150723	14273 359167	35519	56012	0.0201 0.703	0.0502 1.00	0.100 2.51	0.251	0.402
PETN	Ave	11106 559099	38432 808473	73030 1916332	188119	305068	0.200 7.00	0.500 10.0	1.00 25.0	2.50	4.00
1,2-Dinitrobenzene	Ave	2609 101332	7135 145938	13632 348882	34383	54950	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400

Curve Type Legend:
Ave = Average

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010007.D
Lims ID: IC MAIN L8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 01-Jul-2019 14:40:42 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L8
Misc. Info.: 280-0083376-007
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 02-Jul-2019 11:34:43 Calib Date: 02-Jul-2019 00:18:07
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0309

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
3 HMX	1	6.639	6.643	-0.004	226664	2.50	2.47	
7 RDX	1	7.759	7.757	0.002	271989	2.50	2.45	
8 2,4,6-Trinitrophenol	1	8.085	8.177	-0.092	207904	2.50	2.29	
$ 9 1,2-Dinitrobenzene	1	8.745	8.737	0.008	348882	2.50	2.50	
10 1,3,5-Trinitrobenzene	1	8.899	8.897	0.002	605058	2.50	2.47	
11 1,3-Dinitrobenzene	1	9.565	9.557	0.008	772917	2.50	2.48	
12 Nitrobenzene	1	9.952	9.943	0.009	500061	2.51	2.51	
14 Tetryl	1	10.285	10.270	0.015	419514	2.50	2.59	
15 Nitroglycerin	2	10.778	10.770	0.008	1783196	25.0	25.1	
16 2,4,6-Trinitrotoluene	1	11.238	11.223	0.015	563229	2.51	2.48	
17 4-Amino-2,6-dinitrotoluene	1	11.432	11.417	0.015	403338	2.51	2.42	
18 2-Amino-4,6-dinitrotoluene	1	11.718	11.703	0.015	521549	2.51	2.54	
19 2,6-Dinitrotoluene	1	11.858	11.837	0.021	385096	2.51	2.42	
20 2,4-Dinitrotoluene	1	12.052	12.037	0.015	747059	2.51	2.49	
21 o-Nitrotoluene	1	12.898	12.877	0.021	320829	2.51	2.47	
22 p-Nitrotoluene	1	13.338	13.317	0.021	276257	2.51	2.51	
23 m-Nitrotoluene	1	13.938	13.917	0.021	359167	2.51	2.47	
24 PETN	2	15.045	15.010	0.035	1916332	25.0	25.8	

Reagents:

8330IntermStk_00058 Amount Added: 125.00 Units: uL

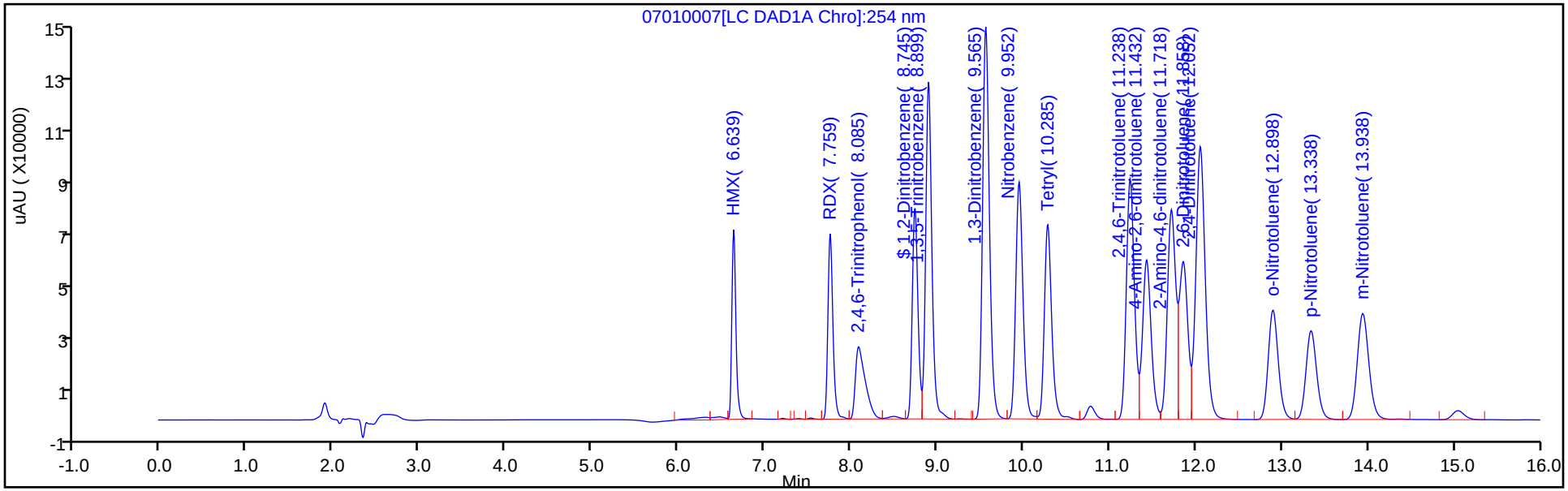
Report Date: 02-Jul-2019 11:34:44 Chrom Revision: 2.3 20-Jun-2019 20:50:56

Eurofins TestAmerica, Denver

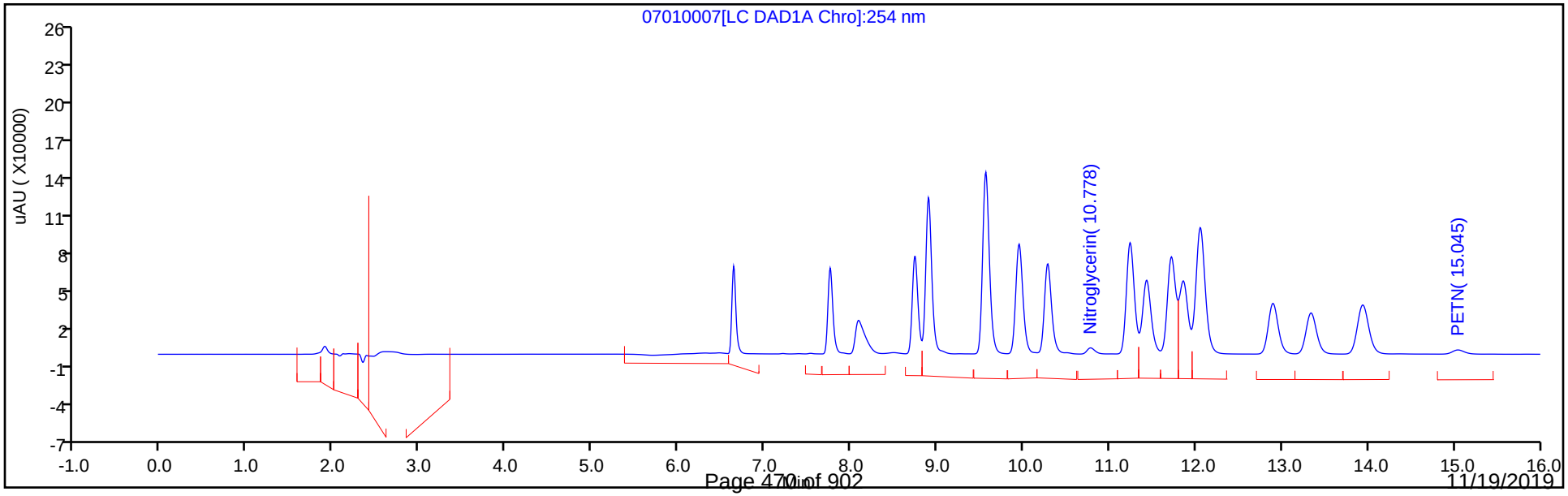
Data File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010007.D

Injection Date:	01-Jul-2019 14:40:42	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC MAIN L8			Worklist Smp#:	7
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010008.D
Lims ID: IC MAIN L7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 01-Jul-2019 15:04:44 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L7
Misc. Info.: 280-0083376-008
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 02-Jul-2019 11:34:46 Calib Date: 02-Jul-2019 00:18:07
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0309

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
3 HMX	1	6.645	6.638	0.007	97946	1.00	1.07	
7 RDX	1	7.772	7.758	0.014	115333	1.00	1.04	
8 2,4,6-Trinitrophenol	1	8.158	8.191	-0.033	89601	1.00	0.9875	
$ 9 1,2-Dinitrobenzene	1	8.752	8.745	0.007	145938	1.00	1.05	
10 1,3,5-Trinitrobenzene	1	8.912	8.898	0.014	258481	1.00	1.05	
11 1,3-Dinitrobenzene	1	9.578	9.565	0.013	325487	1.00	1.05	
12 Nitrobenzene	1	9.965	9.951	0.014	209789	1.00	1.05	
14 Tetryl	1	10.298	10.278	0.020	173034	1.00	1.07	
15 Nitroglycerin	2	10.798	10.785	0.013	759263	10.0	10.7	
16 2,4,6-Trinitrotoluene	1	11.252	11.238	0.014	236273	1.00	1.04	
17 4-Amino-2,6-dinitrotoluene	1	11.452	11.425	0.027	170920	1.00	1.03	
18 2-Amino-4,6-dinitrotoluene	1	11.738	11.718	0.020	213849	1.00	1.04	
19 2,6-Dinitrotoluene	1	11.872	11.851	0.021	165735	1.00	1.04	
20 2,4-Dinitrotoluene	1	12.072	12.051	0.021	315946	1.00	1.05	
21 o-Nitrotoluene	1	12.912	12.891	0.021	134942	1.00	1.04	
22 p-Nitrotoluene	1	13.358	13.331	0.027	115917	1.00	1.05	
23 m-Nitrotoluene	1	13.958	13.925	0.033	150723	1.00	1.04	
24 PETN	2	15.058	15.025	0.033	808473	10.0	10.9	

Reagents:

8330IntermStk_00058 Amount Added: 50.00 Units: uL

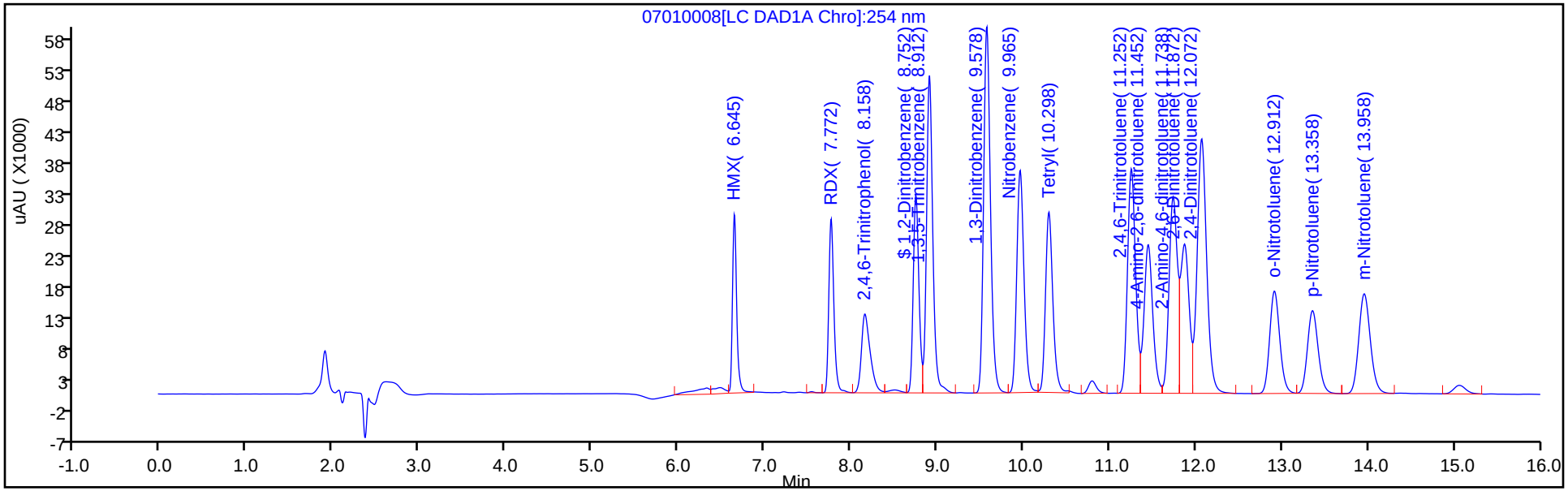
Report Date: 02-Jul-2019 11:34:46 Chrom Revision: 2.3 20-Jun-2019 20:50:56

Eurofins TestAmerica, Denver

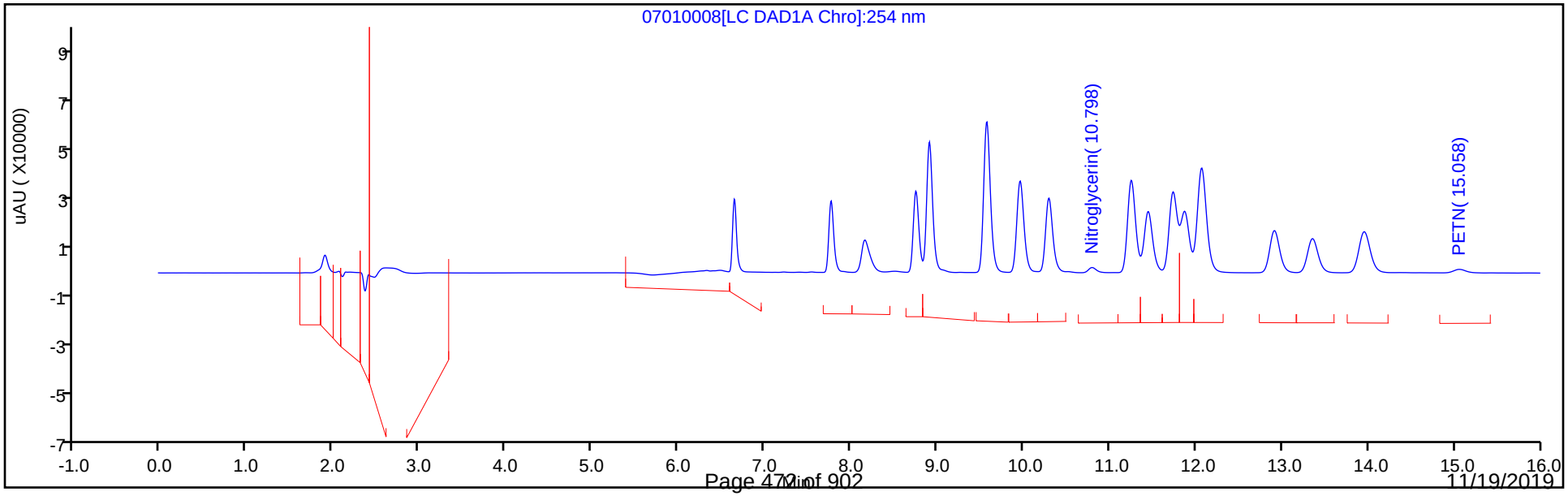
Data File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010008.D

Injection Date:	01-Jul-2019 15:04:44	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC MAIN L7			Worklist Smp#:	8
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010009.D
Lims ID: IC MAIN L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 01-Jul-2019 15:27:41 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L6
Misc. Info.: 280-0083376-009
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 02-Jul-2019 11:34:47 Calib Date: 02-Jul-2019 00:18:07
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0309

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
3 HMX	1	6.644	6.643	0.001	68189	0.7000	0.7425	
7 RDX	1	7.764	7.757	0.007	79796	0.7000	0.7181	
8 2,4,6-Trinitrophenol	1	8.171	8.177	-0.006	62255	0.7000	0.6861	
$ 9 1,2-Dinitrobenzene	1	8.751	8.737	0.014	101332	0.7000	0.7273	
10 1,3,5-Trinitrobenzene	1	8.904	8.897	0.007	177837	0.7000	0.7256	
11 1,3-Dinitrobenzene	1	9.571	9.557	0.014	224809	0.7007	0.7225	
12 Nitrobenzene	1	9.957	9.943	0.014	143304	0.7014	0.7205	
14 Tetryl	1	10.291	10.270	0.021	118767	0.7000	0.7333	
15 Nitroglycerin	2	10.791	10.770	0.021	522695	7.00	7.35	
16 2,4,6-Trinitrotoluene	1	11.244	11.223	0.021	162991	0.7028	0.7171	
17 4-Amino-2,6-dinitrotoluene	1	11.437	11.417	0.020	117942	0.7021	0.7089	
18 2-Amino-4,6-dinitrotoluene	1	11.731	11.703	0.028	148942	0.7021	0.7257	
19 2,6-Dinitrotoluene	1	11.864	11.837	0.027	113245	0.7021	0.7110	
20 2,4-Dinitrotoluene	1	12.064	12.037	0.027	217811	0.7014	0.7250	
21 o-Nitrotoluene	1	12.904	12.877	0.027	93063	0.7021	0.7171	
22 p-Nitrotoluene	1	13.344	13.317	0.027	80159	0.7028	0.7270	
23 m-Nitrotoluene	1	13.944	13.917	0.027	103653	0.7028	0.7142	
24 PETN	2	15.051	15.010	0.041	559099	7.00	7.53	

Reagents:

8330IntermStk_00058 Amount Added: 35.00 Units: uL

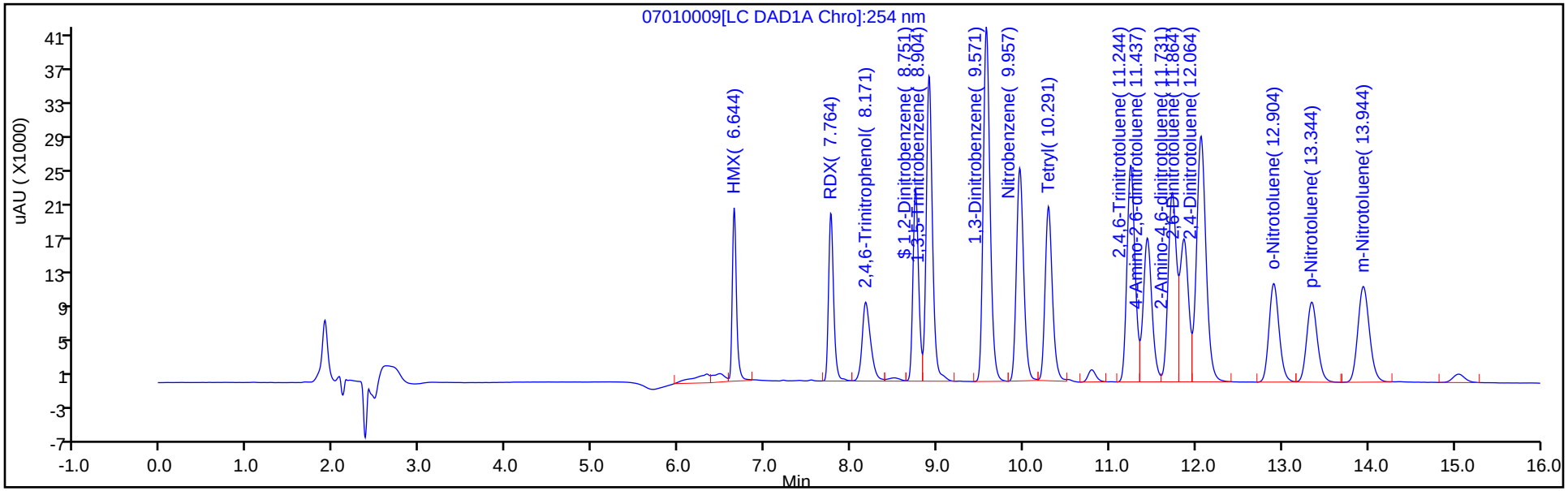
Report Date: 02-Jul-2019 11:34:48 Chrom Revision: 2.3 20-Jun-2019 20:50:56

Eurofins TestAmerica, Denver

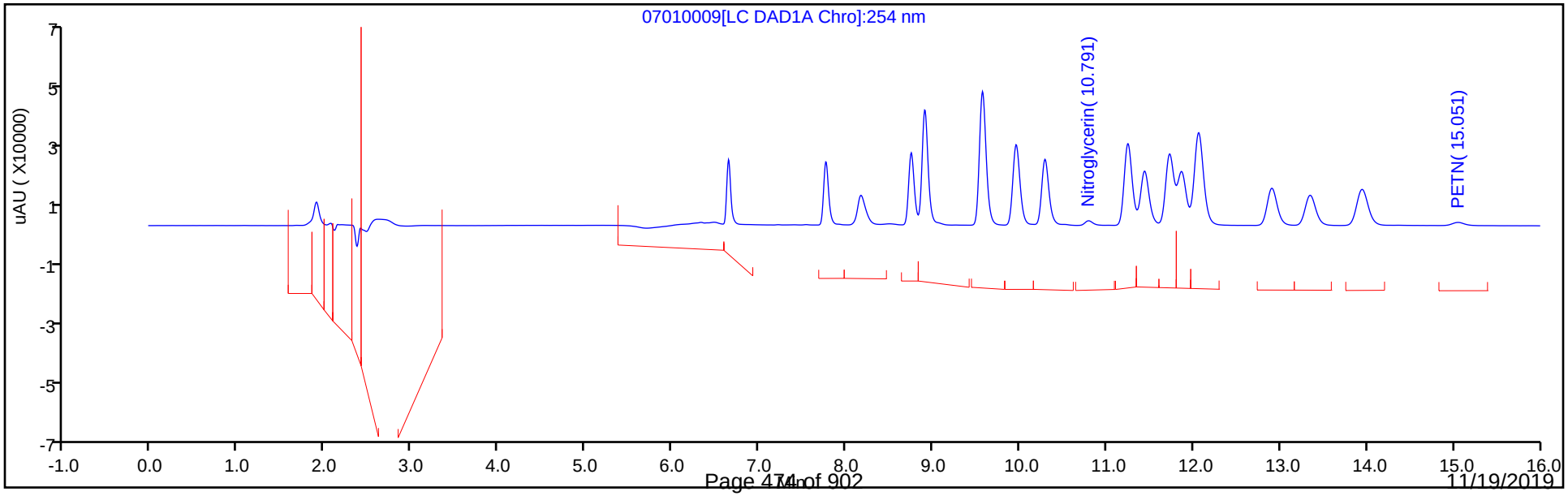
Data File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010009.D

Injection Date:	01-Jul-2019 15:27:41	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC MAIN L6			Worklist Smp#:	9
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010010.D
Lims ID: IC MAIN L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 01-Jul-2019 15:50:38 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L5
Misc. Info.: 280-0083376-010
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 02-Jul-2019 11:34:49 Calib Date: 02-Jul-2019 00:18:07
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0309

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
	3 HMX	1	6.646	6.638	0.008	38127	0.4000	0.4152	
	7 RDX	1	7.759	7.758	0.001	42873	0.4000	0.3858	
	8 2,4,6-Trinitrophenol	1	8.179	8.191	-0.012	33375	0.4000	0.3678	
$	9 1,2-Dinitrobenzene	1	8.739	8.745	-0.006	54950	0.4000	0.3944	
	10 1,3,5-Trinitrobenzene	1	8.899	8.898	0.001	98382	0.4000	0.4014	
	11 1,3-Dinitrobenzene	1	9.559	9.565	-0.006	122583	0.4004	0.3939	
	12 Nitrobenzene	1	9.945	9.951	-0.006	77587	0.4008	0.3901	
	14 Tetryl	1	10.272	10.278	-0.006	64810	0.4000	0.4002	
	15 Nitroglycerin	2	10.779	10.785	-0.006	286239	4.00	4.03	
	16 2,4,6-Trinitrotoluene	1	11.232	11.238	-0.006	89315	0.4016	0.3930	
	17 4-Amino-2,6-dinitrotoluene	1	11.419	11.425	-0.006	64800	0.4012	0.3895	
	18 2-Amino-4,6-dinitrotoluene	1	11.705	11.718	-0.013	81916	0.4012	0.3991	
	19 2,6-Dinitrotoluene	1	11.845	11.851	-0.006	61672	0.4012	0.3872	
	20 2,4-Dinitrotoluene	1	12.039	12.051	-0.012	118926	0.4008	0.3958	
	21 o-Nitrotoluene	1	12.879	12.891	-0.012	50146	0.4012	0.3864	
	22 p-Nitrotoluene	1	13.325	13.331	-0.006	43041	0.4016	0.3904	
	23 m-Nitrotoluene	1	13.919	13.925	-0.006	56012	0.4016	0.3860	
	24 PETN	2	15.019	15.025	-0.006	305068	4.00	4.11	

Reagents:

8330IntermStk_00058 Amount Added: 20.00 Units: uL

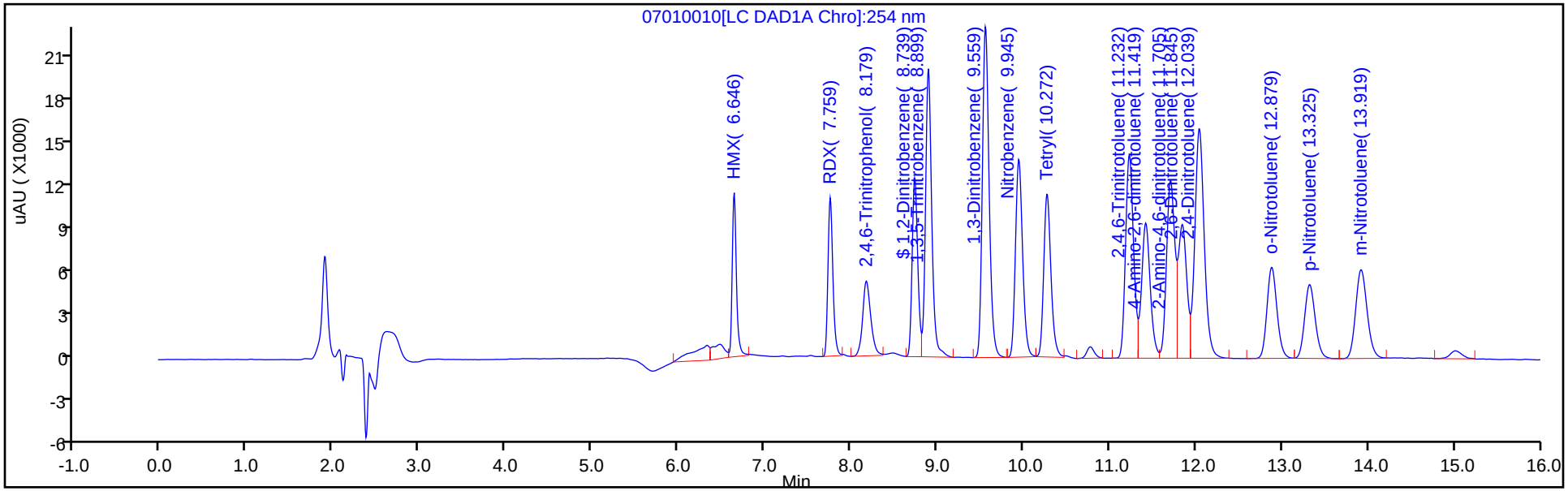
Report Date: 02-Jul-2019 11:34:50 Chrom Revision: 2.3 20-Jun-2019 20:50:56

Eurofins TestAmerica, Denver

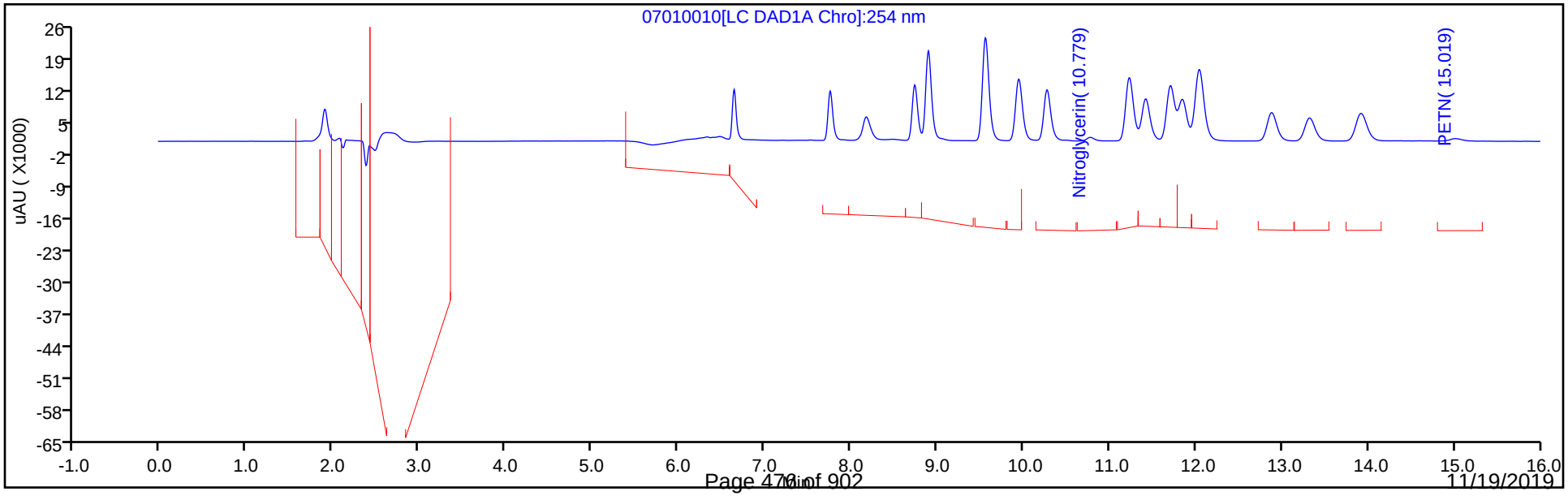
Data File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010010.D

Injection Date:	01-Jul-2019 15:50:38	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC MAIN L5			Worklist Smp#:	10
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010011.D
Lims ID: IC MAIN L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 01-Jul-2019 16:13:37 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L4
Misc. Info.: 280-0083376-011
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 02-Jul-2019 11:34:51 Calib Date: 02-Jul-2019 00:18:07
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0309

First Level Reviewer: fiedlerh Date: 01-Jul-2019 16:40:25

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
3 HMX	1	6.638	6.643	-0.005	21946	0.2500	0.2390	
7 RDX	1	7.758	7.757	0.001	26652	0.2500	0.2398	
8 2,4,6-Trinitrophenol	1	8.191	8.177	0.014	20792	0.2500	0.2292	
$ 9 1,2-Dinitrobenzene	1	8.745	8.737	0.008	34383	0.2500	0.2468	
10 1,3,5-Trinitrobenzene	1	8.898	8.897	0.001	60275	0.2500	0.2459	
11 1,3-Dinitrobenzene	1	9.565	9.557	0.008	76314	0.2503	0.2452	
12 Nitrobenzene	1	9.951	9.943	0.008	49084	0.2505	0.2468	
14 Tetryl	1	10.278	10.270	0.008	39819	0.2500	0.2459	
15 Nitroglycerin	2	10.785	10.770	0.015	177468	2.50	2.50	
16 2,4,6-Trinitrotoluene	1	11.238	11.223	0.015	55080	0.2510	0.2423	
17 4-Amino-2,6-dinitrotoluene	1	11.425	11.417	0.008	40193	0.2508	0.2416	
18 2-Amino-4,6-dinitrotoluene	1	11.718	11.703	0.015	50511	0.2508	0.2461	
19 2,6-Dinitrotoluene	1	11.851	11.837	0.014	38424	0.2508	0.2412	
20 2,4-Dinitrotoluene	1	12.051	12.037	0.014	73608	0.2505	0.2450	
21 o-Nitrotoluene	1	12.891	12.877	0.014	31942	0.2508	0.2461	
22 p-Nitrotoluene	1	13.331	13.317	0.014	27248	0.2510	0.2471	
23 m-Nitrotoluene	1	13.925	13.917	0.008	35519	0.2510	0.2448	
24 PETN	2	15.025	15.010	0.015	188119	2.50	2.53	

Reagents:

8330IntermStk_00058 Amount Added: 12.50 Units: uL

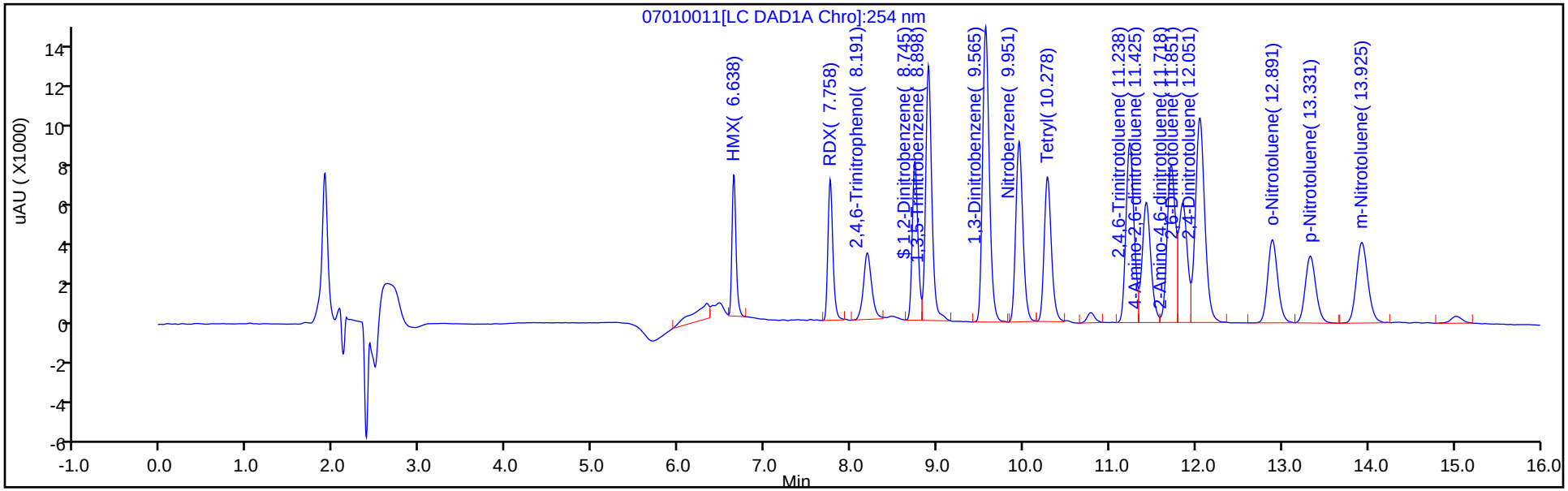
Report Date: 02-Jul-2019 11:34:51 Chrom Revision: 2.3 20-Jun-2019 20:50:56

Eurofins TestAmerica, Denver

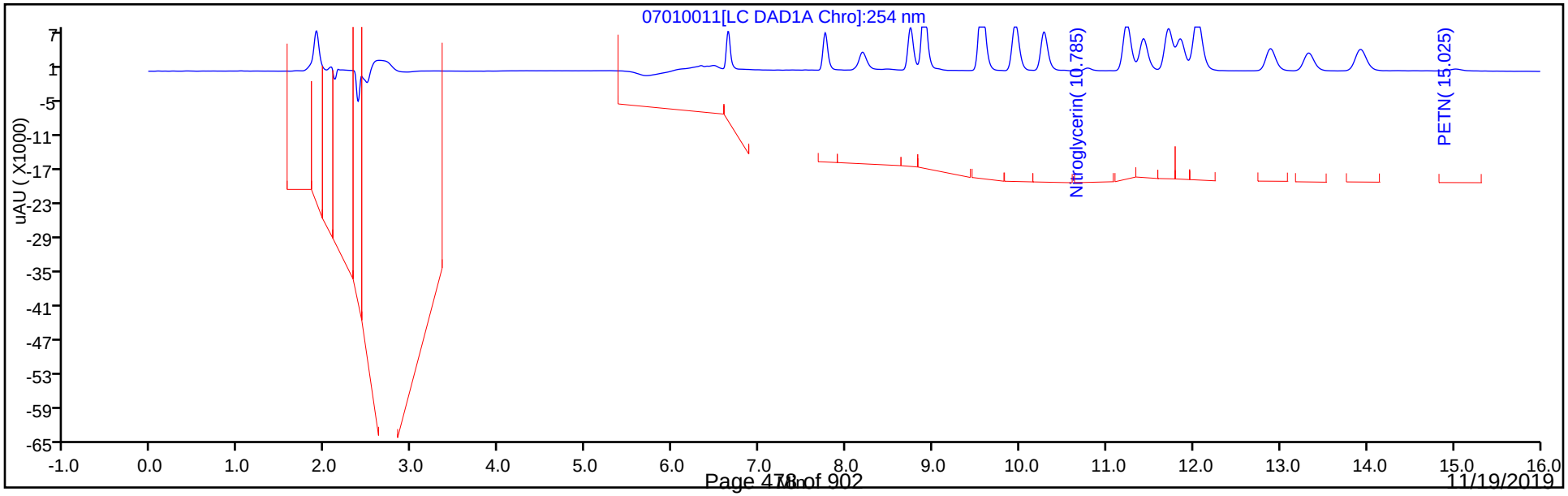
Data File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010011.D

Injection Date:	01-Jul-2019 16:13:37	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC MAIN L4			Worklist Smp#:	11
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010012.D
Lims ID: IC MAIN L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 01-Jul-2019 16:36:33 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L3
Misc. Info.: 280-0083376-012
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 02-Jul-2019 11:34:53 Calib Date: 02-Jul-2019 00:18:07
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0309

First Level Reviewer: fiedlerh Date: 01-Jul-2019 18:30:35

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
3 HMX	1	6.645	6.643	0.002	8595	0.1000	0.0936	M
7 RDX	1	7.759	7.757	0.002	10627	0.1000	0.0956	
8 2,4,6-Trinitrophenol	1	8.199	8.177	0.022	8633	0.1000	0.0951	
$ 9 1,2-Dinitrobenzene	1	8.739	8.737	0.002	13632	0.1000	0.0978	
10 1,3,5-Trinitrobenzene	1	8.899	8.897	0.002	23438	0.1000	0.0956	
11 1,3-Dinitrobenzene	1	9.565	9.557	0.008	30427	0.1001	0.0978	
12 Nitrobenzene	1	9.952	9.943	0.009	19524	0.1002	0.0982	
14 Tetryl	1	10.279	10.270	0.009	15952	0.1000	0.0985	
15 Nitroglycerin	2	10.779	10.770	0.009	69583	1.00	0.9785	
16 2,4,6-Trinitrotoluene	1	11.232	11.223	0.009	22301	0.1004	0.0981	
17 4-Amino-2,6-dinitrotoluene	1	11.425	11.417	0.008	16220	0.1003	0.0975	
18 2-Amino-4,6-dinitrotoluene	1	11.712	11.703	0.009	20461	0.1003	0.0997	
19 2,6-Dinitrotoluene	1	11.852	11.837	0.015	15313	0.1003	0.0961	
20 2,4-Dinitrotoluene	1	12.045	12.037	0.008	29330	0.1002	0.0976	
21 o-Nitrotoluene	1	12.892	12.877	0.015	12775	0.1003	0.0984	
22 p-Nitrotoluene	1	13.332	13.317	0.015	10780	0.1004	0.0978	
23 m-Nitrotoluene	1	13.932	13.917	0.015	14273	0.1004	0.0984	
24 PETN	2	15.032	15.010	0.022	73030	1.00	0.9831	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00058 Amount Added: 5.00 Units: uL

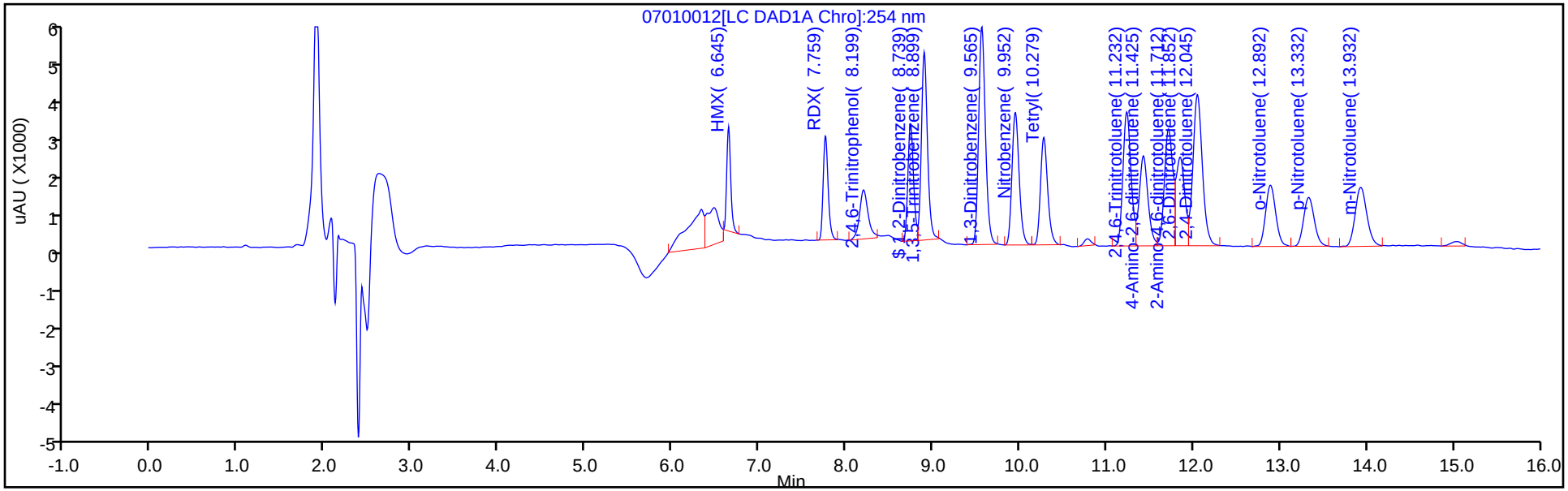
Report Date: 02-Jul-2019 11:34:53 Chrom Revision: 2.3 20-Jun-2019 20:50:56

Eurofins TestAmerica, Denver

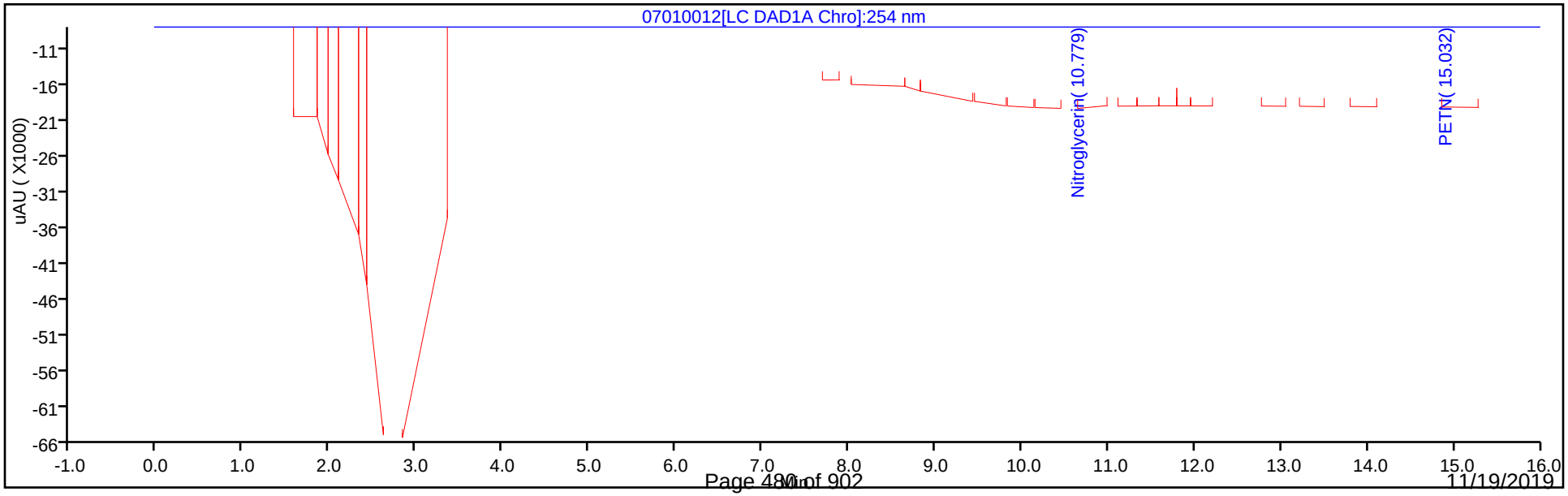
Data File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010012.D

Injection Date:	01-Jul-2019 16:36:33	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC MAIN L3			Worklist Smp#:	12
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

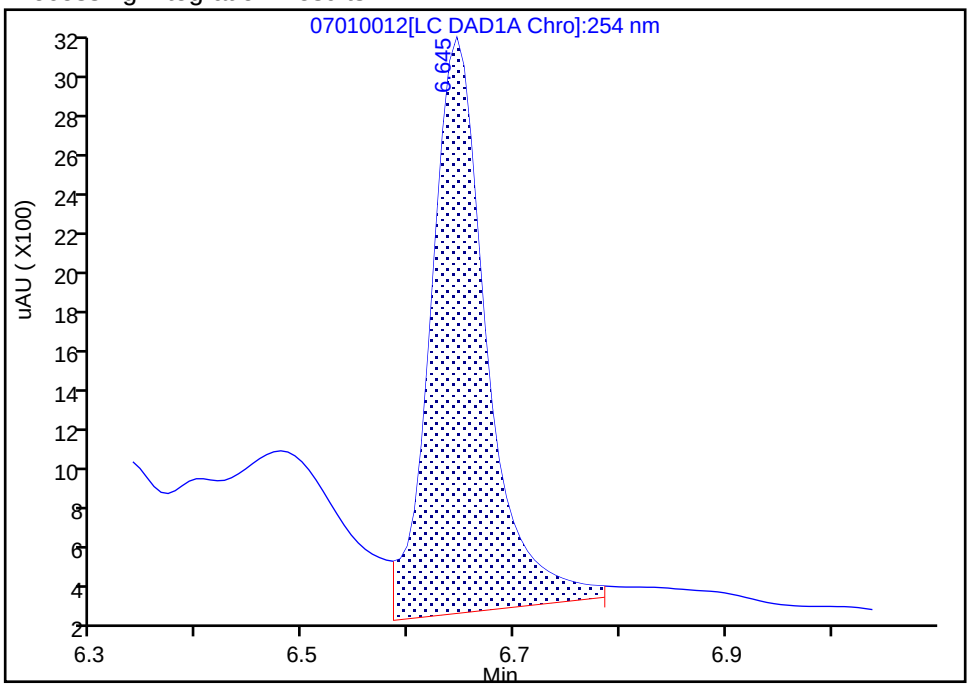
Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010012.D				
Injection Date:	01-Jul-2019 16:36:33	Instrument ID:	CHHPLC_X3		
Lims ID:	IC MAIN L3				
Client ID:					
Operator ID:	hkf	ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

3 HMX, CAS: 2691-41-0

Signal: 1

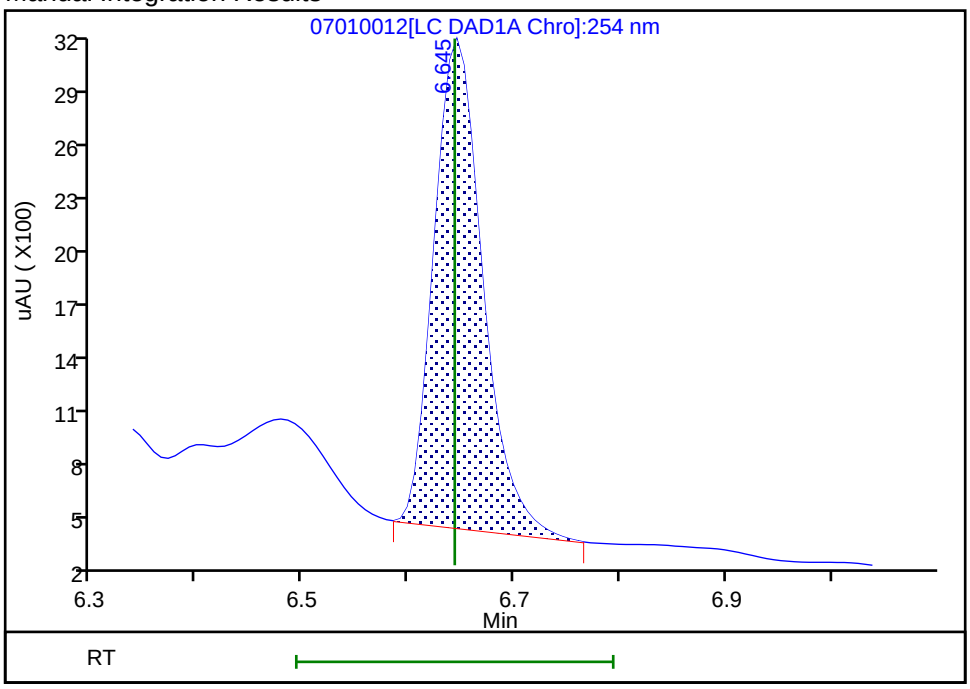
Processing Integration Results

RT: 6.65
Area: 10637
Amount: 0.107460
Amount Units: ug/mL



Manual Integration Results

RT: 6.65
Area: 8595
Amount: 0.093594
Amount Units: ug/mL



Reviewer: fiedlerh, 01-Jul-2019 18:30:35
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010013.D
Lims ID: IC MAIN L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 01-Jul-2019 17:00:38 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L2
Misc. Info.: 280-0083376-013
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 02-Jul-2019 11:34:55 Calib Date: 02-Jul-2019 00:18:07
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0309

First Level Reviewer: fiedlerh Date: 01-Jul-2019 18:30:58

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
3 HMX	1	6.648	6.643	0.005	4492	0.0500	0.0489	M
7 RDX	1	7.768	7.757	0.011	5694	0.0500	0.0512	
8 2,4,6-Trinitrophenol	1	8.215	8.177	0.038	4807	0.0500	0.0530	
$ 9 1,2-Dinitrobenzene	1	8.748	8.737	0.011	7135	0.0500	0.0512	
10 1,3,5-Trinitrobenzene	1	8.908	8.897	0.011	12636	0.0500	0.0516	
11 1,3-Dinitrobenzene	1	9.568	9.557	0.011	16180	0.0501	0.0520	
12 Nitrobenzene	1	9.954	9.943	0.011	10349	0.0501	0.0520	
14 Tetryl	1	10.288	10.270	0.018	8209	0.0500	0.0507	
15 Nitroglycerin	2	10.788	10.770	0.018	35831	0.5000	0.5039	
16 2,4,6-Trinitrotoluene	1	11.241	11.223	0.018	11863	0.0502	0.0522	
17 4-Amino-2,6-dinitrotoluene	1	11.434	11.417	0.017	8615	0.0502	0.0518	
18 2-Amino-4,6-dinitrotoluene	1	11.721	11.703	0.018	10404	0.0502	0.0507	M
19 2,6-Dinitrotoluene	1	11.854	11.837	0.017	8322	0.0502	0.0522	M
20 2,4-Dinitrotoluene	1	12.054	12.037	0.017	15308	0.0501	0.0510	
21 o-Nitrotoluene	1	12.894	12.877	0.017	6814	0.0502	0.0525	
22 p-Nitrotoluene	1	13.334	13.317	0.017	5607	0.0502	0.0509	
23 m-Nitrotoluene	1	13.934	13.917	0.017	7651	0.0502	0.0527	
24 PETN	2	15.041	15.010	0.031	38432	0.5000	0.5173	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00058 Amount Added: 2.50 Units: uL

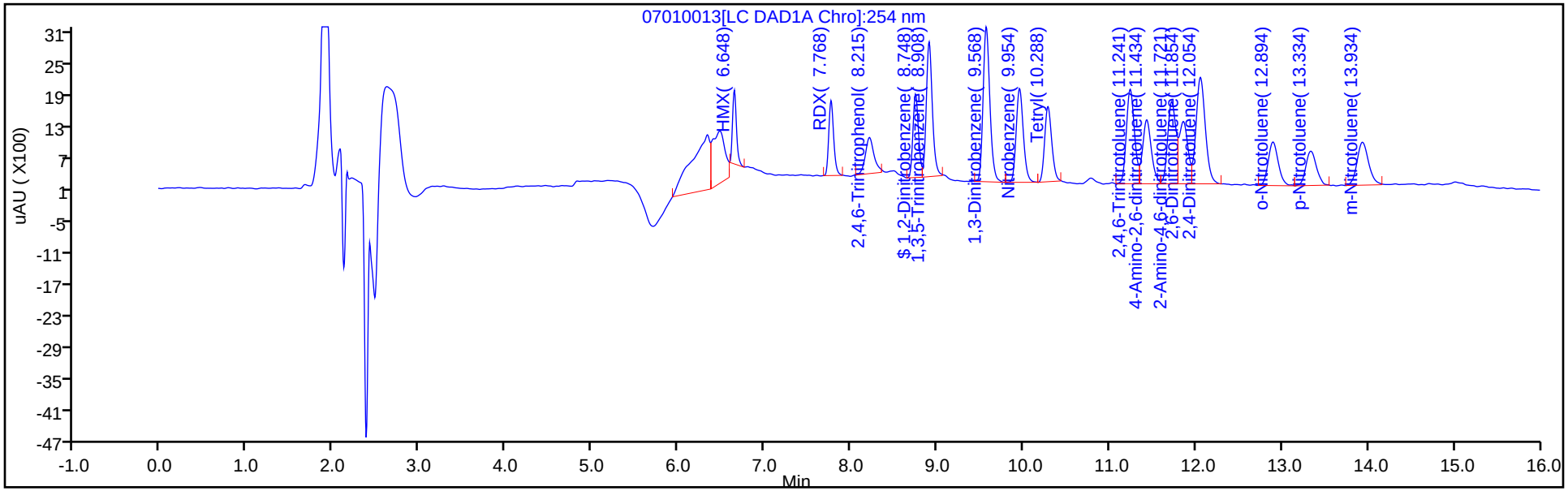
Report Date: 02-Jul-2019 11:34:55 Chrom Revision: 2.3 20-Jun-2019 20:50:56

Eurofins TestAmerica, Denver

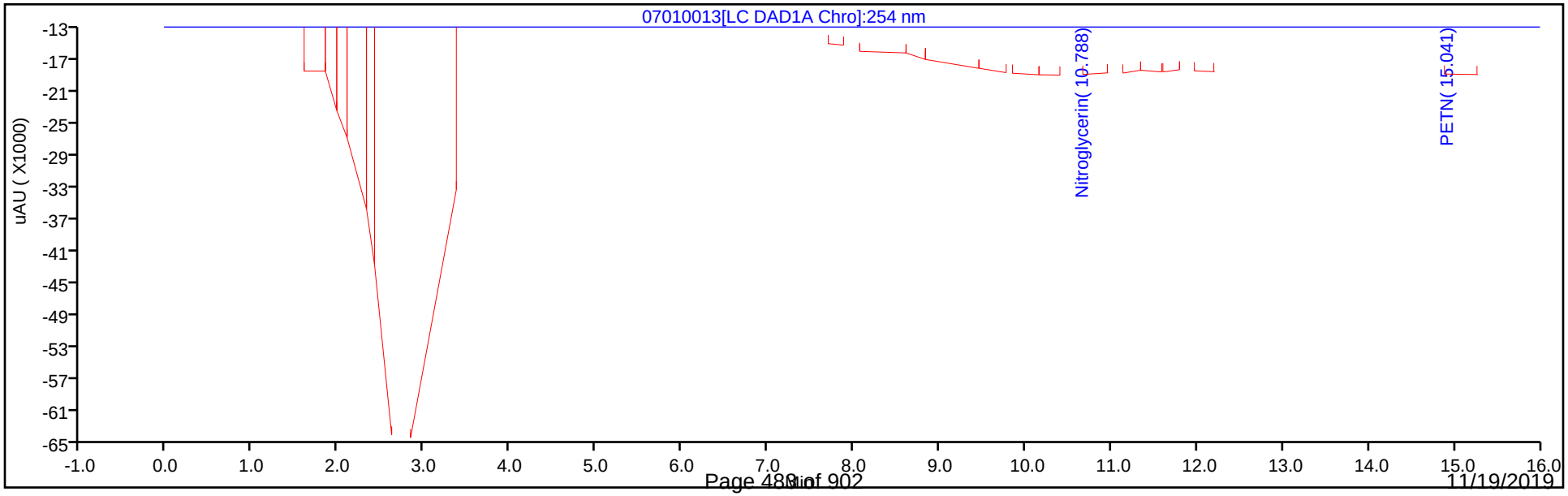
Data File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010013.D

Injection Date:	01-Jul-2019 17:00:38	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC MAIN L2			Worklist Smp#:	13
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

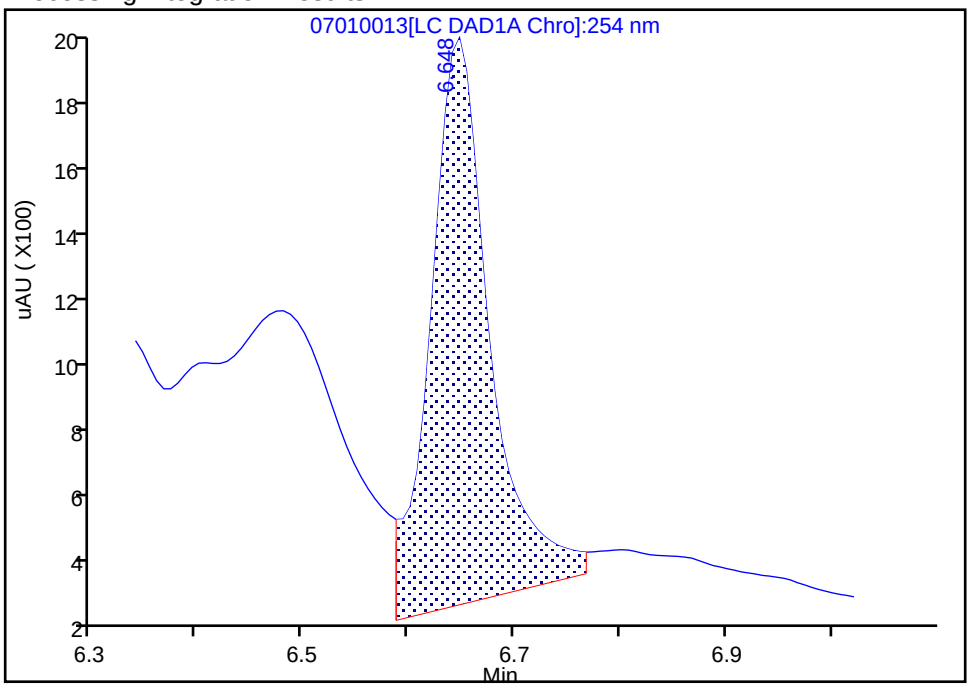
Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010013.D				
Injection Date:	01-Jul-2019 17:00:38	Instrument ID:	CHHPLC_X3		
Lims ID:	IC MAIN L2				
Client ID:					
Operator ID:	hkf	ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

3 HMX, CAS: 2691-41-0

Signal: 1

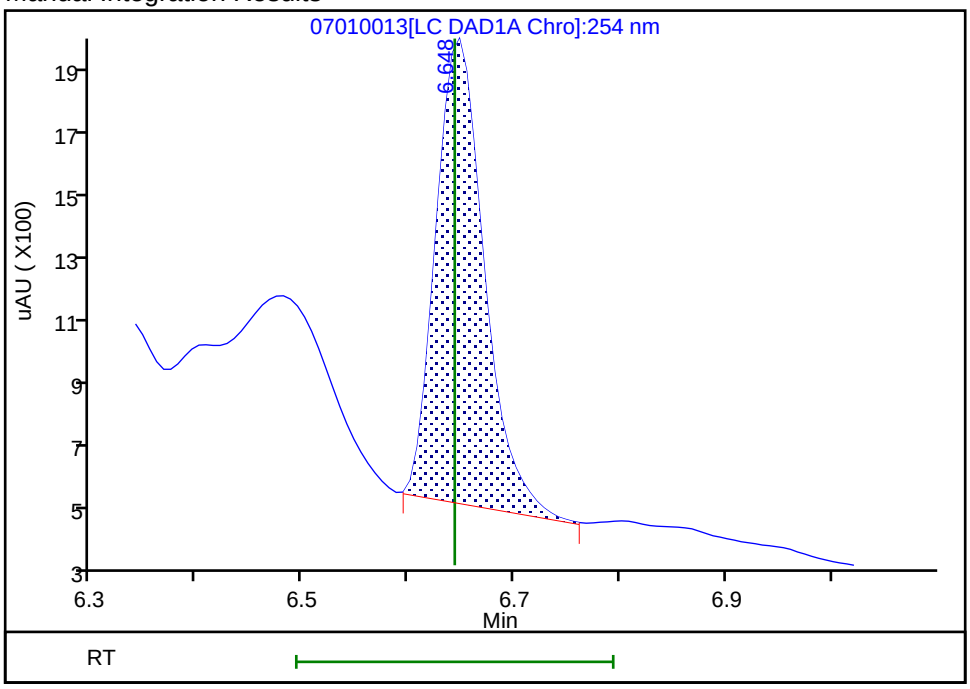
Processing Integration Results

RT: 6.65
Area: 6332
Amount: 0.065662
Amount Units: ug/mL



Manual Integration Results

RT: 6.65
Area: 4492
Amount: 0.048915
Amount Units: ug/mL



Reviewer: fiedlerh, 01-Jul-2019 18:30:57
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010014.D
Lims ID: IC MAIN L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 01-Jul-2019 17:23:38 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L1
Misc. Info.: 280-0083376-014
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 02-Jul-2019 11:34:57 Calib Date: 02-Jul-2019 00:18:07
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0309

First Level Reviewer: fiedlerh Date: 01-Jul-2019 18:31:18

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
3 HMX	1	6.642	6.643	-0.001	1795	0.0200	0.0195	
7 RDX	1	7.762	7.757	0.005	2338	0.0200	0.0210	
8 2,4,6-Trinitrophenol	1	8.209	8.177	0.032	2302	0.0200	0.0254	M
$ 9 1,2-Dinitrobenzene	1	8.742	8.737	0.005	2609	0.0200	0.0187	
10 1,3,5-Trinitrobenzene	1	8.902	8.897	0.005	4638	0.0200	0.0189	
11 1,3-Dinitrobenzene	1	9.562	9.557	0.005	5930	0.0200	0.0191	
12 Nitrobenzene	1	9.949	9.943	0.006	3747	0.0200	0.0188	
14 Tetryl	1	10.275	10.270	0.005	2803	0.0200	0.0173	
15 Nitroglycerin	2	10.775	10.770	0.005	12630	0.2000	0.1776	
16 2,4,6-Trinitrotoluene	1	11.229	11.223	0.006	4544	0.0201	0.0200	
17 4-Amino-2,6-dinitrotoluene	1	11.422	11.417	0.005	3540	0.0201	0.0213	
18 2-Amino-4,6-dinitrotoluene	1	11.715	11.703	0.012	3841	0.0201	0.0187	M
19 2,6-Dinitrotoluene	1	11.842	11.837	0.005	3382	0.0201	0.0212	M
20 2,4-Dinitrotoluene	1	12.042	12.037	0.005	5825	0.0200	0.0194	
21 o-Nitrotoluene	1	12.882	12.877	0.005	2560	0.0201	0.0197	
22 p-Nitrotoluene	1	13.329	13.317	0.012	2162	0.0201	0.0196	
23 m-Nitrotoluene	1	13.915	13.917	-0.002	2906	0.0201	0.0200	
24 PETN	2	15.015	15.010	0.005	11106	0.2000	0.1495	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00058 Amount Added: 1.00 Units: uL

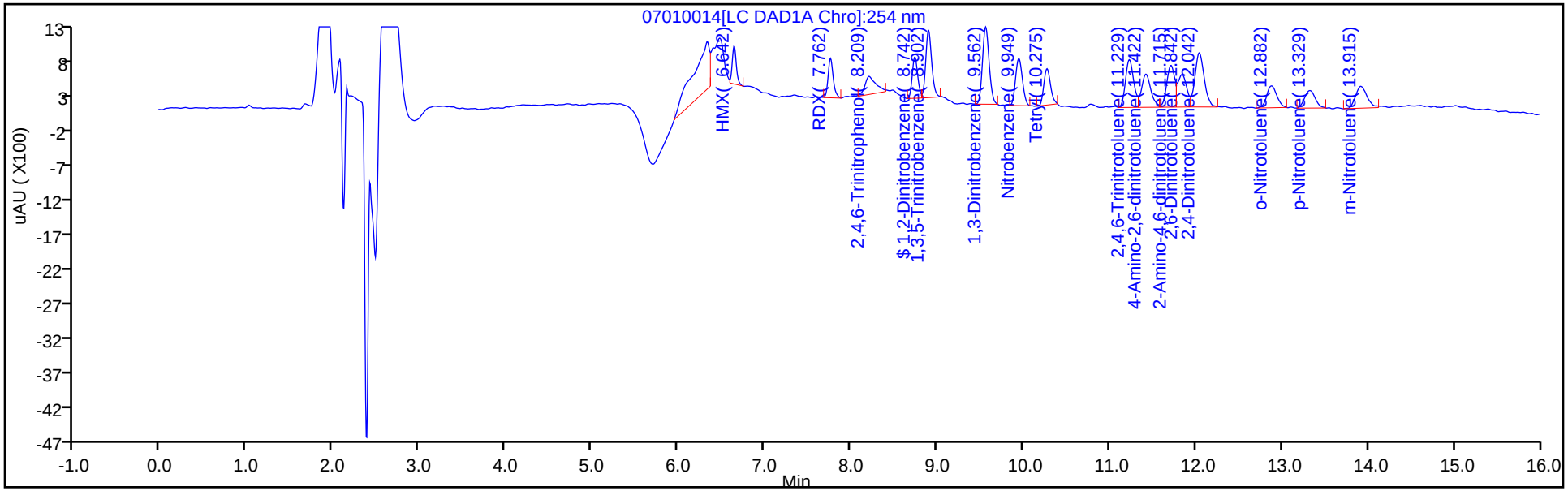
Report Date: 02-Jul-2019 11:34:58 Chrom Revision: 2.3 20-Jun-2019 20:50:56

Eurofins TestAmerica, Denver

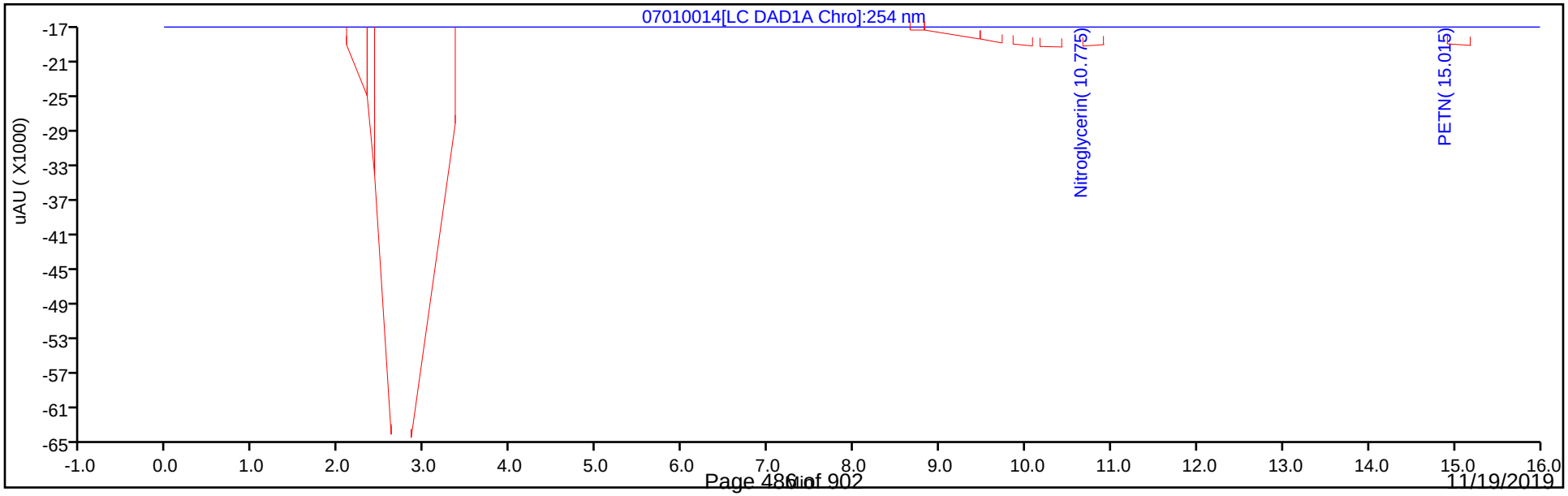
Data File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010014.D

Injection Date:	01-Jul-2019 17:23:38	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC MAIN L1			Worklist Smp#:	14
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

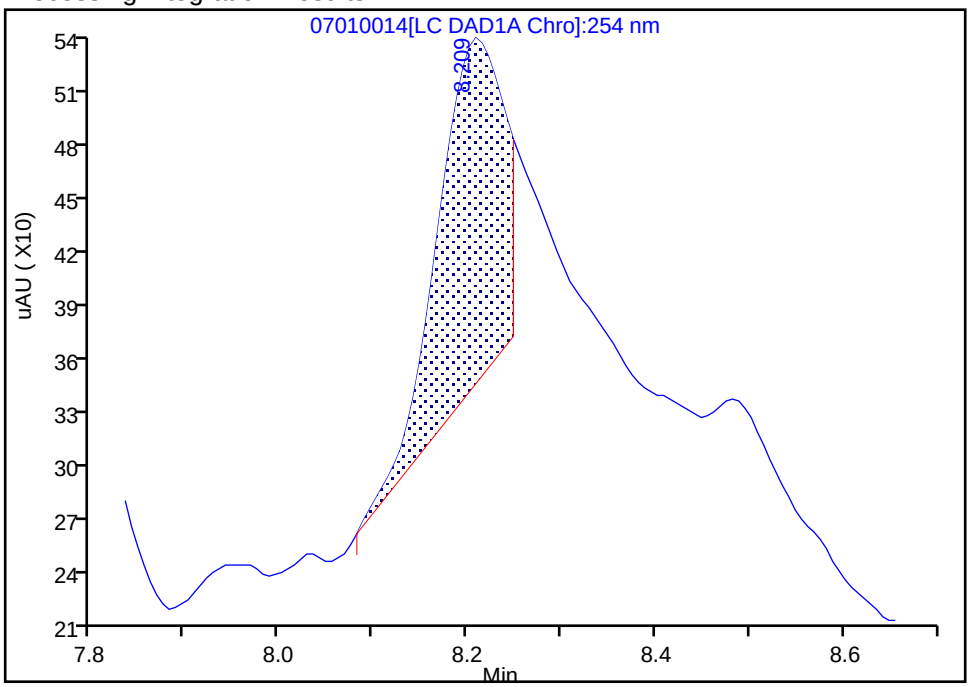
Data File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010014.D
Injection Date: 01-Jul-2019 17:23:38 Instrument ID: CHHPLC_X3
Lims ID: IC MAIN L1
Client ID:
Operator ID: hkf ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

8 2,4,6-Trinitrophenol, CAS: 88-89-1

Signal: 1

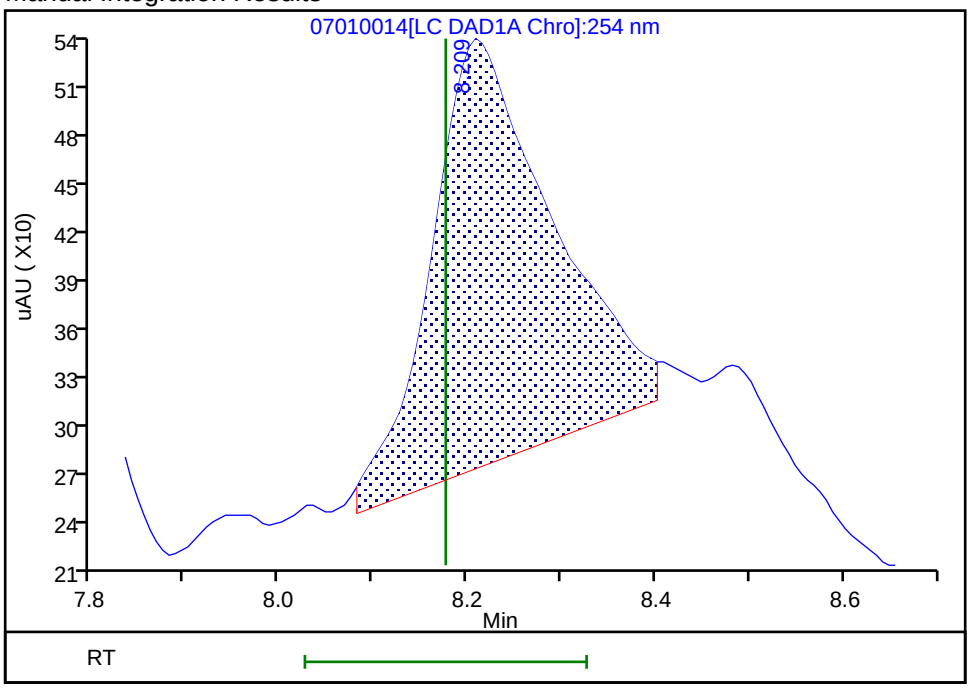
Processing Integration Results

RT: 8.21
Area: 906
Amount: 0.011048
Amount Units: ug/mL



Manual Integration Results

RT: 8.21
Area: 2302
Amount: 0.025371
Amount Units: ug/mL



Reviewer: fiedlerh, 01-Jul-2019 18:33:21
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1 Analy Batch No.: 463276

SDG No.:

Instrument ID: CHHPLC_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/01/2019 21:36 Calibration End Date: 07/02/2019 00:18 Calibration ID: 37013

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-463276/32	07010032.D
Level 2	IC 280-463276/31	07010031.D
Level 3	IC 280-463276/30	07010030.D
Level 4	IC 280-463276/29	07010029.D
Level 5	IC 280-463276/28	07010028.D
Level 6	IC 280-463276/27	07010027.D
Level 7	IC 280-463276/26	07010026.D
Level 8	IC 280-463276/25	07010025.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8			RT WINDOW	AVG RT
TNX	6.550	6.545	6.549	6.550	6.548	6.552	6.556	6.547			6.450 - 6.650	6.550
DNX	6.883	6.878	6.882	6.883	6.882	6.885	6.890	6.880			6.783 - 6.983	6.883
MNX	7.350	7.345	7.342	7.343	7.348	7.352	7.356	7.340			7.193 - 7.493	7.347

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1 Analy Batch No.: 463276

SDG No.:

Instrument ID: CHHPLC_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/01/2019 21:36 Calibration End Date: 07/02/2019 00:18 Calibration ID: 37013

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-463276/32	07010032.D
Level 2	IC 280-463276/31	07010031.D
Level 3	IC 280-463276/30	07010030.D
Level 4	IC 280-463276/29	07010029.D
Level 5	IC 280-463276/28	07010028.D
Level 6	IC 280-463276/27	07010027.D
Level 7	IC 280-463276/26	07010026.D
Level 8	IC 280-463276/25	07010025.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 LVL 8		B	M1	M2								
TNX	210589 222797	208352 218948	210300 221984	212915 213827	Ave		214964.079				2.6		20.0			
DNX	170629 158132	155125 156499	151928 157632	151201 147859	Ave		156125.739				4.4		20.0			
MNX	140231 145495	137018 144045	134996 144473	138841 135229	Ave		140040.970				3.0		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, Denver Job No.: 280-129830-1 Analy Batch No.: 463276

SDG No.:

Instrument ID: CHHPLC_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/01/2019 21:36 Calibration End Date: 07/02/2019 00:18 Calibration ID: 37013

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-463276/32	07010032.D
Level 2	IC 280-463276/31	07010031.D
Level 3	IC 280-463276/30	07010030.D
Level 4	IC 280-463276/29	07010029.D
Level 5	IC 280-463276/28	07010028.D
Level 6	IC 280-463276/27	07010027.D
Level 7	IC 280-463276/26	07010026.D
Level 8	IC 280-463276/25	07010025.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
TNX	Ave	4216 153417	10428 222206	21051 535103	53282	89208	0.0200 0.701	0.0501 1.00	0.100 2.50	0.250	0.400
DNX	Ave	3416 109659	7764 157790	15208 370018	37838	63316	0.0200 0.701	0.0501 1.00	0.100 2.50	0.250	0.400
MNX	Ave	3273 117670	7995 168600	15754 394530	40507	67917	0.0233 0.817	0.0584 1.17	0.117 2.92	0.292	0.467

Curve Type Legend:
Ave = Average

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010025.D				
Lims ID:	IC DMT L8				
Client ID:					
Sample Type:	IC	Calib Level:	8		
Inject. Date:	01-Jul-2019 21:36:10	ALS Bottle#:	25	Worklist Smp#:	25
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC DMT L8				
Misc. Info.:	280-0083376-025				
Operator ID:	hkf	Instrument ID:	CHHPLC_X3		
Sublist:	chrom-8330_X3*sub17				
Method:	\\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	02-Jul-2019 11:35:19	Calib Date:	02-Jul-2019 00:18:07		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX0309				

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 TNX	1	6.547	6.550	-0.003	535103	2.50	2.49	
5 DNX	1	6.880	6.883	-0.003	370018	2.50	2.37	
6 MNX	1	7.340	7.343	-0.003	394530	2.92	2.82	

Reagents:

8330 DMT_00002 Amount Added: 125.00 Units: uL

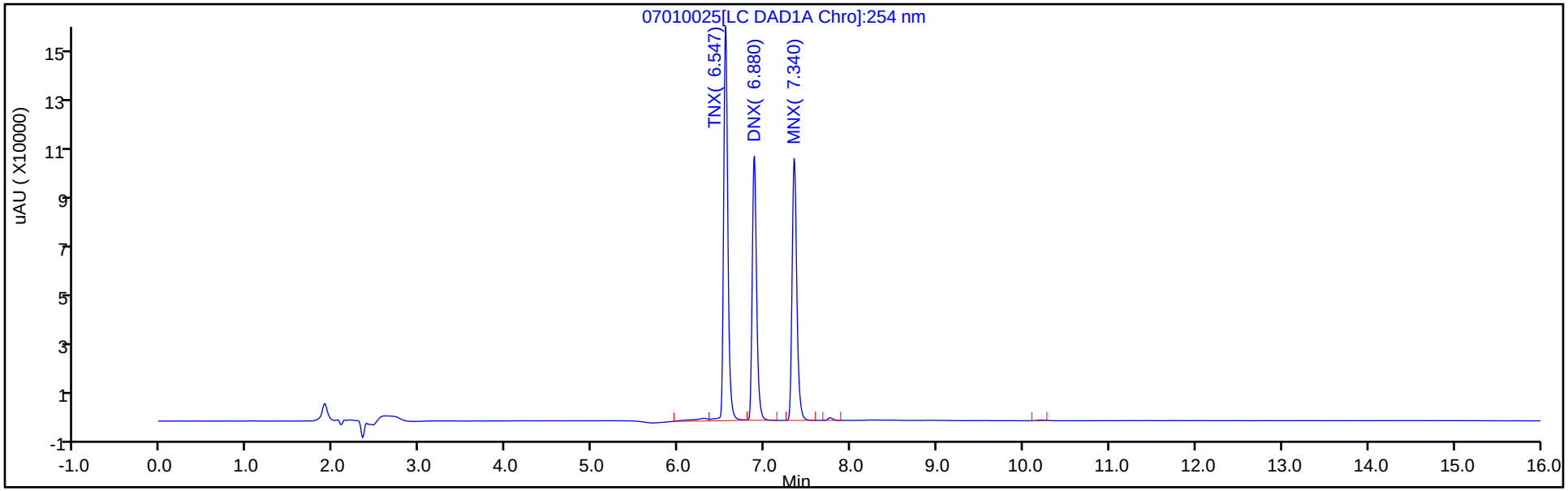
Report Date: 02-Jul-2019 11:35:19 Chrom Revision: 2.3 20-Jun-2019 20:50:56

Eurofins TestAmerica, Denver

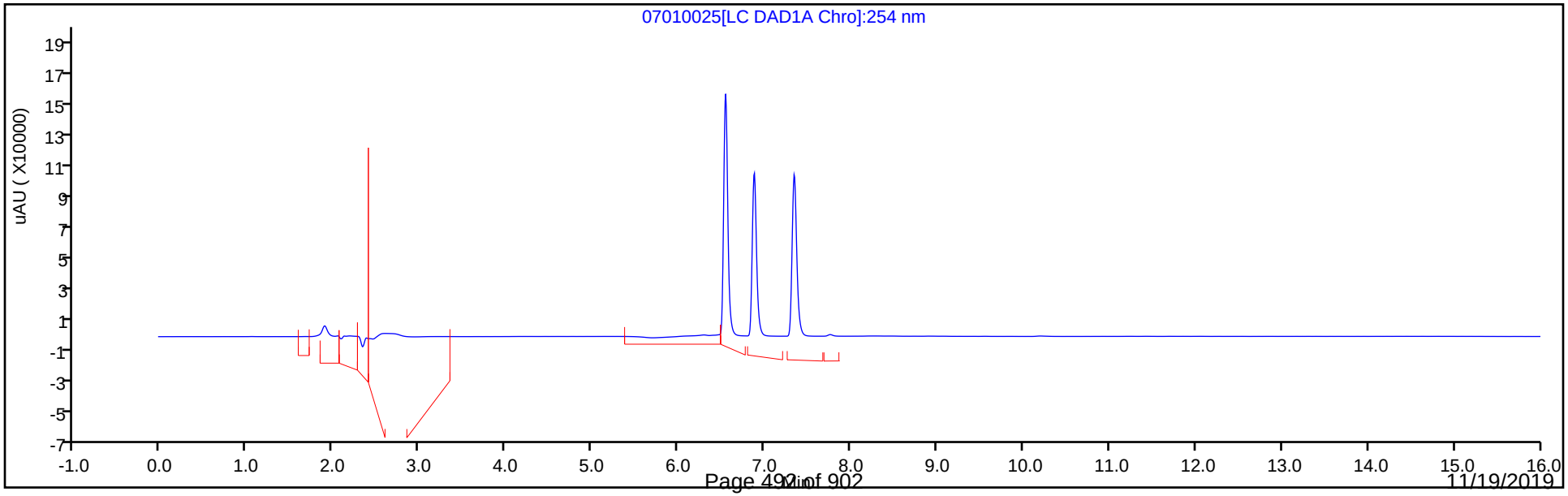
Data File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010025.D

Injection Date:	01-Jul-2019 21:36:10	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC DMT L8			Worklist Smp#:	25
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010026.D
Lims ID: IC DMT L7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 01-Jul-2019 22:00:21 ALS Bottle#: 26 Worklist Smp#: 26
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC DMT L7
Misc. Info.: 280-0083376-026
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub17

Method: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 02-Jul-2019 11:35:21 Calib Date: 02-Jul-2019 00:18:07
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0309

First Level Reviewer: fiedlerh Date: 02-Jul-2019 09:04:16

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 TNX	1	6.556	6.550	0.006	222206	1.00	1.03	M
5 DNX	1	6.890	6.883	0.007	157790	1.00	1.01	M
6 MNX	1	7.356	7.343	0.013	168600	1.17	1.20	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8330 DMT_00002 Amount Added: 50.00 Units: uL

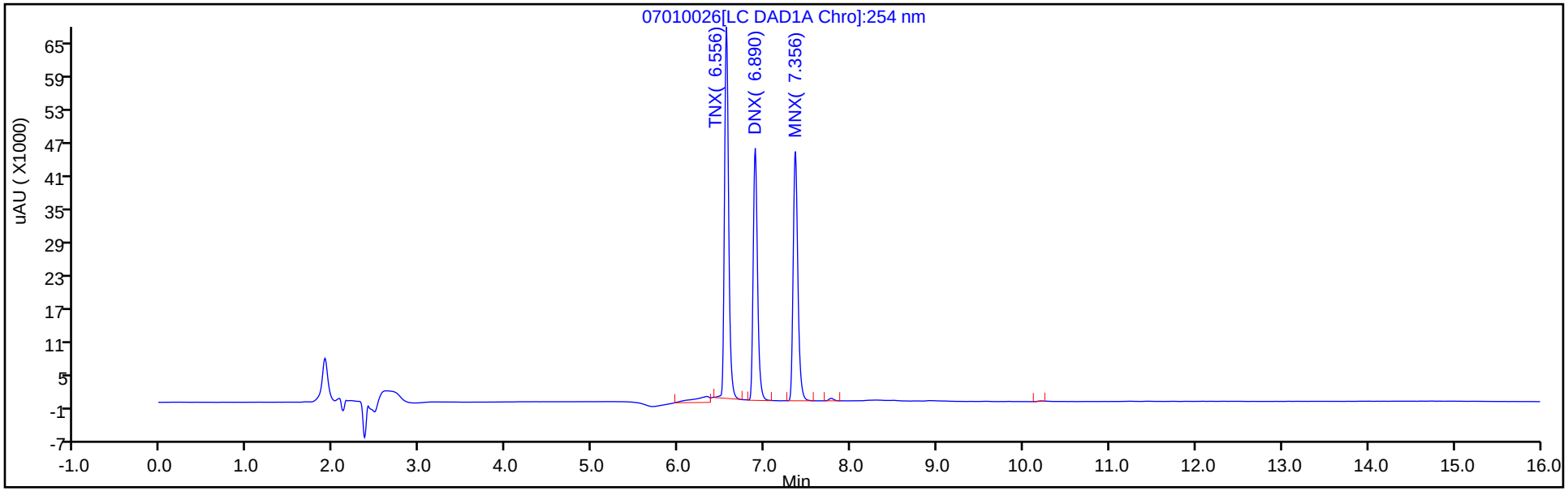
Report Date: 02-Jul-2019 11:35:21 Chrom Revision: 2.3 20-Jun-2019 20:50:56

Eurofins TestAmerica, Denver

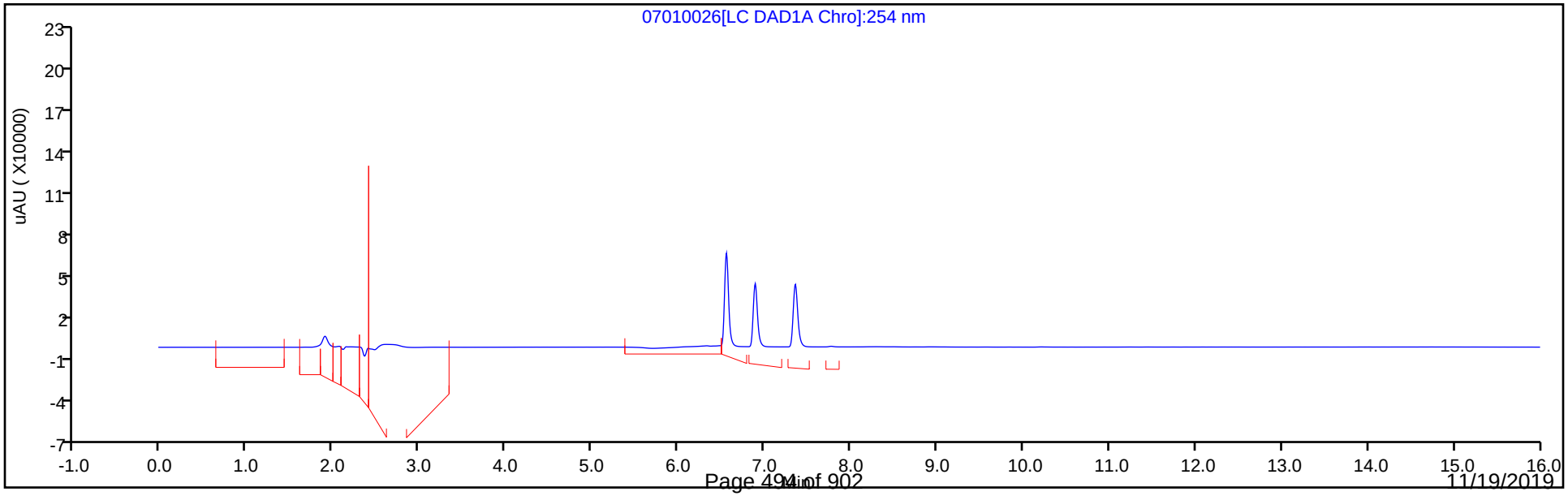
Data File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010026.D

Injection Date:	01-Jul-2019 22:00:21	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC DMT L7			Worklist Smp#:	26
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

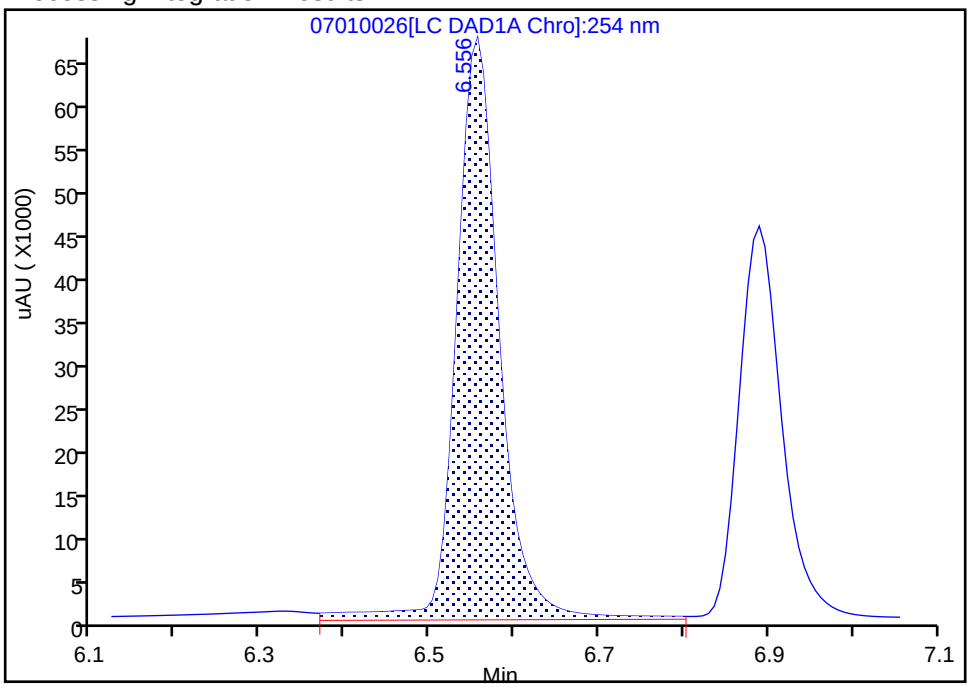
Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010026.D				
Injection Date:	01-Jul-2019 22:00:21	Instrument ID:	CHHPLC_X3		
Lims ID:	IC DMT L7				
Client ID:					
Operator ID:	hkf	ALS Bottle#:	26	Worklist Smp#:	26
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

2 TNX, CAS: 13980-04-6

Signal: 1

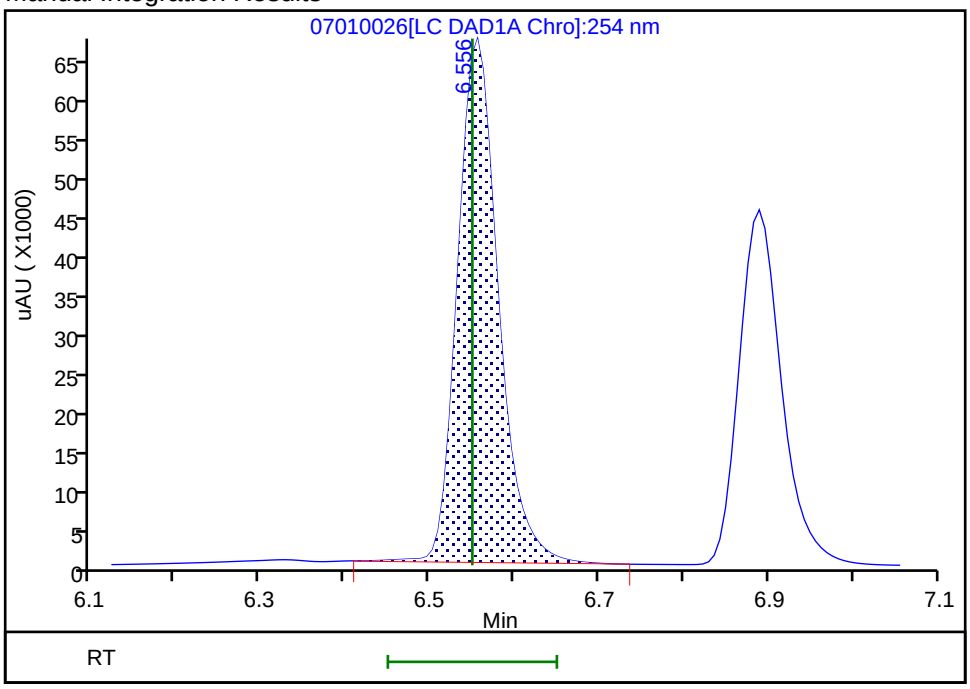
Processing Integration Results

RT: 6.56
Area: 238054
Amount: 0.989410
Amount Units: ug/mL



Manual Integration Results

RT: 6.56
Area: 222206
Amount: 1.033689
Amount Units: ug/mL



Reviewer: fiedlerh, 02-Jul-2019 09:04:11

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

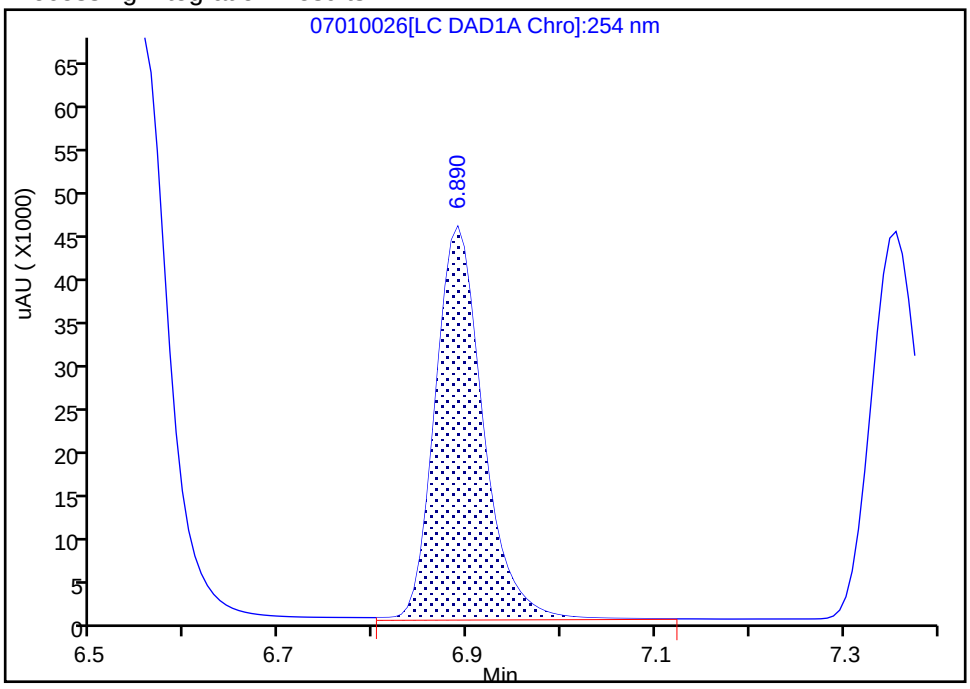
Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010026.D				
Injection Date:	01-Jul-2019 22:00:21	Instrument ID:	CHHPLC_X3		
Lims ID:	IC DMT L7				
Client ID:					
Operator ID:	hkf	ALS Bottle#:	26	Worklist Smp#:	26
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

5 DNX, CAS: 80251-29-2

Signal: 1

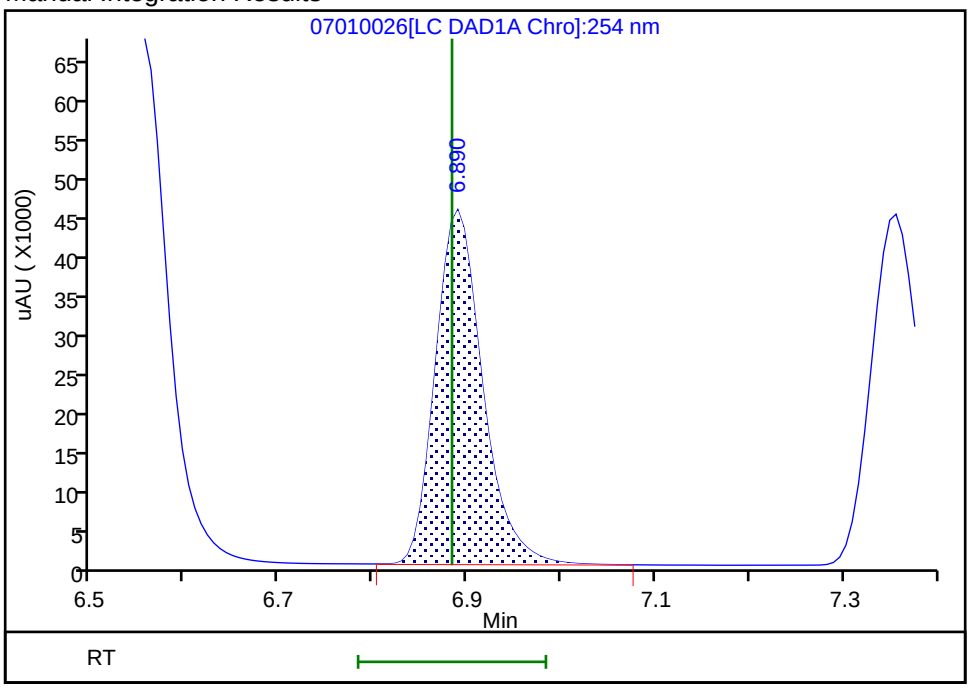
Processing Integration Results

RT: 6.89
Area: 160640
Amount: 1.026574
Amount Units: ug/mL



Manual Integration Results

RT: 6.89
Area: 157790
Amount: 1.010660
Amount Units: ug/mL



Reviewer: fiedlerh, 02-Jul-2019 09:04:15
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010027.D
Lims ID: IC DMT L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 01-Jul-2019 22:23:20 ALS Bottle#: 27 Worklist Smp#: 27
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC DMT L6
Misc. Info.: 280-0083376-027
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub17

Method: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 02-Jul-2019 11:35:22 Calib Date: 02-Jul-2019 00:18:07
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0309

First Level Reviewer: fiedlerh Date: 02-Jul-2019 09:03:59

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 TNX	1	6.552	6.550	0.002	153417	0.7007	0.7137	M
5 DNX	1	6.885	6.883	0.002	109659	0.7007	0.7024	M
6 MNX	1	7.352	7.343	0.009	117670	0.8169	0.8403	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8330 DMT_00002 Amount Added: 35.00 Units: uL

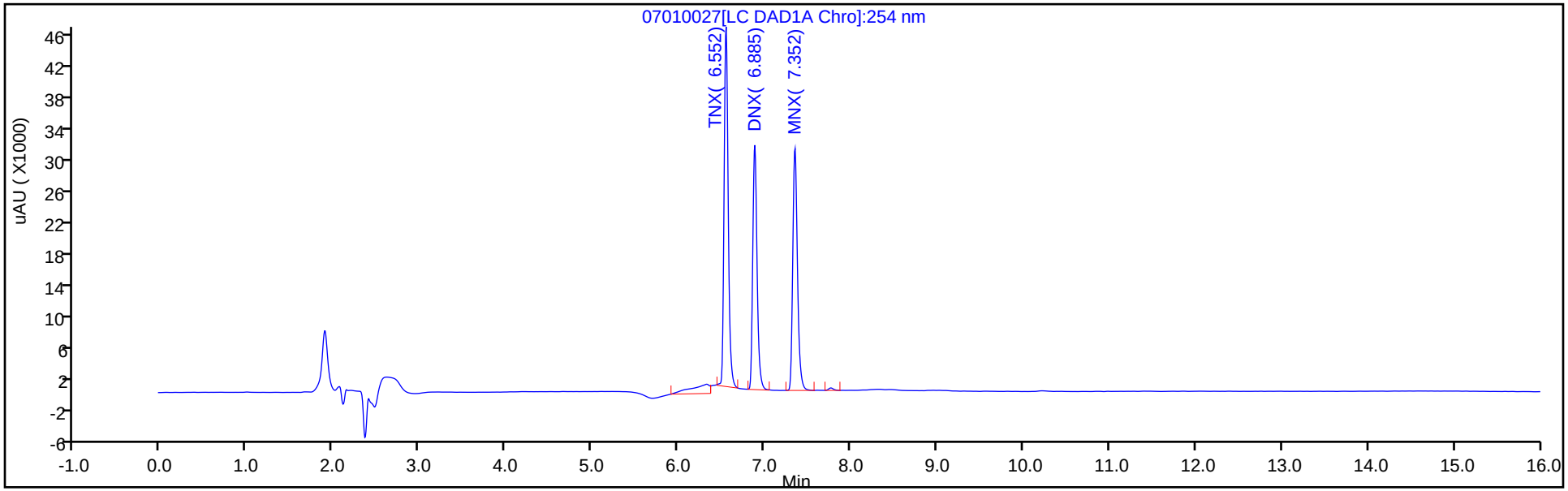
Report Date: 02-Jul-2019 11:35:23 Chrom Revision: 2.3 20-Jun-2019 20:50:56

Eurofins TestAmerica, Denver

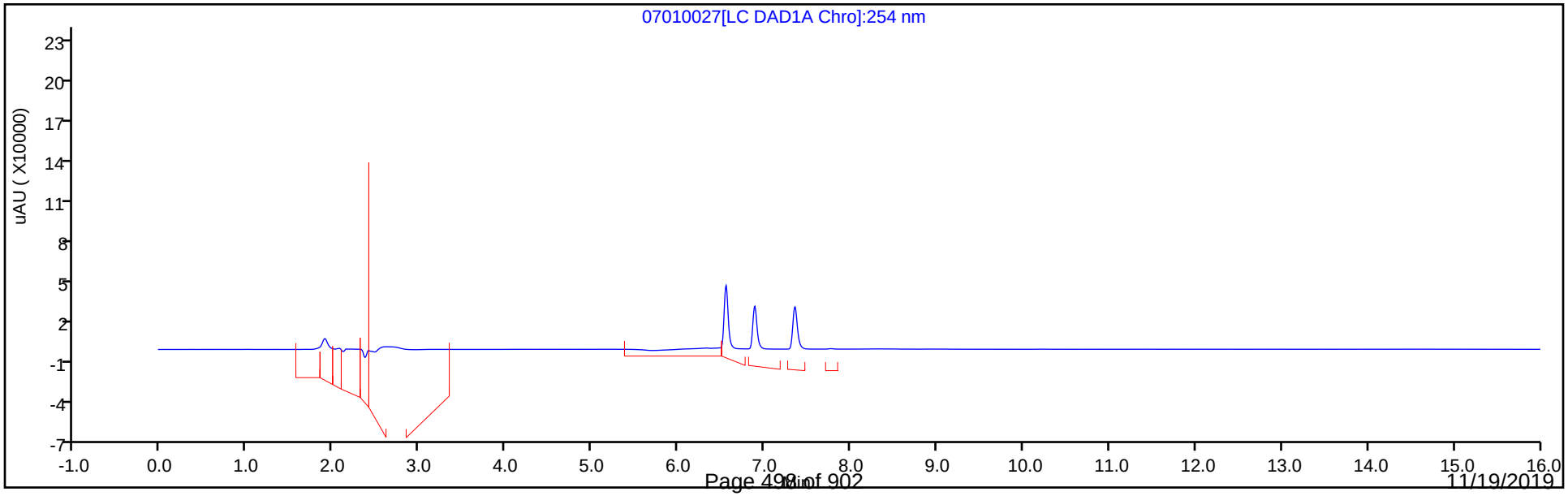
Data File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010027.D

Injection Date:	01-Jul-2019 22:23:20	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC DMT L6			Worklist Smp#:	27
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	27
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

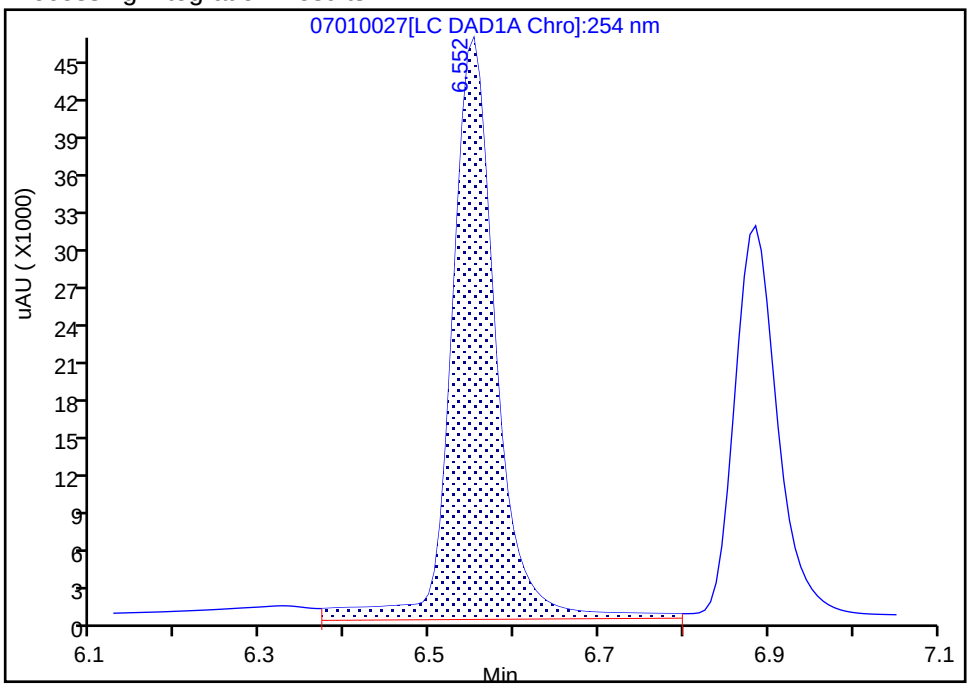
Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010027.D				
Injection Date:	01-Jul-2019 22:23:20	Instrument ID:	CHHPLC_X3		
Lims ID:	IC DMT L6				
Client ID:					
Operator ID:	hkf	ALS Bottle#:	27	Worklist Smp#:	27
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

2 TNX, CAS: 13980-04-6

Signal: 1

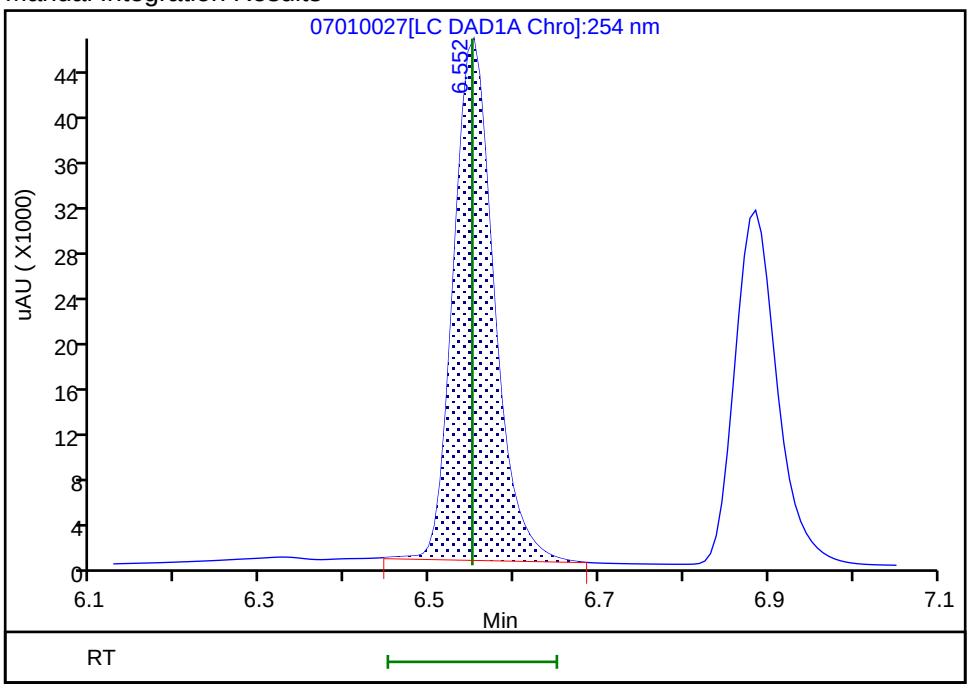
Processing Integration Results

RT: 6.55
Area: 172073
Amount: 0.705419
Amount Units: ug/mL



Manual Integration Results

RT: 6.55
Area: 153417
Amount: 0.713687
Amount Units: ug/mL



Reviewer: fiedlerh, 02-Jul-2019 09:03:43
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

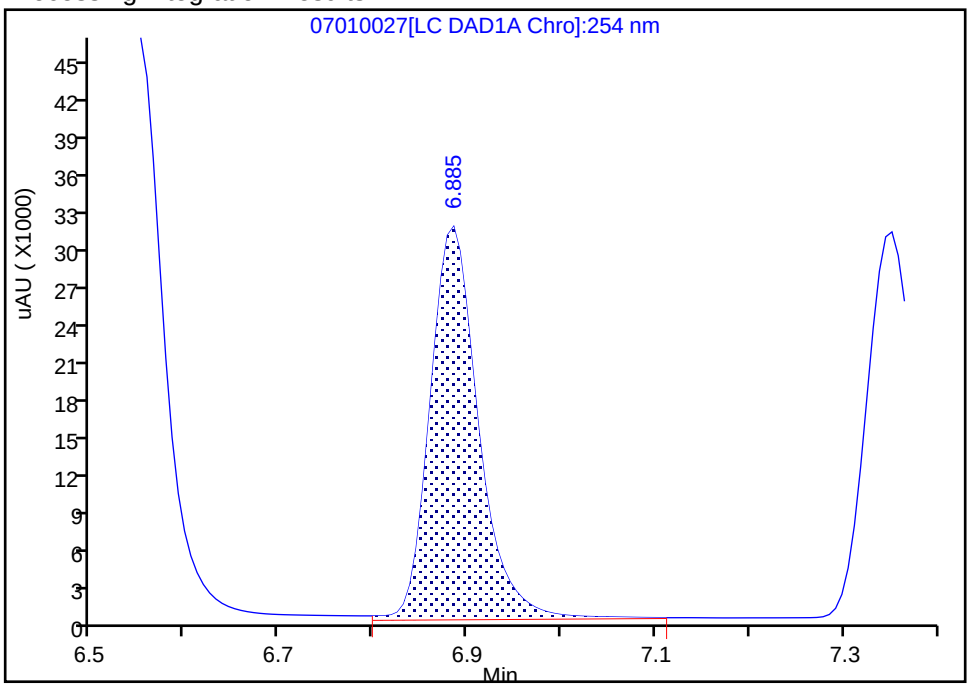
Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010027.D				
Injection Date:	01-Jul-2019 22:23:20	Instrument ID:	CHHPLC_X3		
Lims ID:	IC DMT L6				
Client ID:					
Operator ID:	hkf	ALS Bottle#:	27	Worklist Smp#:	27
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

5 DNX, CAS: 80251-29-2

Signal: 1

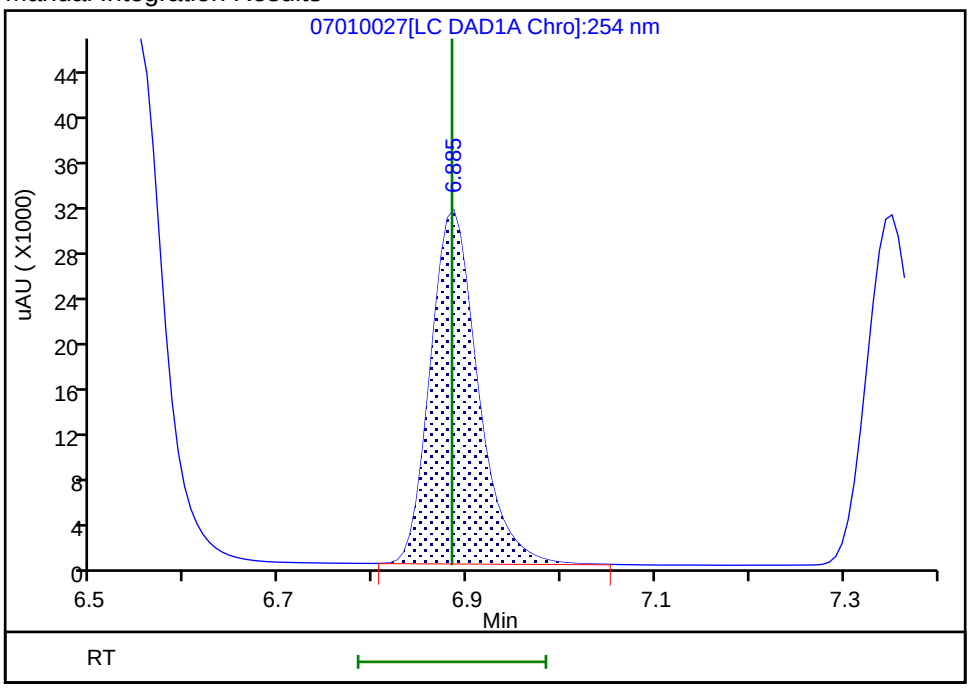
Processing Integration Results

RT: 6.89
Area: 113520
Amount: 0.722273
Amount Units: ug/mL



Manual Integration Results

RT: 6.89
Area: 109659
Amount: 0.702376
Amount Units: ug/mL



Reviewer: fiedlerh, 02-Jul-2019 09:03:57
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010028.D				
Lims ID:	IC DMT L5				
Client ID:					
Sample Type:	IC	Calib Level:	5		
Inject. Date:	01-Jul-2019 22:46:18	ALS Bottle#:	28	Worklist Smp#:	28
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC DMT L5				
Misc. Info.:	280-0083376-028				
Operator ID:	hkf	Instrument ID:	CHHPLC_X3		
Sublist:	chrom-8330_X3*sub17				
Method:	\\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	02-Jul-2019 11:35:24	Calib Date:	02-Jul-2019 00:18:07		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX0309				
First Level Reviewer: fiedlerh		Date:	02-Jul-2019 09:03:31		

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 TNX	1	6.548	6.550	-0.002	89208	0.4004	0.4150	M
5 DNX	1	6.882	6.883	-0.001	63316	0.4004	0.4055	M
6 MNX	1	7.348	7.343	0.005	67917	0.4668	0.4850	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8330 DMT_00002 Amount Added: 20.00 Units: uL

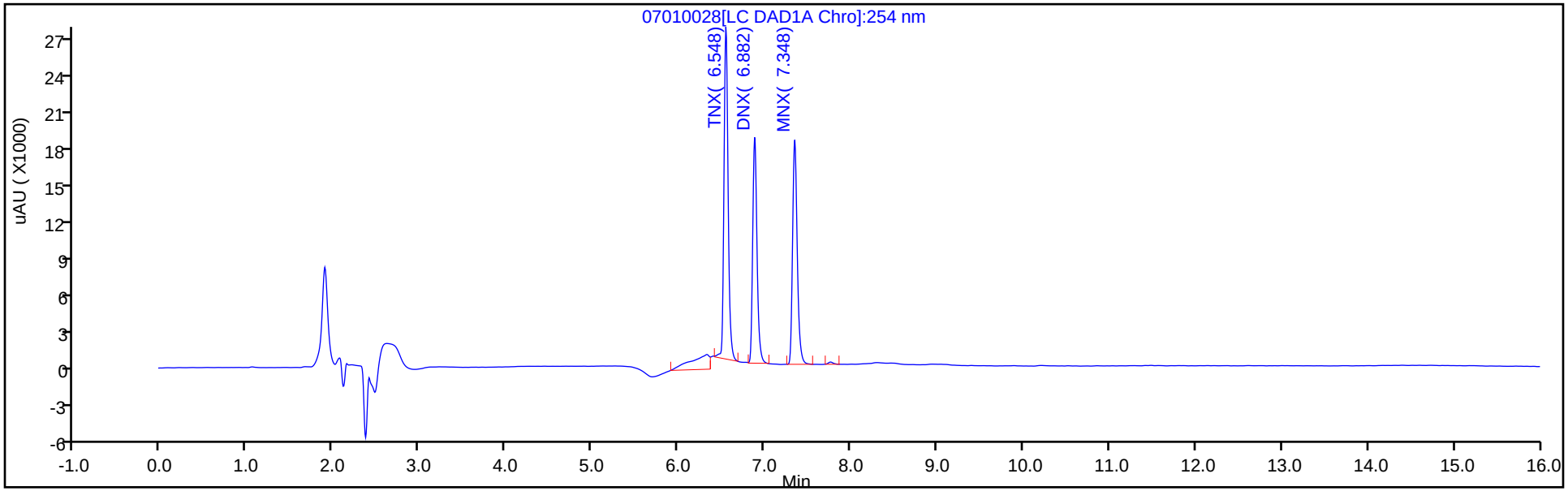
Report Date: 02-Jul-2019 11:35:24 Chrom Revision: 2.3 20-Jun-2019 20:50:56

Eurofins TestAmerica, Denver

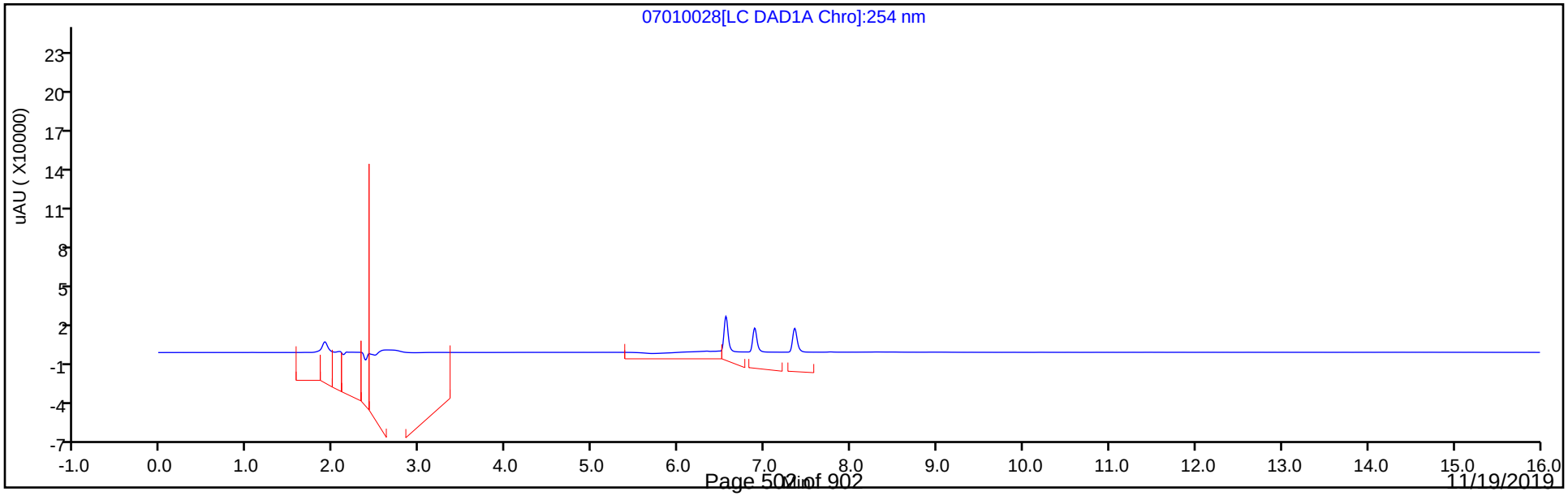
Data File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010028.D

Injection Date:	01-Jul-2019 22:46:18	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC DMT L5			Worklist Smp#:	28
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	28
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

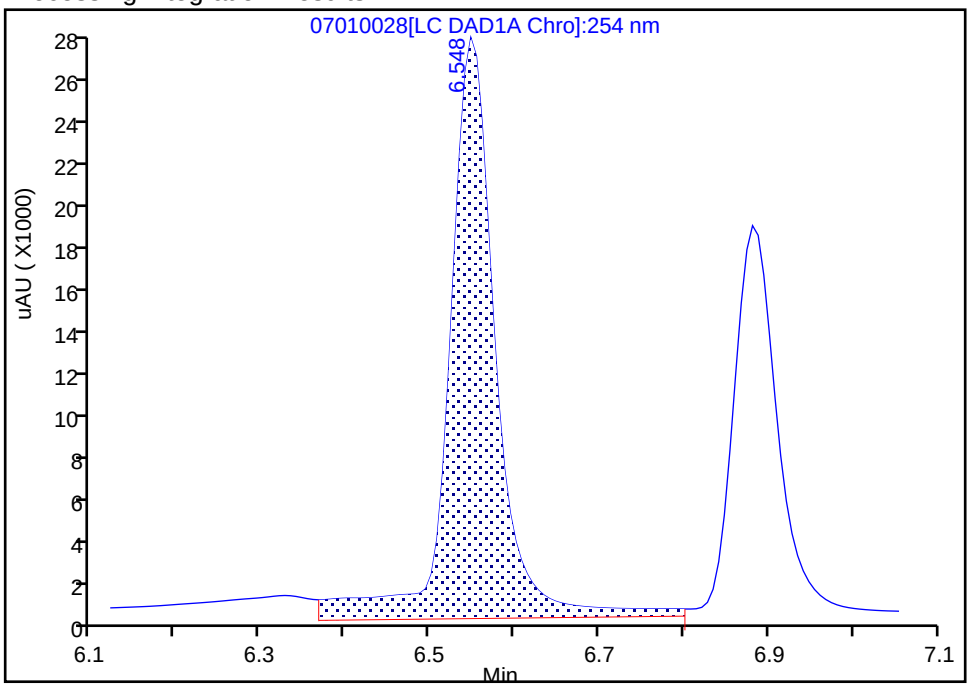
Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010028.D				
Injection Date:	01-Jul-2019 22:46:18	Instrument ID:	CHHPLC_X3		
Lims ID:	IC DMT L5				
Client ID:					
Operator ID:	hkf	ALS Bottle#:	28	Worklist Smp#:	28
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

2 TNX, CAS: 13980-04-6

Signal: 1

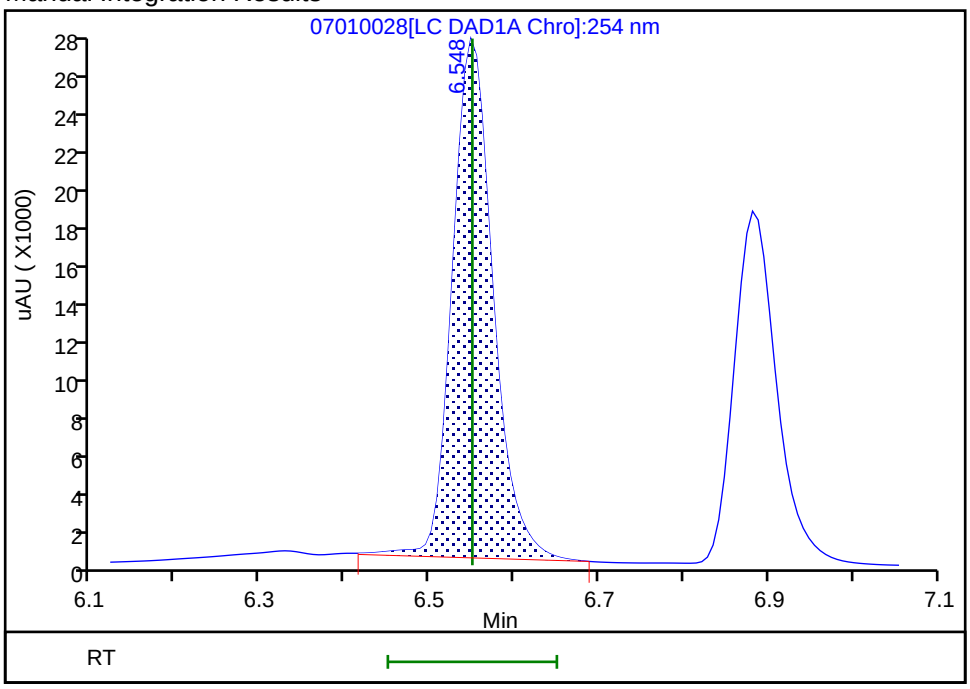
Processing Integration Results

RT: 6.55
Area: 106504
Amount: 0.427161
Amount Units: ug/mL



Manual Integration Results

RT: 6.55
Area: 89208
Amount: 0.414990
Amount Units: ug/mL



Reviewer: fiedlerh, 02-Jul-2019 09:03:27

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

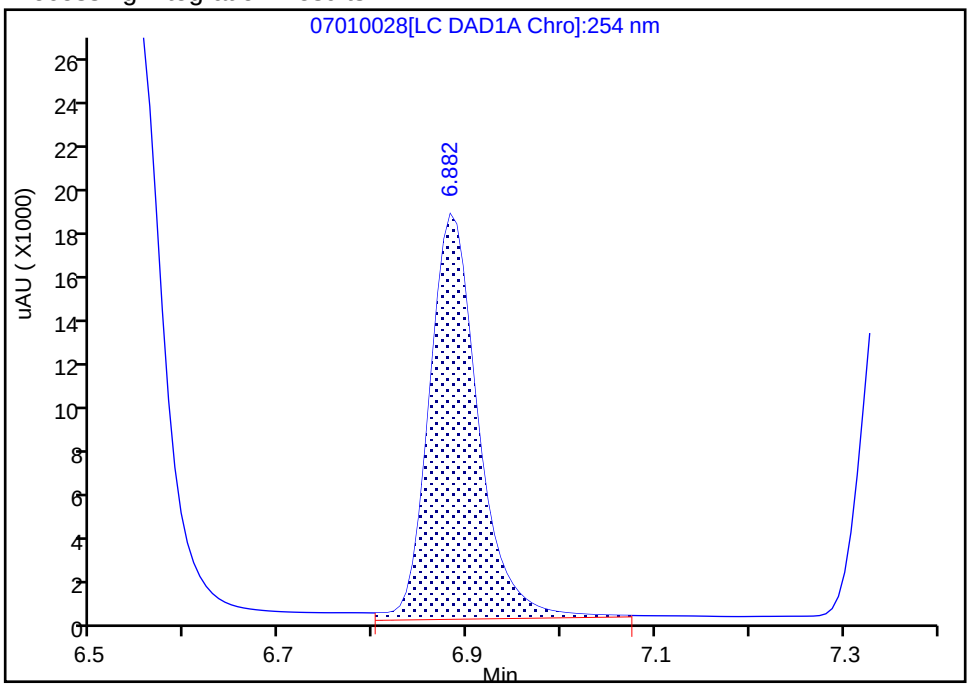
Data File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010028.D
Injection Date: 01-Jul-2019 22:46:18 Instrument ID: CHHPLC_X3
Lims ID: IC DMT L5
Client ID:
Operator ID: hkf ALS Bottle#: 28 Worklist Smp#: 28
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

5 DNX, CAS: 80251-29-2

Signal: 1

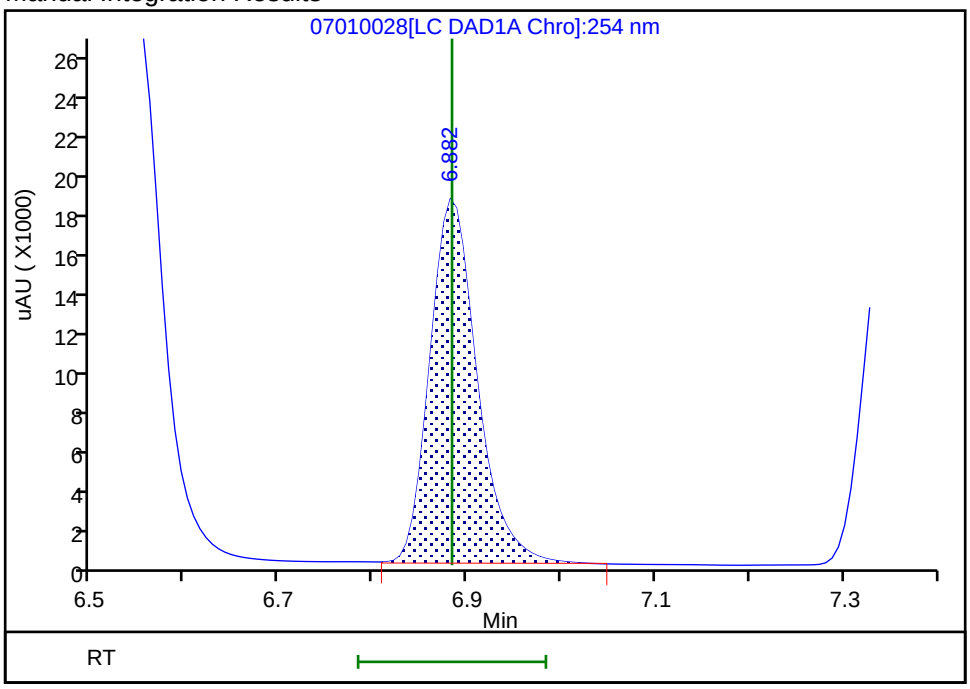
Processing Integration Results

RT: 6.88
Area: 66458
Amount: 0.420218
Amount Units: ug/mL



Manual Integration Results

RT: 6.88
Area: 63316
Amount: 0.405545
Amount Units: ug/mL



Reviewer: fiedlerh, 02-Jul-2019 09:03:30
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010029.D
Lims ID: IC DMT L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 01-Jul-2019 23:09:14 ALS Bottle#: 29 Worklist Smp#: 29
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC DMT L4
Misc. Info.: 280-0083376-029
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub17

Method: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 02-Jul-2019 11:35:26 Calib Date: 02-Jul-2019 00:18:07
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0309

First Level Reviewer: fiedlerh Date: 02-Jul-2019 09:03:16

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 TNX	1	6.550	6.550	0.000	53282	0.2503	0.2479	M
5 DNX	1	6.883	6.883	0.000	37838	0.2503	0.2424	
6 MNX	1	7.343	7.343	0.000	40507	0.2918	0.2893	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8330 DMT_00002 Amount Added: 12.50 Units: uL

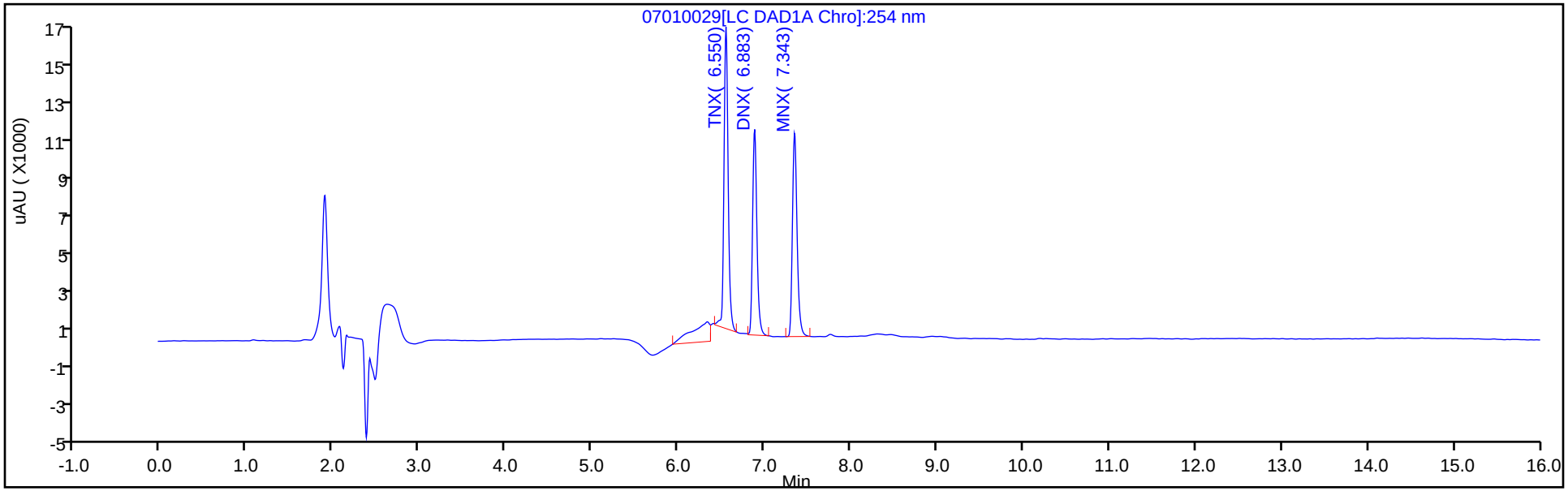
Report Date: 02-Jul-2019 11:35:26 Chrom Revision: 2.3 20-Jun-2019 20:50:56

Eurofins TestAmerica, Denver

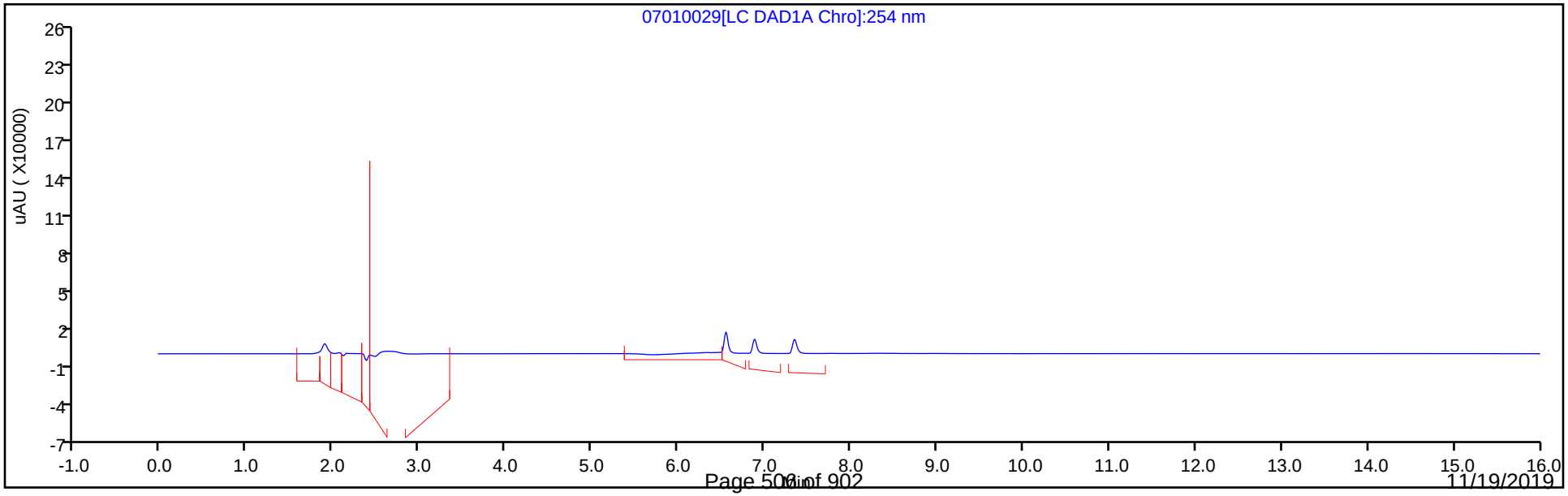
Data File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010029.D

Injection Date:	01-Jul-2019 23:09:14	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC DMT L4			Worklist Smp#:	29
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	29
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

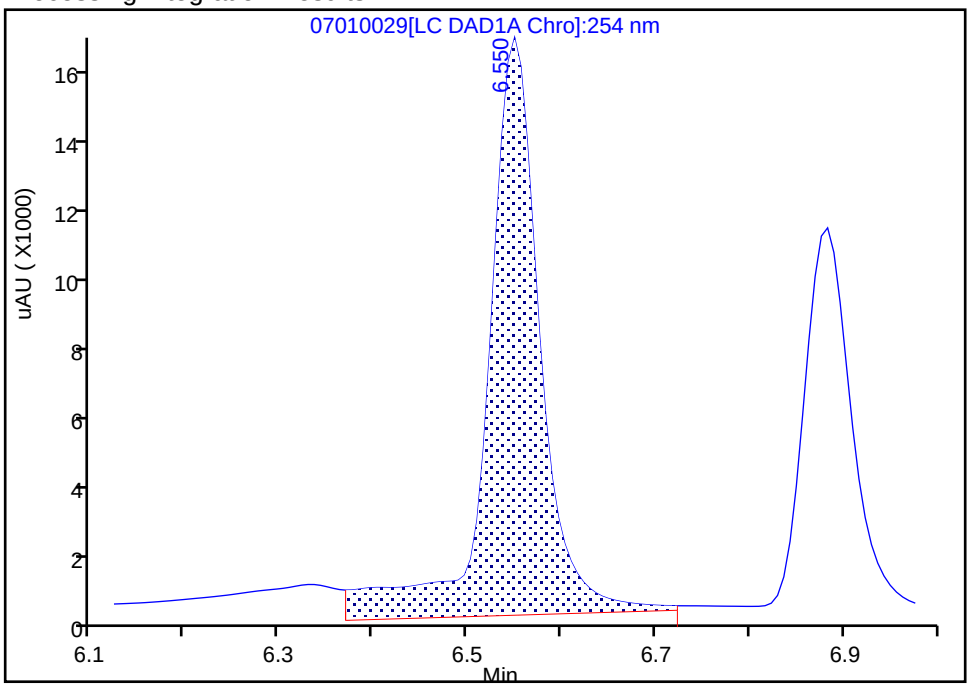
Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010029.D				
Injection Date:	01-Jul-2019 23:09:14	Instrument ID:	CHHPLC_X3		
Lims ID:	IC DMT L4				
Client ID:					
Operator ID:	hkf	ALS Bottle#:	29	Worklist Smp#:	29
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

2 TNX, CAS: 13980-04-6

Signal: 1

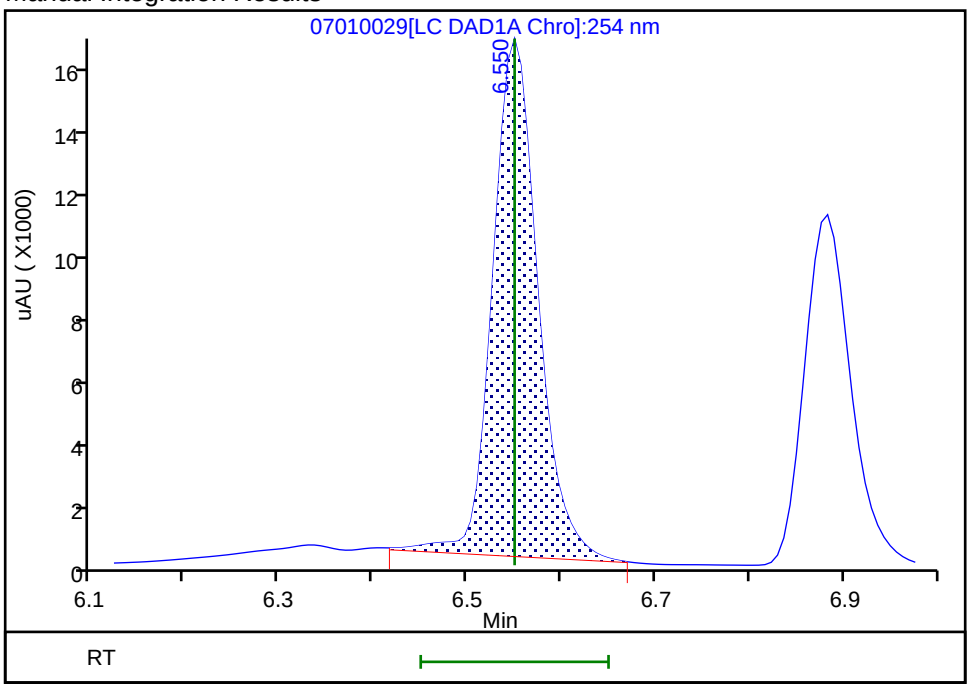
Processing Integration Results

RT: 6.55
Area: 64440
Amount: 0.252802
Amount Units: ug/mL



Manual Integration Results

RT: 6.55
Area: 53282
Amount: 0.247865
Amount Units: ug/mL



Reviewer: fiedlerh, 02-Jul-2019 09:03:09

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010030.D
Lims ID: IC DMT L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 01-Jul-2019 23:32:12 ALS Bottle#: 30 Worklist Smp#: 30
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC DMT L3
Misc. Info.: 280-0083376-030
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub17

Method: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 02-Jul-2019 11:35:27 Calib Date: 02-Jul-2019 00:18:07
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0309

First Level Reviewer: fiedlerh Date: 02-Jul-2019 09:04:35

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 TNX	1	6.549	6.550	-0.001	21051	0.1001	0.0979	M
5 DNX	1	6.882	6.883	-0.001	15208	0.1001	0.0974	
6 MNX	1	7.342	7.343	-0.001	15754	0.1167	0.1125	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8330 DMT_00002 Amount Added: 5.00 Units: uL

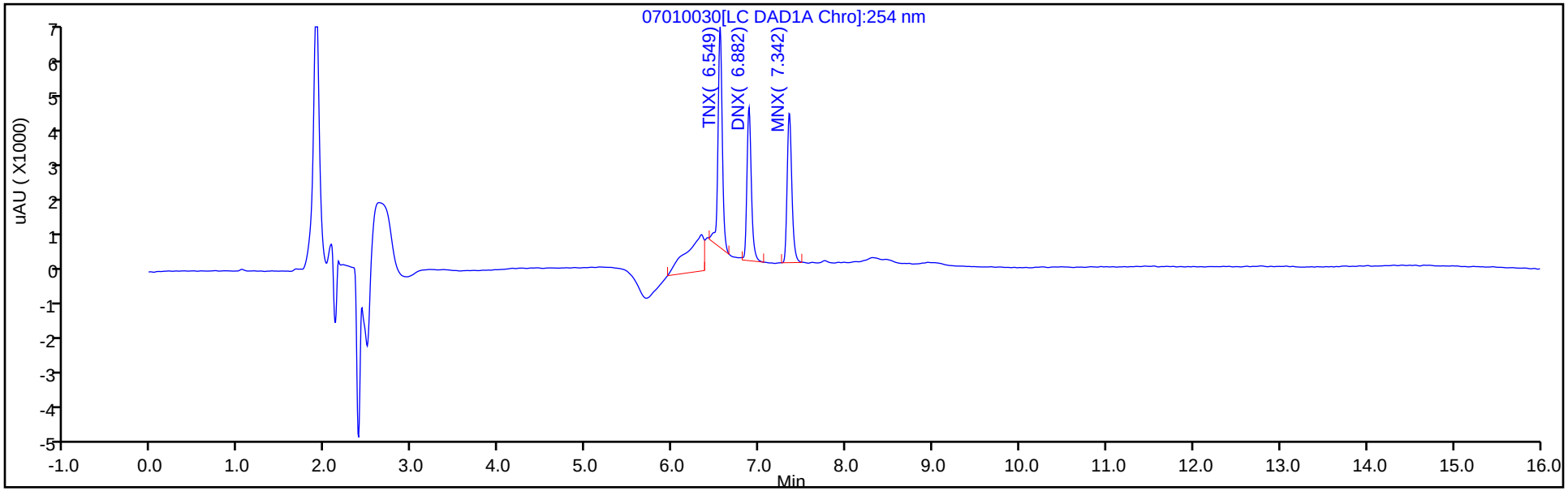
Report Date: 02-Jul-2019 11:35:28 Chrom Revision: 2.3 20-Jun-2019 20:50:56

Eurofins TestAmerica, Denver

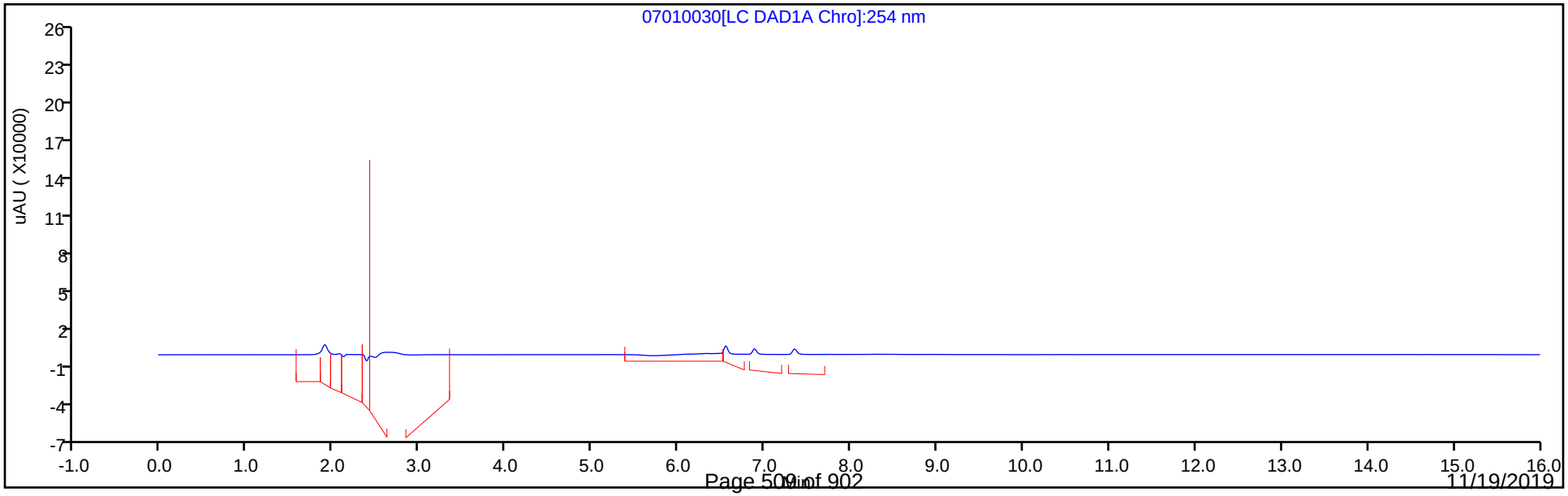
Data File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010030.D

Injection Date:	01-Jul-2019 23:32:12	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC DMT L3			Worklist Smp#:	30
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	30
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

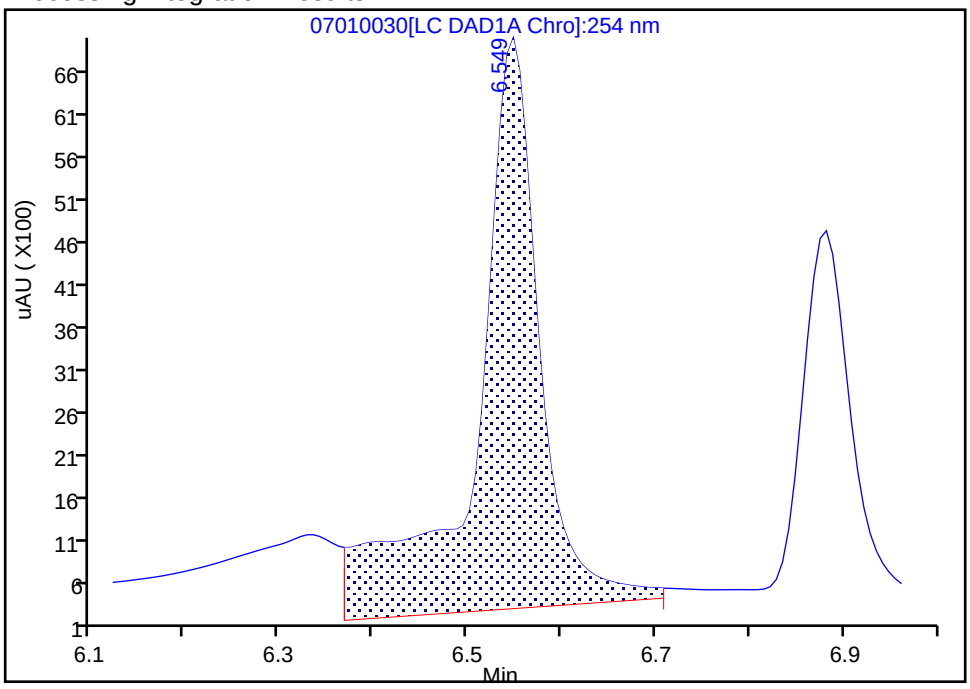
Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010030.D				
Injection Date:	01-Jul-2019 23:32:12	Instrument ID:	CHHPLC_X3		
Lims ID:	IC DMT L3				
Client ID:					
Operator ID:	hkf	ALS Bottle#:	30	Worklist Smp#:	30
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

2 TNX, CAS: 13980-04-6

Signal: 1

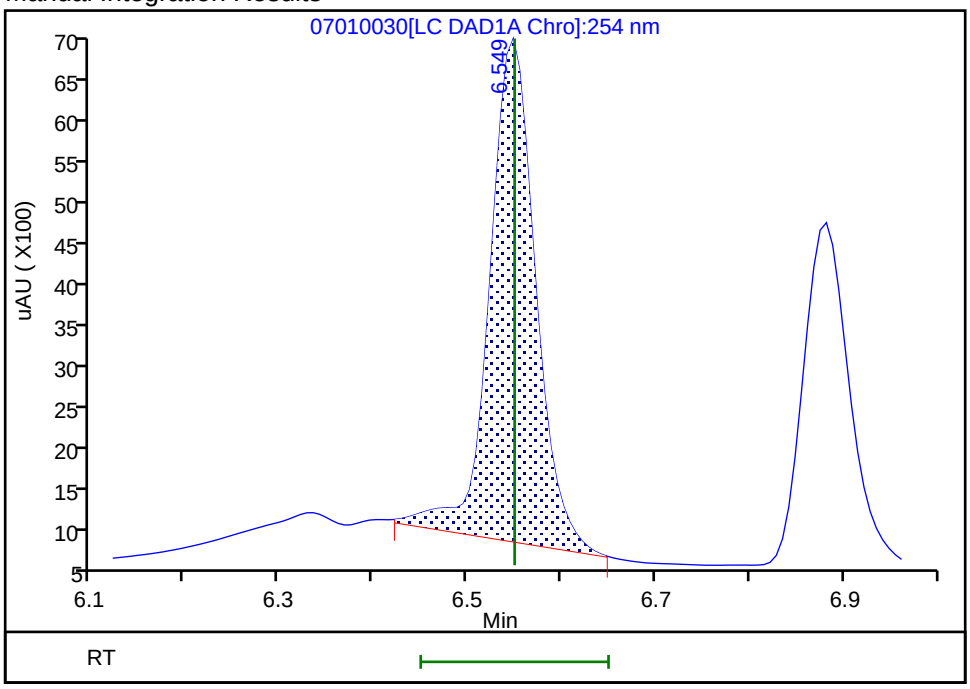
Processing Integration Results

RT: 6.55
Area: 31755
Amount: 0.133076
Amount Units: ug/mL



Manual Integration Results

RT: 6.55
Area: 21051
Amount: 0.097928
Amount Units: ug/mL



Reviewer: fiedlerh, 02-Jul-2019 09:04:34
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010031.D
Lims ID: IC DMT L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 01-Jul-2019 23:55:10 ALS Bottle#: 31 Worklist Smp#: 31
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC DMT L2
Misc. Info.: 280-0083376-031
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub17

Method: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 02-Jul-2019 11:35:29 Calib Date: 02-Jul-2019 00:18:07
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0309

First Level Reviewer: fiedlerh Date: 02-Jul-2019 09:04:53

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 TNX	1	6.545	6.550	-0.005	10428	0.0501	0.0485	M
5 DNX	1	6.878	6.883	-0.005	7764	0.0501	0.0497	
6 MNX	1	7.345	7.343	0.002	7995	0.0584	0.0571	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8330 DMT_00002 Amount Added: 2.50 Units: uL

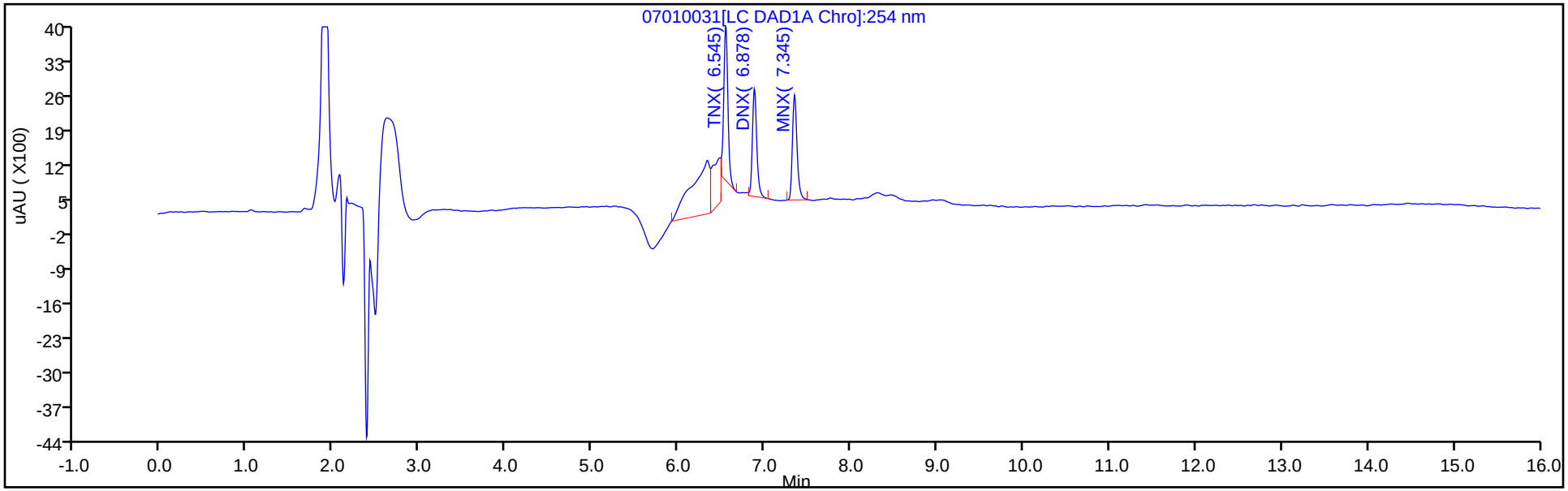
Report Date: 02-Jul-2019 11:35:29 Chrom Revision: 2.3 20-Jun-2019 20:50:56

Eurofins TestAmerica, Denver

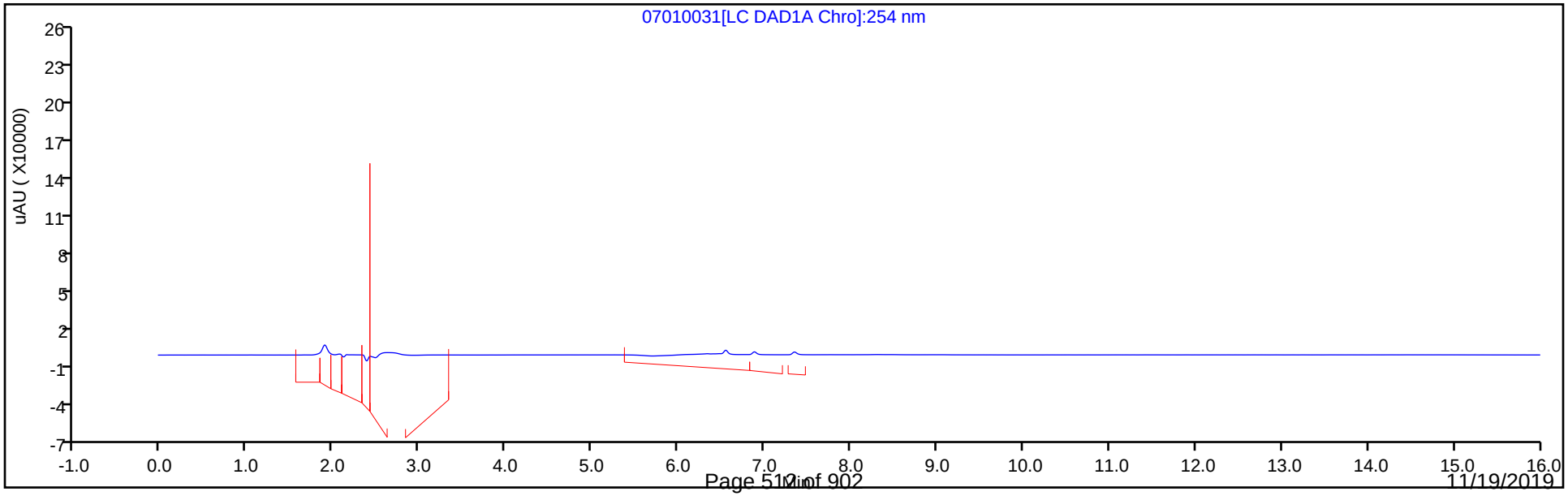
Data File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010031.D

Injection Date:	01-Jul-2019 23:55:10	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC DMT L2			Worklist Smp#:	31
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	31
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

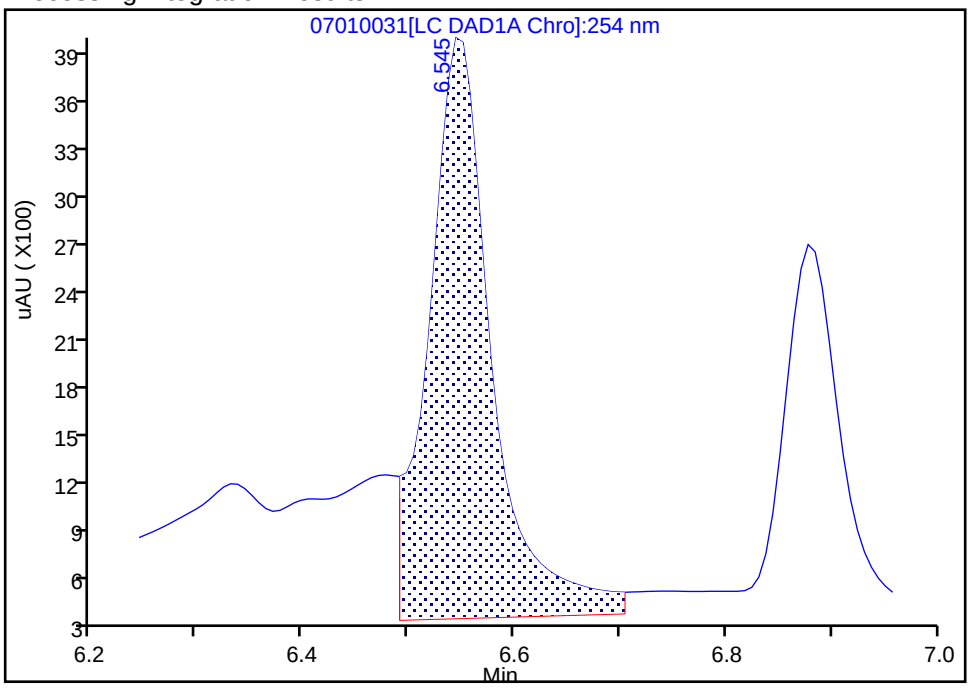
Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010031.D				
Injection Date:	01-Jul-2019 23:55:10	Instrument ID:	CHHPLC_X3		
Lims ID:	IC DMT L2				
Client ID:					
Operator ID:	hkf	ALS Bottle#:	31	Worklist Smp#:	31
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

2 TNX, CAS: 13980-04-6

Signal: 1

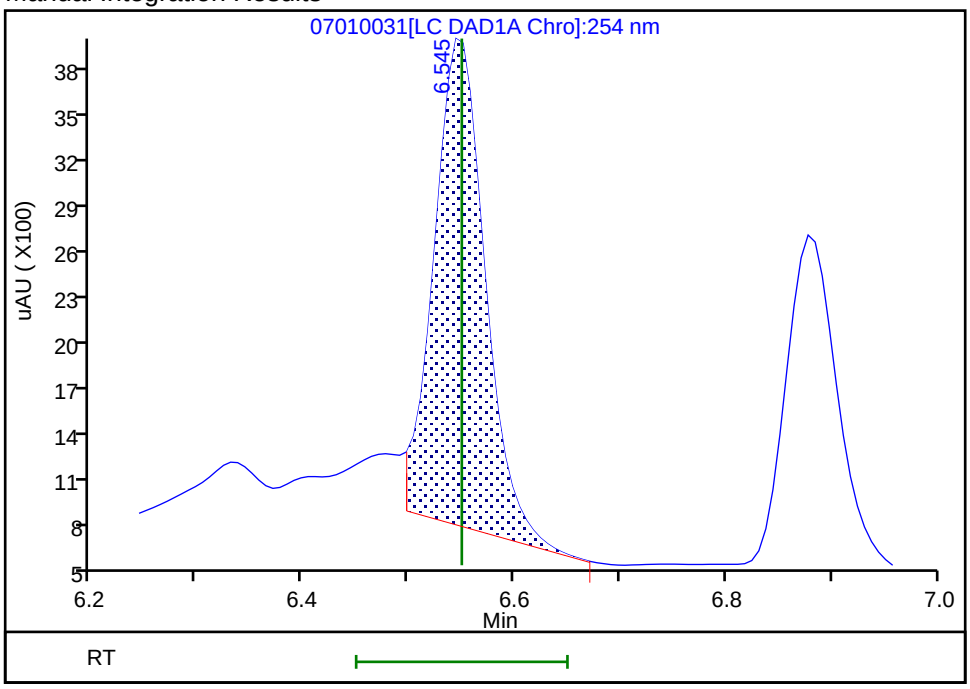
Processing Integration Results

RT: 6.54
Area: 14549
Amount: 0.064589
Amount Units: ug/mL



Manual Integration Results

RT: 6.54
Area: 10428
Amount: 0.048510
Amount Units: ug/mL



Reviewer: fiedlerh, 02-Jul-2019 09:04:49
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D				
Lims ID:	IC DMT L1				
Client ID:					
Sample Type:	IC	Calib Level:	1		
Inject. Date:	02-Jul-2019 00:18:07	ALS Bottle#:	32	Worklist Smp#:	32
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	IC DMT L1				
Misc. Info.:	280-0083376-032				
Operator ID:	hkf	Instrument ID:	CHHPLC_X3		
Sublist:	chrom-8330_X3*sub17				
Method:	\\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	02-Jul-2019 11:35:30	Calib Date:	02-Jul-2019 00:18:07		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX0309				

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 TNX	1	6.550	6.550	0.000	4216	0.0200	0.0196	
5 DNX	1	6.883	6.883	0.000	3416	0.0200	0.0219	
6 MNX	1	7.350	7.343	0.007	3273	0.0233	0.0234	

Reagents:

8330 DMT_00002 Amount Added: 1.00 Units: uL

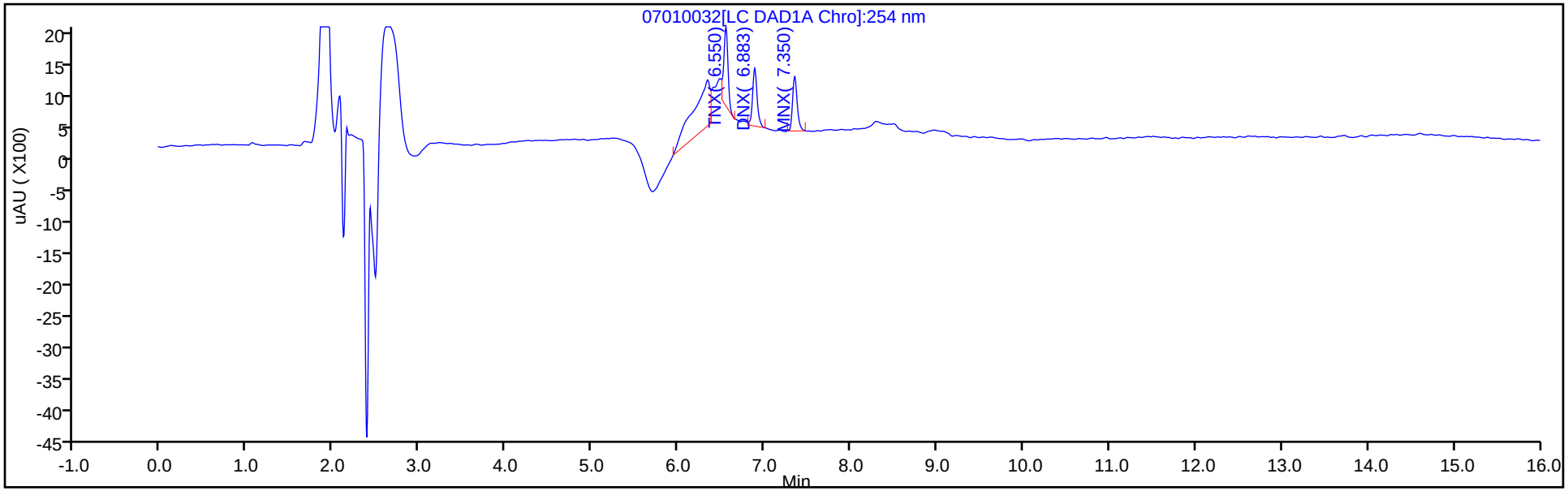
Report Date: 02-Jul-2019 11:35:30 Chrom Revision: 2.3 20-Jun-2019 20:50:56

Eurofins TestAmerica, Denver

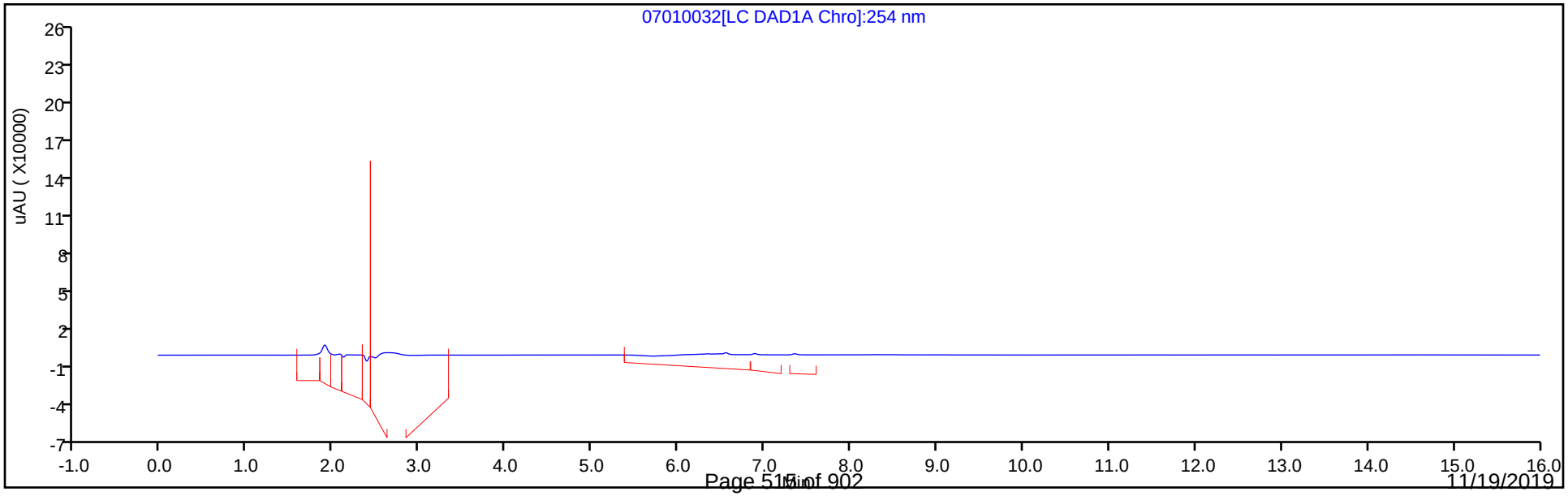
Data File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D

Injection Date:	02-Jul-2019 00:18:07	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC DMT L1			Worklist Smp#:	32
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	32
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: ICV 280-475429/15 Calibration Date: 10/26/2019 00:10

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 10/25/2019 19:30

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 10/25/2019 23:35

Lab File ID: 10250015.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Picric acid	Qua		174513		349	400	-12.7	15.0
HMX	Ave	196879	173995		354	400	-11.6	15.0
RDX	Lin2		220560		377	400	-5.8	15.0
Nitrobenzene	Lin1		390845		383	400	-4.2	15.0
1,3-Dinitrobenzene	Ave	657658	617915		376	400	-6.0	15.0
Nitroglycerin	Ave	134787	120617		3580	4000	-10.5	15.0
2-Nitrotoluene	Ave	279148	240048		344	400	-14.0	15.0
4-Nitrotoluene	Ave	223504	220263		394	400	-1.5	15.0
4-Amino-2,6-dinitrotoluene	Ave	324975	284988		351	400	-12.3	15.0
3-Nitrotoluene	Qua		267125		534	400	33.4*	15.0
2-Amino-4,6-dinitrotoluene	Ave	459775	410260		357	400	-10.8	15.0
1,3,5-Trinitrobenzene	Ave	494290	455373		369	400	-7.9	15.0
2,6-Dinitrotoluene	Ave	322911	285148		353	400	-11.7	15.0
2,4-Dinitrotoluene	Ave	609162	538500		354	400	-11.6	15.0
Tetryl	Ave	353852	323698		366	400	-8.5	15.0
2,4,6-Trinitrotoluene	Lin1		417675		346	400	-13.5	15.0
PETN	Ave	131490	131971		4010	4000	0.4	15.0
1,2-Dinitrobenzene	Lin2		252335		344	400	-14.0	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: ICV 280-475429/15 Calibration Date: 10/26/2019 00:10

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 10/25/2019 19:30

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 10/25/2019 23:35

Lab File ID: 10250015.D

Analyte	RT	RT WINDOW	
		FROM	TO
Picric acid	5.76	5.53	5.83
HMX	7.07	6.93	7.23
RDX	9.28	9.14	9.44
Nitrobenzene	12.26	12.13	12.43
1,3-Dinitrobenzene	15.75	15.61	15.91
Nitroglycerin	16.01	15.87	16.17
2-Nitrotoluene	16.75	16.62	16.92
4-Nitrotoluene	17.03	16.90	17.20
4-Amino-2,6-dinitrotoluene	17.36	17.24	17.54
3-Nitrotoluene	17.96	17.83	18.13
2-Amino-4,6-dinitrotoluene	18.25	18.11	18.41
1,3,5-Trinitrobenzene	19.11	18.98	19.28
2,6-Dinitrotoluene	20.05	19.91	20.21
2,4-Dinitrotoluene	20.52	20.39	20.69
Tetryl	23.81	23.66	23.96
2,4,6-Trinitrotoluene	24.89	24.75	25.05
PETN	25.45	25.29	25.59
1,2-Dinitrobenzene	13.21	13.07	13.37

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250015.D
Lims ID: ICV FULL 8330
Client ID:
Sample Type: ICV
Inject. Date: 26-Oct-2019 00:10:10 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: ICV FULL 8330
Misc. Info.: 280-0086515-015
Operator ID: CB Instrument ID: CHHPLC_G2_LUNA
Sublist:

Method: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 30-Oct-2019 16:00:58 Calib Date: 25-Oct-2019 23:35:16
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250014.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0329

First Level Reviewer: beckerc Date: 30-Oct-2019 12:57:03

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
5 2,4,6-Trinitrophenol	1	5.761	5.680	0.081	69805	0.4000	0.3494	
6 HMX	1	7.074	7.080	-0.006	69598	0.4000	0.3535	
8 RDX	1	9.281	9.286	-0.005	88224	0.4000	0.3766	
9 Nitrobenzene	1	12.261	12.279	-0.018	156338	0.4000	0.3831	
$ 10 1,2-Dinitrobenzene	1	13.208	13.219	-0.011	100934	0.4000	0.3441	
11 3,5-Dinitroaniline	1	15.061	14.939	0.122	177928	0.4000	0.3366	
12 1,3-Dinitrobenzene	1	15.748	15.759	-0.011	247166	0.4000	0.3758	
13 Nitroglycerin	2	16.014	16.019	-0.005	482468	4.00	3.58	
14 o-Nitrotoluene	1	16.754	16.773	-0.019	96019	0.4000	0.3440	
15 p-Nitrotoluene	1	17.028	17.053	-0.025	88105	0.4000	0.3942	
16 4-Amino-2,6-dinitrotoluene	1	17.361	17.386	-0.025	113995	0.4000	0.3508	
17 m-Nitrotoluene	1	17.961	17.979	-0.018	106850	0.4000	0.5336	
18 2-Amino-4,6-dinitrotoluene	1	18.248	18.259	-0.011	164104	0.4000	0.3569	
19 1,3,5-Trinitrobenzene	1	19.108	19.126	-0.018	182149	0.4000	0.3685	
20 2,6-Dinitrotoluene	1	20.048	20.059	-0.011	114059	0.4000	0.3532	
21 2,4-Dinitrotoluene	1	20.521	20.540	-0.018	215400	0.4000	0.3536	
22 Tetryl	1	23.808	23.806	0.002	129479	0.4000	0.3659	
23 2,4,6-Trinitrotoluene	1	24.894	24.900	-0.006	167070	0.4000	0.3458	
24 PETN	2	25.448	25.440	0.008	527885	4.00	4.01	

Reagents:

8330 LCS_00094 Amount Added: 40.00 Units: uL
8330Surrogate_00109 Amount Added: 40.00 Units: uL
3,5-DNA LCS_00034 Amount Added: 40.00 Units: uL

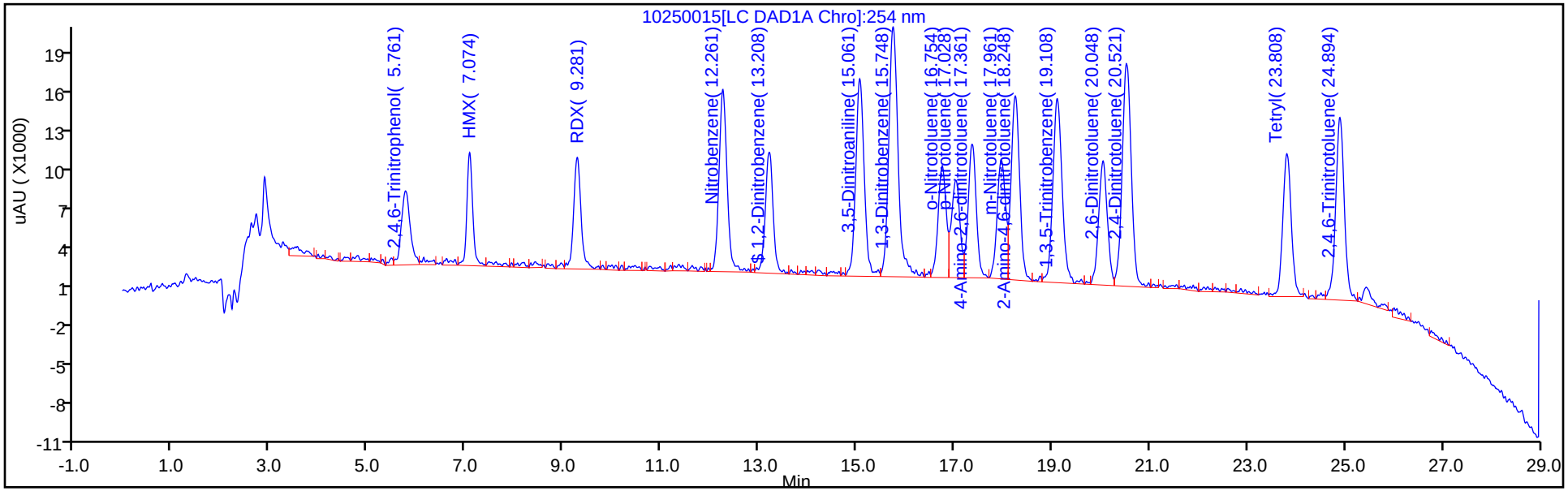
Report Date: 30-Oct-2019 16:01:39 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

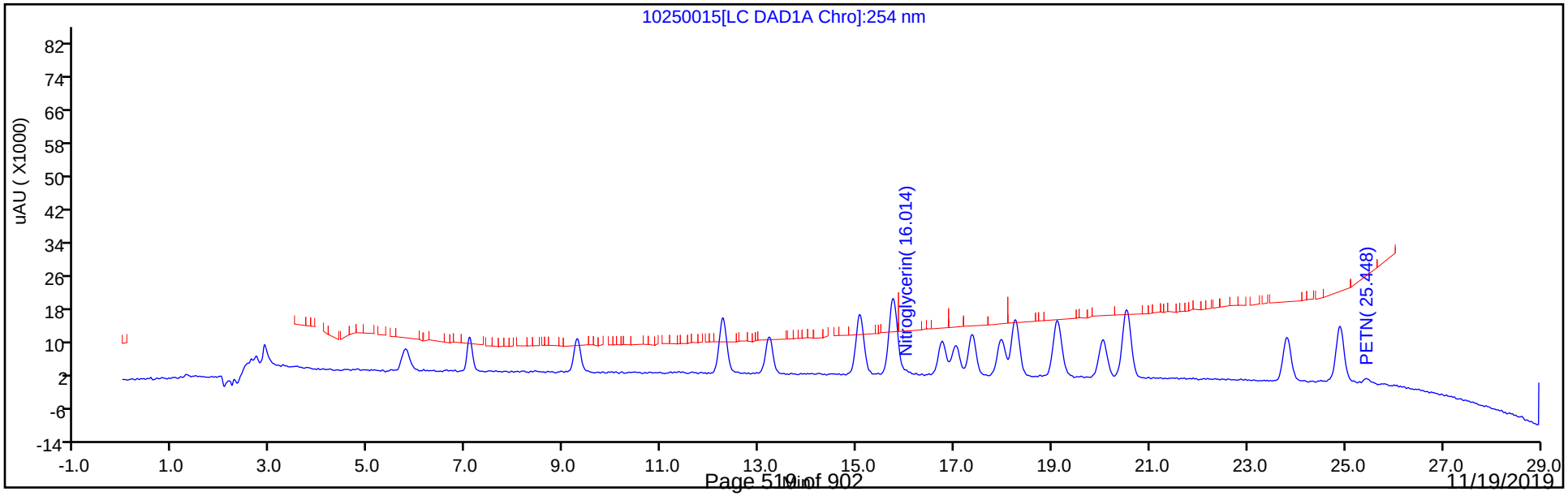
Data File: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250015.D

Injection Date:	26-Oct-2019 00:10:10	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	CB
Lims ID:	ICV FULL 8330			Worklist Smp#:	15
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: CCV 280-475783/23 Calibration Date: 10/30/2019 02:10

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 10/25/2019 19:30

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 10/25/2019 23:35

Lab File ID: 10290023.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Picric acid	Qua		193140		240	250	-4.0	15.0
HMX	Ave	196879	195564		227	250	-0.7	15.0
RDX	Lin2		227980		237	250	-5.0	15.0
Nitrobenzene	Lin1		403301		241	251	-3.6	15.0
1,3-Dinitrobenzene	Ave	657658	655872		250	250	-0.3	15.0
Nitroglycerin	Ave	134787	133279		2470	2500	-1.1	15.0
2-Nitrotoluene	Ave	279148	259059		233	251	-7.2	15.0
4-Nitrotoluene	Ave	223504	219542		247	251	-1.8	15.0
4-Amino-2,6-dinitrotoluene	Ave	324975	301827		233	251	-7.1	15.0
3-Nitrotoluene	Qua		255865		359	251	43.1*	15.0
2-Amino-4,6-dinitrotoluene	Ave	459775	437376		239	251	-4.9	15.0
1,3,5-Trinitrobenzene	Ave	494290	489748		248	250	-0.9	15.0
2,6-Dinitrotoluene	Ave	322911	283613		220	251	-12.2	15.0
2,4-Dinitrotoluene	Ave	609162	563118		232	251	-7.6	15.0
Tetryl	Ave	353852	342076		242	250	-3.3	15.0
2,4,6-Trinitrotoluene	Lin1		520426		262	251	4.3	15.0
PETN	Ave	131490	131058		2490	2500	-0.3	15.0
1,2-Dinitrobenzene	Lin2		300024		249	250	-0.2	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: CCV 280-475783/23 Calibration Date: 10/30/2019 02:10

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 10/25/2019 19:30

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 10/25/2019 23:35

Lab File ID: 10290023.D

Analyte	RT	RT WINDOW	
		FROM	TO
Picric acid	5.73	5.57	5.87
HMX	7.07	6.91	7.21
RDX	9.27	9.11	9.41
Nitrobenzene	12.25	12.08	12.38
1,3-Dinitrobenzene	15.73	15.57	15.87
Nitroglycerin	15.97	15.81	16.11
2-Nitrotoluene	16.73	16.55	16.85
4-Nitrotoluene	17.02	16.84	17.14
4-Amino-2,6-dinitrotoluene	17.34	17.17	17.47
3-Nitrotoluene	17.95	17.77	18.07
2-Amino-4,6-dinitrotoluene	18.21	18.06	18.36
1,3,5-Trinitrobenzene	19.09	18.92	19.22
2,6-Dinitrotoluene	20.03	19.85	20.15
2,4-Dinitrotoluene	20.52	20.33	20.63
Tetryl	23.77	23.60	23.90
2,4,6-Trinitrotoluene	24.87	24.70	25.00
PETN	25.41	25.25	25.55
1,2-Dinitrobenzene	13.19	13.02	13.32

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\G2_LUNA\20191029-86611.b\10290023.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 30-Oct-2019 02:10:20 ALS Bottle#: 7 Worklist Smp#: 23
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Misc. Info.: 280-0086611-023
Operator ID: CB Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\chromna\Denver\ChromData\G2_LUNA\20191029-86611.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 30-Oct-2019 15:11:10 Calib Date: 25-Oct-2019 23:35:16
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250014.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0329

First Level Reviewer: beckerc Date: 30-Oct-2019 14:53:03

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 2,6-diamino-4-nitrotoluene	1	4.421	4.411	0.010	98155	0.2500	0.2207	M
	2 2,4-diamino-6-nitrotoluene	1	5.027	4.984	0.043	60196	0.2500	0.1866	M
	5 2,4,6-Trinitrophenol	1	5.727	5.717	0.010	48285	0.2500	0.2401	M
	6 HMX	1	7.067	7.057	0.010	48891	0.2500	0.2265	
	8 RDX	1	9.274	9.257	0.017	56995	0.2500	0.2375	
	9 Nitrobenzene	1	12.254	12.230	0.024	101027	0.2505	0.2414	
$	10 1,2-Dinitrobenzene	1	13.194	13.170	0.024	75006	0.2500	0.2495	
	11 3,5-Dinitroaniline	1	15.047	15.037	0.010	117256	0.2500	0.2216	
	12 1,3-Dinitrobenzene	1	15.734	15.717	0.017	164132	0.2503	0.2496	
	13 Nitroglycerin	2	15.974	15.964	0.010	333198	2.50	2.47	
	14 o-Nitrotoluene	1	16.727	16.704	0.023	64959	0.2508	0.2327	
	15 p-Nitrotoluene	1	17.021	16.990	0.031	55105	0.2510	0.2466	
	16 4-Amino-2,6-dinitrotoluene	1	17.341	17.324	0.017	75683	0.2508	0.2329	
	17 m-Nitrotoluene	1	17.947	17.924	0.023	64222	0.2510	0.3593	
	18 2-Amino-4,6-dinitrotoluene	1	18.214	18.210	0.004	109672	0.2508	0.2385	
	19 1,3,5-Trinitrobenzene	1	19.087	19.070	0.017	122437	0.2500	0.2477	
	20 2,6-Dinitrotoluene	1	20.027	19.997	0.030	71116	0.2508	0.2202	
	21 2,4-Dinitrotoluene	1	20.521	20.484	0.037	141061	0.2505	0.2316	
	22 Tetryl	1	23.767	23.751	0.016	85519	0.2500	0.2417	
	23 2,4,6-Trinitrotoluene	1	24.874	24.851	0.023	130627	0.2510	0.2618	
	24 PETN	2	25.414	25.397	0.017	327644	2.50	2.49	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8330_ADDs_00023	Amount Added:	12.50	Units: uL
8330IntermStk_00059	Amount Added:	25.00	Units: uL

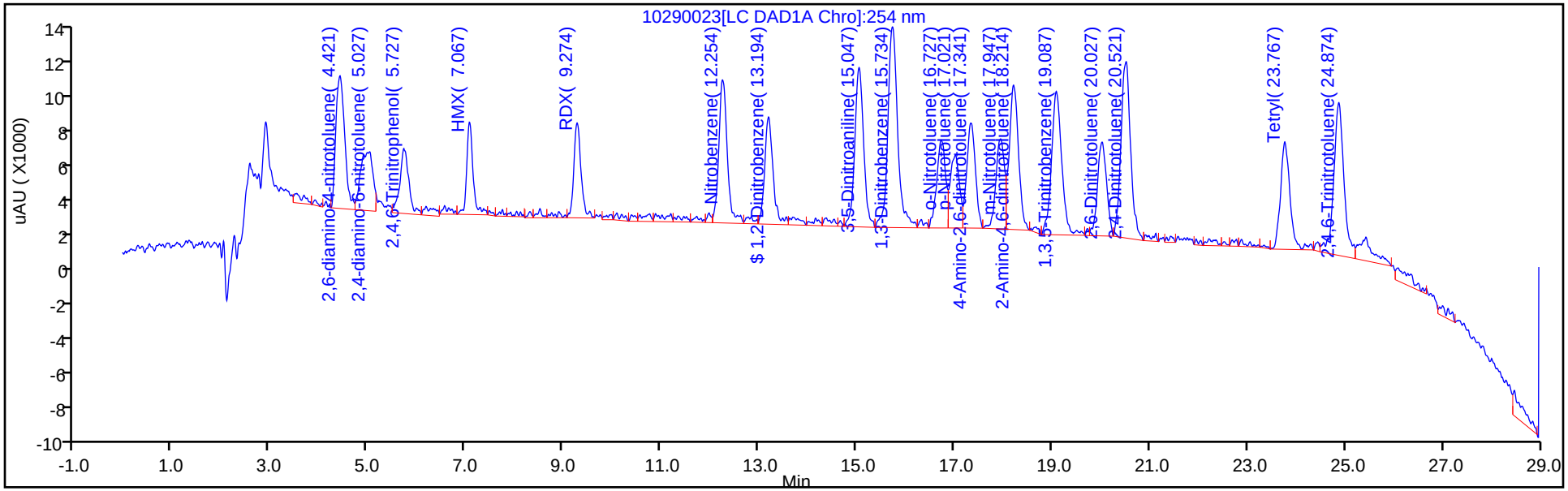
Report Date: 30-Oct-2019 15:11:11 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

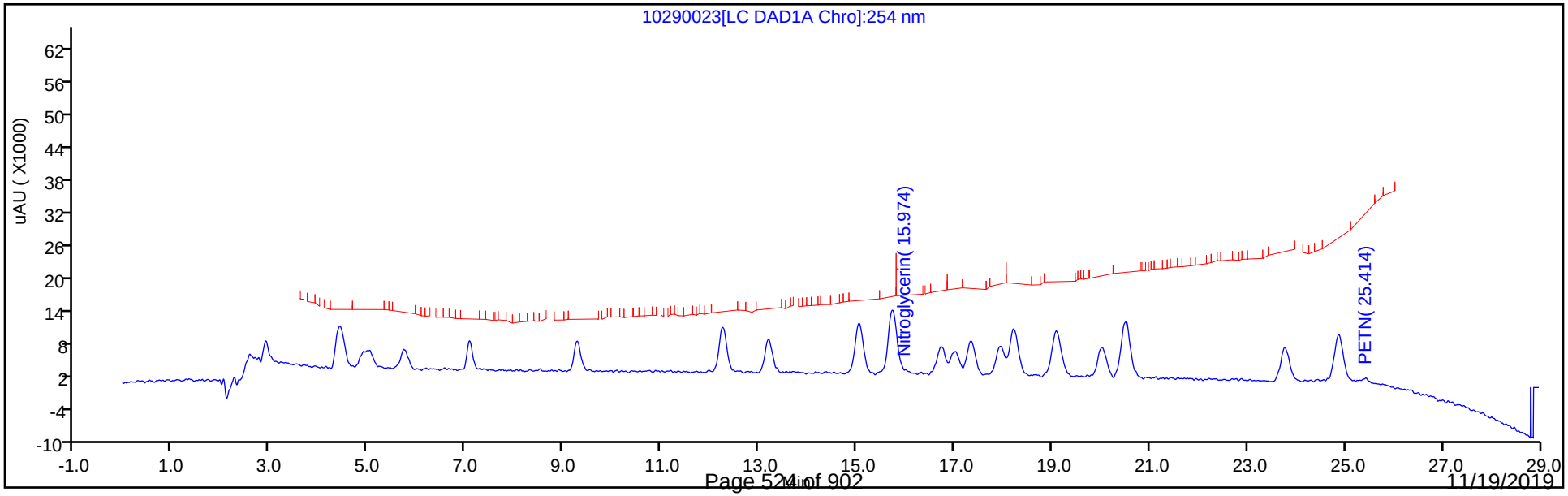
Data File: \\chromna\Denver\ChromData\G2_LUNA\20191029-86611.b\10290023.D

Injection Date:	30-Oct-2019 02:10:20	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	CB
Lims ID:	CCV			Worklist Smp#:	23
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

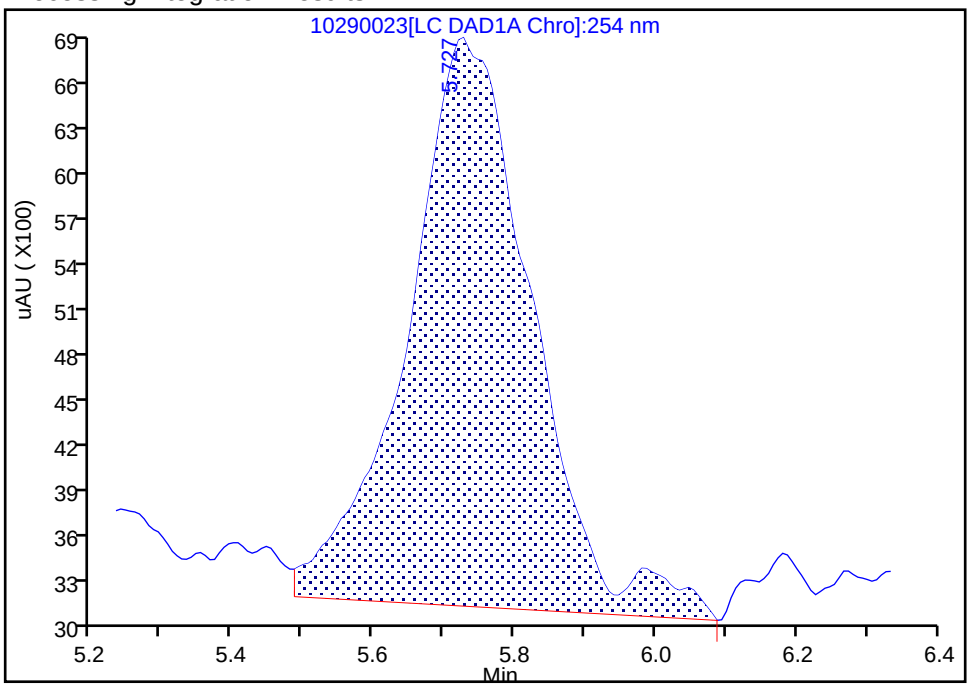
Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191029-86611.b\10290023.D				
Injection Date:	30-Oct-2019 02:10:20	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	CCV				
Client ID:					
Operator ID:	CB	ALS Bottle#:	7	Worklist Smp#:	23
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

5 2,4,6-Trinitrophenol, CAS: 88-89-1

Signal: 1

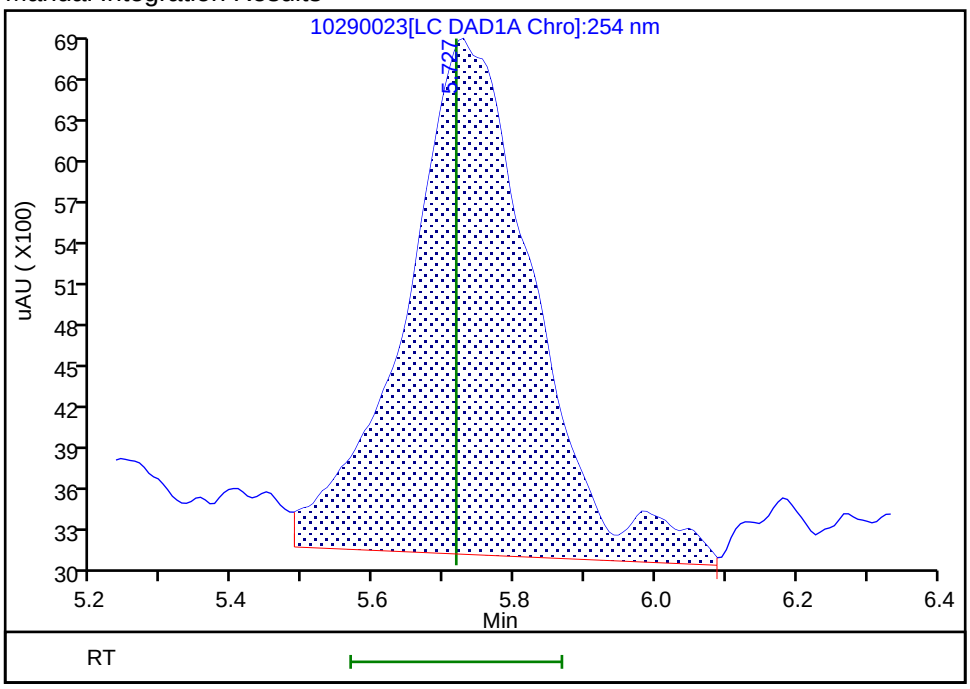
Processing Integration Results

RT: 5.73
Area: 45927
Amount: 0.228540
Amount Units: ug/ml



Manual Integration Results

RT: 5.73
Area: 48285
Amount: 0.240061
Amount Units: ug/ml



Reviewer: beckerc, 30-Oct-2019 14:52:43
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: CCV 280-475783/32 Calibration Date: 10/30/2019 07:25

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 10/25/2019 19:30

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 10/25/2019 23:35

Lab File ID: 10290032.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Picric acid	Qua		167004		208	250	-16.7*	15.0
HMX	Ave	196879	188044		218	250	-4.5	15.0
RDX	Lin2		246164		258	250	3.1	15.0
Nitrobenzene	Lin1		398806		238	251	-4.8	15.0
1,3-Dinitrobenzene	Ave	657658	630422		240	250	-4.1	15.0
Nitroglycerin	Ave	134787	130631		2420	2500	-3.1	15.0
2-Nitrotoluene	Ave	279148	229053		206	251	-17.9*	15.0
4-Nitrotoluene	Ave	223504	215904		242	251	-3.4	15.0
4-Amino-2,6-dinitrotoluene	Ave	324975	319115		246	251	-1.8	15.0
3-Nitrotoluene	Qua		258964		363	251	44.7*	15.0
2-Amino-4,6-dinitrotoluene	Ave	459775	452359		247	251	-1.6	15.0
1,3,5-Trinitrobenzene	Ave	494290	494380		250	250	0.0	15.0
2,6-Dinitrotoluene	Ave	322911	299817		233	251	-7.2	15.0
2,4-Dinitrotoluene	Ave	609162	574782		236	251	-5.6	15.0
Tetryl	Ave	353852	366428		259	250	3.6	15.0
2,4,6-Trinitrotoluene	Lin1		533582		269	251	7.3	15.0
PETN	Ave	131490	122951		2340	2500	-6.5	15.0
1,2-Dinitrobenzene	Lin2		321916		269	250	7.8	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: CCV 280-475783/32 Calibration Date: 10/30/2019 07:25

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 10/25/2019 19:30

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 10/25/2019 23:35

Lab File ID: 10290032.D

Analyte	RT	RT WINDOW	
		FROM	TO
Picric acid	5.72	5.57	5.87
HMX	7.06	6.91	7.21
RDX	9.26	9.11	9.41
Nitrobenzene	12.25	12.08	12.38
1,3-Dinitrobenzene	15.72	15.57	15.87
Nitroglycerin	15.98	15.81	16.11
2-Nitrotoluene	16.73	16.55	16.85
4-Nitrotoluene	17.01	16.84	17.14
4-Amino-2,6-dinitrotoluene	17.33	17.17	17.47
3-Nitrotoluene	17.94	17.77	18.07
2-Amino-4,6-dinitrotoluene	18.20	18.06	18.36
1,3,5-Trinitrobenzene	19.08	18.92	19.22
2,6-Dinitrotoluene	20.02	19.85	20.15
2,4-Dinitrotoluene	20.50	20.33	20.63
Tetryl	23.77	23.60	23.90
2,4,6-Trinitrotoluene	24.87	24.70	25.00
PETN	25.42	25.25	25.55
1,2-Dinitrobenzene	13.20	13.02	13.32

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\G2_LUNA\20191029-86611.b\10290032.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 30-Oct-2019 07:25:17 ALS Bottle#: 7 Worklist Smp#: 32
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Misc. Info.: 280-0086611-032
Operator ID: CB Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\chromna\Denver\ChromData\G2_LUNA\20191029-86611.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 30-Oct-2019 16:11:13 Calib Date: 25-Oct-2019 23:35:16
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250014.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0329

First Level Reviewer: beckerc Date: 30-Oct-2019 15:09:14

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 2,6-diamino-4-nitrotoluene	1	4.397	4.411	-0.014	96456	0.2500	0.2164	M
	2 2,4-diamino-6-nitrotoluene	1	4.910	4.984	-0.074	62897	0.2500	0.1949	M
	5 2,4,6-Trinitrophenol	1	5.724	5.717	0.007	41751	0.2500	0.2083	M
	6 HMX	1	7.064	7.057	0.007	47011	0.2500	0.2178	
	8 RDX	1	9.264	9.257	0.007	61541	0.2500	0.2577	
	9 Nitrobenzene	1	12.250	12.230	0.020	99901	0.2505	0.2385	
$	10 1,2-Dinitrobenzene	1	13.197	13.170	0.027	80479	0.2500	0.2695	
	11 3,5-Dinitroaniline	1	15.050	15.037	0.013	111520	0.2500	0.2107	
	12 1,3-Dinitrobenzene	1	15.724	15.717	0.007	157763	0.2503	0.2399	
	13 Nitroglycerin	2	15.977	15.964	0.013	326578	2.50	2.42	
	14 o-Nitrotoluene	1	16.730	16.704	0.026	57435	0.2508	0.2058	
	15 p-Nitrotoluene	1	17.010	16.990	0.020	54192	0.2510	0.2425	
	16 4-Amino-2,6-dinitrotoluene	1	17.330	17.324	0.006	80018	0.2508	0.2462	
	17 m-Nitrotoluene	1	17.944	17.924	0.020	65000	0.2510	0.3633	
	18 2-Amino-4,6-dinitrotoluene	1	18.204	18.210	-0.006	113429	0.2508	0.2467	
	19 1,3,5-Trinitrobenzene	1	19.084	19.070	0.014	123595	0.2500	0.2500	
	20 2,6-Dinitrotoluene	1	20.017	19.997	0.020	75179	0.2508	0.2328	
	21 2,4-Dinitrotoluene	1	20.504	20.484	0.020	143983	0.2505	0.2364	
	22 Tetryl	1	23.770	23.751	0.019	91607	0.2500	0.2589	
	23 2,4,6-Trinitrotoluene	1	24.870	24.851	0.019	133929	0.2510	0.2694	
	24 PETN	2	25.417	25.397	0.020	307378	2.50	2.34	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8330_ADDs_00023	Amount Added:	12.50	Units: uL
8330IntermStk_00059	Amount Added:	25.00	Units: uL

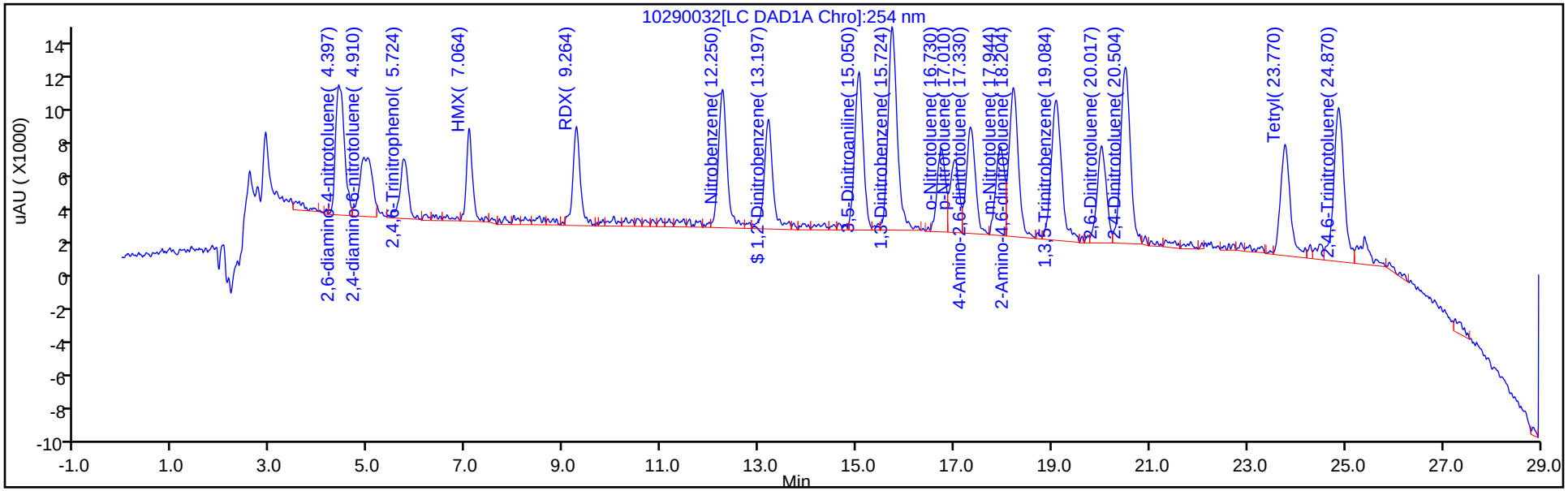
Report Date: 30-Oct-2019 16:11:13 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

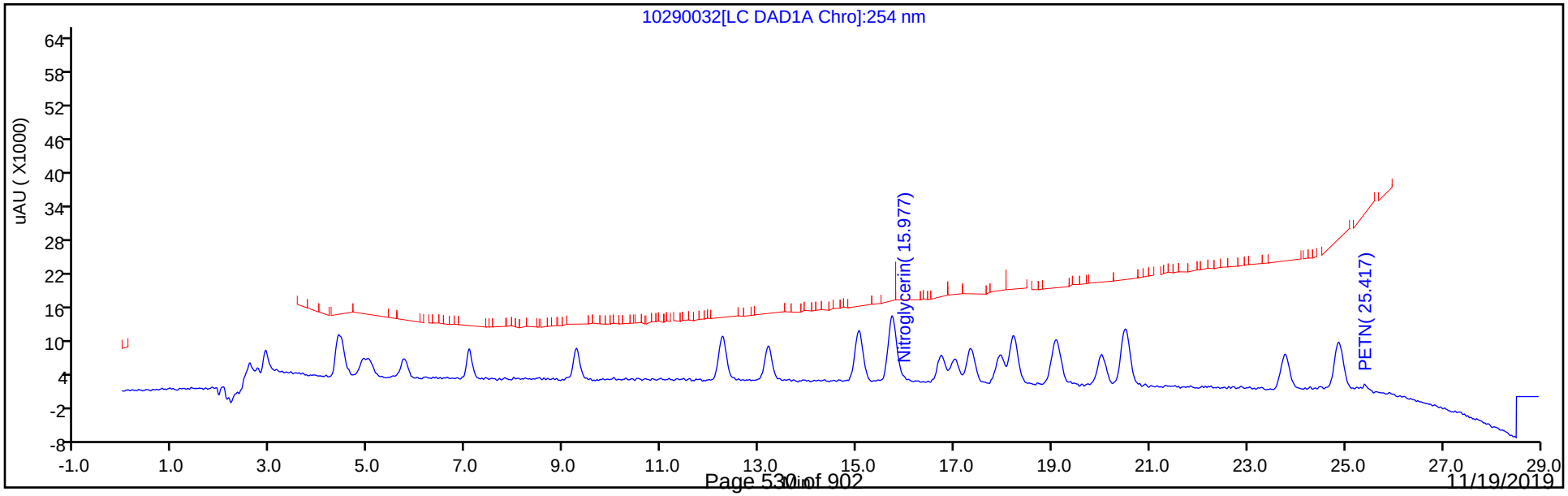
Data File: \\chromna\Denver\ChromData\G2_LUNA\20191029-86611.b\10290032.D

Injection Date:	30-Oct-2019 07:25:17	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	CB
Lims ID:	CCV			Worklist Smp#:	32
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

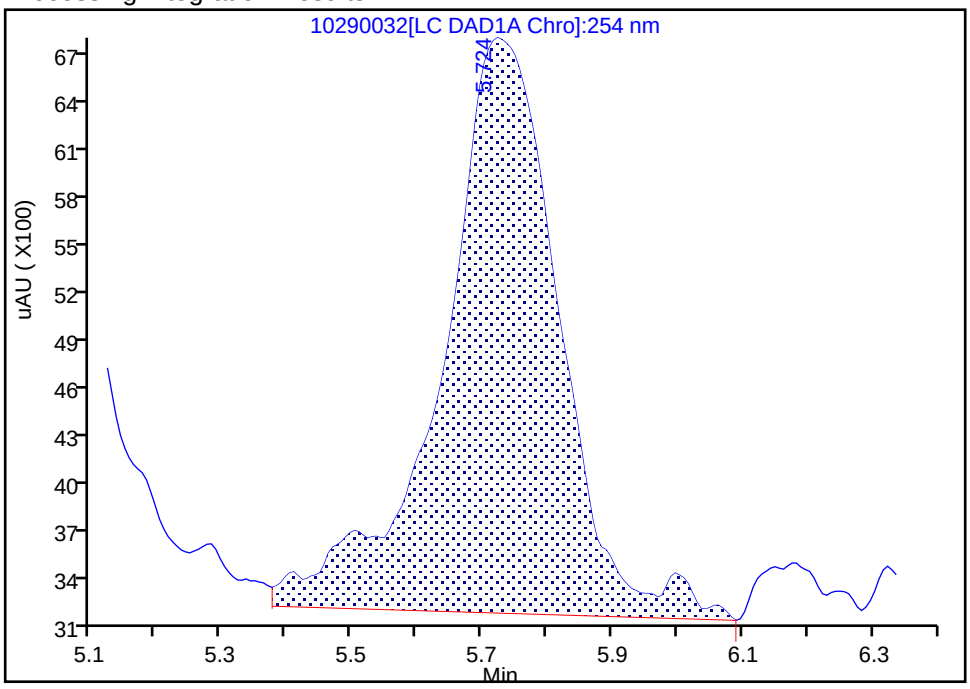
Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191029-86611.b\10290032.D				
Injection Date:	30-Oct-2019 07:25:17	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	CCV				
Client ID:					
Operator ID:	CB	ALS Bottle#:	7	Worklist Smp#:	32
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

5 2,4,6-Trinitrophenol, CAS: 88-89-1

Signal: 1

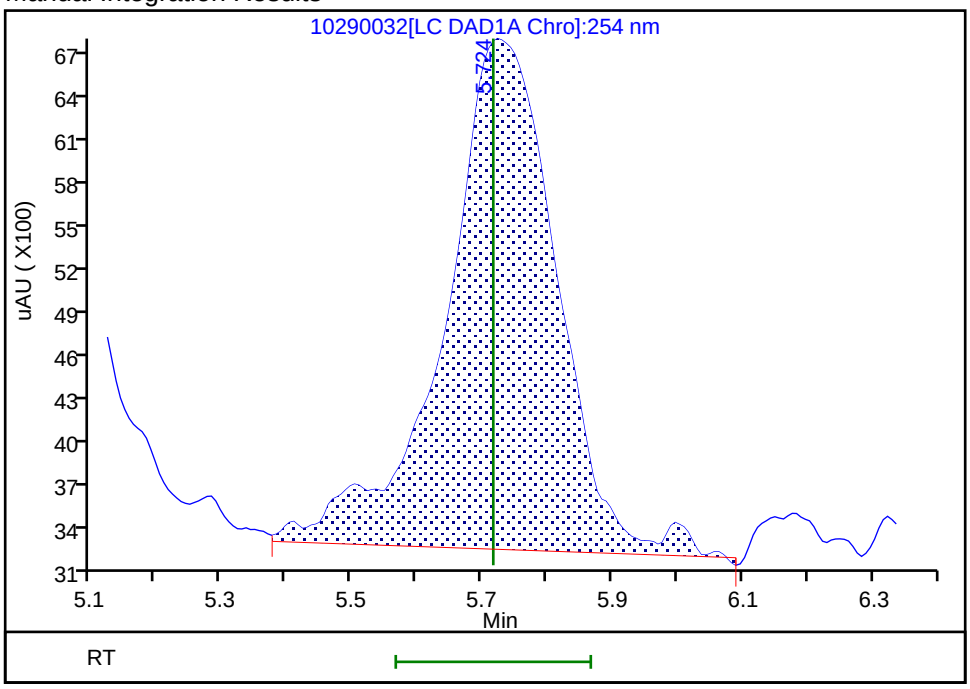
Processing Integration Results

RT: 5.72
Area: 44447
Amount: 0.221351
Amount Units: ug/ml



Manual Integration Results

RT: 5.72
Area: 41751
Amount: 0.208339
Amount Units: ug/ml



Reviewer: beckerc, 30-Oct-2019 16:09:39
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: CCV 280-476190/7 Calibration Date: 11/01/2019 16:37

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 10/25/2019 19:30

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 10/25/2019 23:35

Lab File ID: 11010007.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Picric acid	Qua		184532		230	250	-8.2	15.0
HMX	Ave	196879	204396		237	250	3.8	15.0
RDX	Lin2		256264		269	250	7.6	15.0
Nitrobenzene	Lin1		420387		252	251	0.7	15.0
1,3-Dinitrobenzene	Ave	657658	634098		241	250	-3.6	15.0
Nitroglycerin	Ave	134787	133443		2480	2500	-1.0	15.0
2-Nitrotoluene	Ave	279148	253615		228	251	-9.1	15.0
4-Nitrotoluene	Ave	223504	247602		278	251	10.8	15.0
4-Amino-2,6-dinitrotoluene	Ave	324975	334692		258	251	3.0	15.0
3-Nitrotoluene	Qua		227582		321	251	27.7*	15.0
2-Amino-4,6-dinitrotoluene	Ave	459775	518090		283	251	12.7	15.0
1,3,5-Trinitrobenzene	Ave	494290	487008		246	250	-1.5	15.0
2,6-Dinitrotoluene	Ave	322911	300997		234	251	-6.8	15.0
2,4-Dinitrotoluene	Ave	609162	581976		239	251	-4.5	15.0
Tetryl	Ave	353852	353904		250	250	0.0	15.0
2,4,6-Trinitrotoluene	Lin1		556414		283	251	12.6	15.0
PETN	Ave	131490	127210		2420	2500	-3.3	15.0
1,2-Dinitrobenzene	Lin2		316692		265	250	5.9	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: CCV 280-476190/7 Calibration Date: 11/01/2019 16:37

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 10/25/2019 19:30

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 10/25/2019 23:35

Lab File ID: 11010007.D

Analyte	RT	RT WINDOW	
		FROM	TO
Picric acid	5.66	5.51	5.81
HMX	7.02	6.87	7.17
RDX	9.21	9.06	9.36
Nitrobenzene	12.20	12.05	12.35
1,3-Dinitrobenzene	15.66	15.51	15.81
Nitroglycerin	15.90	15.75	16.05
2-Nitrotoluene	16.66	16.51	16.81
4-Nitrotoluene	16.96	16.81	17.11
4-Amino-2,6-dinitrotoluene	17.24	17.09	17.39
3-Nitrotoluene	17.88	17.73	18.03
2-Amino-4,6-dinitrotoluene	18.10	17.95	18.25
1,3,5-Trinitrobenzene	19.00	18.85	19.15
2,6-Dinitrotoluene	19.92	19.77	20.07
2,4-Dinitrotoluene	20.40	20.25	20.55
Tetryl	23.65	23.50	23.80
2,4,6-Trinitrotoluene	24.76	24.61	24.91
PETN	25.34	25.19	25.49
1,2-Dinitrobenzene	13.12	12.97	13.27

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\G2_LUNA\20191101-86717.b\11010007.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 01-Nov-2019 16:37:05 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Misc. Info.: 280-0086717-007
Operator ID: CB Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\chromna\Denver\ChromData\G2_LUNA\20191101-86717.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 04-Nov-2019 18:04:14 Calib Date: 25-Oct-2019 23:35:16
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250014.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0324

First Level Reviewer: beckerc Date: 04-Nov-2019 16:56:44

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 2,6-diamino-4-nitrotoluene	1	4.415	4.415	0.000	100934	0.2500	0.2277	
2 2,4-diamino-6-nitrotoluene	1	4.982	4.982	0.000	67591	0.2500	0.2095	
5 2,4,6-Trinitrophenol	1	5.662	5.662	0.000	46133	0.2500	0.2295	
6 HMX	1	7.022	7.022	0.000	51099	0.2500	0.2368	
8 RDX	1	9.209	9.209	0.000	64066	0.2500	0.2690	
9 Nitrobenzene	1	12.202	12.202	0.000	105307	0.2505	0.2523	
$ 10 1,2-Dinitrobenzene	1	13.122	13.122	0.000	79173	0.2500	0.2647	
11 3,5-Dinitroaniline	1	14.942	14.942	0.000	117889	0.2500	0.2228	
12 1,3-Dinitrobenzene	1	15.655	15.655	0.000	158683	0.2503	0.2413	
13 Nitroglycerin	2	15.895	15.895	0.000	333607	2.50	2.48	
14 o-Nitrotoluene	1	16.655	16.655	0.000	63594	0.2508	0.2278	
15 p-Nitrotoluene	1	16.955	16.955	0.000	62148	0.2510	0.2781	
16 4-Amino-2,6-dinitrotoluene	1	17.235	17.235	0.000	83924	0.2508	0.2582	
17 m-Nitrotoluene	1	17.875	17.875	0.000	57123	0.2510	0.3205	
18 2-Amino-4,6-dinitrotoluene	1	18.095	18.095	0.000	129911	0.2508	0.2826	
19 1,3,5-Trinitrobenzene	1	18.995	18.995	0.000	121752	0.2500	0.2463	
20 2,6-Dinitrotoluene	1	19.915	19.915	0.000	75475	0.2508	0.2337	
21 2,4-Dinitrotoluene	1	20.402	20.402	0.000	145785	0.2505	0.2393	
22 Tetryl	1	23.649	23.649	0.000	88476	0.2500	0.2500	
23 2,4,6-Trinitrotoluene	1	24.762	24.762	0.000	139660	0.2510	0.2826	
24 PETN	2	25.335	25.335	0.000	318024	2.50	2.42	

Reagents:

8330_ADDs_00023 Amount Added: 12.50 Units: uL
8330IntermStk_00059 Amount Added: 25.00 Units: uL

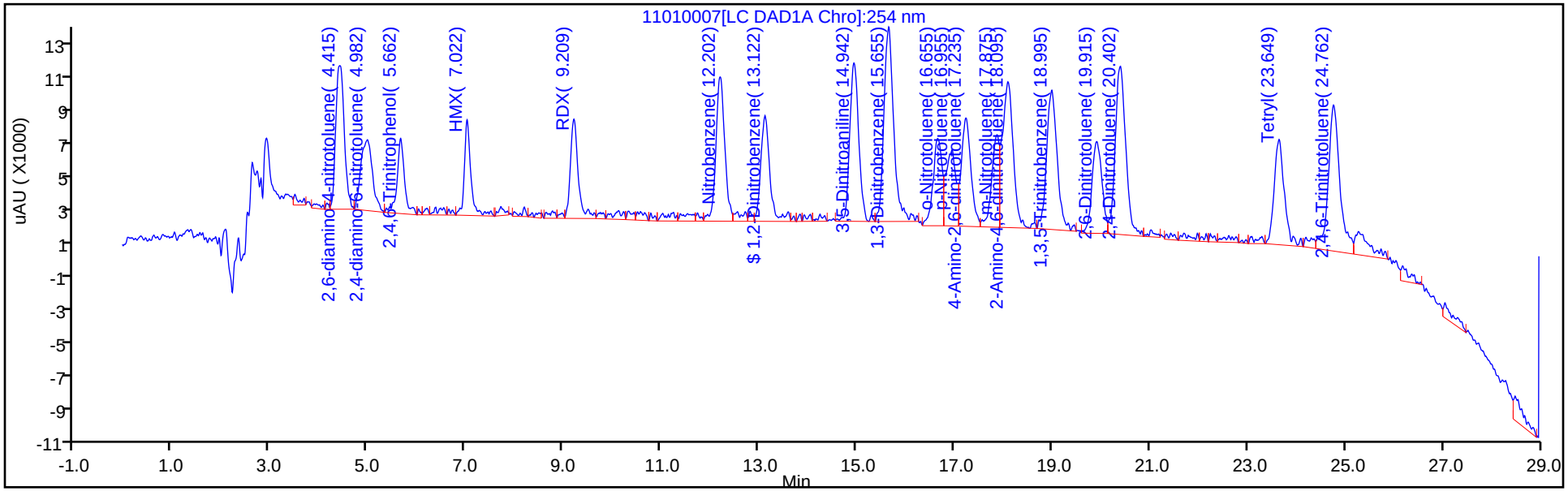
Report Date: 04-Nov-2019 18:04:14 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

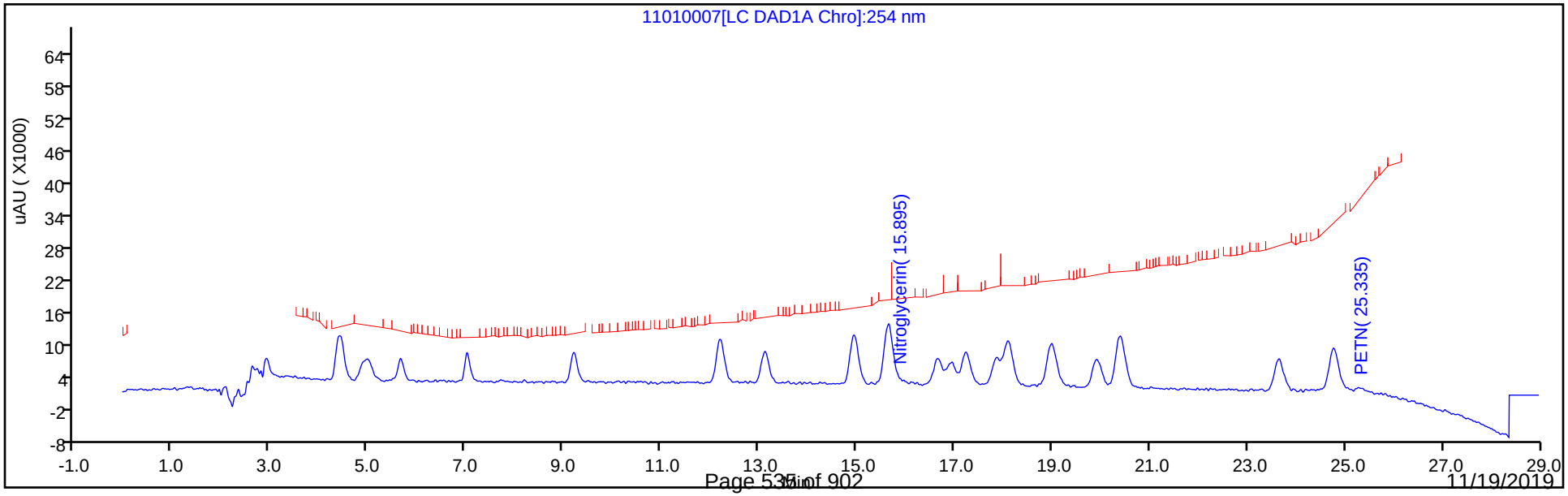
Data File: \\chromna\Denver\ChromData\G2_LUNA\20191101-86717.b\11010007.D

Injection Date:	01-Nov-2019 16:37:05	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	CB
Lims ID:	CCV			Worklist Smp#:	7
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: CCV 280-476190/18 Calibration Date: 11/01/2019 23:01

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 10/25/2019 19:30

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 10/25/2019 23:35

Lab File ID: 11010018.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Picric acid	Qua		197144		245	250	-2.0	15.0
HMX	Ave	196879	186368		216	250	-5.3	15.0
RDX	Lin2		241740		253	250	1.1	15.0
Nitrobenzene	Lin1		422455		254	251	1.3	15.0
1,3-Dinitrobenzene	Ave	657658	641475		244	250	-2.5	15.0
Nitroglycerin	Ave	134787	149337		2770	2500	10.8	15.0
2-Nitrotoluene	Ave	279148	233675		210	251	-16.3*	15.0
4-Nitrotoluene	Ave	223504	219980		247	251	-1.6	15.0
4-Amino-2,6-dinitrotoluene	Ave	324975	327709		253	251	0.8	15.0
3-Nitrotoluene	Qua		218765		307	251	22.5*	15.0
2-Amino-4,6-dinitrotoluene	Ave	459775	522038		285	251	13.5	15.0
1,3,5-Trinitrobenzene	Ave	494290	476668		241	250	-3.6	15.0
2,6-Dinitrotoluene	Ave	322911	298369		232	251	-7.6	15.0
2,4-Dinitrotoluene	Ave	609162	572994		236	251	-5.9	15.0
Tetryl	Ave	353852	336096		237	250	-5.0	15.0
2,4,6-Trinitrotoluene	Lin1		522948		263	251	4.9	15.0
PETN	Ave	131490	130896		2490	2500	-0.5	15.0
1,2-Dinitrobenzene	Lin2		301124		251	250	0.2	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: CCV 280-476190/18 Calibration Date: 11/01/2019 23:01

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 10/25/2019 19:30

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 10/25/2019 23:35

Lab File ID: 11010018.D

Analyte	RT	RT WINDOW	
		FROM	TO
Picric acid	5.55	5.51	5.81
HMX	7.01	6.87	7.17
RDX	9.19	9.06	9.36
Nitrobenzene	12.19	12.05	12.35
1,3-Dinitrobenzene	15.63	15.51	15.81
Nitroglycerin	15.87	15.75	16.05
2-Nitrotoluene	16.65	16.51	16.81
4-Nitrotoluene	16.90	16.81	17.11
4-Amino-2,6-dinitrotoluene	17.21	17.09	17.39
3-Nitrotoluene	17.86	17.73	18.03
2-Amino-4,6-dinitrotoluene	18.07	17.95	18.25
1,3,5-Trinitrobenzene	18.98	18.85	19.15
2,6-Dinitrotoluene	19.91	19.77	20.07
2,4-Dinitrotoluene	20.39	20.25	20.55
Tetryl	23.63	23.50	23.80
2,4,6-Trinitrotoluene	24.76	24.61	24.91
PETN	25.33	25.19	25.49
1,2-Dinitrobenzene	13.11	12.97	13.27

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\G2_LUNA\20191101-86717.b\11010018.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 01-Nov-2019 23:01:47 ALS Bottle#: 7 Worklist Smp#: 18
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Misc. Info.: 280-0086717-018
Operator ID: CB Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub6

Method: \\chromna\Denver\ChromData\G2_LUNA\20191101-86717.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 04-Nov-2019 18:04:29 Calib Date: 25-Oct-2019 23:35:16
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\G2_LUNA\20191025-86515.b\10250014.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX0324

First Level Reviewer: beckerc Date: 04-Nov-2019 18:00:14

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 2,6-diamino-4-nitrotoluene	1	4.419	4.415	0.004	101662	0.2500	0.2295	M
2 2,4-diamino-6-nitrotoluene	1	4.953	4.982	-0.029	71784	0.2500	0.2225	M
5 2,4,6-Trinitrophenol	1	5.553	5.662	-0.109	49286	0.2500	0.2450	M
6 HMX	1	7.013	7.022	-0.009	46592	0.2500	0.2159	M
8 RDX	1	9.186	9.209	-0.023	60435	0.2500	0.2528	M
9 Nitrobenzene	1	12.192	12.202	-0.010	105825	0.2505	0.2537	
$ 10 1,2-Dinitrobenzene	1	13.112	13.122	-0.010	75281	0.2500	0.2505	
11 3,5-Dinitroaniline	1	14.919	14.942	-0.023	115772	0.2500	0.2188	M
12 1,3-Dinitrobenzene	1	15.626	15.655	-0.029	160529	0.2503	0.2441	M
13 Nitroglycerin	2	15.872	15.895	-0.023	373343	2.50	2.77	M
14 o-Nitrotoluene	1	16.646	16.655	-0.009	58594	0.2508	0.2099	M
15 p-Nitrotoluene	1	16.899	16.955	-0.056	55215	0.2510	0.2470	M
16 4-Amino-2,6-dinitrotoluene	1	17.212	17.235	-0.023	82173	0.2508	0.2529	M
17 m-Nitrotoluene	1	17.859	17.875	-0.016	54910	0.2510	0.3074	M
18 2-Amino-4,6-dinitrotoluene	1	18.072	18.095	-0.023	130901	0.2508	0.2847	M
19 1,3,5-Trinitrobenzene	1	18.979	18.995	-0.016	119167	0.2500	0.2411	M
20 2,6-Dinitrotoluene	1	19.912	19.915	-0.003	74816	0.2508	0.2317	M
21 2,4-Dinitrotoluene	1	20.386	20.402	-0.016	143535	0.2505	0.2356	M
22 Tetryl	1	23.633	23.649	-0.016	84024	0.2500	0.2375	
23 2,4,6-Trinitrotoluene	1	24.759	24.762	-0.003	131260	0.2510	0.2632	
24 PETN	2	25.333	25.335	-0.002	327240	2.50	2.49	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8330_ADDs_00023	Amount Added:	12.50	Units: uL
8330IntermStk_00059	Amount Added:	25.00	Units: uL

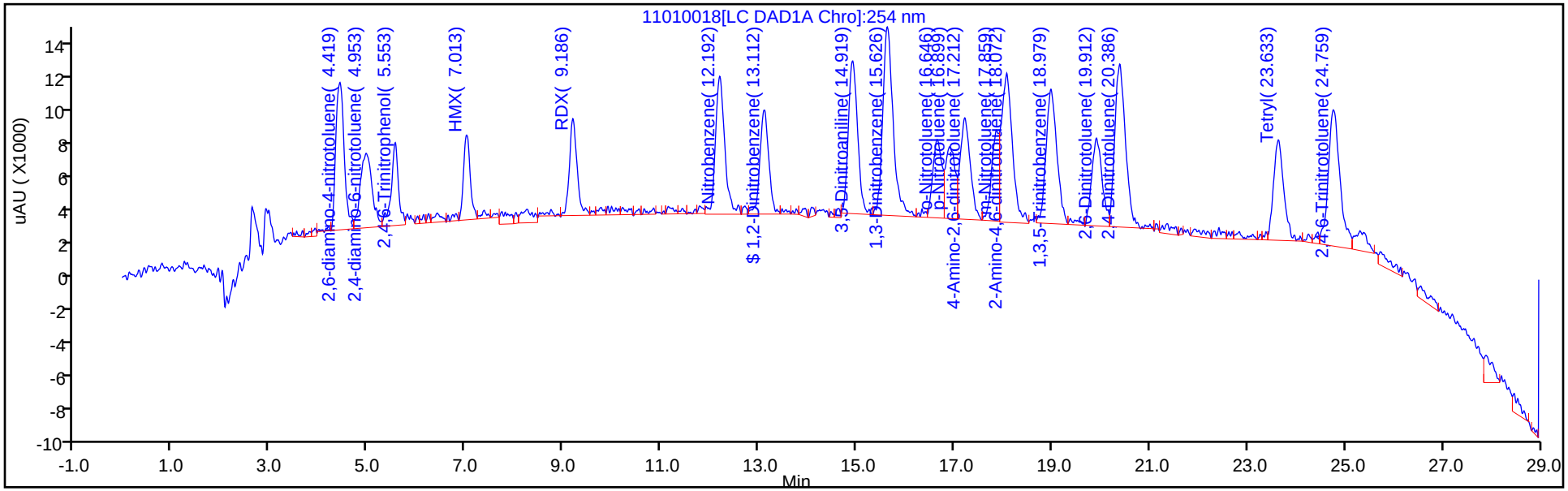
Report Date: 04-Nov-2019 18:04:29 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

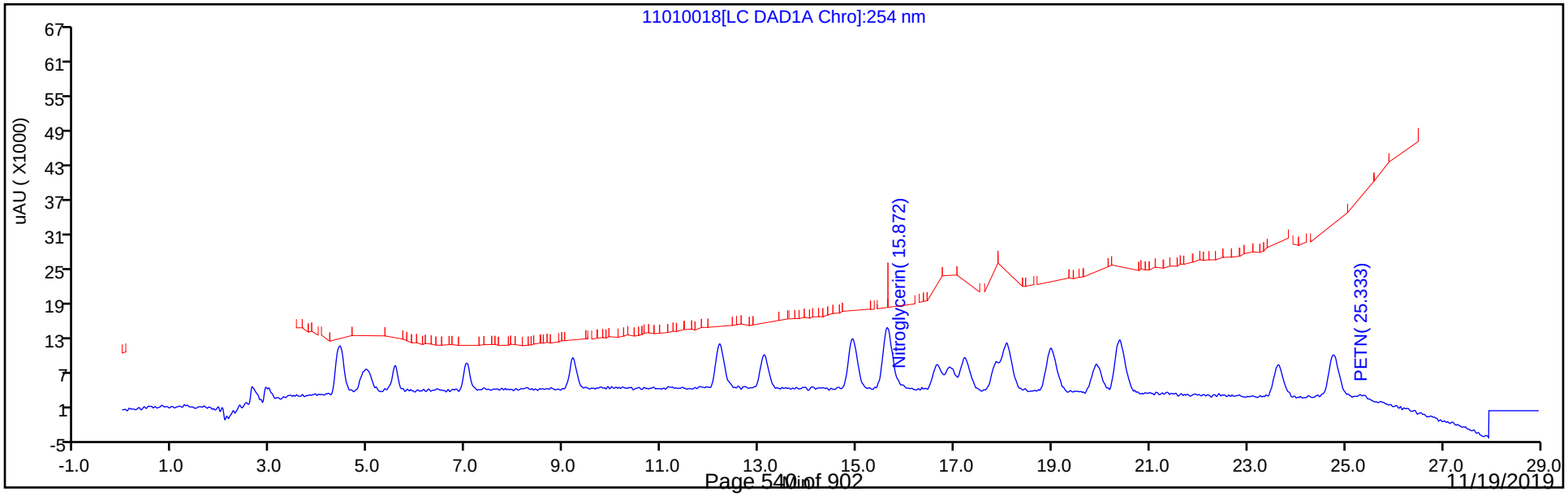
Data File: \\chromna\Denver\ChromData\G2_LUNA\20191101-86717.b\11010018.D

Injection Date:	01-Nov-2019 23:01:47	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	CB
Lims ID:	CCV			Worklist Smp#:	18
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

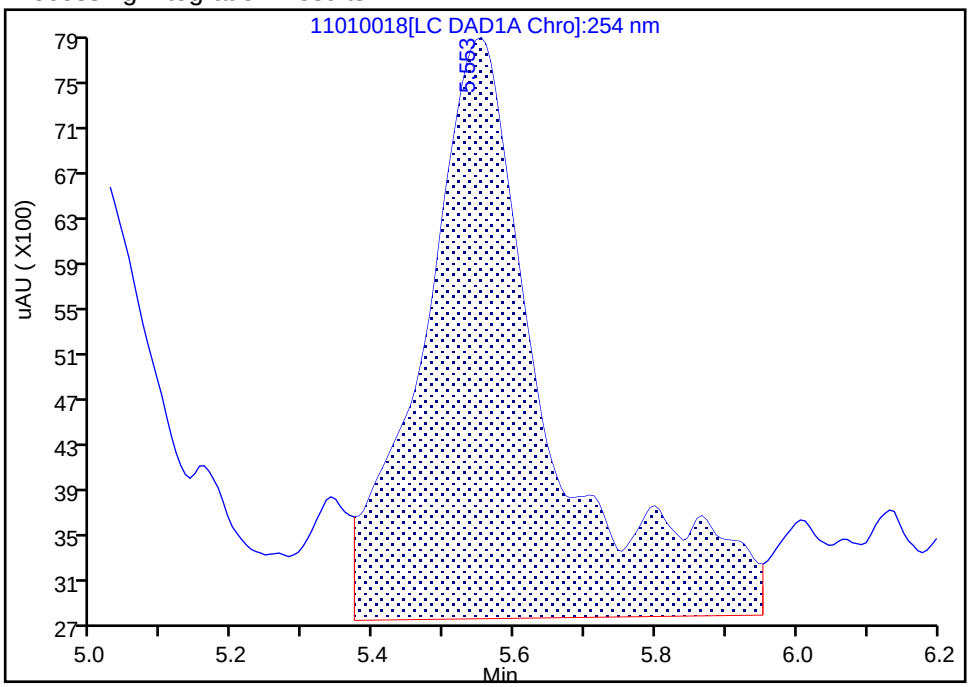
Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191101-86717.b\11010018.D				
Injection Date:	01-Nov-2019 23:01:47	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	CCV				
Client ID:					
Operator ID:	CB	ALS Bottle#:	7	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

5 2,4,6-Trinitrophenol, CAS: 88-89-1

Signal: 1

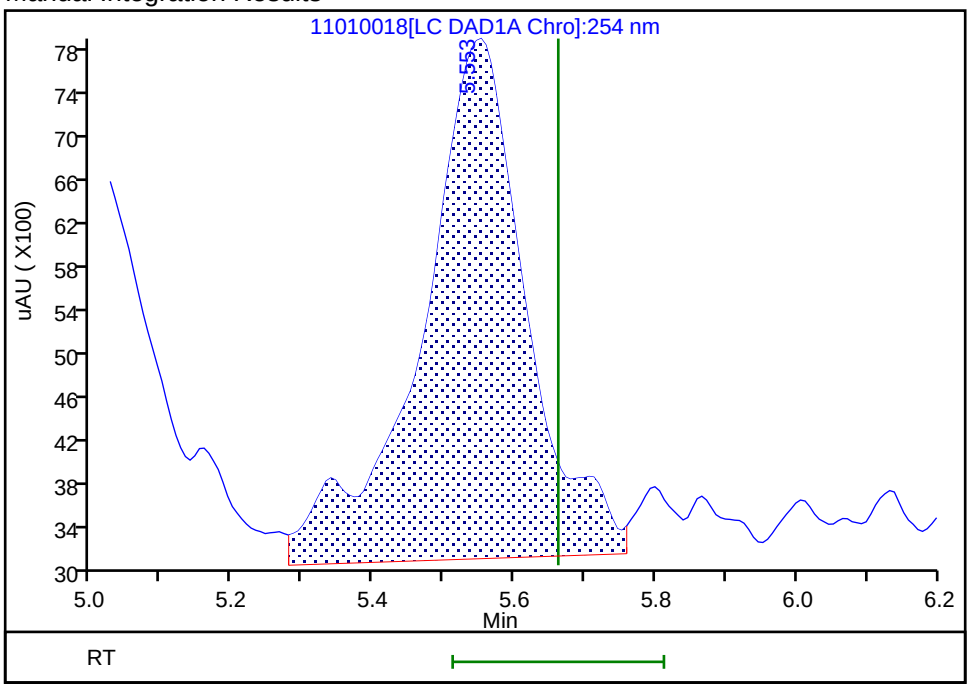
Processing Integration Results

RT: 5.55
Area: 62184
Amount: 0.309766
Amount Units: ug/ml



Manual Integration Results

RT: 5.55
Area: 49286
Amount: 0.244978
Amount Units: ug/ml



Reviewer: beckerc, 04-Nov-2019 17:59:25
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

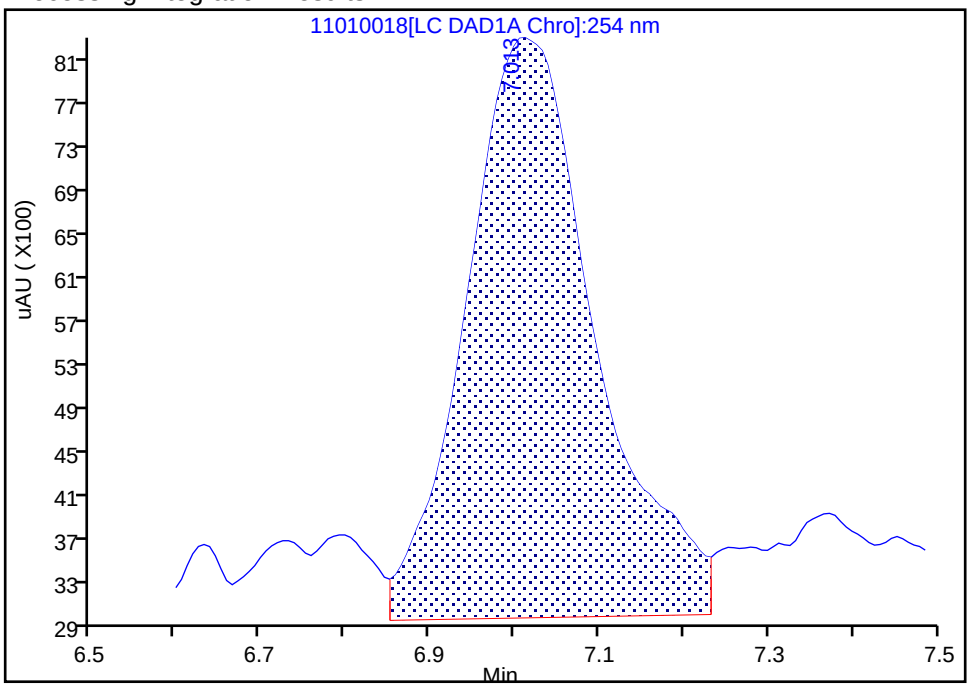
Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191101-86717.b\11010018.D				
Injection Date:	01-Nov-2019 23:01:47	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	CCV				
Client ID:					
Operator ID:	CB	ALS Bottle#:	7	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

6 HMX, CAS: 2691-41-0

Signal: 1

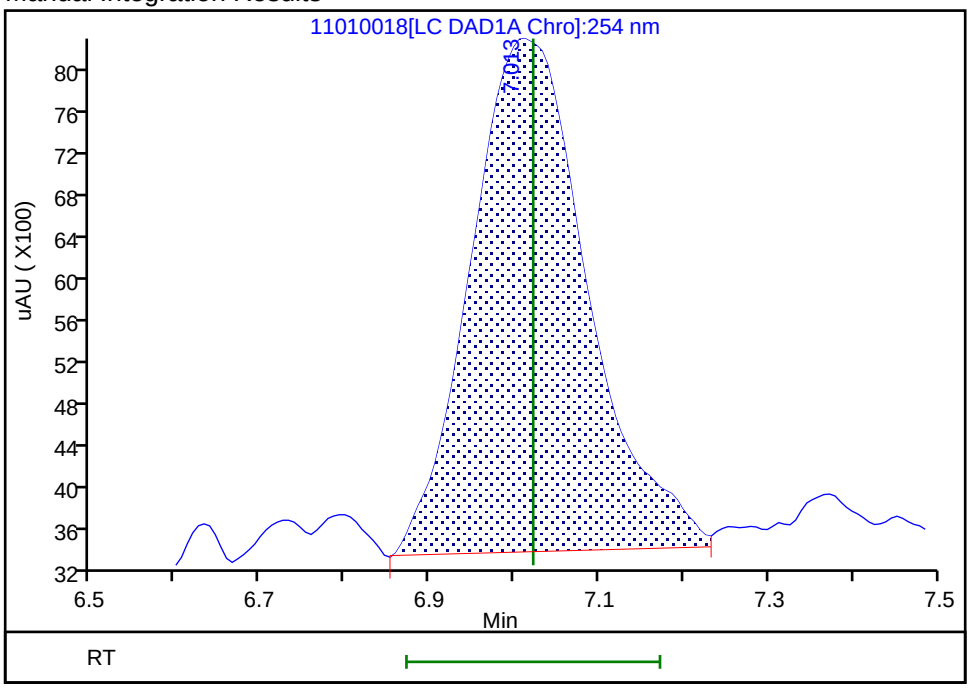
Processing Integration Results

RT: 7.01
Area: 55735
Amount: 0.258263
Amount Units: ug/ml



Manual Integration Results

RT: 7.01
Area: 46592
Amount: 0.215897
Amount Units: ug/ml



Reviewer: beckerc, 04-Nov-2019 17:59:25
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

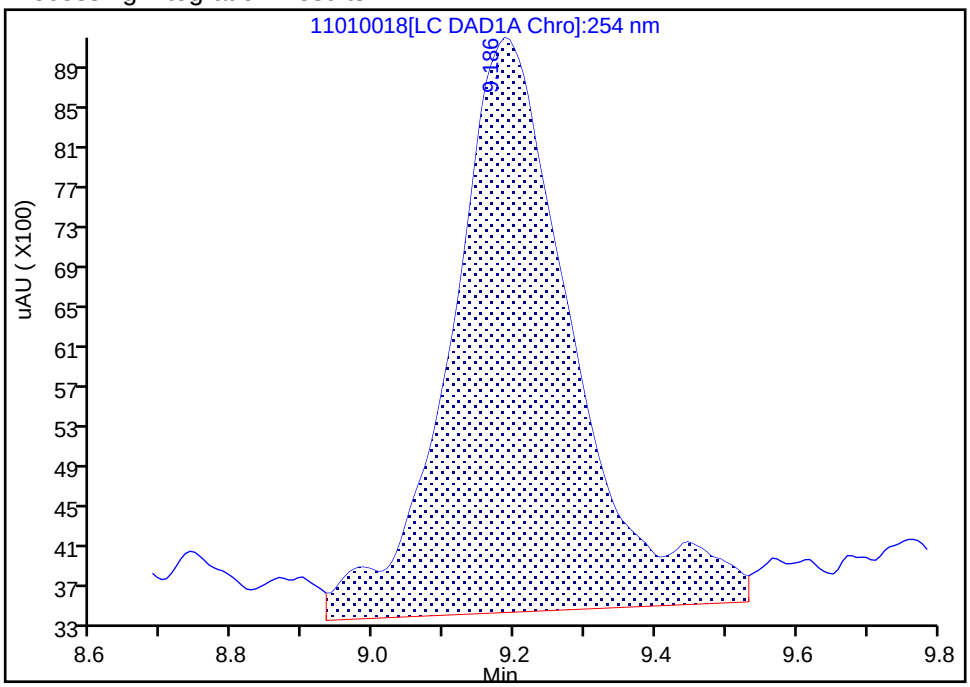
Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191101-86717.b\11010018.D				
Injection Date:	01-Nov-2019 23:01:47	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	CCV				
Client ID:					
Operator ID:	CB	ALS Bottle#:	7	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

8 RDX, CAS: 121-82-4

Signal: 1

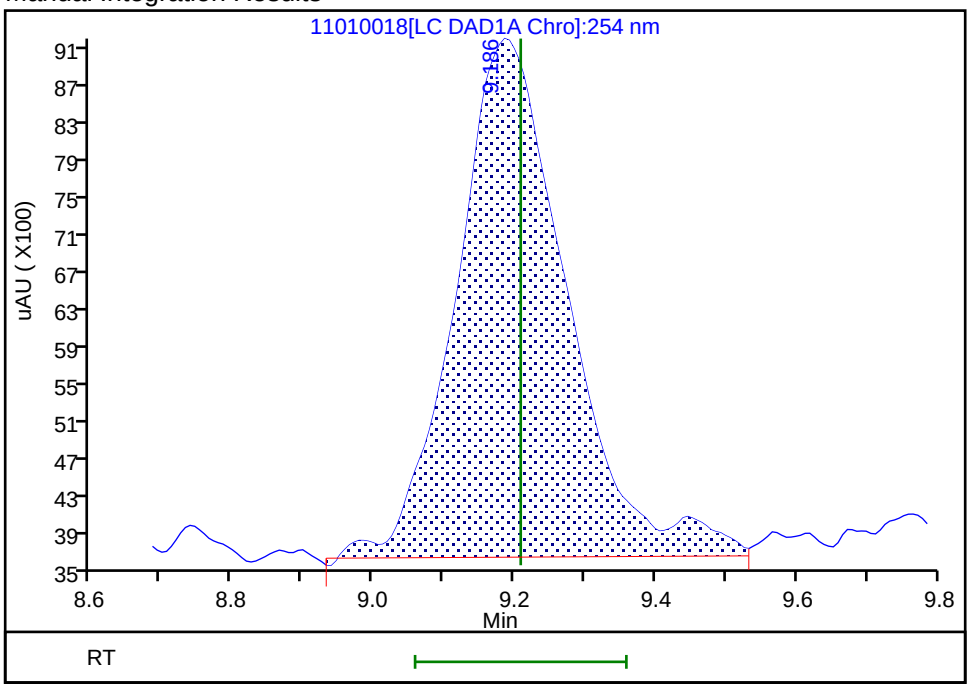
Processing Integration Results

RT: 9.19
Area: 70047
Amount: 0.295618
Amount Units: ug/ml



Manual Integration Results

RT: 9.19
Area: 60435
Amount: 0.252792
Amount Units: ug/ml



Reviewer: beckerc, 04-Nov-2019 17:59:29
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

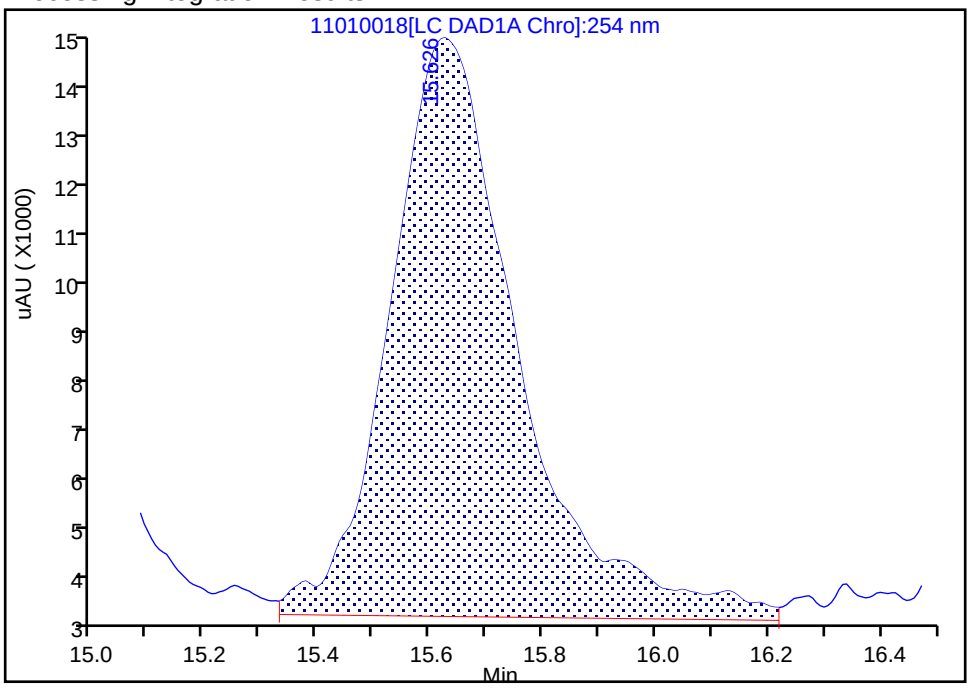
Data File: \\chromna\Denver\ChromData\G2_LUNA\20191101-86717.b\11010018.D
Injection Date: 01-Nov-2019 23:01:47 Instrument ID: CHHPLC_G2_LUNA
Lims ID: CCV
Client ID:
Operator ID: CB ALS Bottle#: 7 Worklist Smp#: 18
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

12 1,3-Dinitrobenzene, CAS: 99-65-0

Signal: 1

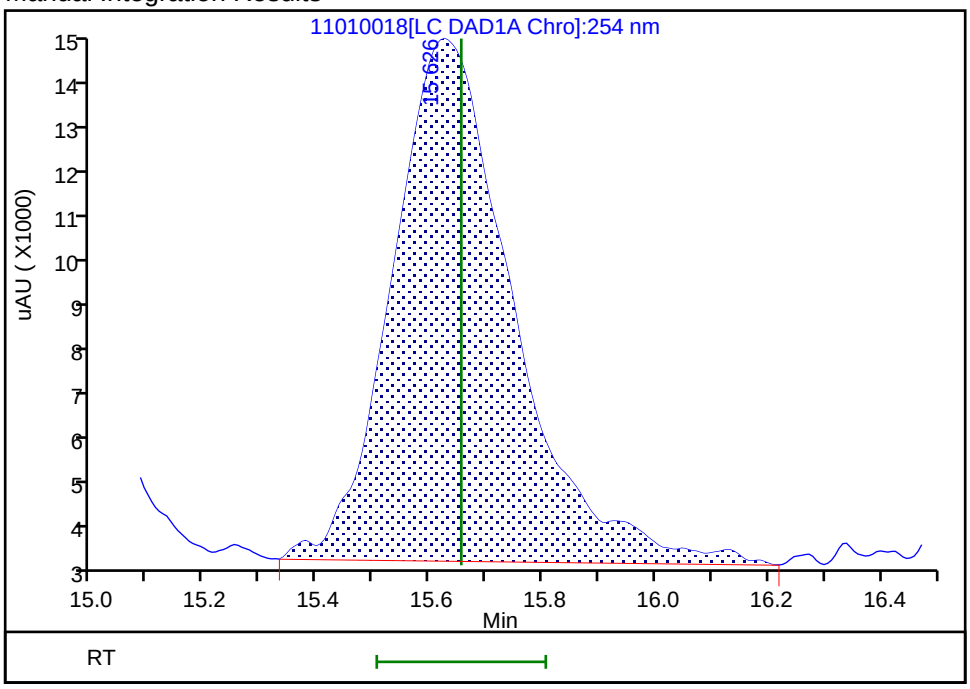
Processing Integration Results

RT: 15.63
Area: 173563
Amount: 0.263911
Amount Units: ug/ml



Manual Integration Results

RT: 15.63
Area: 160529
Amount: 0.244092
Amount Units: ug/ml



Reviewer: beckerc, 04-Nov-2019 17:56:49
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

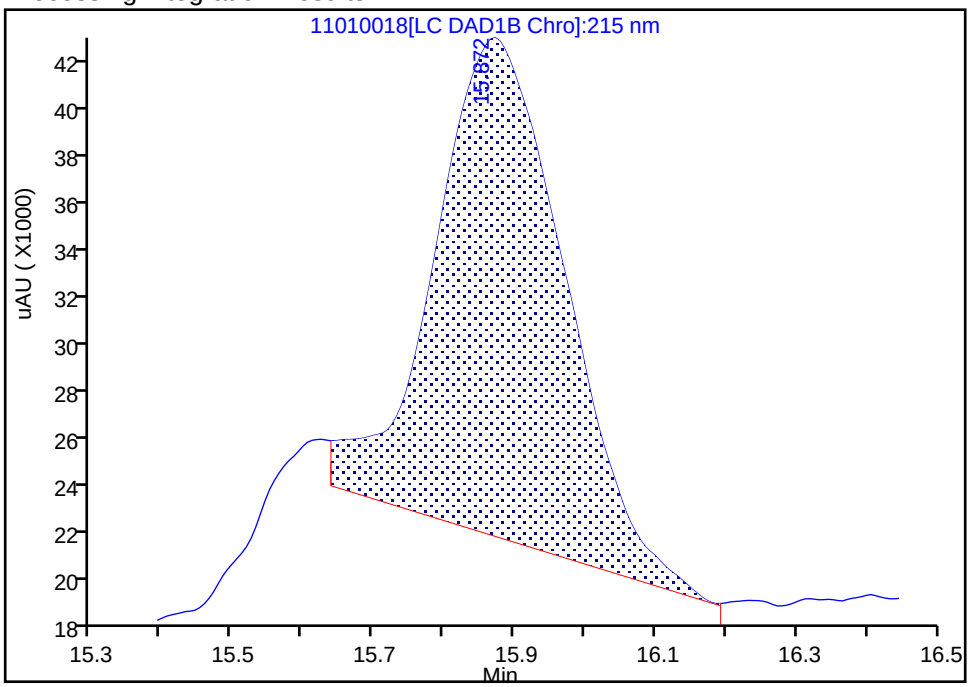
Data File: \\chromna\Denver\ChromData\G2_LUNA\20191101-86717.b\11010018.D
Injection Date: 01-Nov-2019 23:01:47 Instrument ID: CHHPLC_G2_LUNA
Lims ID: CCV
Client ID:
Operator ID: CB ALS Bottle#: 7 Worklist Smp#: 18
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Detector LC DAD1B, 215 nm

13 Nitroglycerin, CAS: 55-63-0

Signal: 1

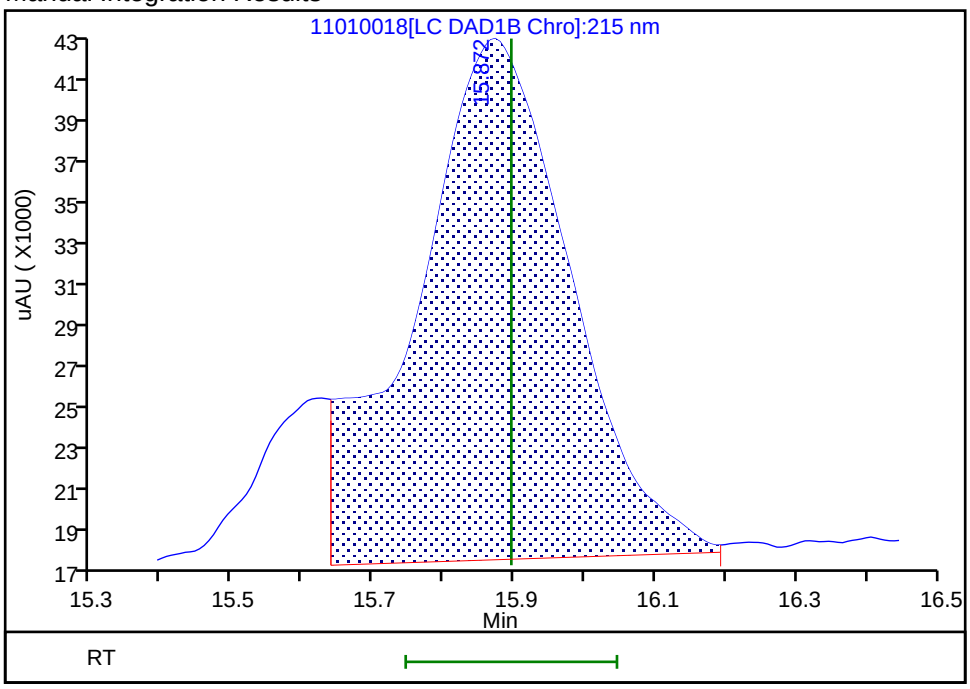
Processing Integration Results

RT: 15.87
Area: 271502
Amount: 2.014299
Amount Units: ug/ml



Manual Integration Results

RT: 15.87
Area: 373343
Amount: 2.769867
Amount Units: ug/ml



Reviewer: beckerc, 04-Nov-2019 17:59:01
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

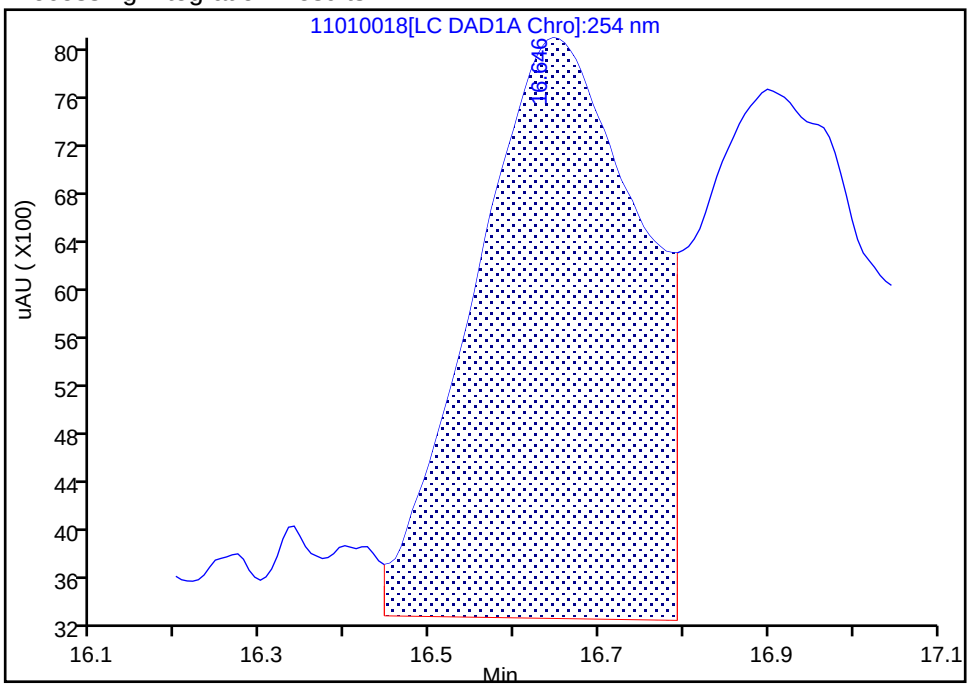
Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191101-86717.b\11010018.D				
Injection Date:	01-Nov-2019 23:01:47	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	CCV				
Client ID:					
Operator ID:	CB	ALS Bottle#:	7	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

14 o-Nitrotoluene, CAS: 88-72-2

Signal: 1

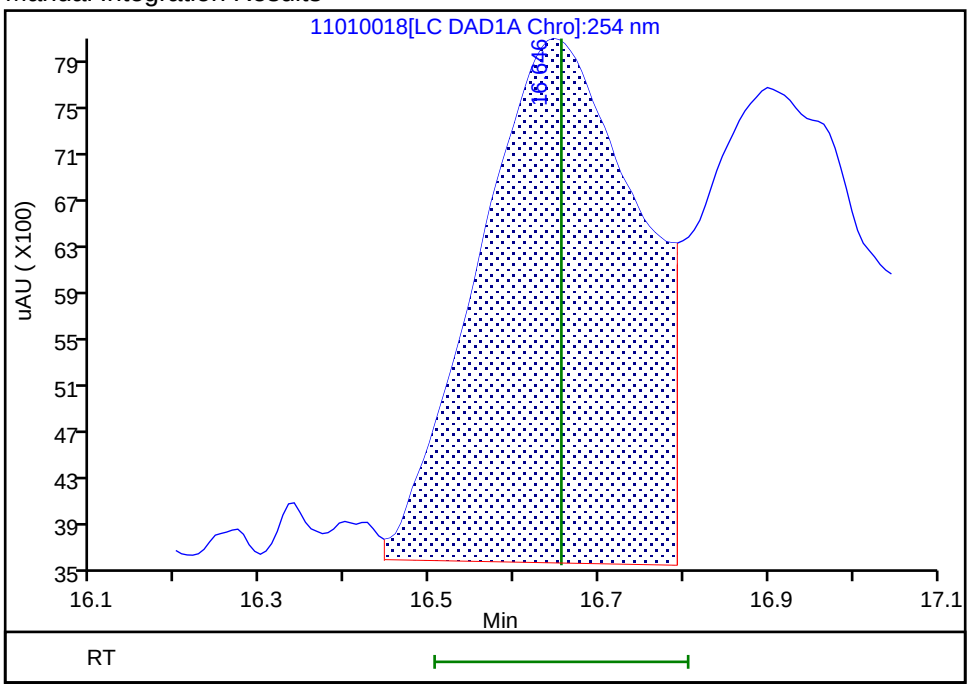
Processing Integration Results

RT: 16.65
Area: 63534
Amount: 0.227600
Amount Units: ug/ml



Manual Integration Results

RT: 16.65
Area: 58594
Amount: 0.209903
Amount Units: ug/ml



Reviewer: beckerc, 04-Nov-2019 17:56:49

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

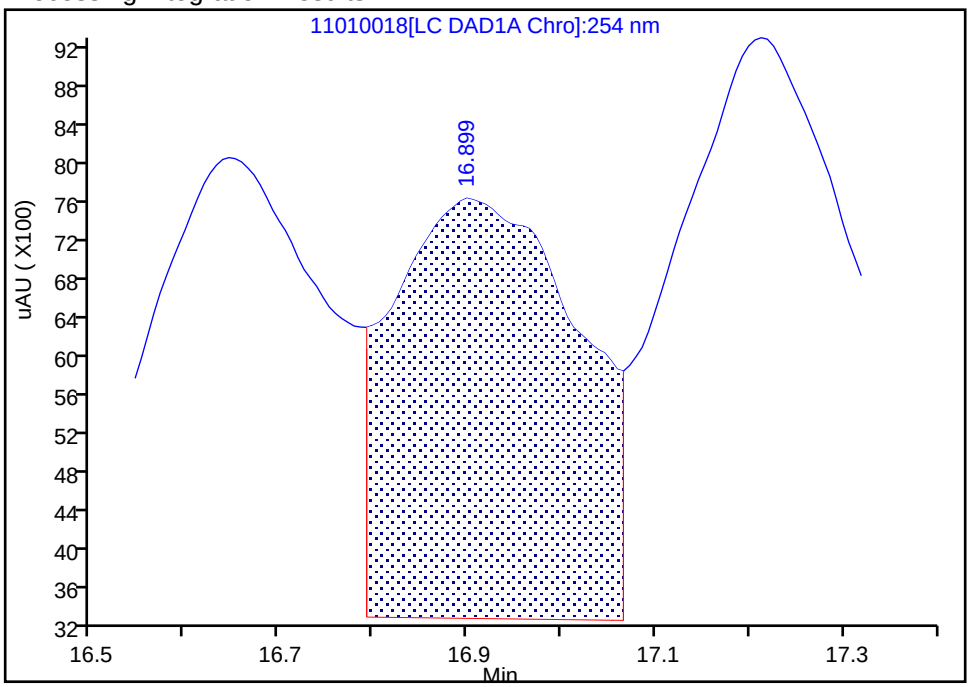
Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191101-86717.b\11010018.D				
Injection Date:	01-Nov-2019 23:01:47	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	CCV				
Client ID:					
Operator ID:	CB	ALS Bottle#:	7	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

15 p-Nitrotoluene, CAS: 99-99-0

Signal: 1

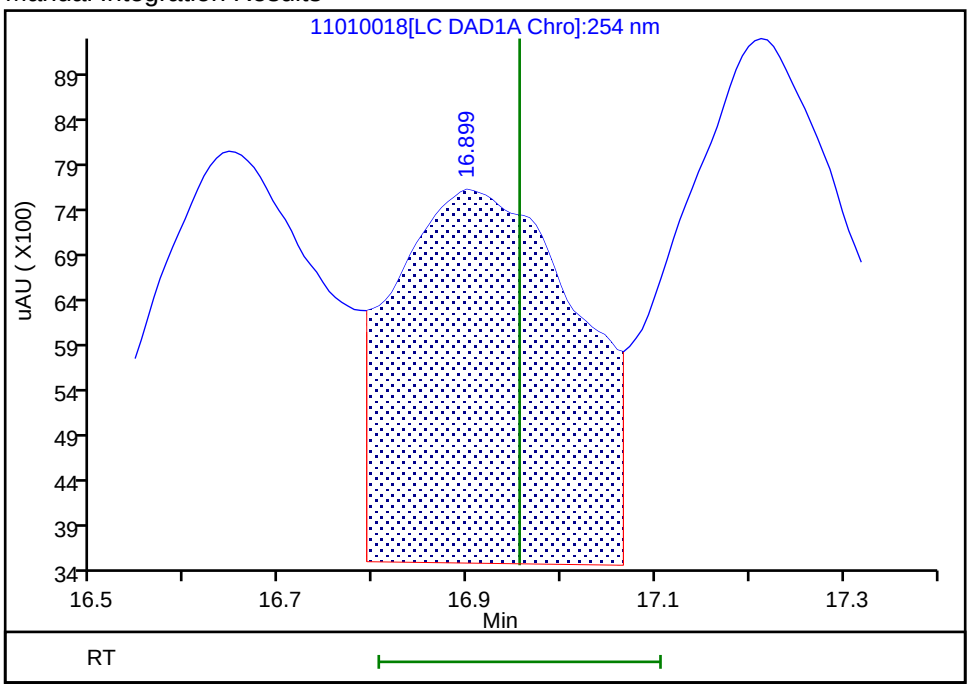
Processing Integration Results

RT: 16.90
Area: 58979
Amount: 0.263883
Amount Units: ug/ml



Manual Integration Results

RT: 16.90
Area: 55215
Amount: 0.247043
Amount Units: ug/ml



Reviewer: beckerc, 04-Nov-2019 17:56:49

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

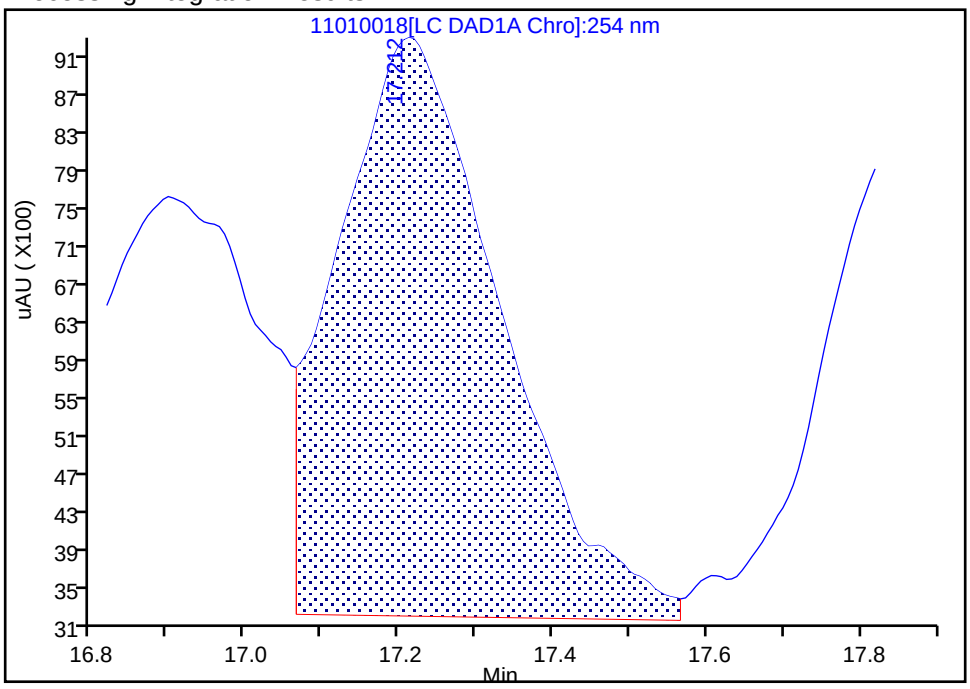
Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191101-86717.b\11010018.D				
Injection Date:	01-Nov-2019 23:01:47	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	CCV				
Client ID:					
Operator ID:	CB	ALS Bottle#:	7	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

16 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

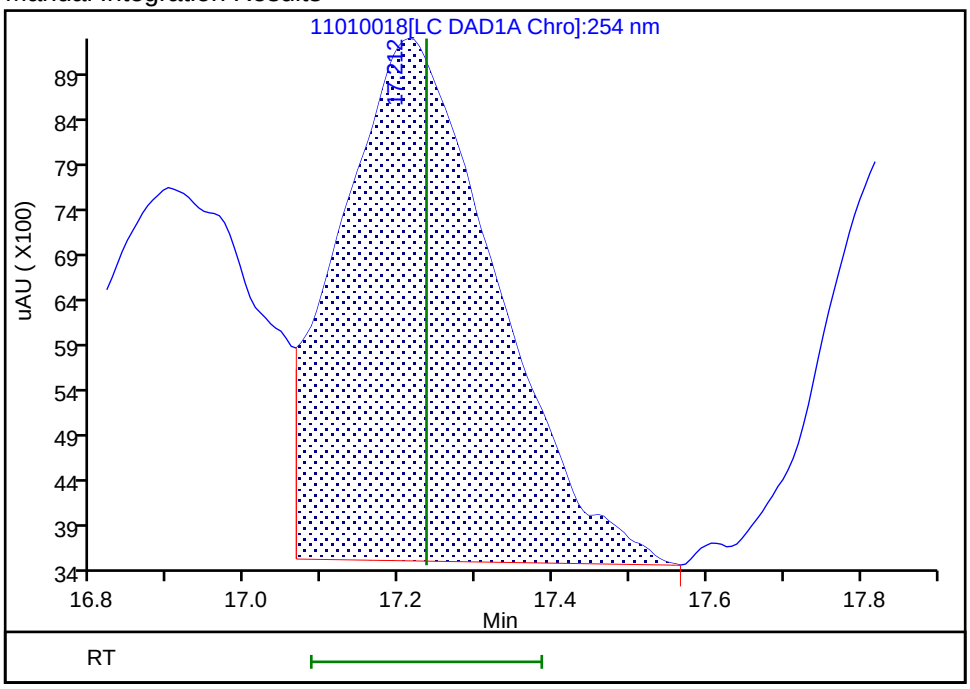
Processing Integration Results

RT: 17.21
Area: 88893
Amount: 0.273538
Amount Units: ug/ml



Manual Integration Results

RT: 17.21
Area: 82173
Amount: 0.252859
Amount Units: ug/ml



Reviewer: beckerc, 04-Nov-2019 17:56:49
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

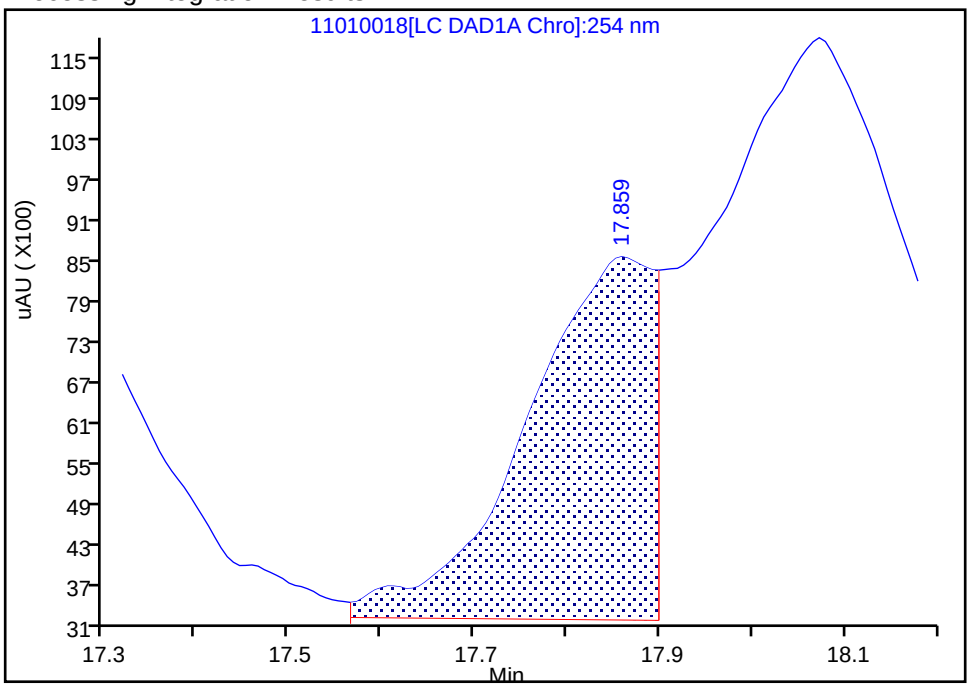
Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191101-86717.b\11010018.D				
Injection Date:	01-Nov-2019 23:01:47	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	CCV				
Client ID:					
Operator ID:	CB	ALS Bottle#:	7	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

17 m-Nitrotoluene, CAS: 99-08-1

Signal: 1

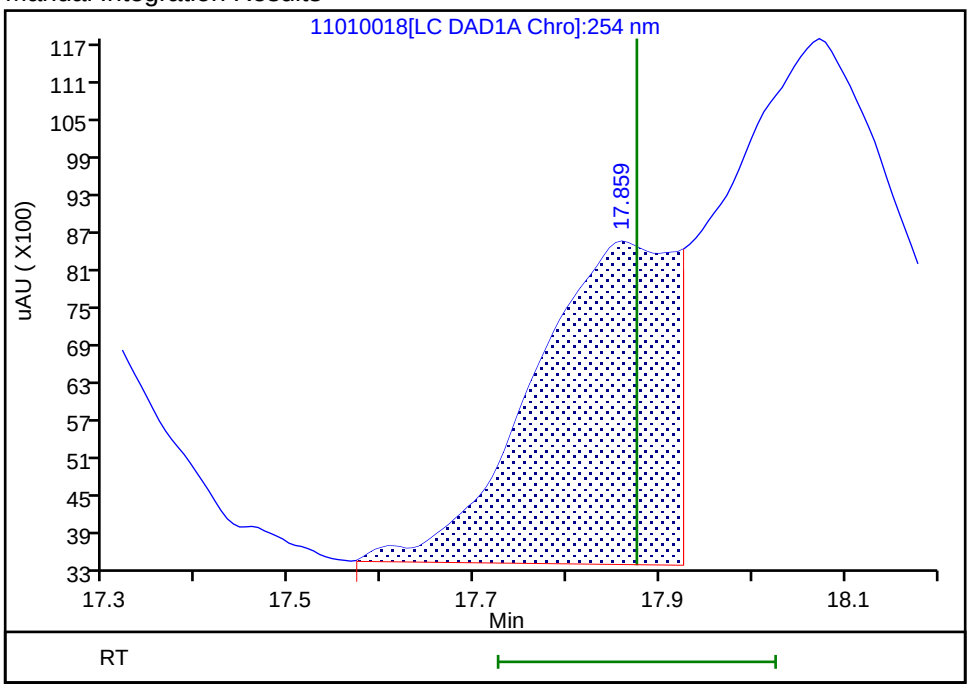
Processing Integration Results

RT: 17.86
Area: 51129
Amount: 0.283411
Amount Units: ug/ml



Manual Integration Results

RT: 17.86
Area: 54910
Amount: 0.307399
Amount Units: ug/ml



Reviewer: beckerc, 04-Nov-2019 18:00:05
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

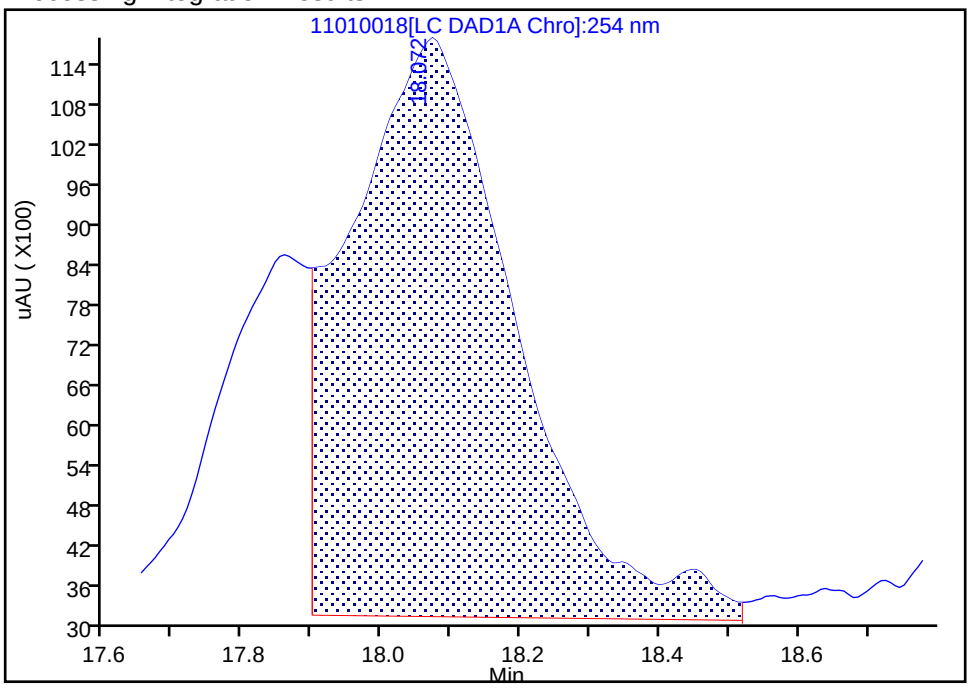
Data File: \\chromna\Denver\ChromData\G2_LUNA\20191101-86717.b\11010018.D
Injection Date: 01-Nov-2019 23:01:47 Instrument ID: CHHPLC_G2_LUNA
Lims ID: CCV
Client ID:
Operator ID: CB ALS Bottle#: 7 Worklist Smp#: 18
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

18 2-Amino-4,6-dinitrotoluene, CAS: 35572-78-2

Signal: 1

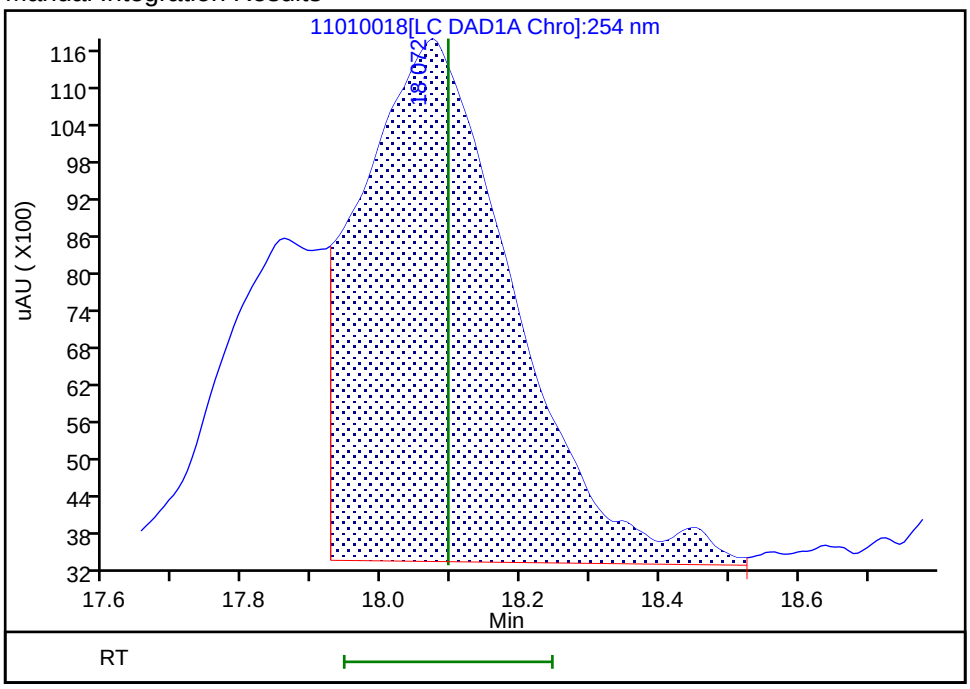
Processing Integration Results

RT: 18.07
Area: 144753
Amount: 0.314834
Amount Units: ug/ml



Manual Integration Results

RT: 18.07
Area: 130901
Amount: 0.284706
Amount Units: ug/ml



Reviewer: beckerc, 04-Nov-2019 17:59:51
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

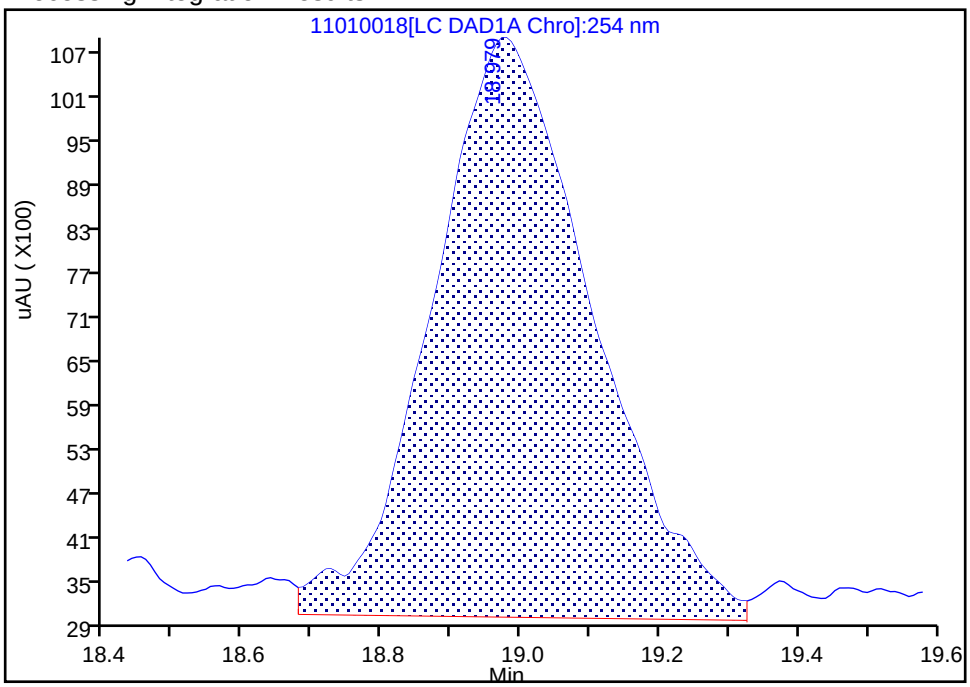
Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191101-86717.b\11010018.D				
Injection Date:	01-Nov-2019 23:01:47	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	CCV				
Client ID:					
Operator ID:	CB	ALS Bottle#:	7	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

19 1,3,5-Trinitrobenzene, CAS: 99-35-4

Signal: 1

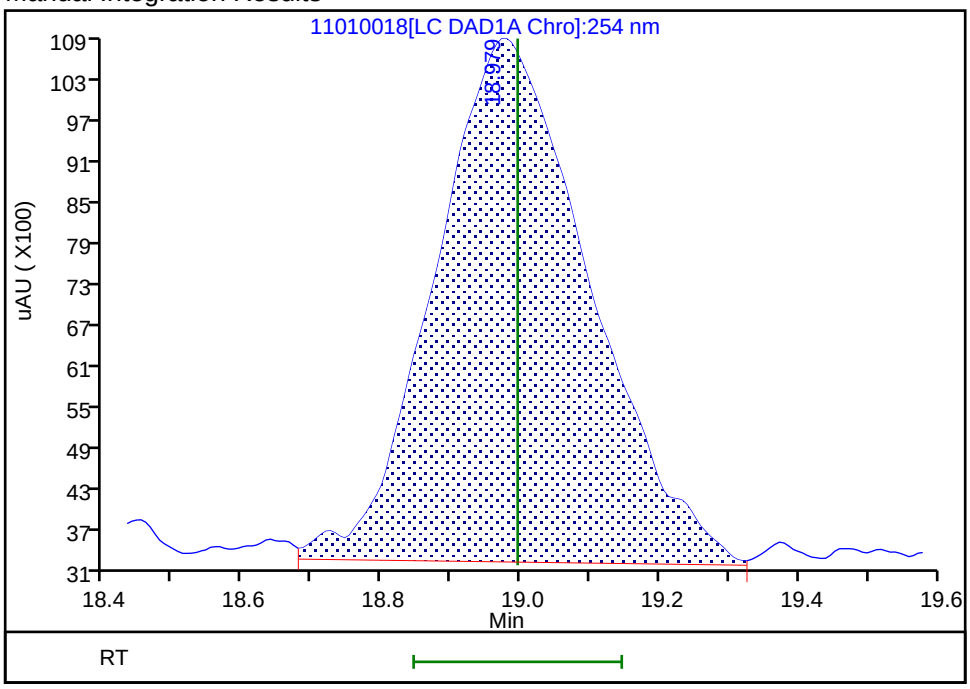
Processing Integration Results

RT: 18.98
Area: 127024
Amount: 0.256983
Amount Units: ug/ml



Manual Integration Results

RT: 18.98
Area: 119167
Amount: 0.241087
Amount Units: ug/ml



Reviewer: beckerc, 04-Nov-2019 17:56:49

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

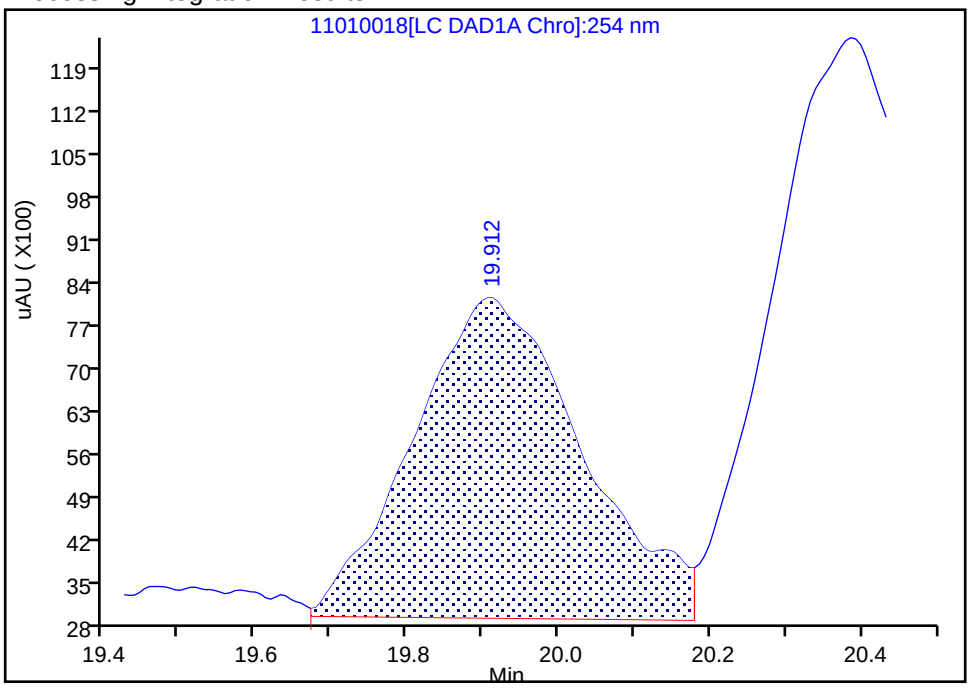
Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191101-86717.b\11010018.D				
Injection Date:	01-Nov-2019 23:01:47	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	CCV				
Client ID:					
Operator ID:	CB	ALS Bottle#:	7	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

20 2,6-Dinitrotoluene, CAS: 606-20-2

Signal: 1

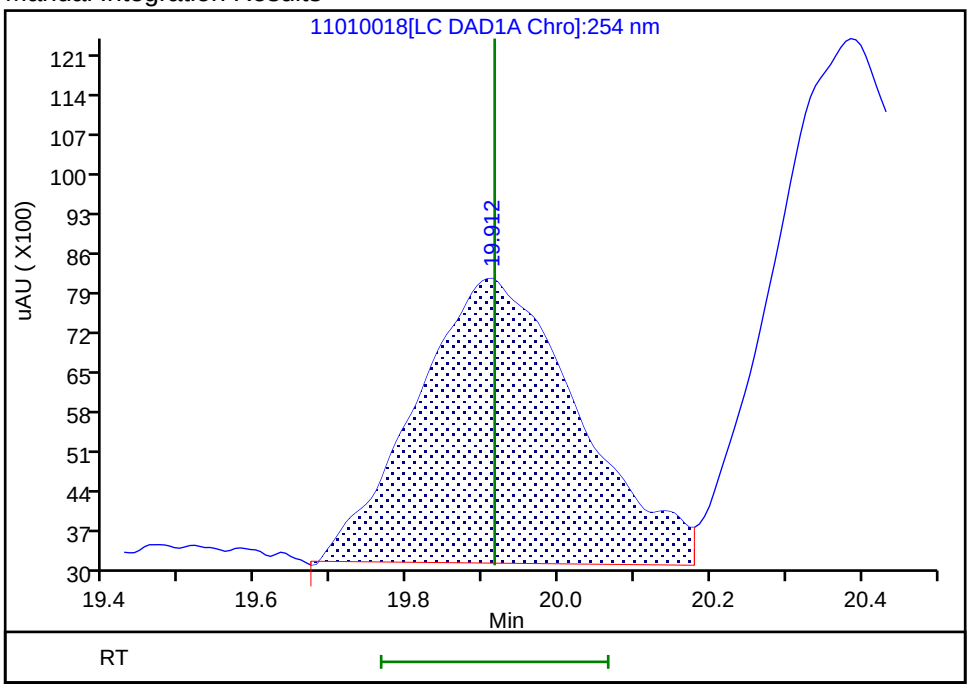
Processing Integration Results

RT: 19.91
Area: 80622
Amount: 0.249673
Amount Units: ug/ml



Manual Integration Results

RT: 19.91
Area: 74816
Amount: 0.231692
Amount Units: ug/ml



Reviewer: beckerc, 04-Nov-2019 17:56:49
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

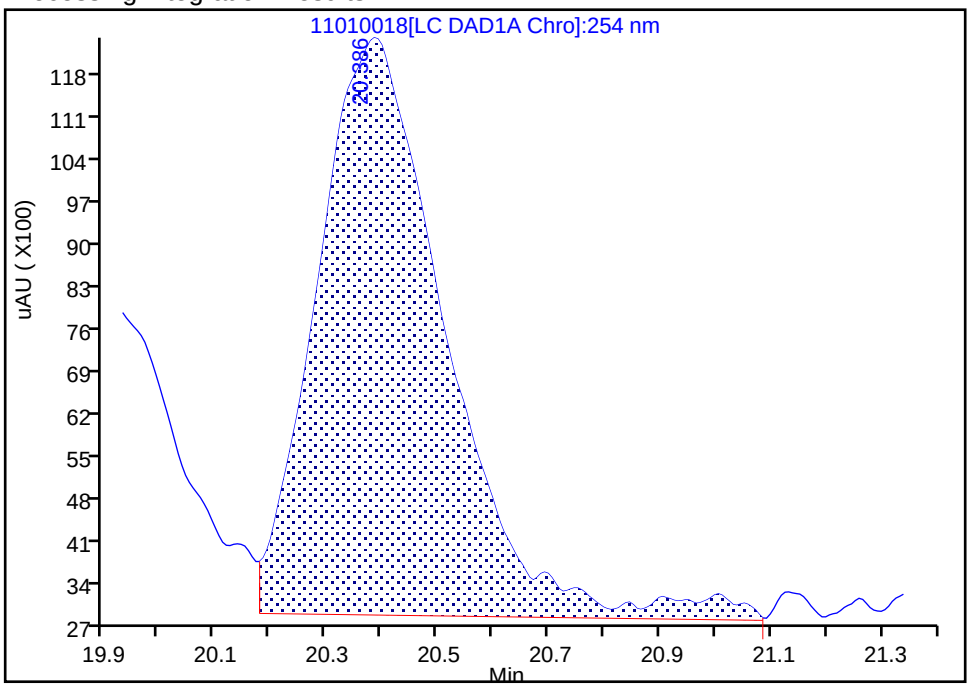
Data File:	\\chromna\Denver\ChromData\G2_LUNA\20191101-86717.b\11010018.D				
Injection Date:	01-Nov-2019 23:01:47	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	CCV				
Client ID:					
Operator ID:	CB	ALS Bottle#:	7	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

21 2,4-Dinitrotoluene, CAS: 121-14-2

Signal: 1

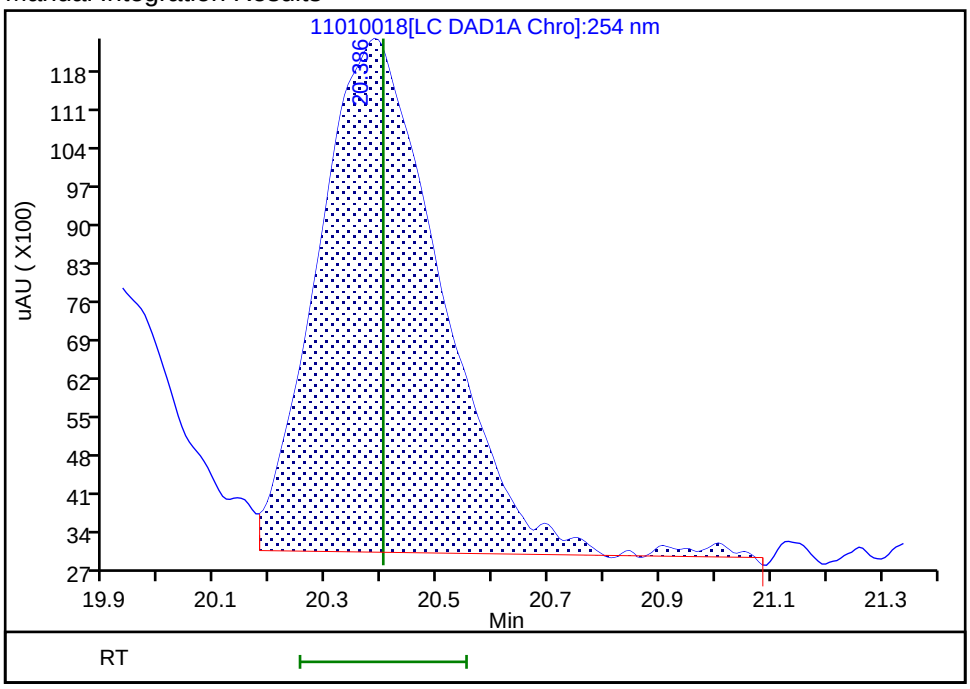
Processing Integration Results

RT: 20.39
Area: 153408
Amount: 0.251834
Amount Units: ug/ml



Manual Integration Results

RT: 20.39
Area: 143535
Amount: 0.235627
Amount Units: ug/ml



Reviewer: beckerc, 04-Nov-2019 17:56:49

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: ICV 280-463276/15 Calibration Date: 07/01/2019 17:46

Instrument ID: CHHPLC_X3 Calib Start Date: 07/01/2019 14:40

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 07/01/2019 17:23

Lab File ID: 07010015.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	91833	83503		364	400	-9.1	15.0
RDX	Ave	111120	100688		362	400	-9.4	15.0
Picric acid	Ave	90734	85358		376	400	-5.9	15.0
1,3,5-Trinitrobenzene	Ave	245077	234935		383	400	-4.1	15.0
1,3-Dinitrobenzene	Ave	311175	300153		386	400	-3.5	15.0
Nitrobenzene	Ave	198903	196135		394	400	-1.4	15.0
Tetryl	Ave	161957	167540		414	400	3.4	15.0
Nitroglycerin	Ave	71108	66318		3730	4000	-6.7	15.0
2,4,6-Trinitrotoluene	Ave	227277	202738		357	400	-10.8	15.0
4-Amino-2,6-dinitrotoluene	Ave	166378	148768		358	400	-10.6	15.0
2-Amino-4,6-dinitrotoluene	Ave	205236	194233		379	400	-5.4	15.0
2,6-Dinitrotoluene	Ave	159284	144348		362	400	-9.4	15.0
2,4-Dinitrotoluene	Ave	300447	282300		376	400	-6.0	15.0
2-Nitrotoluene	Ave	129784	121650		375	400	-6.3	15.0
4-Nitrotoluene	Ave	110255	105768		384	400	-4.1	15.0
3-Nitrotoluene	Ave	145122	136635		377	400	-5.8	15.0
PETN	Ave	74289	73091		3940	4000	-1.6	15.0
1,2-Dinitrobenzene	Ave	139328	123173		354	400	-11.6	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: ICV 280-463276/15 Calibration Date: 07/01/2019 17:46

Instrument ID: CHHPLC_X3 Calib Start Date: 07/01/2019 14:40

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 07/01/2019 17:23

Lab File ID: 07010015.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.64	6.49	6.79
RDX	7.76	7.61	7.91
Picric acid	8.18	8.03	8.33
1,3,5-Trinitrobenzene	8.90	8.75	9.05
1,3-Dinitrobenzene	9.56	9.41	9.71
Nitrobenzene	9.94	9.79	10.09
Tetryl	10.27	10.12	10.42
Nitroglycerin	10.77	10.62	10.92
2,4,6-Trinitrotoluene	11.22	11.12	11.32
4-Amino-2,6-dinitrotoluene	11.42	11.32	11.52
2-Amino-4,6-dinitrotoluene	11.70	11.60	11.80
2,6-Dinitrotoluene	11.84	11.74	11.94
2,4-Dinitrotoluene	12.04	11.94	12.14
2-Nitrotoluene	12.88	12.73	13.03
4-Nitrotoluene	13.32	13.17	13.47
3-Nitrotoluene	13.92	13.77	14.07
PETN	15.01	14.86	15.16
1,2-Dinitrobenzene	8.74	8.59	8.89

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010015.D
Lims ID: ICV MAIN
Client ID:
Sample Type: ICV
Inject. Date: 01-Jul-2019 17:46:34 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: ICV MAIN
Misc. Info.: 280-0083376-015
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist:

Method: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 02-Jul-2019 11:34:59 Calib Date: 01-Jul-2019 17:23:38
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010014.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0309

First Level Reviewer: fiedlerh Date: 01-Jul-2019 18:32:41

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
3 HMX	1	6.643	6.643	0.000	33401	0.4000	0.3637	M
7 RDX	1	7.757	7.757	0.000	40275	0.4000	0.3624	
8 2,4,6-Trinitrophenol	1	8.177	8.177	0.000	34143	0.4000	0.3763	
$ 9 1,2-Dinitrobenzene	1	8.737	8.737	0.000	49269	0.4000	0.3536	
10 1,3,5-Trinitrobenzene	1	8.897	8.897	0.000	93974	0.4000	0.3834	
11 1,3-Dinitrobenzene	1	9.557	9.557	0.000	120061	0.4000	0.3858	
12 Nitrobenzene	1	9.943	9.943	0.000	78454	0.4000	0.3944	
14 Tetryl	1	10.270	10.270	0.000	67016	0.4000	0.4138	
15 Nitroglycerin	2	10.770	10.770	0.000	265271	4.00	3.73	
16 2,4,6-Trinitrotoluene	1	11.223	11.223	0.000	81095	0.4000	0.3568	
17 4-Amino-2,6-dinitrotoluene	1	11.417	11.417	0.000	59507	0.4000	0.3577	
18 2-Amino-4,6-dinitrotoluene	1	11.703	11.703	0.000	77693	0.4000	0.3786	
19 2,6-Dinitrotoluene	1	11.837	11.837	0.000	57739	0.4000	0.3625	
20 2,4-Dinitrotoluene	1	12.037	12.037	0.000	112920	0.4000	0.3758	
21 o-Nitrotoluene	1	12.877	12.877	0.000	48660	0.4000	0.3749	
22 p-Nitrotoluene	1	13.317	13.317	0.000	42307	0.4000	0.3837	
23 m-Nitrotoluene	1	13.917	13.917	0.000	54654	0.4000	0.3766	
24 PETN	2	15.010	15.010	0.000	292363	4.00	3.94	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8330Surrogate_00103 Amount Added: 40.00 Units: uL
8330 LCS_00089 Amount Added: 40.00 Units: uL

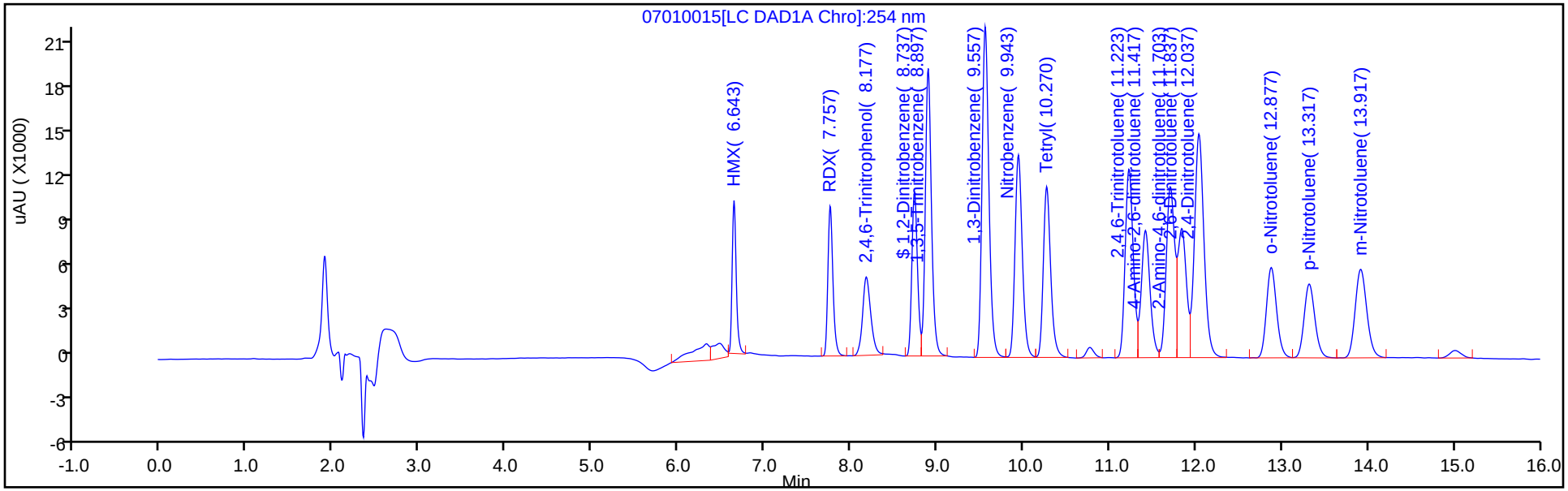
Report Date: 02-Jul-2019 11:34:59 Chrom Revision: 2.3 20-Jun-2019 20:50:56

Eurofins TestAmerica, Denver

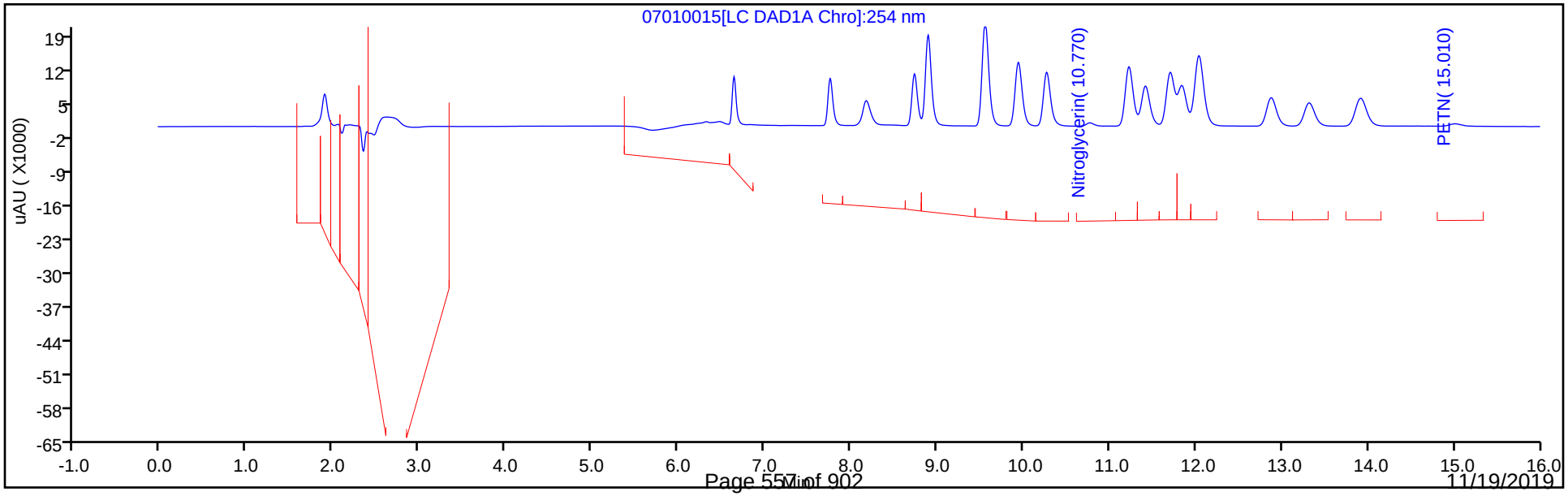
Data File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010015.D

Injection Date:	01-Jul-2019 17:46:34	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	ICV MAIN			Worklist Smp#:	15
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

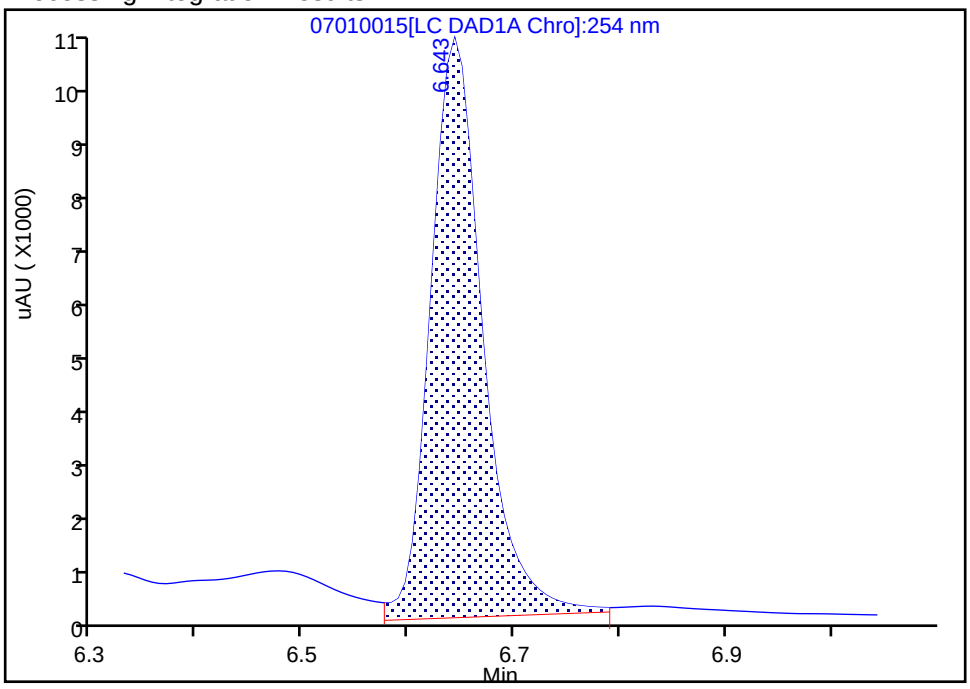
Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010015.D				
Injection Date:	01-Jul-2019 17:46:34	Instrument ID:	CHHPLC_X3		
Lims ID:	ICV MAIN				
Client ID:					
Operator ID:	hkf	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

3 HMX, CAS: 2691-41-0

Signal: 1

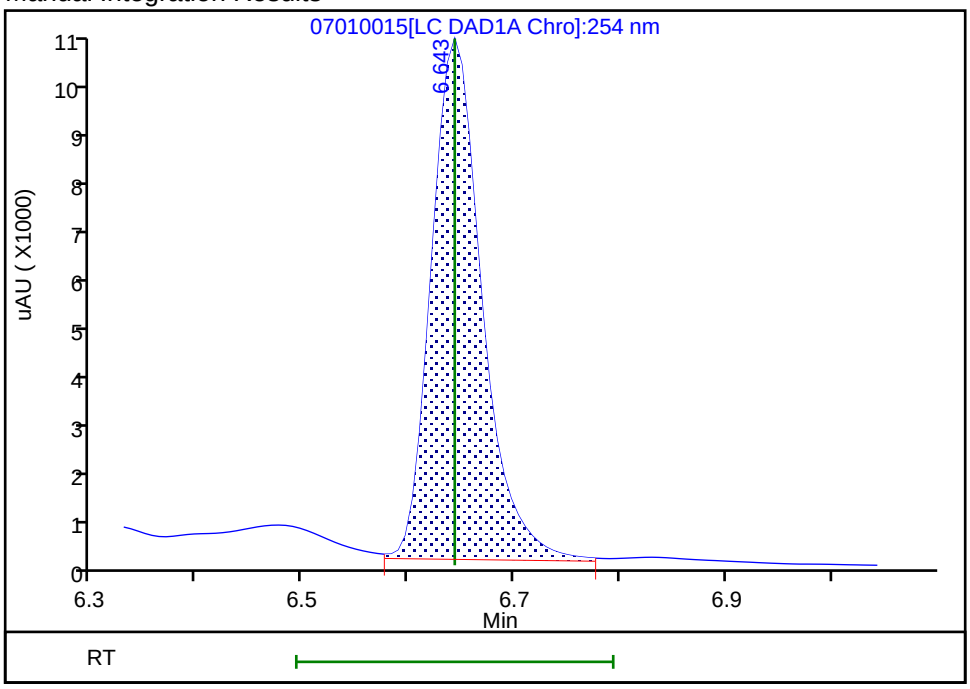
Processing Integration Results

RT: 6.64
Area: 35035
Amount: 0.381507
Amount Units: ug/mL



Manual Integration Results

RT: 6.64
Area: 33401
Amount: 0.363714
Amount Units: ug/mL



Reviewer: fiedlerh, 01-Jul-2019 18:32:36
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: ICV 280-463276/33 Calibration Date: 07/02/2019 00:41

Instrument ID: CHHPLC_X3 Calib Start Date: 07/01/2019 21:36

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 07/02/2019 00:18

Lab File ID: 07010033.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
TNX	Ave	214964	214136		399	400	-0.4	15.0
DNX	Ave	156126	152123		390	400	-2.6	15.0
MNX	Ave	140041	139925		466	467	-0.0	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: ICV 280-463276/33 Calibration Date: 07/02/2019 00:41

Instrument ID: CHHPLC_X3 Calib Start Date: 07/01/2019 21:36

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 07/02/2019 00:18

Lab File ID: 07010033.D

Analyte	RT	RT WINDOW	
		FROM	TO
TNX	6.55	6.45	6.65
DNX	6.88	6.78	6.98
MNX	7.35	7.19	7.49

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010033.D				
Lims ID:	ICV DMT				
Client ID:					
Sample Type:	ICV				
Inject. Date:	02-Jul-2019 00:41:04	ALS Bottle#:	33	Worklist Smp#:	33
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	ICV DMT				
Misc. Info.:	280-0083376-033				
Operator ID:	hkf	Instrument ID:	CHHPLC_X3		
Sublist:					
Method:	\\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	02-Jul-2019 11:35:30	Calib Date:	02-Jul-2019 00:18:07		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX0309				
First Level Reviewer: fiedlerh		Date:	02-Jul-2019 09:05:47		

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 TNX	1	6.547	6.550	-0.003	85740	0.4004	0.3989	M
5 DNX	1	6.881	6.883	-0.002	60910	0.4004	0.3901	M
6 MNX	1	7.347	7.343	0.004	65317	0.4668	0.4664	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8330_OP_DMT_00002 Amount Added: 40.00 Units: uL

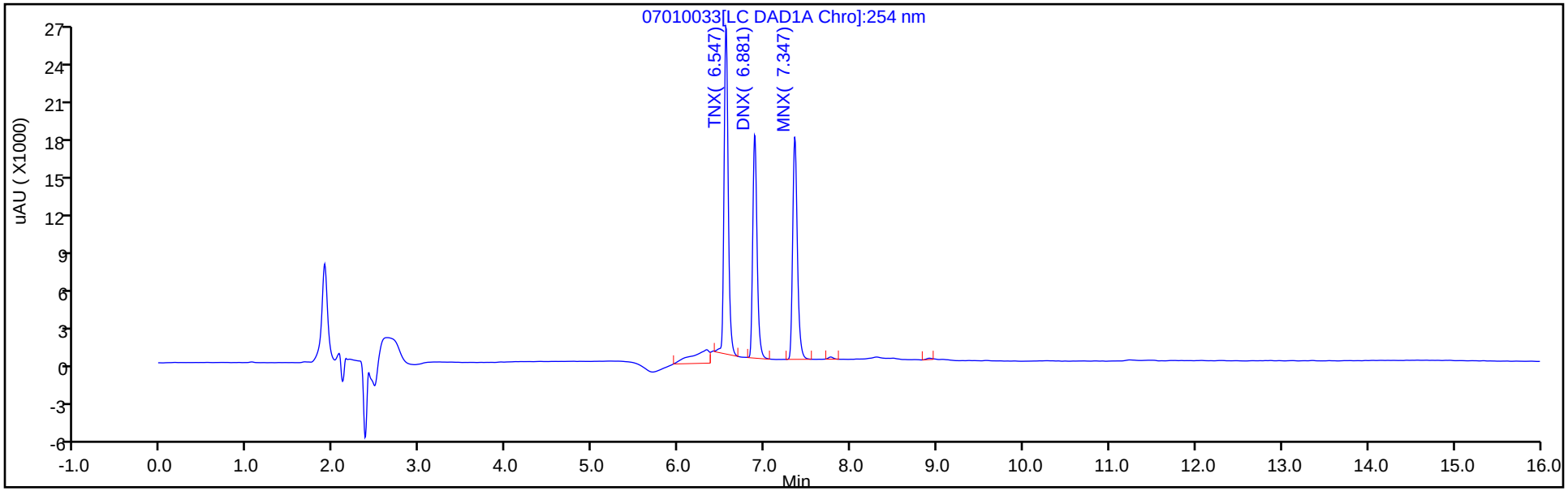
Report Date: 02-Jul-2019 11:35:32 Chrom Revision: 2.3 20-Jun-2019 20:50:56

Eurofins TestAmerica, Denver

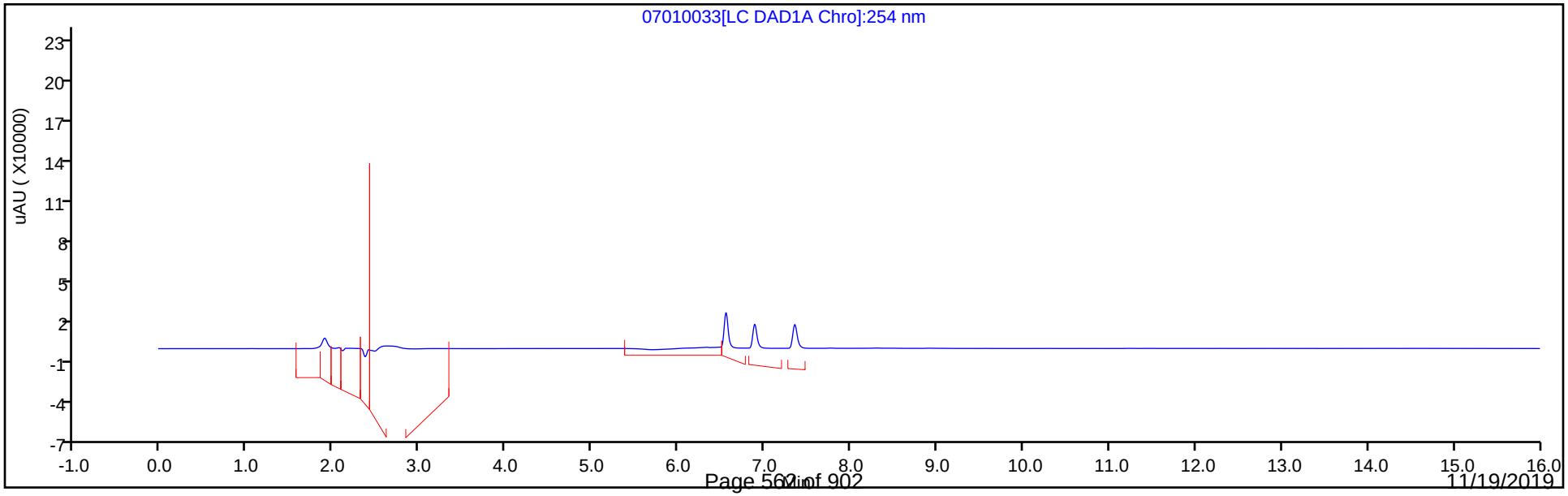
Data File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010033.D

Injection Date:	02-Jul-2019 00:41:04	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	ICV DMT			Worklist Smp#:	33
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	33
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

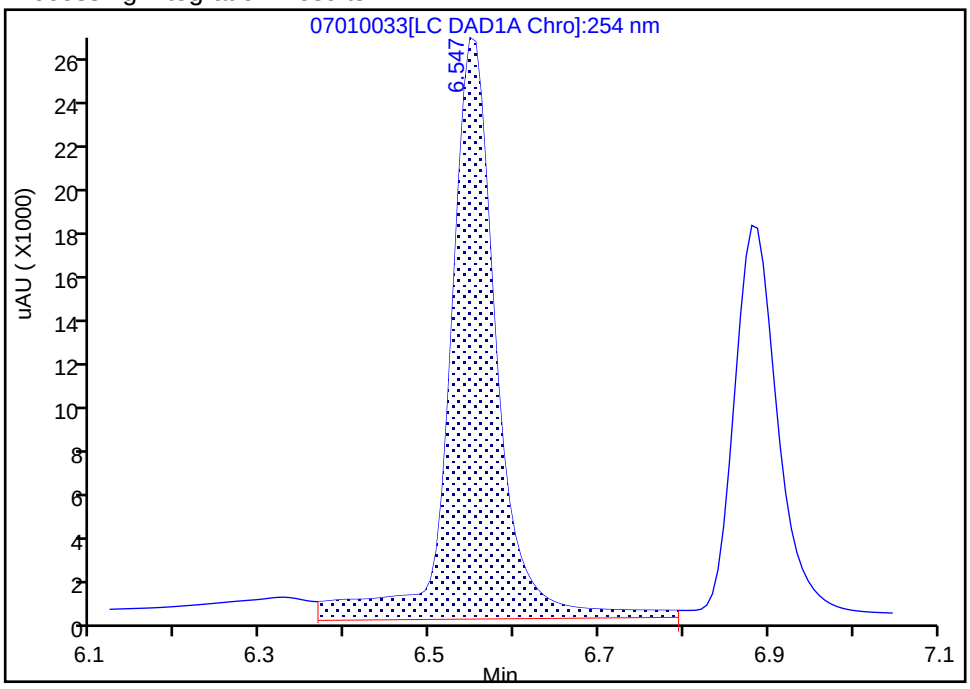
Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010033.D				
Injection Date:	02-Jul-2019 00:41:04	Instrument ID:	CHHPLC_X3		
Lims ID:	ICV DMT				
Client ID:					
Operator ID:	hkf	ALS Bottle#:	33	Worklist Smp#:	33
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

2 TNX, CAS: 13980-04-6

Signal: 1

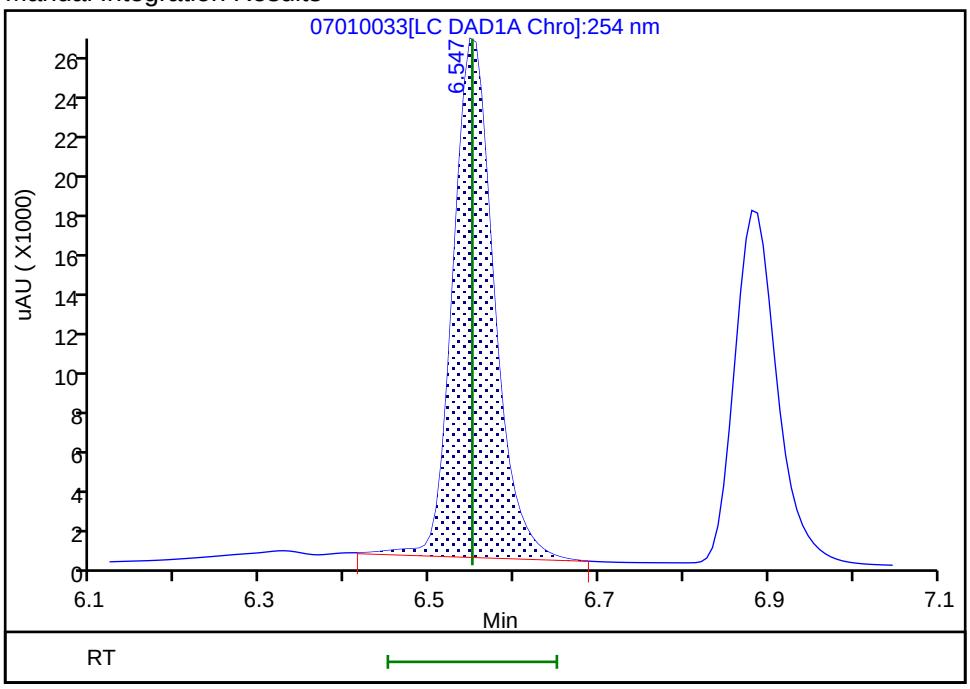
Processing Integration Results

RT: 6.55
Area: 101055
Amount: 0.470102
Amount Units: ug/mL



Manual Integration Results

RT: 6.55
Area: 85740
Amount: 0.398857
Amount Units: ug/mL



Reviewer: fiedlerh, 02-Jul-2019 09:05:27
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

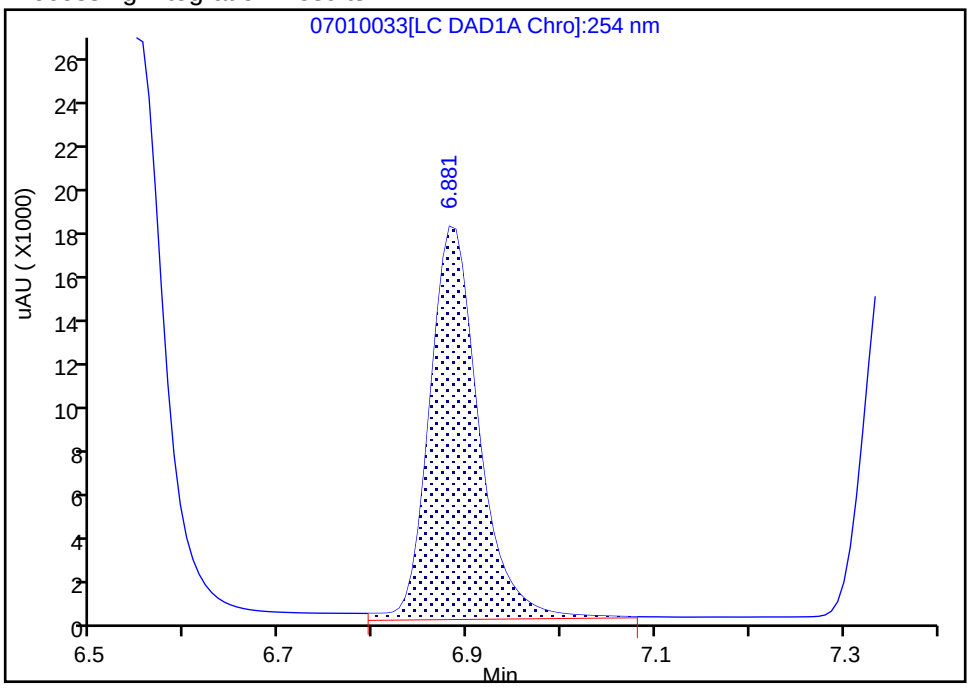
Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010033.D				
Injection Date:	02-Jul-2019 00:41:04	Instrument ID:	CHHPLC_X3		
Lims ID:	ICV DMT				
Client ID:					
Operator ID:	hkf	ALS Bottle#:	33	Worklist Smp#:	33
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

5 DNX, CAS: 80251-29-2

Signal: 1

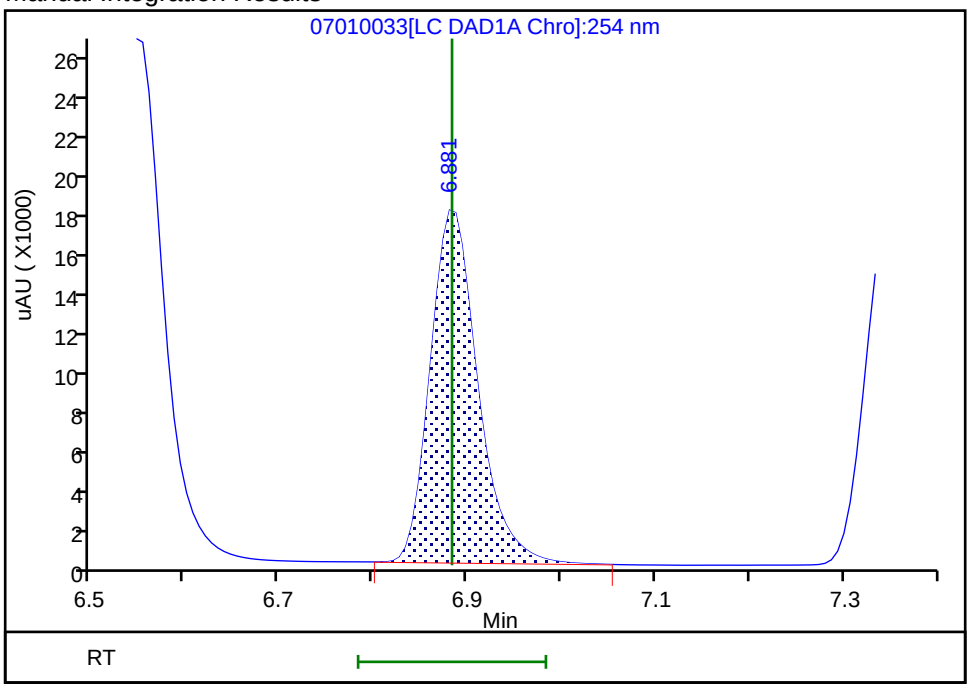
Processing Integration Results

RT: 6.88
Area: 63769
Amount: 0.408446
Amount Units: ug/mL



Manual Integration Results

RT: 6.88
Area: 60910
Amount: 0.390134
Amount Units: ug/mL



Reviewer: fiedlerh, 02-Jul-2019 09:05:30
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: CCV 280-475188/7 Calibration Date: 10/24/2019 11:10

Instrument ID: CHHPLC_X3 Calib Start Date: 07/01/2019 14:40

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 07/01/2019 17:23

Lab File ID: 10240007.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	91833	91576		249	250	-0.3	15.0
RDX	Ave	111120	110200		248	250	-0.8	15.0
Picric acid	Ave	90734	87056		240	250	-4.1	15.0
1,3,5-Trinitrobenzene	Ave	245077	241920		247	250	-1.3	15.0
1,3-Dinitrobenzene	Ave	311175	314314		253	250	1.0	15.0
Nitrobenzene	Ave	198903	206196		260	251	3.7	15.0
Tetryl	Ave	161957	169736		262	250	4.8	15.0
Nitroglycerin	Ave	71108	73049		2570	2500	2.7	15.0
2,4,6-Trinitrotoluene	Ave	227277	230398		254	251	1.4	15.0
4-Amino-2,6-dinitrotoluene	Ave	166378	168367		254	251	1.2	15.0
2-Amino-4,6-dinitrotoluene	Ave	205236	213771		261	251	4.2	15.0
2,6-Dinitrotoluene	Ave	159284	156786		247	251	-1.6	15.0
2,4-Dinitrotoluene	Ave	300447	303764		253	251	1.1	15.0
2-Nitrotoluene	Ave	129784	133807		259	251	3.1	15.0
4-Nitrotoluene	Ave	110255	115530		263	251	4.8	15.0
3-Nitrotoluene	Ave	145122	149426		258	251	3.0	15.0
PETN	Ave	74289	80062		2690	2500	7.8	15.0
1,2-Dinitrobenzene	Ave	139328	143136		257	250	2.7	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: CCV 280-475188/7 Calibration Date: 10/24/2019 11:10

Instrument ID: CHHPLC_X3 Calib Start Date: 07/01/2019 14:40

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 07/01/2019 17:23

Lab File ID: 10240007.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.68	6.52	6.82
RDX	7.76	7.60	7.90
Picric acid	8.13	7.98	8.28
1,3,5-Trinitrobenzene	8.88	8.74	9.04
1,3-Dinitrobenzene	9.53	9.38	9.68
Nitrobenzene	9.92	9.77	10.07
Tetryl	10.22	10.08	10.38
Nitroglycerin	10.73	10.59	10.89
2,4,6-Trinitrotoluene	11.18	11.09	11.29
4-Amino-2,6-dinitrotoluene	11.34	11.25	11.45
2-Amino-4,6-dinitrotoluene	11.63	11.53	11.73
2,6-Dinitrotoluene	11.79	11.69	11.89
2,4-Dinitrotoluene	11.99	11.89	12.09
2-Nitrotoluene	12.83	12.69	12.99
4-Nitrotoluene	13.27	13.13	13.43
3-Nitrotoluene	13.87	13.73	14.03
PETN	14.98	14.84	15.14
1,2-Dinitrobenzene	8.72	8.57	8.87

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240007.D
Lims ID: CCV INT
Client ID:
Sample Type: CCV
Inject. Date: 24-Oct-2019 11:10:24 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV INT
Misc. Info.: 280-0086464-007
Operator ID: CB Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 25-Oct-2019 13:02:16 Calib Date: 02-Jul-2019 00:18:07
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0317

First Level Reviewer: beckerc Date: 25-Oct-2019 08:20:24

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
	3 HMX	1	6.677	6.667	0.010	22894	0.2500	0.2493	
	7 RDX	1	7.757	7.747	0.010	27550	0.2500	0.2479	
	8 2,4,6-Trinitrophenol	1	8.130	8.127	0.003	21764	0.2500	0.2399	
$	9 1,2-Dinitrobenzene	1	8.717	8.721	-0.004	35784	0.2500	0.2568	
	10 1,3,5-Trinitrobenzene	1	8.883	8.887	-0.004	60480	0.2500	0.2468	
	11 1,3-Dinitrobenzene	1	9.530	9.534	-0.004	78657	0.2503	0.2528	
	12 Nitrobenzene	1	9.917	9.920	-0.003	51652	0.2505	0.2597	
	14 Tetryl	1	10.223	10.227	-0.004	42434	0.2500	0.2620	
	15 Nitroglycerin	2	10.730	10.740	-0.010	182623	2.50	2.57	
	16 2,4,6-Trinitrotoluene	1	11.183	11.187	-0.004	57830	0.2510	0.2544	
	17 4-Amino-2,6-dinitrotoluene	1	11.343	11.347	-0.004	42218	0.2508	0.2537	
	18 2-Amino-4,6-dinitrotoluene	1	11.630	11.634	-0.004	53603	0.2508	0.2612	
	19 2,6-Dinitrotoluene	1	11.790	11.794	-0.004	39314	0.2508	0.2468	
	20 2,4-Dinitrotoluene	1	11.990	11.994	-0.004	76093	0.2505	0.2533	
	21 o-Nitrotoluene	1	12.830	12.840	-0.010	33552	0.2508	0.2585	
	22 p-Nitrotoluene	1	13.270	13.280	-0.010	28998	0.2510	0.2630	
	23 m-Nitrotoluene	1	13.870	13.880	-0.010	37506	0.2510	0.2584	
	24 PETN	2	14.977	14.987	-0.010	200154	2.50	2.69	

Reagents:

8330IntermStk_00059 Amount Added: 25.00 Units: uL

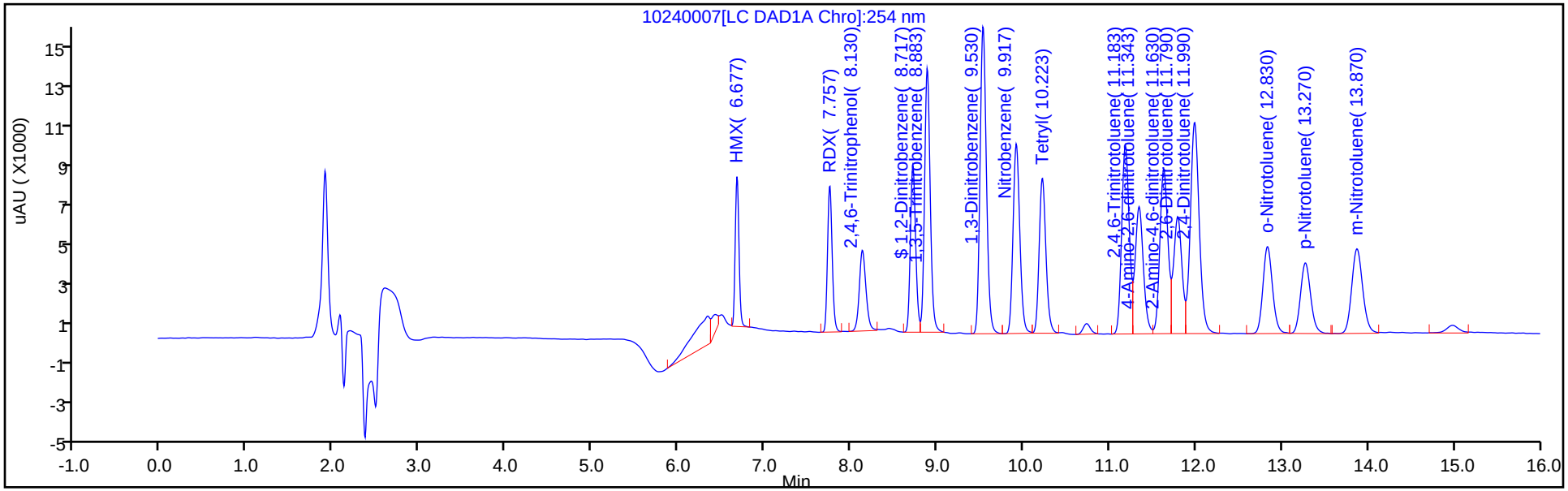
Report Date: 25-Oct-2019 13:02:17 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

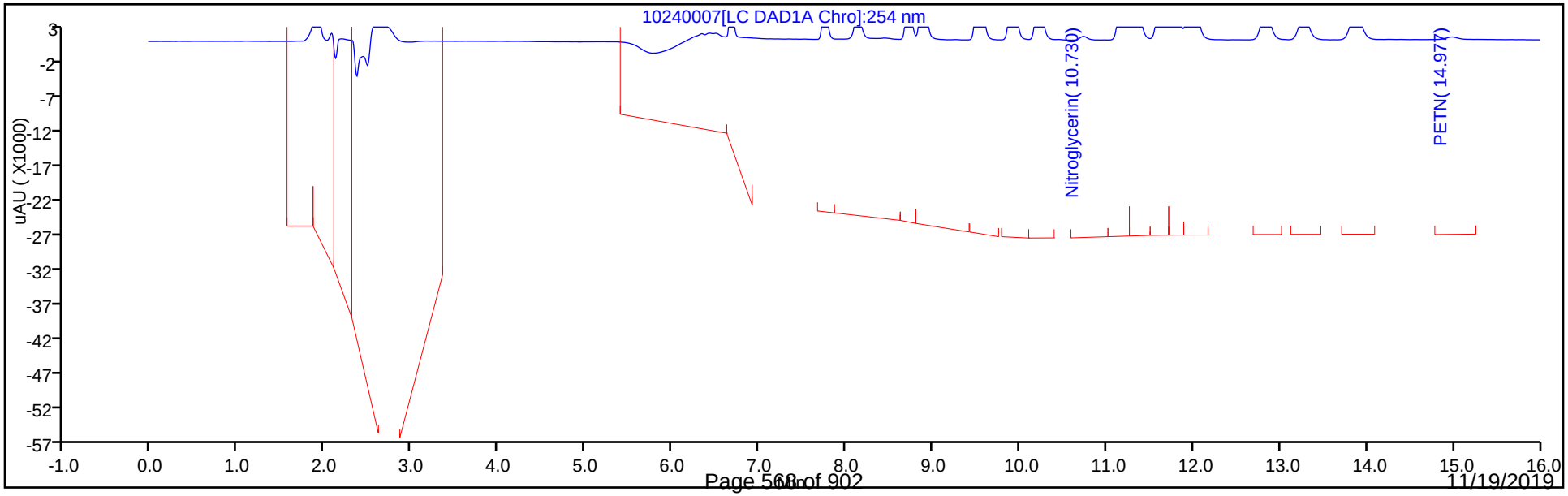
Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240007.D

Injection Date:	24-Oct-2019 11:10:24	Instrument ID:	CHHPLC_X3	Operator ID:	CB
Lims ID:	CCV INT			Worklist Smp#:	7
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: CCV 280-475188/9 Calibration Date: 10/24/2019 11:56

Instrument ID: CHHPLC_X3 Calib Start Date: 07/01/2019 21:36

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 07/02/2019 00:18

Lab File ID: 10240009.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
TNX	Ave	214964	237103		276	250	10.3	15.0
DNX	Ave	156126	169874		272	250	8.8	15.0
MNX	Ave	140041	156329		326	292	11.6	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: CCV 280-475188/9 Calibration Date: 10/24/2019 11:56

Instrument ID: CHHPLC_X3 Calib Start Date: 07/01/2019 21:36

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 07/02/2019 00:18

Lab File ID: 10240009.D

Analyte	RT	RT WINDOW	
		FROM	TO
TNX	6.58	6.49	6.69
DNX	6.90	6.81	7.01
MNX	7.35	7.22	7.52

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240009.D				
Lims ID:	CCV DMT				
Client ID:					
Sample Type:	CCV				
Inject. Date:	24-Oct-2019 11:56:16	ALS Bottle#:	9	Worklist Smp#:	9
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	CCV DMT				
Misc. Info.:	280-0086464-009				
Operator ID:	CB	Instrument ID:	CHHPLC_X3		
Sublist:	chrom-8330_X3*sub17				
Method:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	25-Oct-2019 13:02:22	Calib Date:	02-Jul-2019 00:18:07		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX0317				

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 TNX	1	6.584	6.587	-0.003	59335	0.2503	0.2760	
5 DNX	1	6.904	6.907	-0.003	42511	0.2503	0.2723	
6 MNX	1	7.350	7.367	-0.017	45609	0.2918	0.3257	

Reagents:

8330 DMT_00002 Amount Added: 12.50 Units: uL

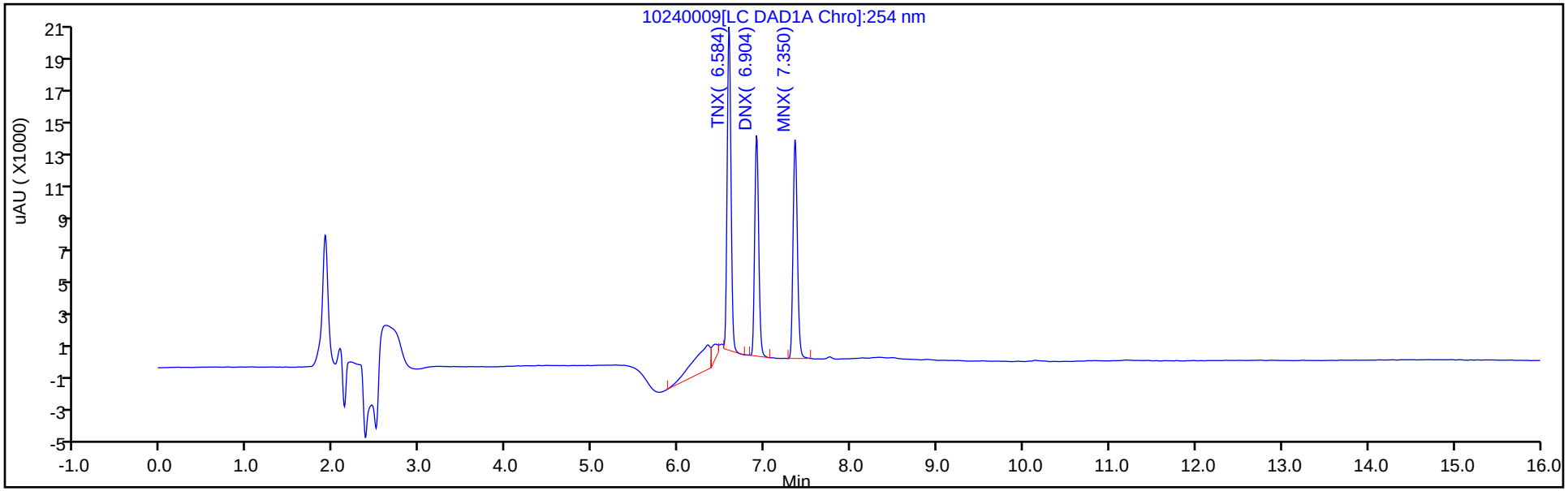
Report Date: 25-Oct-2019 13:02:23 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

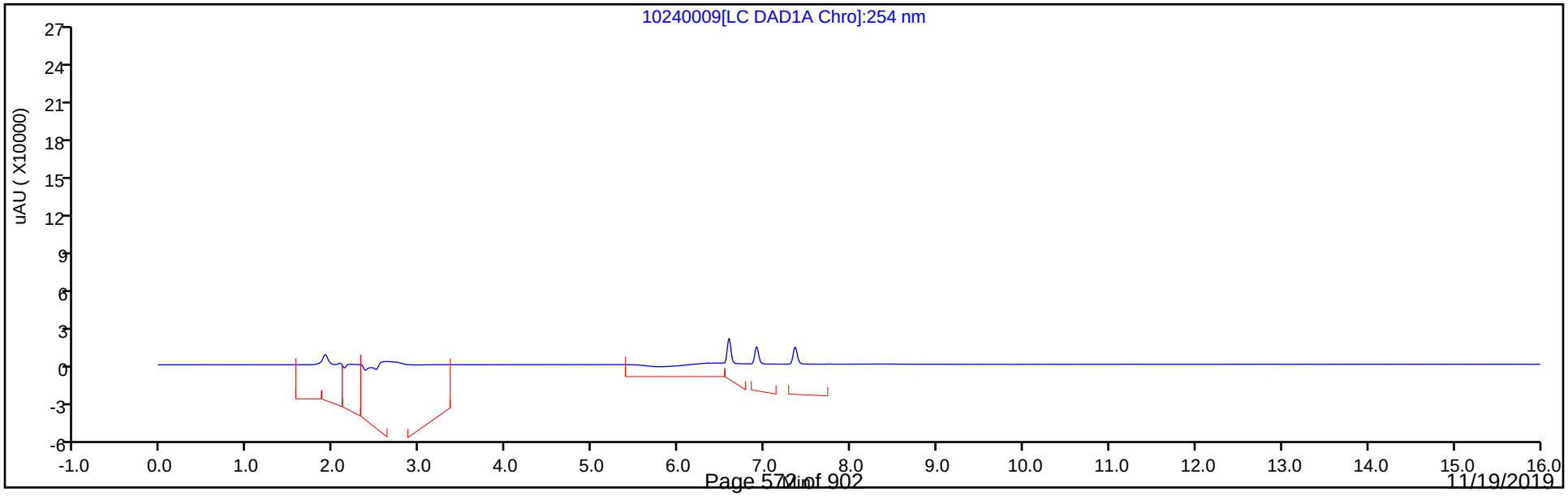
Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240009.D

Injection Date:	24-Oct-2019 11:56:16	Instrument ID:	CHHPLC_X3	Operator ID:	CB
Lims ID:	CCV DMT			Worklist Smp#:	9
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: CCV 280-475188/20 Calibration Date: 10/24/2019 16:08

Instrument ID: CHHPLC_X3 Calib Start Date: 07/01/2019 14:40

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 07/01/2019 17:23

Lab File ID: 10240020.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	91833	92508		252	250	0.7	15.0
RDX	Ave	111120	110284		248	250	-0.8	15.0
Picric acid	Ave	90734	86860		239	250	-4.3	15.0
1,3,5-Trinitrobenzene	Ave	245077	243780		249	250	-0.5	15.0
1,3-Dinitrobenzene	Ave	311175	314601		253	250	1.1	15.0
Nitrobenzene	Ave	198903	204687		258	251	2.9	15.0
Tetryl	Ave	161957	174376		269	250	7.7	15.0
Nitroglycerin	Ave	71108	75137		2640	2500	5.7	15.0
2,4,6-Trinitrotoluene	Ave	227277	230363		254	251	1.4	15.0
4-Amino-2,6-dinitrotoluene	Ave	166378	167322		252	251	0.6	15.0
2-Amino-4,6-dinitrotoluene	Ave	205236	213180		260	251	3.9	15.0
2,6-Dinitrotoluene	Ave	159284	156993		247	251	-1.4	15.0
2,4-Dinitrotoluene	Ave	300447	303449		253	251	1.0	15.0
2-Nitrotoluene	Ave	129784	132291		256	251	1.9	15.0
4-Nitrotoluene	Ave	110255	114657		261	251	4.0	15.0
3-Nitrotoluene	Ave	145122	147522		255	251	1.7	15.0
PETN	Ave	74289	79920		2690	2500	7.6	15.0
1,2-Dinitrobenzene	Ave	139328	144248		259	250	3.5	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: CCV 280-475188/20 Calibration Date: 10/24/2019 16:08

Instrument ID: CHHPLC_X3 Calib Start Date: 07/01/2019 14:40

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 07/01/2019 17:23

Lab File ID: 10240020.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.68	6.52	6.82
RDX	7.75	7.60	7.90
Picric acid	8.13	7.98	8.28
1,3,5-Trinitrobenzene	8.89	8.74	9.04
1,3-Dinitrobenzene	9.53	9.38	9.68
Nitrobenzene	9.91	9.77	10.07
Tetryl	10.22	10.08	10.38
Nitroglycerin	10.73	10.59	10.89
2,4,6-Trinitrotoluene	11.18	11.09	11.29
4-Amino-2,6-dinitrotoluene	11.34	11.25	11.45
2-Amino-4,6-dinitrotoluene	11.63	11.53	11.73
2,6-Dinitrotoluene	11.79	11.69	11.89
2,4-Dinitrotoluene	11.99	11.89	12.09
2-Nitrotoluene	12.83	12.69	12.99
4-Nitrotoluene	13.27	13.13	13.43
3-Nitrotoluene	13.87	13.73	14.03
PETN	14.97	14.84	15.14
1,2-Dinitrobenzene	8.72	8.57	8.87

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240020.D
Lims ID: CCV INT
Client ID:
Sample Type: CCV
Inject. Date: 24-Oct-2019 16:08:29 ALS Bottle#: 7 Worklist Smp#: 20
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV INT
Misc. Info.: 280-0086464-020
Operator ID: CB Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 25-Oct-2019 13:02:53 Calib Date: 02-Jul-2019 00:18:07
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0317

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
	3 HMX	1	6.680	6.667	0.013	23127	0.2500	0.2518	
	7 RDX	1	7.753	7.747	0.006	27571	0.2500	0.2481	
	8 2,4,6-Trinitrophenol	1	8.133	8.127	0.006	21715	0.2500	0.2393	
$	9 1,2-Dinitrobenzene	1	8.720	8.721	-0.001	36062	0.2500	0.2588	
	10 1,3,5-Trinitrobenzene	1	8.887	8.887	0.000	60945	0.2500	0.2487	
	11 1,3-Dinitrobenzene	1	9.533	9.534	-0.001	78729	0.2503	0.2530	
	12 Nitrobenzene	1	9.913	9.920	-0.007	51274	0.2505	0.2578	
	14 Tetryl	1	10.220	10.227	-0.007	43594	0.2500	0.2692	
	15 Nitroglycerin	2	10.733	10.740	-0.007	187842	2.50	2.64	
	16 2,4,6-Trinitrotoluene	1	11.180	11.187	-0.007	57821	0.2510	0.2544	
	17 4-Amino-2,6-dinitrotoluene	1	11.340	11.347	-0.007	41956	0.2508	0.2522	
	18 2-Amino-4,6-dinitrotoluene	1	11.627	11.634	-0.007	53455	0.2508	0.2605	
	19 2,6-Dinitrotoluene	1	11.787	11.794	-0.007	39366	0.2508	0.2471	
	20 2,4-Dinitrotoluene	1	11.987	11.994	-0.007	76014	0.2505	0.2530	
	21 o-Nitrotoluene	1	12.833	12.840	-0.007	33172	0.2508	0.2556	
	22 p-Nitrotoluene	1	13.273	13.280	-0.007	28779	0.2510	0.2610	
	23 m-Nitrotoluene	1	13.867	13.880	-0.013	37028	0.2510	0.2552	
	24 PETN	2	14.967	14.987	-0.020	199799	2.50	2.69	

Reagents:

8330IntermStk_00059 Amount Added: 25.00 Units: uL

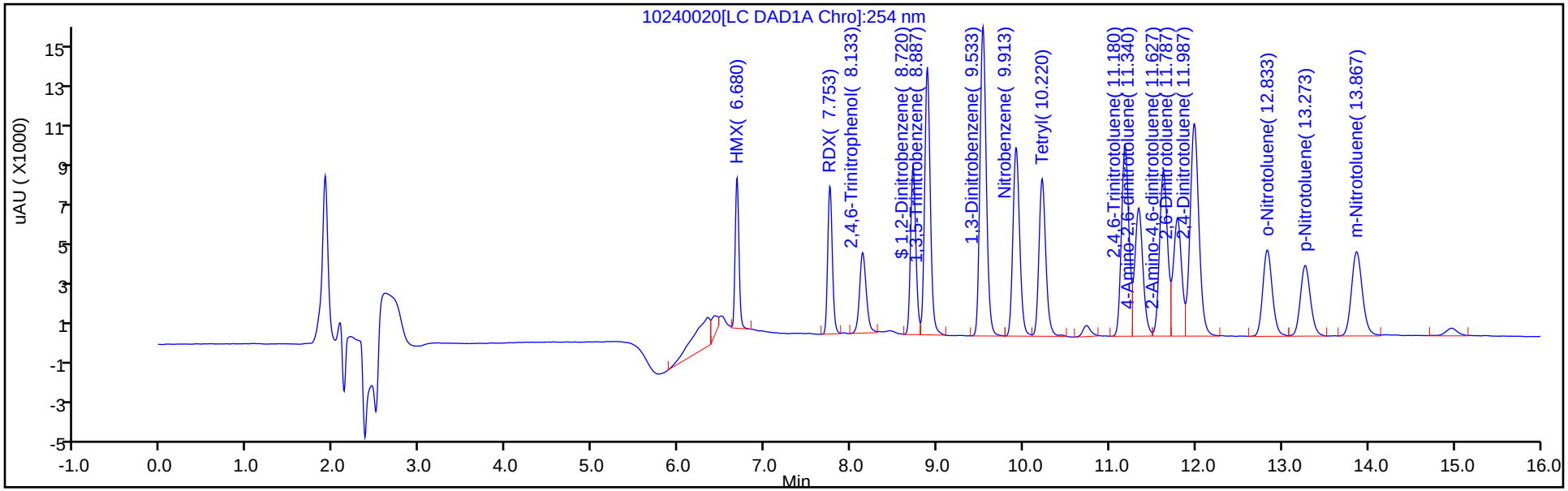
Report Date: 25-Oct-2019 13:02:54 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

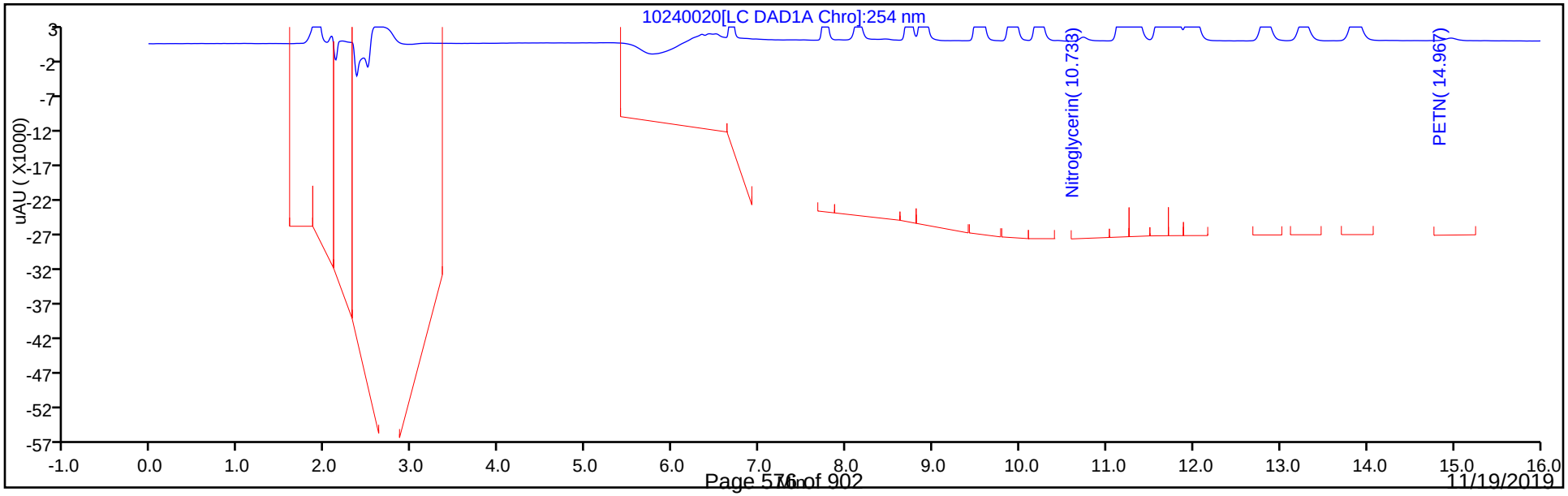
Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240020.D

Injection Date:	24-Oct-2019 16:08:29	Instrument ID:	CHHPLC_X3	Operator ID:	CB
Lims ID:	CCV INT			Worklist Smp#:	20
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: CCV 280-475188/22 Calibration Date: 10/24/2019 16:54

Instrument ID: CHHPLC_X3 Calib Start Date: 07/01/2019 21:36

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 07/02/2019 00:18

Lab File ID: 10240022.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
TNX	Ave	214964	234434		273	250	9.1	15.0
DNX	Ave	156126	170462		273	250	9.2	15.0
MNX	Ave	140041	156610		326	292	11.8	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: CCV 280-475188/22 Calibration Date: 10/24/2019 16:54

Instrument ID: CHHPLC_X3 Calib Start Date: 07/01/2019 21:36

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 07/02/2019 00:18

Lab File ID: 10240022.D

Analyte	RT	RT WINDOW	
		FROM	TO
TNX	6.59	6.49	6.69
DNX	6.91	6.81	7.01
MNX	7.35	7.22	7.52

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240022.D				
Lims ID:	CCV DMT				
Client ID:					
Sample Type:	CCV				
Inject. Date:	24-Oct-2019 16:54:20	ALS Bottle#:	9	Worklist Smp#:	22
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	CCV DMT				
Misc. Info.:	280-0086464-022				
Operator ID:	CB	Instrument ID:	CHHPLC_X3		
Sublist:	chrom-8330_X3*sub17				
Method:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	25-Oct-2019 13:02:59	Calib Date:	02-Jul-2019 00:18:07		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX0317				
First Level Reviewer: beckerc		Date:	25-Oct-2019 11:55:50		

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 TNX	1	6.588	6.587	0.001	58667	0.2503	0.2729	
5 DNX	1	6.908	6.907	0.001	42658	0.2503	0.2732	
6 MNX	1	7.354	7.367	-0.013	45691	0.2918	0.3263	

Reagents:

8330 DMT_00002 Amount Added: 12.50 Units: uL

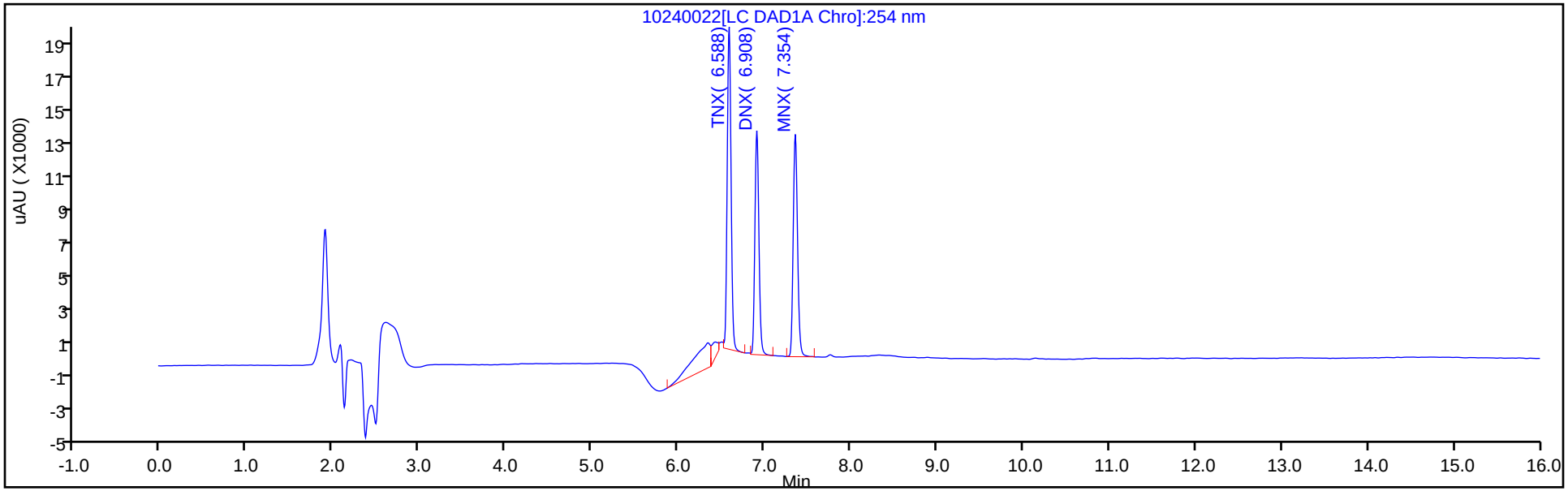
Report Date: 25-Oct-2019 13:03:00 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

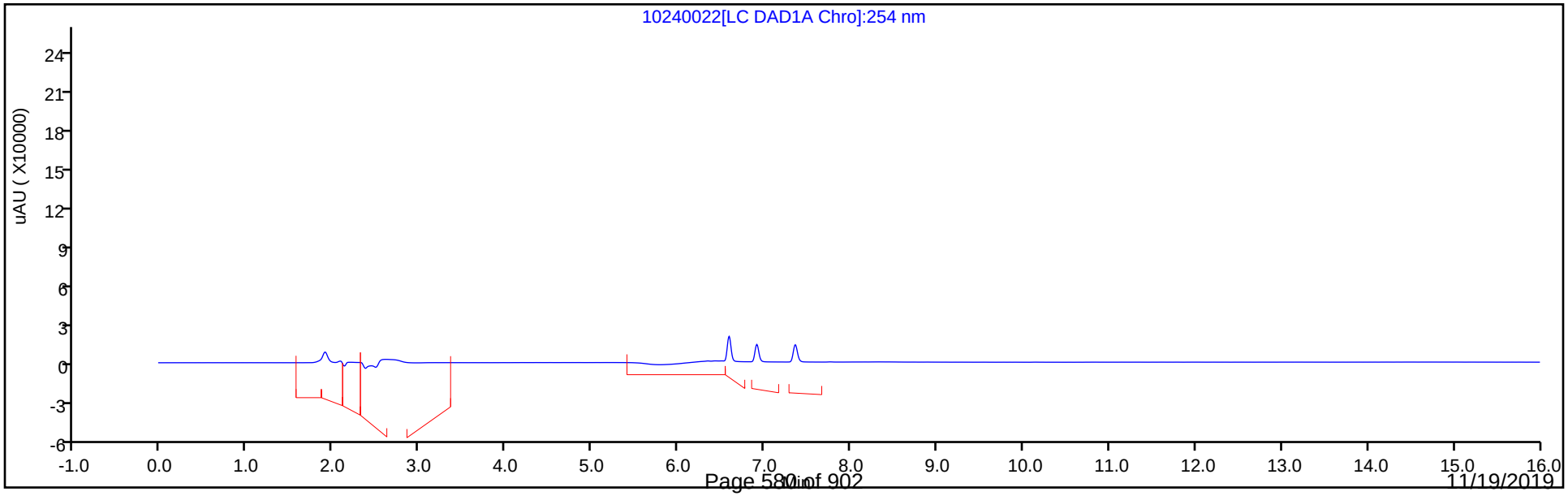
Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240022.D

Injection Date:	24-Oct-2019 16:54:20	Instrument ID:	CHHPLC_X3	Operator ID:	CB
Lims ID:	CCV DMT			Worklist Smp#:	22
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: CCV 280-475188/33 Calibration Date: 10/24/2019 21:06

Instrument ID: CHHPLC_X3 Calib Start Date: 07/01/2019 14:40

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 07/01/2019 17:23

Lab File ID: 10240033.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	91833	92228		251	250	0.4	15.0
RDX	Ave	111120	110240		248	250	-0.8	15.0
Picric acid	Ave	90734	86192		237	250	-5.0	15.0
1,3,5-Trinitrobenzene	Ave	245077	241780		247	250	-1.3	15.0
1,3-Dinitrobenzene	Ave	311175	314649		253	250	1.1	15.0
Nitrobenzene	Ave	198903	200232		252	251	0.7	15.0
Tetryl	Ave	161957	170580		263	250	5.3	15.0
Nitroglycerin	Ave	71108	72746		2560	2500	2.3	15.0
2,4,6-Trinitrotoluene	Ave	227277	230470		255	251	1.4	15.0
4-Amino-2,6-dinitrotoluene	Ave	166378	167202		252	251	0.5	15.0
2-Amino-4,6-dinitrotoluene	Ave	205236	212810		260	251	3.7	15.0
2,6-Dinitrotoluene	Ave	159284	157240		248	251	-1.3	15.0
2,4-Dinitrotoluene	Ave	300447	303760		253	251	1.1	15.0
2-Nitrotoluene	Ave	129784	129440		250	251	-0.3	15.0
4-Nitrotoluene	Ave	110255	112159		255	251	1.7	15.0
3-Nitrotoluene	Ave	145122	146486		253	251	0.9	15.0
PETN	Ave	74289	79522		2680	2500	7.0	15.0
1,2-Dinitrobenzene	Ave	139328	142268		255	250	2.1	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: CCV 280-475188/33 Calibration Date: 10/24/2019 21:06

Instrument ID: CHHPLC_X3 Calib Start Date: 07/01/2019 14:40

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 07/01/2019 17:23

Lab File ID: 10240033.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.68	6.52	6.82
RDX	7.76	7.60	7.90
Picric acid	8.14	7.98	8.28
1,3,5-Trinitrobenzene	8.89	8.74	9.04
1,3-Dinitrobenzene	9.54	9.38	9.68
Nitrobenzene	9.92	9.77	10.07
Tetryl	10.22	10.08	10.38
Nitroglycerin	10.74	10.59	10.89
2,4,6-Trinitrotoluene	11.19	11.09	11.29
4-Amino-2,6-dinitrotoluene	11.35	11.25	11.45
2-Amino-4,6-dinitrotoluene	11.64	11.53	11.73
2,6-Dinitrotoluene	11.80	11.69	11.89
2,4-Dinitrotoluene	12.00	11.89	12.09
2-Nitrotoluene	12.84	12.69	12.99
4-Nitrotoluene	13.28	13.13	13.43
3-Nitrotoluene	13.88	13.73	14.03
PETN	14.99	14.84	15.14
1,2-Dinitrobenzene	8.72	8.57	8.87

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240033.D
Lims ID: CCV INT
Client ID:
Sample Type: CCV
Inject. Date: 24-Oct-2019 21:06:36 ALS Bottle#: 7 Worklist Smp#: 33
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV INT
Misc. Info.: 280-0086464-033
Operator ID: CB Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 25-Oct-2019 13:03:38 Calib Date: 02-Jul-2019 00:18:07
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0317

First Level Reviewer: beckerc Date: 25-Oct-2019 12:56:45

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
3 HMX	1	6.678	6.667	0.011	23057	0.2500	0.2511	
7 RDX	1	7.758	7.747	0.011	27560	0.2500	0.2480	
8 2,4,6-Trinitrophenol	1	8.144	8.127	0.017	21548	0.2500	0.2375	
$ 9 1,2-Dinitrobenzene	1	8.724	8.721	0.003	35567	0.2500	0.2553	
10 1,3,5-Trinitrobenzene	1	8.891	8.887	0.004	60445	0.2500	0.2466	
11 1,3-Dinitrobenzene	1	9.537	9.534	0.003	78741	0.2503	0.2530	
12 Nitrobenzene	1	9.924	9.920	0.004	50158	0.2505	0.2522	
14 Tetryl	1	10.224	10.227	-0.003	42645	0.2500	0.2633	
15 Nitroglycerin	2	10.737	10.740	-0.003	181866	2.50	2.56	
16 2,4,6-Trinitrotoluene	1	11.191	11.187	0.004	57848	0.2510	0.2545	
17 4-Amino-2,6-dinitrotoluene	1	11.351	11.347	0.004	41926	0.2508	0.2520	
18 2-Amino-4,6-dinitrotoluene	1	11.637	11.634	0.003	53362	0.2508	0.2600	
19 2,6-Dinitrotoluene	1	11.797	11.794	0.003	39428	0.2508	0.2475	
20 2,4-Dinitrotoluene	1	11.997	11.994	0.003	76092	0.2505	0.2533	
21 o-Nitrotoluene	1	12.844	12.840	0.004	32457	0.2508	0.2501	
22 p-Nitrotoluene	1	13.284	13.280	0.004	28152	0.2510	0.2553	
23 m-Nitrotoluene	1	13.884	13.880	0.004	36768	0.2510	0.2534	
24 PETN	2	14.991	14.987	0.004	198806	2.50	2.68	

Reagents:

8330IntermStk_00059 Amount Added: 25.00 Units: uL

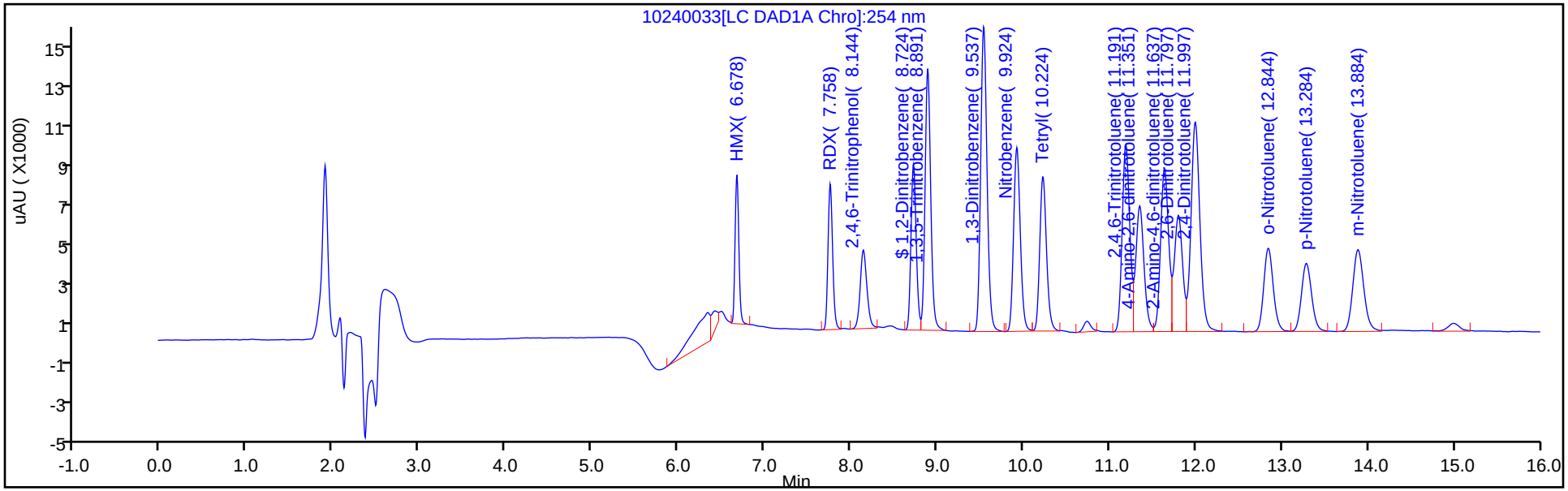
Report Date: 25-Oct-2019 13:03:38 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

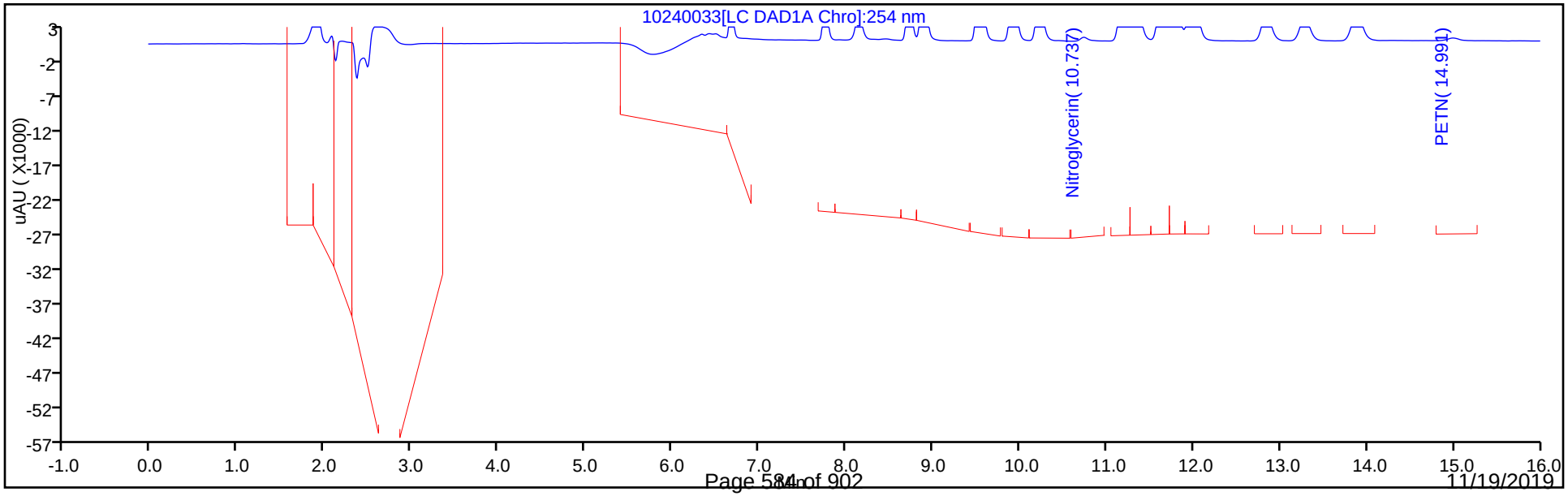
Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240033.D

Injection Date:	24-Oct-2019 21:06:36	Instrument ID:	CHHPLC_X3	Operator ID:	CB
Lims ID:	CCV INT			Worklist Smp#:	33
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: CCV 280-475188/35 Calibration Date: 10/24/2019 21:52

Instrument ID: CHHPLC_X3 Calib Start Date: 07/01/2019 21:36

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 07/02/2019 00:18

Lab File ID: 10240035.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
TNX	Ave	214964	222505		259	250	3.5	15.0
DNX	Ave	156126	170274		273	250	9.1	15.0
MNX	Ave	140041	155167		323	292	10.8	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: CCV 280-475188/35 Calibration Date: 10/24/2019 21:52

Instrument ID: CHHPLC_X3 Calib Start Date: 07/01/2019 21:36

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 07/02/2019 00:18

Lab File ID: 10240035.D

Analyte	RT	RT WINDOW	
		FROM	TO
TNX	6.59	6.49	6.69
DNX	6.91	6.81	7.01
MNX	7.36	7.22	7.52

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240035.D
Lims ID: CCV DMT
Client ID:
Sample Type: CCV
Inject. Date: 24-Oct-2019 21:52:28 ALS Bottle#: 9 Worklist Smp#: 35
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV DMT
Misc. Info.: 280-0086464-035
Operator ID: CB Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub17

Method: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 25-Oct-2019 13:03:41 Calib Date: 02-Jul-2019 00:18:07
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0317

First Level Reviewer: beckerc Date: 25-Oct-2019 12:59:32

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 TNX	1	6.589	6.587	0.002	55682	0.2503	0.2590	M
5 DNX	1	6.909	6.907	0.002	42611	0.2503	0.2729	
6 MNX	1	7.355	7.367	-0.012	45270	0.2918	0.3233	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8330 DMT_00002 Amount Added: 12.50 Units: uL

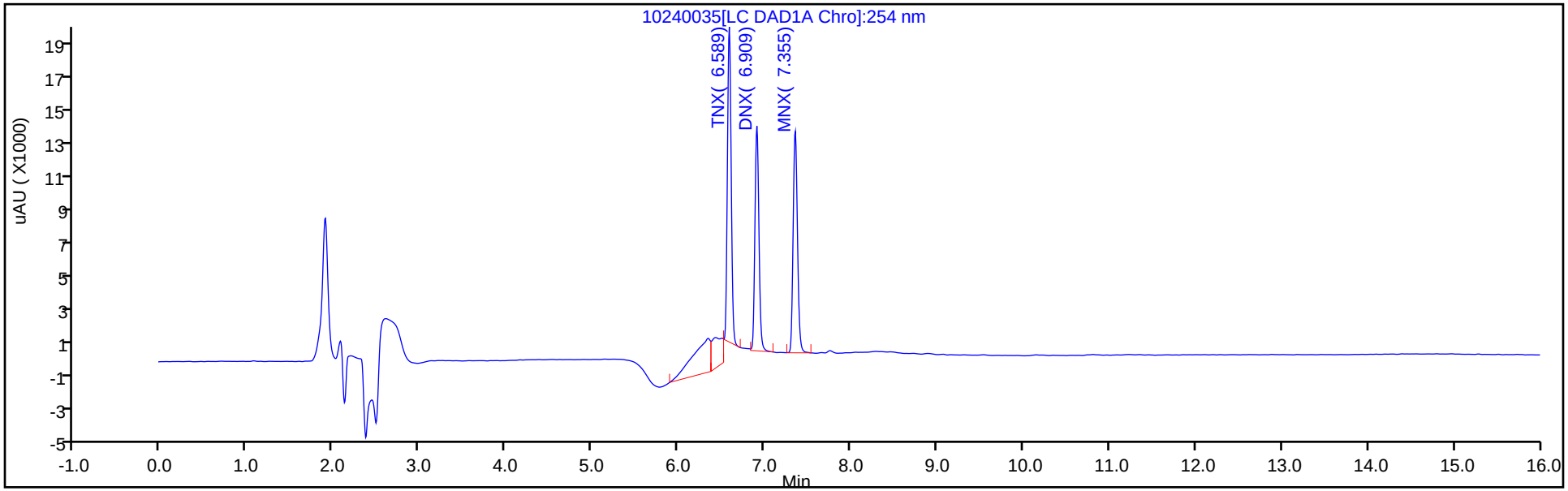
Report Date: 25-Oct-2019 13:03:42 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

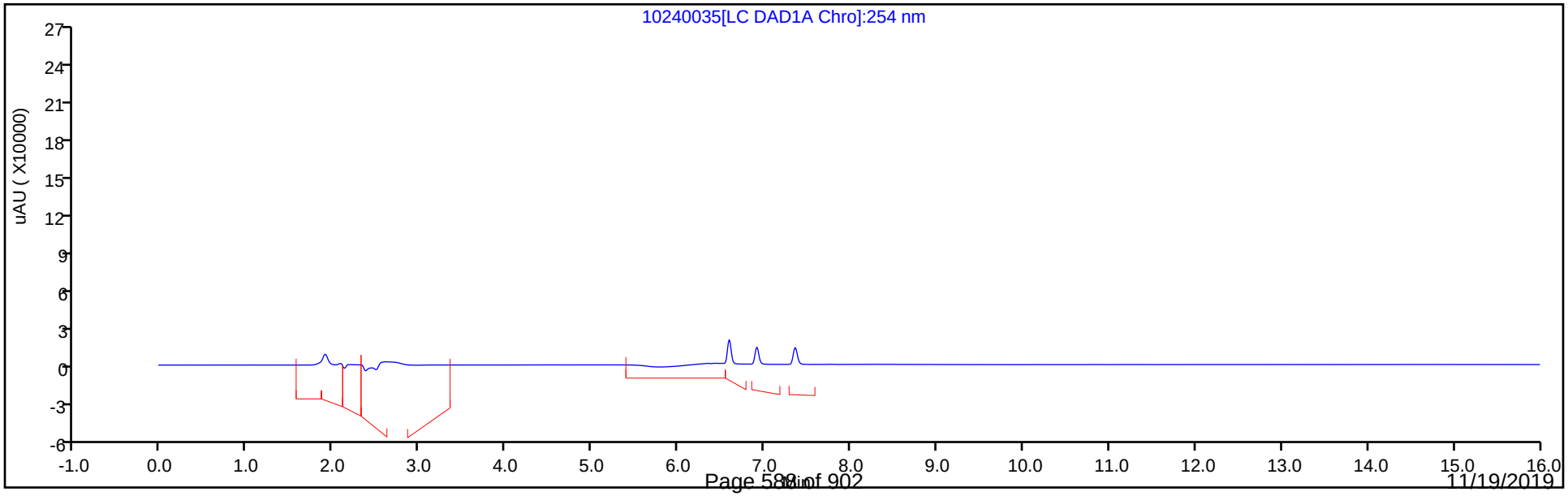
Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240035.D

Injection Date:	24-Oct-2019 21:52:28	Instrument ID:	CHHPLC_X3	Operator ID:	CB
Lims ID:	CCV DMT			Worklist Smp#:	35
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

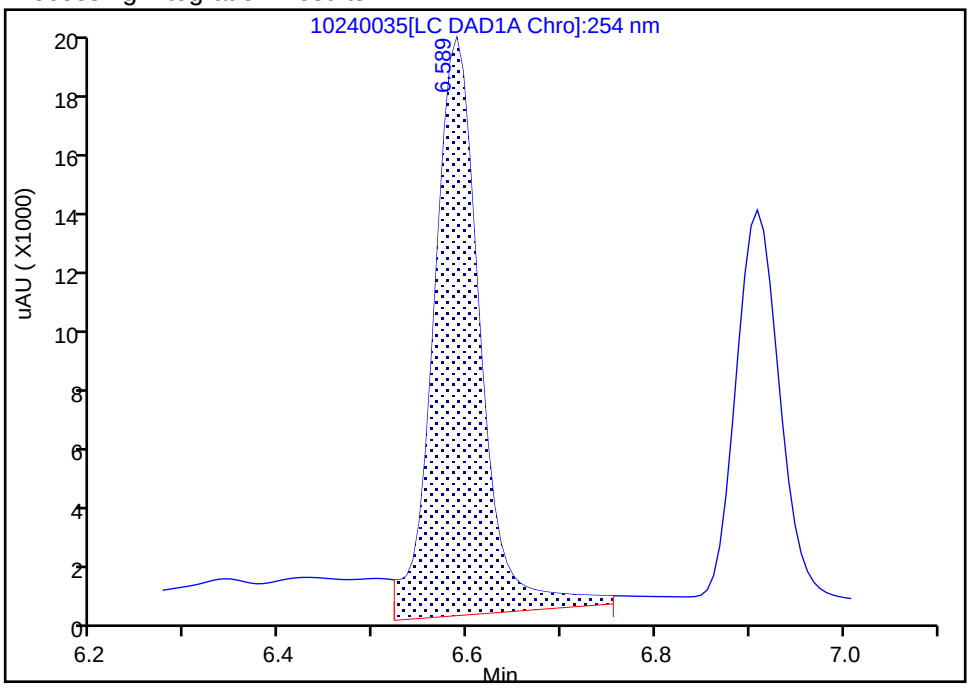
Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240035.D				
Injection Date:	24-Oct-2019 21:52:28	Instrument ID:	CHHPLC_X3		
Lims ID:	CCV DMT				
Client ID:					
Operator ID:	CB	ALS Bottle#:	9	Worklist Smp#:	35
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

2 TNX, CAS: 13980-04-6

Signal: 1

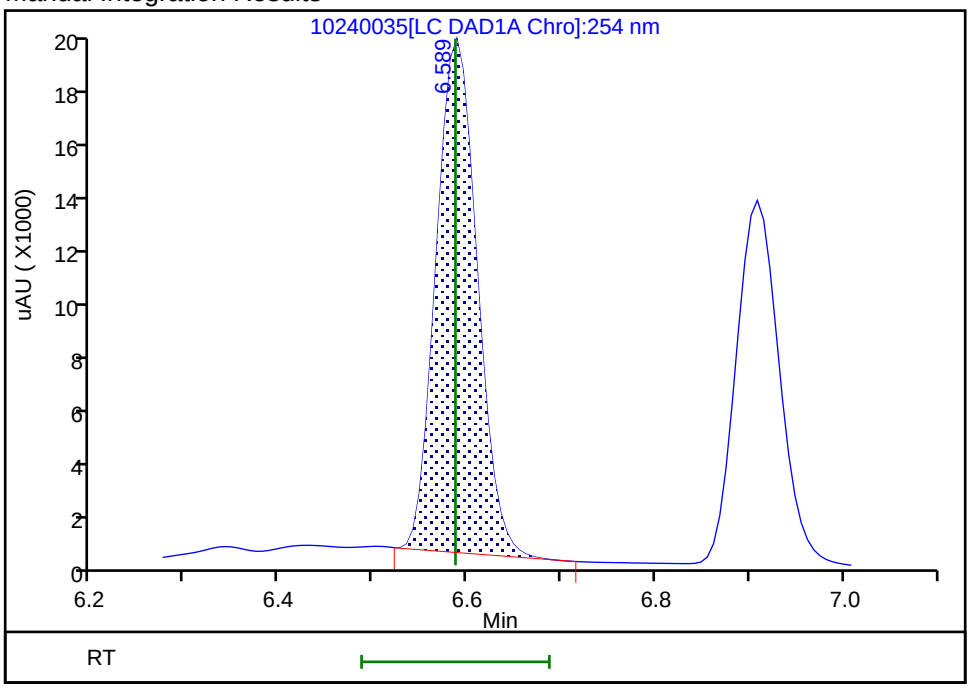
Processing Integration Results

RT: 6.59
Area: 66647
Amount: 0.310038
Amount Units: ug/mL



Manual Integration Results

RT: 6.59
Area: 55682
Amount: 0.259029
Amount Units: ug/mL



Reviewer: beckerc, 25-Oct-2019 12:59:28
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: CCV 280-475589/64 Calibration Date: 10/29/2019 10:48

Instrument ID: CHHPLC_X3 Calib Start Date: 07/01/2019 14:40

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 07/01/2019 17:23

Lab File ID: 10280064.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	91833	91852		250	250	0.0	15.0
RDX	Ave	111120	110440		248	250	-0.6	15.0
Picric acid	Ave	90734	86132		237	250	-5.1	15.0
1,3,5-Trinitrobenzene	Ave	245077	244592		250	250	-0.2	15.0
1,3-Dinitrobenzene	Ave	311175	314525		253	250	1.1	15.0
Nitrobenzene	Ave	198903	192866		243	251	-3.0	15.0
Tetryl	Ave	161957	172356		266	250	6.4	15.0
Nitroglycerin	Ave	71108	72932		2560	2500	2.6	15.0
2,4,6-Trinitrotoluene	Ave	227277	231566		256	251	1.9	15.0
4-Amino-2,6-dinitrotoluene	Ave	166378	166915		252	251	0.3	15.0
2-Amino-4,6-dinitrotoluene	Ave	205236	211629		259	251	3.1	15.0
2,6-Dinitrotoluene	Ave	159284	156471		246	251	-1.8	15.0
2,4-Dinitrotoluene	Ave	300447	305110		254	251	1.6	15.0
2-Nitrotoluene	Ave	129784	123577		239	251	-4.8	15.0
4-Nitrotoluene	Ave	110255	108900		248	251	-1.2	15.0
3-Nitrotoluene	Ave	145122	139371		241	251	-4.0	15.0
PETN	Ave	74289	79493		2680	2500	7.0	15.0
1,2-Dinitrobenzene	Ave	139328	143432		257	250	2.9	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: CCV 280-475589/64 Calibration Date: 10/29/2019 10:48

Instrument ID: CHHPLC_X3 Calib Start Date: 07/01/2019 14:40

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 07/01/2019 17:23

Lab File ID: 10280064.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.68	6.53	6.83
RDX	7.76	7.61	7.91
Picric acid	8.12	7.95	8.25
1,3,5-Trinitrobenzene	8.88	8.73	9.03
1,3-Dinitrobenzene	9.54	9.38	9.68
Nitrobenzene	9.92	9.77	10.07
Tetryl	10.23	10.08	10.38
Nitroglycerin	10.74	10.59	10.89
2,4,6-Trinitrotoluene	11.20	11.10	11.30
4-Amino-2,6-dinitrotoluene	11.37	11.27	11.47
2-Amino-4,6-dinitrotoluene	11.66	11.56	11.76
2,6-Dinitrotoluene	11.81	11.71	11.91
2,4-Dinitrotoluene	12.01	11.91	12.11
2-Nitrotoluene	12.86	12.70	13.00
4-Nitrotoluene	13.30	13.15	13.45
3-Nitrotoluene	13.90	13.75	14.05
PETN	15.00	14.85	15.15
1,2-Dinitrobenzene	8.72	8.57	8.87

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191028-86569.b\10280064.D
Lims ID: CCV INT
Client ID:
Sample Type: CCV
Inject. Date: 29-Oct-2019 10:48:26 ALS Bottle#: 7 Worklist Smp#: 64
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV INT
Misc. Info.: 280-0086569-064
Operator ID: CB Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\chromna\Denver\ChromData\CHHPLC_X\20191028-86569.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 29-Oct-2019 11:54:22 Calib Date: 02-Jul-2019 00:18:07
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0329

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
	3 HMX	1	6.677	6.675	0.002	22963	0.2500	0.2501	
	7 RDX	1	7.757	7.761	-0.004	27610	0.2500	0.2485	
	8 2,4,6-Trinitrophenol	1	8.123	8.095	0.028	21533	0.2500	0.2373	
$	9 1,2-Dinitrobenzene	1	8.717	8.715	0.002	35858	0.2500	0.2574	
	10 1,3,5-Trinitrobenzene	1	8.883	8.881	0.002	61148	0.2500	0.2495	
	11 1,3-Dinitrobenzene	1	9.536	9.534	0.002	78710	0.2503	0.2529	
	12 Nitrobenzene	1	9.923	9.921	0.002	48313	0.2505	0.2429	
	14 Tetryl	1	10.230	10.228	0.002	43089	0.2500	0.2661	
	15 Nitroglycerin	2	10.743	10.741	0.002	182329	2.50	2.56	
	16 2,4,6-Trinitrotoluene	1	11.196	11.201	-0.005	58123	0.2510	0.2557	
	17 4-Amino-2,6-dinitrotoluene	1	11.370	11.368	0.002	41854	0.2508	0.2516	
	18 2-Amino-4,6-dinitrotoluene	1	11.656	11.661	-0.005	53066	0.2508	0.2586	
	19 2,6-Dinitrotoluene	1	11.810	11.814	-0.004	39235	0.2508	0.2463	
	20 2,4-Dinitrotoluene	1	12.010	12.008	0.002	76430	0.2505	0.2544	
	21 o-Nitrotoluene	1	12.856	12.854	0.002	30987	0.2508	0.2388	
	22 p-Nitrotoluene	1	13.303	13.301	0.002	27334	0.2510	0.2479	
	23 m-Nitrotoluene	1	13.903	13.901	0.002	34982	0.2510	0.2411	
	24 PETN	2	15.003	15.001	0.002	198733	2.50	2.68	

Reagents:

8330IntermStk_00059 Amount Added: 25.00 Units: uL

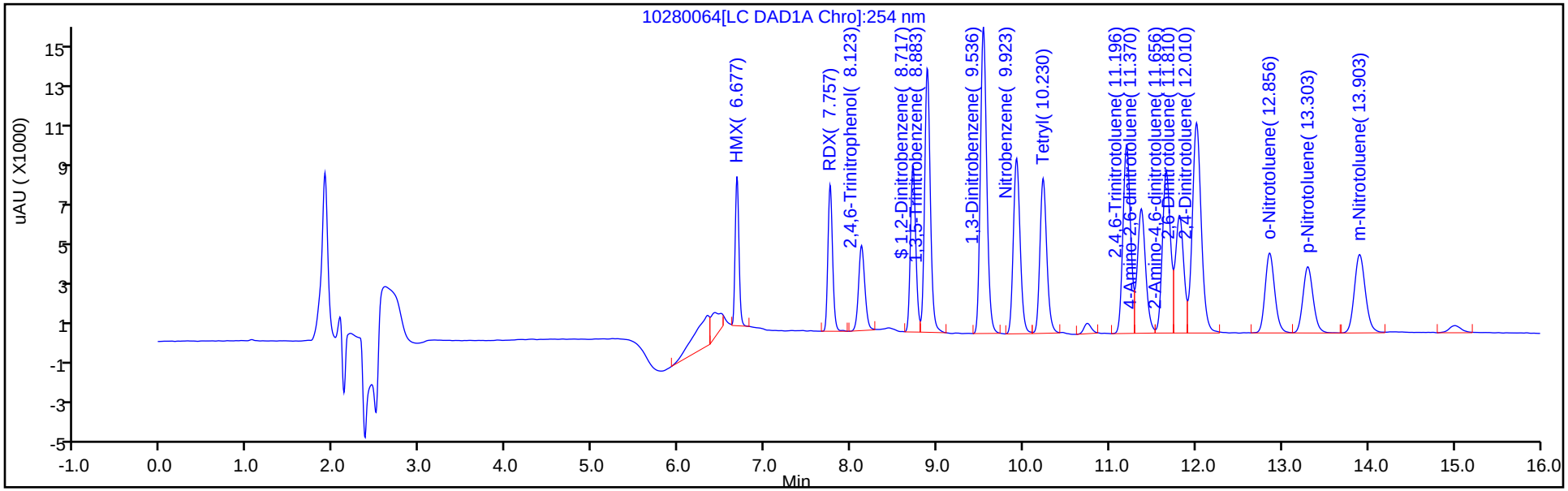
Report Date: 29-Oct-2019 11:54:23 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

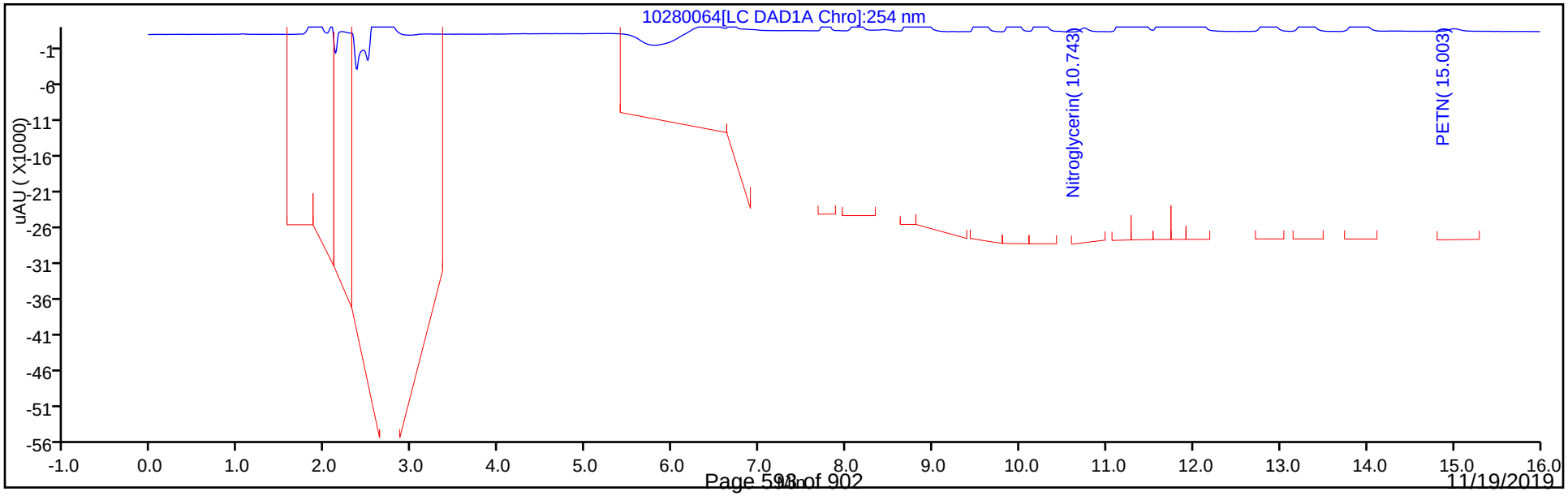
Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191028-86569.b\10280064.D

Injection Date:	29-Oct-2019 10:48:26	Instrument ID:	CHHPLC_X3	Operator ID:	CB
Lims ID:	CCV INT			Worklist Smp#:	64
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: CCV 280-475589/66 Calibration Date: 10/29/2019 11:34

Instrument ID: CHHPLC_X3 Calib Start Date: 07/01/2019 21:36

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 07/02/2019 00:18

Lab File ID: 10280066.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
TNX	Ave	214964	201155		234	250	-6.4	15.0
DNX	Ave	156126	154737		248	250	-0.9	15.0
MNX	Ave	140041	144754		302	292	3.4	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: CCV 280-475589/66 Calibration Date: 10/29/2019 11:34

Instrument ID: CHHPLC_X3 Calib Start Date: 07/01/2019 21:36

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 07/02/2019 00:18

Lab File ID: 10280066.D

Analyte	RT	RT WINDOW	
		FROM	TO
TNX	6.59	6.49	6.69
DNX	6.91	6.81	7.01
MNX	7.36	7.22	7.52

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191028-86569.b\10280066.D
Lims ID: CCV DMT
Client ID:
Sample Type: CCV
Inject. Date: 29-Oct-2019 11:34:19 ALS Bottle#: 9 Worklist Smp#: 66
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV DMT
Misc. Info.: 280-0086569-066
Operator ID: CB Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub17

Method: \\chromna\Denver\ChromData\CHHPLC_X\20191028-86569.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 29-Oct-2019 16:05:04 Calib Date: 02-Jul-2019 00:18:07
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0329

First Level Reviewer: beckerc Date: 29-Oct-2019 13:30:06

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 TNX	1	6.589	6.587	0.002	50339	0.2503	0.2342	M
5 DNX	1	6.909	6.907	0.002	38723	0.2503	0.2480	M
6 MNX	1	7.356	7.367	-0.011	42232	0.2918	0.3016	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8330 DMT_00002 Amount Added: 12.50 Units: uL

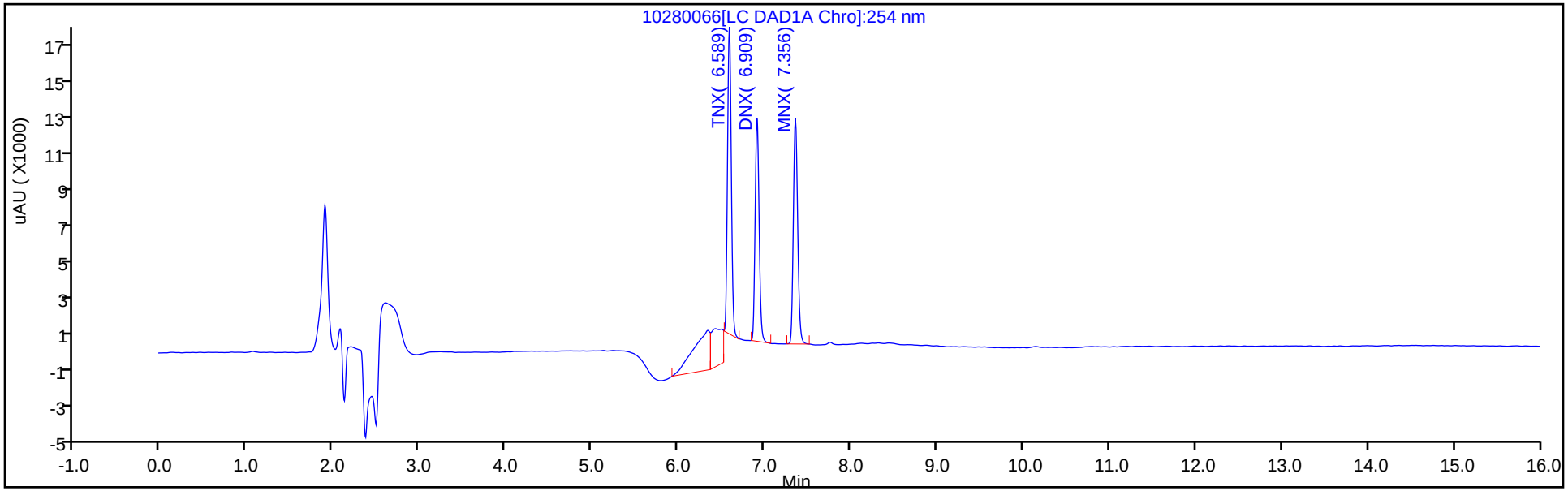
Report Date: 29-Oct-2019 16:05:05 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

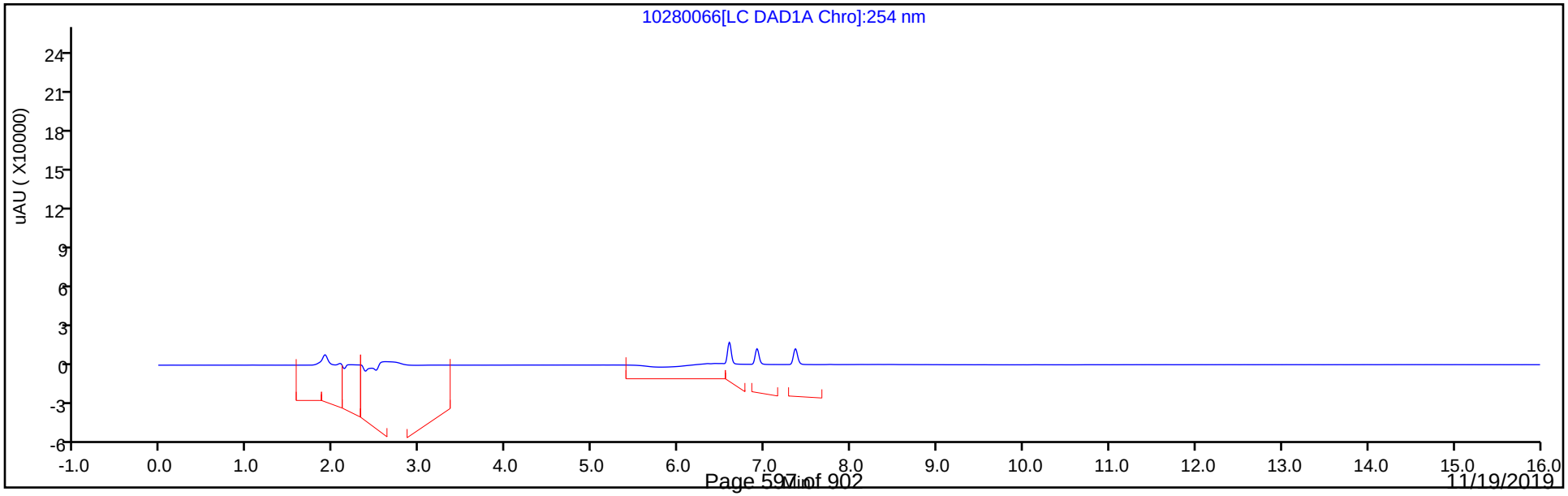
Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191028-86569.b\10280066.D

Injection Date:	29-Oct-2019 11:34:19	Instrument ID:	CHHPLC_X3	Operator ID:	CB
Lims ID:	CCV DMT			Worklist Smp#:	66
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

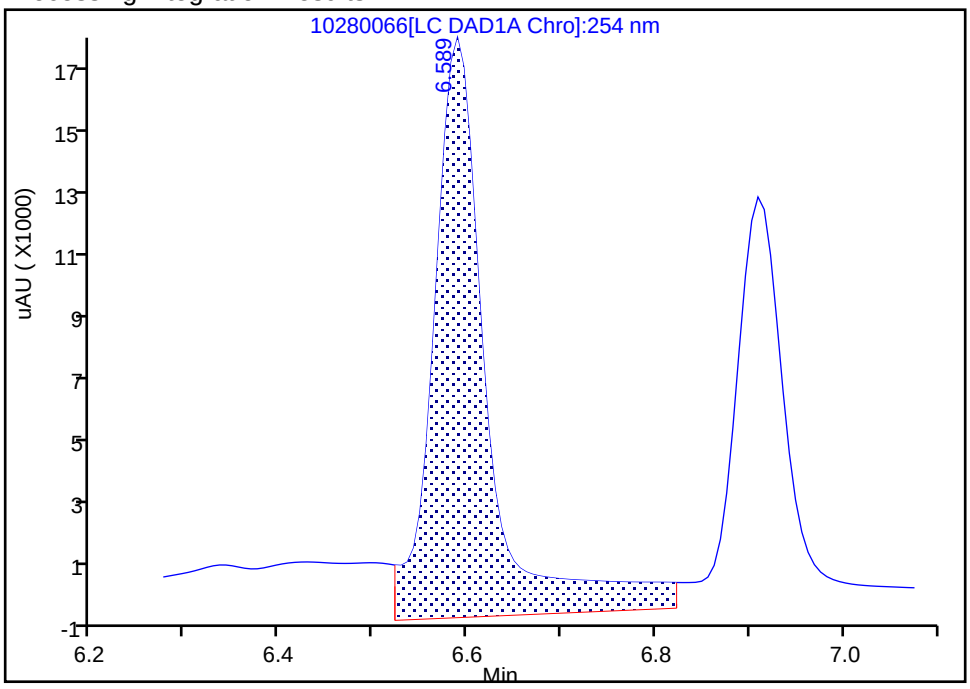
Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20191028-86569.b\10280066.D				
Injection Date:	29-Oct-2019 11:34:19	Instrument ID:	CHHPLC_X3		
Lims ID:	CCV DMT				
Client ID:					
Operator ID:	CB	ALS Bottle#:	9	Worklist Smp#:	66
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

2 TNX, CAS: 13980-04-6

Signal: 1

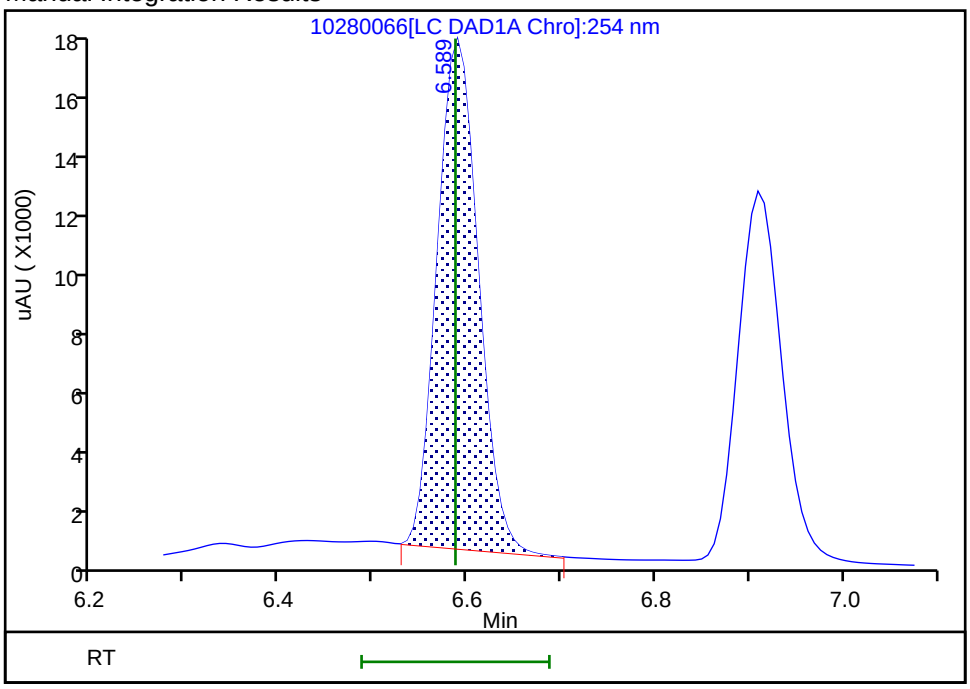
Processing Integration Results

RT: 6.59
Area: 71425
Amount: 0.332265
Amount Units: ug/mL



Manual Integration Results

RT: 6.59
Area: 50339
Amount: 0.234174
Amount Units: ug/mL



Reviewer: beckerc, 29-Oct-2019 13:29:56

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

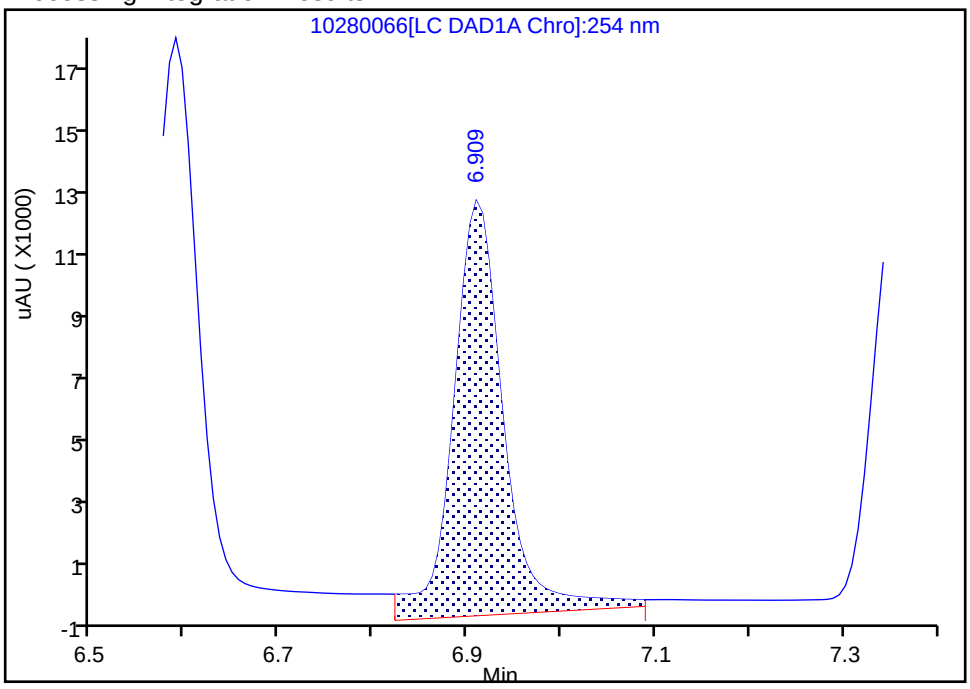
Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20191028-86569.b\10280066.D				
Injection Date:	29-Oct-2019 11:34:19	Instrument ID:	CHHPLC_X3		
Lims ID:	CCV DMT				
Client ID:					
Operator ID:	CB	ALS Bottle#:	9	Worklist Smp#:	66
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

5 DNX, CAS: 80251-29-2

Signal: 1

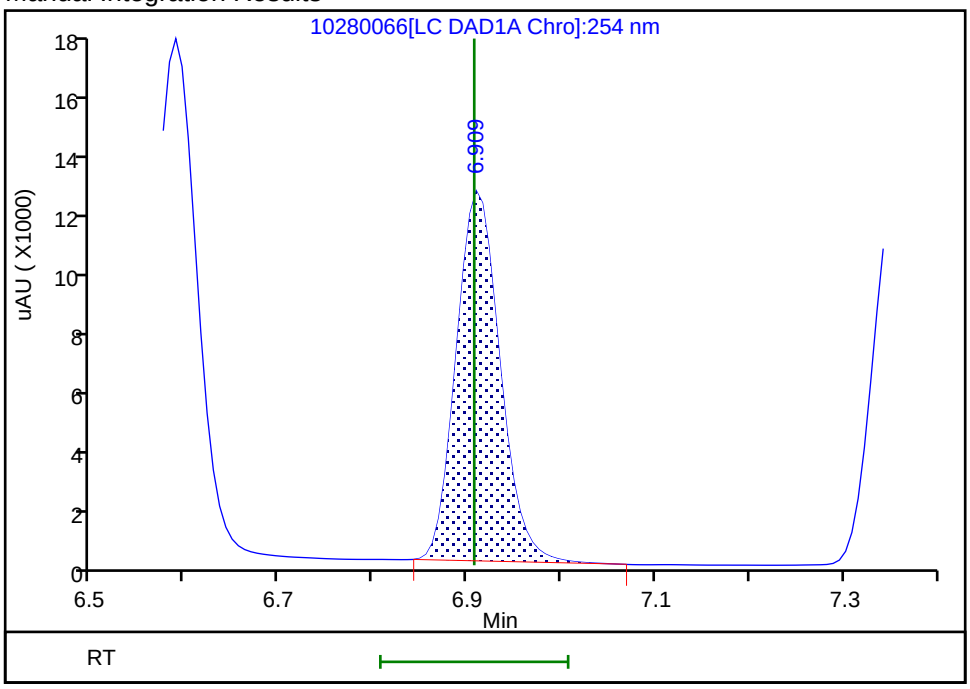
Processing Integration Results

RT: 6.91
Area: 46829
Amount: 0.299944
Amount Units: ug/mL



Manual Integration Results

RT: 6.91
Area: 38723
Amount: 0.248024
Amount Units: ug/mL



Reviewer: beckerc, 29-Oct-2019 13:30:02
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: CCV 280-475589/74 Calibration Date: 10/29/2019 14:37

Instrument ID: CHHPLC_X3 Calib Start Date: 07/01/2019 14:40

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 07/01/2019 17:23

Lab File ID: 10280074.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	91833	91912		250	250	0.0	15.0
RDX	Ave	111120	110344		248	250	-0.7	15.0
Picric acid	Ave	90734	86472		238	250	-4.7	15.0
1,3,5-Trinitrobenzene	Ave	245077	244832		250	250	-0.1	15.0
1,3-Dinitrobenzene	Ave	311175	316124		254	250	1.6	15.0
Nitrobenzene	Ave	198903	190064		239	251	-4.4	15.0
Tetryl	Ave	161957	170724		264	250	5.4	15.0
Nitroglycerin	Ave	71108	72902		2560	2500	2.5	15.0
2,4,6-Trinitrotoluene	Ave	227277	231215		255	251	1.7	15.0
4-Amino-2,6-dinitrotoluene	Ave	166378	167801		253	251	0.9	15.0
2-Amino-4,6-dinitrotoluene	Ave	205236	211486		258	251	3.0	15.0
2,6-Dinitrotoluene	Ave	159284	159797		252	251	0.3	15.0
2,4-Dinitrotoluene	Ave	300447	304531		254	251	1.4	15.0
2-Nitrotoluene	Ave	129784	122648		237	251	-5.5	15.0
4-Nitrotoluene	Ave	110255	107749		245	251	-2.3	15.0
3-Nitrotoluene	Ave	145122	137191		237	251	-5.5	15.0
PETN	Ave	74289	79827		2690	2500	7.5	15.0
1,2-Dinitrobenzene	Ave	139328	144108		259	250	3.4	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: CCV 280-475589/74 Calibration Date: 10/29/2019 14:37

Instrument ID: CHHPLC_X3 Calib Start Date: 07/01/2019 14:40

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 07/01/2019 17:23

Lab File ID: 10280074.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.68	6.53	6.83
RDX	7.76	7.61	7.91
Picric acid	8.12	7.95	8.25
1,3,5-Trinitrobenzene	8.88	8.73	9.03
1,3-Dinitrobenzene	9.53	9.38	9.68
Nitrobenzene	9.92	9.77	10.07
Tetryl	10.22	10.08	10.38
Nitroglycerin	10.74	10.59	10.89
2,4,6-Trinitrotoluene	11.19	11.10	11.30
4-Amino-2,6-dinitrotoluene	11.36	11.27	11.47
2-Amino-4,6-dinitrotoluene	11.66	11.56	11.76
2,6-Dinitrotoluene	11.81	11.71	11.91
2,4-Dinitrotoluene	12.00	11.91	12.11
2-Nitrotoluene	12.85	12.70	13.00
4-Nitrotoluene	13.29	13.15	13.45
3-Nitrotoluene	13.89	13.75	14.05
PETN	14.99	14.85	15.15
1,2-Dinitrobenzene	8.72	8.57	8.87

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191028-86569.b\10280074.D
Lims ID: CCV INT
Client ID:
Sample Type: CCV
Inject. Date: 29-Oct-2019 14:37:56 ALS Bottle#: 7 Worklist Smp#: 74
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV INT
Misc. Info.: 280-0086569-074
Operator ID: CB Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\chromna\Denver\ChromData\CHHPLC_X\20191028-86569.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 29-Oct-2019 16:05:13 Calib Date: 02-Jul-2019 00:18:07
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0329

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
	3 HMX	1	6.683	6.675	0.008	22978	0.2500	0.2502	
	7 RDX	1	7.756	7.761	-0.005	27586	0.2500	0.2483	
	8 2,4,6-Trinitrophenol	1	8.123	8.095	0.028	21618	0.2500	0.2383	
$	9 1,2-Dinitrobenzene	1	8.716	8.715	0.001	36027	0.2500	0.2586	
	10 1,3,5-Trinitrobenzene	1	8.883	8.881	0.002	61208	0.2500	0.2498	
	11 1,3-Dinitrobenzene	1	9.529	9.534	-0.005	79110	0.2503	0.2542	
	12 Nitrobenzene	1	9.916	9.921	-0.005	47611	0.2505	0.2394	
	14 Tetryl	1	10.222	10.228	-0.006	42681	0.2500	0.2635	
	15 Nitroglycerin	2	10.736	10.741	-0.005	182254	2.50	2.56	
	16 2,4,6-Trinitrotoluene	1	11.189	11.201	-0.012	58035	0.2510	0.2553	
	17 4-Amino-2,6-dinitrotoluene	1	11.362	11.368	-0.006	42076	0.2508	0.2529	
	18 2-Amino-4,6-dinitrotoluene	1	11.656	11.661	-0.005	53030	0.2508	0.2584	
	19 2,6-Dinitrotoluene	1	11.809	11.814	-0.005	40069	0.2508	0.2516	
	20 2,4-Dinitrotoluene	1	12.002	12.008	-0.006	76285	0.2505	0.2539	
	21 o-Nitrotoluene	1	12.849	12.854	-0.005	30754	0.2508	0.2370	
	22 p-Nitrotoluene	1	13.289	13.301	-0.012	27045	0.2510	0.2453	
	23 m-Nitrotoluene	1	13.889	13.901	-0.012	34435	0.2510	0.2373	
	24 PETN	2	14.989	15.001	-0.012	199568	2.50	2.69	

Reagents:

8330IntermStk_00059 Amount Added: 25.00 Units: uL

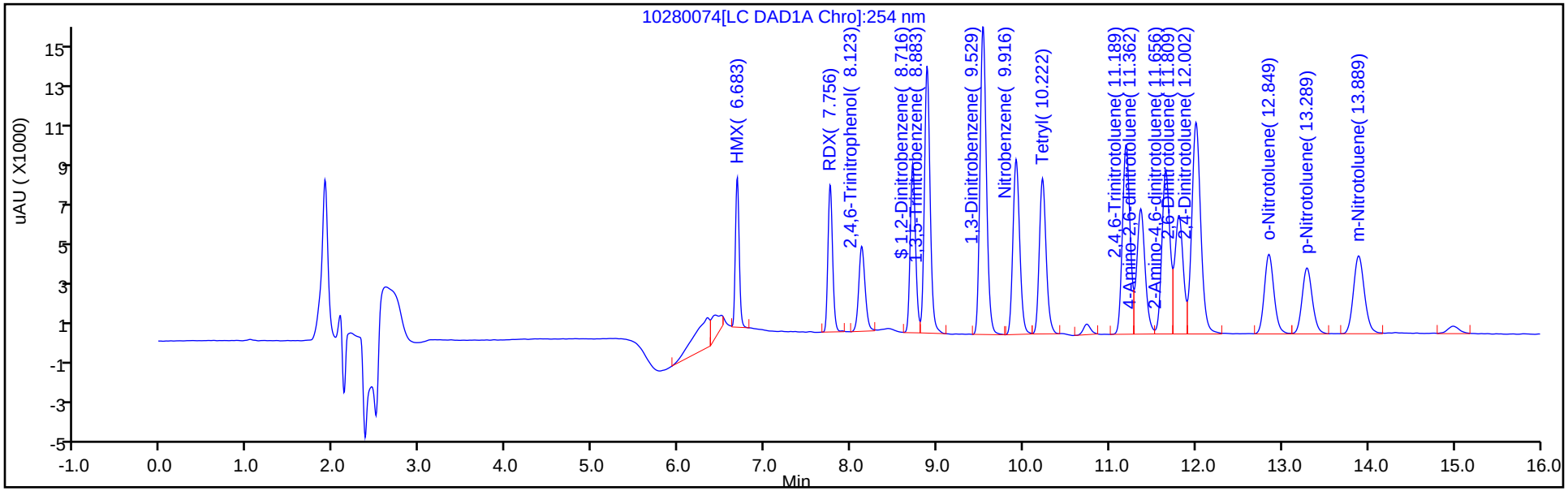
Report Date: 29-Oct-2019 16:05:13 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

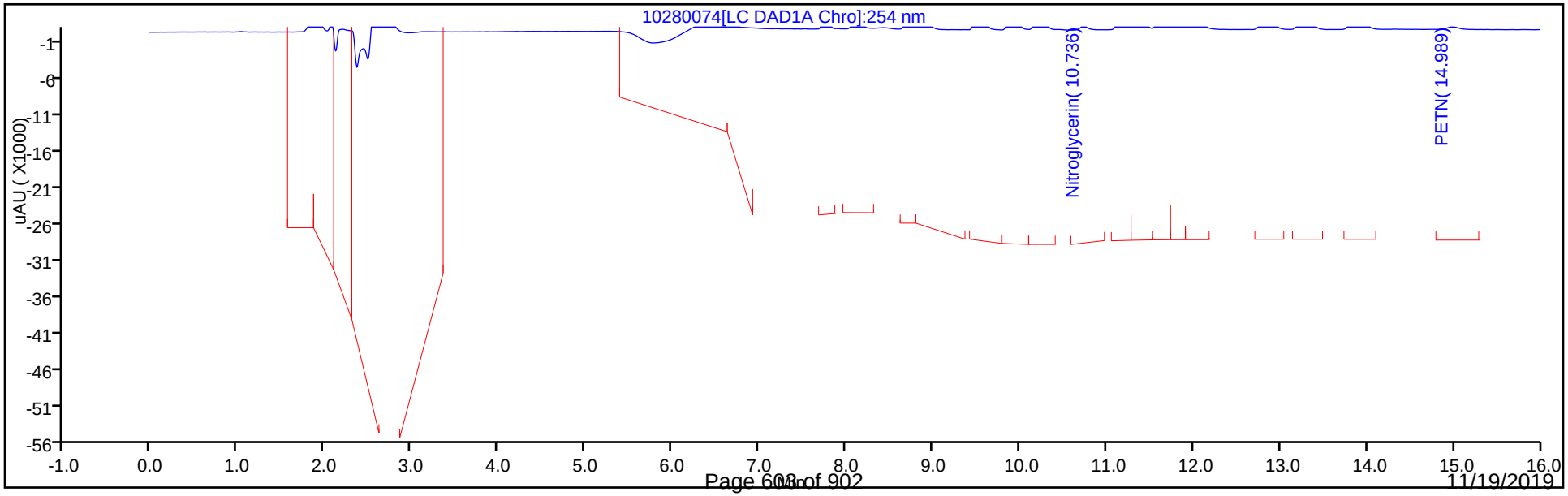
Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191028-86569.b\10280074.D

Injection Date:	29-Oct-2019 14:37:56	Instrument ID:	CHHPLC_X3	Operator ID:	CB
Lims ID:	CCV INT			Worklist Smp#:	74
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: CCV 280-475589/76 Calibration Date: 10/29/2019 15:23

Instrument ID: CHHPLC_X3 Calib Start Date: 07/01/2019 21:36

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 07/02/2019 00:18

Lab File ID: 10280076.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
TNX	Ave	214964	198126		231	250	-7.8	15.0
DNX	Ave	156126	153882		247	250	-1.4	15.0
MNX	Ave	140041	144569		301	292	3.2	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Lab Sample ID: CCV 280-475589/76 Calibration Date: 10/29/2019 15:23

Instrument ID: CHHPLC_X3 Calib Start Date: 07/01/2019 21:36

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 07/02/2019 00:18

Lab File ID: 10280076.D

Analyte	RT	RT WINDOW	
		FROM	TO
TNX	6.59	6.49	6.69
DNX	6.91	6.81	7.01
MNX	7.36	7.22	7.52

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191028-86569.b\10280076.D
Lims ID: CCV DMT
Client ID:
Sample Type: CCV
Inject. Date: 29-Oct-2019 15:23:48 ALS Bottle#: 9 Worklist Smp#: 76
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV DMT
Misc. Info.: 280-0086569-076
Operator ID: CB Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub17

Method: \\chromna\Denver\ChromData\CHHPLC_X\20191028-86569.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 29-Oct-2019 16:05:14 Calib Date: 02-Jul-2019 00:18:07
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0329

First Level Reviewer: beckerc Date: 29-Oct-2019 16:04:56

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 TNX	1	6.590	6.587	0.003	49581	0.2503	0.2306	M
5 DNX	1	6.910	6.907	0.003	38509	0.2503	0.2467	M
6 MNX	1	7.357	7.367	-0.010	42178	0.2918	0.3012	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8330 DMT_00002 Amount Added: 12.50 Units: uL

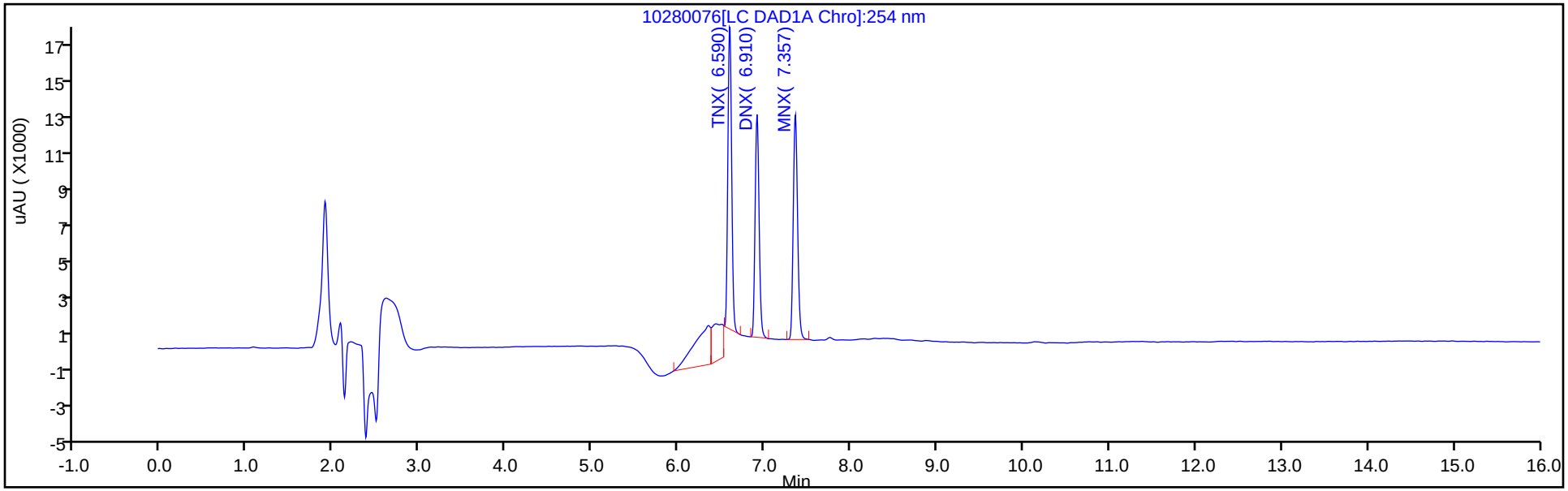
Report Date: 29-Oct-2019 16:05:15 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

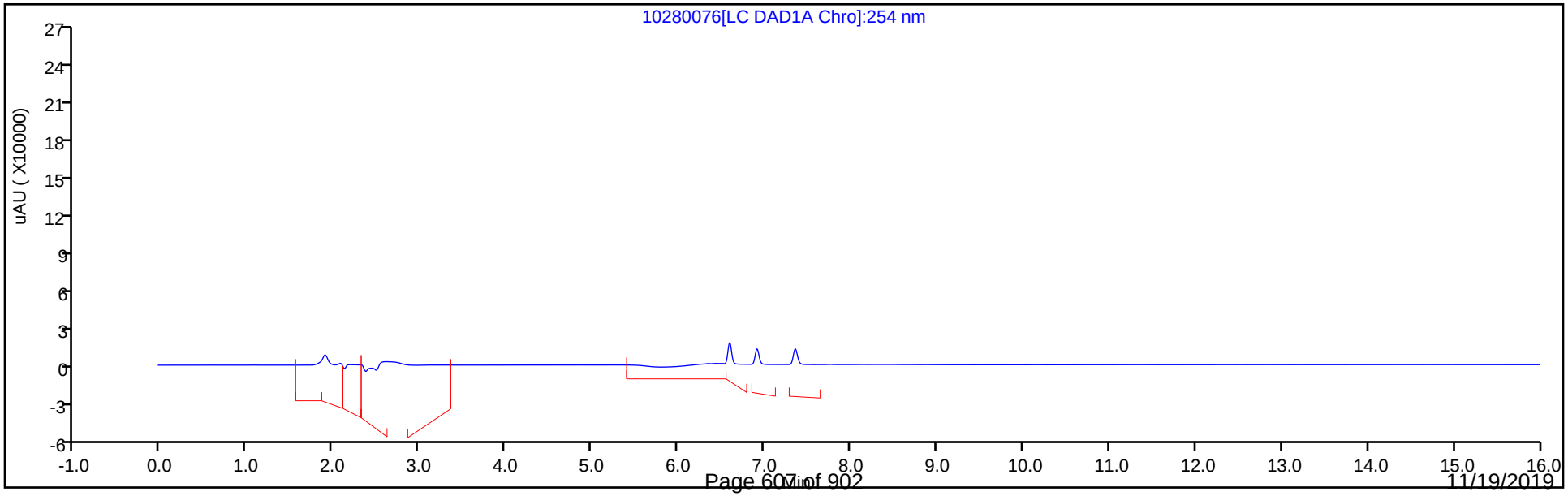
Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191028-86569.b\10280076.D

Injection Date:	29-Oct-2019 15:23:48	Instrument ID:	CHHPLC_X3	Operator ID:	CB
Lims ID:	CCV DMT			Worklist Smp#:	76
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

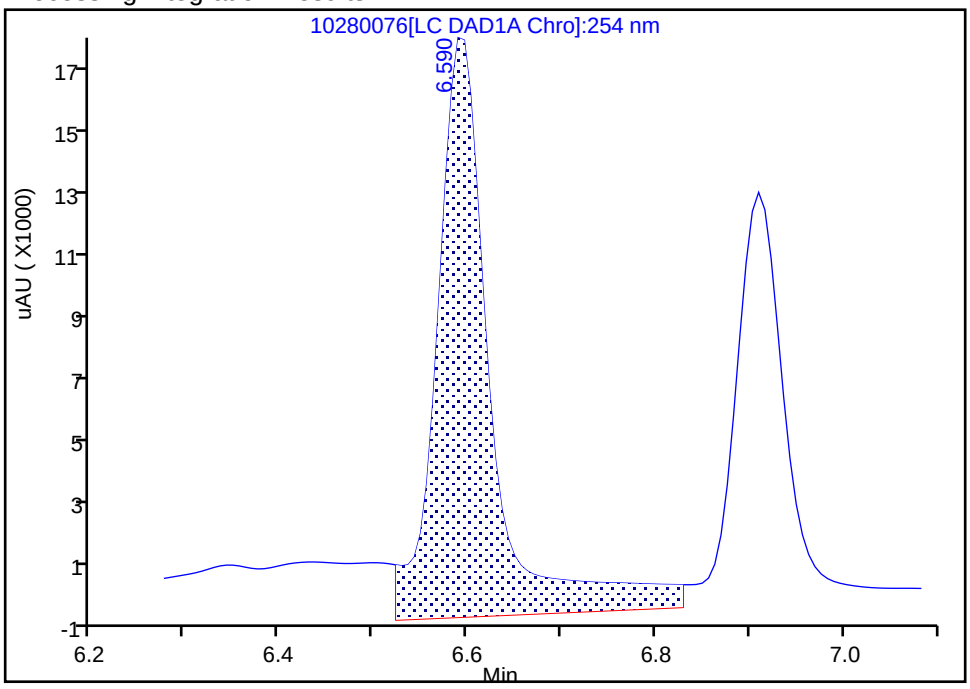
Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191028-86569.b\10280076.D
Injection Date: 29-Oct-2019 15:23:48 Instrument ID: CHHPLC_X3
Lims ID: CCV DMT
Client ID:
Operator ID: CB ALS Bottle#: 9 Worklist Smp#: 76
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

2 TNX, CAS: 13980-04-6

Signal: 1

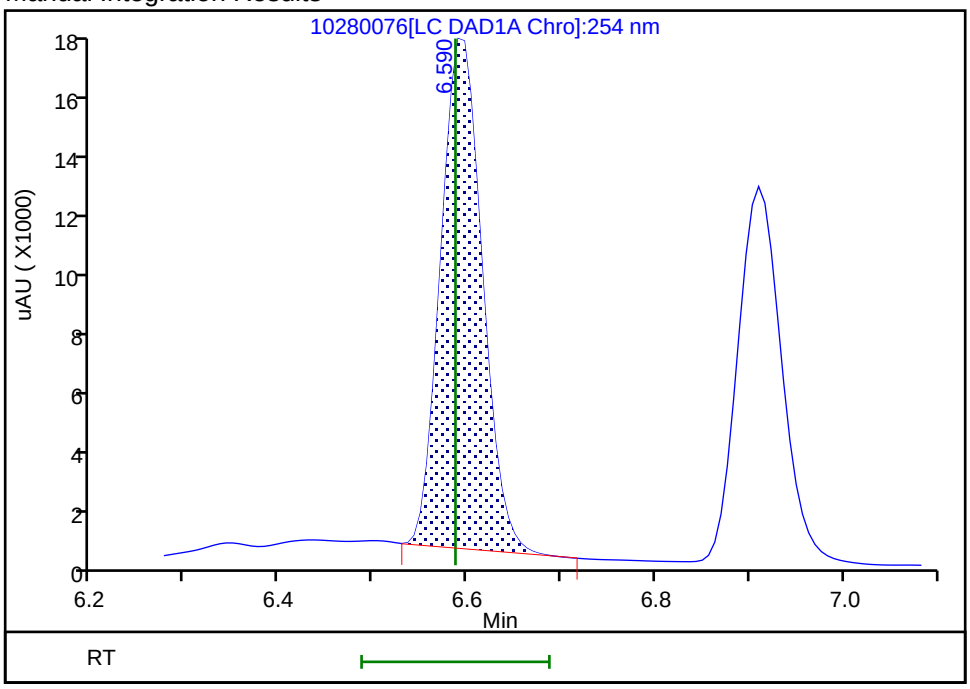
Processing Integration Results

RT: 6.59
Area: 70232
Amount: 0.326715
Amount Units: ug/mL



Manual Integration Results

RT: 6.59
Area: 49581
Amount: 0.230648
Amount Units: ug/mL



Reviewer: beckerc, 29-Oct-2019 16:04:38
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

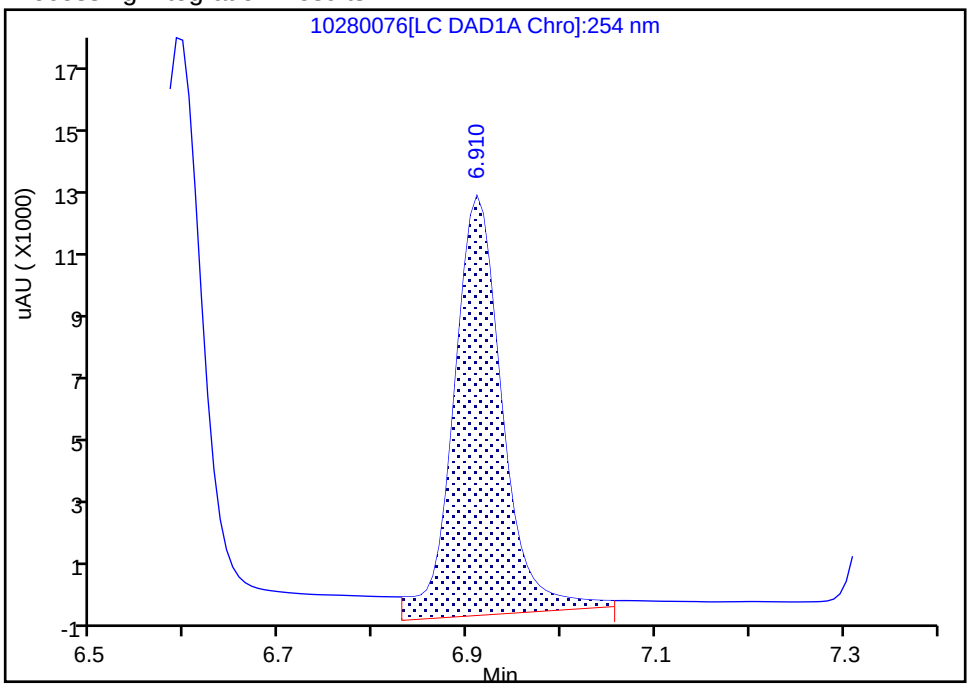
Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20191028-86569.b\10280076.D				
Injection Date:	29-Oct-2019 15:23:48	Instrument ID:	CHHPLC_X3		
Lims ID:	CCV DMT				
Client ID:					
Operator ID:	CB	ALS Bottle#:	9	Worklist Smp#:	76
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

5 DNX, CAS: 80251-29-2

Signal: 1

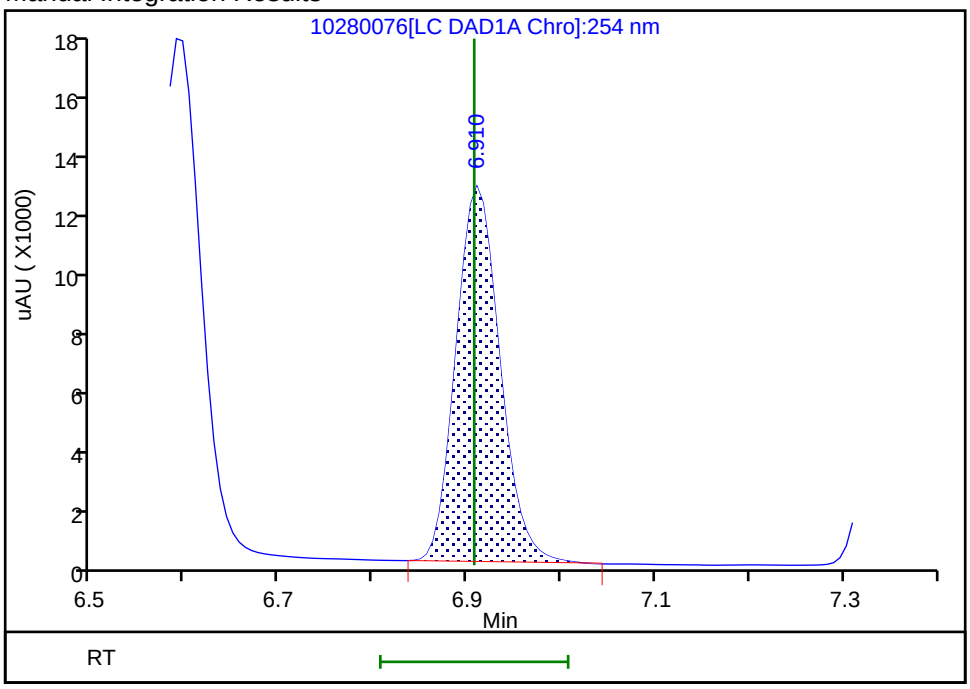
Processing Integration Results

RT: 6.91
Area: 44577
Amount: 0.285520
Amount Units: ug/mL



Manual Integration Results

RT: 6.91
Area: 38509
Amount: 0.246654
Amount Units: ug/mL



Reviewer: beckerc, 29-Oct-2019 16:04:43
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 280-475090/1-A

Matrix: Water Lab File ID: 10240010.D

Analysis Method: 8330A Date Collected:

Extraction Method: 3535 Date Extracted: 10/23/2019 15:47

Sample wt/vol: 500(mL) Date Analyzed: 10/24/2019 12:19

Con. Extract Vol.: 5(mL) Dilution Factor: 1

Injection Volume: 100(uL) GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 475188 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	0.40	U	1.0	0.40	0.20
99-65-0	1,3-Dinitrobenzene	0.20	U	0.40	0.20	0.089
118-96-7	2,4,6-Trinitrotoluene	0.40	U	0.40	0.40	0.16
121-14-2	2,4-Dinitrotoluene	0.20	U	0.40	0.20	0.084
606-20-2	2,6-Dinitrotoluene	0.20	U	0.20	0.20	0.065
35572-78-2	2-Amino-4,6-dinitrotoluene	0.12	U	0.20	0.12	0.051
88-72-2	2-Nitrotoluene	0.20	U	0.40	0.20	0.086
99-08-1	3-Nitrotoluene	0.40	U M	0.40	0.40	0.20
19406-51-0	4-Amino-2,6-dinitrotoluene	0.12	U	0.20	0.12	0.058
99-99-0	4-Nitrotoluene	0.40	U	1.0	0.40	0.20
2691-41-0	HMX	0.20	U	0.40	0.20	0.088
5755-27-1	MNX	0.40	U M	2.0	0.40	0.15
98-95-3	Nitrobenzene	0.20	U	0.40	0.20	0.091
121-82-4	RDX	0.40	U	0.40	0.40	0.16
479-45-8	Tetryl	0.20	U	0.24	0.20	0.079

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	92		83-119

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240010.D
Lims ID: MB 280-475090/1-A
Client ID:
Sample Type: MB
Inject. Date: 24-Oct-2019 12:19:13 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: MB 280-475090/1-
Misc. Info.: 280-0086464-010
Operator ID: CB Instrument ID: CHHPLC_X3

Method: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 25-Oct-2019 13:02:22 Calib Date: 02-Jul-2019 00:18:07
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0317

First Level Reviewer: beckerc Date: 25-Oct-2019 08:21:47

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
1	2,6-diamino-4-nitrotoluene	1		6.540				ND	U
2	TNX	1		6.587				ND	
3	HMX	1		6.667				ND	
4	2,4-diamino-6-nitrotoluene	1		6.727				ND	
5	DNX	1		6.907				ND	
6	MNX	1		7.367				ND	U
7	RDX	1		7.747				ND	
8	2,4,6-Trinitrophenol	1		8.127				ND	U
$ 9	1,2-Dinitrobenzene	1	8.715	8.721	-0.006	25584	0.2000	0.1836	
10	1,3,5-Trinitrobenzene	1		8.887				ND	
11	1,3-Dinitrobenzene	1		9.534				ND	
12	Nitrobenzene	1		9.920				ND	
13	3,5-Dinitroaniline	1		10.173				ND	
14	Tetryl	1		10.227				ND	
15	Nitroglycerin	2		10.740				ND	
16	2,4,6-Trinitrotoluene	1		11.187				ND	
17	4-Amino-2,6-dinitrotoluene	1		11.347				ND	
18	2-Amino-4,6-dinitrotoluene	1		11.634				ND	
19	2,6-Dinitrotoluene	1		11.794				ND	
20	2,4-Dinitrotoluene	1		11.994				ND	
21	o-Nitrotoluene	1		12.840				ND	
22	p-Nitrotoluene	1		13.280				ND	
23	m-Nitrotoluene	1		13.880				ND	U
24	PETN	2		14.987				ND	
25	Ammonium Picrate	1		0.000				ND	

QC Flag Legend

Review Flags

U - Marked Undetected

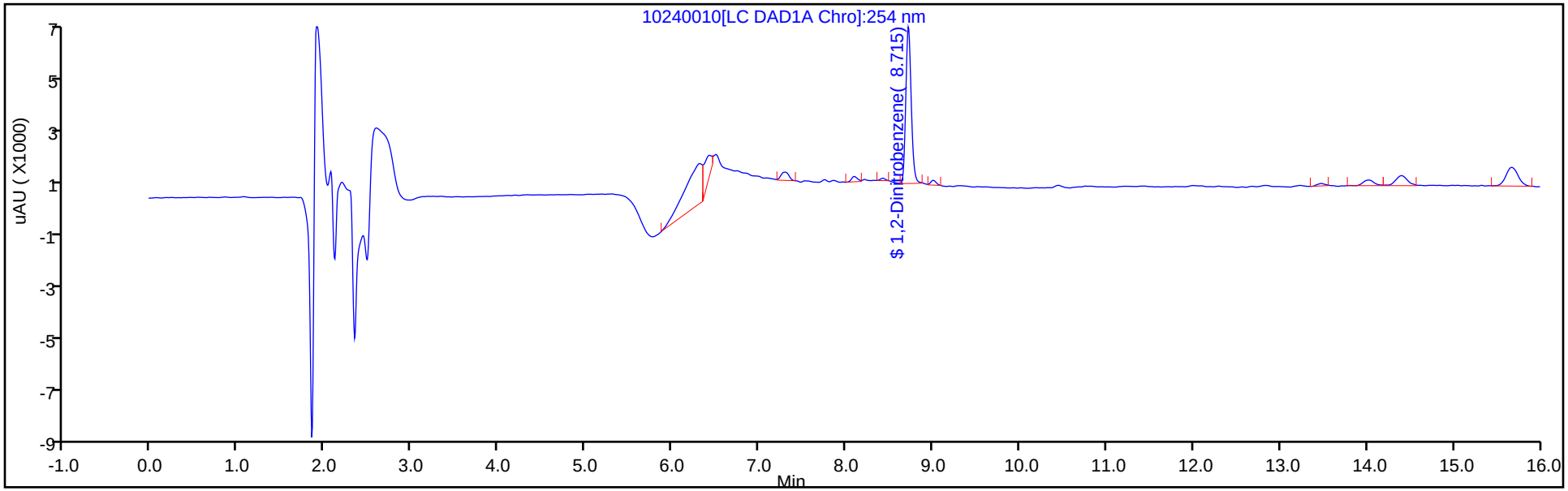
Report Date: 25-Oct-2019 13:02:26 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

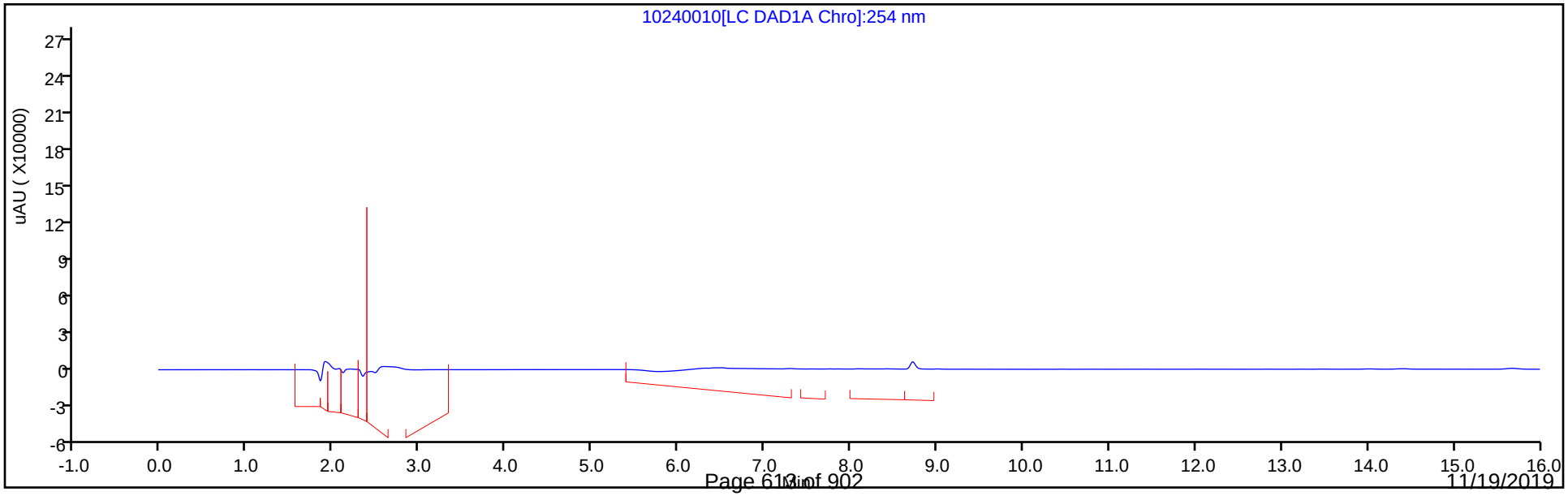
Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240010.D

Injection Date:	24-Oct-2019 12:19:13	Instrument ID:	CHHPLC_X3	Operator ID:	CB
Lims ID:	MB 280-475090/1-A			Worklist Smp#:	10
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Recovery Report

Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240010.D				
Lims ID:	MB 280-475090/1-A				
Client ID:					
Sample Type:	MB				
Inject. Date:	24-Oct-2019 12:19:13	ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	MB 280-475090/1-				
Misc. Info.:	280-0086464-010				
Operator ID:	CB	Instrument ID:	CHHPLC_X3		
Method:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	25-Oct-2019 13:02:22	Calib Date:	02-Jul-2019 00:18:07		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX0317				
First Level Reviewer: beckerc		Date:	25-Oct-2019 08:21:47		

Compound	Amount Added	Amount Recovered	% Rec.
$ 9 1,2-Dinitrobenzene	0.2000	0.1836	91.81

User Disabled Compound Report

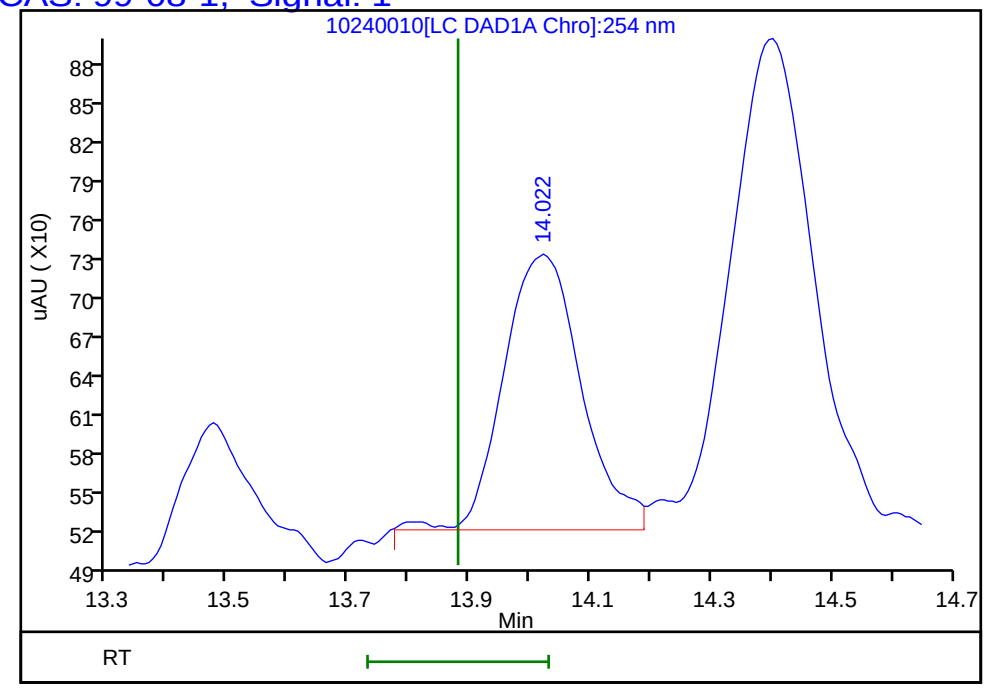
Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240010.D
Injection Date: 24-Oct-2019 12:19:13 Instrument ID: CHHPLC_X3
Lims ID: MB 280-475090/1-A
Client ID:
Operator ID: CB ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330

Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

23 m-Nitrotoluene, CAS: 99-08-1, Signal: 1

RT: 14.02
Response: 1890
Amount: 0.013024



Reviewer: beckerc, 25-Oct-2019 08:21:47
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

User Disabled Compound Report

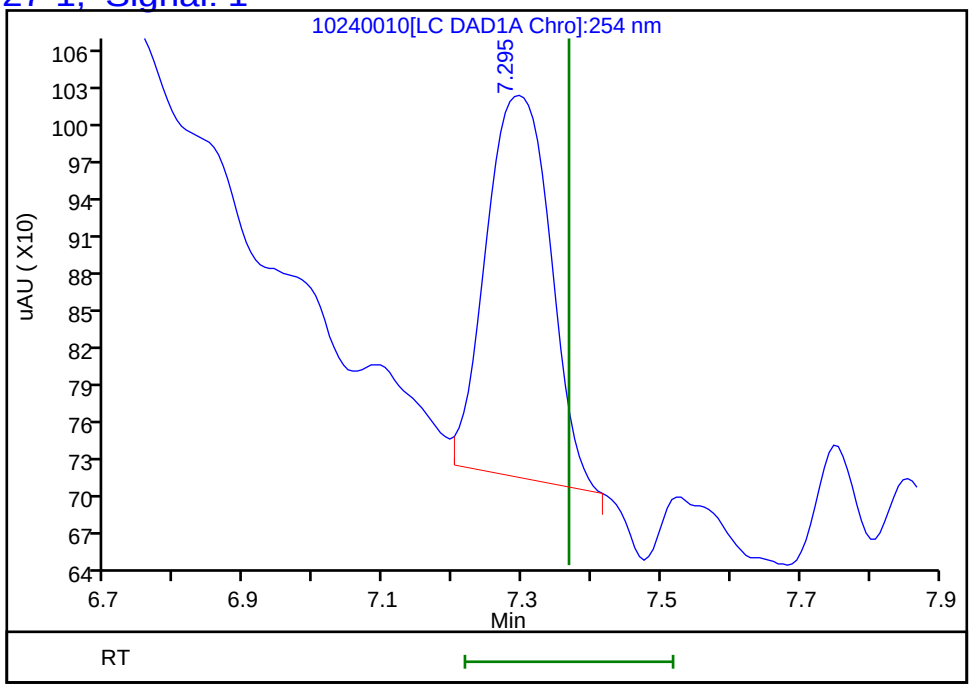
Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240010.D
Injection Date: 24-Oct-2019 12:19:13 Instrument ID: CHHPLC_X3
Lims ID: MB 280-475090/1-A
Client ID:
Operator ID: CB ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330

Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

6 MNX, CAS: 5755-27-1, Signal: 1

RT: 7.30
Response: 1992
Amount: 0.014224



Reviewer: beckerc, 25-Oct-2019 08:21:47
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 280-475090/2-A

Matrix: Water Lab File ID: 10240011.D

Analysis Method: 8330A Date Collected:

Extraction Method: 3535 Date Extracted: 10/23/2019 15:47

Sample wt/vol: 500(mL) Date Analyzed: 10/24/2019 12:42

Con. Extract Vol.: 5(mL) Dilution Factor: 1

Injection Volume: 100(uL) GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 475188 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	1.96		1.0	0.40	0.20
99-65-0	1,3-Dinitrobenzene	1.92		0.40	0.20	0.089
118-96-7	2,4,6-Trinitrotoluene	1.84		0.40	0.40	0.16
121-14-2	2,4-Dinitrotoluene	1.87		0.40	0.20	0.084
606-20-2	2,6-Dinitrotoluene	1.82		0.20	0.20	0.065
35572-78-2	2-Amino-4,6-dinitrotoluene	1.86		0.20	0.12	0.051
88-72-2	2-Nitrotoluene	1.59	M	0.40	0.20	0.086
99-08-1	3-Nitrotoluene	1.81	M	0.40	0.40	0.20
19406-51-0	4-Amino-2,6-dinitrotoluene	1.72		0.20	0.12	0.058
99-99-0	4-Nitrotoluene	1.78	M	1.0	0.40	0.20
2691-41-0	HMX	1.89		0.40	0.20	0.088
98-95-3	Nitrobenzene	1.78		0.40	0.20	0.091
121-82-4	RDX	1.94		0.40	0.40	0.16
479-45-8	Tetryl	2.06		0.24	0.20	0.079

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	86		83-119

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240011.D
Lims ID: LCS 280-475090/2-A
Client ID:
Sample Type: LCS
Inject. Date: 24-Oct-2019 12:42:12 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: LCS 280-475090/2
Misc. Info.: 280-0086464-011
Operator ID: CB Instrument ID: CHHPLC_X3

Method: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 25-Oct-2019 13:02:22 Calib Date: 02-Jul-2019 00:18:07
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0317

First Level Reviewer: beckerc Date: 25-Oct-2019 08:22:55

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
	3 HMX	1	6.676	6.667	0.009	17392	0.2000	0.1894	
	7 RDX	1	7.749	7.747	0.002	21541	0.2000	0.1939	
	8 2,4,6-Trinitrophenol	1	8.109	8.127	-0.018	19368	0.2000	0.2135	
$	9 1,2-Dinitrobenzene	1	8.716	8.721	-0.005	23899	0.2000	0.1715	
	10 1,3,5-Trinitrobenzene	1	8.883	8.887	-0.004	48069	0.2000	0.1961	
	11 1,3-Dinitrobenzene	1	9.529	9.534	-0.005	59829	0.2000	0.1923	
	12 Nitrobenzene	1	9.916	9.920	-0.004	35438	0.2000	0.1782	
	14 Tetryl	1	10.223	10.227	-0.004	33406	0.2000	0.2063	
	15 Nitroglycerin	2	10.736	10.740	-0.004	133679	2.00	1.88	
	16 2,4,6-Trinitrotoluene	1	11.183	11.187	-0.004	41712	0.2000	0.1835	
	17 4-Amino-2,6-dinitrotoluene	1	11.343	11.347	-0.004	28662	0.2000	0.1723	
	18 2-Amino-4,6-dinitrotoluene	1	11.629	11.634	-0.005	38262	0.2000	0.1864	
	19 2,6-Dinitrotoluene	1	11.796	11.794	0.002	29017	0.2000	0.1822	
	20 2,4-Dinitrotoluene	1	11.989	11.994	-0.005	56129	0.2000	0.1868	
	21 o-Nitrotoluene	1	12.836	12.840	-0.004	20651	0.2000	0.1591	M
	22 p-Nitrotoluene	1	13.276	13.280	-0.004	19641	0.2000	0.1781	M
	23 m-Nitrotoluene	1	13.876	13.880	-0.004	26220	0.2000	0.1807	M
	24 PETN	2	14.976	14.987	-0.011	150285	2.00	2.02	

QC Flag Legend

Review Flags
M - Manually Integrated

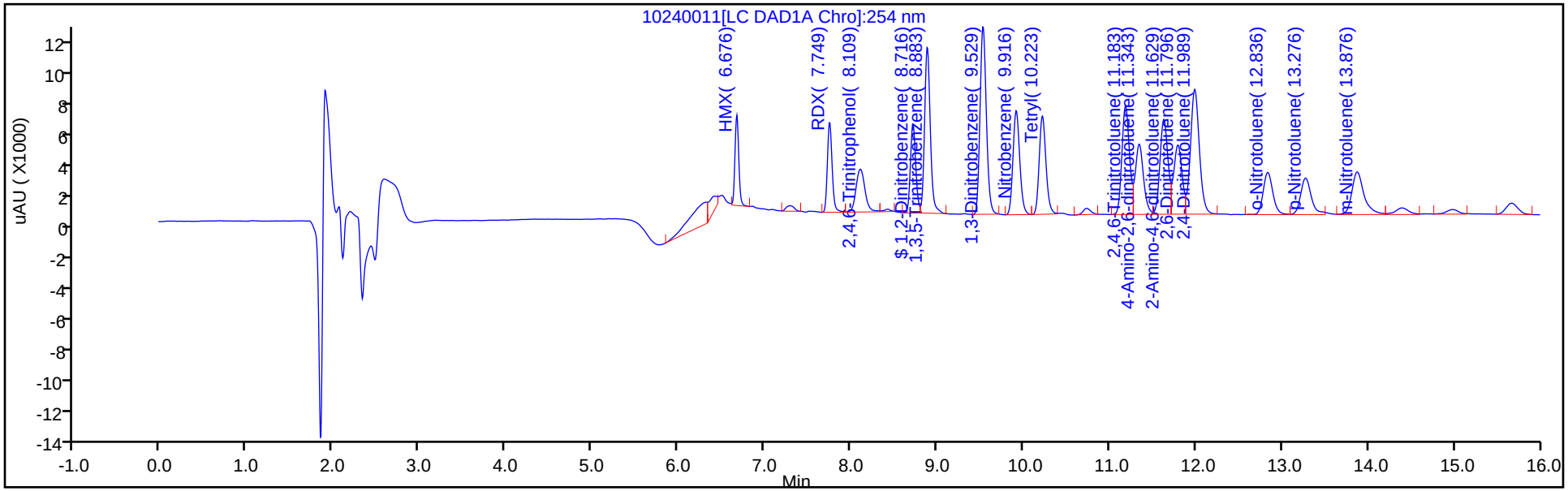
Report Date: 25-Oct-2019 13:02:29 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

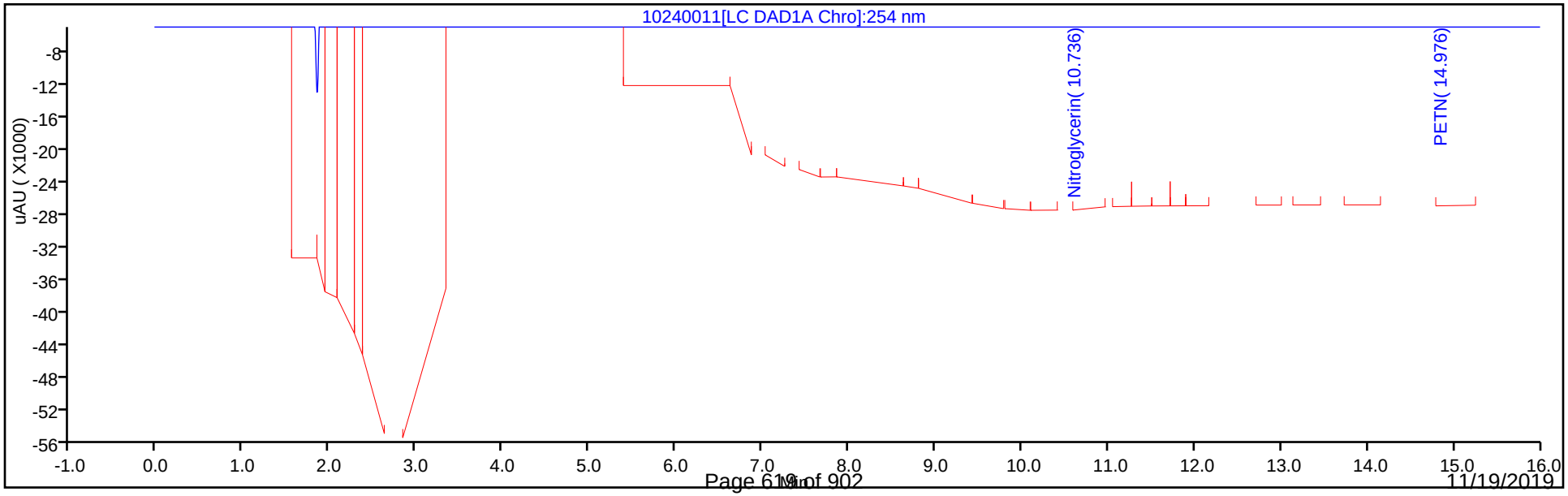
Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240011.D

Injection Date:	24-Oct-2019 12:42:12	Instrument ID:	CHHPLC_X3	Operator ID:	CB
Lims ID:	LCS 280-475090/2-A			Worklist Smp#:	11
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Recovery Report

Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240011.D				
Lims ID:	LCS 280-475090/2-A				
Client ID:					
Sample Type:	LCS				
Inject. Date:	24-Oct-2019 12:42:12	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCS 280-475090/2				
Misc. Info.:	280-0086464-011				
Operator ID:	CB	Instrument ID:	CHHPLC_X3		
Method:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	25-Oct-2019 13:02:22	Calib Date:	02-Jul-2019 00:18:07		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX0317				
First Level Reviewer: beckerc		Date:	25-Oct-2019 08:22:55		

Compound	Amount Added	Amount Recovered	% Rec.
$ 9 1,2-Dinitrobenzene	0.2000	0.1715	85.76

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

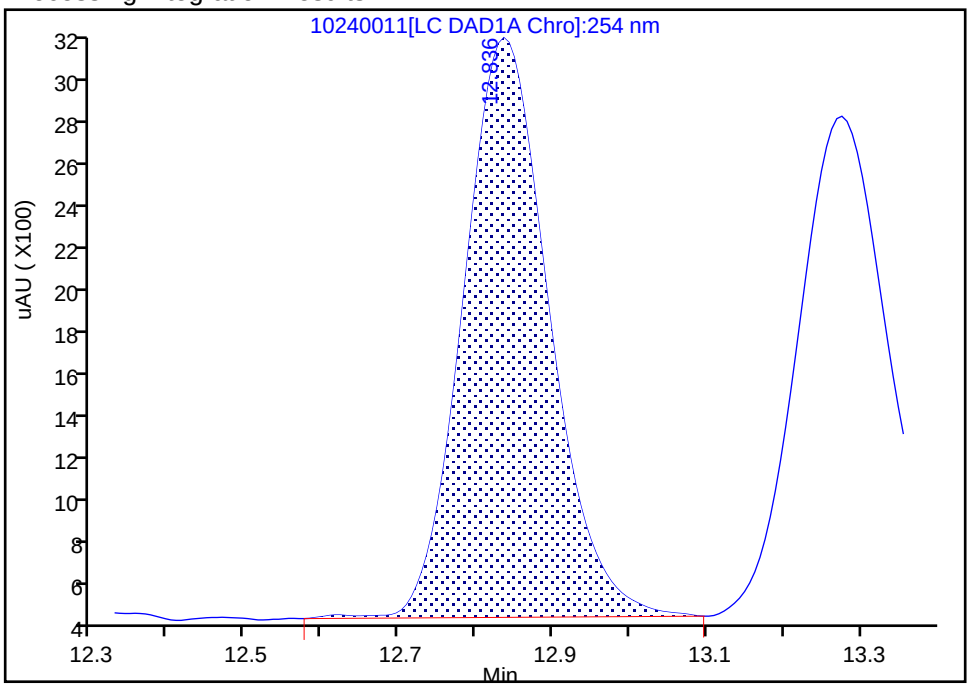
Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240011.D				
Injection Date:	24-Oct-2019 12:42:12	Instrument ID:	CHHPLC_X3		
Lims ID:	LCS 280-475090/2-A				
Client ID:					
Operator ID:	CB	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

21 o-Nitrotoluene, CAS: 88-72-2

Signal: 1

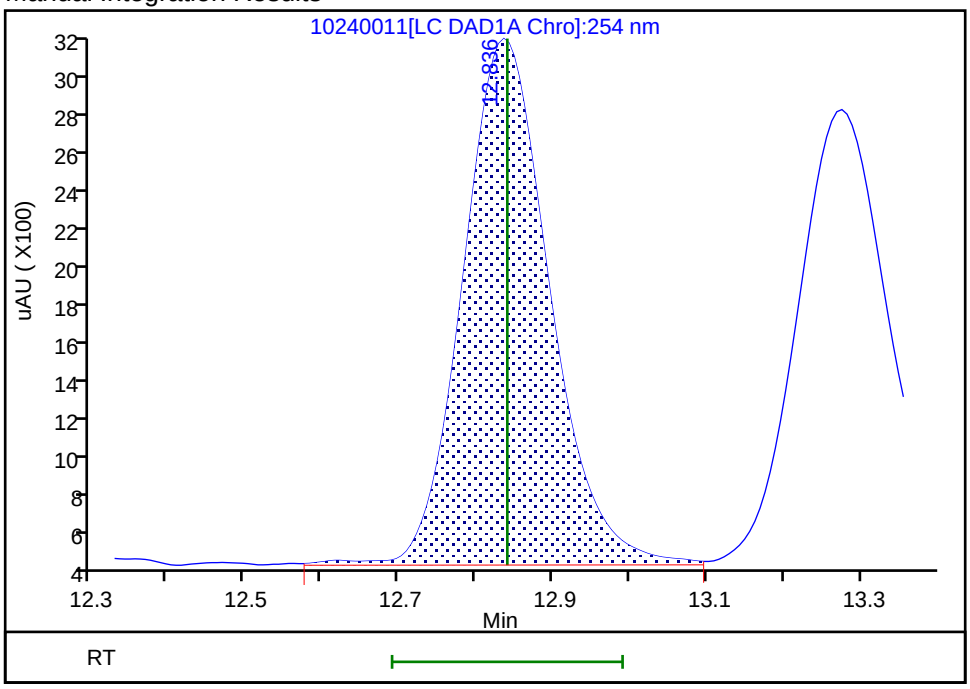
Processing Integration Results

RT: 12.84
Area: 20261
Amount: 0.156114
Amount Units: ug/mL



Manual Integration Results

RT: 12.84
Area: 20651
Amount: 0.159119
Amount Units: ug/mL



Reviewer: beckerc, 25-Oct-2019 08:22:46

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

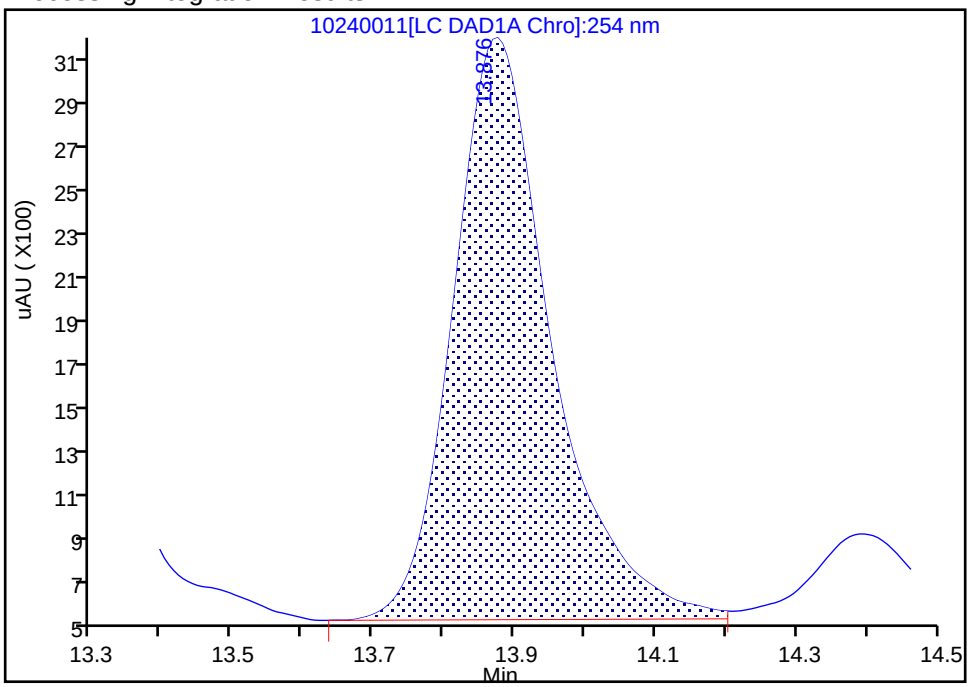
Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240011.D				
Injection Date:	24-Oct-2019 12:42:12	Instrument ID:	CHHPLC_X3		
Lims ID:	LCS 280-475090/2-A				
Client ID:					
Operator ID:	CB	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

23 m-Nitrotoluene, CAS: 99-08-1

Signal: 1

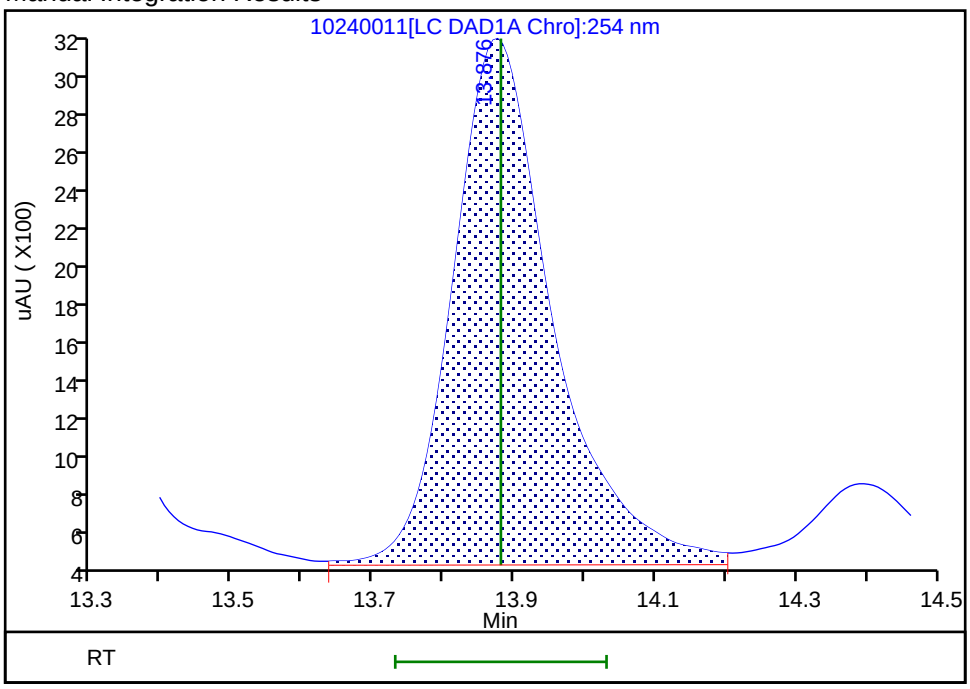
Processing Integration Results

RT: 13.88
Area: 25472
Amount: 0.175521
Amount Units: ug/mL



Manual Integration Results

RT: 13.88
Area: 26220
Amount: 0.180675
Amount Units: ug/mL



Reviewer: beckerc, 25-Oct-2019 08:22:46

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

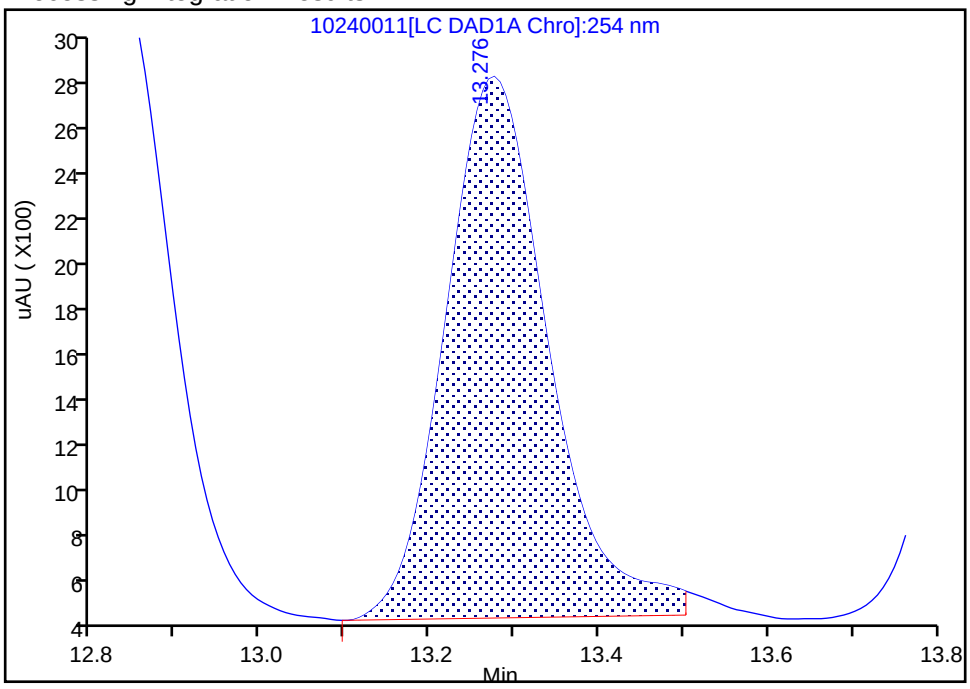
Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240011.D				
Injection Date:	24-Oct-2019 12:42:12	Instrument ID:	CHHPLC_X3		
Lims ID:	LCS 280-475090/2-A				
Client ID:					
Operator ID:	CB	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

22 p-Nitrotoluene, CAS: 99-99-0

Signal: 1

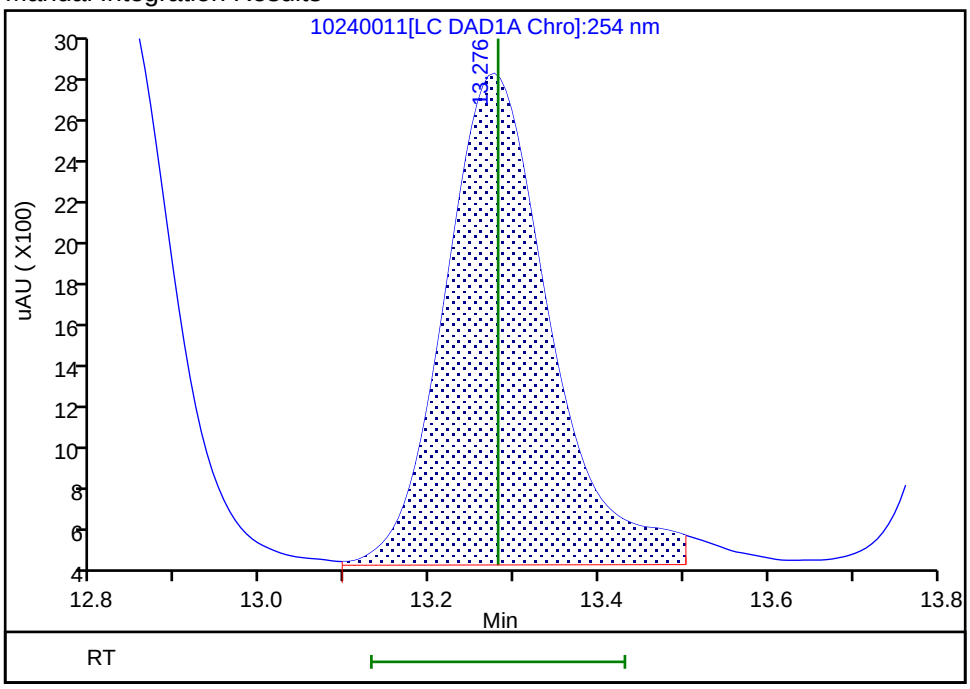
Processing Integration Results

RT: 13.28
Area: 18995
Amount: 0.172283
Amount Units: ug/mL



Manual Integration Results

RT: 13.28
Area: 19641
Amount: 0.178142
Amount Units: ug/mL



Reviewer: beckerc, 25-Oct-2019 08:22:46

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 280-475090/3-A

Matrix: Water Lab File ID: 10240012.D

Analysis Method: 8330A Date Collected:

Extraction Method: 3535 Date Extracted: 10/23/2019 15:47

Sample wt/vol: 500(mL) Date Analyzed: 10/24/2019 13:05

Con. Extract Vol.: 5(mL) Dilution Factor: 1

Injection Volume: 100(uL) GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 475188 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
5755-27-1	MNX	2.56		2.0	0.40	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	93		83-119

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240012.D
Lims ID: LCS 280-475090/3-A
Client ID:
Sample Type: LCS
Inject. Date: 24-Oct-2019 13:05:06 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: LCS 280-475090/3
Misc. Info.: 280-0086464-012
Operator ID: CB Instrument ID: CHHPLC_X3

Method: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 25-Oct-2019 13:02:22 Calib Date: 02-Jul-2019 00:18:07
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0317

First Level Reviewer: beckerc Date: 25-Oct-2019 08:23:38

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 TNX	1	6.584	6.587	-0.003	43455	0.2002	0.2022	
5 DNX	1	6.904	6.907	-0.003	31834	0.2002	0.2039	
6 MNX	1	7.344	7.367	-0.023	35807	0.2334	0.2557	
$ 9 1,2-Dinitrobenzene	1	8.724	8.721	0.003	25980	0.2000	0.1865	

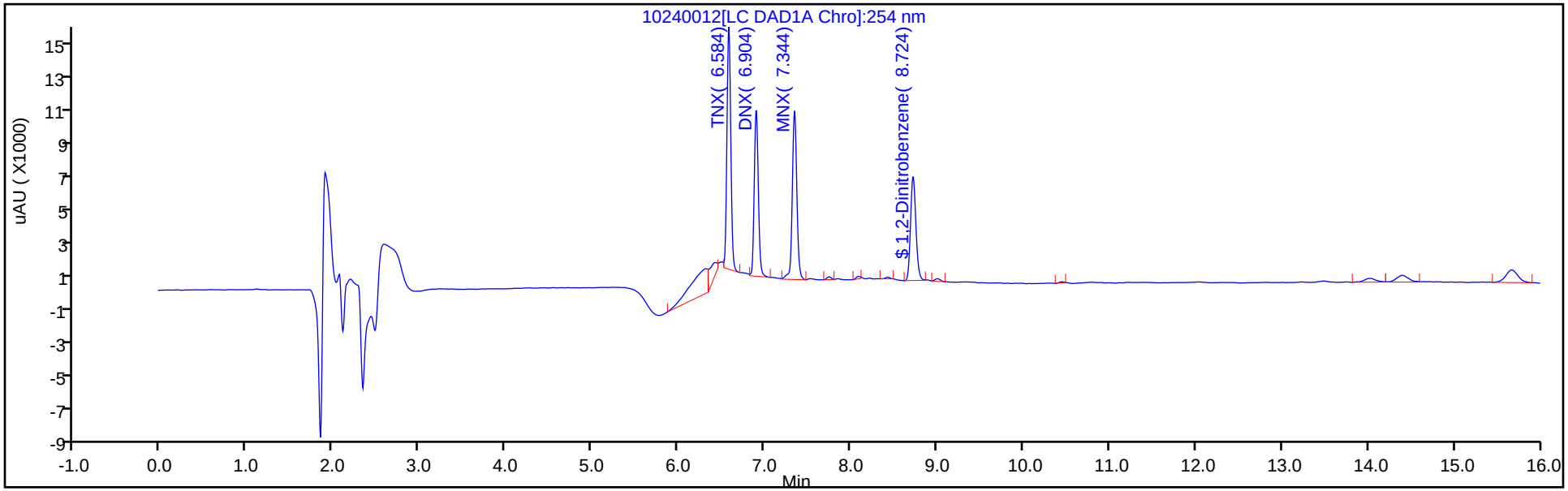
Report Date: 25-Oct-2019 13:02:33 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

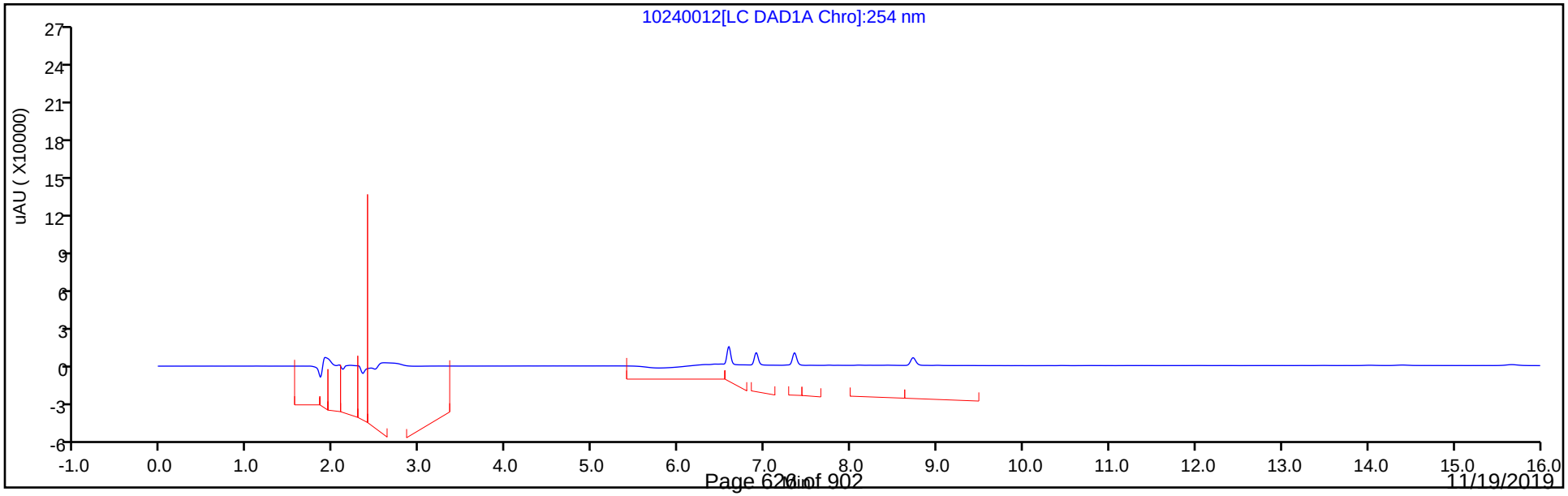
Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240012.D

Injection Date:	24-Oct-2019 13:05:06	Instrument ID:	CHHPLC_X3	Operator ID:	CB
Lims ID:	LCS 280-475090/3-A			Worklist Smp#:	12
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Recovery Report

Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240012.D				
Lims ID:	LCS 280-475090/3-A				
Client ID:					
Sample Type:	LCS				
Inject. Date:	24-Oct-2019 13:05:06	ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCS 280-475090/3				
Misc. Info.:	280-0086464-012				
Operator ID:	CB	Instrument ID:	CHHPLC_X3		
Method:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	25-Oct-2019 13:02:22	Calib Date:	02-Jul-2019 00:18:07		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX0317				
First Level Reviewer: beckerc		Date:	25-Oct-2019 08:23:38		

Compound	Amount Added	Amount Recovered	% Rec.
$ 9 1,2-Dinitrobenzene	0.2000	0.1865	93.23

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Client Sample ID: EW7-PM25B-1-35 MS Lab Sample ID: 280-129830-3 MS

Matrix: Water Lab File ID: 10240025.D

Analysis Method: 8330A Date Collected: 10/16/2019 14:55

Extraction Method: 3535 Date Extracted: 10/23/2019 15:47

Sample wt/vol: 522.8(mL) Date Analyzed: 10/24/2019 18:03

Con. Extract Vol.: 5(mL) Dilution Factor: 1

Injection Volume: 100(uL) GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 475188 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	22.1	Q 4	0.96	0.38	0.19
99-65-0	1,3-Dinitrobenzene	1.98	Q	0.38	0.19	0.085
118-96-7	2,4,6-Trinitrotoluene	5.68	Q	0.38	0.38	0.15
121-14-2	2,4-Dinitrotoluene	1.70	Q	0.38	0.19	0.080
606-20-2	2,6-Dinitrotoluene	1.58	Q	0.19	0.19	0.062
35572-78-2	2-Amino-4,6-dinitrotoluene	3.03	Q	0.19	0.11	0.048
88-72-2	2-Nitrotoluene	1.20	Q J1	0.38	0.19	0.082
99-08-1	3-Nitrotoluene	1.34	Q J1	0.38	0.38	0.19
19406-51-0	4-Amino-2,6-dinitrotoluene	2.62	Q	0.19	0.11	0.055
99-99-0	4-Nitrotoluene	1.55	Q	0.96	0.38	0.19
2691-41-0	HMX	1.57	Q M	0.38	0.19	0.084
98-95-3	Nitrobenzene	1.28	Q	0.38	0.19	0.087
121-82-4	RDX	1.75	Q M	0.38	0.38	0.15
479-45-8	Tetryl	23.5	Q J1 M	0.23	0.19	0.076

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	80	Q	83-119

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240025.D
Lims ID: 280-129830-A-3-B MS
Client ID: EW7-PM25B-1-35
Sample Type: MS
Inject. Date: 24-Oct-2019 18:03:07 ALS Bottle#: 25 Worklist Smp#: 25
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-129830-A-3-B
Misc. Info.: 280-0086464-025
Operator ID: CB Instrument ID: CHHPLC_X3

Method: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 25-Oct-2019 13:02:59 Calib Date: 02-Jul-2019 00:18:07
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0317

First Level Reviewer: beckerc Date: 25-Oct-2019 12:35:19

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
1	2,6-diamino-4-nitrotoluene	1		6.540				ND	
2	TNX	1		6.587				ND	
3	HMX	1	6.673	6.667	0.006	15039	0.2000	0.1638	M
4	2,4-diamino-6-nitrotoluene	1		6.727				ND	
5	DNX	1		6.907				ND	U
6	MNX	1		7.367				ND	U
7	RDX	1	7.759	7.747	0.012	20333	0.2000	0.1830	M
8	2,4,6-Trinitrophenol	1	8.086	8.127	-0.041	18947	0.2000	0.2088	M
$ 9	1,2-Dinitrobenzene	1	8.726	8.721	0.005	22312	0.2000	0.1601	
10	1,3,5-Trinitrobenzene	1	8.893	8.887	0.006	566348	0.2000	2.31	
11	1,3-Dinitrobenzene	1	9.539	9.534	0.005	64328	0.2000	0.2067	
12	Nitrobenzene	1	9.926	9.920	0.006	26521	0.2000	0.1333	
13	3,5-Dinitroaniline	1		10.173				ND	a
14	Tetryl	1	10.146	10.227	-0.081	397951	0.2000	2.46	a
15	Nitroglycerin	2	10.739	10.740	-0.001	133883	2.00	1.88	
16	2,4,6-Trinitrotoluene	1	11.193	11.187	0.006	135051	0.2000	0.5942	
17	4-Amino-2,6-dinitrotoluene	1	11.353	11.347	0.006	45632	0.2000	0.2743	
18	2-Amino-4,6-dinitrotoluene	1	11.639	11.634	0.005	64981	0.2000	0.3166	
19	2,6-Dinitrotoluene	1	11.799	11.794	0.005	26330	0.2000	0.1653	
20	2,4-Dinitrotoluene	1	11.999	11.994	0.005	53494	0.2000	0.1780	
21	o-Nitrotoluene	1	12.846	12.840	0.006	16261	0.2000	0.1253	
22	p-Nitrotoluene	1	13.279	13.280	-0.001	17888	0.2000	0.1622	
23	m-Nitrotoluene	1	13.879	13.880	-0.001	20306	0.2000	0.1399	
24	PETN	2	14.986	14.987	-0.001	149585	2.00	2.01	
25	Ammonium Picrate	1		0.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

U - Marked Undetected

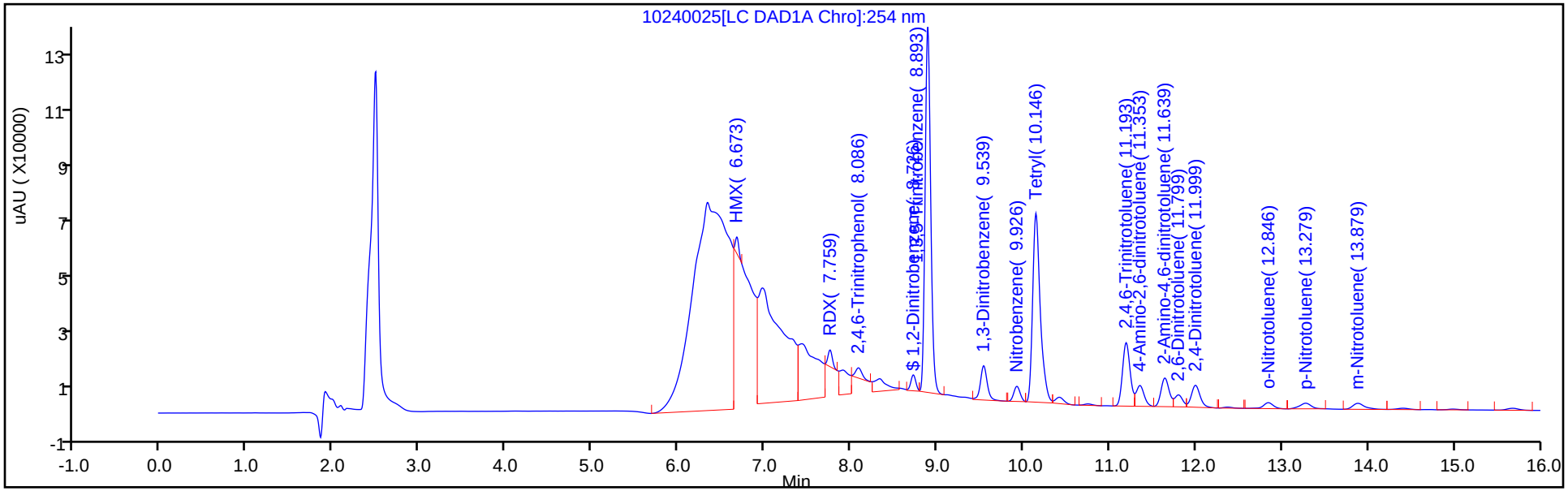
a - User Assigned ID

Report Date: 25-Oct-2019 13:03:12 Chrom Revision: 2.3 09-Oct-2019 11:13:36

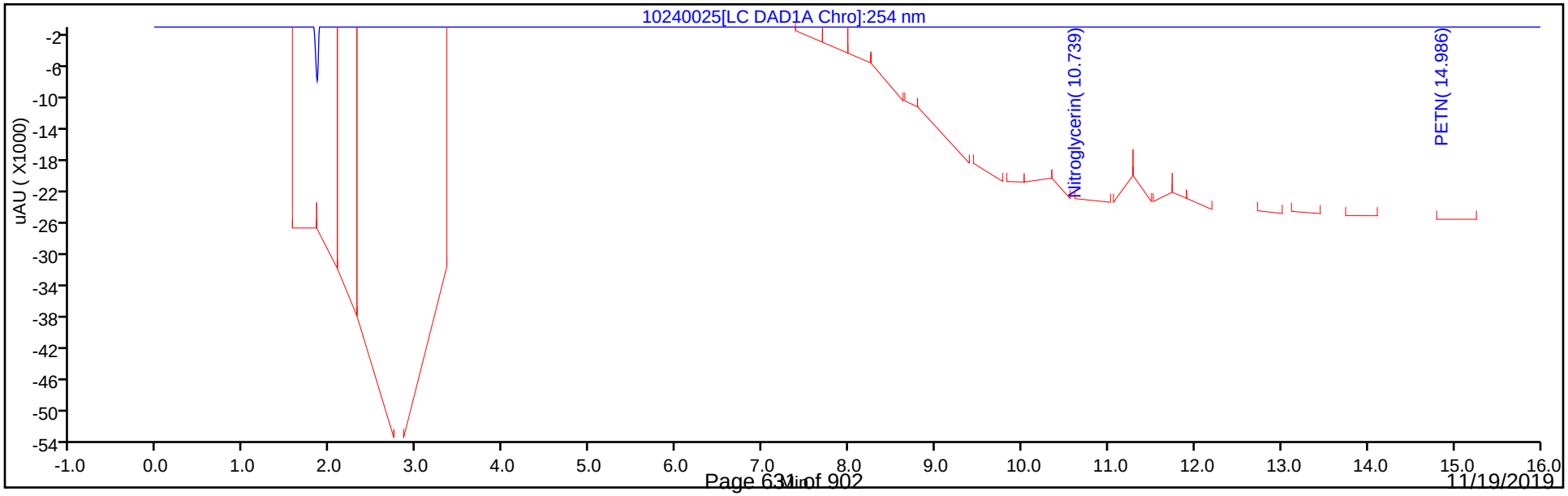
Eurofins TestAmerica, Denver

Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240025.D				
Injection Date:	24-Oct-2019 18:03:07	Instrument ID:	CHHPLC_X3	Operator ID:	CB
Lims ID:	280-129830-A-3-B MS			Worklist Smp#:	25
Client ID:	EW7-PM25B-1-35				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Recovery Report

Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240025.D				
Lims ID:	280-129830-A-3-B MS				
Client ID:	EW7-PM25B-1-35				
Sample Type:	MS				
Inject. Date:	24-Oct-2019 18:03:07	ALS Bottle#:	25	Worklist Smp#:	25
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-129830-A-3-B				
Misc. Info.:	280-0086464-025				
Operator ID:	CB	Instrument ID:	CHHPLC_X3		
Method:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	25-Oct-2019 13:02:59	Calib Date:	02-Jul-2019 00:18:07		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX0317				
First Level Reviewer: beckerc		Date:	25-Oct-2019 12:35:19		

Compound	Amount Added	Amount Recovered	% Rec.
$ 9 1,2-Dinitrobenzene	0.2000	0.1601	80.07

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

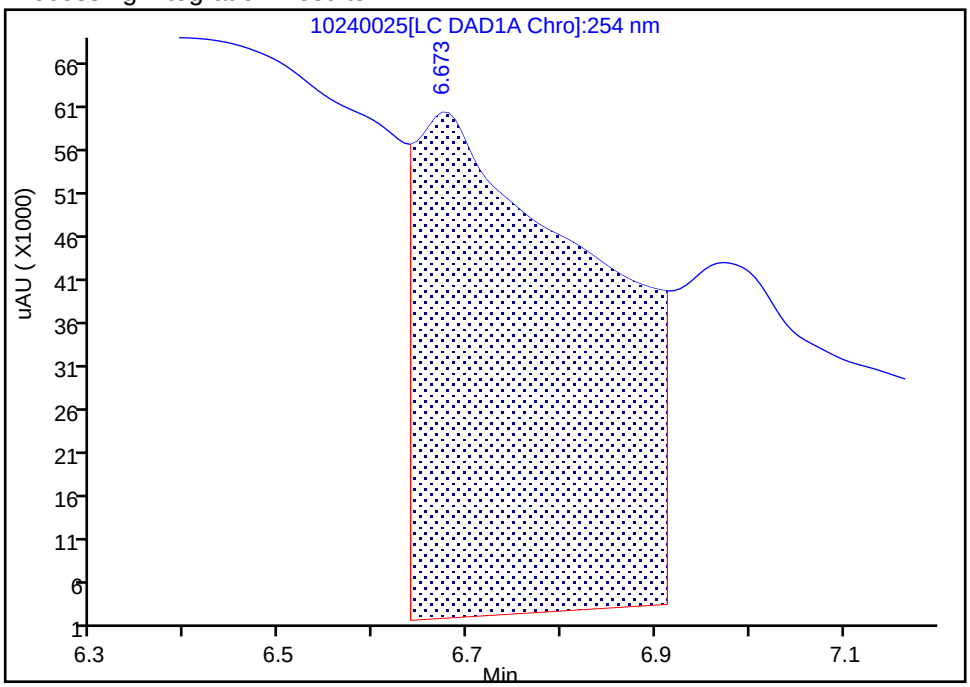
Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240025.D				
Injection Date:	24-Oct-2019 18:03:07	Instrument ID:	CHHPLC_X3		
Lims ID:	280-129830-A-3-B MS				
Client ID:	EW7-PM25B-1-35				
Operator ID:	CB	ALS Bottle#:	25	Worklist Smp#:	25
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

3 HMX, CAS: 2691-41-0

Signal: 1

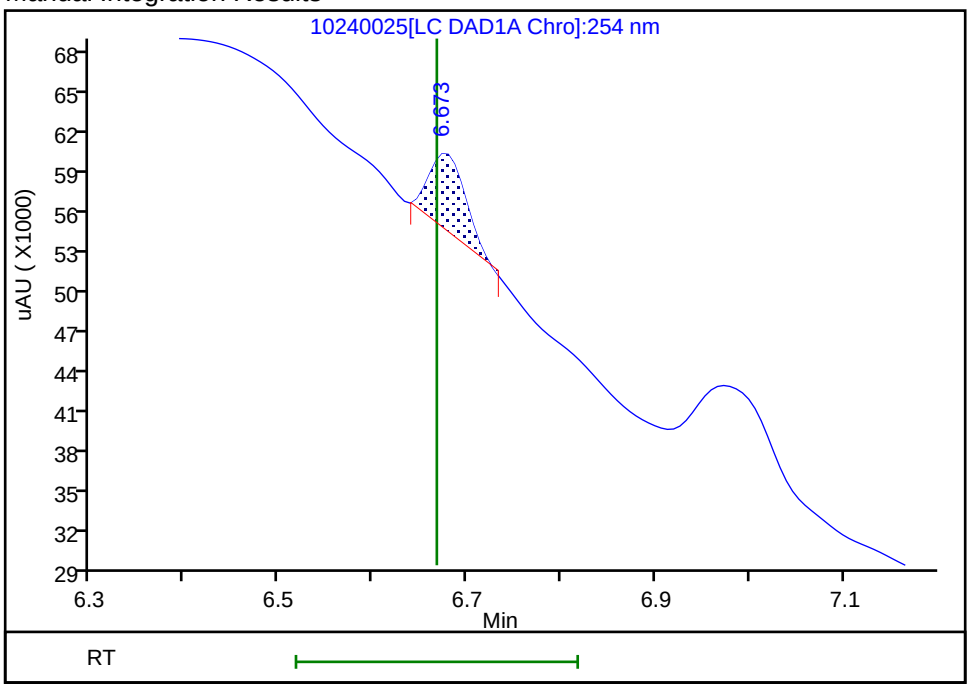
Processing Integration Results

RT: 6.67
Area: 760232
Amount: 8.278396
Amount Units: ug/mL



Manual Integration Results

RT: 6.67
Area: 15039
Amount: 0.163764
Amount Units: ug/mL



Reviewer: beckerc, 25-Oct-2019 12:33:59
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

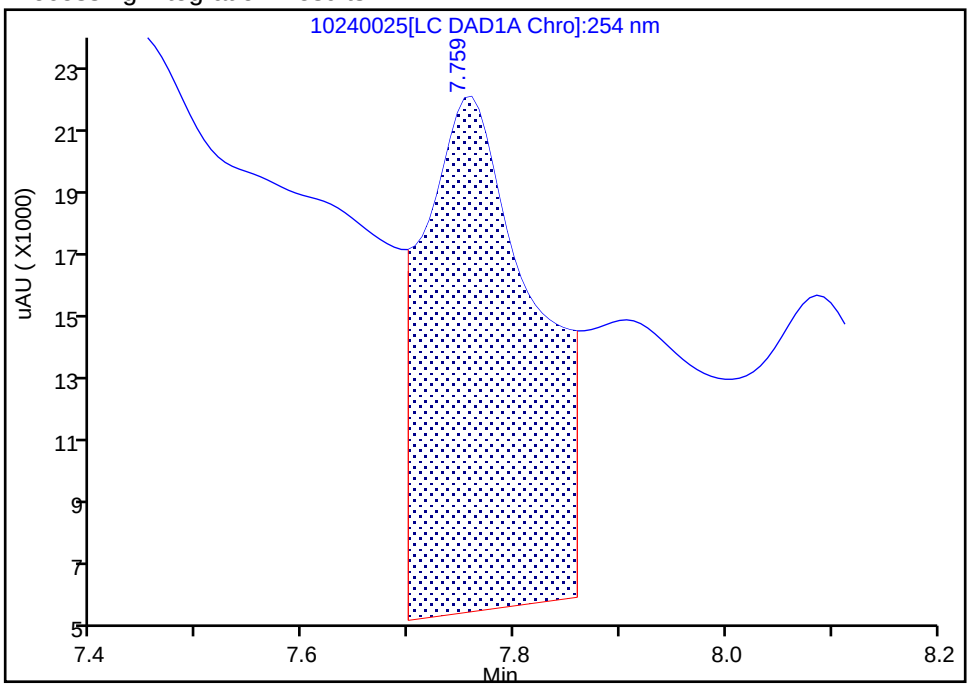
Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240025.D				
Injection Date:	24-Oct-2019 18:03:07	Instrument ID:	CHHPLC_X3		
Lims ID:	280-129830-A-3-B MS				
Client ID:	EW7-PM25B-1-35				
Operator ID:	CB	ALS Bottle#:	25	Worklist Smp#:	25
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

7 RDX, CAS: 121-82-4

Signal: 1

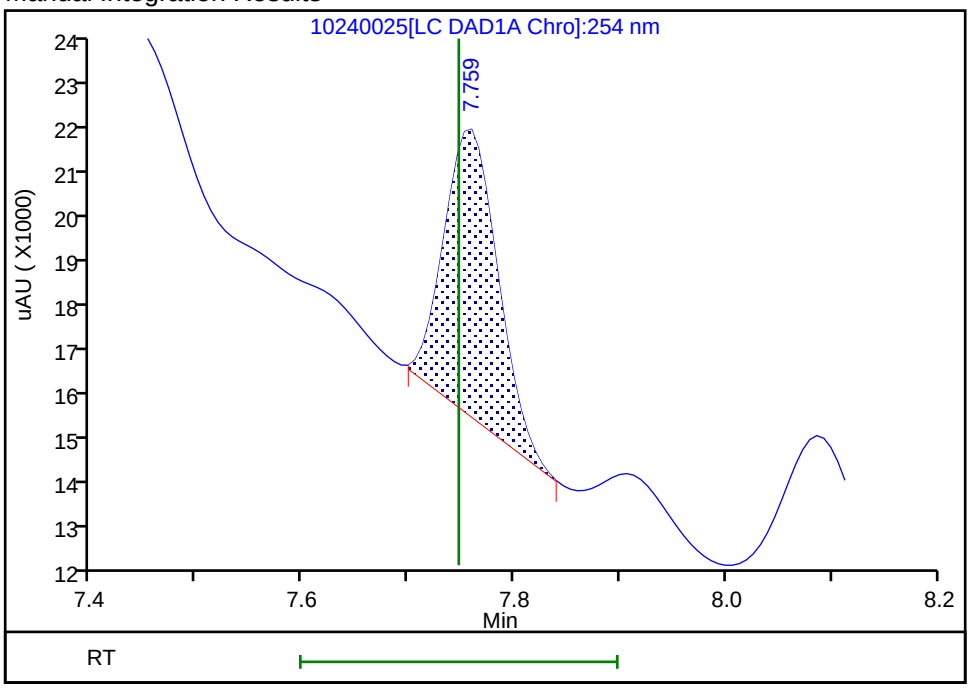
Processing Integration Results

RT: 7.76
Area: 113336
Amount: 1.019939
Amount Units: ug/mL



Manual Integration Results

RT: 7.76
Area: 20333
Amount: 0.182982
Amount Units: ug/mL



Reviewer: beckerc, 25-Oct-2019 12:34:13
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

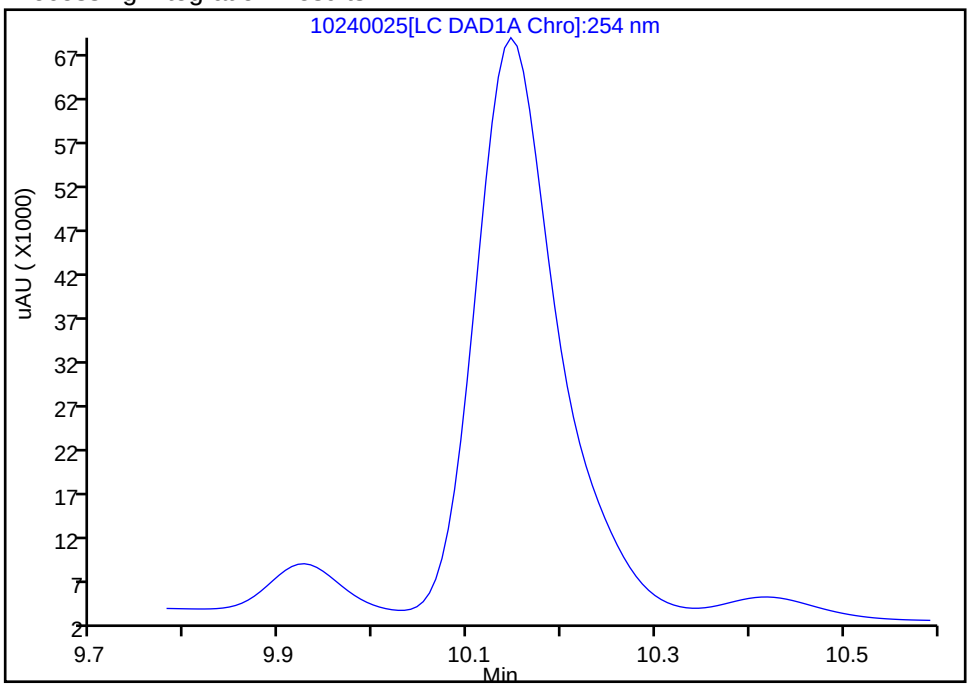
Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240025.D				
Injection Date:	24-Oct-2019 18:03:07	Instrument ID:	CHHPLC_X3		
Lims ID:	280-129830-A-3-B MS				
Client ID:	EW7-PM25B-1-35				
Operator ID:	CB	ALS Bottle#:	25	Worklist Smp#:	25
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

14 Tetryl, CAS: 479-45-8

Signal: 1

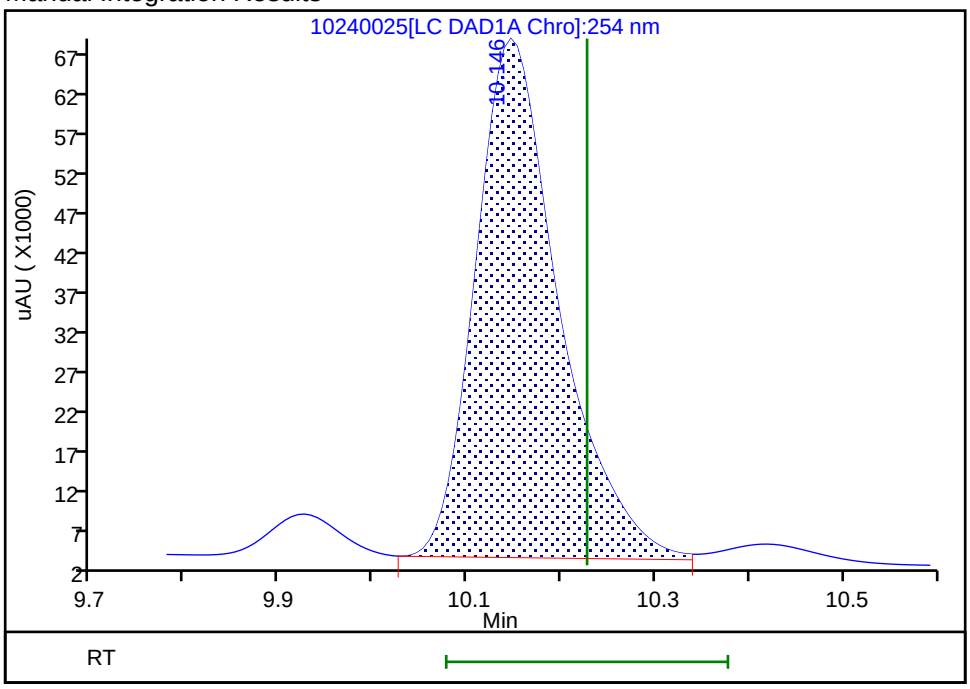
Not Detected
Expected RT: 10.23

Processing Integration Results



Manual Integration Results

RT: 10.15
Area: 397951
Amount: 2.457137
Amount Units: ug/mL



Reviewer: beckerc, 25-Oct-2019 12:35:04
Audit Action: Assigned Compound ID Audit Reason: Baseline Smoothing

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Client Sample ID: EW7-PM25B-1-35 MS Lab Sample ID: 280-129830-3 MS

Matrix: Water Lab File ID: 10240027.D

Analysis Method: 8330A Date Collected: 10/16/2019 14:55

Extraction Method: 3535 Date Extracted: 10/23/2019 15:47

Sample wt/vol: 524.4(mL) Date Analyzed: 10/24/2019 18:48

Con. Extract Vol.: 5(mL) Dilution Factor: 1

Injection Volume: 100(uL) GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 475188 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
5755-27-1	MNX	2.05	M	1.9	0.38	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	72	Q	83-119

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240027.D
Lims ID: 280-129830-B-3-A MS
Client ID: EW7-PM25B-1-35
Sample Type: MS
Inject. Date: 24-Oct-2019 18:48:58 ALS Bottle#: 27 Worklist Smp#: 27
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-129830-B-3-A
Misc. Info.: 280-0086464-027
Operator ID: CB Instrument ID: CHHPLC_X3

Method: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 25-Oct-2019 13:02:59 Calib Date: 02-Jul-2019 00:18:07
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0317

First Level Reviewer: beckerc Date: 25-Oct-2019 12:37:36

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
	1 2,6-diamino-4-nitrotoluene	1		6.540				ND	U
	2 TNX	1	6.586	6.587	-0.001	39928	0.2002	0.1857	M
	3 HMX	1		6.667				ND	
	4 2,4-diamino-6-nitrotoluene	1		6.727				ND	
	5 DNX	1	6.906	6.907	-0.001	57445	0.2002	0.3679	M
	6 MNX	1	7.346	7.367	-0.021	30156	0.2334	0.2153	M
	7 RDX	1		7.747				ND	
	8 2,4,6-Trinitrophenol	1		8.127				ND	
$	9 1,2-Dinitrobenzene	1	8.719	8.721	-0.002	20147	0.2000	0.1446	
	10 1,3,5-Trinitrobenzene	1	8.886	8.887	-0.001	531635		2.17	
	11 1,3-Dinitrobenzene	1		9.534				ND	U
	12 Nitrobenzene	1		9.920				ND	
	13 3,5-Dinitroaniline	1	10.145	10.173	-0.028	376833		1.58	
	14 Tetryl	1		10.227				ND	
	15 Nitroglycerin	2		10.740				ND	
	16 2,4,6-Trinitrotoluene	1	11.192	11.187	0.005	98568		0.4337	
	17 4-Amino-2,6-dinitrotoluene	1	11.352	11.347	0.005	19786		0.1189	
	18 2-Amino-4,6-dinitrotoluene	1	11.645	11.634	0.011	31047		0.1513	
	19 2,6-Dinitrotoluene	1		11.794				ND	
	20 2,4-Dinitrotoluene	1		11.994				ND	
	21 o-Nitrotoluene	1		12.840				ND	
	22 p-Nitrotoluene	1		13.280				ND	U
	23 m-Nitrotoluene	1		13.880				ND	
	24 PETN	2		14.987				ND	
	25 Ammonium Picrate	1		0.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

U - Marked Undetected

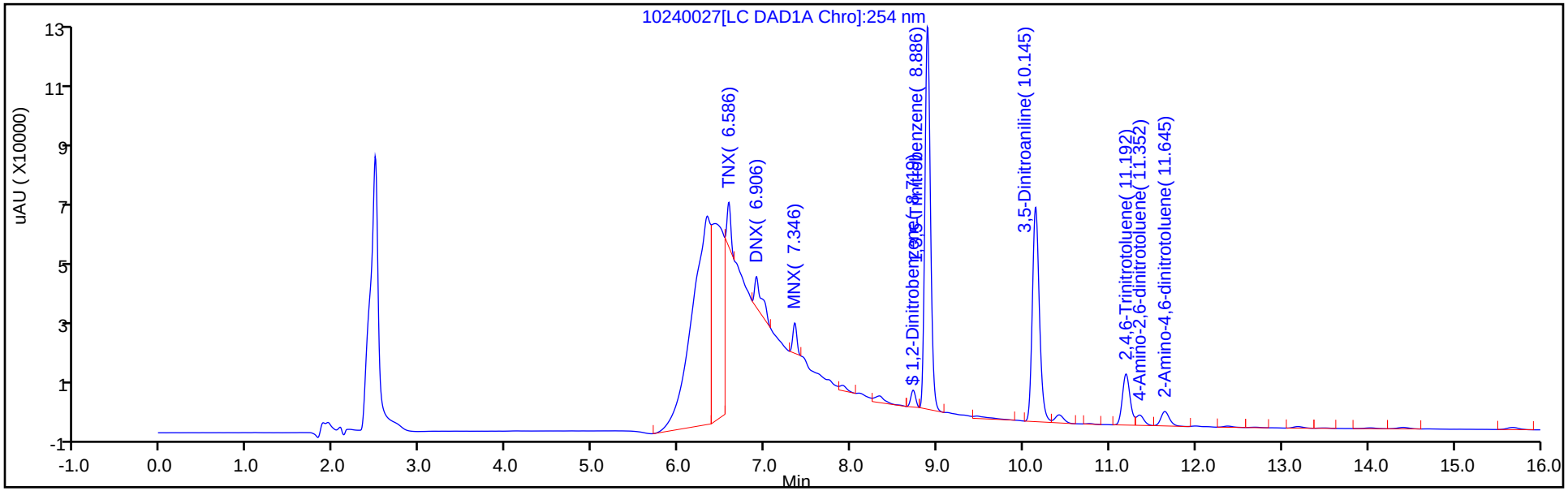
Report Date: 25-Oct-2019 13:03:23 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

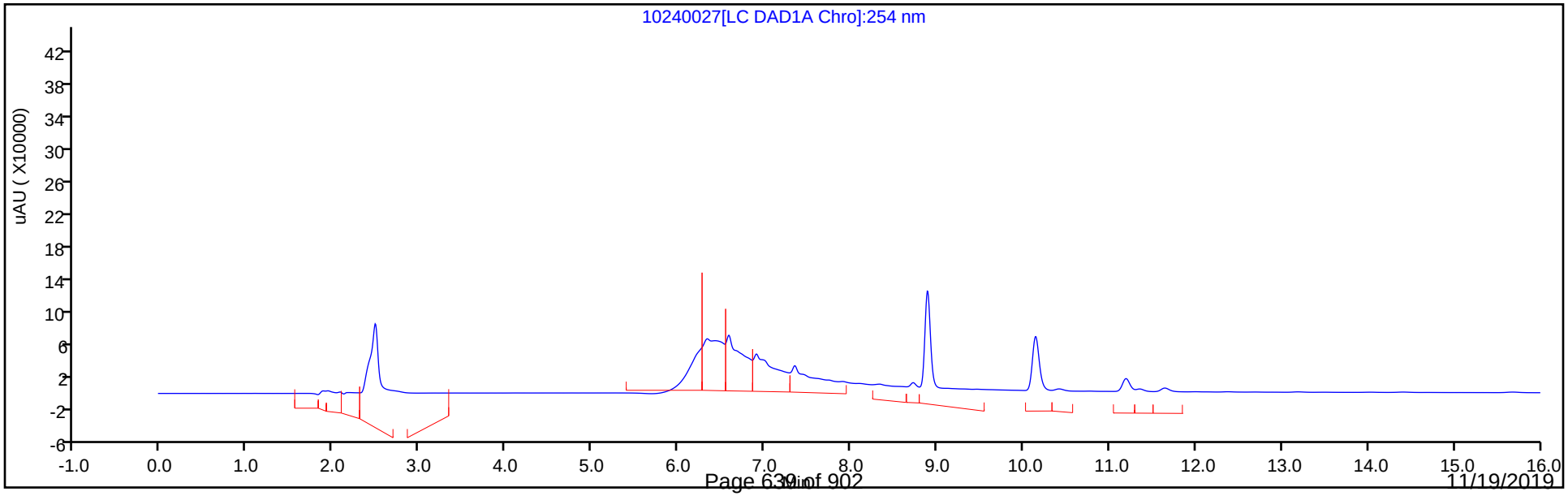
Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240027.D

Injection Date:	24-Oct-2019 18:48:58	Instrument ID:	CHHPLC_X3	Operator ID:	CB
Lims ID:	280-129830-B-3-A MS			Worklist Smp#:	27
Client ID:	EW7-PM25B-1-35				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	27
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Recovery Report

Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240027.D				
Lims ID:	280-129830-B-3-A MS				
Client ID:	EW7-PM25B-1-35				
Sample Type:	MS				
Inject. Date:	24-Oct-2019 18:48:58	ALS Bottle#:	27	Worklist Smp#:	27
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-129830-B-3-A				
Misc. Info.:	280-0086464-027				
Operator ID:	CB	Instrument ID:	CHHPLC_X3		
Method:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	25-Oct-2019 13:02:59	Calib Date:	02-Jul-2019 00:18:07		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX0317				
First Level Reviewer: beckerc		Date:	25-Oct-2019 12:37:36		

Compound	Amount Added	Amount Recovered	% Rec.
$ 9 1,2-Dinitrobenzene	0.2000	0.1446	72.30

User Disabled Compound Report

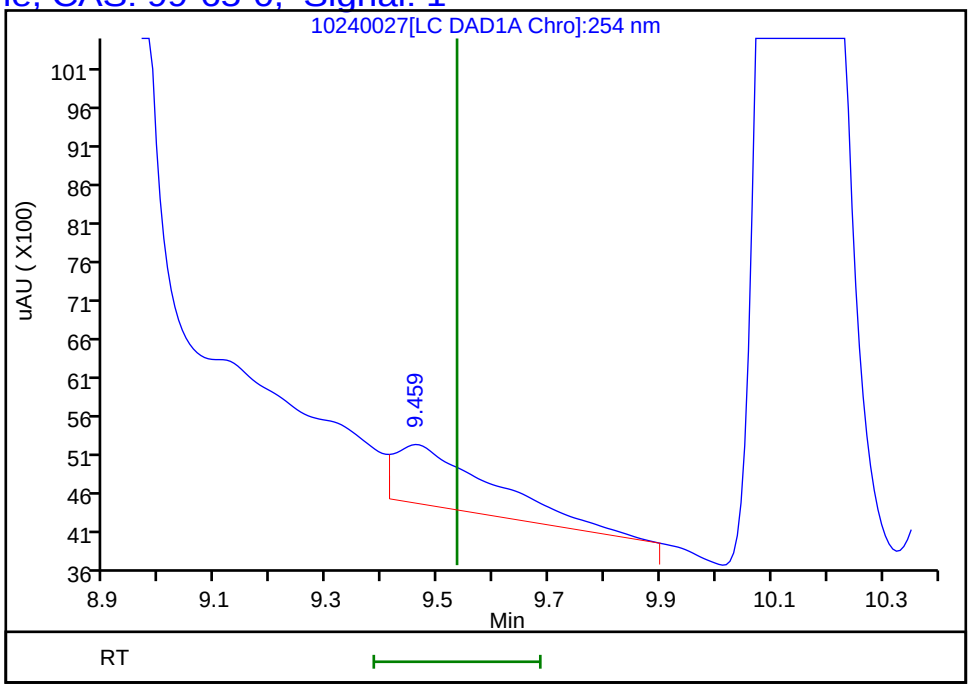
Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240027.D
Injection Date: 24-Oct-2019 18:48:58 Instrument ID: CHHPLC_X3
Lims ID: 280-129830-B-3-A MS
Client ID: EW7-PM25B-1-35
Operator ID: CB ALS Bottle#: 27 Worklist Smp#: 27
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330

Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

11 1,3-Dinitrobenzene, CAS: 99-65-0, Signal: 1

RT: 9.46
Response: 9753
Amount: 0.031342



Reviewer: beckerc, 25-Oct-2019 12:37:36
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

User Disabled Compound Report

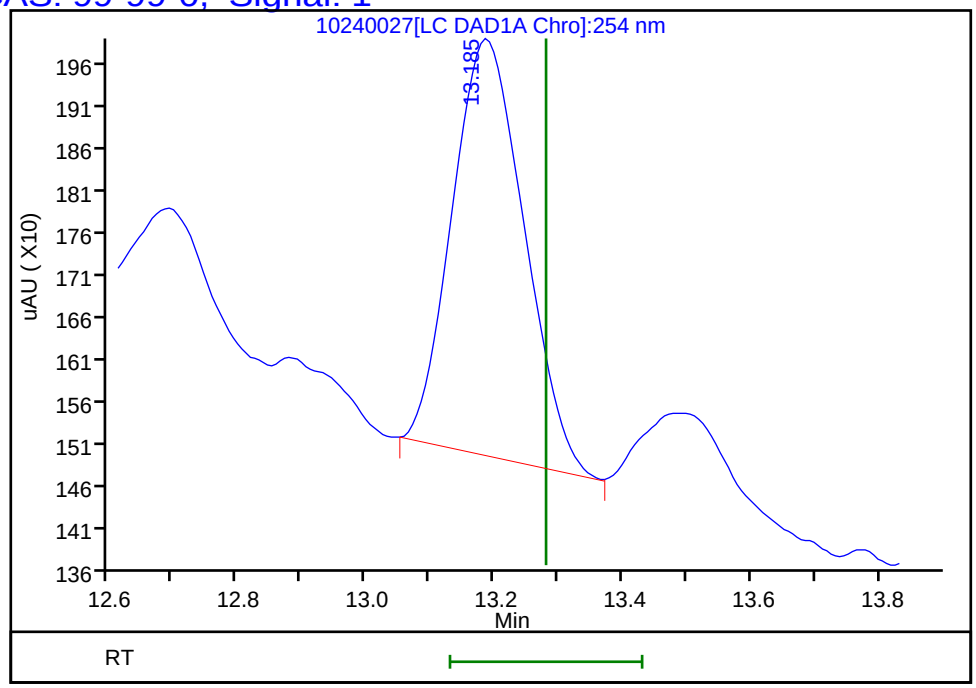
Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240027.D
Injection Date: 24-Oct-2019 18:48:58 Instrument ID: CHHPLC_X3
Lims ID: 280-129830-B-3-A MS
Client ID: EW7-PM25B-1-35
Operator ID: CB ALS Bottle#: 27 Worklist Smp#: 27
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330

Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

22 p-Nitrotoluene, CAS: 99-99-0, Signal: 1

RT: 13.19
Response: 3852
Amount: 0.034937



Reviewer: beckerc, 25-Oct-2019 12:37:36
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

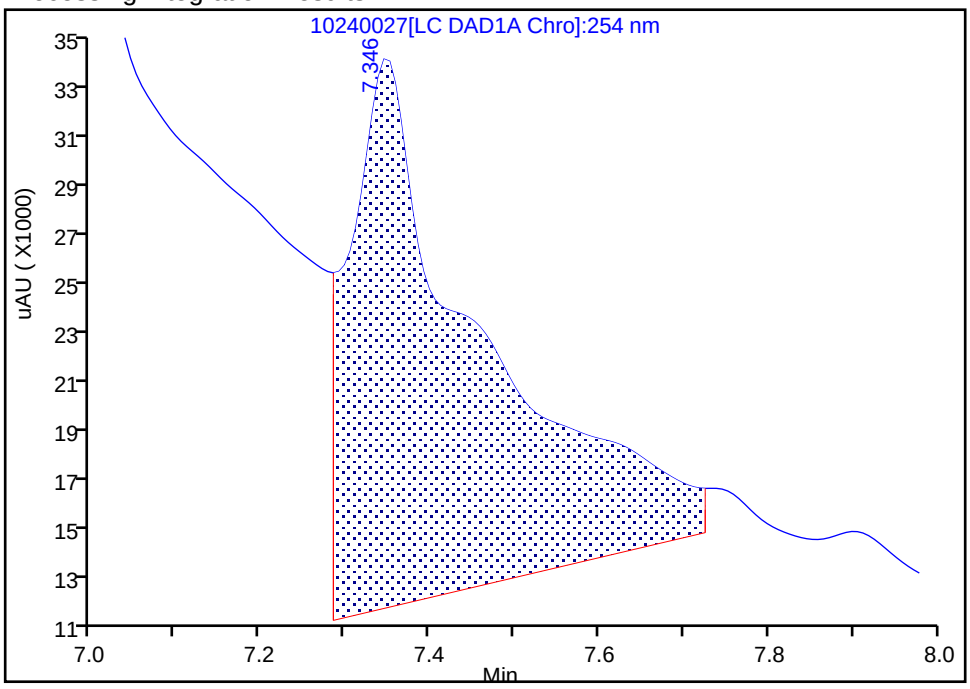
Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240027.D				
Injection Date:	24-Oct-2019 18:48:58	Instrument ID:	CHHPLC_X3		
Lims ID:	280-129830-B-3-A MS				
Client ID:	EW7-PM25B-1-35				
Operator ID:	CB	ALS Bottle#:	27	Worklist Smp#:	27
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

6 MNX, CAS: 5755-27-1

Signal: 1

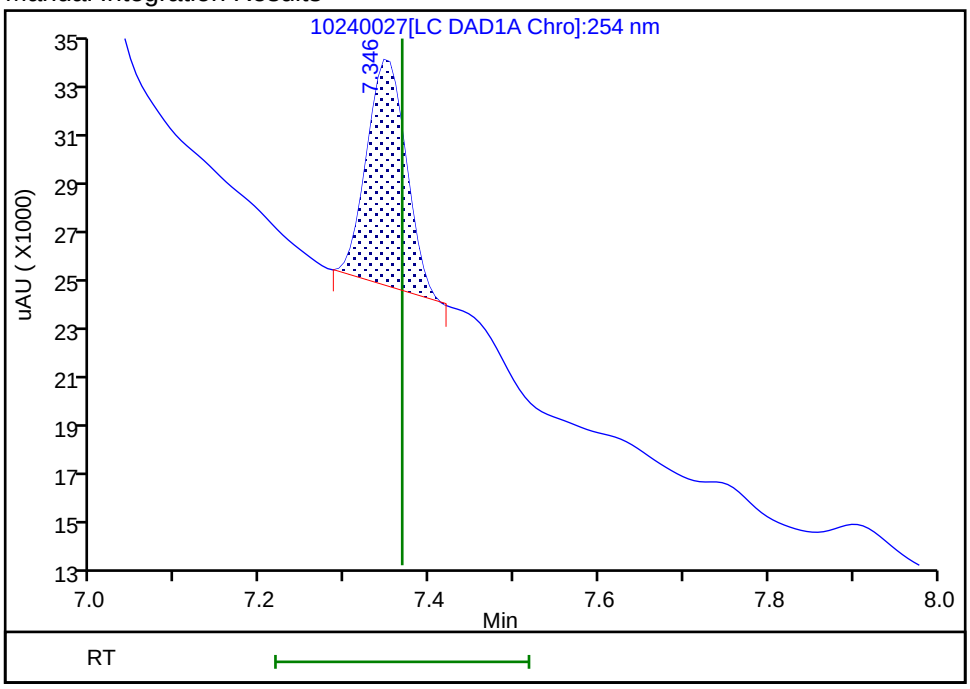
Processing Integration Results

RT: 7.35
Area: 243965
Amount: 1.742097
Amount Units: ug/mL



Manual Integration Results

RT: 7.35
Area: 30156
Amount: 0.215337
Amount Units: ug/mL



Reviewer: beckerc, 25-Oct-2019 12:37:17

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Client Sample ID: EW7-PM25B-1-35 MSD Lab Sample ID: 280-129830-3 MSD

Matrix: Water Lab File ID: 10240026.D

Analysis Method: 8330A Date Collected: 10/16/2019 14:55

Extraction Method: 3535 Date Extracted: 10/23/2019 15:47

Sample wt/vol: 500.7(mL) Date Analyzed: 10/24/2019 18:26

Con. Extract Vol.: 5(mL) Dilution Factor: 1

Injection Volume: 100(uL) GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 475188 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	21.4	4	1.0	0.40	0.20
99-65-0	1,3-Dinitrobenzene	2.14		0.40	0.20	0.089
118-96-7	2,4,6-Trinitrotoluene	5.78		0.40	0.40	0.16
121-14-2	2,4-Dinitrotoluene	1.87		0.40	0.20	0.084
606-20-2	2,6-Dinitrotoluene	1.75		0.20	0.20	0.064
35572-78-2	2-Amino-4,6-dinitrotoluene	3.18		0.20	0.12	0.051
88-72-2	2-Nitrotoluene	1.47		0.40	0.20	0.085
99-08-1	3-Nitrotoluene	1.61		0.40	0.40	0.19
19406-51-0	4-Amino-2,6-dinitrotoluene	2.75		0.20	0.12	0.058
99-99-0	4-Nitrotoluene	1.82		1.0	0.40	0.20
2691-41-0	HMX	1.75	M	0.40	0.20	0.087
98-95-3	Nitrobenzene	1.54		0.40	0.20	0.091
121-82-4	RDX	1.85	M	0.40	0.40	0.16
479-45-8	Tetryl	22.7	J1 M	0.24	0.20	0.079

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	86		83-119

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240026.D
Lims ID: 280-129830-A-3-C MSD
Client ID: EW7-PM25B-1-35
Sample Type: MSD
Inject. Date: 24-Oct-2019 18:26:03 ALS Bottle#: 26 Worklist Smp#: 26
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-129830-A-3-C
Misc. Info.: 280-0086464-026
Operator ID: CB Instrument ID: CHHPLC_X3

Method: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 25-Oct-2019 13:02:59 Calib Date: 02-Jul-2019 00:18:07
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0317

First Level Reviewer: beckerc Date: 25-Oct-2019 12:36:32

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
1	2,6-diamino-4-nitrotoluene	1		6.540				ND	
2	TNX	1		6.587				ND	
3	HMX	1	6.673	6.667	0.006	16078	0.2000	0.1751	M
4	2,4-diamino-6-nitrotoluene	1		6.727				ND	
5	DNX	1		6.907				ND	U
6	MNX	1		7.367				ND	U
7	RDX	1	7.753	7.747	0.006	20610	0.2000	0.1855	M
8	2,4,6-Trinitrophenol	1	8.086	8.127	-0.041	17377	0.2000	0.1915	M
$ 9	1,2-Dinitrobenzene	1	8.719	8.721	-0.002	23934	0.2000	0.1718	
10	1,3,5-Trinitrobenzene	1	8.886	8.887	-0.001	525785	0.2000	2.15	
11	1,3-Dinitrobenzene	1	9.532	9.534	-0.002	66679	0.2000	0.2143	
12	Nitrobenzene	1	9.919	9.920	-0.001	30728	0.2000	0.1545	
13	3,5-Dinitroaniline	1		10.173				ND	a
14	Tetryl	1	10.139	10.227	-0.088	367873	0.2000	2.27	a
15	Nitroglycerin	2	10.732	10.740	-0.008	137879	2.00	1.94	
16	2,4,6-Trinitrotoluene	1	11.186	11.187	-0.001	131481	0.2000	0.5785	
17	4-Amino-2,6-dinitrotoluene	1	11.346	11.347	-0.001	45879	0.2000	0.2758	
18	2-Amino-4,6-dinitrotoluene	1	11.632	11.634	-0.002	65345	0.2000	0.3184	
19	2,6-Dinitrotoluene	1	11.792	11.794	-0.002	27840	0.2000	0.1748	
20	2,4-Dinitrotoluene	1	11.992	11.994	-0.002	56273	0.2000	0.1873	
21	o-Nitrotoluene	1	12.839	12.840	-0.001	19050	0.2000	0.1468	
22	p-Nitrotoluene	1	13.272	13.280	-0.008	20081	0.2000	0.1821	
23	m-Nitrotoluene	1	13.879	13.880	-0.001	23391	0.2000	0.1612	
24	PETN	2	14.986	14.987	-0.001	154248	2.00	2.08	
25	Ammonium Picrate	1		0.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

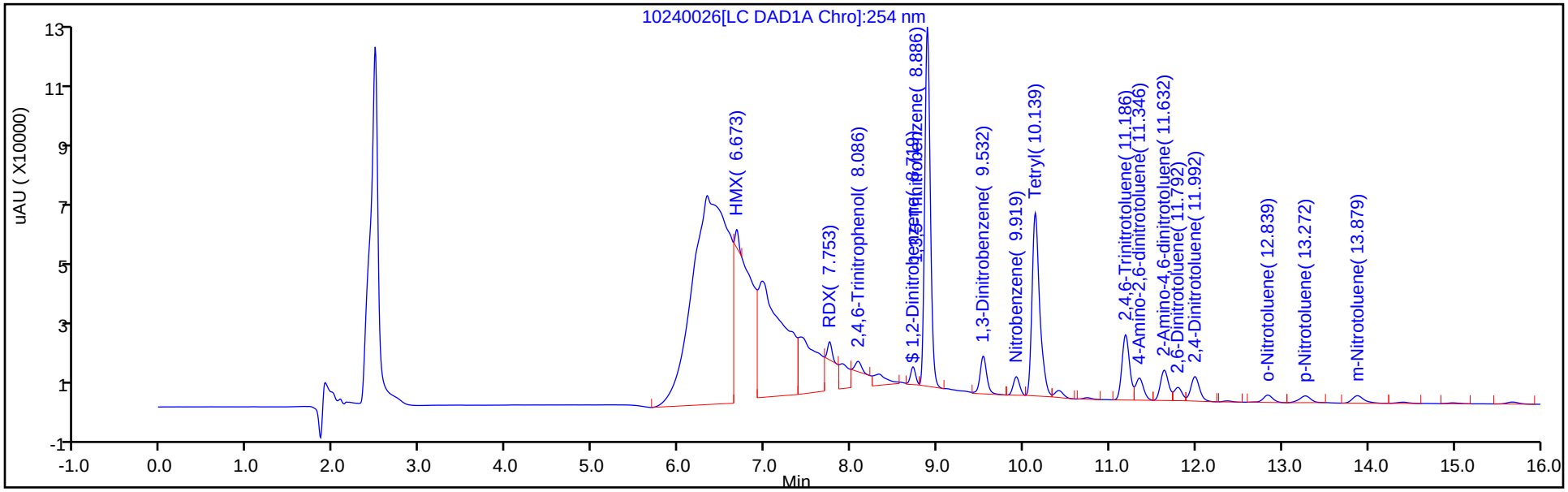
Report Date: 25-Oct-2019 13:03:19 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

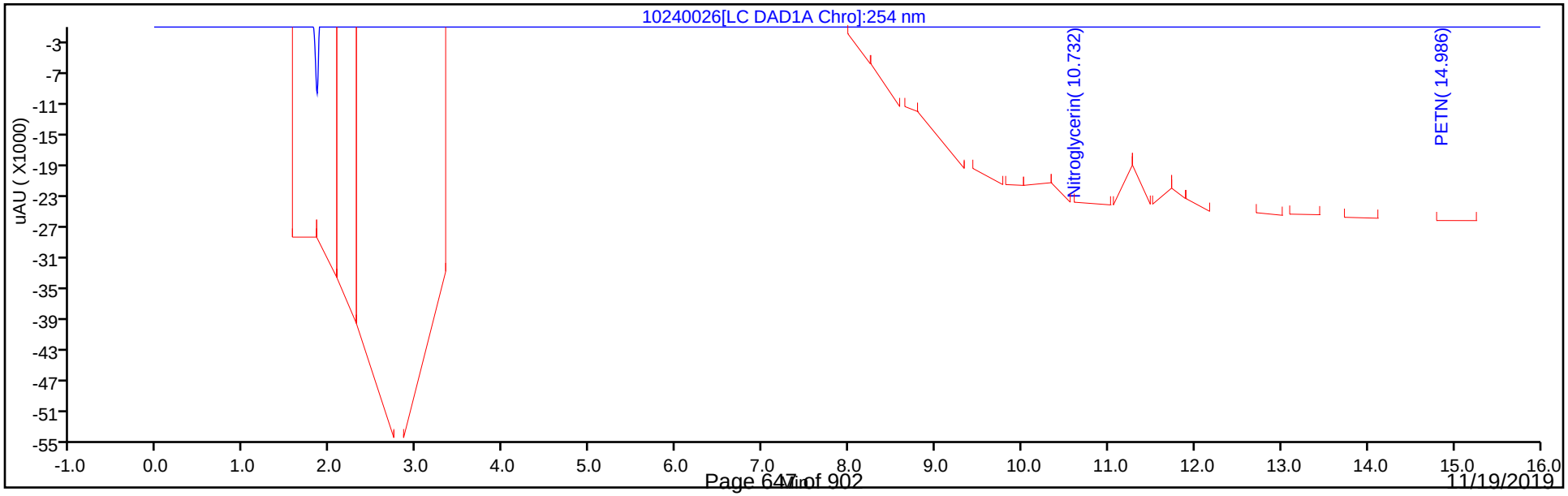
Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240026.D

Injection Date:	24-Oct-2019 18:26:03	Instrument ID:	CHHPLC_X3	Operator ID:	CB
Lims ID:	280-129830-A-3-C MSD			Worklist Smp#:	26
Client ID:	EW7-PM25B-1-35				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Recovery Report

Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240026.D				
Lims ID:	280-129830-A-3-C MSD				
Client ID:	EW7-PM25B-1-35				
Sample Type:	MSD				
Inject. Date:	24-Oct-2019 18:26:03	ALS Bottle#:	26	Worklist Smp#:	26
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-129830-A-3-C				
Misc. Info.:	280-0086464-026				
Operator ID:	CB	Instrument ID:	CHHPLC_X3		
Method:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	25-Oct-2019 13:02:59	Calib Date:	02-Jul-2019 00:18:07		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX0317				
First Level Reviewer: beckerc		Date:	25-Oct-2019 12:36:32		

Compound	Amount Added	Amount Recovered	% Rec.
$ 9 1,2-Dinitrobenzene	0.2000	0.1718	85.89

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

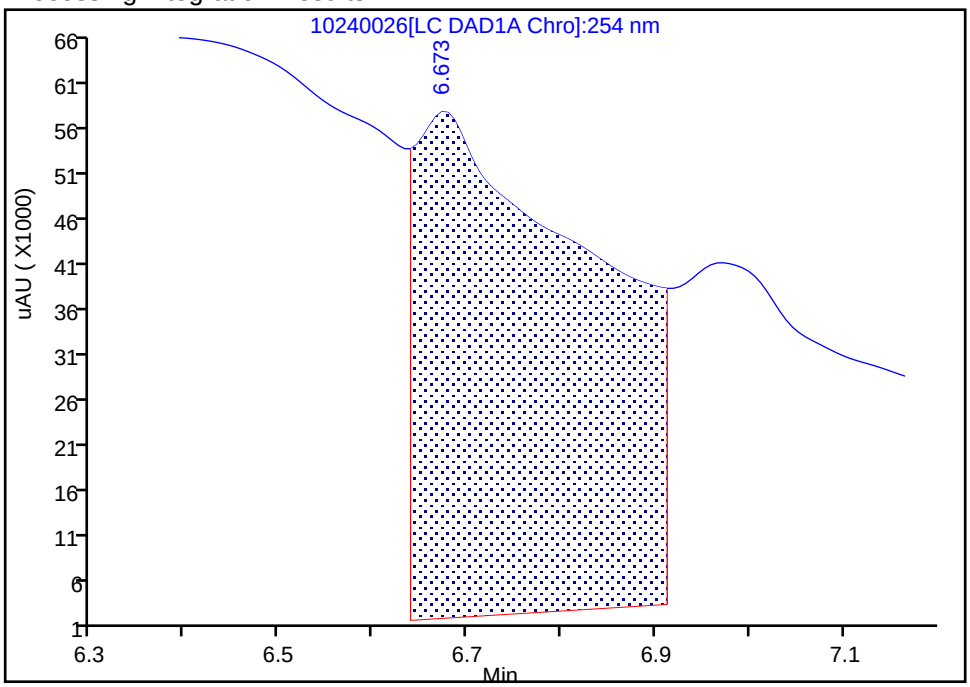
Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240026.D				
Injection Date:	24-Oct-2019 18:26:03	Instrument ID:	CHHPLC_X3		
Lims ID:	280-129830-A-3-C MSD				
Client ID:	EW7-PM25B-1-35				
Operator ID:	CB	ALS Bottle#:	26	Worklist Smp#:	26
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

3 HMX, CAS: 2691-41-0

Signal: 1

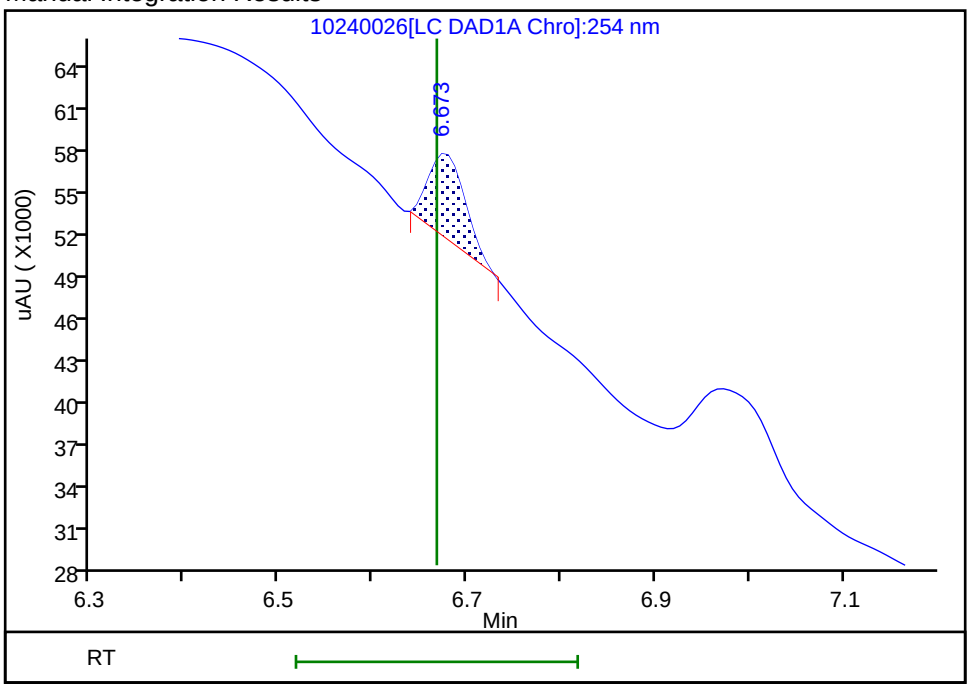
Processing Integration Results

RT: 6.67
Area: 726943
Amount: 7.915902
Amount Units: ug/mL



Manual Integration Results

RT: 6.67
Area: 16078
Amount: 0.175078
Amount Units: ug/mL



Reviewer: beckerc, 25-Oct-2019 12:35:40
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

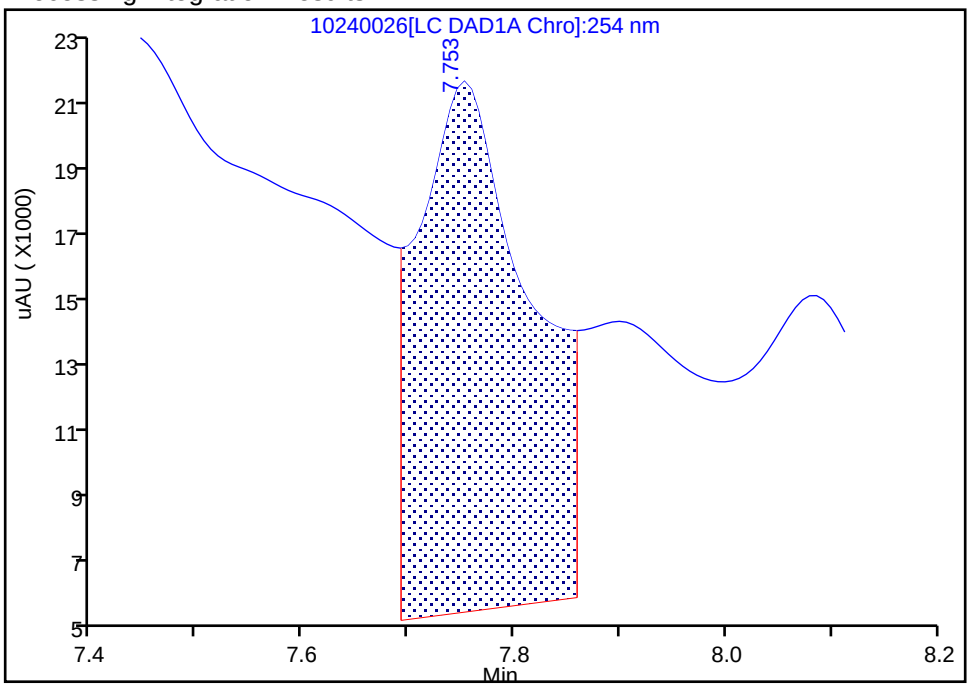
Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240026.D				
Injection Date:	24-Oct-2019 18:26:03	Instrument ID:	CHHPLC_X3		
Lims ID:	280-129830-A-3-C MSD				
Client ID:	EW7-PM25B-1-35				
Operator ID:	CB	ALS Bottle#:	26	Worklist Smp#:	26
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

7 RDX, CAS: 121-82-4

Signal: 1

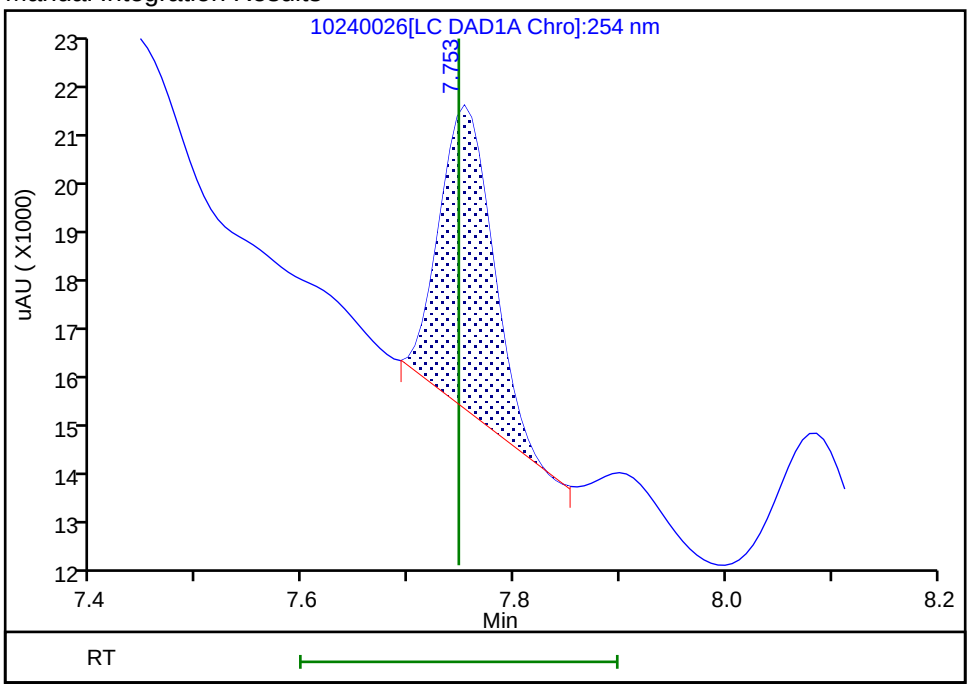
Processing Integration Results

RT: 7.75
Area: 114660
Amount: 1.031854
Amount Units: ug/mL



Manual Integration Results

RT: 7.75
Area: 20610
Amount: 0.185474
Amount Units: ug/mL



Reviewer: beckerc, 25-Oct-2019 12:35:58
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

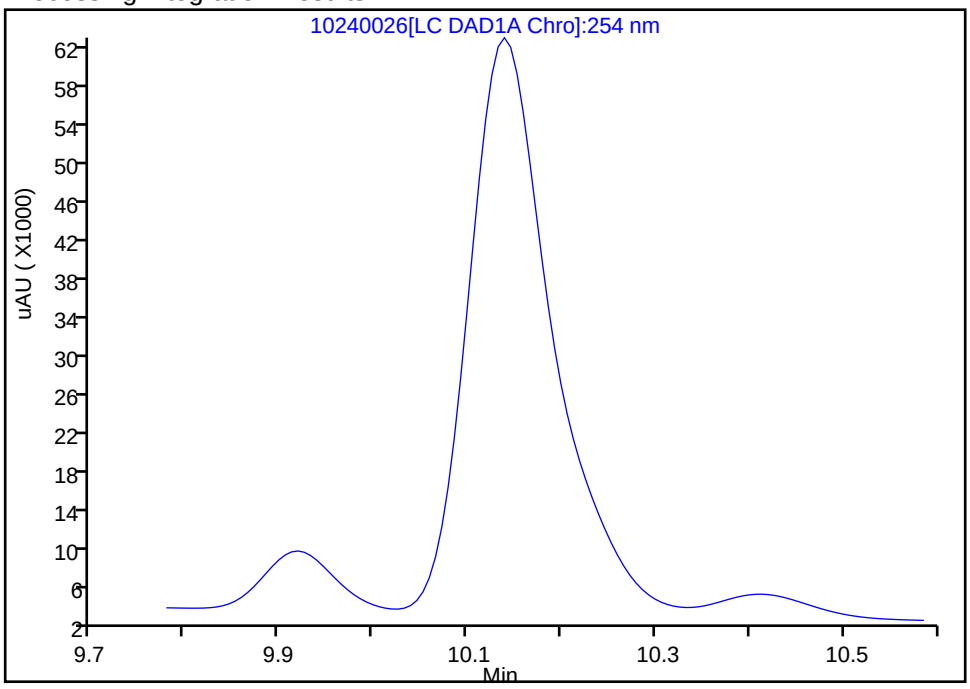
Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240026.D				
Injection Date:	24-Oct-2019 18:26:03	Instrument ID:	CHHPLC_X3		
Lims ID:	280-129830-A-3-C MSD				
Client ID:	EW7-PM25B-1-35				
Operator ID:	CB	ALS Bottle#:	26	Worklist Smp#:	26
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

14 Tetryl, CAS: 479-45-8

Signal: 1

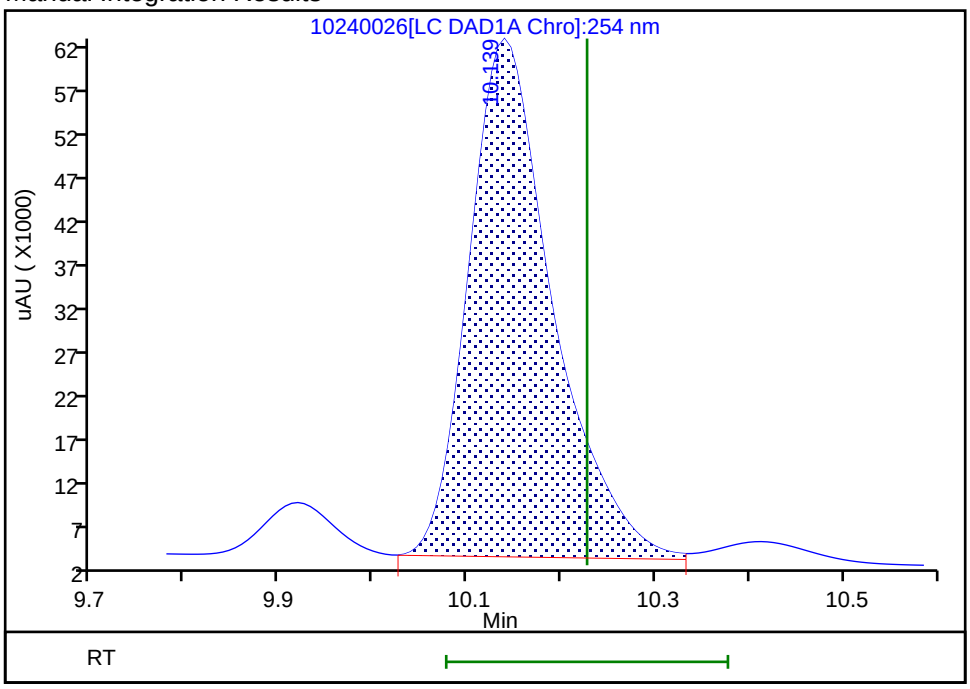
Not Detected
Expected RT: 10.23

Processing Integration Results



Manual Integration Results

RT: 10.14
Area: 367873
Amount: 2.271421
Amount Units: ug/mL



Reviewer: beckerc, 25-Oct-2019 12:36:18
Audit Action: Assigned Compound ID Audit Reason: Baseline Smoothing

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Client Sample ID: EW7-PM25B-1-35 MSD Lab Sample ID: 280-129830-3 MSD

Matrix: Water Lab File ID: 10240028.D

Analysis Method: 8330A Date Collected: 10/16/2019 14:55

Extraction Method: 3535 Date Extracted: 10/23/2019 15:47

Sample wt/vol: 508.2(mL) Date Analyzed: 10/24/2019 19:11

Con. Extract Vol.: 5(mL) Dilution Factor: 1

Injection Volume: 100(uL) GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 475188 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
5755-27-1	MNX	2.05	M	2.0	0.39	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	83		83-119

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240028.D
Lims ID: 280-129830-B-3-B MSD
Client ID: EW7-PM25B-1-35
Sample Type: MSD
Inject. Date: 24-Oct-2019 19:11:54 ALS Bottle#: 28 Worklist Smp#: 28
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-129830-B-3-B
Misc. Info.: 280-0086464-028
Operator ID: CB Instrument ID: CHHPLC_X3

Method: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 25-Oct-2019 13:02:59 Calib Date: 02-Jul-2019 00:18:07
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0317

First Level Reviewer: beckerc Date: 25-Oct-2019 12:51:09

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
	1 2,6-diamino-4-nitrotoluene	1		6.540				ND	
	2 TNX	1	6.587	6.587	0.000	39391	0.2002	0.1832	M
	3 HMX	1		6.667				ND	
	4 2,4-diamino-6-nitrotoluene	1		6.727				ND	
	5 DNX	1	6.907	6.907	0.000	17651	0.2002	0.1131	M
	6 MNX	1	7.347	7.367	-0.020	29162	0.2334	0.2082	M
	7 RDX	1		7.747				ND	
	8 2,4,6-Trinitrophenol	1		8.127				ND	
$	9 1,2-Dinitrobenzene	1	8.720	8.721	-0.001	23217	0.2000	0.1666	
	10 1,3,5-Trinitrobenzene	1	8.887	8.887	0.000	486088		1.98	
	11 1,3-Dinitrobenzene	1		9.534				ND	U
	12 Nitrobenzene	1		9.920				ND	
	13 3,5-Dinitroaniline	1	10.140	10.173	-0.033	341065		1.43	M
	14 Tetryl	1		10.227				ND	
	15 Nitroglycerin	2		10.740				ND	
	16 2,4,6-Trinitrotoluene	1	11.187	11.187	0.000	91806		0.4039	
	17 4-Amino-2,6-dinitrotoluene	1	11.347	11.347	0.000	17454		0.1049	
	18 2-Amino-4,6-dinitrotoluene	1	11.640	11.634	0.006	28635		0.1395	
	19 2,6-Dinitrotoluene	1		11.794				ND	
	20 2,4-Dinitrotoluene	1		11.994				ND	
	21 o-Nitrotoluene	1		12.840				ND	
	22 p-Nitrotoluene	1		13.280				ND	U
	23 m-Nitrotoluene	1		13.880				ND	U
	24 PETN	2		14.987				ND	
	25 Ammonium Picrate	1		0.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

U - Marked Undetected

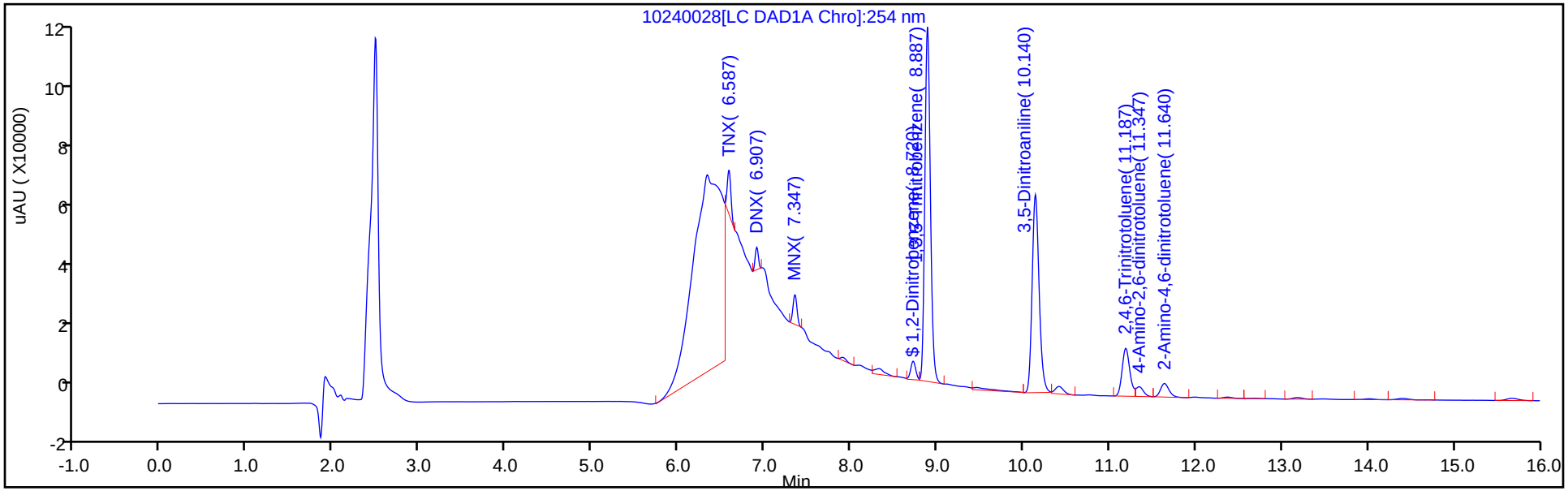
Report Date: 25-Oct-2019 13:03:25 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

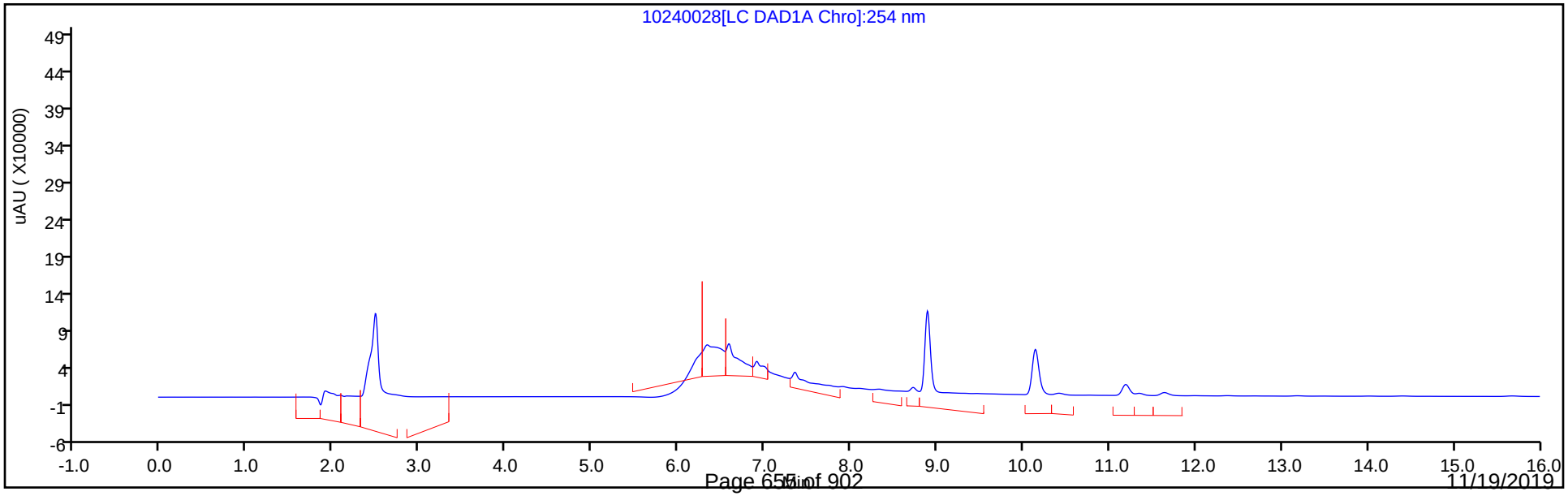
Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240028.D

Injection Date:	24-Oct-2019 19:11:54	Instrument ID:	CHHPLC_X3	Operator ID:	CB
Lims ID:	280-129830-B-3-B MSD			Worklist Smp#:	28
Client ID:	EW7-PM25B-1-35				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	28
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Recovery Report

Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240028.D				
Lims ID:	280-129830-B-3-B MSD				
Client ID:	EW7-PM25B-1-35				
Sample Type:	MSD				
Inject. Date:	24-Oct-2019 19:11:54	ALS Bottle#:	28	Worklist Smp#:	28
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-129830-B-3-B				
Misc. Info.:	280-0086464-028				
Operator ID:	CB	Instrument ID:	CHHPLC_X3		
Method:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	25-Oct-2019 13:02:59	Calib Date:	02-Jul-2019 00:18:07		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Denver\ChromData\CHHPLC_X\20190701-83376.b\07010032.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX0317				
First Level Reviewer: beckerc		Date:	25-Oct-2019 12:51:09		

Compound	Amount Added	Amount Recovered	% Rec.
$ 9 1,2-Dinitrobenzene	0.2000	0.1666	83.32

User Disabled Compound Report

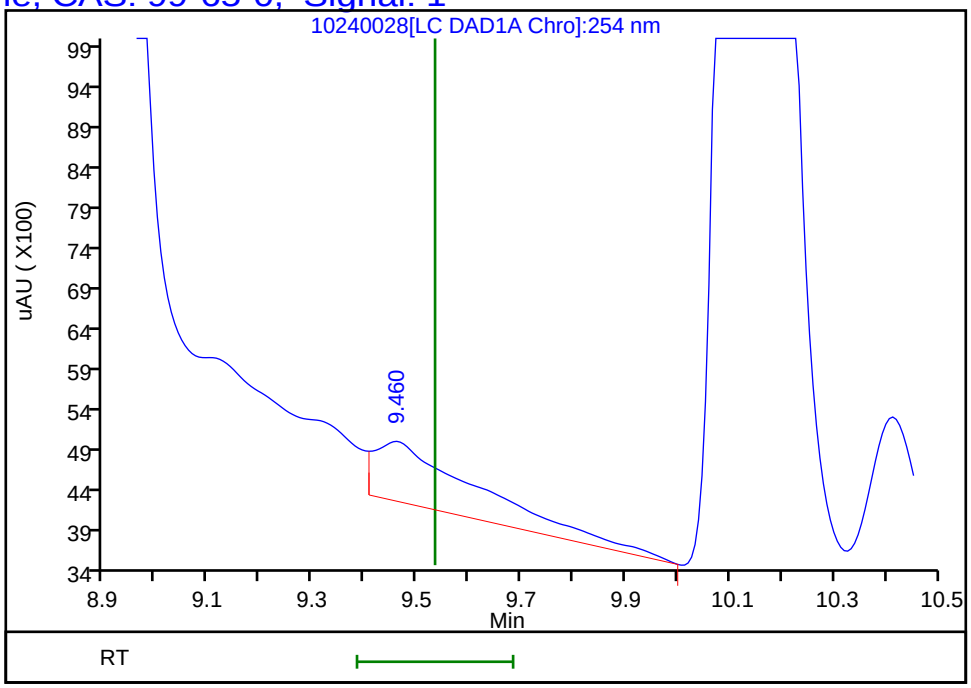
Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240028.D
Injection Date: 24-Oct-2019 19:11:54 Instrument ID: CHHPLC_X3
Lims ID: 280-129830-B-3-B MSD
Client ID: EW7-PM25B-1-35
Operator ID: CB ALS Bottle#: 28 Worklist Smp#: 28
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330

Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

11 1,3-Dinitrobenzene, CAS: 99-65-0, Signal: 1

RT: 9.46
Response: 11082
Amount: 0.035613



Reviewer: beckerc, 25-Oct-2019 12:51:09
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

User Disabled Compound Report

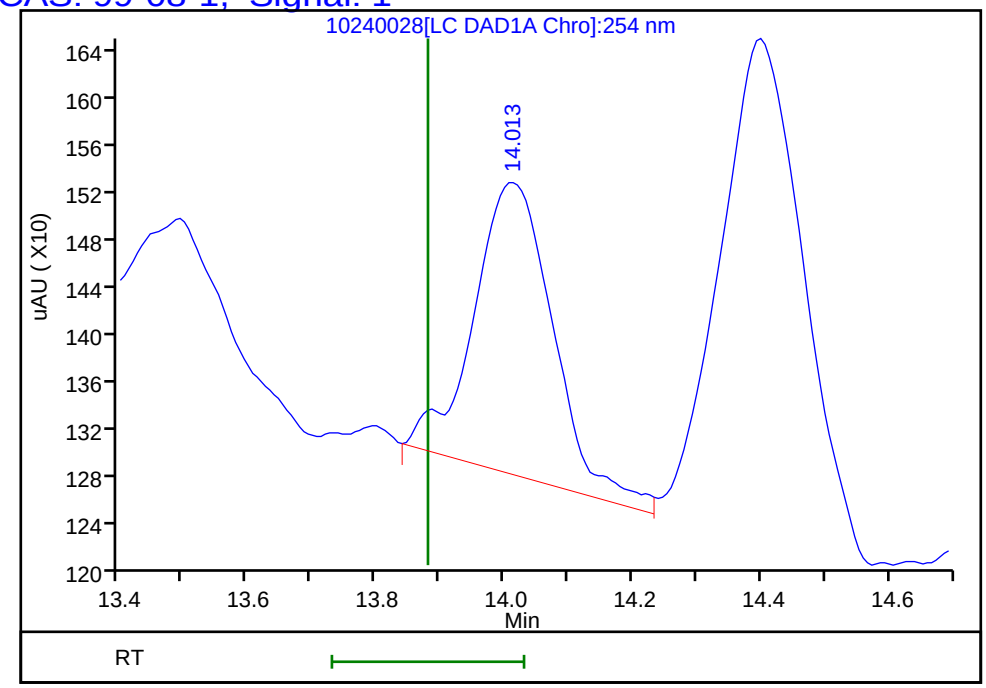
Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240028.D
Injection Date: 24-Oct-2019 19:11:54 Instrument ID: CHHPLC_X3
Lims ID: 280-129830-B-3-B MSD
Client ID: EW7-PM25B-1-35
Operator ID: CB ALS Bottle#: 28 Worklist Smp#: 28
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330

Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

23 m-Nitrotoluene, CAS: 99-08-1, Signal: 1

RT: 14.01
Response: 2121
Amount: 0.014615



Reviewer: beckerc, 25-Oct-2019 12:51:09
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

User Disabled Compound Report

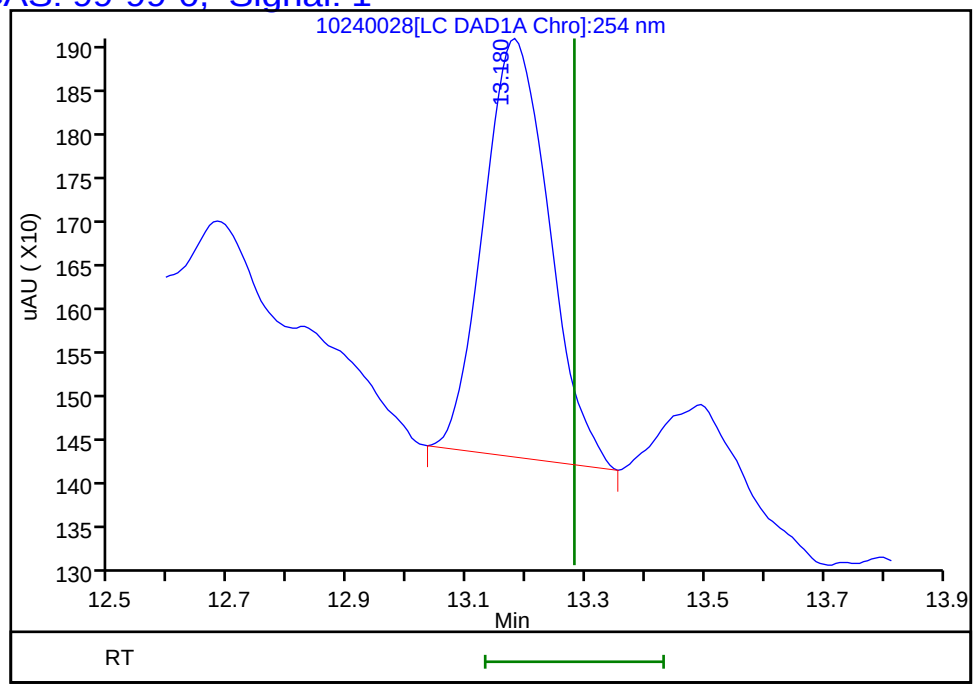
Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240028.D
Injection Date: 24-Oct-2019 19:11:54 Instrument ID: CHHPLC_X3
Lims ID: 280-129830-B-3-B MSD
Client ID: EW7-PM25B-1-35
Operator ID: CB ALS Bottle#: 28 Worklist Smp#: 28
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330

Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

22 p-Nitrotoluene, CAS: 99-99-0, Signal: 1

RT: 13.18
Response: 3661
Amount: 0.033205



Reviewer: beckerc, 25-Oct-2019 12:51:09
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

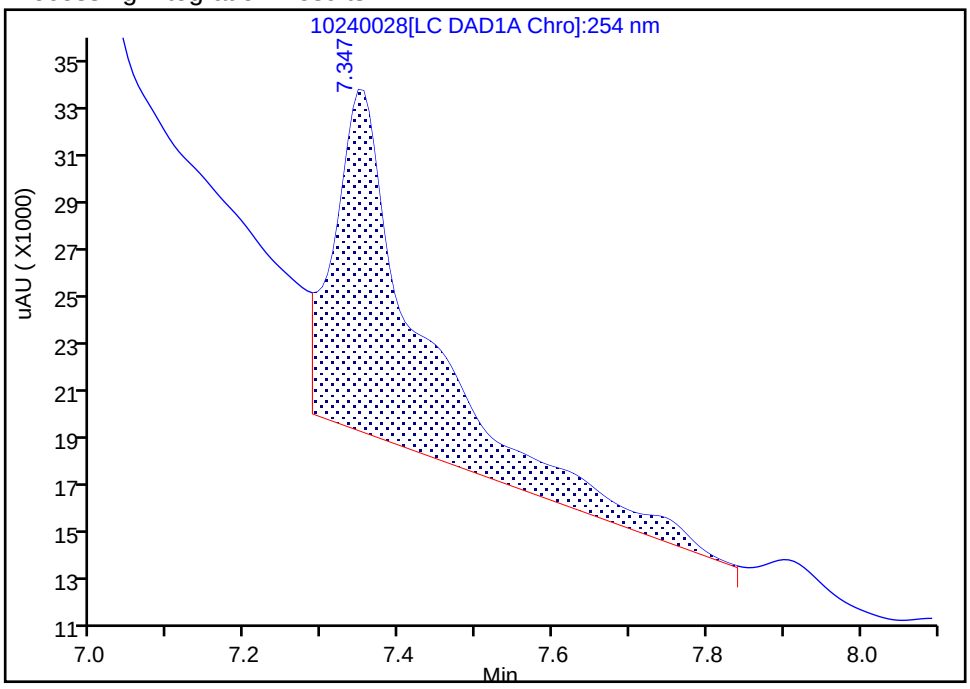
Data File:	\\chromna\Denver\ChromData\CHHPLC_X\20191024-86464.b\10240028.D				
Injection Date:	24-Oct-2019 19:11:54	Instrument ID:	CHHPLC_X3		
Lims ID:	280-129830-B-3-B MSD				
Client ID:	EW7-PM25B-1-35				
Operator ID:	CB	ALS Bottle#:	28	Worklist Smp#:	28
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

6 MNX, CAS: 5755-27-1

Signal: 1

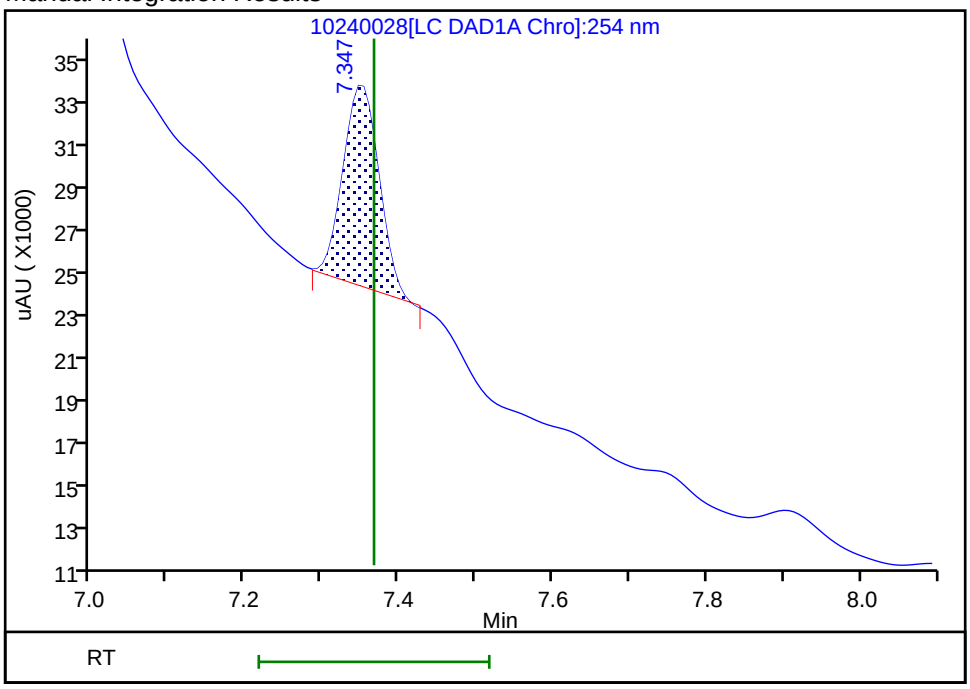
Processing Integration Results

RT: 7.35
Area: 107688
Amount: 0.768975
Amount Units: ug/mL



Manual Integration Results

RT: 7.35
Area: 29162
Amount: 0.208239
Amount Units: ug/mL



Reviewer: beckerc, 25-Oct-2019 12:50:39

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: CHHPLC_X3 Start Date: 07/01/2019 14:40

Analysis Batch Number: 463276 End Date: 07/02/2019 00:41

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 280-463276/7		07/01/2019 14:40	1	07010007.D	UltraCarb5uODS 4.6(mm)
IC 280-463276/8		07/01/2019 15:04	1	07010008.D	UltraCarb5uODS 4.6(mm)
IC 280-463276/9		07/01/2019 15:27	1	07010009.D	UltraCarb5uODS 4.6(mm)
IC 280-463276/10		07/01/2019 15:50	1	07010010.D	UltraCarb5uODS 4.6(mm)
IC 280-463276/11		07/01/2019 16:13	1	07010011.D	UltraCarb5uODS 4.6(mm)
IC 280-463276/12		07/01/2019 16:36	1	07010012.D	UltraCarb5uODS 4.6(mm)
IC 280-463276/13		07/01/2019 17:00	1	07010013.D	UltraCarb5uODS 4.6(mm)
IC 280-463276/14		07/01/2019 17:23	1	07010014.D	UltraCarb5uODS 4.6(mm)
ICV 280-463276/15		07/01/2019 17:46	1	07010015.D	UltraCarb5uODS 4.6(mm)
IC 280-463276/16		07/01/2019 18:09	1		UltraCarb5uODS 4.6(mm)
IC 280-463276/17		07/01/2019 18:32	1		UltraCarb5uODS 4.6(mm)
IC 280-463276/18		07/01/2019 18:55	1		UltraCarb5uODS 4.6(mm)
IC 280-463276/19		07/01/2019 19:18	1		UltraCarb5uODS 4.6(mm)
IC 280-463276/20		07/01/2019 19:41	1		UltraCarb5uODS 4.6(mm)
IC 280-463276/21		07/01/2019 20:04	1		UltraCarb5uODS 4.6(mm)
IC 280-463276/22		07/01/2019 20:27	1		UltraCarb5uODS 4.6(mm)
IC 280-463276/23		07/01/2019 20:50	1		UltraCarb5uODS 4.6(mm)
ICV 280-463276/24		07/01/2019 21:13	1		UltraCarb5uODS 4.6(mm)
IC 280-463276/25		07/01/2019 21:36	1	07010025.D	UltraCarb5uODS 4.6(mm)
IC 280-463276/26		07/01/2019 22:00	1	07010026.D	UltraCarb5uODS 4.6(mm)
IC 280-463276/27		07/01/2019 22:23	1	07010027.D	UltraCarb5uODS 4.6(mm)
IC 280-463276/28		07/01/2019 22:46	1	07010028.D	UltraCarb5uODS 4.6(mm)
IC 280-463276/29		07/01/2019 23:09	1	07010029.D	UltraCarb5uODS 4.6(mm)
IC 280-463276/30		07/01/2019 23:32	1	07010030.D	UltraCarb5uODS 4.6(mm)
IC 280-463276/31		07/01/2019 23:55	1	07010031.D	UltraCarb5uODS 4.6(mm)
IC 280-463276/32		07/02/2019 00:18	1	07010032.D	UltraCarb5uODS 4.6(mm)
ICV 280-463276/33		07/02/2019 00:41	1	07010033.D	UltraCarb5uODS 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: CHHPLC_X3 Start Date: 10/24/2019 11:10

Analysis Batch Number: 475188 End Date: 10/24/2019 23:47

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 280-475188/7		10/24/2019 11:10	1	10240007.D	UltraCarb5uODS 4.6(mm)
CCV 280-475188/8		10/24/2019 11:33	1		UltraCarb5uODS 4.6(mm)
CCV 280-475188/9		10/24/2019 11:56	1	10240009.D	UltraCarb5uODS 4.6(mm)
MB 280-475090/1-A		10/24/2019 12:19	1	10240010.D	UltraCarb5uODS 4.6(mm)
LCS 280-475090/2-A		10/24/2019 12:42	1	10240011.D	UltraCarb5uODS 4.6(mm)
LCS 280-475090/3-A		10/24/2019 13:05	1	10240012.D	UltraCarb5uODS 4.6(mm)
ZZZZZ		10/24/2019 13:28	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		10/24/2019 13:50	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		10/24/2019 14:13	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		10/24/2019 14:36	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		10/24/2019 14:59	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		10/24/2019 15:22	1		UltraCarb5uODS 4.6(mm)
280-129830-1		10/24/2019 15:45	1	10240019.D	UltraCarb5uODS 4.6(mm)
CCV 280-475188/20		10/24/2019 16:08	1	10240020.D	UltraCarb5uODS 4.6(mm)
CCV 280-475188/21		10/24/2019 16:31	1		UltraCarb5uODS 4.6(mm)
CCV 280-475188/22		10/24/2019 16:54	1	10240022.D	UltraCarb5uODS 4.6(mm)
280-129830-2		10/24/2019 17:17	1	10240023.D	UltraCarb5uODS 4.6(mm)
280-129830-3		10/24/2019 17:40	1	10240024.D	UltraCarb5uODS 4.6(mm)
280-129830-3 MS		10/24/2019 18:03	1	10240025.D	UltraCarb5uODS 4.6(mm)
280-129830-3 MSD		10/24/2019 18:26	1	10240026.D	UltraCarb5uODS 4.6(mm)
280-129830-3 MS		10/24/2019 18:48	1	10240027.D	UltraCarb5uODS 4.6(mm)
280-129830-3 MSD		10/24/2019 19:11	1	10240028.D	UltraCarb5uODS 4.6(mm)
ZZZZZ		10/24/2019 19:34	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		10/24/2019 19:57	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		10/24/2019 20:20	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		10/24/2019 20:43	1		UltraCarb5uODS 4.6(mm)
CCV 280-475188/33		10/24/2019 21:06	1	10240033.D	UltraCarb5uODS 4.6(mm)
CCV 280-475188/34		10/24/2019 21:29	1		UltraCarb5uODS 4.6(mm)
CCV 280-475188/35		10/24/2019 21:52	1	10240035.D	UltraCarb5uODS 4.6(mm)
ZZZZZ		10/24/2019 22:15	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		10/24/2019 22:38	1		UltraCarb5uODS 4.6(mm)
CCV 280-475188/38		10/24/2019 23:01	1		UltraCarb5uODS 4.6(mm)
CCV 280-475188/39		10/24/2019 23:24	1		UltraCarb5uODS 4.6(mm)
CCV 280-475188/40		10/24/2019 23:47	1		UltraCarb5uODS 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Start Date: 10/25/2019 19:30

Analysis Batch Number: 475429 End Date: 10/26/2019 00:10

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 280-475429/7		10/25/2019 19:30	1	10250007.D	Luna-phenylhex 4.6(mm)
IC 280-475429/8		10/25/2019 20:05	1	10250008.D	Luna-phenylhex 4.6(mm)
IC 280-475429/9		10/25/2019 20:40	1	10250009.D	Luna-phenylhex 4.6(mm)
IC 280-475429/10		10/25/2019 21:15	1	10250010.D	Luna-phenylhex 4.6(mm)
IC 280-475429/11		10/25/2019 21:50	1	10250011.D	Luna-phenylhex 4.6(mm)
IC 280-475429/12		10/25/2019 22:25	1	10250012.D	Luna-phenylhex 4.6(mm)
IC 280-475429/13		10/25/2019 23:00	1	10250013.D	Luna-phenylhex 4.6(mm)
IC 280-475429/14		10/25/2019 23:35	1	10250014.D	Luna-phenylhex 4.6(mm)
ICV 280-475429/15		10/26/2019 00:10	1	10250015.D	Luna-phenylhex 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: CHHPLC_X3 Start Date: 10/29/2019 10:48

Analysis Batch Number: 475589 End Date: 10/29/2019 15:23

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 280-475589/64		10/29/2019 10:48	1	10280064.D	UltraCarb5uODS 4.6(mm)
CCV 280-475589/65		10/29/2019 11:11	1		UltraCarb5uODS 4.6(mm)
CCV 280-475589/66		10/29/2019 11:34	1	10280066.D	UltraCarb5uODS 4.6(mm)
ZZZZZ		10/29/2019 11:57	50		UltraCarb5uODS 4.6(mm)
ZZZZZ		10/29/2019 12:20	50		UltraCarb5uODS 4.6(mm)
ZZZZZ		10/29/2019 12:43	50		UltraCarb5uODS 4.6(mm)
ZZZZZ		10/29/2019 13:06	10		UltraCarb5uODS 4.6(mm)
ZZZZZ		10/29/2019 13:29	10		UltraCarb5uODS 4.6(mm)
280-129830-1 DL		10/29/2019 13:52	25	10280072.D	UltraCarb5uODS 4.6(mm)
ZZZZZ		10/29/2019 14:14	10		UltraCarb5uODS 4.6(mm)
CCV 280-475589/74		10/29/2019 14:37	1	10280074.D	UltraCarb5uODS 4.6(mm)
CCV 280-475589/75		10/29/2019 15:00	1		UltraCarb5uODS 4.6(mm)
CCV 280-475589/76		10/29/2019 15:23	1	10280076.D	UltraCarb5uODS 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Start Date: 10/29/2019 16:50

Analysis Batch Number: 475783 End Date: 10/30/2019 07:25

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 280-475783/7		10/29/2019 16:50	1		Luna-phenylhex 4.6(mm)
ZZZZZ		10/29/2019 17:25	1		Luna-phenylhex 4.6(mm)
ZZZZZ		10/29/2019 18:00	1		Luna-phenylhex 4.6(mm)
ZZZZZ		10/29/2019 18:35	1		Luna-phenylhex 4.6(mm)
ZZZZZ		10/29/2019 19:10	1		Luna-phenylhex 4.6(mm)
CCV 280-475783/12		10/29/2019 19:45	1		Luna-phenylhex 4.6(mm)
ZZZZZ		10/29/2019 20:20	1		Luna-phenylhex 4.6(mm)
ZZZZZ		10/29/2019 20:55	1		Luna-phenylhex 4.6(mm)
ZZZZZ		10/29/2019 21:30	1		Luna-phenylhex 4.6(mm)
ZZZZZ		10/29/2019 22:05	1		Luna-phenylhex 4.6(mm)
ZZZZZ		10/29/2019 22:40	1		Luna-phenylhex 4.6(mm)
ZZZZZ		10/29/2019 23:15	50		Luna-phenylhex 4.6(mm)
ZZZZZ		10/29/2019 23:50	1		Luna-phenylhex 4.6(mm)
ZZZZZ		10/30/2019 00:25	50		Luna-phenylhex 4.6(mm)
ZZZZZ		10/30/2019 01:00	1		Luna-phenylhex 4.6(mm)
ZZZZZ		10/30/2019 01:35	50		Luna-phenylhex 4.6(mm)
CCV 280-475783/23		10/30/2019 02:10	1	10290023.D	Luna-phenylhex 4.6(mm)
ZZZZZ		10/30/2019 02:45	1		Luna-phenylhex 4.6(mm)
ZZZZZ		10/30/2019 03:20	10		Luna-phenylhex 4.6(mm)
ZZZZZ		10/30/2019 03:55	1		Luna-phenylhex 4.6(mm)
ZZZZZ		10/30/2019 04:30	10		Luna-phenylhex 4.6(mm)
280-129830-1		10/30/2019 05:05	1	10290028.D	Luna-phenylhex 4.6(mm)
280-129830-1 DL		10/30/2019 05:40	25	10290029.D	Luna-phenylhex 4.6(mm)
ZZZZZ		10/30/2019 06:15	1		Luna-phenylhex 4.6(mm)
ZZZZZ		10/30/2019 06:50	10		Luna-phenylhex 4.6(mm)
CCV 280-475783/32		10/30/2019 07:25	1	10290032.D	Luna-phenylhex 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Start Date: 11/01/2019 16:37

Analysis Batch Number: 476190 End Date: 11/02/2019 08:56

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 280-476190/7		11/01/2019 16:37	1	11010007.D	Luna-phenylhex 4.6(mm)
ZZZZZ		11/01/2019 17:12	1		Luna-phenylhex 4.6(mm)
ZZZZZ		11/01/2019 17:47	1		Luna-phenylhex 4.6(mm)
ZZZZZ		11/01/2019 18:22	1		Luna-phenylhex 4.6(mm)
280-129830-2		11/01/2019 18:57	1	11010011.D	Luna-phenylhex 4.6(mm)
280-129830-3		11/01/2019 19:32	1	11010012.D	Luna-phenylhex 4.6(mm)
ZZZZZ		11/01/2019 20:07	1		Luna-phenylhex 4.6(mm)
ZZZZZ		11/01/2019 20:42	1		Luna-phenylhex 4.6(mm)
ZZZZZ		11/01/2019 21:16	1		Luna-phenylhex 4.6(mm)
ZZZZZ		11/01/2019 21:51	1		Luna-phenylhex 4.6(mm)
ZZZZZ		11/01/2019 22:26	1		Luna-phenylhex 4.6(mm)
CCV 280-476190/18		11/01/2019 23:01	1	11010018.D	Luna-phenylhex 4.6(mm)
ZZZZZ		11/01/2019 23:36	1		Luna-phenylhex 4.6(mm)
ZZZZZ		11/02/2019 00:11	1		Luna-phenylhex 4.6(mm)
ZZZZZ		11/02/2019 00:46	1		Luna-phenylhex 4.6(mm)
CCV 280-476190/22		11/02/2019 01:21	1		Luna-phenylhex 4.6(mm)
ZZZZZ		11/02/2019 01:56	1		Luna-phenylhex 4.6(mm)
ZZZZZ		11/02/2019 02:31	1		Luna-phenylhex 4.6(mm)
ZZZZZ		11/02/2019 03:06	1		Luna-phenylhex 4.6(mm)
ZZZZZ		11/02/2019 03:41	1		Luna-phenylhex 4.6(mm)
ZZZZZ		11/02/2019 04:16	1		Luna-phenylhex 4.6(mm)
ZZZZZ		11/02/2019 04:51	1		Luna-phenylhex 4.6(mm)
ZZZZZ		11/02/2019 05:26	1		Luna-phenylhex 4.6(mm)
ZZZZZ		11/02/2019 06:01	1		Luna-phenylhex 4.6(mm)
ZZZZZ		11/02/2019 06:36	250		Luna-phenylhex 4.6(mm)
ZZZZZ		11/02/2019 07:11	1		Luna-phenylhex 4.6(mm)
CCV 280-476190/33		11/02/2019 07:46	1		Luna-phenylhex 4.6(mm)
ZZZZZ		11/02/2019 08:21	25		Luna-phenylhex 4.6(mm)
CCV 280-476190/35		11/02/2019 08:56	1		Luna-phenylhex 4.6(mm)

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Batch Number: 475090 Batch Start Date: 10/23/19 15:47 Batch Analyst: Anders, Kayla S

Batch Method: 3535 Batch End Date: 10/23/19 18:04

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	8330 LCS 00094	8330_OP_DMT 00003
MB 280-475090/1		3535, 8330A				500 mL	5 mL		
LCS 280-475090/2		3535, 8330A				500 mL	5 mL	0.1 mL	
LCS 280-475090/3		3535, 8330A				500 mL	5 mL		0.1 mL
280-129830-A-1	EW7-PM23A-1-25	3535, 8330A	T	791.9 g	285.5 g	506.4 mL	5 mL		
280-129830-A-2	EW7-PM25A-1-25	3535, 8330A	T	804.3 g	285.7 g	518.6 mL	5 mL		
280-129830-A-3	EW7-PM25B-1-35	3535, 8330A	T	809.3 g	285.4 g	523.9 mL	5 mL		
280-129830-A-3 MS	EW7-PM25B-1-35	3535, 8330A	T	808.8 g	286.0 g	522.8 mL	5 mL	0.1 mL	
280-129830-A-3 MSD	EW7-PM25B-1-35	3535, 8330A	T	786.1 g	285.4 g	500.7 mL	5 mL	0.1 mL	
280-129830-B-3 MS	EW7-PM25B-1-35	3535, 8330A	T	809.4 g	285.0 g	524.4 mL	5 mL		0.1 mL
280-129830-B-3 MSD	EW7-PM25B-1-35	3535, 8330A	T	793.6 g	285.4 g	508.2 mL	5 mL		0.1 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	8330Surrogate 00109					
MB 280-475090/1		3535, 8330A		0.1 mL					
LCS 280-475090/2		3535, 8330A		0.1 mL					
LCS 280-475090/3		3535, 8330A		0.1 mL					
280-129830-A-1	EW7-PM23A-1-25	3535, 8330A	T	0.1 mL					
280-129830-A-2	EW7-PM25A-1-25	3535, 8330A	T	0.1 mL					
280-129830-A-3	EW7-PM25B-1-35	3535, 8330A	T	0.1 mL					
280-129830-A-3 MS	EW7-PM25B-1-35	3535, 8330A	T	0.1 mL					
280-129830-A-3 MSD	EW7-PM25B-1-35	3535, 8330A	T	0.1 mL					
280-129830-B-3 MS	EW7-PM25B-1-35	3535, 8330A	T	0.1 mL					
280-129830-B-3 MSD	EW7-PM25B-1-35	3535, 8330A	T	0.1 mL					

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, Denver Job No.: 280-129830-1

SDG No.:

Batch Number: 475090 Batch Start Date: 10/23/19 15:47 Batch Analyst: Anders, Kayla S

Batch Method: 3535 Batch End Date: 10/23/19 18:04

Batch Notes	
Acid ID	0.1AAinACN_00131
Acid Name	0.1AAinACN
Balance ID	24350888
Batch Comment	DV-OP-0017
First End time	10/23/2019 17:45
Pipette/Syringe/Dispenser ID	Jiji, Soot
Rinse Solvent Lot	Acetonitrile_00041
Rinse Solvent Name	Acetonitrile
Solvent Lot #	CaCl2_Sol_00068
Solvent Name	Calcium Chloride
SPE Cartridge Lot ID	005039142A
SPE Cartridge Type	Porapak RDX Cartridges
Analyst ID - Spike Analyst	KA(trainer)/MA(trainee)
Analyst ID - Spike Witness Analyst	Reviewer:FL
First Start time	10/23/2019 16:04

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.

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job Number: 280-129830-1

SDG No.:

Project: Cornhusker (CHAAP)

Client Sample ID	Lab Sample ID
EW7-PM23A-1-25	280-129830-1
EW7-PM25A-1-25	280-129830-2
EW7-PM25B-1-35	280-129830-3

Comments:

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: EW7-PM23A-1-25 Lab Sample ID: 280-129830-1

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG ID.:

Matrix: Water Date Sampled: 10/16/2019 10:45

Reporting Basis: WET Date Received: 10/17/2019 09:15

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Ammonia	1.8	0.10	0.050	0.022	mg/L			1	350.1
Nitrogen, Total Kjeldahl	1.0	1.0	1.0	0.69	mg/L	U		1	351.2
Nitrate Nitrite as N	24	0.50	0.25	0.095	mg/L			5	353.2
Sulfide	1.9	4.0	1.9	0.79	mg/L	U		1	9034
Sulfate	90	5.0	3.0	1.0	mg/L			1	9056A
Total Alkalinity as CaCO3	330	10	10	3.1	mg/L			1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - DISSOLVED

Client Sample ID: EW7-PM23A-1-25 Lab Sample ID: 280-129830-1

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG ID.:

Matrix: Water Date Sampled: 10/16/2019 10:45

Reporting Basis: WET Date Received: 10/17/2019 09:15

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Dissolved Organic Carbon - Quad	3.6	1.0	1.0	0.35	mg/L			1	9060A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: EW7-PM25A-1-25 Lab Sample ID: 280-129830-2

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG ID.:

Matrix: Water Date Sampled: 10/16/2019 12:50

Reporting Basis: WET Date Received: 10/17/2019 09:15

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Ammonia	0.13	0.10	0.050	0.022	mg/L			1	350.1
Nitrogen, Total Kjeldahl	1.0	1.0	1.0	0.69	mg/L	U		1	351.2
Nitrate Nitrite as N	25	0.50	0.25	0.095	mg/L			5	353.2
Sulfide	1.9	4.0	1.9	0.79	mg/L	U		1	9034
Sulfate	87	5.0	3.0	1.0	mg/L			1	9056A
Total Alkalinity as CaCO3	320	10	10	3.1	mg/L			1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - DISSOLVED

Client Sample ID: EW7-PM25A-1-25 Lab Sample ID: 280-129830-2

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG ID.:

Matrix: Water Date Sampled: 10/16/2019 12:50

Reporting Basis: WET Date Received: 10/17/2019 09:15

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Dissolved Organic Carbon - Quad	4.4	1.0	1.0	0.35	mg/L			1	9060A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: EW7-PM25B-1-35 Lab Sample ID: 280-129830-3

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG ID.:

Matrix: Water Date Sampled: 10/16/2019 14:55

Reporting Basis: WET Date Received: 10/17/2019 09:15

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Ammonia	1.5	0.10	0.050	0.022	mg/L			1	350.1
Nitrogen, Total Kjeldahl	1.5	1.0	1.0	0.69	mg/L		J1	1	351.2
Nitrate Nitrite as N	1.7	0.10	0.050	0.019	mg/L		J1	1	353.2
Sulfide	1.9	4.0	1.9	0.79	mg/L	U		1	9034
Sulfate	110	5.0	3.0	1.0	mg/L		J1	1	9056A
Total Alkalinity as CaCO3	410	10	10	3.1	mg/L			1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - DISSOLVED

Client Sample ID: EW7-PM25B-1-35 Lab Sample ID: 280-129830-3

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG ID.:

Matrix: Water Date Sampled: 10/16/2019 14:55

Reporting Basis: WET Date Received: 10/17/2019 09:15

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Dissolved Organic Carbon - Quad	4.8	1.0	1.0	0.35	mg/L			1	9060A

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Analyst: BWH Batch Start Date: 10/31/2019

Reporting Units: mg/L Analytical Batch No.: 476097

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
14	ICVL	12:48	Ammonia	0.490	0.498	98	90-110		350.1 ICV_00375
15	ICV	12:50	Ammonia	2.61	2.49	105	90-110		350.1 ICV_00375
16	ICB	12:52	Ammonia	0.050				U	
33	CCVL	13:26	Ammonia	0.490	0.500	98	90-110		350.1 cal_00391
34	CCV	13:28	Ammonia	2.51	2.50	100	90-110		350.1 cal_00391
35	CCB	13:30	Ammonia	0.050				U	
49	CCVL	13:58	Ammonia	0.483	0.500	97	90-110		350.1 cal_00391
50	CCV	14:00	Ammonia	2.55	2.50	102	90-110		350.1 cal_00391
51	CCB	14:02	Ammonia	0.050				U	
67	CCVL	14:45	Ammonia	0.487	0.500	97	90-110		350.1 cal_00391
68	CCV	14:47	Ammonia	2.53	2.50	101	90-110		350.1 cal_00391
69	CCB	14:49	Ammonia	0.050				U	

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.: 280-129830-1

SDG No.:

Analyst: SVC Batch Start Date: 10/28/2019

Reporting Units: mg/L Analytical Batch No.: 475682

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
13	ICV	19:41	Nitrogen, Total Kjeldahl	5.10	5.00	102	90-110		TKN ICV 25_00084
14	ICB	19:42	Nitrogen, Total Kjeldahl	1.0				U	
31	CCV	20:03	Nitrogen, Total Kjeldahl	4.93	5.00	99	90-110		TKN 25ppm_00799
32	CCB	20:05	Nitrogen, Total Kjeldahl	1.0				U	

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.: 280-129830-1

SDG No.:

Analyst: SVC Batch Start Date: 11/03/2019

Reporting Units: mg/L Analytical Batch No.: 476322

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
17	ICV	18:18	Nitrate Nitrite as N	5.11	5.00	102	90-110		NXN ICV INT_00492
18	ICVL	18:20	Nitrate Nitrite as N	2.14	2.00	107	90-110		NXN ICV INT_00492
19	ICB	18:22	Nitrate Nitrite as N	0.050				U	
35	CCV	18:54	Nitrate Nitrite as N	5.06	5.00	101	90-110		NXN CAL INT_00511
36	CCVL	18:56	Nitrate Nitrite as N	1.05	1.00	105	90-110		NXN CAL INT_00511
37	CCB	18:58	Nitrate Nitrite as N	0.050				U	
51	CCV	19:26	Nitrate Nitrite as N	4.87	5.00	97	90-110		NXN CAL INT_00511
52	CCVL	19:28	Nitrate Nitrite as N	1.04	1.00	104	90-110		NXN CAL INT_00511
53	CCB	19:30	Nitrate Nitrite as N	0.050				U	

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.: 280-129830-1

SDG No.:

Analyst: JAP Batch Start Date: 10/16/2019

Reporting Units: mg/L Analytical Batch No.: 474200

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
8	ICV	13:41	Sulfate	77.3	80.0	97	90-110		IC SO4 ICV_00020
9	ICB	13:58	Sulfate	2.5				U	

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.: 280-129830-1

SDG No.:

Analyst: JAP Batch Start Date: 11/12/2019

Reporting Units: mg/L Analytical Batch No.: 477274

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	13:03	Sulfate	97.3	100	97	90-110		IC LCS_01709
2	CCB	13:20	Sulfate	2.5				U	
17	CCV	09:06	Sulfate	98.7	100	99	90-110		IC LCS_01709
18	CCB	09:24	Sulfate	2.5				U	
41	CCV	16:06	Sulfate	99.5	100	99	90-110		IC LCS_01709
42	CCB	16:24	Sulfate	2.5				U	
53	CCV	19:35	Sulfate	99.9	100	100	90-110		IC LCS_01709
54	CCB	19:53	Sulfate	2.5				U	
65	CCV	23:05	Sulfate	102	100	102	90-110		IC LCS_01709
66	CCB	23:23	Sulfate	2.5				U	

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.: 280-129830-1

SDG No.:

Analyst: SGB Batch Start Date: 11/04/2019

Reporting Units: mg/L Analytical Batch No.: 476539

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	ICV	16:10	Dissolved Organic Carbon - Quad	19.8	20.0	99	90-110		TOC ICV Std_00041
2	ICB	16:24	Dissolved Organic Carbon - Quad	1.0				U	
15	CCV	19:44	Dissolved Organic Carbon - Quad	23.7	25.0	95	90-110		TOC LCS Std_00048
16	CCB	20:01	Dissolved Organic Carbon - Quad	1.0				U	

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.: 280-129830-1

SDG No.:

Analyst: SPG Batch Start Date: 10/24/2019

Reporting Units: mg/L Analytical Batch No.: 475343

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
29	CCV	19:42	Total Alkalinity as CaCO3	208	200	104	90-110		Alk daily lcs 00860
30	CCB	19:49	Total Alkalinity as CaCO3	10				U	
44	CCV	21:52	Total Alkalinity as CaCO3	207	200	104	90-110		Alk daily lcs 00860
45	CCB	21:59	Total Alkalinity as CaCO3	10				U	
53	CCV	23:24	Total Alkalinity as CaCO3	209	200	104	90-110		Alk daily lcs 00860
54	CCB	23:31	Total Alkalinity as CaCO3	10				U	

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.: 280-129830-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	LOQ	Dil
Batch ID: 476097	Date: 10/31/2019 13:00						
350.1	MB 280-476097/20	Ammonia	0.050	U	mg/L	0.10	1
Batch ID: 475682	Date: 10/28/2019 19:45	Prep Batch: 475492	Date: 10/26/2019 15:22				
351.2	MB 280-475492/2-A	Nitrogen, Total Kjeldahl	1.0	U	mg/L	1.0	1
Batch ID: 476322	Date: 11/03/2019 18:28						
353.2	MB 280-476322/22	Nitrate Nitrite as N	0.050	U	mg/L	0.10	1
Batch ID: 474999	Date: 10/22/2019 18:54	Prep Batch: 474982	Date: 10/22/2019 16:37				
9034	MB 280-474982/2-A	Sulfide	1.9	U	mg/L	4.0	1
Batch ID: 477274	Date: 11/12/2019 14:30						
9056A	MB 280-477274/6	Sulfate	3.0	U	mg/L	5.0	1
Batch ID: 476539	Date: 11/04/2019 16:54						
9060A	MB 280-476389/2-A	Dissolved Organic Carbon - Quad	1.0	U	mg/L	1.0	1
Batch ID: 475343	Date: 10/24/2019 20:15						
SM 2320B	MB 280-475343/33	Total Alkalinity as CaCO3	10	U	mg/L	10	1

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 476097	Date: 10/31/2019 13:40										
350.1	280-129830-3	Ammonia	1.5		mg/L						
350.1	280-129830-3 MS	Ammonia	2.58		mg/L	1.00	105	90-110			
Batch ID: 475682	Date: 10/28/2019 19:47	Prep Batch: 475492	Date: 10/26/2019 15:22								
351.2	280-129830-3	Nitrogen, Total Kjeldahl	1.5		mg/L						J1
351.2	280-129830-3 MS	Nitrogen, Total Kjeldahl	4.15		mg/L	3.00	87	90-110			J1
Batch ID: 476322	Date: 11/03/2019 19:08										
353.2	280-129830-3	Nitrate Nitrite as N	1.7		mg/L						J1
353.2	280-129830-3 MS	Nitrate Nitrite as N	5.29		mg/L	4.00	89	90-110			J1
Batch ID: 474999	Date: 10/22/2019 18:54	Prep Batch: 474982	Date: 10/22/2019 16:37								
9034	280-129830-3	Sulfide	1.9	U	mg/L						
9034	280-129830-3 MS	Sulfide	22.4		mg/L	21.8	103	44-110			
Batch ID: 477274	Date: 11/13/2019 19:00										
9056A	280-129830-3	Sulfate	110		mg/L						J1
9056A	280-129830-3 MS	Sulfate	165		mg/L	50.0	117	87-112			J1
Batch ID: 476539	Date: 11/04/2019 17:38										
9060A	280-129830-3	Dissolved Organic Carbon - Quad	4.8		mg/L						
9060A	280-129830-3 MS	Dissolved Organic Carbon - Quad	28.8		mg/L	25.0	96	88-112			

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

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 476097	Date: 10/31/2019 13:42										
350.1	280-129830-3 MSD	Ammonia	2.55		mg/L	1.00	102	90-110	1	10	
Batch ID: 475682	Date: 10/28/2019 19:48	Prep Batch: 475492	Date: 10/26/2019 15:22								
351.2	280-129830-3 MSD	Nitrogen, Total Kjeldahl	4.24		mg/L	3.00	90	90-110	2	25	
Batch ID: 476322	Date: 11/03/2019 19:10										
353.2	280-129830-3 MSD	Nitrate Nitrite as N	5.62		mg/L	4.00	97	90-110	6	10	
Batch ID: 474999	Date: 10/22/2019 18:54	Prep Batch: 474982	Date: 10/22/2019 16:37								
9034	280-129830-3 MSD	Sulfide	22.4		mg/L	21.8	103	44-110	0	20	
Batch ID: 477274	Date: 11/13/2019 19:18										
9056A	280-129830-3 MSD	Sulfate	166		mg/L	50.0	118	87-112	1	10	J1
Batch ID: 476539	Date: 11/04/2019 17:53										
9060A	280-129830-3 MSD	Dissolved Organic Carbon - Quad	28.9		mg/L	25.0	96	88-112	1	15	

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

FORM V-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 477274 Date: 11/13/2019 18:43								
9056A	EW7-PM25B-1-35	280-129830-3	Sulfate	110	mg/L			
9056A	EW7-PM25B-1-35	280-129830-3 DU	Sulfate	106	mg/L	0.4	10	

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

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 476097	Date: 10/31/2019 12:56										
						LCS Source: 350.1 cal_00391					
350.1	LCS 280-476097/18	Ammonia	2.54		mg/L	2.50	102	90-110	1	10	
Batch ID: 475682	Date: 10/28/2019 19:43	Prep Batch: 475492	Date: 10/26/2019 15:22								
						LCS Source: TKN 25ppm_00799					
351.2	LCS 280-475492/1-A	Nitrogen, Total Kjeldahl	6.25		mg/L	6.00	104	90-110			
Batch ID: 476322	Date: 11/03/2019 18:26										
						LCS Source: NXN CAL INT_00511					
353.2	LCS 280-476322/21	Nitrate Nitrite as N	5.22		mg/L	5.00	104	90-110			
Batch ID: 474999	Date: 10/22/2019 18:54	Prep Batch: 474982	Date: 10/22/2019 16:37								
						LCS Source: SFD ICV INT_01626					
9034	LCS 280-474982/1-A	Sulfide	20.0		mg/L	21.8	92	44-110			
Batch ID: 477274	Date: 11/12/2019 13:55										
						LCS Source: IC LCS_01709					
9056A	LCS 280-477274/4	Sulfate	97.4		mg/L	100	97	87-112	0	10	
Batch ID: 476539	Date: 11/04/2019 16:39										
						LCS Source: TOC LCS Std_00048					
9060A	LCS 280-476389/1-A	Dissolved Organic Carbon - Quad	23.7		mg/L	25.0	95	88-112			
Batch ID: 475343	Date: 10/24/2019 19:58										
						LCS Source: Alk daily lcs_00860					
SM 2320B	LCS 280-475343/31	Total Alkalinity as CaCO3	207		mg/L	200	103	89-109	1	10	

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.: 280-129830-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 476097	Date: 10/31/2019 12:58										
						LCSD Source: 350.1 cal_00391					
350.1	LCSD 280-476097/19	Ammonia	2.56		mg/L	2.50	102	90-110	1	10	
Batch ID: 477274	Date: 11/12/2019 14:13										
						LCSD Source: IC LCS_01709					
9056A	LCSD 280-477274/5	Sulfate	97.1		mg/L	100	97	87-112	0	10	
Batch ID: 475343	Date: 10/24/2019 20:08										
						LCSD Source: Alk daily lcs_00860					
SM 2320B	LCSD 280-475343/32	Total Alkalinity as CaCO3	208		mg/L	200	104	89-109	1	10	

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

FORM VIIA-IN

7A-IN
METHOD REPORTING LIMIT CHECK
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 477274	Date: 11/12/2019 13:38										
						LCS Source: IC CAL cl/so4_00283					
9056A	MRL 280-477274/3	Sulfate	4.32	J	mg/L	5.00	86	50-150			

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: 280-129830-1

SDG Number:

Matrix: Water Instrument ID: WC_Alp 3

Method: 350.1 DL Date: 03/28/2011 13:26

Analyte	Wavelength/ Mass	LOQ (mg/L)	DL (mg/L)
Ammonia		0.1	0.022

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job Number: 280-129830-1

SDG Number:

Matrix: Water Instrument ID: WC_Alp 3

Method: 350.1 XMDL Date: 03/28/2011 13:26

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Ammonia		0.1	0.0225

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job Number: 280-129830-1

SDG Number:

Matrix: Water Instrument ID: WC_Astoria

Method: 351.2 DL Date: 02/03/2019 00:00

Prep Method: 351.2

Analyte	Wavelength/ Mass	LOQ (mg/L)	DL (mg/L)
Nitrogen, Total Kjeldahl		1	0.687

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job Number: 280-129830-1

SDG Number:

Matrix: Water Instrument ID: WC_Astoria

Method: 351.2 XMDL Date: 02/03/2019 00:00

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Nitrogen, Total Kjeldahl		1	0.687

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job Number: 280-129830-1

SDG Number:

Matrix: Water Instrument ID: WC_Alp 2

Method: 353.2 DL Date: 12/16/2011 09:50

Analyte	Wavelength/ Mass	LOQ (mg/L)	DL (mg/L)
Nitrate Nitrite as N		0.1	0.019

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job Number: 280-129830-1

SDG Number:

Matrix: Water Instrument ID: WC_Alp 2

Method: 353.2 XMDL Date: 05/16/2011 11:21

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Nitrate Nitrite as N		0.1	0.0191

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job Number: 280-129830-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 9034 DL Date: 03/28/2011 13:37

Prep Method: 9030B

Analyte	Wavelength/ Mass	LOQ (mg/L)	DL (mg/L)
Sulfide		4	0.793

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job Number: 280-129830-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 9034 XMDL Date: 03/28/2011 13:37

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Sulfide		4	0.793

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job Number: 280-129830-1

SDG Number:

Matrix: Water Instrument ID: WC_IonChrom10

Method: 9056A DL Date: 06/21/2019 00:00

Analyte	Wavelength/ Mass	LOQ (mg/L)	DL (mg/L)
Sulfate		5	1.03

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job Number: 280-129830-1

SDG Number:

Matrix: Water Instrument ID: WC_IonChrom10

Method: 9056A XMDL Date: 06/21/2019 00:00

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Sulfate		5	1.03

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY - DISSOLVED

Lab Name: Eurofins TestAmerica, Denver Job Number: 280-129830-1

SDG Number:

Matrix: Water Instrument ID: WC_SHI3

Method: 9060A DL Date: 06/21/2019 00:00

Analyte	Wavelength/ Mass	LOQ (mg/L)	DL (mg/L)
Dissolved Organic Carbon - Quad		1	0.345

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY - DISSOLVED

Lab Name: Eurofins TestAmerica, Denver Job Number: 280-129830-1

SDG Number:

Matrix: Water Instrument ID: WC_SHI3

Method: 9060A XMDL Date: 06/21/2019 00:00

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Dissolved Organic Carbon - Quad		1	0.345

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job Number: 280-129830-1

SDG Number:

Matrix: Water Instrument ID: WC_AT2

Method: SM 2320B DL Date: 02/03/2019 00:00

Analyte	Wavelength/ Mass	LOQ (mg/L)	DL (mg/L)
Total Alkalinity as CaCO3		10	3.08

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job Number: 280-129830-1

SDG Number:

Matrix: Water Instrument ID: WC_AT2

Method: SM 2320B XMDL Date: 02/03/2019 00:00

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Total Alkalinity as CaCO3		10	3.08

12-IN
PREPARATION LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Prep Method: 351.2

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
LCS 280-475492/1-A	10/26/2019 15:22	475492		25	25
MB 280-475492/2-A	10/26/2019 15:22	475492		25	25
280-129830-3	10/26/2019 15:22	475492		25	25
280-129830-3 MS	10/26/2019 15:22	475492		25	25
280-129830-3 MSD	10/26/2019 15:22	475492		25	25
280-129830-1	10/26/2019 15:22	475492		25	25
280-129830-2	10/26/2019 15:22	475492		25	25

12-IN
PREPARATION LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Prep Method: 9030B

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
LCS 280-474982/1-A	10/22/2019 16:37	474982		50	50
MB 280-474982/2-A	10/22/2019 16:37	474982		50	50
280-129830-1	10/22/2019 16:37	474982		50	50
280-129830-2	10/22/2019 16:37	474982		50	50
280-129830-3	10/22/2019 16:37	474982		50	50
280-129830-3 MS	10/22/2019 16:37	474982		50	50
280-129830-3 MSD	10/22/2019 16:37	474982		50	50

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: WC_Alp 3 Analysis Method: 350.1

Start Date: 10/31/2019 12:22 End Date: 10/31/2019 16:49

Lab Sample Id	D/F	Type	Time	Analytes																								
				NH3																								
ZZZZZZ			12:22																									
ZZZZZZ			12:24																									
ZZZZZZ			12:26																									
IC 280-476097/4			12:28	X																								
IC 280-476097/5			12:30	X																								
IC 280-476097/6			12:32	X																								
IC 280-476097/7			12:34	X																								
IC 280-476097/8			12:36	X																								
IC 280-476097/9			12:38	X																								
IC 280-476097/10			12:40	X																								
IC 280-476097/11			12:42	X																								
ZZZZZZ			12:44																									
ZZZZZZ			12:46																									
ICVL 280-476097/14	1		12:48	X																								
ICV 280-476097/15	1		12:50	X																								
ICB 280-476097/16	1		12:52	X																								
ZZZZZZ			12:54																									
LCS 280-476097/18	1	T	12:56	X																								
LCSD 280-476097/19	1	T	12:58	X																								
MB 280-476097/20	1	T	13:00	X																								
ZZZZZZ			13:02																									
ZZZZZZ			13:04																									
ZZZZZZ			13:06																									
ZZZZZZ			13:08																									
ZZZZZZ			13:10																									
ZZZZZZ			13:12																									
ZZZZZZ			13:14																									
ZZZZZZ			13:16																									
ZZZZZZ			13:18																									
ZZZZZZ			13:20																									
RINSE 280-476097/31			13:22																									
ZZZZZZ			13:24																									
CCVL 280-476097/33	1		13:26	X																								
CCV 280-476097/34	1		13:28	X																								
CCB 280-476097/35	1		13:30	X																								
ZZZZZZ			13:32																									
ZZZZZZ			13:34																									
ZZZZZZ			13:36																									
ZZZZZZ			13:38																									
280-129830-3 MS	1	T	13:40	X																								
280-129830-3 MSD	1	T	13:42	X																								

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: WC_Alp 3 Analysis Method: 350.1

Start Date: 10/31/2019 12:22 End Date: 10/31/2019 16:49

Lab Sample Id	D/F	Type	Time	Analytes																								
				NH3																								
280-129830-2	1	T	13:44	X																								
280-129830-1	1	T	13:46	X																								
ZZZZZZ			13:48																									
ZZZZZZ			13:50																									
ZZZZZZ			13:52																									
RINSE 280-476097/47			13:54																									
ZZZZZZ			13:56																									
CCVL 280-476097/49	1		13:58	X																								
CCV 280-476097/50	1		14:00	X																								
CCB 280-476097/51	1		14:02	X																								
ZZZZZZ			14:04																									
ZZZZZZ			14:06																									
ZZZZZZ			14:08																									
ZZZZZZ			14:14																									
ZZZZZZ			14:16																									
ZZZZZZ			14:18																									
ZZZZZZ			14:20																									
ZZZZZZ			14:22																									
ZZZZZZ			14:24																									
ZZZZZZ			14:26																									
ZZZZZZ			14:35																									
280-129830-3	1	T	14:37	X																								
ZZZZZZ			14:39																									
RINSE 280-476097/65			14:41																									
ZZZZZZ			14:43																									
CCVL 280-476097/67	1		14:45	X																								
CCV 280-476097/68	1		14:47	X																								
CCB 280-476097/69	1		14:49	X																								
ZZZZZZ			14:51																									
ZZZZZZ			14:53																									
ZZZZZZ			14:55																									
ZZZZZZ			14:57																									
ZZZZZZ			14:59																									
ZZZZZZ			15:05																									
ZZZZZZ			15:14																									
ZZZZZZ			15:16																									
ZZZZZZ			15:18																									
ZZZZZZ			15:20																									
ZZZZZZ			15:22																									
ZZZZZZ			15:24																									
ZZZZZZ			15:26																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: WC_Alp 3 Analysis Method: 350.1

Start Date: 10/31/2019 12:22 End Date: 10/31/2019 16:49

Lab Sample Id	D/F	Type	Time	Analytes																								
				NH3																								
ZZZZZZ			15:28																									
ZZZZZZ			15:30																									
RINSE 280-476097/85			15:32																									
ZZZZZZ			15:34																									
CCVL 280-476097/87			15:36																									
CCV 280-476097/88			15:38																									
CCB 280-476097/89			15:40																									
ZZZZZZ			15:42																									
ZZZZZZ			15:44																									
ZZZZZZ			15:46																									
ZZZZZZ			15:48																									
ZZZZZZ			15:50																									
ZZZZZZ			15:56																									
ZZZZZZ			15:58																									
ZZZZZZ			16:00																									
ZZZZZZ			16:02																									
ZZZZZZ			16:04																									
ZZZZZZ			16:06																									
RINSE 280-476097/101			16:08																									
ZZZZZZ			16:10																									
CCVL 280-476097/103			16:12																									
CCV 280-476097/104			16:14																									
CCB 280-476097/105			16:16																									
ZZZZZZ			16:18																									
ZZZZZZ			16:20																									
ZZZZZZ			16:22																									
ZZZZZZ			16:24																									
ZZZZZZ			16:26																									
ZZZZZZ			16:28																									
ZZZZZZ			16:30																									
ZZZZZZ			16:37																									
RINSE 280-476097/114			16:39																									
ZZZZZZ			16:41																									
CCVL 280-476097/116			16:43																									
CCV 280-476097/117			16:45																									
CCB 280-476097/118			16:47																									
ZZZZZZ			16:49																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: WC_Astoria Analysis Method: 351.2

Start Date: 10/28/2019 19:27 End Date: 10/28/2019 20:45

Lab Sample Id	D/F	Type	Time	Analytes																								
				TKN																								
ZZZZZZ			19:27																									
ZZZZZZ			19:27																									
ZZZZZZ			19:28																									
ZZZZZZ			19:30																									
IC 280-474499/1-A			19:31	X																								
IC 280-474499/2-A			19:32	X																								
IC 280-474499/3-A			19:33	X																								
IC 280-474499/4-A			19:35	X																								
IC 280-474499/5-A			19:36	X																								
IC 280-474499/6-A			19:37	X																								
ZZZZZZ			19:38																									
ZZZZZZ			19:40																									
ICV 280-474499/7-A	1		19:41	X																								
ICB 280-474499/8-A	1		19:42	X																								
LCS 280-475492/1-A	1	T	19:43	X																								
MB 280-475492/2-A	1	T	19:45	X																								
280-129830-3	1	T	19:46	X																								
280-129830-3 MS	1	T	19:47	X																								
280-129830-3 MSD	1	T	19:48	X																								
ZZZZZZ			19:50																									
280-129830-1	1	T	19:51	X																								
280-129830-2	1	T	19:52	X																								
ZZZZZZ			19:53																									
ZZZZZZ			19:55																									
ZZZZZZ			19:56																									
ZZZZZZ			19:57																									
ZZZZZZ			19:58																									
ZZZZZZ			20:00																									
ZZZZZZ			20:01																									
ZZZZZZ			20:02																									
CCV 280-474499/9-A	1		20:03	X																								
CCB 280-474499/10-A	1		20:05	X																								
ZZZZZZ			20:06																									
ZZZZZZ			20:07																									
ZZZZZZ			20:08																									
ZZZZZZ			20:10																									
ZZZZZZ			20:11																									
ZZZZZZ			20:12																									
ZZZZZZ			20:13																									
ZZZZZZ			20:15																									
ZZZZZZ			20:16																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: WC_Astoria Analysis Method: 351.2

Start Date: 10/28/2019 19:27 End Date: 10/28/2019 20:45

Lab Sample Id	D/F	Type	Time	Analytes																								
				TKN																								
ZZZZZZ			20:17																									
ZZZZZZ			20:18																									
ZZZZZZ			20:20																									
ZZZZZZ			20:21																									
ZZZZZZ			20:22																									
ZZZZZZ			20:23																									
ZZZZZZ			20:25																									
CCV 280-474499/9-A			20:26																									
CCB 280-474499/10-A			20:27																									
ZZZZZZ			20:28																									
ZZZZZZ			20:30																									
ZZZZZZ			20:31																									
ZZZZZZ			20:32																									
ZZZZZZ			20:33																									
ZZZZZZ			20:35																									
ZZZZZZ			20:36																									
ZZZZZZ			20:37																									
ZZZZZZ			20:38																									
ZZZZZZ			20:40																									
CCV 280-474499/9-A			20:41																									
CCB 280-474499/10-A			20:42																									
ZZZZZZ			20:43																									
ZZZZZZ			20:45																									

Prep Types:
T = Total/NA

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: WC_Alp 2 Analysis Method: 353.2

Start Date: 11/03/2019 17:46 End Date: 11/03/2019 21:08

Lab Sample Id	D/F	Type	Time	Analytes
				NNO32
ZZZZZZ			17:46	
ZZZZZZ			17:48	
ZZZZZZ			17:50	
ZZZZZZ			17:52	
IC 280-476322/5			17:54	X
IC 280-476322/6			17:56	X
IC 280-476322/7			17:58	X
IC 280-476322/8			18:00	X
IC 280-476322/9			18:02	X
IC 280-476322/10			18:04	X
IC 280-476322/11			18:06	X
IC 280-476322/12			18:08	X
IC 280-476322/13			18:10	X
ZZZZZZ			18:12	
ZZZZZZ			18:14	
ZZZZZZ			18:16	
ICV 280-476322/17	1		18:18	X
ICVL 280-476322/18	1		18:20	X
ICB 280-476322/19	1		18:22	X
ZZZZZZ			18:24	
LCS 280-476322/21	1	T	18:26	X
MB 280-476322/22	1	T	18:28	X
ZZZZZZ			18:30	
ZZZZZZ			18:32	
ZZZZZZ			18:34	
ZZZZZZ			18:36	
ZZZZZZ			18:38	
ZZZZZZ			18:40	
ZZZZZZ			18:42	
ZZZZZZ			18:44	
ZZZZZZ			18:46	
ZZZZZZ			18:48	
RINSE 280-476322/33			18:50	
ZZZZZZ			18:52	
CCV 280-476322/35	1		18:54	X
CCVL 280-476322/36	1		18:56	X
CCB 280-476322/37	1		18:58	X
ZZZZZZ			19:00	
ZZZZZZ			19:02	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: WC_Alp 2 Analysis Method: 353.2

Start Date: 11/03/2019 17:46 End Date: 11/03/2019 21:08

Lab Sample Id	D/F	Type	Time	Analytes
				NNO32
ZZZZZZ			19:04	
280-129830-3	1	T	19:06	X
280-129830-3 MS	1	T	19:08	X
280-129830-3 MSD	1	T	19:10	X
280-129830-1	5	T	19:12	X
280-129830-2	5	T	19:14	X
ZZZZZZ			19:16	
ZZZZZZ			19:18	
ZZZZZZ			19:20	
RINSE 280-476322/49			19:22	
ZZZZZZ			19:24	
CCV 280-476322/51	1		19:26	X
CCVL 280-476322/52	1		19:28	X
CCB 280-476322/53	1		19:30	X
ZZZZZZ			19:32	
ZZZZZZ			19:34	
ZZZZZZ			19:36	
ZZZZZZ			19:38	
ZZZZZZ			19:40	
ZZZZZZ			19:42	
ZZZZZZ			19:44	
ZZZZZZ			19:46	
ZZZZZZ			19:48	
ZZZZZZ			19:50	
ZZZZZZ			19:52	
RINSE 280-476322/65			19:54	
ZZZZZZ			19:56	
CCV 280-476322/67			19:58	
CCVL 280-476322/68			20:00	
CCB 280-476322/69			20:02	
ZZZZZZ			20:04	
ZZZZZZ			20:06	
ZZZZZZ			20:08	
ZZZZZZ			20:10	
ZZZZZZ			20:12	
ZZZZZZ			20:14	
ZZZZZZ			20:16	
ZZZZZZ			20:18	
ZZZZZZ			20:20	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: WC_Alp 2 Analysis Method: 353.2

Start Date: 11/03/2019 17:46 End Date: 11/03/2019 21:08

Lab Sample Id	D/F	Type	Time	Analytes
				NNO32
ZZZZZZ			20:22	
ZZZZZZ			20:24	
RINSE 280-476322/81			20:26	
ZZZZZZ			20:28	
CCV 280-476322/83			20:30	
CCVL 280-476322/84			20:32	
CCB 280-476322/85			20:34	
ZZZZZZ			20:36	
ZZZZZZ			20:38	
ZZZZZZ			20:40	
ZZZZZZ			20:42	
ZZZZZZ			20:44	
ZZZZZZ			20:46	
ZZZZZZ			20:48	
ZZZZZZ			20:50	
ZZZZZZ			20:52	
ZZZZZZ			20:54	
ZZZZZZ			20:56	
RINSE 280-476322/97			20:58	
ZZZZZZ			21:00	
CCV 280-476322/99			21:02	
CCVL 280-476322/100			21:04	
CCB 280-476322/101			21:06	
ZZZZZZ			21:08	

Prep Types:
T = Total/NA

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 9034

Start Date: 10/22/2019 18:54 End Date: 10/22/2019 18:54

Lab Sample Id	D/F	Type	Time	Analytes																								
				S2																								
LCS 280-474982/1-A	1	T	18:54	X																								
MB 280-474982/2-A	1	T	18:54	X																								
ZZZZZZ			18:54																									
ZZZZZZ			18:54																									
280-129830-1	1	T	18:54	X																								
280-129830-2	1	T	18:54	X																								
280-129830-3	1	T	18:54	X																								
280-129830-3 MS	1	T	18:54	X																								
280-129830-3 MSD	1	T	18:54	X																								
ZZZZZZ			18:54																									
ZZZZZZ			18:54																									
ZZZZZZ			18:54																									
ZZZZZZ			18:54																									
ZZZZZZ			18:54																									
ZZZZZZ			18:54																									
ZZZZZZ			18:54																									
ZZZZZZ			18:54																									
ZZZZZZ			18:54																									

Prep Types:
T = Total/NA

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Method: 9056A

Start Date: 10/16/2019 09:39 End Date: 10/16/2019 22:21

Lab Sample Id	D/F	Type	Time	Analytes																								
				SO4																								
RTC 280-474200/1			09:39																									
STD1 280-474200/2 IC	1		09:56	X																								
STD2 280-474200/3 IC	1		10:14	X																								
STD3 280-474200/4 IC	1		10:31	X																								
STD4 280-474200/5 IC	1		10:49	X																								
STD5 280-474200/6 IC	1		11:06	X																								
STD6 280-474200/7 IC	1		11:24	X																								
ICV 280-474200/8	1		13:41	X																								
ICB 280-474200/9	1		13:58	X																								
ZZZZZZ			14:15																									
ZZZZZZ			14:33																									
ZZZZZZ			14:50																									
ZZZZZZ			15:08																									
ZZZZZZ			16:49																									
ZZZZZZ			17:06																									
ZZZZZZ			17:24																									
ZZZZZZ			17:41																									
ZZZZZZ			17:59																									
ZZZZZZ			18:16																									
CCV 280-474200/24			18:34																									
CCB 280-474200/25			18:51																									
ZZZZZZ			19:09																									
ZZZZZZ			19:26																									
ZZZZZZ			19:44																									
ZZZZZZ			20:01																									
ZZZZZZ			20:19																									
ZZZZZZ			20:36																									
ZZZZZZ			20:54																									
ZZZZZZ			21:29																									
ZZZZZZ			21:46																									
CCV 280-474200/36			22:04																									
CCB 280-474200/37			22:21																									

Prep Types:
=

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Method: 9056A

Start Date: 11/12/2019 13:03 End Date: 11/14/2019 00:50

Lab Sample Id	D/F	Type	Time	Analytes
				SO4
CCV 280-477274/1	1		13:03	X
CCB 280-477274/2	1		13:20	X
MRL 280-477274/3	1	T	13:38	X
LCS 280-477274/4	1	T	13:55	X
LCSD 280-477274/5	1	T	14:13	X
MB 280-477274/6	1	T	14:30	X
ZZZZZZ			14:48	
ZZZZZZ			15:05	
ZZZZZZ			15:22	
ZZZZZZ			15:40	
ZZZZZZ			15:57	
ZZZZZZ			16:15	
ZZZZZZ			16:32	
ZZZZZZ			16:50	
ZZZZZZ			17:07	
ZZZZZZ			17:25	
CCV 280-477274/17	1		09:06	X
CCB 280-477274/18	1		09:24	X
ZZZZZZ			09:41	
ZZZZZZ			09:59	
ZZZZZZ			10:16	
ZZZZZZ			10:34	
ZZZZZZ			10:51	
ZZZZZZ			11:09	
ZZZZZZ			11:26	
ZZZZZZ			11:44	
ZZZZZZ			12:01	
ZZZZZZ			12:19	
CCV 280-477274/29			12:36	
CCB 280-477274/30			12:54	
ZZZZZZ			13:11	
ZZZZZZ			13:29	
ZZZZZZ			13:46	
ZZZZZZ			14:04	
ZZZZZZ			14:21	
ZZZZZZ			14:39	
ZZZZZZ			14:56	
ZZZZZZ			15:14	
ZZZZZZ			15:31	
ZZZZZZ			15:49	
CCV 280-477274/41	1		16:06	X

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13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Method: 9056A

Start Date: 11/12/2019 13:03 End Date: 11/14/2019 00:50

Lab Sample Id	D/F	Type	Time	Analytes																								
				SO4																								
CCB 280-477274/42	1		16:24	X																								
ZZZZZZ			16:41																									
ZZZZZZ			16:58																									
280-129830-1	1	T	17:16	X																								
ZZZZZZ			17:33																									
280-129830-2	1	T	17:51	X																								
ZZZZZZ			18:08																									
280-129830-3	1	T	18:26	X																								
280-129830-3 DU	1	T	18:43	X																								
280-129830-3 MS	1	T	19:00	X																								
280-129830-3 MSD	1	T	19:18	X																								
CCV 280-477274/53	1		19:35	X																								
CCB 280-477274/54	1		19:53	X																								
ZZZZZZ			20:10																									
ZZZZZZ			20:28																									
ZZZZZZ			20:45																									
ZZZZZZ			21:03																									
ZZZZZZ			21:20																									
ZZZZZZ			21:38																									
ZZZZZZ			21:55																									
ZZZZZZ			22:13																									
ZZZZZZ			22:30																									
ZZZZZZ			22:48																									
CCV 280-477274/65	1		23:05	X																								
CCB 280-477274/66	1		23:23	X																								
ZZZZZZ			23:40																									
ZZZZZZ			23:58																									
ZZZZZZ			00:15																									
CCV 280-477274/70			00:33																									
CCB 280-477274/71			00:50																									

Prep Types:
T = Total/NA

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: WC_SHI3 Analysis Method: 9060A

Start Date: 11/04/2019 16:10 End Date: 11/05/2019 11:40

Lab Sample Id	D/F	Type	Time	Analytes
				DOCQ
ICV 280-476539/1	1		16:10	X
ICB 280-476539/2	1		16:24	X
LCS 280-476389/1-A	1	D	16:39	X
MB 280-476389/2-A	1	D	16:54	X
ZZZZZZ			17:09	
280-129830-3	1	D	17:23	X
280-129830-3 MS	1	D	17:38	X
280-129830-3 MSD	1	D	17:53	X
ZZZZZZ			18:07	
280-129830-1	1	D	18:24	X
280-129830-2	1	D	18:39	X
ZZZZZZ			18:54	
ZZZZZZ			19:13	
ZZZZZZ			19:29	
CCV 280-476539/15	1		19:44	X
CCB 280-476539/16	1		20:01	X
ZZZZZZ			20:15	
ZZZZZZ			20:32	
ZZZZZZ			20:47	
ZZZZZZ			21:02	
ZZZZZZ			21:16	
ZZZZZZ			21:31	
ZZZZZZ			21:48	
ZZZZZZ			22:05	
ZZZZZZ			22:19	
ZZZZZZ			22:34	
CCV 280-476539/27			22:49	
CCB 280-476539/28			23:06	
ZZZZZZ			23:21	
ZZZZZZ			23:35	
ZZZZZZ			23:50	
ZZZZZZ			00:07	
ZZZZZZ			00:22	
ZZZZZZ			00:36	
ZZZZZZ			00:53	
ZZZZZZ			01:08	
ZZZZZZ			01:23	
ZZZZZZ			01:37	
CCV 280-476539/39			01:52	
CCB 280-476539/40			02:09	

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: WC_SHI3 Analysis Method: 9060A

Start Date: 11/04/2019 16:10 End Date: 11/05/2019 11:40

Lab Sample Id	D/F	Type	Time	Analytes																										
				DOCQ																										
ZZZZZZ			02:24																											
ZZZZZZ			02:40																											
ZZZZZZ			02:55																											
ZZZZZZ			03:12																											
ZZZZZZ			03:29																											
ZZZZZZ			03:43																											
ZZZZZZ			03:58																											
ZZZZZZ			04:15																											
ZZZZZZ			04:30																											
ZZZZZZ			04:44																											
CCV 280-476539/51			04:59																											
CCB 280-476539/52			05:16																											
ZZZZZZ			05:31																											
ZZZZZZ			05:45																											
ZZZZZZ			06:00																											
ZZZZZZ			06:17																											
ZZZZZZ			06:36																											
ZZZZZZ			06:50																											
ZZZZZZ			07:05																											
ZZZZZZ			07:20																											
ZZZZZZ			07:35																											
ZZZZZZ			07:49																											
CCV 280-476539/63			08:04																											
CCB 280-476539/64			08:21																											
ZZZZZZ			08:38																											
ZZZZZZ			08:52																											
ZZZZZZ			09:07																											
ZZZZZZ			09:30																											
ZZZZZZ			09:45																											
ZZZZZZ			10:04																											
ZZZZZZ			10:18																											
ZZZZZZ			10:41																											
CCV 280-476539/73			10:56																											
CCB 280-476539/74			11:11																											
EMPTY 280-476539/75			11:25																											
EMPTY 280-476539/76			11:40																											

Prep Types:
D = Dissolved

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: WC_AT2 Analysis Method: SM 2320B

Start Date: 10/24/2019 15:11 End Date: 10/24/2019 23:31

Lab Sample Id	D/F	Type	Time	Analytes																								
				Alk																								
RINSE 280-475343/1			15:11																									
ZZZZZZ			15:28																									
ZZZZZZ			15:36																									
ZZZZZZ			15:46																									
ZZZZZZ			15:55																									
ZZZZZZ			16:03																									
ZZZZZZ			16:12																									
ZZZZZZ			16:23																									
ZZZZZZ			16:30																									
ZZZZZZ			16:38																									
ZZZZZZ			16:45																									
ZZZZZZ			16:55																									
ZZZZZZ			17:06																									
ZZZZZZ			17:14																									
ZZZZZZ			17:22																									
ZZZZZZ			17:31																									
CCV 280-475343/17			17:41																									
CCB 280-475343/18			17:48																									
ZZZZZZ			17:56																									
ZZZZZZ			18:06																									
ZZZZZZ			18:19																									
ZZZZZZ			18:28																									
ZZZZZZ			18:38																									
ZZZZZZ			18:54																									
ZZZZZZ			19:10																									
ZZZZZZ			19:18																									
ZZZZZZ			19:25																									
ZZZZZZ			19:33																									
CCV 280-475343/29	1		19:42	X																								
CCB 280-475343/30	1		19:49	X																								
LCS 280-475343/31	1	T	19:58	X																								
LCSD 280-475343/32	1	T	20:08	X																								
MB 280-475343/33	1	T	20:15	X																								
ZZZZZZ			20:24																									
ZZZZZZ			20:33																									
ZZZZZZ			20:43																									
ZZZZZZ			20:51																									
ZZZZZZ			21:00																									
ZZZZZZ			21:09																									
ZZZZZZ			21:17																									
ZZZZZZ			21:24																									

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13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Instrument ID: WC_AT2 Analysis Method: SM 2320B

Start Date: 10/24/2019 15:11 End Date: 10/24/2019 23:31

Lab Sample Id	D/F	Type	Time	Analytes																								
				Alk																								
280-129830-1	1	T	21:33	X																								
280-129830-2	1	T	21:43	X																								
CCV 280-475343/44	1		21:52	X																								
CCB 280-475343/45	1		21:59	X																								
280-129830-3	1	T	22:08	X																								
ZZZZZZ			22:25																									
ZZZZZZ			22:32																									
ZZZZZZ			22:44																									
ZZZZZZ			22:55																									
ZZZZZZ			23:07																									
ZZZZZZ			23:14																									
CCV 280-475343/53	1		23:24	X																								
CCB 280-475343/54	1		23:31	X																								

Prep Types:
T = Total/NA

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Batch Number: 476097 Batch Start Date: 10/31/19 12:22 Batch Analyst: Hunter, Brandon W

Batch Method: 350.1 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	ClResPres	InitialAmount	FinalAmount	Initial pH	350.1 cal 00391	350.1 ICV 00375
ICVL 280-476097/14		350.1			100 mL	100 mL			0.5 mL
ICV 280-476097/15		350.1			100 mL	100 mL			2.5 mL
ICB 280-476097/16		350.1			10 mL	10 mL			
LCS 280-476097/18		350.1			100 mL	100 mL		2.5 mL	
LCSD 280-476097/19		350.1			100 mL	100 mL		2.5 mL	
MB 280-476097/20		350.1			10 mL	10 mL			
CCVL 280-476097/33		350.1			100 mL	100 mL		0.5 mL	
CCV 280-476097/34		350.1			100 mL	100 mL		2.5 mL	
CCB 280-476097/35		350.1			10 mL	10 mL			
280-129830-C-3 MS	EW7-PM25B-1-35	350.1	T	No	10 mL	10 mL	<2 SU	0.1 mL	
280-129830-C-3 MSD	EW7-PM25B-1-35	350.1	T	No	10 mL	10 mL	<2 SU	0.1 mL	
280-129830-C-2	EW7-PM25A-1-25	350.1	T	No	10 mL	10 mL	<2 SU		
280-129830-C-1	EW7-PM23A-1-25	350.1	T	No	10 mL	10 mL	<2 SU		
CCVL 280-476097/49		350.1			100 mL	100 mL		0.5 mL	
CCV 280-476097/50		350.1			100 mL	100 mL		2.5 mL	
CCB 280-476097/51		350.1			10 mL	10 mL			
280-129830-C-3	EW7-PM25B-1-35	350.1	T	No	10 mL	10 mL	<2 SU		
CCVL 280-476097/67		350.1			100 mL	100 mL		0.5 mL	
CCV 280-476097/68		350.1			100 mL	100 mL		2.5 mL	
CCB 280-476097/69		350.1			10 mL	10 mL			

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.: 280-129830-1

SDG No.:

Batch Number: 476097 Batch Start Date: 10/31/19 12:22 Batch Analyst: Hunter, Brandon W

Batch Method: 350.1 Batch End Date:

Batch Notes	
Batch Comment	BWH
Carrier Identification	350.1 complex_00459
Hypochlorite ID	350.1 bleach_01156
Sodium Nitroprusside ID	350.1 color_00172
Pipette/Syringe/Dispenser ID	JPX100, JPX1000, JPX5000

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.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Batch Number: 474499 Batch Start Date: 10/17/19 18:01 Batch Analyst: Cherry, Scott V

Batch Method: 351.2 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	TKN 25ppm 00799	TKN ICV 25 00084		
ICV 280-474499/7		351.2, 351.2		25 mL	25 mL		5 mL		
ICB 280-474499/8		351.2, 351.2		25 mL	25 mL				
CCV 280-474499/9		351.2, 351.2		25 mL	25 mL	5 mL			
CCB 280-474499/10		351.2, 351.2		25 mL	25 mL				

Batch Notes	
Block Digestion End time	10/18/19 0400
Block Digestion Start time	10/17/19 2100
Block Digestor ID	TKN Hotblock
Digestion Solution ID	TKN digestion_00129
Oven, Bath or Block Temperature 1	185 Degrees C
Oven, Bath or Block Temperature 2	380 Degrees C

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.: 280-129830-1

SDG No.:

Batch Number: 475492 Batch Start Date: 10/26/19 15:22 Batch Analyst: Ryan, Jonathan D

Batch Method: 351.2 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	TKN 25ppm 00799		
LCS 280-475492/1		351.2, 351.2		<2	25 mL	25 mL	6 mL		
MB 280-475492/2		351.2, 351.2		<2	25 mL	25 mL			
280-129830-C-3	EW7-PM25B-1-35	351.2, 351.2	T	<2	25 mL	25 mL			
280-129830-C-3 MS	EW7-PM25B-1-35	351.2, 351.2	T	<2	25 mL	25 mL	3 mL		
280-129830-C-3 MSD	EW7-PM25B-1-35	351.2, 351.2	T	<2	25 mL	25 mL	3 mL		
280-129830-C-1	EW7-PM23A-1-25	351.2, 351.2	T	<2	25 mL	25 mL			
280-129830-C-2	EW7-PM25A-1-25	351.2, 351.2	T	<2	25 mL	25 mL			

Batch Notes	
Block Digestion End time	10/24/19 2005
Block Digestion Start time	10/26/19 1605
Block Digestor ID	TKN Hotblock
Digestion Solution ID	TKN digestion_00129
Oven, Bath or Block Temperature 1	185 Degrees C
Oven, Bath or Block Temperature 2	380 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.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Batch Number: 475682 Batch Start Date: 10/28/19 19:27 Batch Analyst: Cherry, Scott V

Batch Method: 351.2 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount					
ICV 280-474499/7-A		351.2		4 mL					
ICB 280-474499/8-A		351.2		4 mL					
LCS 280-475492/1-A		351.2		4 mL					
MB 280-475492/2-A		351.2		4 mL					
280-129830-C-3-A	EW7-PM25B-1-35	351.2	T	4 mL					
280-129830-C-3-B MS	EW7-PM25B-1-35	351.2	T	4 mL					
280-129830-C-3-C MSD	EW7-PM25B-1-35	351.2	T	4 mL					
280-129830-C-1-A	EW7-PM23A-1-25	351.2	T	4 mL					
280-129830-C-2-A	EW7-PM25A-1-25	351.2	T	4 mL					
CCV 280-474499/9-A		351.2		4 mL					
CCB 280-474499/10-A		351.2		4 mL					

Batch Notes	
Buffer Reagent ID	TKN Buffer_00122
Hypochlorite ID	TKN hypo_00666
Sodium Nitroprusside ID	Sodium Nitro_00097
Pipette/Syringe/Dispenser ID	5000ad, 1000ad

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.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Batch Number: 476322 Batch Start Date: 11/03/19 17:46 Batch Analyst: Cherry, Scott V

Batch Method: 353.2 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	NXN CAL INT 00511	NXN ICV INT 00492		
ICV 280-476322/17		353.2		100 mL	100 mL		5 mL		
ICVL 280-476322/18		353.2		100 mL	100 mL		2 mL		
ICB 280-476322/19		353.2		100 mL	100 mL				
LCS 280-476322/21		353.2		100 mL	100 mL	5 mL			
MB 280-476322/22		353.2		100 mL	100 mL				
CCV 280-476322/35		353.2		100 mL	100 mL	5 mL			
CCVL 280-476322/36		353.2		100 mL	100 mL	1 mL			
CCB 280-476322/37		353.2		100 mL	100 mL				
280-129830-C-3	EW7-PM25B-1-35	353.2	T	100 mL	100 mL				
280-129830-C-3 MS	EW7-PM25B-1-35	353.2	T	5 mL	5 mL	0.2 mL			
280-129830-C-3 MSD	EW7-PM25B-1-35	353.2	T	5 mL	5 mL	0.2 mL			
280-129830-C-1	EW7-PM23A-1-25	353.2	T	100 mL	100 mL				
280-129830-C-2	EW7-PM25A-1-25	353.2	T	100 mL	100 mL				
CCV 280-476322/51		353.2		100 mL	100 mL	5 mL			
CCVL 280-476322/52		353.2		100 mL	100 mL	1 mL			
CCB 280-476322/53		353.2		100 mL	100 mL				

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.: 280-129830-1

SDG No.:

Batch Number: 476322 Batch Start Date: 11/03/19 17:46 Batch Analyst: Cherry, Scott V

Batch Method: 353.2 Batch End Date:

Batch Notes	
Acid used for pH adjustment	SulfuricAcid_00223
Base used for pH adjustment	50%NaOH_00016
Buffer Reagent ID	NOXT Buffer_00206
Color Reagent ID	NOXT CR_00105
Copper Sulfate ID	CuSO4 NOXT_0007
Hydrochloric Acid ID	0.5N HCl_0075
pH Indicator ID	hc869997
Pipette/Syringe/Dispenser ID	5000ad, 1000ad

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.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Batch Number: 474982 Batch Start Date: 10/22/19 16:37 Batch Analyst: Abeyta, Joseph L

Batch Method: 9030B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	DistillUnitPort	Initial pH	Final pH	AcidVolAdded
LCS 280-474982/1		9030B, 9034		50 mL	50 mL	1		<2 SU	5 mL
MB 280-474982/2		9030B, 9034		50 mL	50 mL	2		<2 SU	5 mL
280-129830-E-1	EW7-PM23A-1-25	9030B, 9034	T	50 mL	50 mL	5	14 SU	<2 SU	5 mL
280-129830-E-2	EW7-PM25A-1-25	9030B, 9034	T	50 mL	50 mL	6	14 SU	<2 SU	5 mL
280-129830-E-3	EW7-PM25B-1-35	9030B, 9034	T	50 mL	50 mL	7	14 SU	<2 SU	5 mL
280-129830-E-3 MS	EW7-PM25B-1-35	9030B, 9034	T	50 mL	50 mL	8	14 SU	<2 SU	5 mL
280-129830-E-3 MSD	EW7-PM25B-1-35	9030B, 9034	T	50 mL	50 mL	9	14 SU	<2 SU	5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	SFD ICV INT 01626					
LCS 280-474982/1		9030B, 9034		1 mL					
MB 280-474982/2		9030B, 9034							
280-129830-E-1	EW7-PM23A-1-25	9030B, 9034	T						
280-129830-E-2	EW7-PM25A-1-25	9030B, 9034	T						
280-129830-E-3	EW7-PM25B-1-35	9030B, 9034	T						
280-129830-E-3 MS	EW7-PM25B-1-35	9030B, 9034	T	1 mL					
280-129830-E-3 MSD	EW7-PM25B-1-35	9030B, 9034	T	1 mL					

Batch Notes	
Batch Comment	JLA
Distillation End Time	10/22/2019 18:35
Distillation Start Time	10/22/2019 17:10
Formaldehyde ID	Form_00116
pH Indicator ID	HC989495 & HC 606169
Pipette/Syringe/Dispenser ID	AB8A1000 & 5000IX
Sulfuric Acid Reagent ID Number	H2SO4_00197
Zinc Acetate Buffer ID	Znac_00110

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.: 280-129830-1

SDG No.:

Batch Number: 474982 Batch Start Date: 10/22/19 16:37 Batch Analyst: Abeyta, Joseph L

Batch Method: 9030B 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.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Batch Number: 474999 Batch Start Date: 10/22/19 18:54 Batch Analyst: Abeyta, Joseph L

Batch Method: 9034 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	BuretStart1	BuretStop1	IodineAmount	TitrantVolume1	FinalAmount	
LCS 280-474982/1-A		9034		0.00 mL	2.50 mL	5 mL	2.5 mL	50 mL	
MB 280-474982/2-A		9034		2.50 mL	3.60 mL	1 mL	1.1 mL	50 mL	
280-129830-E-1-A	EW7-PM23A-1-25	9034	T	5.70 mL	6.80 mL	1 mL	1.1 mL	50 mL	
280-129830-E-2-A	EW7-PM25A-1-25	9034	T	6.80 mL	7.80 mL	1 mL	1 mL	50 mL	
280-129830-E-3-A	EW7-PM25B-1-35	9034	T	7.80 mL	8.80 mL	1 mL	1 mL	50 mL	
280-129830-E-3-B MS	EW7-PM25B-1-35	9034	T	8.80 mL	11.00 mL	5 mL	2.2 mL	50 mL	
280-129830-E-3-C MSD	EW7-PM25B-1-35	9034	T	11.00 mL	13.20 mL	5 mL	2.2 mL	50 mL	

Batch Notes	
Batch Comment	JA
Hydrochloric Acid ID	HCL Sol_00172
Iodine ID	Iod_00242
Normality of Iodine Solution	0.0250 N
Sodium Thiosulfate ID	Na Thio_00159
Pipette/Syringe/Dispenser ID	AB8A1000 & 5000IX
Starch Reagent ID	Starch Ind_00059
Normality of First Titrant	0.0250 N

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.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Batch Number: 474200 Batch Start Date: 10/16/19 09:39 Batch Analyst: Pedrick, Joshua A

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC CAL cl/so4 00279	IC Cal low 00488	IC CL ICV 00016	IC ICV 5 00250
STD1 280-474200/2 IC		9056A		5 mL	5 mL	0.04 mL	0.04 mL		
STD2 280-474200/3 IC		9056A		5 mL	5 mL	0.1 mL	0.1 mL		
STD3 280-474200/4 IC		9056A		5 mL	5 mL	0.2 mL	0.2 mL		
STD4 280-474200/5 IC		9056A		5 mL	5 mL	2.4 mL	0.8 mL		
STD5 280-474200/6 IC		9056A		5 mL	5 mL	4.8 mL	1.6 mL		
STD6 280-474200/7 IC		9056A		5 mL	5 mL	8 mL	2 mL		
ICV 280-474200/8		9056A		5 mL	5 mL			0.8 mL	0.8 mL
ICB 280-474200/9		9056A		5 mL	5 mL				

Lab Sample ID	Client Sample ID	Method Chain	Basis	IC SO4 ICV 00020					
STD1 280-474200/2 IC		9056A							
STD2 280-474200/3 IC		9056A							
STD3 280-474200/4 IC		9056A							
STD4 280-474200/5 IC		9056A							
STD5 280-474200/6 IC		9056A							
STD6 280-474200/7 IC		9056A							
ICV 280-474200/8		9056A		0.8 mL					
ICB 280-474200/9		9056A							

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.: 280-129830-1

SDG No.:

Batch Number: 474200 Batch Start Date: 10/16/19 09:39 Batch Analyst: Pedrick, Joshua A

Batch Method: 9056A Batch End Date:

Batch Notes	
Eluent 1 ID	Water
Filter ID	R7MA61819
Pipette/Syringe/Dispenser ID	ic100, wc-1000d, 5000ics
Regeneration Solution ID	ic10 H3PO4_00002
Sufficient Volume for Batch QC	Yes

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.: 280-129830-1

SDG No.:

Batch Number: 477274 Batch Start Date: 11/12/19 13:03 Batch Analyst: Pedrick, Joshua A

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC CAL cl/so4 00283	IC Cal low 00493	IC LCS 01709	ICMS/MSD WEEK 00622
CCV 280-477274/1		9056A		5 mL	5 mL			10 mL	
CCB 280-477274/2		9056A		5 mL	5 mL				
MRL 280-477274/3		9056A		5 mL	5 mL	0.2 mL	0.1 mL		
LCS 280-477274/4		9056A		5 mL	5 mL			10 mL	
LCSD 280-477274/5		9056A		5 mL	5 mL			10 mL	
MB 280-477274/6		9056A		5 mL	5 mL				
CCV 280-477274/17		9056A		5 mL	5 mL			10 mL	
CCB 280-477274/18		9056A		5 mL	5 mL				
CCV 280-477274/41		9056A		5 mL	5 mL			10 mL	
CCB 280-477274/42		9056A		5 mL	5 mL				
280-129830-F-1	EW7-PM23A-1-25	9056A	T	5 mL	5 mL				
280-129830-F-1	EW7-PM23A-1-25	9056A	T	5 mL	5 mL				
280-129830-F-2	EW7-PM25A-1-25	9056A	T	5 mL	5 mL				
280-129830-F-2	EW7-PM25A-1-25	9056A	T	5 mL	5 mL				
280-129830-F-3	EW7-PM25B-1-35	9056A	T	5 mL	5 mL				
280-129830-F-3 DU	EW7-PM25B-1-35	9056A	T	5 mL	5 mL				
280-129830-F-3 MS	EW7-PM25B-1-35	9056A	T	5 mL	5 mL				0.1 mL
280-129830-F-3 MSD	EW7-PM25B-1-35	9056A	T	5 mL	5 mL				0.1 mL
CCV 280-477274/53		9056A		5 mL	5 mL			10 mL	
CCB 280-477274/54		9056A		5 mL	5 mL				
280-129830-F-3	EW7-PM25B-1-35	9056A	T	5 mL	5 mL				
280-129830-F-3 DU	EW7-PM25B-1-35	9056A	T	5 mL	5 mL				
280-129830-F-3 MS	EW7-PM25B-1-35	9056A	T	5 mL	5 mL				0.1 mL

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.: 280-129830-1

SDG No.:

Batch Number: 477274 Batch Start Date: 11/12/19 13:03 Batch Analyst: Pedrick, Joshua A

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC CAL cl/so4 00283	IC Cal low 00493	IC LCS 01709	ICMS/MSD WEEK 00622
280-129830-F-3 MSD	EW7-PM25B-1-35	9056A	T	5 mL	5 mL				0.1 mL
CCV 280-477274/65		9056A		5 mL	5 mL			10 mL	
CCB 280-477274/66		9056A		5 mL	5 mL				

Batch Notes	
Eluent 1 ID	Water
Filter ID	R7MA61819
Pipette/Syringe/Dispenser ID	ic100, wc-1000d, 5000ics
Regeneration Solution ID	ic10 H3PO4_00002
Sufficient Volume for Batch QC	Yes

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.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-129830-1

SDG No.:

Batch Number: 476389 Batch Start Date: 11/04/19 11:18 Batch Analyst: Hunter, Brandon W

Batch Method: FILTRATION Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	TOC LCS Std 00048			
LCS 280-476389/1		FILTRATION, 9060A		200 mL	200 mL	5 mL			
MB 280-476389/2		FILTRATION, 9060A		20 mL	20 mL				
280-129830-D-3	EW7-PM25B-1-35	FILTRATION, 9060A	D	20 mL	20 mL				
280-129830-D-3 MS	EW7-PM25B-1-35	FILTRATION, 9060A	D	50 mL	50 mL				
280-129830-D-3 MSD	EW7-PM25B-1-35	FILTRATION, 9060A	D	50 mL	50 mL				
280-129830-D-1	EW7-PM23A-1-25	FILTRATION, 9060A	D	20 mL	20 mL				
280-129830-D-2	EW7-PM25A-1-25	FILTRATION, 9060A	D	20 mL	20 mL				

Batch Notes	
Filter ID	9743727
Pipette/Syringe/Dispenser ID	8332928

Basis	Basis Description
D	Dissolved

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.: 280-129830-1

SDG No.:

Batch Number: 476539 Batch Start Date: 11/04/19 16:10 Batch Analyst: Barker, Scott G

Batch Method: 9060A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	TOC ICV Std 00041	TOC LCS Std 00048	
ICV 280-476539/1		9060A		50 mL	50 mL	<2 SU	1 mL		
ICB 280-476539/2		9060A		20 mL	20 mL	<2 SU			
LCS 280-476389/1-A		9060A		200 mL	200 mL	<2 SU			
MB 280-476389/2-A		9060A		20 mL	20 mL	<2 SU			
280-129830-D-3-D	EW7-PM25B-1-35	9060A	D	20 mL	20 mL	7 SU			
280-129830-D-3-E MS	EW7-PM25B-1-35	9060A	D	50 mL	50 mL	7 SU		1.25 mL	
280-129830-D-3-F MSD	EW7-PM25B-1-35	9060A	D	50 mL	50 mL	7 SU		1.25 mL	
280-129830-D-1-B	EW7-PM23A-1-25	9060A	D	20 mL	20 mL	7 SU			
280-129830-D-2-B	EW7-PM25A-1-25	9060A	D	20 mL	20 mL	7 SU			
CCV 280-476539/15		9060A		200 mL	200 mL	<2 SU		5 mL	
CCB 280-476539/16		9060A		20 mL	20 mL	<2 SU			

Batch Notes	

Basis	Basis Description
D	Dissolved

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.: 280-129830-1

SDG No.:

Batch Number: 475343 Batch Start Date: 10/24/19 15:11 Batch Analyst: Gonzalez, Sofie P

Batch Method: SM 2320B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	CalcMsg	Alk daily lcs 00860				
CCV 280-475343/29		SM 2320B		InitialAmount is blank	25 mL				
CCB 280-475343/30		SM 2320B		InitialAmount is blank					
LCS 280-475343/31		SM 2320B		InitialAmount is blank	25 mL				
LCSD 280-475343/32		SM 2320B		InitialAmount is blank	25 mL				
MB 280-475343/33		SM 2320B		InitialAmount is blank					
280-129830-F-1	EW7-PM23A-1-25	SM 2320B	T	InitialAmount is blank					
280-129830-F-2	EW7-PM25A-1-25	SM 2320B	T	InitialAmount is blank					
CCV 280-475343/44		SM 2320B		InitialAmount is blank	25 mL				
CCB 280-475343/45		SM 2320B		InitialAmount is blank					
280-129830-F-3	EW7-PM25B-1-35	SM 2320B	T	InitialAmount is blank					
CCV 280-475343/53		SM 2320B		InitialAmount is blank	25 mL				
CCB 280-475343/54		SM 2320B		InitialAmount is blank					

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.: 280-129830-1

SDG No.:

Batch Number: 475343 Batch Start Date: 10/24/19 15:11 Batch Analyst: Gonzalez, Sofie P

Batch Method: SM 2320B Batch End Date:

Batch Notes	
Acid ID	0.02 H2SO4_00268
pH Buffer 1 ID	pH 2.0 Buffer_00082
pH Buffer 2 ID	pH 4.0 Buffer_00184
pH Buffer 3 ID	pH 7.0 Buffer_00269
pH Buffer 4 ID	pH 10 Buffer_00145
pH Buffer 5 ID	pH 12 Buffer_00159
pH Buffer 6 ID	pH 7.0 Buffer_00271
Sodium Carbonate ID	alk stk std_00017
Nominal Amount Used	25 mL
pH Meter ID	SV1
Probe ID	PCE 86 pH 1105_5241
Normality of First Titrant	0.02 N

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.

*** Sample Table from Analysis ***

File name: *** Sample Table from Analysis ***
Date: 31-Oct-19

BWH

350.1 color_00172
350.1 complex_00459
350.1 Bleach_01156

Cup	Name	Type	R	Dil	Wt	Comment	pH	Cl-
5	Sync	SYNC	1	1	1			
0	blk	CO	1	1	1			
0	Read Baseline	RB	1	1	1			
1	Cal 0.0 PPB	C	1	1	1			
3	Cal 25.0 ppb	C	1	1	1			
4	Cal 50.0 ppb	C	1	1	1			
5	Cal 100.0 ppb	C	1	1	1			
6	Cal 500.0 ppb	C	1	1	1			
7	Cal 1000.0 ppb	C	1	1	1			
8	Cal 2500.0 ppb	C	1	1	1			
9	Cal 5000.0 ppb	C	1	1	1			
0	blank	BLNK	1	1	1			
0	read baseline	RB	1	1	1			
10	ICVL 500.0 ppb	U	1	1	1			
11	ICV 2500.0 ppb	U	1	1	1			
12	ICB	U	1	1	1			
0	read baseline	RB	1	1	1			
8	LCS	U	1	1	1			
8	LCSD	U	1	1	1			
12	MB	U	1	1	1			
13	280-129804-a-11	U	1	1	1		<2	n
14	280-129804-a-11	ms U	1	1	1		<2	n
15	280-129804-a-11	msd U	1	1	1		<2	n
16	280-129676-b-13	U	1	1	1		<2	n
17	280-129676-b-14	U	1	5	1		<2	n
18	280-129676-b-15	U	1	1	1		<2	n
19	280-129676-b-16	U	1	1	1		<2	n
20	280-129686-b-2	U	1	1	1		<2	n
21	280-129686-c-3	U	1	1	1		<2	n
22	280-129741-c-1	U	1	1000	1		<2	n
0	rinse	U	1	1	1			n
0	read baseline	RB	1	1	1			
6	CCVL 500.0 ppb	U	1	1	1			
8	CCV 2500.0 ppb	U	1	1	1			
12	CCB	U	1	1	1			
0	read baseline	RB	1	1	1			
23	280-129741-b-2	U	1	1000	1		<2	n
24	280-129698-a-10	X U	1	1	1		<2	y
25	280-129830-c-3	X U	1	1	1		<2	
26	MS 280-129830-c-3	U	1	1	1		<2	n
27	MSD 280-129830-c-3	U	1	1	1		<2	n
28	280-129830-c-2	U	1	1	1		<2	n
29	280-129830-c-1	U	1	1	1		<2	n
30	280-129644-d-3	U	1	2	1		<2	n
31	280-129644-d-4	U	1	1	1		<2	n
32	280-129644-d-5	U	1	5	1		<2	n
0	rinse	U	1	1	1			
0	read baseline	RB	1	1	1			
6	CCVL 500.0 ppb	U	1	1	1			
8	CCV 2500.0 ppb	U	1	1	1			
12	CCB	U	1	1	1			
0	read baseline	RB	1	1	1			
33	280-129927-a-1	U	1	1	1		<2	n
34	280-129927-a-2	U	1	1	1		<2	n
35	280-129263-b-1	U	1	5	1		<2	n
36	LCS	U	1	1	1			n

Cup	Name	Type	R	Dil	Wt	Comment	pH	Cl⁻
37	MB	U	1	1	1			
38	280-129446-k-1	U	1	1	1			
39	MS 280-129446-k-1	U	1	1	1	11/21/19 BWH	~~<2~~ 7	n
40	MSD 280-129446-k-1	U	1	1	1		<2 7	n
22	280-129741-c-1	U	1	1000	1		~~<2~~ 7	n
23	280-129741-b-2	U	1	1000	1		<2	n
25	280-129830-c-3	U	1	1	1		<2	n
41	280-129698-a-10	X U	1	100	1		<2	y
0	rinse	U	1	1	1			
0	read baseline	RB	1	1	1			
6	CCVL 500.0 ppb	U	1	1	1			
8	CCV 2500.0 ppb	U	1	1	1			
12	CCB	U	1	1	1			
0	read baseline	RB	1	1	1			
42	280-129698-a-10	X U	1	10	1		<2	y
8	LCS	U	1	1	1			
8	LCSD	U	1	1	1			
12	MB	U	1	1	1			
43	280-129676-b-2	U	1	1	1		<2	
44	MS 280-129676-b-2	U	1	1	1		<2	n
45	MSD 280-129676-b-2	U	1	1	1		<2	n
8	LCS	U	1	1	1			
46	280-129676-b-4	U	1	5	1		<2	n
47	280-129676-b-5	U	1	2	1		<2	n
48	280-129676-b-6	U	1	10	1		<2	n
49	280-129676-b-7	U	1	1	1		<2	n
50	280-129676-b-8	U	1	1	1		<2	n
51	280-129676-b-9	U	1	1	1		<2	n
0	rinse	U	1	1	1			
0	read baseline	RB	1	1	1			
6	CCVL 500.0 ppb	U	1	1	1			
8	CCV 2500.0 ppb	U	1	1	1			
12	CCB	U	1	1	1			
0	read baseline	RB	1	1	1			
52	280-129676-b-10	U	1	1	1		<2	
53	280-129676-b-11	X U	1	2	1		<2	n
54	280-129676-b-12	U	1	1	1		<2	n
55	280-129698-a-10	U	1	1000	1		<2	n
56	280-129697-a-4	U	1	1	1		<2	y
57	280-129697-a-4 ms	U	1	1	1		<2	n
58	280-129697-a-4 msd	U	1	1	1		<2	n
59	280-129697-a-9	U	1	1	1		<2	n
60	280-129697-a-14	U	1	1	1		<2	n
61	280-129697-a-19	U	1	1	1		<2	n
0	rinse	U	1	1	1		<2	n
0	read baseline	RB	1	1	1			
6	CCVL 500.0 ppb	U	1	1	1			
8	CCV 2500.0 ppb	U	1	1	1			
12	CCB	U	1	1	1			
0	read baseline	RB	1	1	1			
62	280-129697-a-24	U	1	1	1		<2	n
63	280-129697-a-29	U	1	1	1		<2	n
64	280-129697-a-34	U	1	1	1		<2	n
65	280-129702-f-2	U	1	1	1		<2	n
66	280-129676-b-1	U	1	1	1		<2	n
67	280-129676-b-3	U	1	10	1		<2	n
68	280-129676-b-11	U	1	4	1		<2	n
0	rinse	U	1	1	1			
0	read baseline	RB	1	1	1			
6	CCVL 500.0 ppb	U	1	1	1			

Cup	Name	Type	R	Dil	Wt	Comment
8	CCV 2500.0 ppb	U	1	1	1	
12	CCB	U	1	1	1	
0	read baseline	RB	1	1	1	

Run Results Report

Facility Name	
Facility Location	
Department	
Operator Name	BWH
Operator ID	BWH
Platform	FS 3000
Software Rev Code	222
Data system ID	57
Result path	C:\FLOW_4\103119.RST
Sample table path	C:\FLOW_4\103119.tbl
Method path	C:\FLOW_4\nh3.mth
Date acquired	31-Oct-19
Time acquired	16:55

				Ammonia		
Date	Time	Cup	Name	Response	Calc [ppb]	Flags
31-Oct-19	12:22	5	Sync	10708	97.585	
31-Oct-19	12:24	0	blk	131	-6.367	LO
31-Oct-19	12:26	0	Read Baseline	0	-7.640	BL
31-Oct-19	12:28	1	Cal 0.0 PPB	939	1.513	
31-Oct-19	12:30	3	Cal 25.0 ppb	3634	27.866	
31-Oct-19	12:32	4	Cal 50.0 ppb	6065	51.737	
31-Oct-19	12:34	5	Cal 100.0 ppb	11655	106.971	
31-Oct-19	12:36	6	Cal 500.0 ppb	49590	494.696	
31-Oct-19	12:38	7	Cal 1000.0 ppb	95801	997.325	
31-Oct-19	12:40	8	Cal 2500.0 ppb	219249	2503.344	
31-Oct-19	12:42	9	Cal 5000.0 ppb	391328	4999.187	
31-Oct-19	12:44	0	blank	-6140	-67.169	LO
31-Oct-19	12:46	0	read baseline	0	-7.640	BL
31-Oct-19	12:48	10	ICVL 500.0 ppb	49135	489.912	
31-Oct-19	12:50	11	ICV 2500.0 ppb	227271	2609.435	
31-Oct-19	12:52	12	ICB	-1563	-22.847	LO
31-Oct-19	12:54	0	read baseline	0	-7.640	BL
31-Oct-19	12:56	8	LCS	222130	2541.328	
31-Oct-19	12:58	8	LCSD	223568	2560.344	
31-Oct-19	13:00	12	MB	-2272	-29.737	LO
31-Oct-19	13:02	13	280-129804-a-11	22243	212.938	
31-Oct-19	13:04	14	280-129804-a-11 ms	120353	1277.920	
31-Oct-19	13:06	15	280-129804-a-11 msd	115831	1225.534	
31-Oct-19	13:08	16	280-129676-b-13	239580	2774.169	
31-Oct-19	13:10	17	280-129676-b-14	143263	7741.127	
31-Oct-19	13:12	18	280-129676-b-15	239789	2776.990	
31-Oct-19	13:14	19	280-129676-b-16	292878	3514.749	
31-Oct-19	13:16	20	280-129686-b-2	-2599	-32.912	LO
31-Oct-19	13:18	21	280-129686-c-3	372	-4.012	LO
31-Oct-19	13:20	22	280-129741-c-1	33584	328369.188	
31-Oct-19	13:22	0	rinse	-207	-9.657	LO
31-Oct-19	13:24	0	read baseline	0	-7.640	BL
31-Oct-19	13:26	6	CCVL 500.0 ppb	49165	490.231	
31-Oct-19	13:28	8	CCV 2500.0 ppb	219772	2510.230	
31-Oct-19	13:30	12	CCB	-1664	-23.835	LO
31-Oct-19	13:32	0	read baseline	0	-7.640	BL
31-Oct-19	13:34	23	280-129741-b-2	243965	2833426.500	
31-Oct-19	13:36	24	280-129698-a-10 X	876258	14516.903	HI
31-Oct-19	13:38	25	280-129830-c-3 X	11844	108.847	FL
31-Oct-19	13:40	26	MS 280-129830-c-3	225306	2583.361	
31-Oct-19	13:42	27	MSD 280-129830-c-3	222600	2547.542	
31-Oct-19	13:44	28	280-129830-c-2	13968	129.971	
31-Oct-19	13:46	29	280-129830-c-1	166034	1825.005	
31-Oct-19	13:48	30	280-129644-d-3	235117	5428.332	
31-Oct-19	13:50	31	280-129644-d-4	-2437	-31.340	LO
31-Oct-19	13:52	32	280-129644-d-5	146844	7956.054	

Result path C:\FLOW_4\103119.RST
Sample table path C:\FLOW_4\103119.tbl
Method path C:\FLOW_4\nh3.mth
Date acquired 31-Oct-19
Time acquired 16:55

				Ammonia		
Date	Time	Cup	Name	Response	Calc [ppb]	Flags
31-Oct-19	13:54	0	rinse	-1944	-26.555	LO
31-Oct-19	13:56	0	read baseline	0	-7.640	BL
31-Oct-19	13:58	6	CCVL 500.0 ppb	48507	483.318	
31-Oct-19	14:00	8	CCV 2500.0 ppb	222467	2545.790	
31-Oct-19	14:02	12	CCB	-2616	-33.075	LO
31-Oct-19	14:04	0	read baseline	0	-7.640	BL
31-Oct-19	14:06	33	280-129927-a-1	1381	5.835	
31-Oct-19	14:08	34	280-129927-a-2	21968	210.156	
31-Oct-19	14:14	35	280-129263-b-1	197152	11081.535	
31-Oct-19	14:16	36	LCS	217917	2485.832	
31-Oct-19	14:18	37	MB	-2692	-33.809	LO
31-Oct-19	14:20	38	280-129446-k-1	67316	683.557	
31-Oct-19	14:22	39	MS 280-129446-k-1	157785	1723.806	
31-Oct-19	14:24	40	MSD 280-129446-k-1	155149	1691.692	
31-Oct-19	14:26	22	280-129741-c-1	30177	293483.844	
31-Oct-19	14:35	23	280-129741-b-2	243230	2823479.500	
31-Oct-19	14:37	25	280-129830-c-3	141923	1532.183	
31-Oct-19	14:39	41	280-129698-a-10 X	916792	1547854.750	HI
31-Oct-19	14:41	0	rinse	-8905	-93.783	LO FL
31-Oct-19	14:43	0	read baseline	0	-7.640	BL
31-Oct-19	14:45	6	CCVL 500.0 ppb	48889	487.326	
31-Oct-19	14:47	8	CCV 2500.0 ppb	221620	2534.600	
31-Oct-19	14:49	12	CCB	-2607	-32.983	LO
31-Oct-19	14:51	0	read baseline	0	-7.640	BL
31-Oct-19	14:53	42	280-129698-a-10 X	1045295	186965.609	HI
31-Oct-19	14:55	8	LCS	205486	2323.678	FL
31-Oct-19	14:57	8	LCSD	221528	2533.385	
31-Oct-19	14:59	12	MB	-2530	-32.243	LO
31-Oct-19	15:05	43	280-129676-b-2	28158	272.890	
31-Oct-19	15:14	44	MS 280-129676-b-2	127895	1365.994	
31-Oct-19	15:16	45	MSD 280-129676-b-2	127193	1357.758	
31-Oct-19	15:18	8	LCS	221782	2536.741	
31-Oct-19	15:20	46	280-129676-b-4	92791	4817.858	
31-Oct-19	15:22	47	280-129676-b-5	252023	5886.204	
31-Oct-19	15:24	48	280-129676-b-6	188655	21079.633	
31-Oct-19	15:26	49	280-129676-b-7	121015	1285.614	
31-Oct-19	15:28	50	280-129676-b-8	190144	2126.872	
31-Oct-19	15:30	51	280-129676-b-9	24884	239.639	
31-Oct-19	15:32	0	rinse	-242	-9.994	LO
31-Oct-19	15:34	0	read baseline	0	-7.640	BL
31-Oct-19	15:36	6	CCVL 500.0 ppb	49725	496.114	
31-Oct-19	15:38	8	CCV 2500.0 ppb	225183	2581.724	
31-Oct-19	15:40	12	CCB	-2326	-30.264	LO
31-Oct-19	15:42	0	read baseline	0	-7.640	BL
31-Oct-19	15:44	52	280-129676-b-10	46530	462.591	
31-Oct-19	15:46	53	280-129676-b-11 X	428802	11207.885	
31-Oct-19	15:48	54	280-129676-b-12	99883	1043.328	
31-Oct-19	15:50	55	280-129698-a-10	33247	324903.500	
31-Oct-19	15:56	56	280-129697-a-4	847	0.618	LO UM
31-Oct-19	15:58	57	280-129697-a-4 ms	100244	1047.402	
31-Oct-19	16:00	58	280-129697-a-4 msd	101792	1064.919	
31-Oct-19	16:02	59	280-129697-a-9	-746	-14.901	LO UM
31-Oct-19	16:04	60	280-129697-a-14	384	-3.900	LO UM
31-Oct-19	16:06	61	280-129697-a-19	2121	13.057	
31-Oct-19	16:08	0	rinse	-56	-8.184	LO
31-Oct-19	16:10	0	read baseline	0	-7.640	BL UM
31-Oct-19	16:12	6	CCVL 500.0 ppb	48672	485.045	

Result path C:\FLOW_4\103119.RST
Sample table path C:\FLOW_4\103119.tbl
Method path C:\FLOW_4\nh3.mth
Date acquired 31-Oct-19
Time acquired 16:55

				Ammonia		
Date	Time	Cup	Name	Response	Calc [ppb]	Flags
31-Oct-19	16:14	8	CCV 2500.0 ppb	222984	2552.619	
31-Oct-19	16:16	12	CCB	-2583	-32.754	LO
31-Oct-19	16:18	0	read baseline	0	-7.640	BL
31-Oct-19	16:20	62	280-129697-a-24	-280	-10.368	LO
31-Oct-19	16:22	63	280-129697-a-29	1532	7.304	
31-Oct-19	16:24	64	280-129697-a-34	-286	-10.423	LO
31-Oct-19	16:26	65	280-129702-f-2	1710	9.039	
31-Oct-19	16:28	66	280-129676-b-1	-453	-12.049	LO
31-Oct-19	16:30	67	280-129676-b-3	228674	26280.975	
31-Oct-19	16:37	68	280-129676-b-11	242019	11228.378	
31-Oct-19	16:39	0	rinse	-2789	-34.754	LO
31-Oct-19	16:41	0	read baseline	0	-7.640	BL
31-Oct-19	16:43	6	CCVL 500.0 ppb	46924	466.718	
31-Oct-19	16:45	8	CCV 2500.0 ppb	221997	2539.583	
31-Oct-19	16:47	12	CCB	-2386	-30.847	LO
31-Oct-19	16:49	0	read baseline	0	-7.640	BL

Peak Table:Ammonia

File name: C:\FLOW_4\103119.RST
Date: 31-Oct-19
Operator: BWH

Peak	Cup	Name	R	Type	Dil	Wt	Height	Calc. (ppb)	Flags
1	5	Sync	1	SYNC	1	1	10708	97.584648	
2	0	blk	1	CO	1	1	131	-6.367124	LO
B	0	Read Baseline	1	RB	1	1	0	-7.639565	BL
4	1	Cal 0.0 PPB	1	C	1	1	939	1.513319	
5	3	Cal 25.0 ppb	1	C	1	1	3634	27.865965	
6	4	Cal 50.0 ppb	1	C	1	1	6065	51.736652	
7	5	Cal 100.0 ppb	1	C	1	1	11655	106.971489	
8	6	Cal 500.0 ppb	1	C	1	1	49590	494.696167	
9	7	Cal 1000.0 ppb	1	C	1	1	95801	997.324585	
10	8	Cal 2500.0 ppb	1	C	1	1	219249	2503.344482	
11	9	Cal 5000.0 ppb	1	C	1	1	391328	4999.186523	
12	0	blank	1	BLNK	1	1	-6140	-67.168640	LO
B	0	read baseline	1	RB	1	1	0	-7.639565	BL
14	10	ICVL 500.0 ppb	1	U	1	1	49135	489.911682	
15	11	ICV 2500.0 ppb	1	U	1	1	227271	2609.434570	
16	12	ICB	1	U	1	1	-1563	-22.847090	LO
B	0	read baseline	1	RB	1	1	0	-7.639565	BL
18	8	LCS	1	U	1	1	222130	2541.328369	
19	8	LCSD	1	U	1	1	223568	2560.343506	
20	12	MB	1	U	1	1	-2272	-29.736530	LO
21	13	280-129804-a-11	1	U	1	1	22243	212.937607	
22	14	280-129804-a-11 ms	1	U	1	1	120353	1277.920166	
23	15	280-129804-a-11 msd	1	U	1	1	115831	1225.533569	
24	16	280-129676-b-13	1	U	1	1	239580	2774.168701	
25	17	280-129676-b-14	1	U	5	1	143263	7741.126953	
26	18	280-129676-b-15	1	U	1	1	239789	2776.990479	
27	19	280-129676-b-16	1	U	1	1	292878	3514.748779	
28	20	280-129686-b-2	1	U	1	1	-2599	-32.911549	LO
29	21	280-129686-c-3	1	U	1	1	372	-4.011717	LO
30	22	280-129741-c-1	1	U	1000	1	33584	328369.187500	
31	0	rinse	1	U	1	1	-207	-9.656699	LO
B	0	read baseline	1	RB	1	1	0	-7.639565	BL
33	6	CCVL 500.0 ppb	1	U	1	1	49165	490.231232	
34	8	CCV 2500.0 ppb	1	U	1	1	219772	2510.229980	
35	12	CCB	1	U	1	1	-1664	-23.835285	LO
B	0	read baseline	1	RB	1	1	0	-7.639565	BL
37	23	280-129741-b-2	1	U	1000	1	243965	2833426.500000	
38	24	280-129698-a-10 X	1	U	1	1	876258	14516.903320	HI
39	25	280-129830-c-3 X	1	U	1	1	11844	108.846954	FL
40	26	MS 280-129830-c-3	1	U	1	1	225306	2583.360840	
41	27	MSD 280-129830-c-3	1	U	1	1	222600	2547.542236	
42	28	280-129830-c-2	1	U	1	1	13968	129.971008	
43	29	280-129830-c-1	1	U	1	1	166034	1825.005371	
44	30	280-129644-d-3	1	U	2	1	235117	5428.332031	
45	31	280-129644-d-4	1	U	1	1	-2437	-31.339649	LO
46	32	280-129644-d-5	1	U	5	1	146844	7956.053711	
47	0	rinse	1	U	1	1	-1944	-26.555031	LO
B	0	read baseline	1	RB	1	1	0	-7.639565	BL
49	6	CCVL 500.0 ppb	1	U	1	1	48507	483.318176	
50	8	CCV 2500.0 ppb	1	U	1	1	222467	2545.790039	
51	12	CCB	1	U	1	1	-2616	-33.074894	LO
B	0	read baseline	1	RB	1	1	0	-7.639565	BL
53	33	280-129927-a-1	1	U	1	1	1381	5.835369	
54	34	280-129927-a-2	1	U	1	1	21968	210.155685	
55	35	280-129263-b-1	1	U	5	1	197152	11081.535156	
56	36	LCS	1	U	1	1	217917	2485.831787	
57	37	MB	1	U	1	1	-2692	-33.808670	LO
58	38	280-129446-k-1	1	U	1	1	67316	683.557007	
59	39	MS 280-129446-k-1	1	U	1	1	157785	1723.805664	
60	40	MSD 280-129446-k-1	1	U	1	1	155149	1691.691528	
61	22	280-129741-c-1	1	U	1000	1	30177	293483.843750	
62	23	280-129741-b-2	1	U	1000	1	243230	2823479.500000	
63	25	280-129830-c-3	1	U	1	1	141923	1532.183350	
64	41	280-129698-a-10 X	1	U	100	1	916792	1547854.750000	HI
65	0	rinse	1	U	1	1	-8905	-93.782593	LO FL
B	0	read baseline	1	RB	1	1	0	-7.639565	BL
67	6	CCVL 500.0 ppb	1	U	1	1	48889	487.326416	
68	8	CCV 2500.0 ppb	1	U	1	1	221620	2534.599609	
69	12	CCB	1	U	1	1	-2607	-32.982925	LO
B	0	read baseline	1	RB	1	1	0	-7.639565	BL

Peak	Cup	Name	R	Type	Dil	Wt	Height	Calc. (ppb)	Flags
71	42	280-129698-a-10 X 1		U	10	1	1045295	186965.609375	HI
72	8	LCS	1	U	1	1	205486	2323.677979	FL
73	8	LCSD	1	U	1	1	221528	2533.385254	
74	12	MB	1	U	1	1	-2530	-32.242695	LO
75	43	280-129676-b-2	1	U	1	1	28158	272.889923	
76	44	MS 280-129676-b-2 1		U	1	1	127895	1365.994385	
77	45	MSD 280-129676-b-2 1		U	1	1	127193	1357.757812	
78	8	LCS	1	U	1	1	221782	2536.740723	
79	46	280-129676-b-4	1	U	5	1	92791	4817.858398	
80	47	280-129676-b-5	1	U	2	1	252023	5886.203613	
81	48	280-129676-b-6	1	U	10	1	188655	21079.632812	
82	49	280-129676-b-7	1	U	1	1	121015	1285.613525	
83	50	280-129676-b-8	1	U	1	1	190144	2126.871826	
84	51	280-129676-b-9	1	U	1	1	24884	239.638672	
85	0	rinse	1	U	1	1	-242	-9.993671	LO
B	0	read baseline	1	RB	1	1	0	-7.639565	BL
87	6	CCVL 500.0 ppb	1	U	1	1	49725	496.113556	
88	8	CCV 2500.0 ppb	1	U	1	1	225183	2581.723633	
89	12	CCB	1	U	1	1	-2326	-30.264299	LO
B	0	read baseline	1	RB	1	1	0	-7.639565	BL
91	52	280-129676-b-10	1	U	1	1	46530	462.590668	
92	53	280-129676-b-11 X 1		U	2	1	428802	11207.884766	
93	54	280-129676-b-12	1	U	1	1	99883	1043.327759	
94	55	280-129698-a-10	1	U	1000	1	33247	324903.500000	
95	56	280-129697-a-4	1	U	1	1	847	0.618122	LO UM
96	57	280-129697-a-4 ms 1		U	1	1	100244	1047.401733	
97	58	280-129697-a-4 msd 1		U	1	1	101792	1064.918945	
98	59	280-129697-a-9	1	U	1	1	-746	-14.900517	LO UM
99	60	280-129697-a-14	1	U	1	1	384	-3.899899	LO UM
100	61	280-129697-a-19	1	U	1	1	2121	13.056684	
101	0	rinse	1	U	1	1	-56	-8.183713	LO
B	0	read baseline	1	RB	1	1	0	-7.639565	BL UM
103	6	CCVL 500.0 ppb	1	U	1	1	48672	485.044678	
104	8	CCV 2500.0 ppb	1	U	1	1	222984	2552.618896	
105	12	CCB	1	U	1	1	-2583	-32.754330	LO
B	0	read baseline	1	RB	1	1	0	-7.639565	BL
107	62	280-129697-a-24	1	U	1	1	-280	-10.368223	LO
108	63	280-129697-a-29	1	U	1	1	1532	7.303732	
109	64	280-129697-a-34	1	U	1	1	-286	-10.423409	LO
110	65	280-129702-f-2	1	U	1	1	1710	9.039420	
111	66	280-129676-b-1	1	U	1	1	-453	-12.048921	LO
112	67	280-129676-b-3	1	U	10	1	228674	26280.974609	
113	68	280-129676-b-11	1	U	4	1	242019	11228.377930	
114	0	rinse	1	U	1	1	-2789	-34.753769	LO
B	0	read baseline	1	RB	1	1	0	-7.639565	BL
116	6	CCVL 500.0 ppb	1	U	1	1	46924	466.717682	
117	8	CCV 2500.0 ppb	1	U	1	1	221997	2539.583496	
118	12	CCB	1	U	1	1	-2386	-30.846752	LO
B	0	read baseline	1	RB	1	1	0	-7.639565	BL

Ammonia:Calibration 1: Peak 4-119

File name: C:\FLOW_4\103119.RST
Date: 31-Oct-19
Operator: BWH

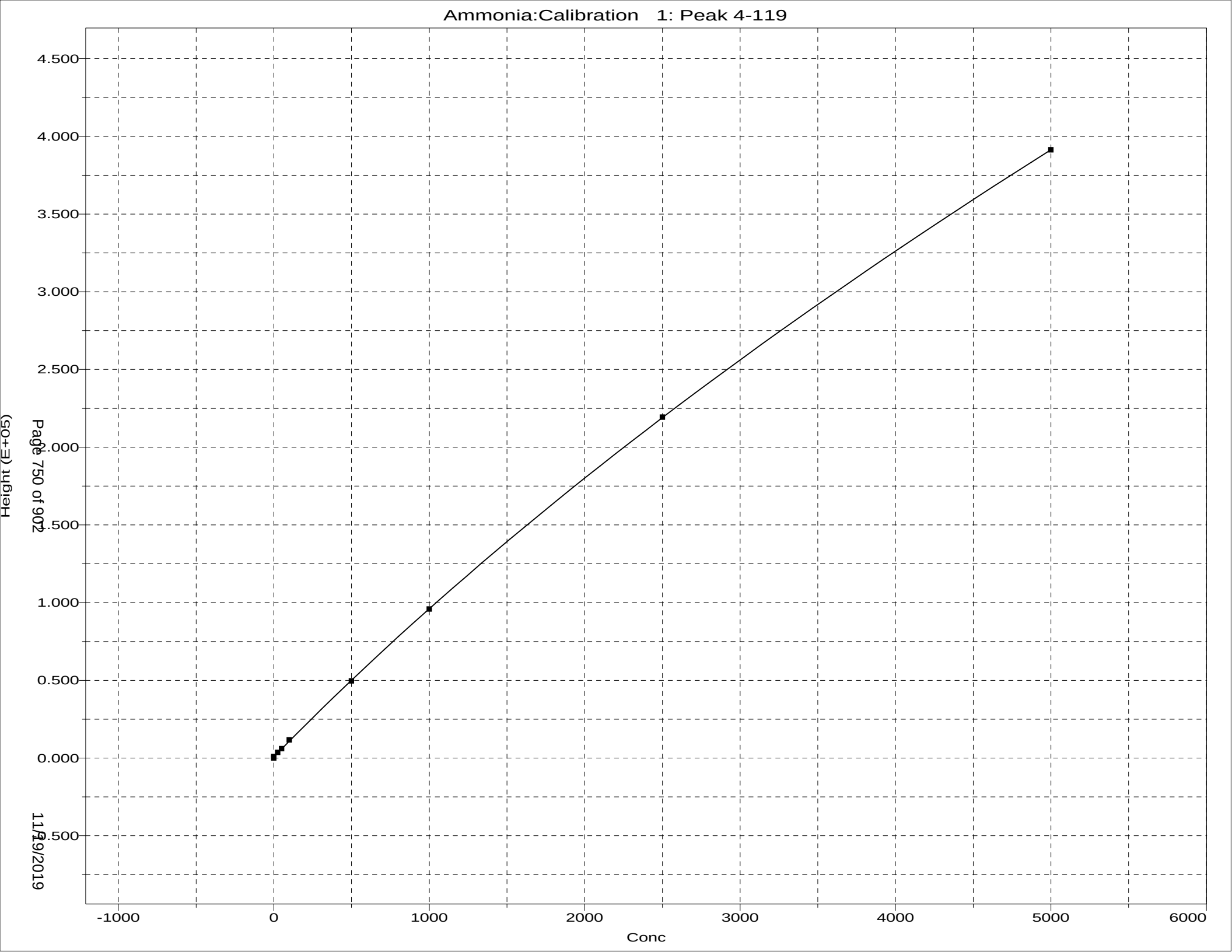
*	Name	Conc	Height
*	Cal 0.0 PPB	0.000000	938.716370
*	Cal 25.0 ppb	25.000000	3633.602783
*	Cal 50.0 ppb	50.000000	6064.741211
*	Cal 100.0 ppb	100.000000	11654.591797
*	Cal 500.0 ppb	500.000000	49589.992188
*	Cal 1000.0 ppb	1000.000000	95801.125000
*	Cal 2500.0 ppb	2500.000000	219248.609375
*	Cal 5000.0 ppb	5000.000000	391327.843750

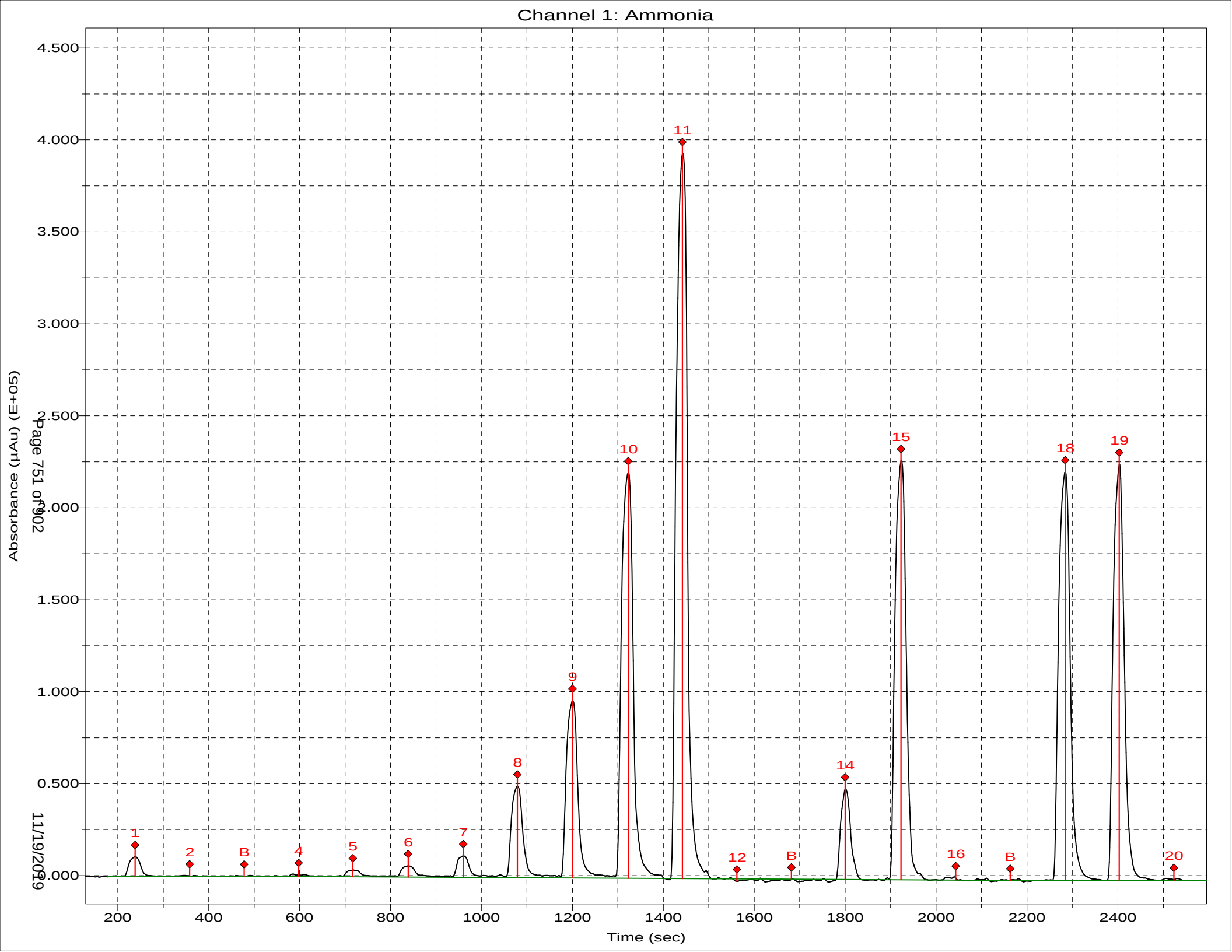
Calib Coef:
x=cyy+by+a
a: (intercept) -7.6396e+00
b: 9.7431e-03
c: 7.7974e-09

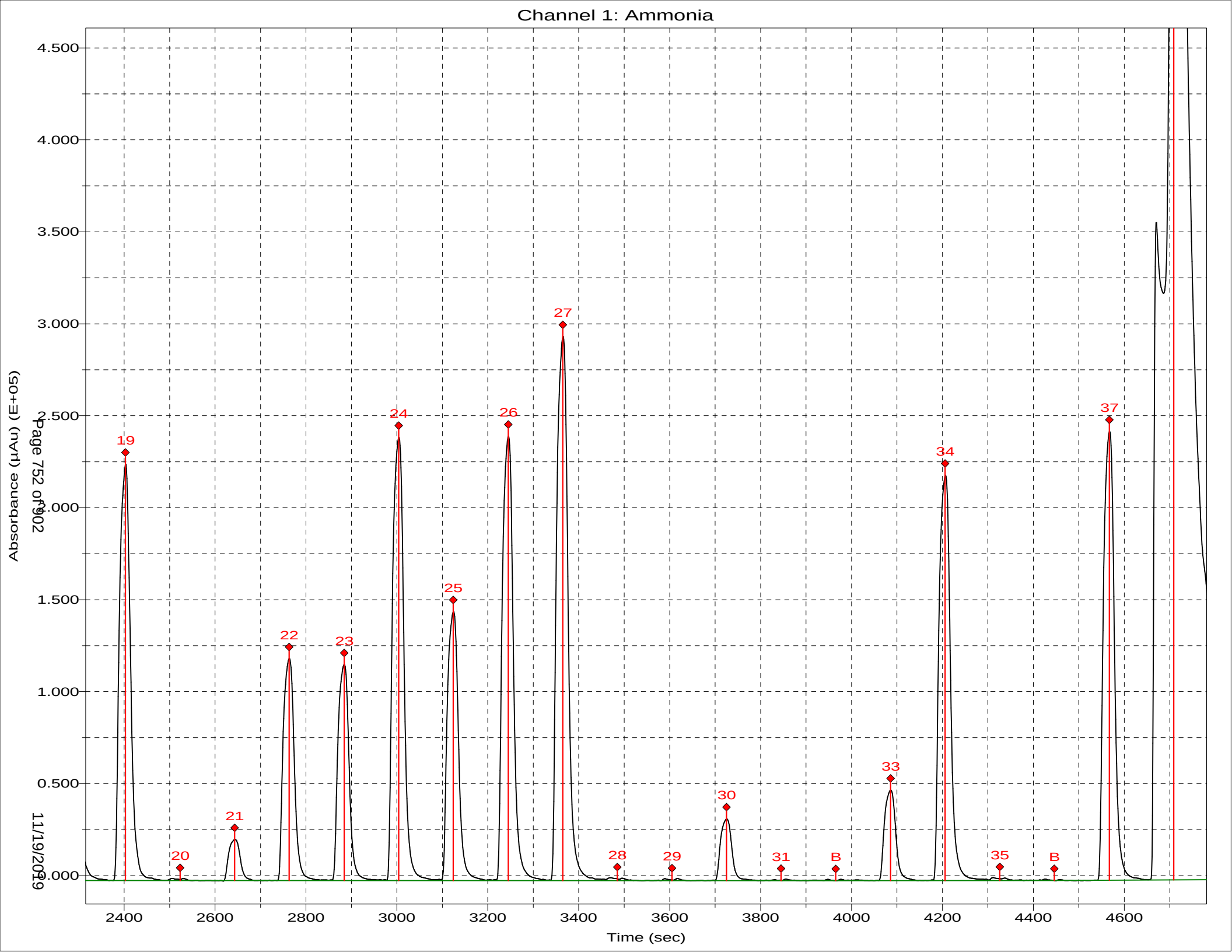
Corr Coef: 0.999996

Carryover: 1.22%

No Drift Peaks


Ammonia:Calibration 1: Peak 4-119
4.500
4.000
3.500
3.000
2.500
2.000
1.500
1.000
0.500
0.000
-0.500
Height (E+05)
-1000
0
1000
2000
3000
4000
5000
6000
Conc


Channel 1: Ammonia
Absorbance (µAu) (E+05)
4.500
4.000
3.500
3.000
2.500
2.000
1.500
1.000
0.500
0.000
200
400
600
800
1000
1200
1400
1600
1800
2000
2200
2400
Time (sec)
1
2
B
4
5
6
7
8
9
10
11
12
B
14
15
16
B
18
19
20


Channel 1: Ammonia
Absorbance (µAu) (E+05)
4.500
4.000
3.500
3.000
2.500
2.000
1.500
1.000
0.500
0.000
19
20
21
22
23
24
25
26
27
28
29
30
31
B
33
34
35
B
37
2400
2600
2800
3000
3200
3400
3600
3800
4000
4200
4400
4600
Time (sec)
Page 752 of 902
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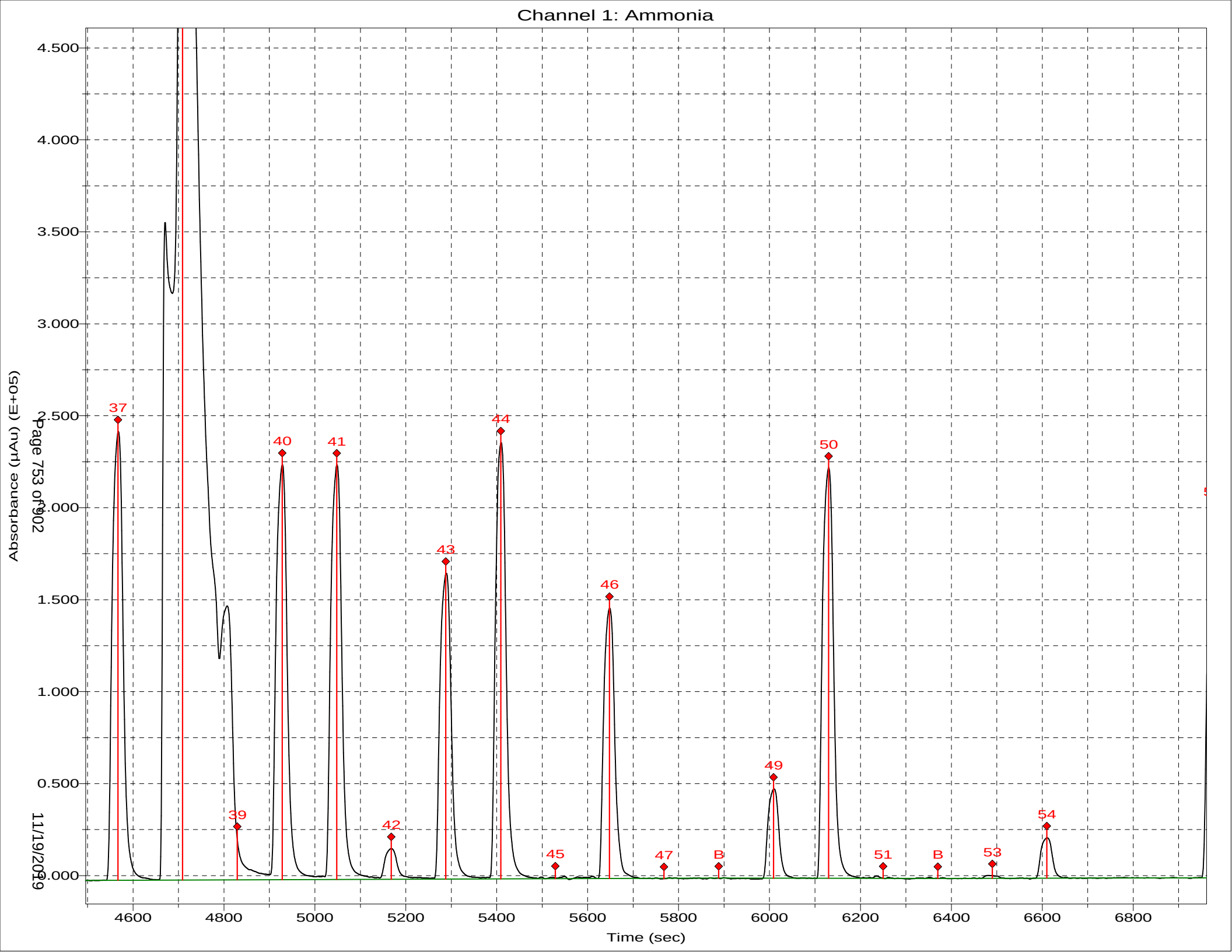
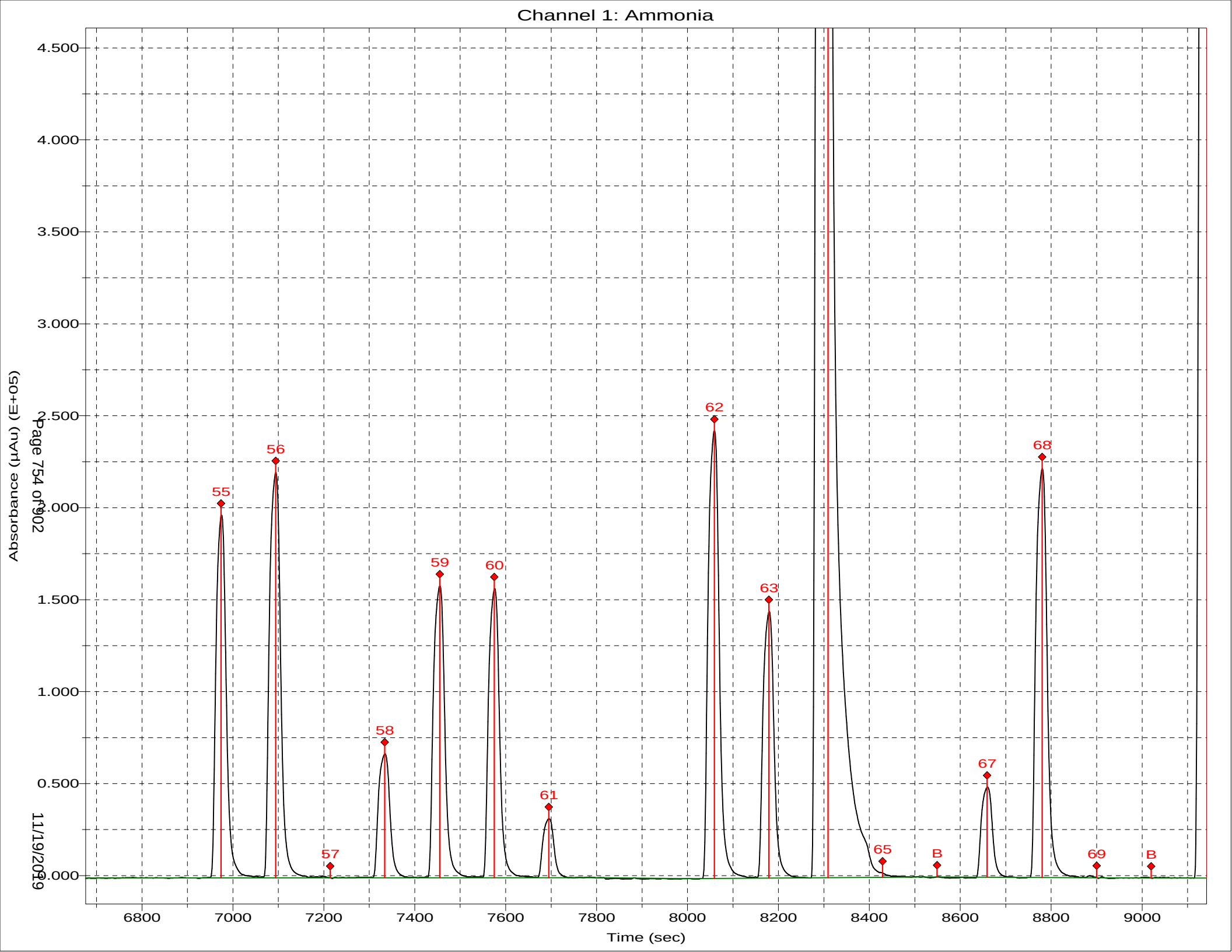
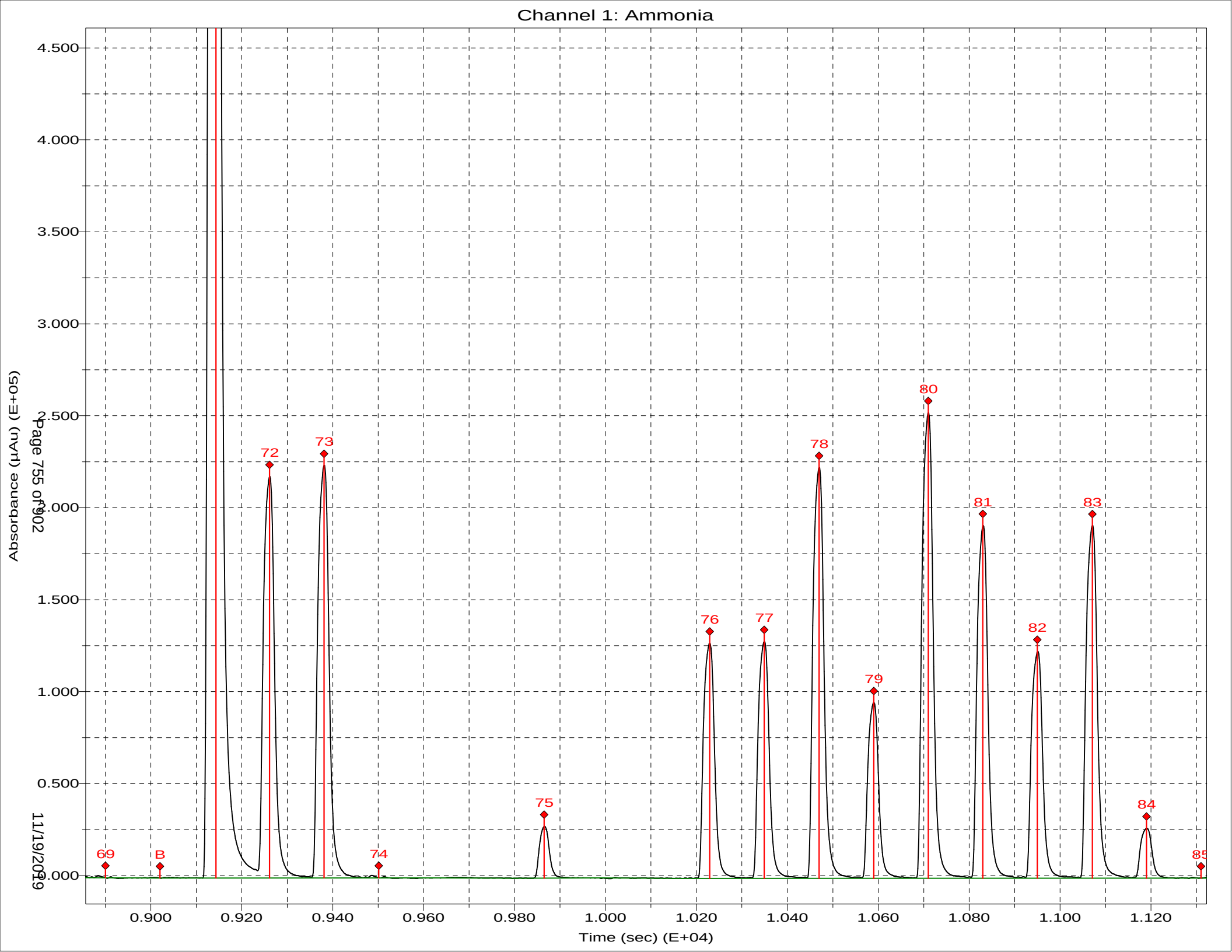
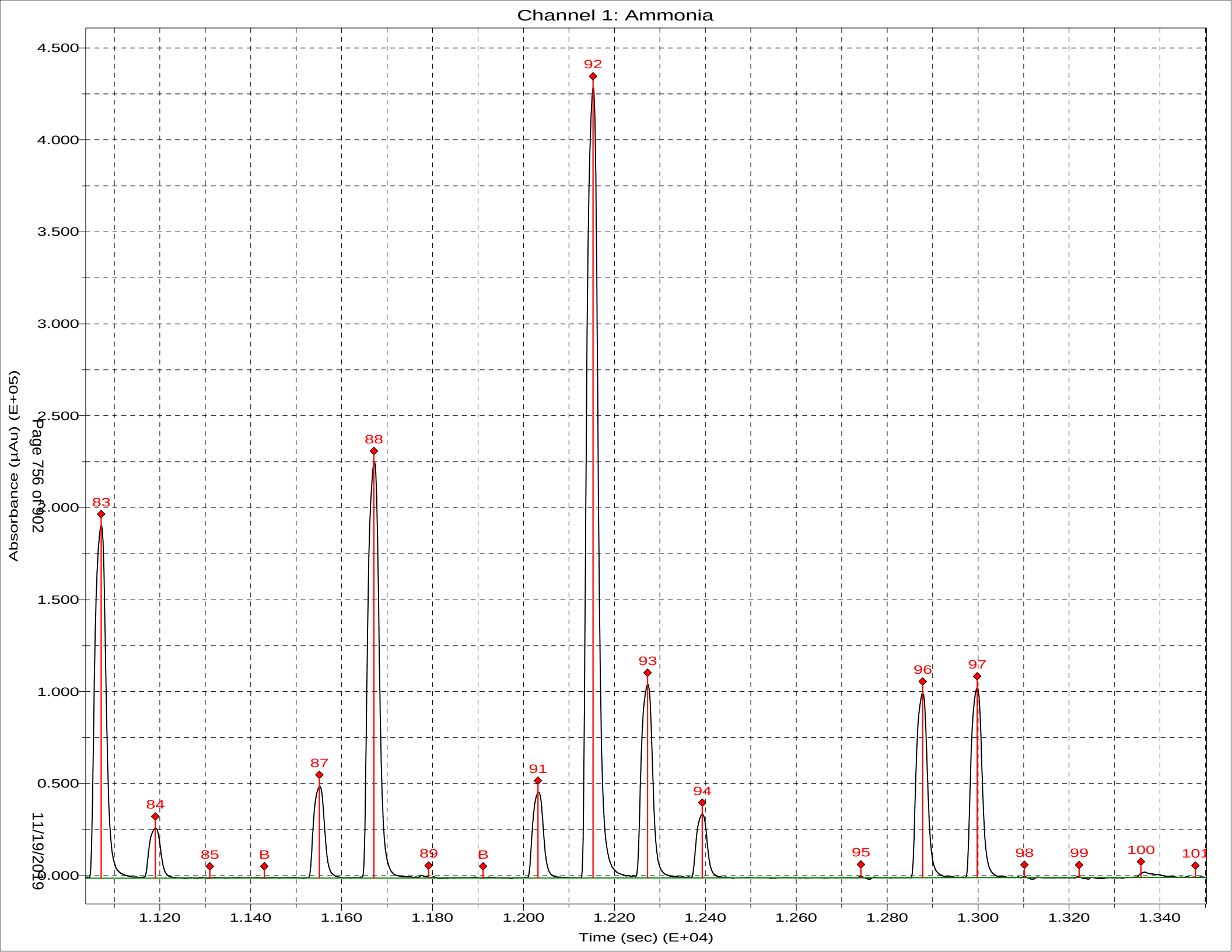
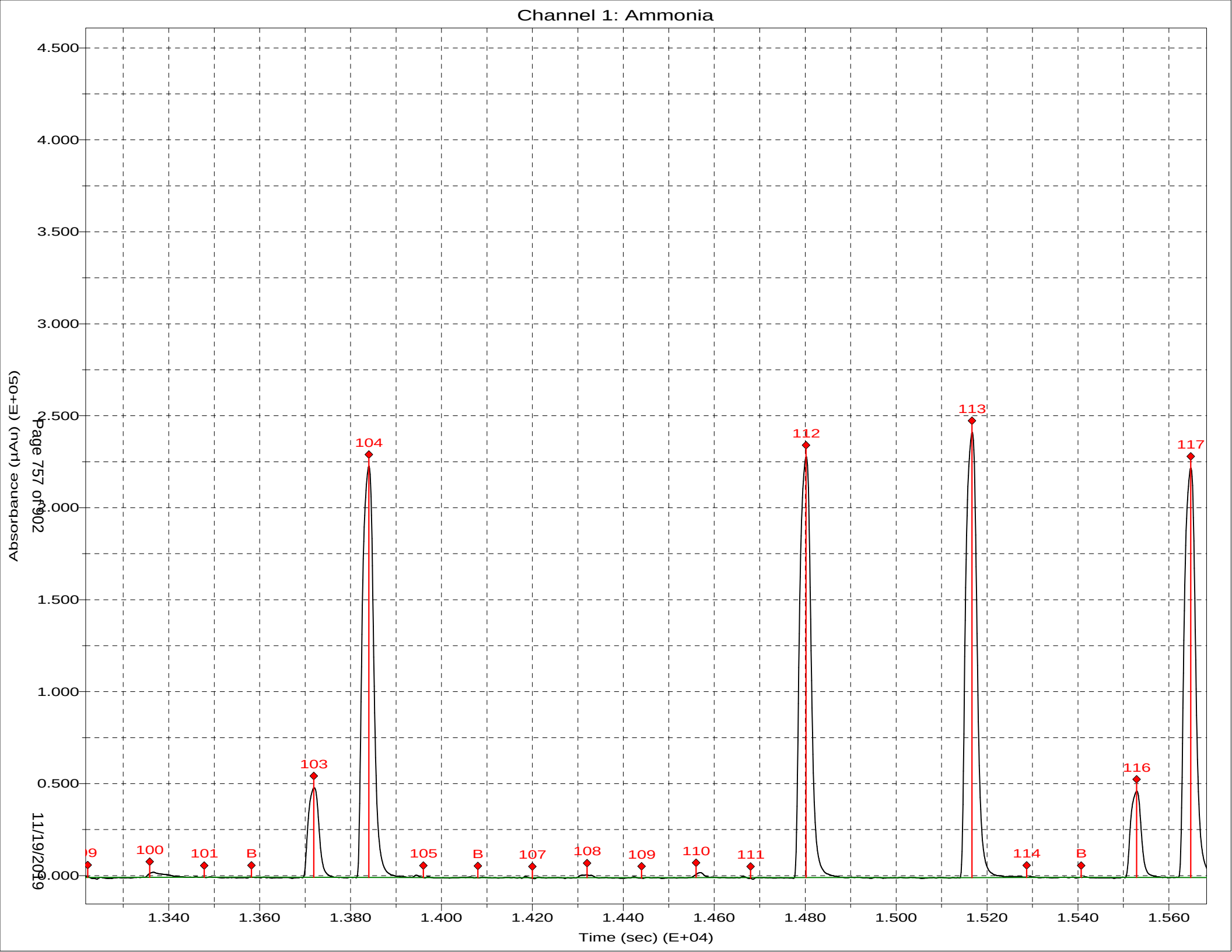

Channel 1: Ammonia
Absorbance (µAu) (E+05)
4.500
4.000
3.500
3.000
2.500
2.000
1.500
1.000
0.500
0.000
4600
4800
5000
5200
5400
5600
5800
6000
6200
6400
6600
6800
Time (sec)
37
39
40
41
42
43
44
45
46
47
B
49
50
51
B
53
54
Page 753 of 902
11/19/2019


Channel 1: Ammonia
Absorbance (µAu) (E+05)
Time (sec)
Page 754 of 902
11/19/2019
4.500
4.000
3.500
3.000
2.500
2.000
1.500
1.000
0.500
0.000
6800
7000
7200
7400
7600
7800
8000
8200
8400
8600
8800
9000
55
56
57
58
59
60
61
62
63
65
B
67
68
69
B


Channel 1: Ammonia
Absorbance (µAu) (E+05)
4.500
4.000
3.500
3.000
2.500
2.000
1.500
1.000
0.500
0.000
0.900
0.920
0.940
0.960
0.980
1.000
1.020
1.040
1.060
1.080
1.100
1.120
Time (sec) (E+04)
69
B
72
73
74
75
76
77
78
79
80
81
82
83
84
85
Page 755 of 902
11/19/2019


Channel 1: Ammonia
Absorbance (µAu) (E+05)
Time (sec) (E+04)
4.500
4.000
3.500
3.000
2.500
2.000
1.500
1.000
0.500
0.000
1.120
1.140
1.160
1.180
1.200
1.220
1.240
1.260
1.280
1.300
1.320
1.340
83
84
85
B
87
88
89
B
91
92
93
94
95
96
97
98
99
100
101
Page 756 of 902
11/19/2019


Channel 1: Ammonia
Absorbance (µAu) (E+05)
Time (sec) (E+04)
4.500
4.000
3.500
3.000
2.500
2.000
1.500
1.000
0.500
0.000
1.340
1.360
1.380
1.400
1.420
1.440
1.460
1.480
1.500
1.520
1.540
1.560
99
100
101
B
103
104
105
B
107
108
109
110
111
112
113
114
B
116
117
Page 757 of 902
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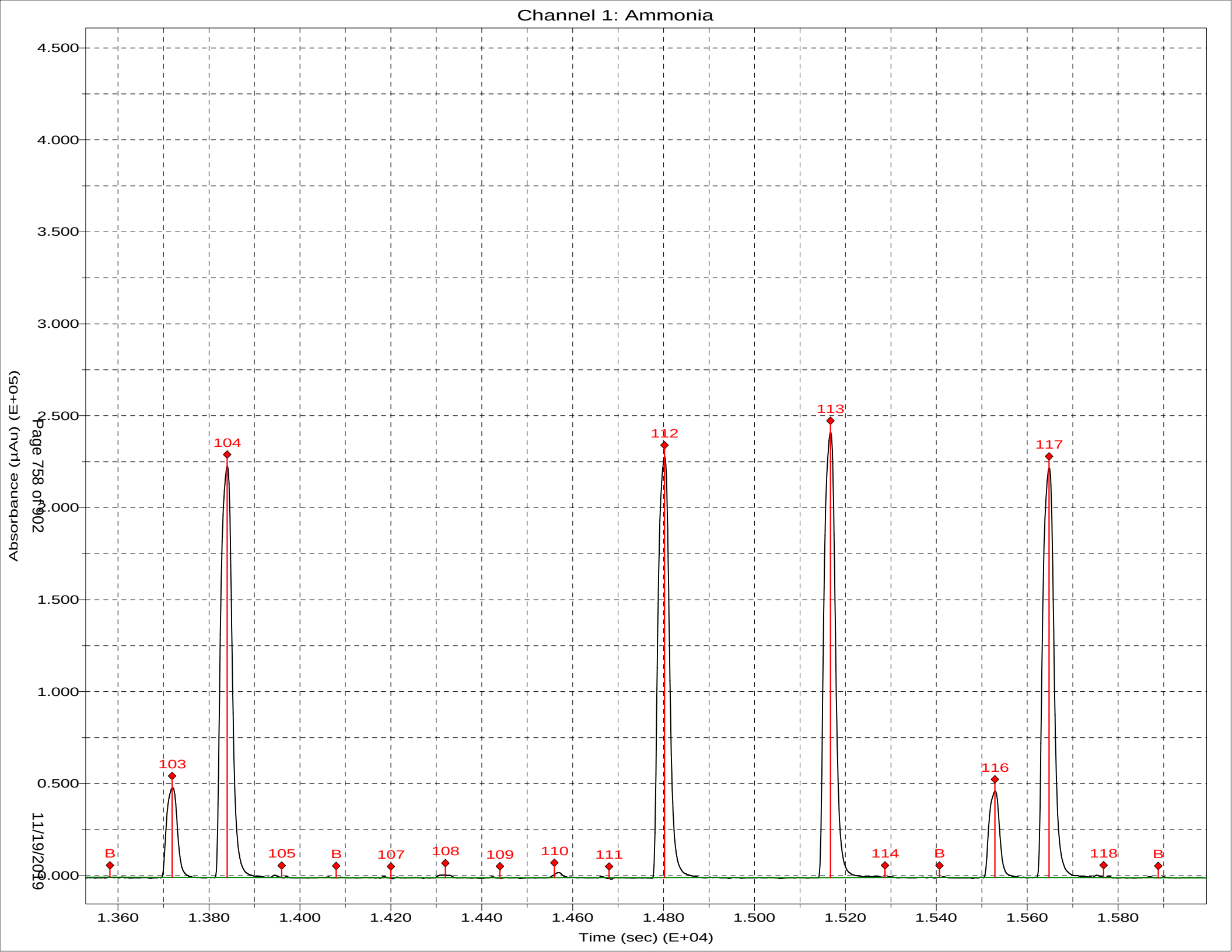

Channel 1: Ammonia
Absorbance (µAu) (E+05)
4.500
4.000
3.500
3.000
2.500
2.000
1.500
1.000
0.500
0.000
Time (sec) (E+04)
1.360
1.380
1.400
1.420
1.440
1.460
1.480
1.500
1.520
1.540
1.560
1.580
B
103
104
105
B
107
108
109
110
111
112
113
114
B
116
117
118
B
Page 758 of 902
11/19/2019

Sample Table for 102819

	Position	Identifier	Type	Cup Type
1	1:1	SYNC	SYNC	4 ml
2	1:2	CO	Carry over	4 ml
3	1:3	w	Blank	4 ml
4	1:4	W	Wash	4 ml
5	1:5	C1	Calibrant	4 ml
6	1:6	C2	Calibrant	4 ml
7	1:7	C3	Calibrant	4 ml
8	1:8	C4	Calibrant	4 ml
9	1:9	C5	Calibrant	4 ml
10	1:10	C6	Calibrant	4 ml
11	1:13	w	Blank	4 ml
12	1:14	W	Wash	4 ml
13	1:15	ICV 280-474499/7-A	Unknown	4 ml
14	1:16	ICB 280-474499/8-A	Unknown	4 ml
15	1:17	LCS 280-475492/1-A	Unknown	4 ml
16	1:18	MB 280-475492/2-A	Unknown	4 ml
17	1:19	280-129830-C-3-A	Unknown	4 ml
18	1:20	280-129830-C-3-B MS	Unknown	4 ml
19	1:21	280-129830-C-3-C MS	Unknown	4 ml
20	1:22	w	Blank	4 ml
21	1:23	280-129830-C-1-A	Unknown	4 ml
22	1:24	280-129830-C-2-A	Unknown	4 ml
23	1:25	280-129611-H-1-A	Unknown	4 ml
24	1:26	280-129702-H-2-A	Unknown	4 ml
25	1:27	280-129794-C-1-A	Unknown	4 ml
26	1:28	280-129794-C-2-A	Unknown	4 ml
27	1:29	280-129794-C-3-A	Unknown	4 ml
28	1:30	w	Blank	4 ml
29	1:31	CCV 280-474499/9-A	Unknown	4 ml
30	1:32	CCB 280-474499/10-A	Unknown	4 ml
31	1:33	280-129794-C-4-A	Unknown	4 ml
32	1:34	280-129794-C-5-A	Unknown	4 ml
33	1:35	280-129794-C-6-A	Unknown	4 ml
34	1:36	280-129794-C-6-B MS	Unknown	4 ml
35	1:37	280-129794-C-6-C MS	Unknown	4 ml
36	1:38	w	Blank	4 ml
37	1:39	280-129829-C-1-A	Unknown	4 ml
38	1:40	280-129829-C-2-A	Unknown	4 ml
39	1:41	280-129829-C-3-A	Unknown	4 ml
40	1:42	280-129829-C-4-A	Unknown	4 ml
41	1:43	280-129850-C-2-A	Unknown	4 ml
42	1:44	w	Blank	4 ml
43	1:45	CCV 280-474499/9-A	Unknown	4 ml
44	1:46	CCB 280-474499/10-A	Unknown	4 ml

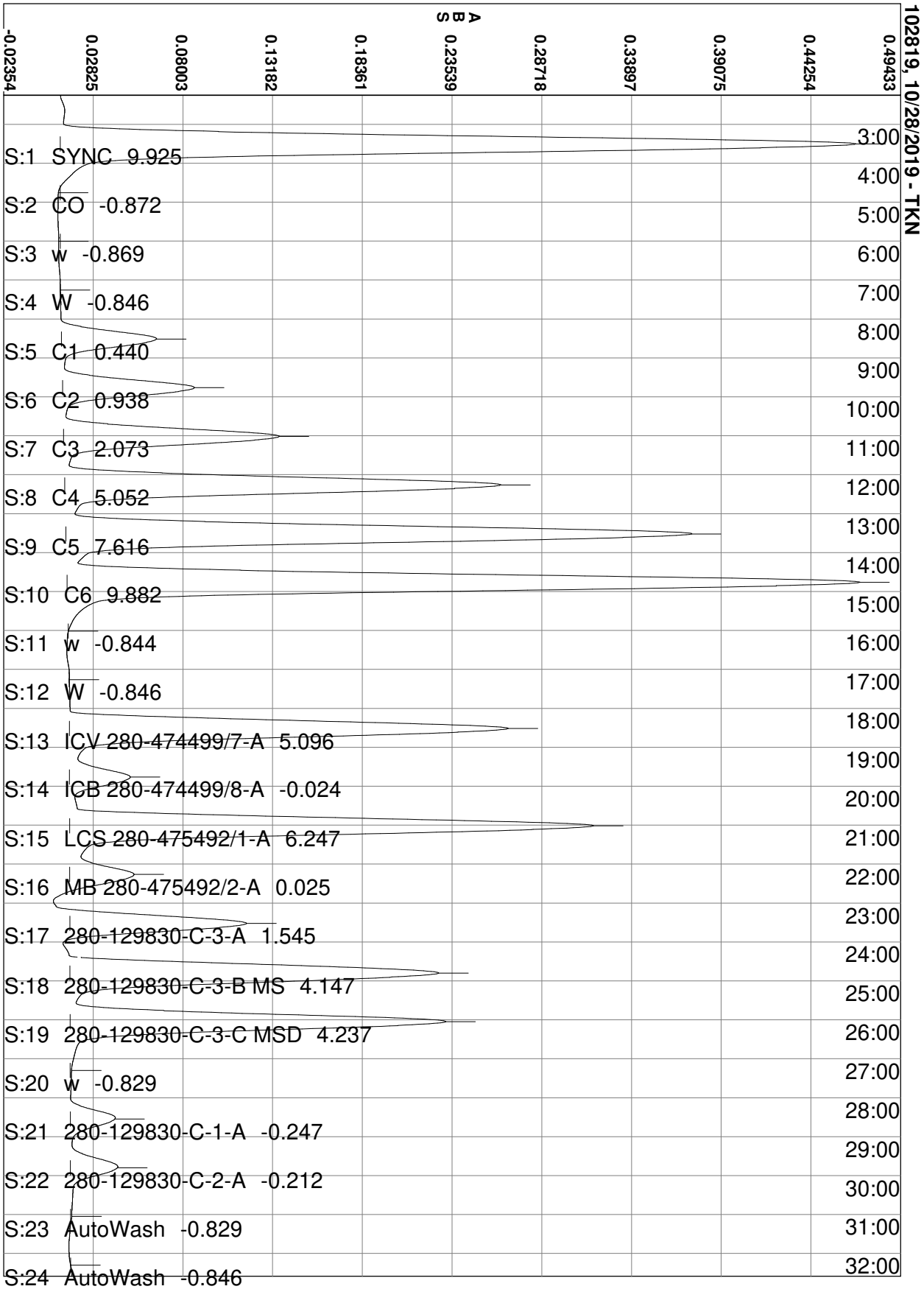
Sample Table for 102819

	Position	Identifier	Type	Cup Type
45	1:47	280-129850-C-1-A	Unknown	4 ml
46	1:48	280-130015-B-1-A	Unknown	4 ml
47	1:49	280-130015-B-2-A	Unknown	4 ml
48	1:50	280-130015-B-3-A	Unknown	4 ml
49	1:51	w	Blank	4 ml
50	1:52	w	Blank	4 ml
51	1:53	w	Blank	4 ml
52	1:54	w	Blank	4 ml
53	1:58	CCV 280-474499/9-A	Unknown	4 ml
54	1:59	CCB 280-474499/10-A	Unknown	4 ml

Run Name: 102819
Configuration: TKN
Run date: 10/28/2019

	Position	Identifier	Type	Comme	Date	Time	otal	TKN Cor Ht	TKN mg/l
1	1:1	SYNC	SYNC	50;351.2	10/28/201	7:27:05 PM	1	0.45828	9.925
2	1:2	CO	Carry over		10/28/201	7:27:34 PM	1	-0.00110	-0.872
3	1:3	w	Blank		10/28/201	7:28:49 PM	1	-0.00097	-0.869
4	1:4	W	Wash		10/28/201	7:30:04 PM	1	0.00000	-0.846
5	1:5	C1	Calibrant		10/28/201	7:31:19 PM	1	0.05472	0.440
6	1:6	C2	Calibrant		10/28/201	7:32:34 PM	1	0.07593	0.938
7	1:7	C3	Calibrant		10/28/201	7:33:49 PM	1	0.12420	2.073
8	1:8	C4	Calibrant		10/28/201	7:35:04 PM	1	0.25096	5.052
9	1:9	C5	Calibrant		10/28/201	7:36:19 PM	1	0.36004	7.616
10	1:10	C6	Calibrant		10/28/201	7:37:34 PM	1	0.45646	9.882
		Curve #:							1
		Curve Type:							Linear
		Correlation:							0.99971
		Intercept:							0.036014
		Linear coef:							0.042547
11	1:13	w	Blank		10/28/201	7:38:49 PM	1	0.00009	-0.844
12	1:14	W	Wash		10/28/201	7:40:04 PM	1	0.00000	-0.846
13	1:15	ICV 280-474499/7-A	Unknown		10/28/201	7:41:19 PM	1	0.25283	5.096
14	1:16	ICB 280-474499/8-A	Unknown		10/28/201	7:42:34 PM	1	0.03497	-0.024
15	1:17	LCS 280-475492/1-A	Unknown		10/28/201	7:43:49 PM	1	0.30180	6.247
16	1:18	MB 280-475492/2-A	Unknown		10/28/201	7:45:04 PM	1	0.03707	0.025
17	1:19	280-129830-C-3-A	Unknown		10/28/201	7:46:19 PM	1	0.10177	1.545
18	1:20	280-129830-C-3-B MS	Unknown		10/28/201	7:47:34 PM	1	0.21247	4.147
19	1:21	280-129830-C-3-C MSD	Unknown		10/28/201	7:48:50 PM	1	0.21627	4.237
20	1:22	w	Blank		10/28/201	7:50:05 PM	1	0.00074	-0.829
21	1:23	280-129830-C-1-A	Unknown		10/28/201	7:51:20 PM	1	0.02550	-0.247
22	1:24	280-129830-C-2-A	Unknown		10/28/201	7:52:35 PM	1	0.02699	-0.212
23	0	AutoWash	AutoWash		10/28/201	7:53:50 PM	1	0.00074	-0.829
24	0	AutoWash	AutoWash		10/28/201	7:55:04 PM	1	0.00000	-0.846
25	1:25	280-129611-H-1-A	Unknown		10/28/201	7:56:19 PM	1	0.27366	5.585
26	1:26	280-129702-H-2-A	Unknown		10/28/201	7:57:34 PM	1	0.05680	0.489
27	1:27	280-129794-C-1-A	Unknown		10/28/201	7:58:49 PM	1	0.02476	-0.265
28	1:28	280-129794-C-2-A	Unknown		10/28/201	8:00:04 PM	1	0.04969	0.322
29	1:29	280-129794-C-3-A	Unknown		10/28/201	8:01:19 PM	1	0.08663	1.190
30	1:30	w	Blank		10/28/201	8:02:34 PM	1	0.00233	-0.792
31	1:31	CCV 280-474499/9-A	Unknown		10/28/201	8:03:49 PM	1	0.24558	4.926
32	1:32	CCB 280-474499/10-A	Unknown		10/28/201	8:05:04 PM	1	0.03457	-0.034
33	1:33	280-129794-C-4-A	Unknown		10/28/201	8:06:19 PM	1	0.02075	-0.359
34	1:34	280-129794-C-5-A	Unknown		10/28/201	8:07:34 PM	1	0.09456	1.376
35	0	AutoWash	AutoWash		10/28/201	8:08:49 PM	1	0.00068	-0.830
36	0	AutoWash	AutoWash		10/28/201	8:10:04 PM	1	0.00000	-0.846
37	1:35	280-129794-C-6-A	Unknown		10/28/201	8:11:19 PM	1	0.09590	1.408
38	1:36	280-129794-C-6-B MS	Unknown		10/28/201	8:12:34 PM	1	0.19161	3.657

	Position	Identifier	Type	Comme	Date	Time	otal	Cor Ht	TKN mg/l
39	1:37	280-129794-C-6-C MSD	Unknown		10/28/201	8:13:49 PM	1	0.15019	2.684
40	1:38	w	Blank		10/28/201	8:15:04 PM	1	0.00114	-0.820
41	1:39	280-129829-C-1-A	Unknown		10/28/201	8:16:19 PM	1	0.09561	1.401
42	1:40	280-129829-C-2-A	Unknown		10/28/201	8:17:34 PM	1	0.09479	1.381
43	1:41	280-129829-C-3-A	Unknown		10/28/201	8:18:49 PM	1	0.10305	1.576
44	1:42	280-129829-C-4-A	Unknown		10/28/201	8:20:04 PM	1	0.06616	0.709
45	1:43	280-129850-C-2-A	Unknown		10/28/201	8:21:19 PM	1	0.07633	0.948
46	1:44	w	Blank		10/28/201	8:22:34 PM	1	0.00002	-0.846
47	0	AutoWash	AutoWash		10/28/201	8:23:50 PM	1	-0.00001	-0.847
48	0	AutoWash	AutoWash		10/28/201	8:25:05 PM	1	0.00000	-0.846
49	1:45	CCV 280-474499/9-A	Unknown		10/28/201	8:26:20 PM	1	0.24746	4.970
50	1:46	CCB 280-474499/10-A	Unknown		10/28/201	8:27:35 PM	1	0.03285	-0.074
51	1:47	280-129850-C-1-A	Unknown		10/28/201	8:28:49 PM	1	0.09613	1.413
52	1:48	280-130015-B-1-A	Unknown		10/28/201	8:30:04 PM	1	0.03882	0.066
53	1:49	280-130015-B-2-A	Unknown		10/28/201	8:31:19 PM	1	0.03421	-0.042
54	1:50	280-130015-B-3-A	Unknown		10/28/201	8:32:34 PM	1	0.03409	-0.045
55	1:51	w	Blank		10/28/201	8:33:49 PM	1	-0.00237	-0.902
56	1:52	w	Blank		10/28/201	8:35:04 PM	1	-0.00239	-0.903
57	1:53	w	Blank		10/28/201	8:36:19 PM	1	-0.00258	-0.907
58	1:54	w	Blank		10/28/201	8:37:34 PM	1	-0.00315	-0.921
59	0	AutoWash	AutoWash		10/28/201	8:38:49 PM	1	-0.00376	-0.935
60	0	AutoWash	AutoWash		10/28/201	8:40:04 PM	1	0.00000	-0.846
61	1:58	CCV 280-474499/9-A	Unknown		10/28/201	8:41:19 PM	1	0.24666	4.951
62	1:59	CCB 280-474499/10-A	Unknown		10/28/201	8:42:34 PM	1	0.03280	-0.076
63	0	AutoWash	AutoWash		10/28/201	8:43:49 PM	1	-0.00068	-0.862
64	0	AutoWash	AutoWash		10/28/201	8:45:04 PM	1	0.00000	-0.846


102819, 10/28/2019 - TKN
ABS
-0.02354
0.02825
0.08003
0.13182
0.18361
0.23539
0.28718
0.33897
0.39075
0.44254
0.49433
S:1 SYNC 9.925
S:2 CO -0.872
S:3 w -0.869
S:4 W -0.846
S:5 C1 0.440
S:6 C2 0.938
S:7 C3 2.073
S:8 C4 5.052
S:9 C5 7.616
S:10 C6 9.882
S:11 w -0.844
S:12 W -0.846
S:13 ICV 280-474499/7-A 5.096
S:14 ICB 280-474499/8-A -0.024
S:15 LCS 280-475492/1-A 6.247
S:16 MB 280-475492/2-A 0.025
S:17 280-129830-C-3-A 1.545
S:18 280-129830-C-3-B MS 4.147
S:19 280-129830-C-3-C MSD 4.237
S:20 w -0.829
S:21 280-129830-C-1-A -0.247
S:22 280-129830-C-2-A -0.212
S:23 AutoWash -0.829
S:24 AutoWash -0.846
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
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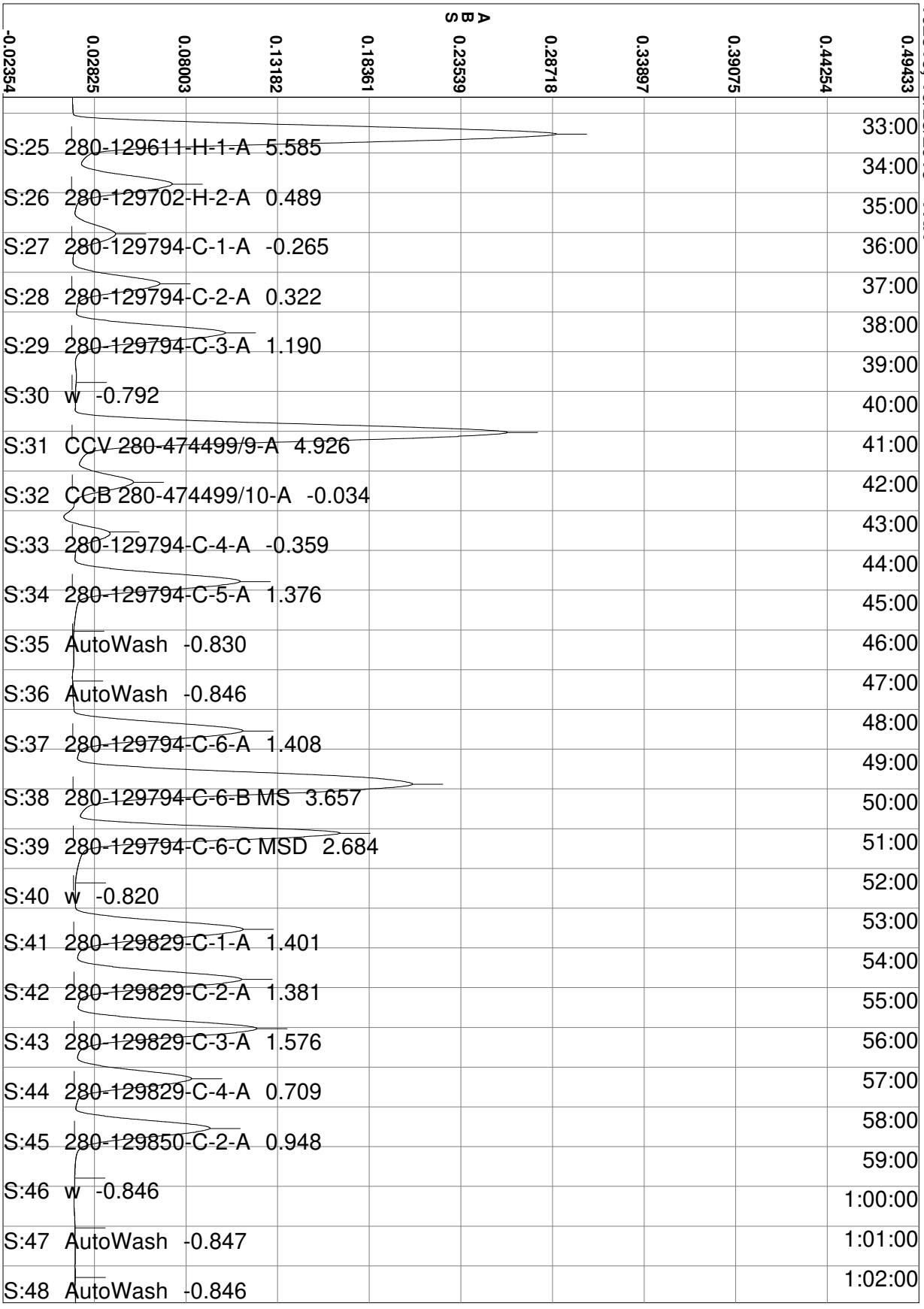
102819, 10/28/2019 - TKN
ABS
-0.02354
0.02825
0.08003
0.13182
0.18361
0.23539
0.28718
0.33897
0.39075
0.44254
0.49433
S:25 280-129611-H-1-A 5.585
S:26 280-129702-H-2-A 0.489
S:27 280-129794-C-1-A -0.265
S:28 280-129794-C-2-A 0.322
S:29 280-129794-C-3-A 1.190
S:30 w -0.792
S:31 CCV 280-474499/9-A 4.926
S:32 CCB 280-474499/10-A -0.034
S:33 280-129794-C-4-A -0.359
S:34 280-129794-C-5-A 1.376
S:35 AutoWash -0.830
S:36 AutoWash -0.846
S:37 280-129794-C-6-A 1.408
S:38 280-129794-C-6-B MS 3.657
S:39 280-129794-C-6-C MSD 2.684
S:40 w -0.820
S:41 280-129829-C-1-A 1.401
S:42 280-129829-C-2-A 1.381
S:43 280-129829-C-3-A 1.576
S:44 280-129829-C-4-A 0.709
S:45 280-129850-C-2-A 0.948
S:46 w -0.846
S:47 AutoWash -0.847
S:48 AutoWash -0.846
33:00
34:00
35:00
36:00
37:00
38:00
39:00
40:00
41:00
42:00
43:00
44:00
45:00
46:00
47:00
48:00
49:00
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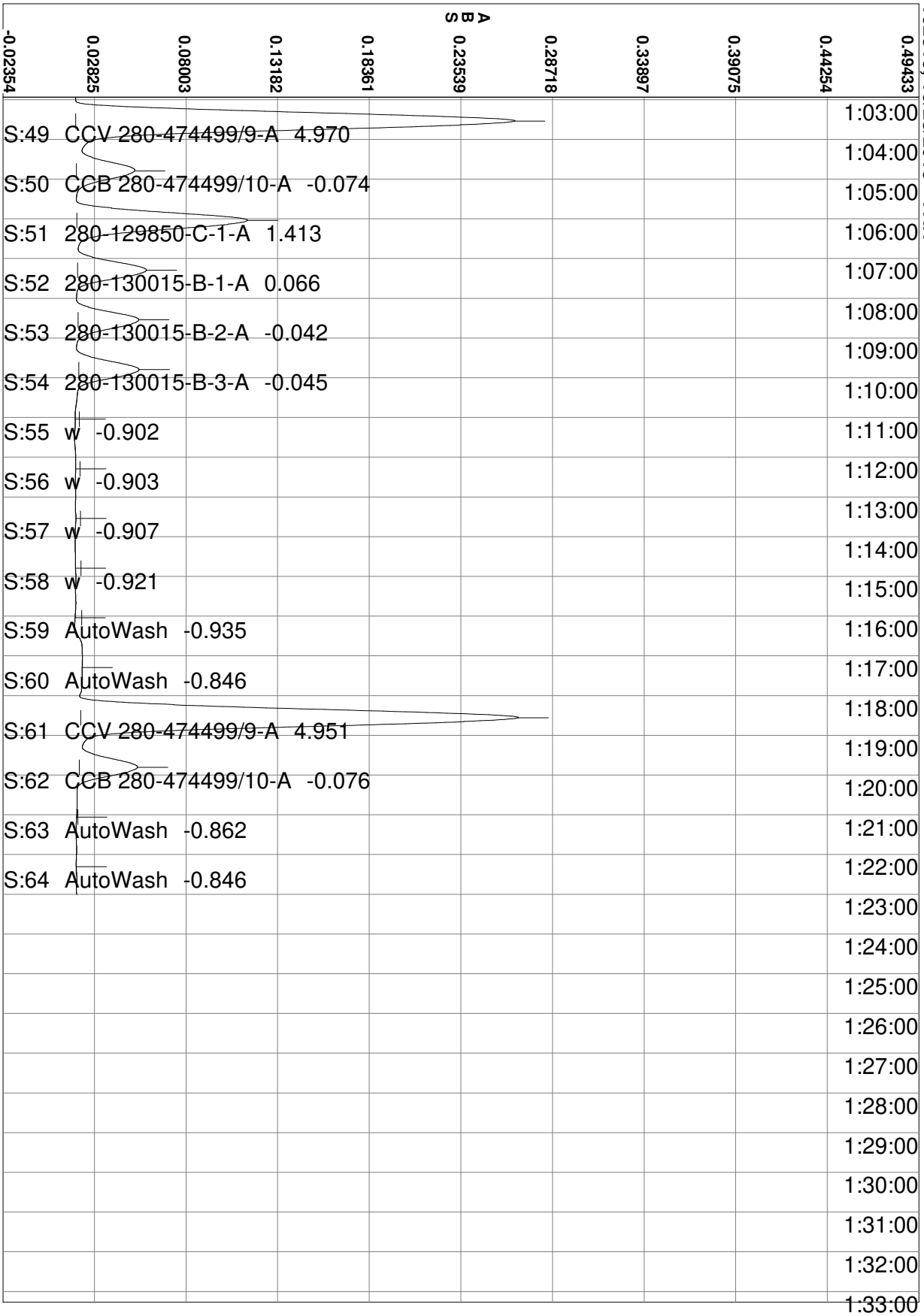
59:00
1:00:00
1:01:00
1:02:00


102819, 10/28/2019 - TKN
ABS
-0.02354
0.02825
0.08003
0.13182
0.18361
0.23539
0.28718
0.33897
0.39075
0.44254
0.49433
S:49 CCV 280-474499/9-A 4.970
S:50 CCB 280-474499/10-A -0.074
S:51 280-129850-C-1-A 1.413
S:52 280-130015-B-1-A 0.066
S:53 280-130015-B-2-A -0.042
S:54 280-130015-B-3-A -0.045
S:55 w -0.902
S:56 w -0.903
S:57 w -0.907
S:58 w -0.921
S:59 AutoWash -0.935
S:60 AutoWash -0.846
S:61 CCV 280-474499/9-A 4.951
S:62 CCB 280-474499/10-A -0.076
S:63 AutoWash -0.862
S:64 AutoWash -0.846
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1:04:00
1:05:00
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1:08:00
1:09:00
1:10:00
1:11:00
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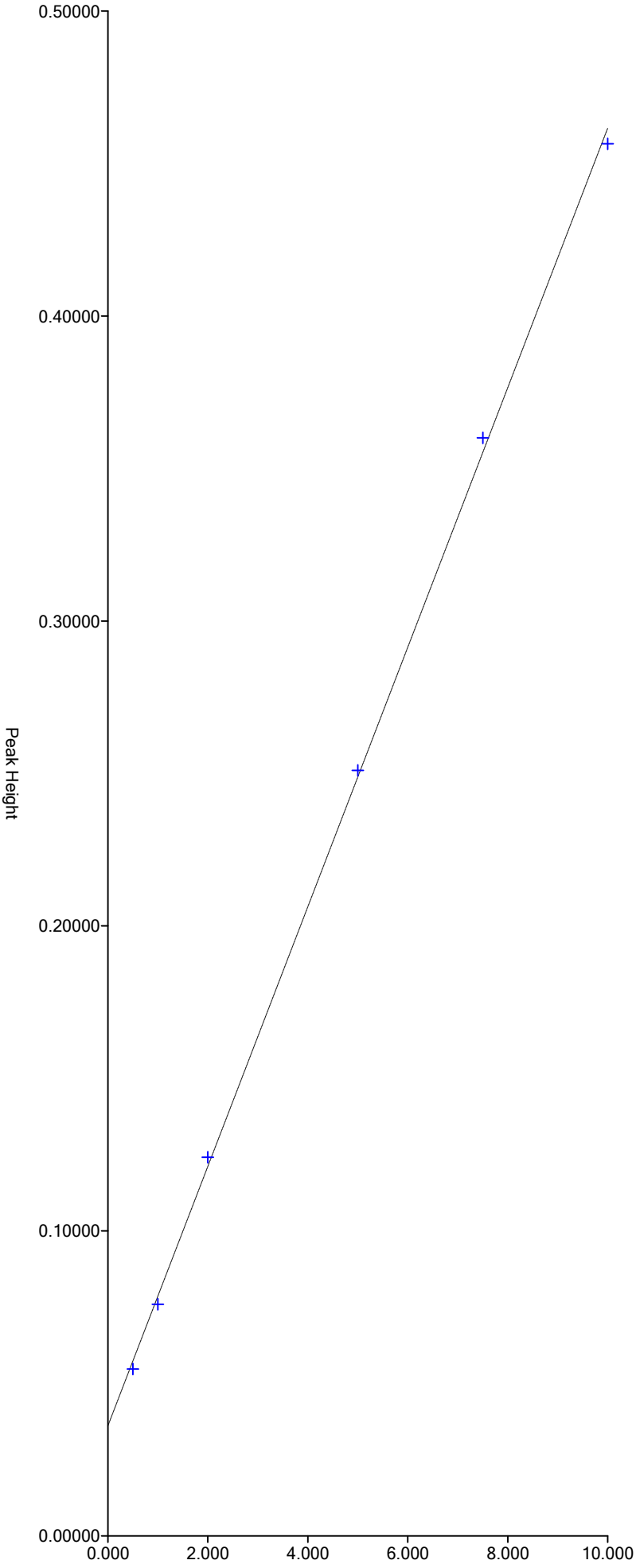
Calibration for TKN



Segment 1: Equation: y = 0.04255x + 0.03601
Correlation: 0.9997
X Range = 0.000 to 10.000
Y Range = 0.00000 to 7.20000

Run Results Report

Facility Name	
Facility Location	
Department	
Operator Name	svc
Operator ID	svc
Platform	FS III/IV/3100
Software Rev Code	240
Data system ID	54
Result path	C:\FLOW_4\110219.RST
Sample table path	C:\FLOW_4\110219.tbl
Method path	C:\FLOW_4\nox.mth
Date acquired	03-Nov-19
Time acquired	21:15

Date	Time	Cup	Name
03-Nov-19	17:46	109	SYNC
03-Nov-19	17:48	0	Carryover
03-Nov-19	17:50	0	Carryover (Statistics)
03-Nov-19	17:52	0	read baseline
03-Nov-19	17:54	101	Cal 0.00 ppb
03-Nov-19	17:56	102	Cal 50.0 ppb
03-Nov-19	17:58	103	Cal 100 ppb
03-Nov-19	18:00	104	Cal 500 ppb
03-Nov-19	18:02	105	Cal 1000 ppb
03-Nov-19	18:04	106	Cal 2500 ppb
03-Nov-19	18:06	107	Cal 5000 ppb
03-Nov-19	18:08	108	Cal 7500 ppb
03-Nov-19	18:10	109	Cal 10000 ppb
03-Nov-19	18:12	0	Blank
03-Nov-19	18:14	0	Read Baseline
03-Nov-19	18:16	110	5000 PPB NO2
03-Nov-19	18:18	111	ICV 5000 PPB
03-Nov-19	18:20	112	ICV 2000 PPB
03-Nov-19	18:22	0	ICB
03-Nov-19	18:24	0	Read Baseline
03-Nov-19	18:26	107	LCS
03-Nov-19	18:28	0	MB
03-Nov-19	18:30	113	280-129753-B-2
03-Nov-19	18:32	114	ms 280-129753-B-2
03-Nov-19	18:34	115	msd 280-129753-B-2
03-Nov-19	18:36	116	280-129753-B-3
03-Nov-19	18:38	117	280-129753-B-4
03-Nov-19	18:40	118	280-129625-C-13
03-Nov-19	18:42	119	280-129914-C-2
03-Nov-19	18:44	120	280-129698-B-3
03-Nov-19	18:46	121	680-175701-L-1
03-Nov-19	18:48	122	680-175701-L-2
03-Nov-19	18:50	0	Rinse
03-Nov-19	18:52	0	Read Baseline
03-Nov-19	18:54	107	CCV 5000 ppb
03-Nov-19	18:56	105	CCVL 1000 ppb
03-Nov-19	18:58	0	CCB
03-Nov-19	19:00	0	Read Baseline
03-Nov-19	19:02	123	680-175701-L-3
03-Nov-19	19:04	124	680-175701-L-4
03-Nov-19	19:06	125	280-129830-C-3
03-Nov-19	19:08	126	ms 280-129830-C-3
03-Nov-19	19:10	127	msd 280-129830-C-3
03-Nov-19	19:12	128	280-129830-C-1

Result path C:\FLOW_4\110219.RST
Sample table path C:\FLOW_4\110219.tbl
Method path C:\FLOW_4\nox.mth
Date acquired 03-Nov-19
Time acquired 21:15

Date	Time	Cup	Name
03-Nov-19	19:14	129	280-129830-C-2
03-Nov-19	19:16	130	280-129335-B-1
03-Nov-19	19:18	131	280-129335-B-2
03-Nov-19	19:20	132	280-129335-B-3
03-Nov-19	19:22	0	Rinse
03-Nov-19	19:24	0	Read Baseline
03-Nov-19	19:26	107	CCV 5000 ppb
03-Nov-19	19:28	105	CCVL 1000 ppb
03-Nov-19	19:30	0	CCB
03-Nov-19	19:32	0	Read Baseline
03-Nov-19	19:34	133	280-129335-B-4
03-Nov-19	19:36	134	280-129335-B-5
03-Nov-19	19:38	135	280-129335-B-6
03-Nov-19	19:40	136	280-129335-B-7
03-Nov-19	19:42	107	LCS
03-Nov-19	19:44	0	MB
03-Nov-19	19:46	137	280-129335-B-9
03-Nov-19	19:48	138	ms 280-129335-B-9
03-Nov-19	19:50	139	msd 280-129335-B-9
03-Nov-19	19:52	140	280-129335-B-10
03-Nov-19	19:54	0	Rinse
03-Nov-19	19:56	0	Read Baseline
03-Nov-19	19:58	107	CCV 5000 ppb
03-Nov-19	20:00	105	CCVL 1000 ppb
03-Nov-19	20:02	0	CCB
03-Nov-19	20:04	0	Read Baseline
03-Nov-19	20:06	141	280-129335-B-11
03-Nov-19	20:08	142	280-129335-B-12
03-Nov-19	20:10	143	280-129335-B-13
03-Nov-19	20:12	144	280-129702-H-2
03-Nov-19	20:14	145	280-129369-H-1
03-Nov-19	20:16	146	280-129369-H-2
03-Nov-19	20:18	147	280-129369-H-3
03-Nov-19	20:20	148	280-129369-B-4
03-Nov-19	20:22	149	280-129369-H-6
03-Nov-19	20:24	150	ms 280-129369-H-6
03-Nov-19	20:26	0	Rinse
03-Nov-19	20:28	0	Read Baseline
03-Nov-19	20:30	107	CCV 5000 ppb
03-Nov-19	20:32	105	CCVL 1000 ppb
03-Nov-19	20:34	0	CCB
03-Nov-19	20:36	0	Read Baseline
03-Nov-19	20:38	151	msd 280-129369-H-6
03-Nov-19	20:40	152	280-129369-H-7
03-Nov-19	20:42	153	280-129369-H-8
03-Nov-19	20:44	154	280-129263-B-1
03-Nov-19	20:46	155	280-129263-B-2
03-Nov-19	20:48	156	280-129263-B-3
03-Nov-19	20:50	157	280-129263-B-4
03-Nov-19	20:52	158	280-129263-B-5
03-Nov-19	20:54	159	280-129263-B-7
03-Nov-19	20:56	160	280-129263-B-8
03-Nov-19	20:58	0	Rinse
03-Nov-19	21:00	0	Read Baseline
03-Nov-19	21:02	107	CCV 5000 ppb
03-Nov-19	21:04	105	CCVL 1000 ppb
03-Nov-19	21:06	0	CCB

Result path	C:\FLOW_4\110219.RST
Sample table path	C:\FLOW_4\110219.tbl
Method path	C:\FLOW_4\nox.mth
Date acquired	03-Nov-19
Time acquired	21:15

Date	Time	Cup	Name
03-Nov-19	21:08	0	Read Baseline

Run Results Report

Facility Name	
Facility Location	
Department	
Operator Name	svc
Operator ID	svc
Platform	FS III/IV/3100
Software Rev Code	240
Data system ID	54
Result path	C:\FLOW_4\110219.RST
Sample table path	C:\FLOW_4\110219.tbl
Method path	C:\FLOW_4\nox.mth
Date acquired	03-Nov-19
Time acquired	21:15

	Nitrate as N					
Name	Response	Calc [ppb]	Flags	Mean Response	Mean Calc [ppb]	
SYNC	2001712	9867.829				
Carryover	1141	12.533				
Carryover (Statistics)	-692	3.504		225	8.018	N
read baseline	0	6.911	BL			
Cal 0.00 ppb	-198	5.934				
Cal 50.0 ppb	10749	59.861				
Cal 100 ppb	21900	114.797				
Cal 500 ppb	108012	539.006				
Cal 1000 ppb	213244	1057.404				
Cal 2500 ppb	512260	2530.429				
Cal 5000 ppb	992895	4898.151				
Cal 7500 ppb	1447156	7135.954				
Cal 10000 ppb	2091158	10308.463	HI			
Blank	-404	4.922				
Read Baseline	0	6.911	BL			
5000 PPB NO2	1025450	5058.528				
ICV 5000 PPB	1035726	5109.146				
ICV 2000 PPB	433276	2141.333				
ICB	-21	6.806				
Read Baseline	0	6.911	BL			
LCS	1058426	5220.973				
MB	355	8.660				
280-129753-B-2	197797	981.309				
ms 280-129753-B-2	998936	4927.912				
msd 280-129753-B-2	1016928	5016.545				
280-129753-B-3	1216470	599953.812				
280-129753-B-4	-11	6.856				
280-129625-C-13	1189215	11730.545				
280-129914-C-2	183016	908.491				
280-129698-B-3	853033	21045.805				
680-175701-L-1	377683	1867.469				
680-175701-L-2	13730	74.551				
Rinse	5964	36.293				
Read Baseline	0	6.911	BL			
CCV 5000 ppb	1026259	5062.511				
CCVL 1000 ppb	212156	1052.044				
CCB	-15	6.836				
Read Baseline	0	6.911	BL			
680-175701-L-3	37	7.091				
680-175701-L-4	6811	40.464				
280-129830-C-3	352353	1742.689				
ms 280-129830-C-3	1071901	5287.355				
msd 280-129830-C-3	1139072	5618.259				
280-129830-C-1	955353	23586.055				

Result path C:\FLOW_4\110219.RST
Sample table path C:\FLOW_4\110219.tbl
Method path C:\FLOW_4\nox.mth
Date acquired 03-Nov-19
Time acquired 21:15

	Nitrate as N				
Name	Response	Calc [ppb]	Flags	Mean Response	Mean Calc [ppb]
280-129830-C-2	1020470	25169.965			
280-129335-B-1	23353	121.953			
280-129335-B-2	319	8.482			
280-129335-B-3	2193	17.713			
Rinse	-512	4.386			
Read Baseline	0	6.911	BL		
CCV 5000 ppb	986979	4869.012			
CCVL 1000 ppb	210504	1043.905			
CCB	-204	5.907			
Read Baseline	0	6.911	BL		
280-129335-B-4	1072	12.193			
280-129335-B-5	1412	13.866			
280-129335-B-6	997	11.825			
280-129335-B-7	567	9.706			
LCS	1036801	5114.443			
MB	-290	5.481			
280-129335-B-9	1059	12.127			
ms 280-129335-B-9	786141	3879.633			
msd 280-129335-B-9	794063	3918.660			
280-129335-B-10	936	11.521			
Rinse	-35	6.736			
Read Baseline	0	6.911	BL		
CCV 5000 ppb	1000543	4935.829			
CCVL 1000 ppb	211734	1049.966			
CCB	18	6.999			
Read Baseline	0	6.911	BL		
280-129335-B-11	855	11.124			
280-129335-B-12	776	10.735			
280-129335-B-13	2100	17.256			
280-129702-H-2	139081	692.059			
280-129369-H-1	72961	366.333			
280-129369-H-2	809	10.897			
280-129369-H-3	-33	6.746			
280-129369-B-4	-127	6.285			
280-129369-H-6	32989	169.420			
ms 280-129369-H-6	840752	4148.660			
Rinse	-327	5.298			
Read Baseline	0	6.911	BL		
CCV 5000 ppb	945824	4666.271			
CCVL 1000 ppb	205279	1018.165			
CCB	-1043	1.771			
Read Baseline	0	6.911	BL		
msd 280-129369-H-6	796811	3932.196			
280-129369-H-7	1563	14.612			
280-129369-H-8	149	7.643			
280-129263-B-1	254	8.162			
280-129263-B-2	130	7.552			
280-129263-B-3	271	8.247			
280-129263-B-4	522	9.485			
280-129263-B-5	509	9.417			
280-129263-B-7	27	7.042			
280-129263-B-8	386	8.813			
Rinse	-207	5.890			
Read Baseline	0	6.911	BL		
CCV 5000 ppb	929379	4585.258			
CCVL 1000 ppb	204127	1012.489			
CCB	381	8.789			

Result path C:\FLOW_4\110219.RST
Sample table path C:\FLOW_4\110219.tbl
Method path C:\FLOW_4\nox.mth
Date acquired 03-Nov-19
Time acquired 21:15

	Nitrate as N				
Name	Response	Calc [ppb]	Flags	Mean Response	Mean Calc [ppb]
Read Baseline	0	6.911	BL		

Nitrate as N:Calibration 1: Peak 5-102

File name: C:\FLOW_4\110219.RST
Date: 03-Nov-19
Operator: svc

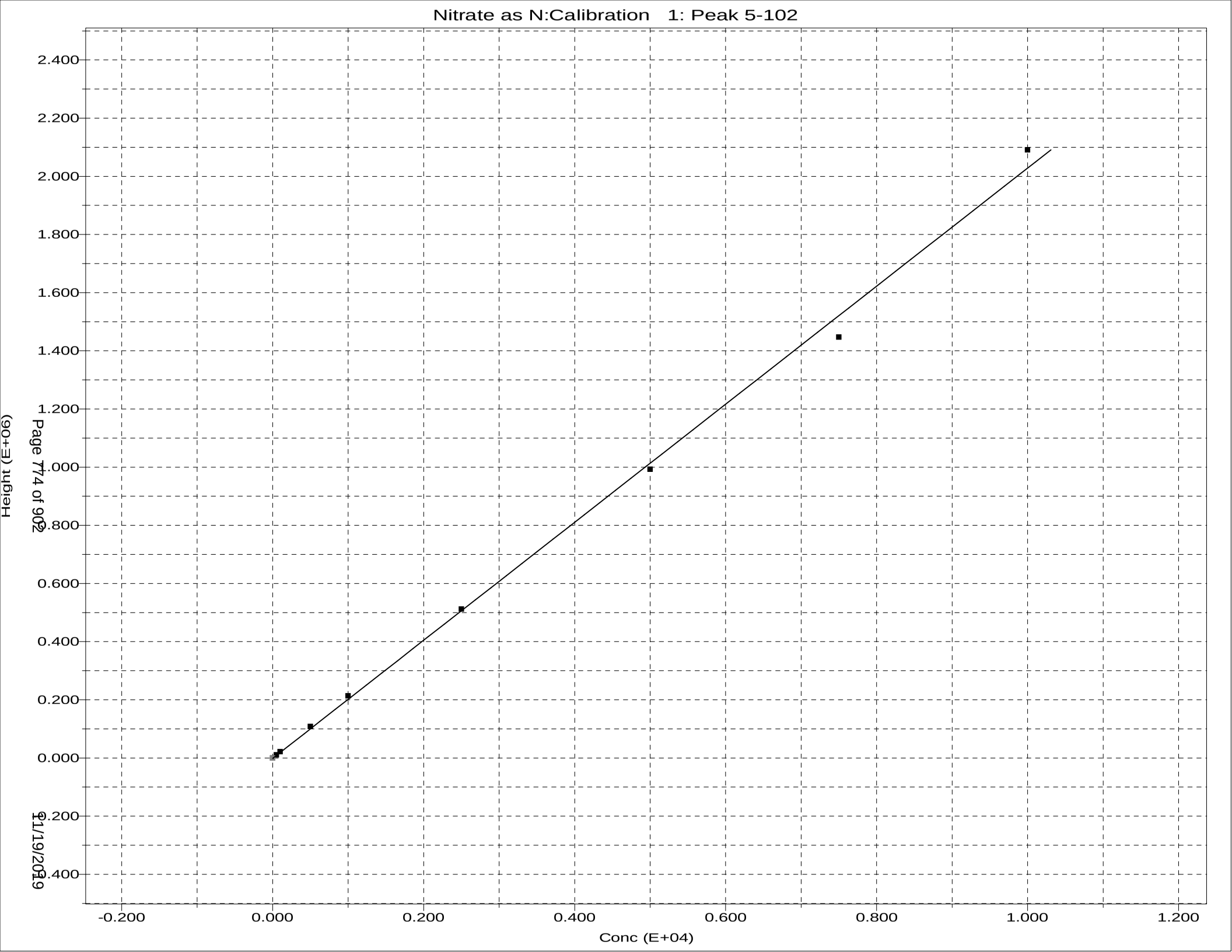
*	Name	Conc	Height
*	Cal 0.00 ppb	0.000000	-198.346985
*	Cal 50.0 ppb	50.000000	10748.593750
*	Cal 100 ppb	100.000000	21900.275391
*	Cal 500 ppb	500.000000	108012.320312
*	Cal 1000 ppb	1000.000000	213244.156250
*	Cal 2500 ppb	2500.000000	512260.093750
*	Cal 5000 ppb	5000.000000	992894.625000
*	Cal 7500 ppb	7500.000000	1447156.125000
*	Cal 10000 ppb	10000.000000	2091158.000000

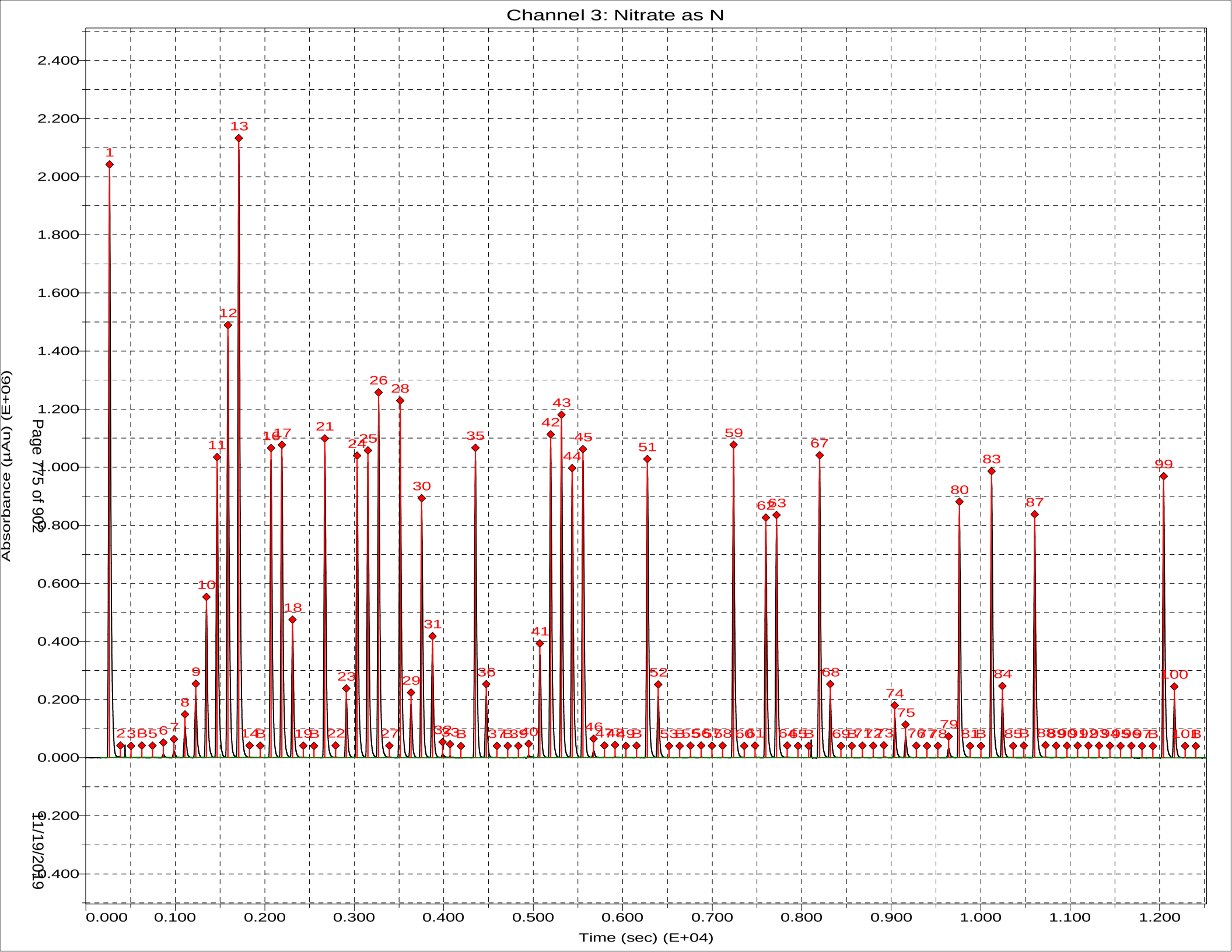
Calib Coef:
y=bx+a
a: (intercept) -1.4029e+03
b: 2.0299e+02

Corr Coef: 0.998891

Carryover: 0.057%

No Drift Peaks


Nitrate as N:Calibration 1: Peak 5-102
2.400
2.200
2.000
1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
-0.200
-0.400
Height (E+06)
-0.200
0.000
0.200
0.400
0.600
0.800
1.000
1.200
Conc (E+04)


Channel 3: Nitrate as N
Absorbance (µAu) (E+06)
Time (sec) (E+04)
Page 775 of 902
11/19/2019

Sample Table - 110219.tbl

File name: C:\FLOW_4\110219.TBL
Date: 03-Nov-19

Cup	Name	Type	R	Dil	Wt	Vial	Comment
109	SYNC	SYNC	1	1	1		
0	Carryover	CO	1	1	1		
0	Carryover	CO	1	1	1		
0	read baseline	RB	1	1	1		
101	Cal 0.00 ppb	C	1	1	1		
102	Cal 50.0 ppb	C	1	1	1		
103	Cal 100 ppb	C	1	1	1		
104	Cal 500 ppb	C	1	1	1		
105	Cal 1000 ppb	C	1	1	1		
106	Cal 2500 ppb	C	1	1	1		
107	Cal 5000 ppb	C	1	1	1		
108	Cal 7500 ppb	C	1	1	1		
109	Cal 10000 ppb	C	1	1	1		
0	Blank	BLNK	1	1	1		
0	Read Baseline	RB	1	1	1		
110	5000 PPB NO2	U	1	1	1		
111	ICV 5000 PPB	CCV	1	1	1		
112	ICV 2000 PPB	CCV	1	1	1		
0	ICB	U	1	1	1		
0	Read Baseline	RB	1	1	1		
107	LCS	U	1	1	1		pH
0	MB	U	1	1	1		
113	280-129753-B-2	U	1	1	1		"
114	ms 280-129753-B-2	U	1	1	1		"
115	msd 280-129753-B-2	U	1	1	1		"
116	280-129753-B-3	U	1	100	1		"
117	280-129753-B-4	U	1	1	1		"
118	280-129625-C-13	U	1	2	1		"
119	280-129914-C-2	U	1	1	1		"
120	280-129698-B-3	U	1	5	1		"
121	680-175701-L-1	U	1	1	1		"
122	680-175701-L-2	U	1	1	1		"
0	Rinse	U	1	1	1		
0	Read Baseline	RB	1	1	1		
107	CCV 5000 ppb	CCV	1	1	1		
105	CCVL 1000 ppb	CCV	1	1	1		
0	CCB	U	1	1	1		
0	Read Baseline	RB	1	1	1		
123	680-175701-L-3	U	1	1	1		"
124	680-175701-L-4	U	1	1	1		"
125	280-129830-C-3	U	1	1	1		"
126	ms 280-129830-C-3	U	1	1	1		"
127	msd 280-129830-C-3	U	1	1	1		"
128	280-129830-C-1	U	1	5	1		"
129	280-129830-C-2	U	1	5	1		"
130	280-129335-B-1	U	1	1	1		"
131	280-129335-B-2	U	1	1	1		"
132	280-129335-B-3	U	1	1	1		"
0	Rinse	U	1	1	1		
0	Read Baseline	RB	1	1	1		
107	CCV 5000 ppb	CCV	1	1	1		
105	CCVL 1000 ppb	CCV	1	1	1		
0	CCB	U	1	1	1		
0	Read Baseline	RB	1	1	1		
133	280-129335-B-4	U	1	1	1		"
134	280-129335-B-5	U	1	1	1		"

Cup	Name	Type	R	Dil	Wt	Vial	Comment
135	280-129335-B-6	U	1	1	1		
136	280-129335-B-7	U	1	1	1		
107	LCS	U	1	1	1		
0	MB	U	1	1	1		
137	280-129335-B-9	U	1	1	1		
138	ms 280-129335-B-9	U	1	1	1		
139	msd 280-129335-B-9	U	1	1	1		
140	280-129335-B-10	U	1	1	1		
0	Rinse	U	1	1	1		
0	Read Baseline	RB	1	1	1		
107	CCV 5000 ppb	CCV	1	1	1		
105	CCVL 1000 ppb	CCV	1	1	1		
0	CCB	U	1	1	1		
0	Read Baseline	RB	1	1	1		
141	280-129335-B-11	U	1	1	1		
142	280-129335-B-12	U	1	1	1		
143	280-129335-B-13	U	1	1	1		
144	280-129702-H-2	U	1	1	1		
145	280-129369-H-1	U	1	1	1		
146	280-129369-H-2	U	1	1	1		
147	280-129369-H-3	U	1	1	1		
148	280-129369-B-4	U	1	1	1		
149	280-129369-H-6	U	1	1	1		
150	ms 280-129369-H-6	U	1	1	1		
0	Rinse	U	1	1	1		
0	Read Baseline	RB	1	1	1		
107	CCV 5000 ppb	CCV	1	1	1		
105	CCVL 1000 ppb	CCV	1	1	1		
0	CCB	U	1	1	1		
0	Read Baseline	RB	1	1	1		
151	msd 280-129369-H-6	U	1	1	1		
152	280-129369-H-7	U	1	1	1		
153	280-129369-H-8	U	1	1	1		
154	280-129263-B-1	U	1	1	1		
155	280-129263-B-2	U	1	1	1		
156	280-129263-B-3	U	1	1	1		
157	280-129263-B-4	U	1	1	1		
158	280-129263-B-5	U	1	1	1		
159	280-129263-B-7	U	1	1	1		
160	280-129263-B-8	U	1	1	1		
0	Rinse	U	1	1	1		
0	Read Baseline	RB	1	1	1		
107	CCV 5000 ppb	CCV	1	1	1		
105	CCVL 1000 ppb	CCV	1	1	1		
0	CCB	U	1	1	1		
0	Read Baseline	RB	1	1	1		

Sulfide by Titration

Analyst:	JLA	SOP Information:	
Date:	10/22/2019	Number:	
Titration Solutions		**Calibration Information**	
Solution 1:	Iodine	Source/Ver-Lot#:	INT_01675
TALS ID	Iod_000242	Prep Date:	10/9/2019
Normality:	0.025	Made By:	JLA
Solution 2:	sodium thiosulfate	Concentration:	1260
TALS ID	Na Thio_00159	Expiration Date:	1/9/2020
Normality:	0.025		
	Starch Indicator		
TALS ID	Starch ind_00059		

	CAL Volume	Buret Start	Buret End	mL Iodine	Final mL	Conc mg/L
CAL	5	0.00	4.10	20	4.10	1272.000
CAL	5	4.10	8.50	20	4.40	1248.000

For SM4500 S2 D colorimetric

ICV Information	
Source/Ver-Lot#:	INT_01626
Prep Date:	10/9/2019
Made By:	JLA
Concentration:	1040
Expiration Date:	1/9/2020

	CAL Volume	Buret Start	Buret End	mL Iodine	Final mL	Conc mg/L
ICV	5	0.00	7.10	20	7.10	1032.000
ICV	5	7.10	14.00	20	6.90	1048.000

TALS Raw Data Report

Job Number: 280-129219-1
LIMS Batch: 474999
Equipment: NOEQUIP

Laboratory: Eurofins TestAmerica, Denver

RS# 1 Lab ID: **LCS 280-474982/1-A** Inj Date: 10/22/2019 6:54:50PM Dil: 1.0 Meth: 9034_Calc

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		20 mg/L	mg/L	92	44 110		
Sulfide as H2S		21.25 mg/L	mg/L				

RS# 2 Lab ID: **MB 280-474982/2-A** Inj Date: 10/22/2019 6:54:50PM Dil: 1.0 Meth: 9034_Calc

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		-0.8 mg/L	mg/L				
Sulfide as H2S		-0.85 mg/L	mg/L				

RS# 14 Lab ID: **280-129219-A-1-D MDLV** Inj Date: 10/22/2019 6:54:50PM Dil: 1.0 Meth: 9034_Calc

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		4.8 mg/L	mg/L	220			
Sulfide as H2S		5.1 mg/L	mg/L				

RS# 15 Lab ID: **280-129219-A-2-D MDLV** Inj Date: 10/22/2019 6:54:50PM Dil: 1.0 Meth: 9034_Calc

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		3.2 mg/L	mg/L	147			
Sulfide as H2S		3.4 mg/L	mg/L				

RS# 16 Lab ID: **280-129219-A-3-D MDLV** Inj Date: 10/22/2019 6:54:50PM Dil: 1.0 Meth: 9034_Calc

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		2.4 mg/L	mg/L	110			
Sulfide as H2S		2.55 mg/L	mg/L				

RS# 17 Lab ID: **280-129219-A-4-D MDLV** Inj Date: 10/22/2019 6:54:50PM Dil: 1.0 Meth: 9034_Calc

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		2.4 mg/L	mg/L	110			
Sulfide as H2S		2.55 mg/L	mg/L				

RS# 18 Lab ID: **280-129219-A-5-D LOQV** Inj Date: 10/22/2019 6:54:50PM Dil: 1.0 Meth: 9034_Calc

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		999999996 mg/L	2.40 J mg/L	37			
Sulfide as H2S		999999996 mg/L	mg/L				

TALS Raw Data Report

Job Number: 280-129707-1
LIMS Batch: 474999
Equipment: NOEQUIP

Laboratory: Eurofins TestAmerica, Denver

RS# 1 Lab ID: **LCS 280-474982/1-A** Inj Date: 10/22/2019 6:54:50PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		20 mg/L	mg/L	92	44 110		
Sulfide as H2S		21.25 mg/L	mg/L				

RS# 2 Lab ID: **MB 280-474982/2-A** Inj Date: 10/22/2019 6:54:50PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		-0.8 mg/L	mg/L				
Sulfide as H2S		-0.85 mg/L	mg/L				

RS# 3 Lab ID: **280-129707-O-3-A** Inj Date: 10/22/2019 6:54:50PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		-0.8 mg/L	mg/L				
Sulfide as H2S		-0.85 mg/L	mg/L				

RS# 7 Lab ID: **280-129830-E-3-A** Inj Date: 10/22/2019 6:54:50PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		0 mg/L	mg/L				
Sulfide as H2S		0 mg/L	mg/L				

RS# 8 Lab ID: **280-129830-E-3-B MS** Inj Date: 10/22/2019 6:54:50PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		22.4 mg/L	mg/L	103	44 110		
Sulfide as H2S		23.8 mg/L	mg/L				

RS# 9 Lab ID: **280-129830-E-3-C MSD** Inj Date: 10/22/2019 6:54:50PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		22.4 mg/L	mg/L	103	44 110	0	20
Sulfide as H2S		23.8 mg/L	mg/L				

RS# 10 Lab ID: **280-129707-O-1-A** Inj Date: 10/22/2019 6:54:50PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		0 mg/L	mg/L				
Sulfide as H2S		0 mg/L	mg/L				

RS# 11 Lab ID: **280-129707-O-2-A** Inj Date: 10/22/2019 6:54:50PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		1.6 mg/L	1.6 J mg/L				
Sulfide as H2S		1.7 mg/L	1.7 J mg/L				

TALS Raw Data Report

Job Number: 280-129741-1
LIMS Batch: 474999
Equipment: NOEQUIP

Laboratory: Eurofins TestAmerica, Denver

RS# 1 Lab ID: **LCS 280-474982/1-A** Inj Date: 10/22/2019 6:54:50PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		20 mg/L	mg/L	92	44 110		
Sulfide as H2S		21.25 mg/L	mg/L				

RS# 2 Lab ID: **MB 280-474982/2-A** Inj Date: 10/22/2019 6:54:50PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		-0.8 mg/L	mg/L				
Sulfide as H2S		-0.85 mg/L	mg/L				

RS# 7 Lab ID: **280-129830-E-3-A** Inj Date: 10/22/2019 6:54:50PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		0 mg/L	mg/L				
Sulfide as H2S		0 mg/L	mg/L				

RS# 8 Lab ID: **280-129830-E-3-B MS** Inj Date: 10/22/2019 6:54:50PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		22.4 mg/L	mg/L	103	44 110		
Sulfide as H2S		23.8 mg/L	mg/L				

RS# 9 Lab ID: **280-129830-E-3-C MSD** Inj Date: 10/22/2019 6:54:50PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		22.4 mg/L	mg/L	103	44 110	0	20
Sulfide as H2S		23.8 mg/L	mg/L				

RS# 12 Lab ID: **280-129741-F-1-A** Inj Date: 10/22/2019 6:54:50PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		0 mg/L	mg/L				
Sulfide as H2S		0 mg/L	mg/L				

RS# 13 Lab ID: **280-129741-D-2-A** Inj Date: 10/22/2019 6:54:50PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		0 mg/L	mg/L				
Sulfide as H2S		0 mg/L	mg/L				

TALS Raw Data Report

Job Number: 280-129794-1
LIMS Batch: 474999
Equipment: NOEQUIP

Laboratory: Eurofins TestAmerica, Denver

RS# 1 Lab ID: **LCS 280-474982/1-A** Inj Date: 10/22/2019 6:54:50PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		20 mg/L	mg/L	92	44 110		
Sulfide as H2S		21.25 mg/L	mg/L				

RS# 2 Lab ID: **MB 280-474982/2-A** Inj Date: 10/22/2019 6:54:50PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		-0.8 mg/L	1.9 U mg/L				
Sulfide as H2S		-0.85 mg/L	2.0 U mg/L				

RS# 4 Lab ID: **280-129794-E-1-A** Inj Date: 10/22/2019 6:54:50PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		0 mg/L	1.9 U mg/L				
Sulfide as H2S		0 mg/L	2.0 U mg/L				

RS# 7 Lab ID: **280-129830-E-3-A** Inj Date: 10/22/2019 6:54:50PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		0 mg/L	1.9 U mg/L				
Sulfide as H2S		0 mg/L	2.0 U mg/L				

RS# 8 Lab ID: **280-129830-E-3-B MS** Inj Date: 10/22/2019 6:54:50PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		22.4 mg/L	mg/L	103	44 110		
Sulfide as H2S		23.8 mg/L	mg/L				

RS# 9 Lab ID: **280-129830-E-3-C MSD** Inj Date: 10/22/2019 6:54:50PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		22.4 mg/L	mg/L	103	44 110	0	20
Sulfide as H2S		23.8 mg/L	mg/L				

TALS Raw Data Report

Job Number: 280-129830-1
LIMS Batch: 474999
Equipment: NOEQUIP

Laboratory: Eurofins TestAmerica, Denver

RS# 1 Lab ID: **LCS 280-474982/1-A** Inj Date: 10/22/2019 6:54:50PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		20 mg/L	mg/L	92	44 110		
Sulfide as H2S		21.25 mg/L	mg/L				

RS# 2 Lab ID: **MB 280-474982/2-A** Inj Date: 10/22/2019 6:54:50PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		-0.8 mg/L	1.9 U mg/L				
Sulfide as H2S		-0.85 mg/L	2.0 U mg/L				

RS# 5 Lab ID: **280-129830-E-1-A** Inj Date: 10/22/2019 6:54:50PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		-0.8 mg/L	1.9 U mg/L				
Sulfide as H2S		-0.85 mg/L	2.0 U mg/L				

RS# 6 Lab ID: **280-129830-E-2-A** Inj Date: 10/22/2019 6:54:50PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		0 mg/L	1.9 U mg/L				
Sulfide as H2S		0 mg/L	2.0 U mg/L				

RS# 7 Lab ID: **280-129830-E-3-A** Inj Date: 10/22/2019 6:54:50PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		0 mg/L	1.9 U mg/L				
Sulfide as H2S		0 mg/L	2.0 U mg/L				

RS# 8 Lab ID: **280-129830-E-3-B MS** Inj Date: 10/22/2019 6:54:50PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		22.4 mg/L	mg/L	103	44 110		
Sulfide as H2S		23.8 mg/L	mg/L				

RS# 9 Lab ID: **280-129830-E-3-C MSD** Inj Date: 10/22/2019 6:54:50PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		22.4 mg/L	mg/L	103	44 110	0	20
Sulfide as H2S		23.8 mg/L	mg/L				

Titration Data Review Checklist

LIMS Batch Number: 474999	**Method (circle one):**	**QC Type (circle):**
Analyst/1st Reviewer: Joseph Abeyta	**2310B 2320B 2340C**	**Standard DoD QAPP Other**
Date: 10/22/19	**4500 S2 F 4500 SO3 B 9030B/9034**	
Matrix (circle): Water Solid	**Automated or Manual (circle one)**	**Instrument ID (circle one if applicable):** AT2 AT3

Review Items	Yes	No	2nd Rev	If No, why is data reportable?
A. Sample Storage and Pretreatment				
1. Is sample pH verified and documented prior to analysis? (if required)	✓		✓	
2. For samples requiring pH adjustment is the amount of acid/base used documented?	NA		✓	If no, list details:
3. Are samples analyzed within the required hold time?	✓		✓	NCM:
4. Pre-treatment reagents used to remove interferences are documented.	NA		✓	
B. Calibration / Instrument				
5. Was the normality of the titrant verified and found acceptable?	✓		✓	Comments:
6. For potentiometric titration, the pH meter is calibrated with 5 buffers bracketing range of samples and QC.	NA		✓	Comments:
7. Calibration standards are analyzed at the beginning and end of the analytical sequence and after every 10 sample analyses. (samples/dilutions/reanalyses).	NA		✓	Comments:
8. Calibrations standards (ICV/CCV) are within 90-110% recovery.	NA		✓	
C. Sample and Batch QC				
9. Blanks are analyzed at the beginning, end and after every 10 sample analyses in the sequence.	✓		✓	
10. Results of blank analyses (MB, ICB, CCB) are < ½ RL (<RL for alkalinity unless DoD)	✓		✓	□ No analyte > ½ RL in associated samples □ Sample results >10x blank
11. A standard from a second source (SRM, CRM, LCS) is included in the analytical sequence.	✓		✓	
12. The recovery of the 2nd source material falls within 90-110% or manufacturer's limits.	✓		✓	
13. Samples analyses are bracketing by acceptable CCV/CCBs.	NA		✓	□ No analyte > RL in associated samples □ Sample results >10x blank □ Sample results qualified
14. MS/MSD analyzed at required frequency and recoveries within limits. (If recoveries out of limits, verify not due to lab error) (Required for 2340C, 4500 S2 F, 9030B/9034)	✓		✓	□ Non-conformance (NCM) added □ Sample results >4X spike conc.
15. Duplicate analyzed at required frequency and RPD within limits. (Required for 2310B, 2320B, 4500 SO3 B)	NA		✓	□ Non-conformance (NCM) added □ Sample results ND or <2X RL

Review Items	Yes	No	2nd Rev	If No, why is data reportable?
16. Are all MS/MSD RPDs <50%? Note: Excessive RPDs (>50%) require evaluation, correction or explanation.	✓		✓	□ Non-conformance (NCM) added
D. Raw Data & TALS Data Entry				
17. Raw Data	✓		✓	
a. Unused data is clearly identified with reason	✓		✓	
b. All crossed out data is initialed and dated	✓		✓	
c. Out of control QC is clearly identified	✓		✓	
d. Any data that has a qualifier is commented on with appropriate action taken	✓		✓	
e. The first page of the run includes the filename, instrument, and analyst initials/signature	✓		✓	
f. 100% of manual calculations are verified.	✓		✓	
18. TALS Samples Tab	✓		✓	
a. LIMS Sample IDs / Containers are correct	✓		✓	
b. Method and matrix are correct	✓		✓	
c. Date and time match raw data	✓		✓	
d. Dilutions are correct	✓		✓	
e. Correct suffix designated (where applicable)	✓		✓	
19. TALS Worksheet Tab is complete and correct	✓		✓	
20. TALS Reagent Tab is complete and correct	✓		✓	
21. TALS QC Links Tab is correct	✓		✓	
22. TALS Sample Results Tab	✓		✓	
a. All unused data are marked Rejected or Accepted	✓		✓	
b. All reported analytes are marked Primary or Secondary	✓		✓	
c. Data manually transcribed from benchsheet into TALS verified 100% including significant figures SM 4500 SO3 B).	✓		✓	
d. TALS Batch Information Screen documentation is complete	✓		✓	
e. TALS Status set to appropriate review level	✓		✓	
E. Final Report and NCMs (2nd level review only)				
f. Were all job/project requirements met?			✓	
g. Results for samples and QC correct on final report?			✓	
h. Are all necessary scanned documents in TALS?			✓	
i. NCMs reviewed for applicability, correct references to batches, grammar/typographical errors?			✓	

Comments: _____

_____

_____

2nd Reviewer: _____ **Review Date:** 10/24/19

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-101
Lims ID: STD1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 16-Oct-2019 09:56:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0086204-002
Misc. Info.: 280-0086204-002
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub2

Method: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 17-Oct-2019 08:07:50 Calib Date: 16-Oct-2019 11:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-114

Column 1 : Det: Info 2_091554_1
Process Host: CTX0337

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.232	3.230	0.002	1002740	0.2000	0.2366	
2 Chloride	4.403	4.397	0.006	2974754	1.00	1.20	
3 Nitrite as N	5.082	5.073	0.009	1074611	NC	NC	
4 Bromide	6.155	6.137	0.018	258005	0.2000	0.2376	
5 Nitrate as N	6.932	6.888	0.044	1373194	NC	NC	
6 Orthophosphate as P	9.392	9.353	0.039	1269882	NC	NC	
7 Sulfate	10.710	10.693	0.017	2094368	1.00	1.26	

QC Flag Legend

Processing Flags
NC - Not Calibrated

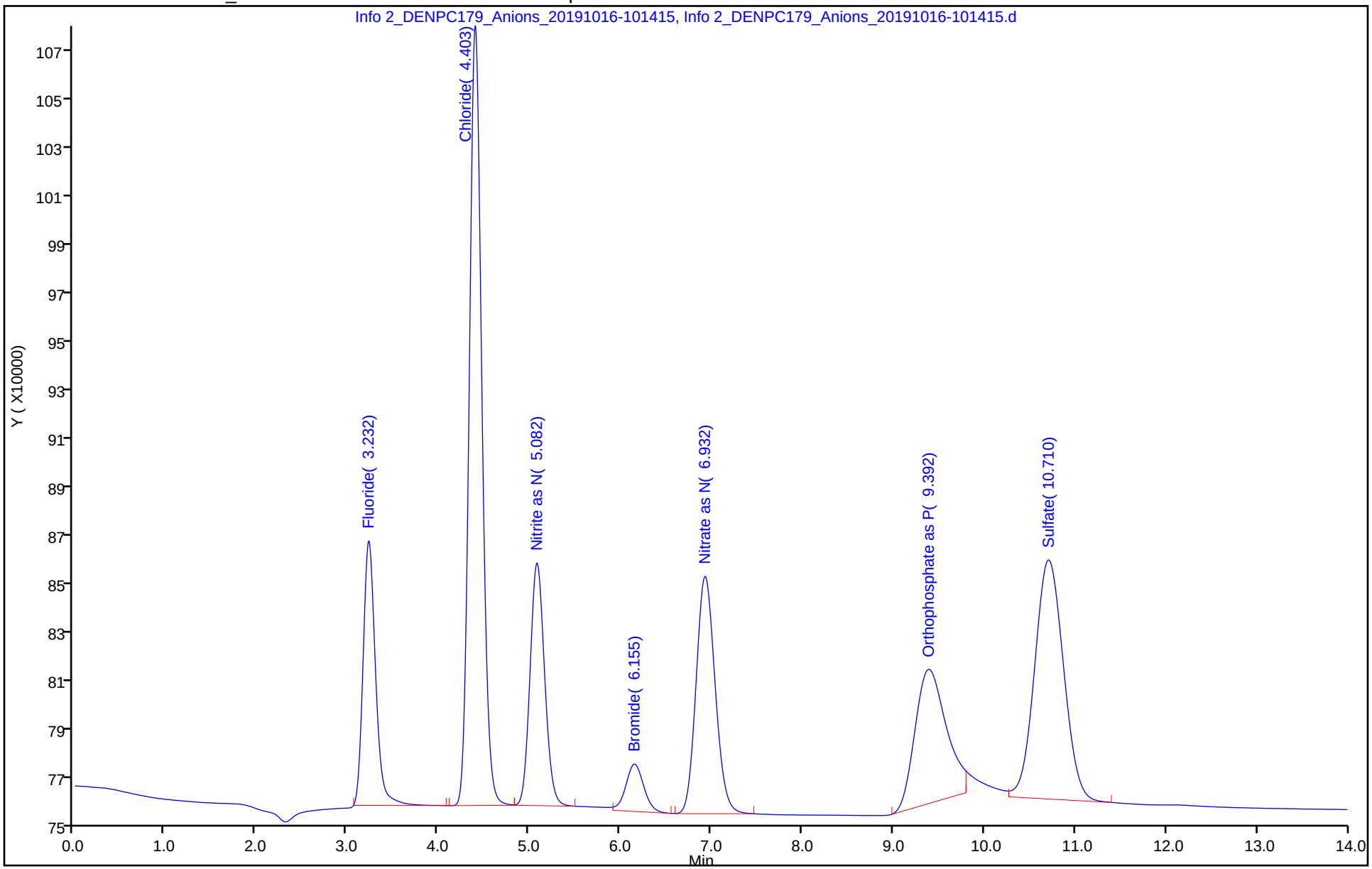
Reagents:

IC Cal low_00488 Amount Added: 0.04 Units: mL
IC CAL cl/so4_00279 Amount Added: 0.04 Units: mL

Report Date: 17-Oct-2019 08:07:50 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

Data File:	\\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-101415.d				
Injection Date:	16-Oct-2019 09:56:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD1			Worklist Smp#:	2
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-103
Lims ID: STD2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 16-Oct-2019 10:14:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0086204-003
Misc. Info.: 280-0086204-003
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub2

Method: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 17-Oct-2019 08:07:49 Calib Date: 16-Oct-2019 11:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-114

Column 1 : Det: Info 2_091554_1
Process Host: CTX0337

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.228	3.230	-0.002	2620818	0.5000	0.4568	
2 Chloride	4.398	4.397	0.001	7619029	2.50	2.29	
3 Nitrite as N	5.080	5.073	0.007	2684802	NC	NC	
4 Bromide	6.150	6.137	0.013	589406	0.5000	0.4745	
5 Nitrate as N	6.920	6.888	0.032	3496323	NC	NC	
6 Orthophosphate as P	9.375	9.353	0.022	2908622	NC	NC	
7 Sulfate	10.703	10.693	0.010	5258185	2.50	2.27	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

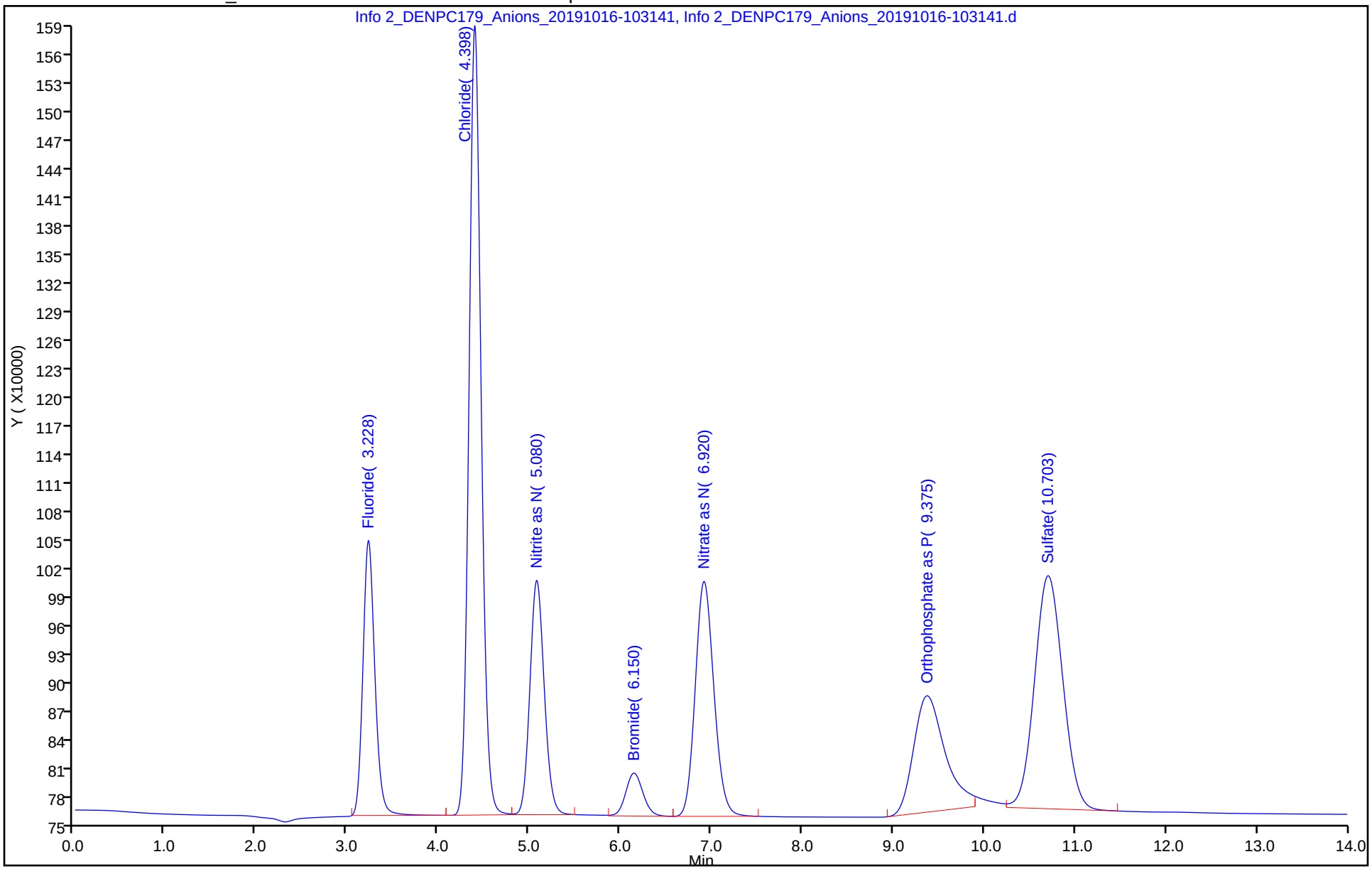
IC Cal low_00488 Amount Added: 0.10 Units: mL
IC CAL cl/so4_00279 Amount Added: 0.10 Units: mL

Report Date: 17-Oct-2019 08:07:49 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-103141.d

Injection Date:	16-Oct-2019 10:14:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD2			Worklist Smp#:	3
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-104
Lims ID: STD3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 16-Oct-2019 10:31:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0086204-004
Misc. Info.: 280-0086204-004
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub2

Method: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 17-Oct-2019 08:07:48 Calib Date: 16-Oct-2019 11:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-114

Column 1 : Det: Info 2_091554_1
Process Host: CTX0337

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.230	3.230	0.000	5802506	1.00	0.8897	
2 Chloride	4.398	4.397	0.001	16645385	5.00	4.41	
3 Nitrite as N	5.078	5.073	0.005	5995758	NC	NC	
4 Bromide	6.147	6.137	0.010	1172610	1.00	0.8912	
5 Nitrate as N	6.913	6.888	0.025	7395115	NC	NC	
6 Orthophosphate as P	9.370	9.353	0.017	6150863	NC	NC	
7 Sulfate	10.703	10.693	0.010	11314027	5.00	4.20	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

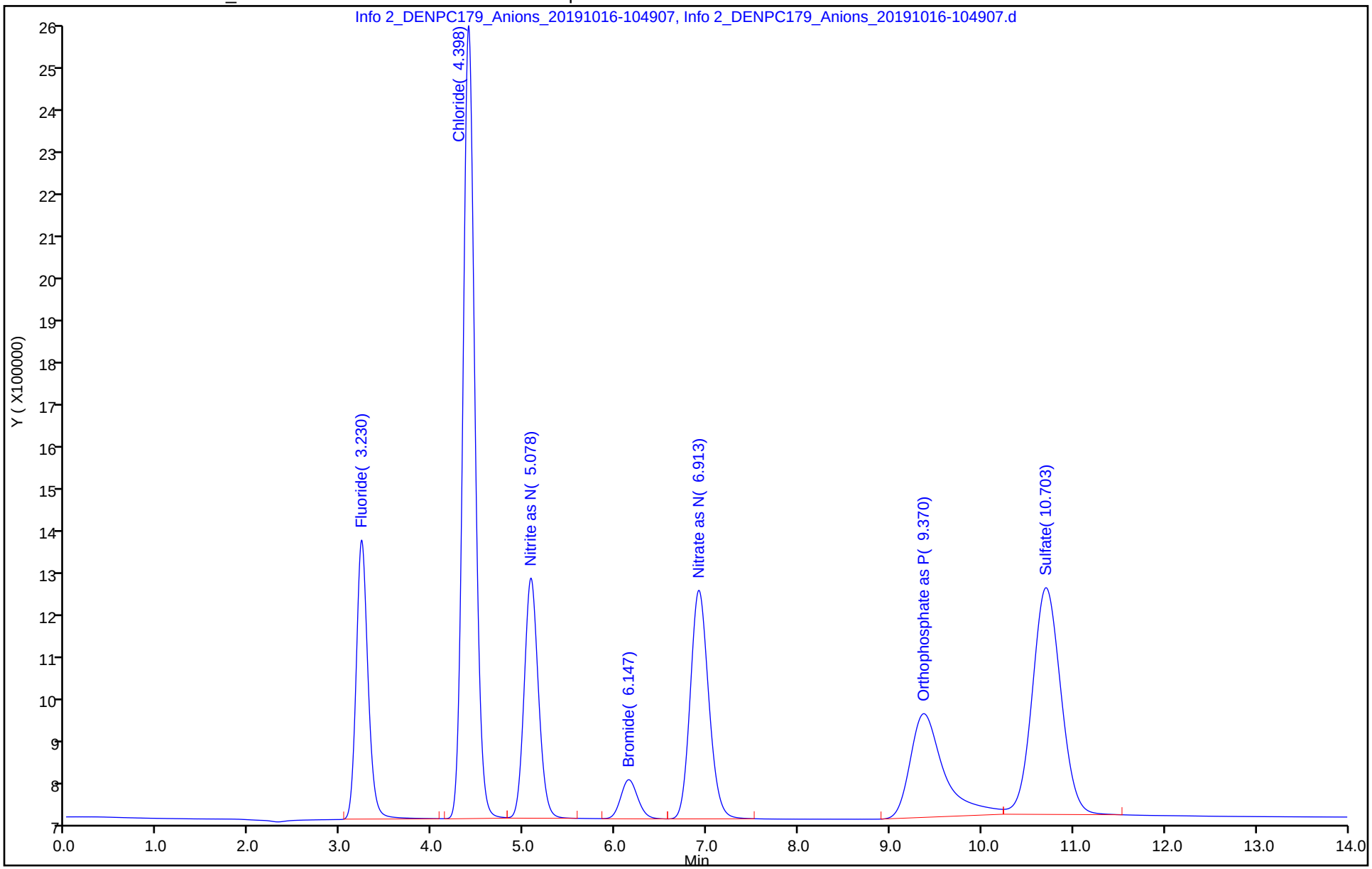
IC Cal low_00488 Amount Added: 0.20 Units: mL
IC CAL cl/so4_00279 Amount Added: 0.20 Units: mL

Report Date: 17-Oct-2019 08:07:48 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-104907.d

Injection Date:	16-Oct-2019 10:31:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD3			Worklist Smp#:	4
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-110
Lims ID: STD4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 16-Oct-2019 10:49:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0086204-005
Misc. Info.: 280-0086204-005
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub2

Method: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 17-Oct-2019 08:07:47 Calib Date: 16-Oct-2019 11:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-114

Column 1 : Det: Info 2_091554_1
Process Host: CTX0337

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.230	3.230	0.000	28651108	4.00	4.00	
2 Chloride	4.397	4.397	0.000	251096867	60.0	59.4	
3 Nitrite as N	5.073	5.073	0.000	30588598	NC	NC	
4 Bromide	6.137	6.137	0.000	5152478	4.00	3.74	
5 Nitrate as N	6.888	6.888	0.000	36456238	NC	NC	
6 Orthophosphate as P	9.353	9.353	0.000	22227008	NC	NC	
7 Sulfate	10.693	10.693	0.000	181914278	60.0	58.5	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

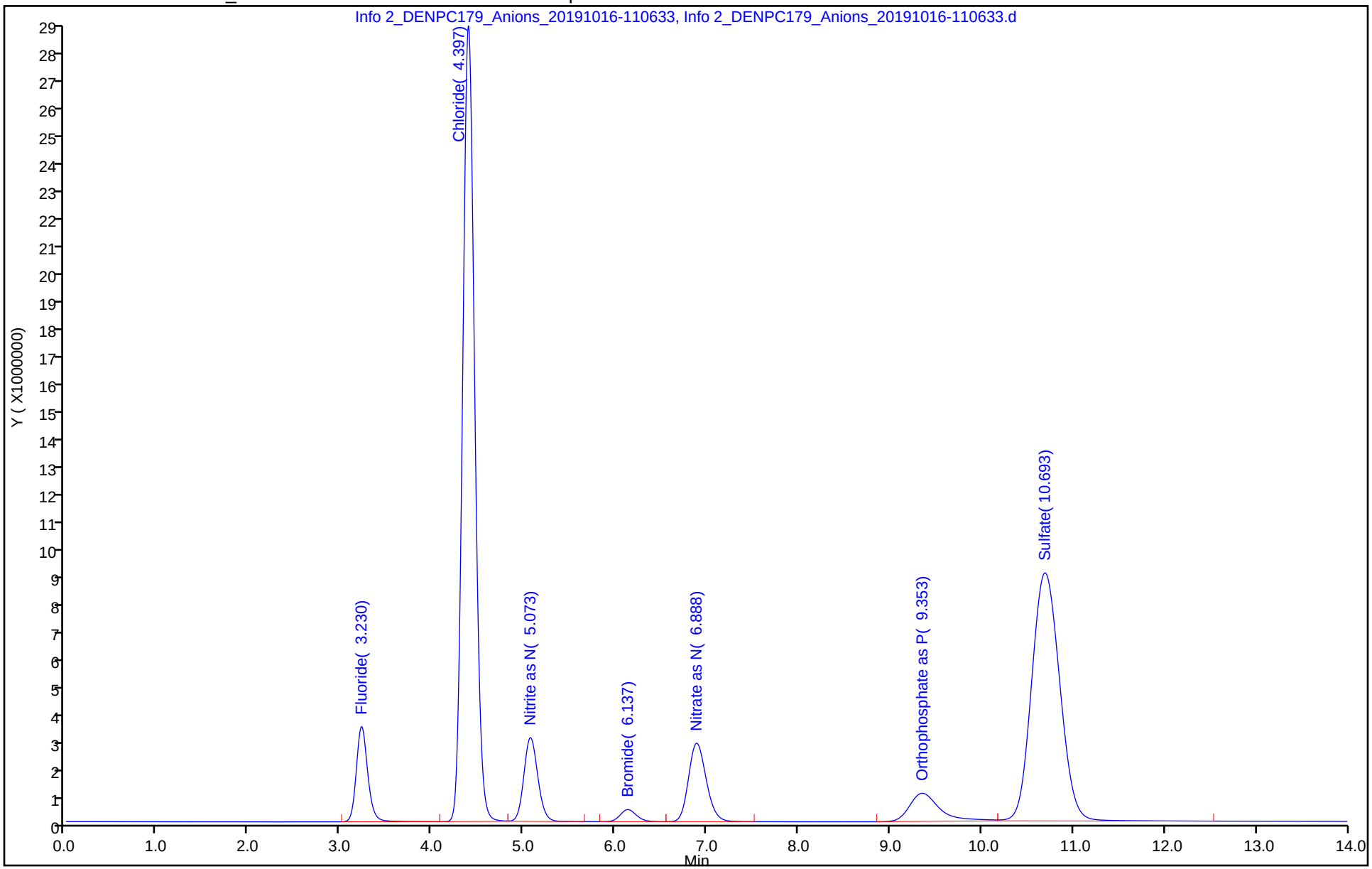
IC Cal low_00488 Amount Added: 0.80 Units: mL
IC CAL cl/so4_00279 Amount Added: 2.40 Units: mL

Report Date: 17-Oct-2019 08:07:47 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-110633.d

Injection Date:	16-Oct-2019 10:49:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD4			Worklist Smp#:	5
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File:	\\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-112				
Lims ID:	STD5				
Client ID:					
Sample Type:	IC	Calib Level:	5		
Inject. Date:	16-Oct-2019 11:06:00	ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0086204-006				
Misc. Info.:	280-0086204-006				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom10		
Sublist:	chrom-Anions_IC10*sub2				
Method:	\\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Anions_IC10.m				
Limit Group:	Wet - Anions 28D				
Last Update:	17-Oct-2019 08:07:46	Calib Date:	16-Oct-2019 11:24:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-114				
Column 1 :			Det: Info 2_091554_1		
Process Host:	CTX0337				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.232	3.223	0.009	58734368	8.00	8.09	
2 Chloride	4.402	4.417	-0.015	511590511	120.0	120.5	
3 Nitrite as N	5.075	5.113	-0.038	65194107	NC	NC	
4 Bromide	6.138	6.225	-0.087	11214767	8.00	8.07	
5 Nitrate as N	6.887	7.007	-0.120	79358403	NC	NC	
6 Orthophosphate as P	9.332	9.287	0.045	40702804	NC	NC	
7 Sulfate	10.663	10.613	0.050	376005839	120.0	120.3	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

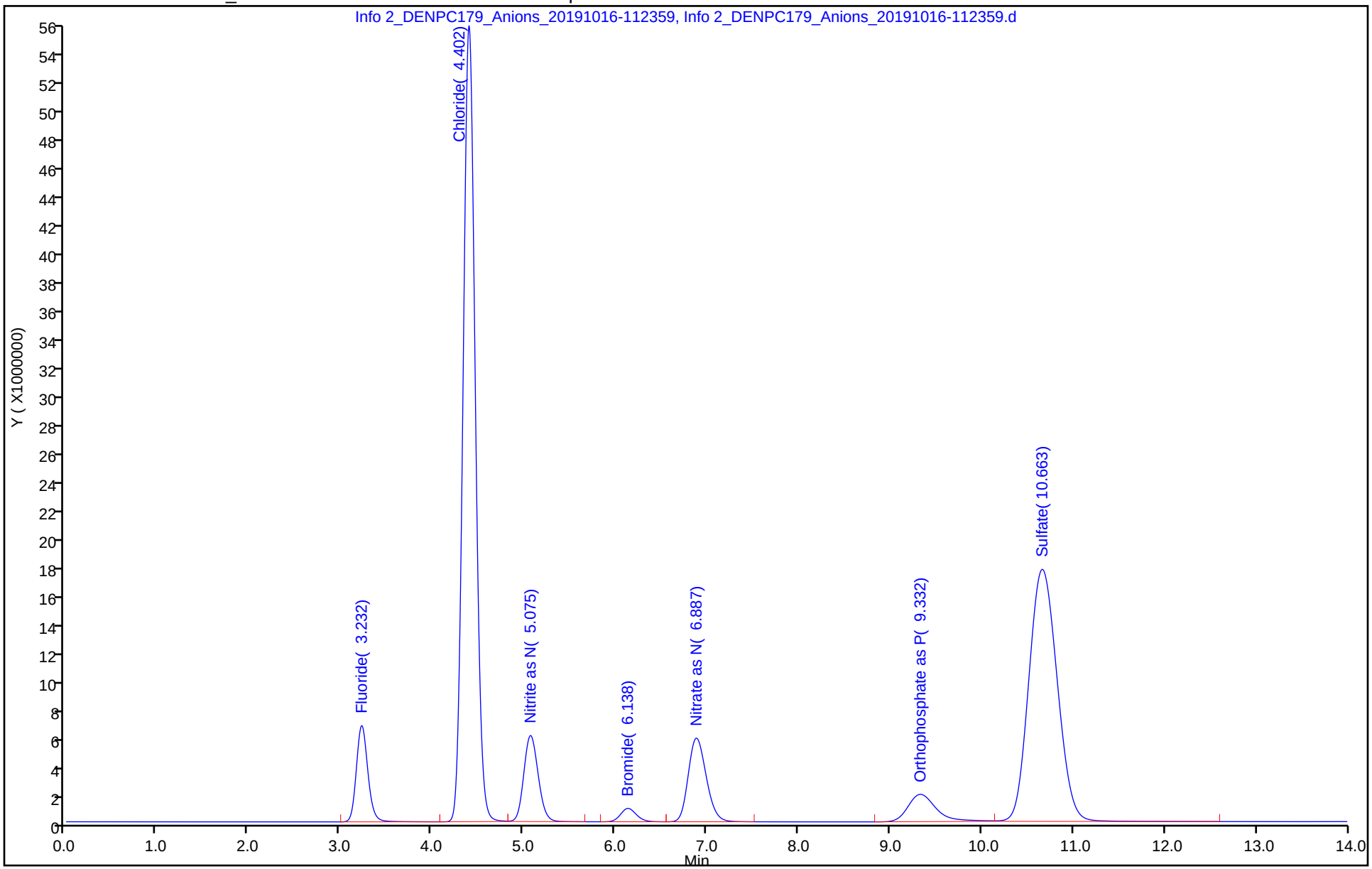
IC Cal low_00488	Amount Added:	1.60	Units: mL
IC CAL cl/so4_00279	Amount Added:	4.80	Units: mL

Report Date: 17-Oct-2019 08:07:46 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-112359.d

Injection Date:	16-Oct-2019 11:06:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD5			Worklist Smp#:	6
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-114
Lims ID: STD6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 16-Oct-2019 11:24:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0086204-007
Misc. Info.: 280-0086204-007
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub2

Method: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 17-Oct-2019 08:07:45 Calib Date: 16-Oct-2019 11:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-114

Column 1 : Det: Info 2_091554_1
Process Host: CTX0337

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.228	3.223	0.005	72959380	10.0	10.0	
2 Chloride	4.428	4.417	0.011	853716021	200.0	200.7	
3 Nitrite as N	5.112	5.113	-0.001	83596523	NC	NC	
4 Bromide	6.218	6.225	-0.007	14330248	10.0	10.3	
5 Nitrate as N	6.987	7.007	-0.020	100613170	NC	NC	
6 Orthophosphate as P	9.287	9.287	0.000	48862862	NC	NC	
7 Sulfate	10.610	10.613	-0.003	632188294	200.0	201.9	

QC Flag Legend

Processing Flags
NC - Not Calibrated

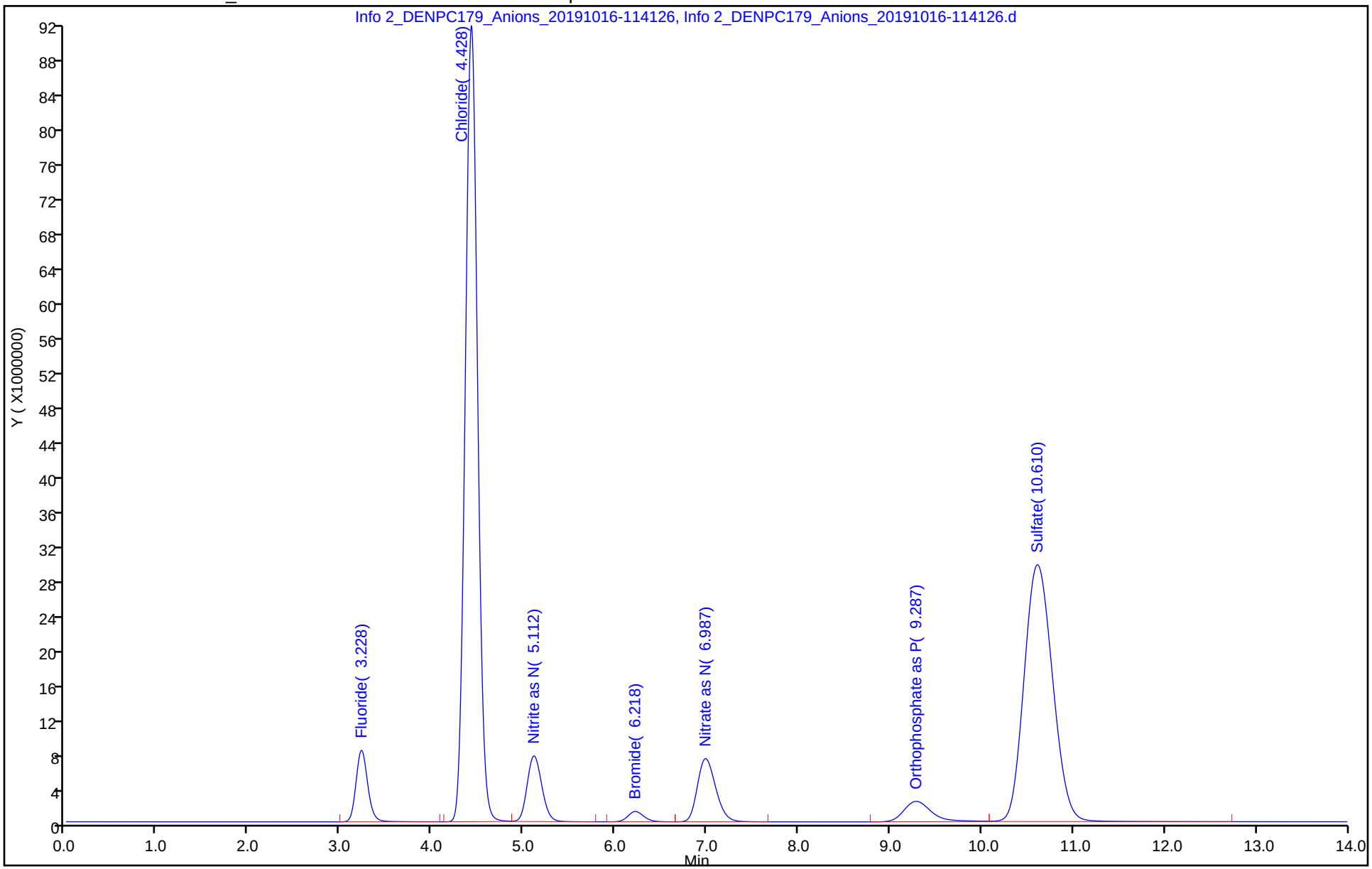
Reagents:

IC Cal low_00488 Amount Added: 2.00 Units: mL
IC CAL cl/so4_00279 Amount Added: 8.00 Units: mL

Report Date: 17-Oct-2019 08:07:45 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

Data File:	\\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-114126.d				
Injection Date:	16-Oct-2019 11:24:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD6			Worklist Smp#:	7
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



IC Instrument Information

WL: 86204 **Inst ID:** 10 **Analysis Date:** 10/14/19 **Analyst:** JP

Rush	Job No.	Samples	Anions	QC Req	HT Exp
☐	129308	1	F Cl NO2 Br NO3 PO4 SO4	MS/D 1	
☐	129194	3	F Cl NO2 Br NO3 PO4 SO4	MS/D 1	
☐	129571	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	129486	10/16/19 B 1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	127963	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	129322	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	128979	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	129442	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	129604	4	F Cl NO2 Br NO3 PO4 SO4	MS/D 1	
☐	129584	2	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	89764	9	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	89765	3	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason
308		F Cl NO2 Br NO3 PO4 SO4	5X	RERUN
194		F Cl NO2 Br NO3 PO4 SO4	10X	RERUN
571		F Cl NO2 Br NO3 PO4 SO4	2X	RERUN
486		F Cl NO2 Br NO3 PO4 SO4	10, 100X	COVERAGE
963		F Cl NO2 Br NO3 PO4 SO4	10, 100X	COVERAGE
322		F Cl NO2 Br NO3 PO4 SO4	10X	RERUN
979		F Cl NO2 Br NO3 PO4 SO4	5, 20X	RERUN
442		F Cl NO2 Br NO3 PO4 SO4	5X	RERUN
584		F Cl NO2 Br NO3 PO4 SO4	50X	RERUN
764			100, 500, 1000 10000, 20000	RERUN
765			10, 100, 1000	RERUN

TestAmerica Laboratories
Initial Calibration Summary Report

Method: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Anions_IC10.m
Instrument: WC_IonChrom10 Lims Location: 280
Lock State: Unlocked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 16-Oct-2019 12:35:03
No.Compounds:7

Initial Calibration Batches

Ical Batch: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b
Inj Date : 16-Oct-2019 09:56:00, Sublist: chrom-Anions_IC10*sub2

Detector 1: Info 2_091554_1

	Wet - Anions 28D				Wet - Anions			
Compound	b	M1	M2	Err	b	M1	M2	Err
1 Fluoride	-736288	7349732		0.999				
2 Chloride	-215711	4264055		1.000				
3 Nitrite as N					-100454	8234670		0.997
4 Bromide	-74537	1399356		0.998				
5 Nitrate as N					-108509	9924177		0.997
6 Orthophosphate as P					421424	5046139		0.997
7 Sulfate	-187445	3140339		0.999				

TestAmerica Laboratories
Initial Calibration Report

Method: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Anions_IC10.m
Instrument: WC_IonChrom10 Lims Location: 280
Lock State: Unlocked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 16-Oct-2019 12:35:03
No.Compounds:7
Sublist: chrom-Anions_IC10*sub2
Limit Group: Wet - Anions 28D

Detectors

Detector: 1, Info 2_091554_1
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-17.267 No. Points: 7196

Calibration File Names

Level: 1 \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-10141
Inj Date: 16-Oct-2019 09:56:00 Worklist: 86204 Sample#: 2
Level: 2 \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-10314
Inj Date: 16-Oct-2019 10:14:00 Worklist: 86204 Sample#: 3
Level: 3 \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-10490
Inj Date: 16-Oct-2019 10:31:00 Worklist: 86204 Sample#: 4
Level: 4 \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-11063
Inj Date: 16-Oct-2019 10:49:00 Worklist: 86204 Sample#: 5
Level: 5 \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-11235
Inj Date: 16-Oct-2019 11:06:00 Worklist: 86204 Sample#: 6
Level: 6 \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-11412
Inj Date: 16-Oct-2019 11:24:00 Worklist: 86204 Sample#: 7

Start Cal Date: 16-Oct-2019 09:56:00 End Cal Date: 16-Oct-2019 11:24:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: raw_COD Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 4

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
1 Fluoride				Signal: 1					
5013700	5241636	5802506	7162777	7341796	7295938	**-736288**			**0.999**
0.200000(1)	0.500000(2)	1.0000 (3)	4.0000 (4)	8.0000 (5)	10.0 (6)		**7349732**		
1002740	2620818	5802506	28651108	58734368	72959380				
86204(2)	86204(3)	86204(4)	86204(5)	86204(6)	86204(7)				
2 Chloride				Signal: 1					
2974754	3047612	3329077	4184948	4263254	4268580	**-2157119**			**1.000**
1.0000 (1)	2.5000 (2)	5.0000 (3)	60.0 (4)	120.0 (5)	200.0 (6)		**4264055**		
2974754	7619029	16645385	251096867	511590511	853716021				
86204(2)	86204(3)	86204(4)	86204(5)	86204(6)	86204(7)				
4 Bromide				Signal: 1					
1290025	1178812	1172610	1288120	1401846	1433025	**-74537**			**0.998**
0.200000(1)	0.500000(2)	1.0000 (3)	4.0000 (4)	8.0000 (5)	10.0 (6)		**1399356**		
258005	589406	1172610	5152478	11214767	14330248				
86204(2)	86204(3)	86204(4)	86204(5)	86204(6)	86204(7)				
7 Sulfate				Signal: 1					
2094368	2103274	2262805	3031905	3133382	3160941	**-1874453**			**0.999**
1.0000 (1)	2.5000 (2)	5.0000 (3)	60.0 (4)	120.0 (5)	200.0 (6)		**3140339**		
2094368	5258185	11314027	181914278	376005839	632188294				
86204(2)	86204(3)	86204(4)	86204(5)	86204(6)	86204(7)				

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-135
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 16-Oct-2019 13:41:00 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0086204-008
Misc. Info.: 280-0086204-008
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist:

Method: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 17-Oct-2019 08:07:44 Calib Date: 16-Oct-2019 11:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-114

Column 1 : Det: Info 2_091554_1
Process Host: CTX0337

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.223	3.223	0.000	28761700	4.00	4.01	
2 Chloride	4.417	4.417	0.000	335727051	80.0	79.2	
3 Nitrite as N	5.113	5.113	0.000	33076019	NC	NC	
4 Bromide	6.225	6.225	0.000	5194127	4.00	3.77	
5 Nitrate as N	7.007	7.007	0.000	36954215	NC	NC	
6 Orthophosphate as P	9.287	9.287	0.000	21190799	NC	NC	
7 Sulfate	10.613	10.613	0.000	240813859	80.0	77.3	

QC Flag Legend

Processing Flags
NC - Not Calibrated

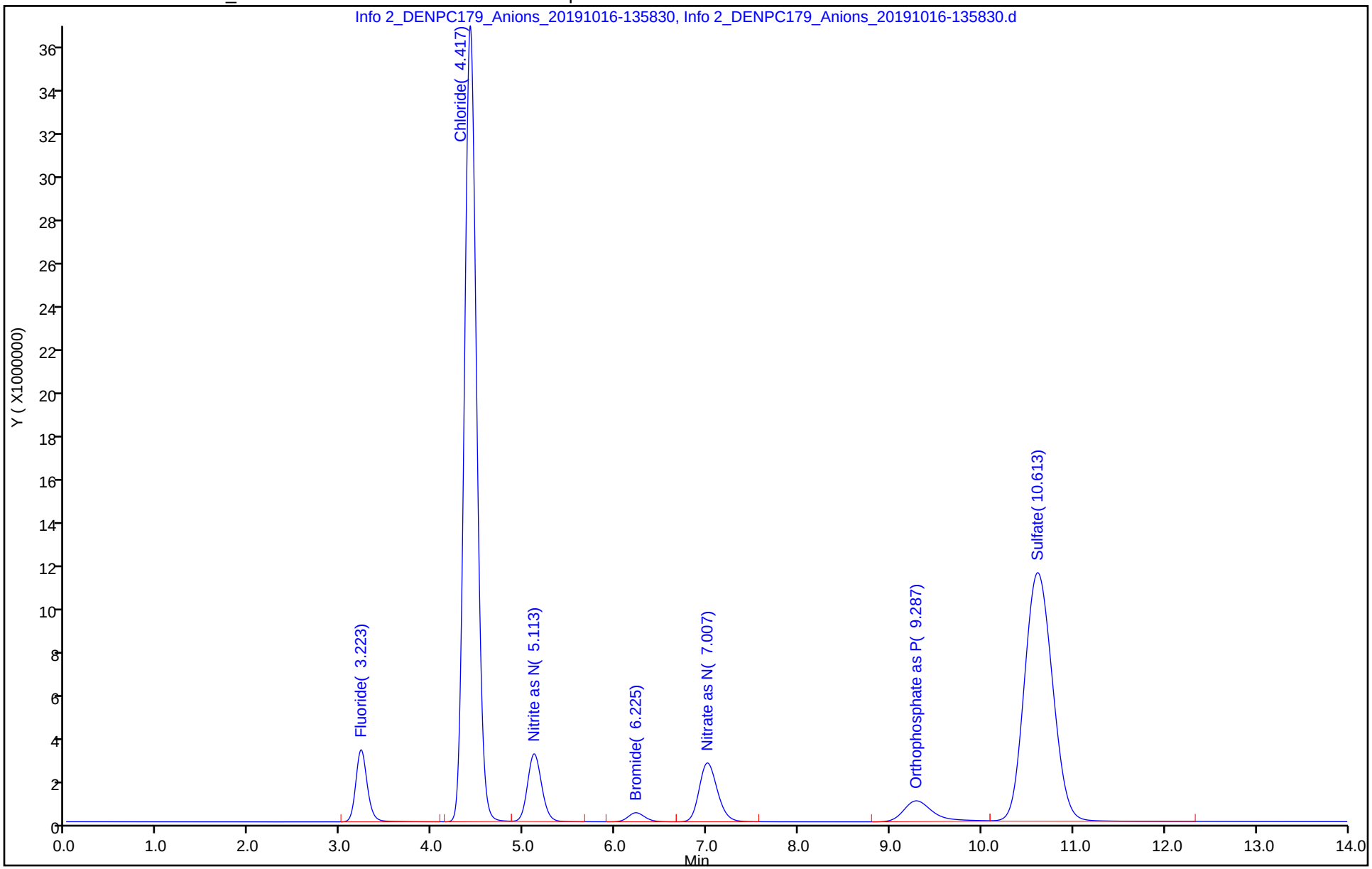
Reagents:

IC SO4 ICV_00020	Amount Added:	0.80	Units: mL
IC ICV 5_00250	Amount Added:	0.80	Units: mL
IC CL ICV_00016	Amount Added:	0.80	Units: mL

Report Date: 17-Oct-2019 08:07:45 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

Data File:	\\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-135830.d				
Injection Date:	16-Oct-2019 13:41:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ICV			Worklist Smp#:	8
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File:	\\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-141				
Lims ID:	ICB				
Client ID:					
Sample Type:	ICB				
Inject. Date:	16-Oct-2019 13:58:00	ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0086204-009				
Misc. Info.:	280-0086204-009				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom10		
Method:	\\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Anions_IC10.m				
Limit Group:	Wet - Anions 28D				
Last Update:	17-Oct-2019 08:07:32	Calib Date:	16-Oct-2019 11:24:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-114				
Column 1 :			Det: Info 2_091554_1		
Process Host:	CTX0337				

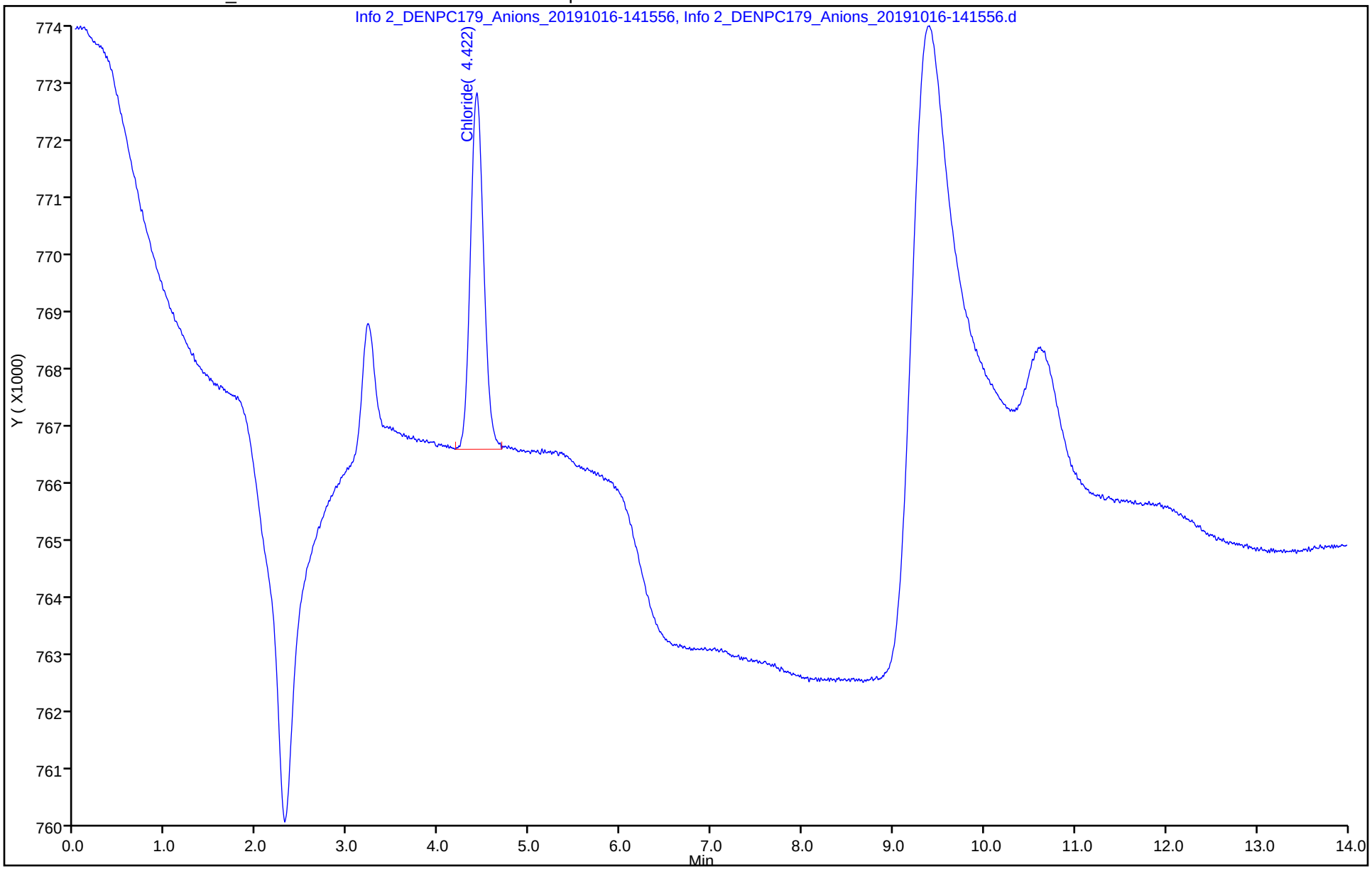
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.223				ND	
2 Chloride	4.422	4.417	0.005	57654		0.5194	
3 Nitrite as N		5.113				ND	
4 Bromide		6.225				ND	
5 Nitrate as N		7.007				ND	
6 Orthophosphate as P		9.287				ND	
7 Sulfate		10.613				ND	

Report Date: 17-Oct-2019 08:07:44 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-141556.d

Injection Date:	16-Oct-2019 13:58:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ICB			Worklist Smp#:	9
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



IC Instrument Information

WL: 87035 **Inst ID:** 10 **Analysis Date:** 11/12/19 **Analyst:** JP

Rush	Job No.	Samples	Anions	QC Req	HT Exp
☐	129855	4	F Cl NO2 Br NO3 PO4 SO4	(MS/D) 1	
☐	129717	2	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	129906	11	F Cl NO2 Br NO3 PO4 SO4	(MS/D) 6	
☐	129713	3	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	129830	3	F Cl NO2 Br NO3 PO4 (SO4)	(MS/D) 3	
☐	130740	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	130751	3	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	129862	2	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason
717		F Cl NO2 Br NO3 PO4 (SO4)	20X	RERUN
906		F (Cl) NO2 Br NO3 PO4 (SO4)	10, 20X	TEST
713		F (Cl) NO2 Br NO3 PO4 (SO4)	10, 20X	RERUN
862		F Cl NO2 Br NO3 PO4 SO4	10, 100	Thick.
740		F Cl NO2 Br (NO3) PO4 SO4	50, 100	HIST.
830		F Cl NO2 Br NO3 PO4 (SO4)	10X	TEST.
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		

TestAmerica Laboratories
Initial Calibration Summary Report

Method: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Anions_IC10.m
Instrument: WC_IonChrom10 Lims Location: 280
Lock State: Unlocked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 16-Oct-2019 12:35:03
No.Compounds:7

Initial Calibration Batches

Ical Batch: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b
Inj Date : 16-Oct-2019 09:56:00, Sublist: chrom-Anions_IC10*sub2

Detector 1: Info 2_091554_1

	Wet - Anions 28D				Wet - Anions			
Compound	b	M1	M2	Err	b	M1	M2	Err
1 Fluoride	-736288	7349732		0.999				
2 Chloride	-215711	4264055		1.000				
3 Nitrite as N					-100454	8234670		0.997
4 Bromide	-74537	1399356		0.998				
5 Nitrate as N					-108509	9924177		0.997
6 Orthophosphate as P					421424	5046139		0.997
7 Sulfate	-187445	3140339		0.999				

TestAmerica Laboratories
Initial Calibration Report

Method: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Anions_IC10.m
Instrument: WC_IonChrom10 Lims Location: 280
Lock State: Unlocked Cpnd Order: Retention Time
Integrator: Falcon Last Modified: 16-Oct-2019 12:35:03
No.Compounds:7
Sublist: chrom-Anions_IC10*sub2
Limit Group: Wet - Anions 28D

Detectors

Detector: 1, Info 2_091554_1
Data Type: ic Spec Type: none
Supports Extracted Chromatograms: False
Run Time: 0.000-17.267 No. Points: 7196

Calibration File Names

Level: 1 \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-10141
Inj Date: 16-Oct-2019 09:56:00 Worklist: 86204 Sample#: 2
Level: 2 \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-10314
Inj Date: 16-Oct-2019 10:14:00 Worklist: 86204 Sample#: 3
Level: 3 \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-10490
Inj Date: 16-Oct-2019 10:31:00 Worklist: 86204 Sample#: 4
Level: 4 \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-11063
Inj Date: 16-Oct-2019 10:49:00 Worklist: 86204 Sample#: 5
Level: 5 \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-11235
Inj Date: 16-Oct-2019 11:06:00 Worklist: 86204 Sample#: 6
Level: 6 \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-11412
Inj Date: 16-Oct-2019 11:24:00 Worklist: 86204 Sample#: 7

Start Cal Date: 16-Oct-2019 09:56:00 End Cal Date: 16-Oct-2019 11:24:00

Individual Compound Calibration Parameters

Quant Method: ESTD RF Calibration: Replace
Rule Name: Linear1 Curve: Linear Weighting: Conc
Origin: None Error: raw_COD Error Limit: 1.00
RF %Dif: 0.0 SPCC Limit: 0.0 CCC Limit: 0.0
Dependent Variable: Resp

Number of Compounds: 4

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error

RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	RF/Amt(Lvl) Response WL(Smp)	b	m1	m2	Error
1 Fluoride				Signal: 1					
5013700	5241636	5802506	7162777	7341796	7295938	**-736288**			**0.999**
0.200000(1)	0.500000(2)	1.0000 (3)	4.0000 (4)	8.0000 (5)	10.0 (6)		**7349732**		
1002740	2620818	5802506	28651108	58734368	72959380				
86204(2)	86204(3)	86204(4)	86204(5)	86204(6)	86204(7)				
2 Chloride				Signal: 1					
2974754	3047612	3329077	4184948	4263254	4268580	**-2157119**			**1.000**
1.0000 (1)	2.5000 (2)	5.0000 (3)	60.0 (4)	120.0 (5)	200.0 (6)		**4264055**		
2974754	7619029	16645385	251096867	511590511	853716021				
86204(2)	86204(3)	86204(4)	86204(5)	86204(6)	86204(7)				
4 Bromide				Signal: 1					
1290025	1178812	1172610	1288120	1401846	1433025	**-74537**			**0.998**
0.200000(1)	0.500000(2)	1.0000 (3)	4.0000 (4)	8.0000 (5)	10.0 (6)		**1399356**		
258005	589406	1172610	5152478	11214767	14330248				
86204(2)	86204(3)	86204(4)	86204(5)	86204(6)	86204(7)				
7 Sulfate				Signal: 1					
2094368	2103274	2262805	3031905	3133382	3160941	**-1874453**			**0.999**
1.0000 (1)	2.5000 (2)	5.0000 (3)	60.0 (4)	120.0 (5)	200.0 (6)		**3140339**		
2094368	5258185	11314027	181914278	376005839	632188294				
86204(2)	86204(3)	86204(4)	86204(5)	86204(6)	86204(7)				

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Info 2_DENPC179_Anions_20191112-132
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 12-Nov-2019 13:03:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0087035-001
Misc. Info.: 280-0087035-001
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub2

Method: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 14-Nov-2019 08:17:21 Calib Date: 16-Oct-2019 11:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-114

Column 1 : Det: Info 2_091554_1
Process Host: CTX0306

First Level Reviewer: pedrickj Date: 12-Nov-2019 13:56:30

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.225	3.233	-0.008	39258312	5.00	5.44	M
2 Chloride	4.390	4.402	-0.012	419005021	100.0	98.8	
3 Nitrite as N	5.063	5.072	-0.009	42648765	NC	NC	
4 Bromide	6.127	6.138	-0.011	6696816	5.00	4.84	
5 Nitrate as N	6.872	6.887	-0.015	48939267	NC	NC	
6 Orthophosphate as P	9.380	9.355	0.025	25803902	NC	NC	
7 Sulfate	10.748	10.688	0.060	303575090	100.0	97.3	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

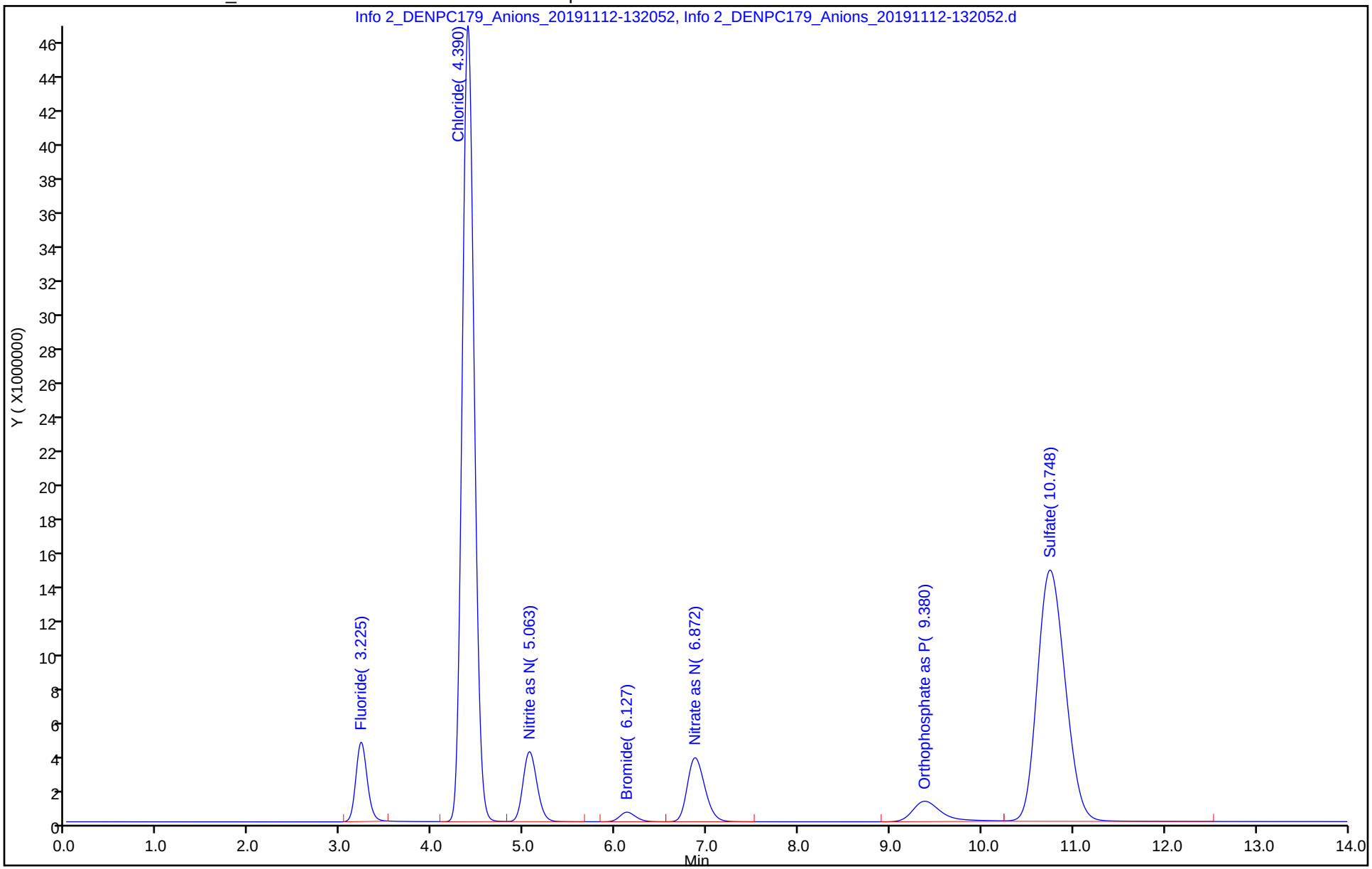
IC LCS_01709 Amount Added: 10.00 Units: mL

Report Date: 14-Nov-2019 08:17:22 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Info 2_DENPC179_Anions_20191112-132052.d

Injection Date:	12-Nov-2019 13:03:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	CCV			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Info 2_DENPC179_Anions_20191112-133
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 12-Nov-2019 13:20:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0087035-002
Misc. Info.: 280-0087035-002
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 14-Nov-2019 08:17:21 Calib Date: 16-Oct-2019 11:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-114

Column 1 : Det: Info 2_091554_1
Process Host: CTX0306

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.233				ND	
2 Chloride	4.383	4.402	-0.019	58246		0.5195	
3 Nitrite as N		5.072				ND	
4 Bromide		6.138				ND	
5 Nitrate as N		6.887				ND	
6 Orthophosphate as P	9.462	9.355	0.107	124801		NC	
7 Sulfate		10.688				ND	

QC Flag Legend

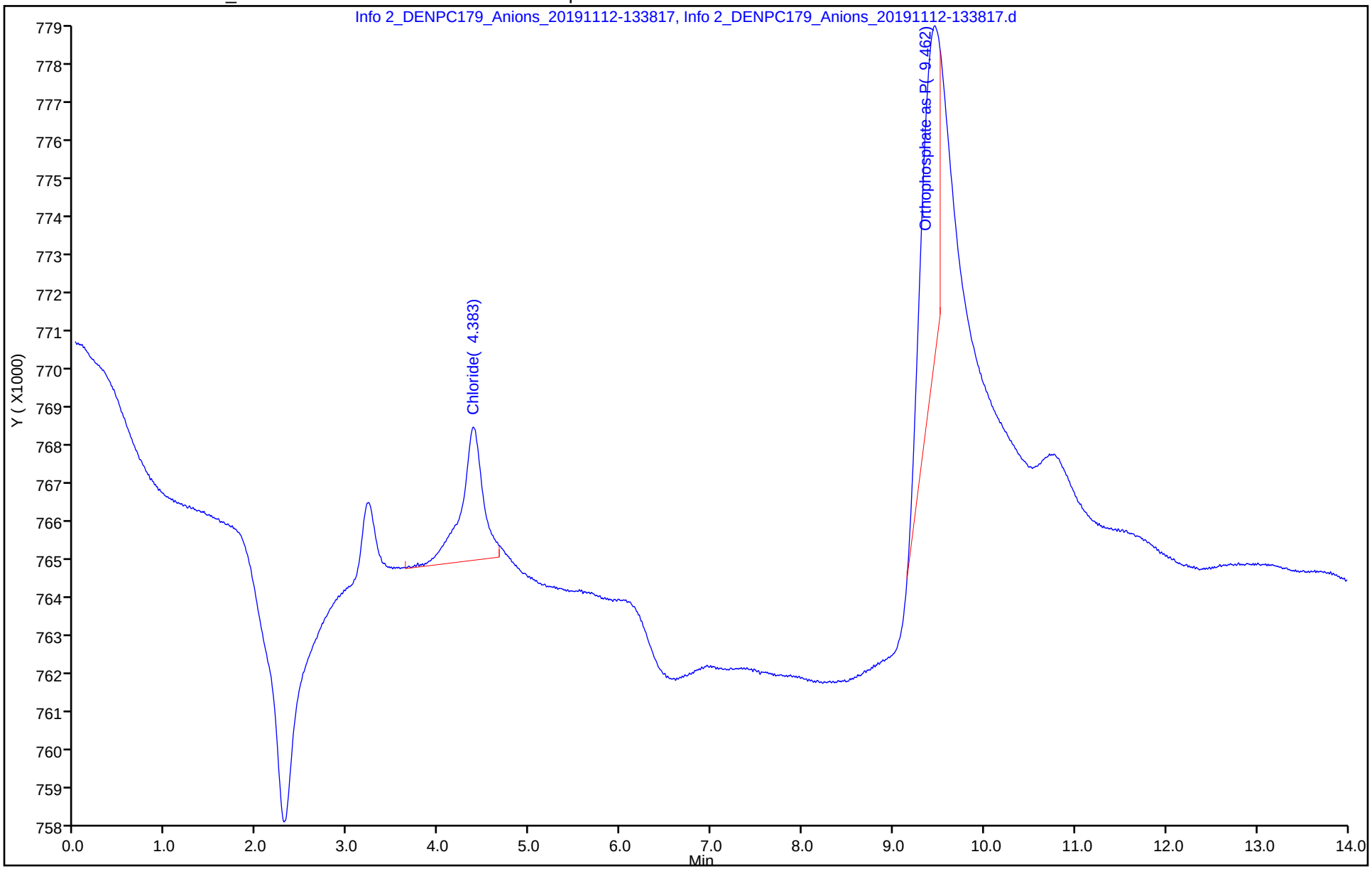
Processing Flags
NC - Not Calibrated

Report Date: 14-Nov-2019 08:17:24 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Info 2_DENPC179_Anions_20191112-133817.d

Injection Date:	12-Nov-2019 13:20:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	CCB			Worklist Smp#:	2
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Info 2_DENPC179_Anions_20191112-135
Lims ID: MRL
Client ID:
Sample Type: MRL
Inject. Date: 12-Nov-2019 13:38:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0087035-003
Misc. Info.: 280-0087035-003
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 14-Nov-2019 08:17:21 Calib Date: 16-Oct-2019 11:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-114

Column 1 : Det: Info 2_091554_1
Process Host: CTX0306

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.220	3.233	-0.013	3170229	0.5000	0.5315	
2 Chloride	4.385	4.402	-0.017	17645185	5.00	4.64	
3 Nitrite as N	5.067	5.072	-0.005	3043588	NC	NC	
4 Bromide	6.137	6.138	-0.001	631960	0.5000	0.5049	
5 Nitrate as N	6.903	6.887	0.016	3686299	NC	NC	
6 Orthophosphate as P	9.397	9.355	0.042	2812592	NC	NC	
7 Sulfate	10.760	10.688	0.072	11681243	5.00	4.32	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

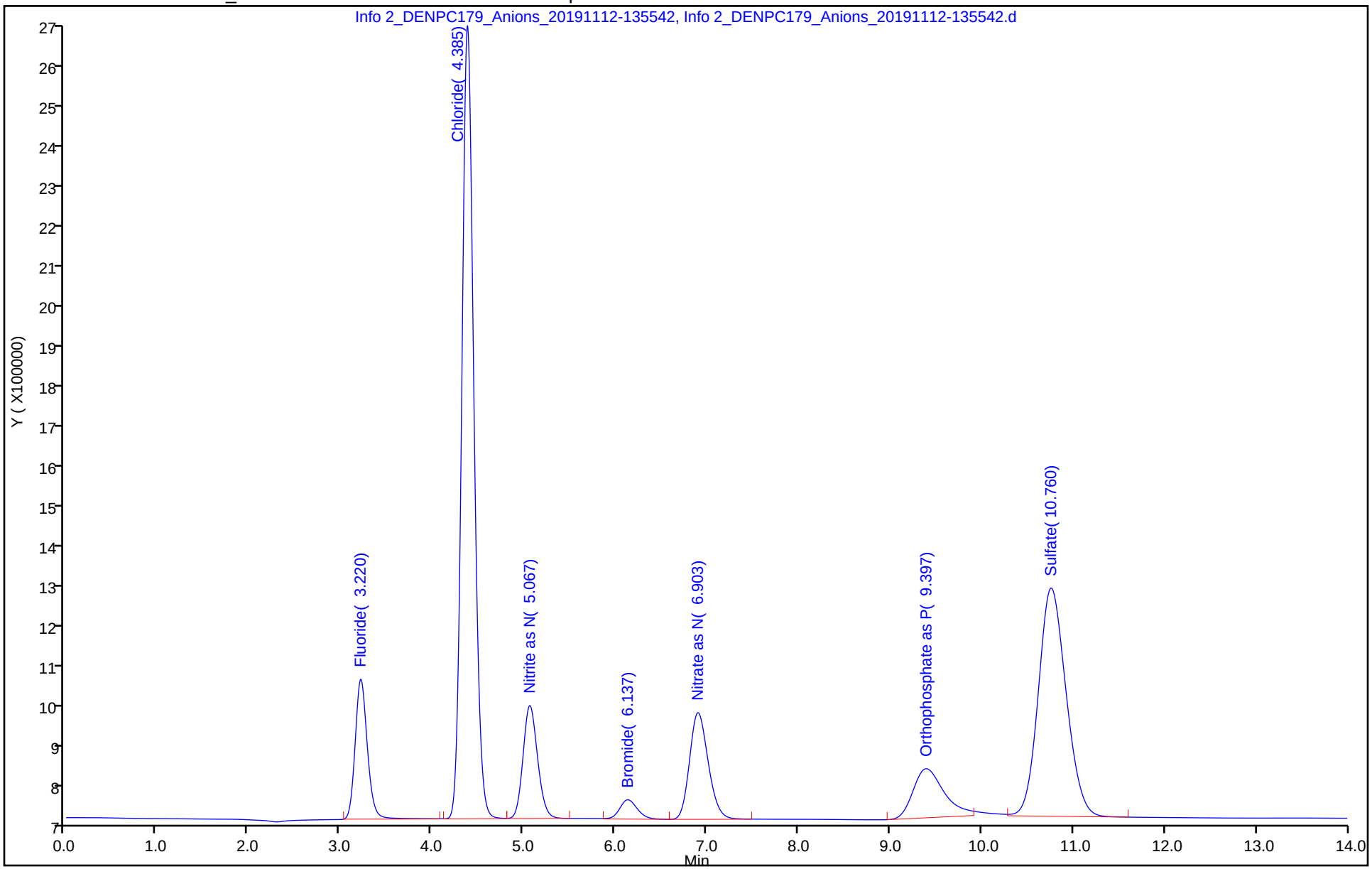
IC Cal low_00493 Amount Added: 0.10 Units: mL
IC CAL cl/so4_00283 Amount Added: 0.20 Units: mL

Report Date: 14-Nov-2019 08:17:26 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Info 2_DENPC179_Anions_20191112-135542.d

Injection Date:	12-Nov-2019 13:38:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	MRL			Worklist Smp#:	3
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Info 2_DENPC179_Anions_20191112-141
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 12-Nov-2019 13:55:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0087035-004
Misc. Info.: 280-0087035-004
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 14-Nov-2019 08:17:21 Calib Date: 16-Oct-2019 11:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-114

Column 1 : Det: Info 2_091554_1
Process Host: CTX0306

First Level Reviewer: pedrickj Date: 13-Nov-2019 08:52:56

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.222	3.233	-0.011	39716244	5.00	5.50	M
2 Chloride	4.388	4.402	-0.014	419286082	100.0	98.8	
3 Nitrite as N	5.060	5.072	-0.012	42714191	NC	NC	
4 Bromide	6.123	6.138	-0.015	6719078	5.00	4.85	
5 Nitrate as N	6.867	6.887	-0.020	48970996	NC	NC	
6 Orthophosphate as P	9.373	9.355	0.018	25793879	NC	NC	
7 Sulfate	10.742	10.688	0.054	303912143	100.0	97.4	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

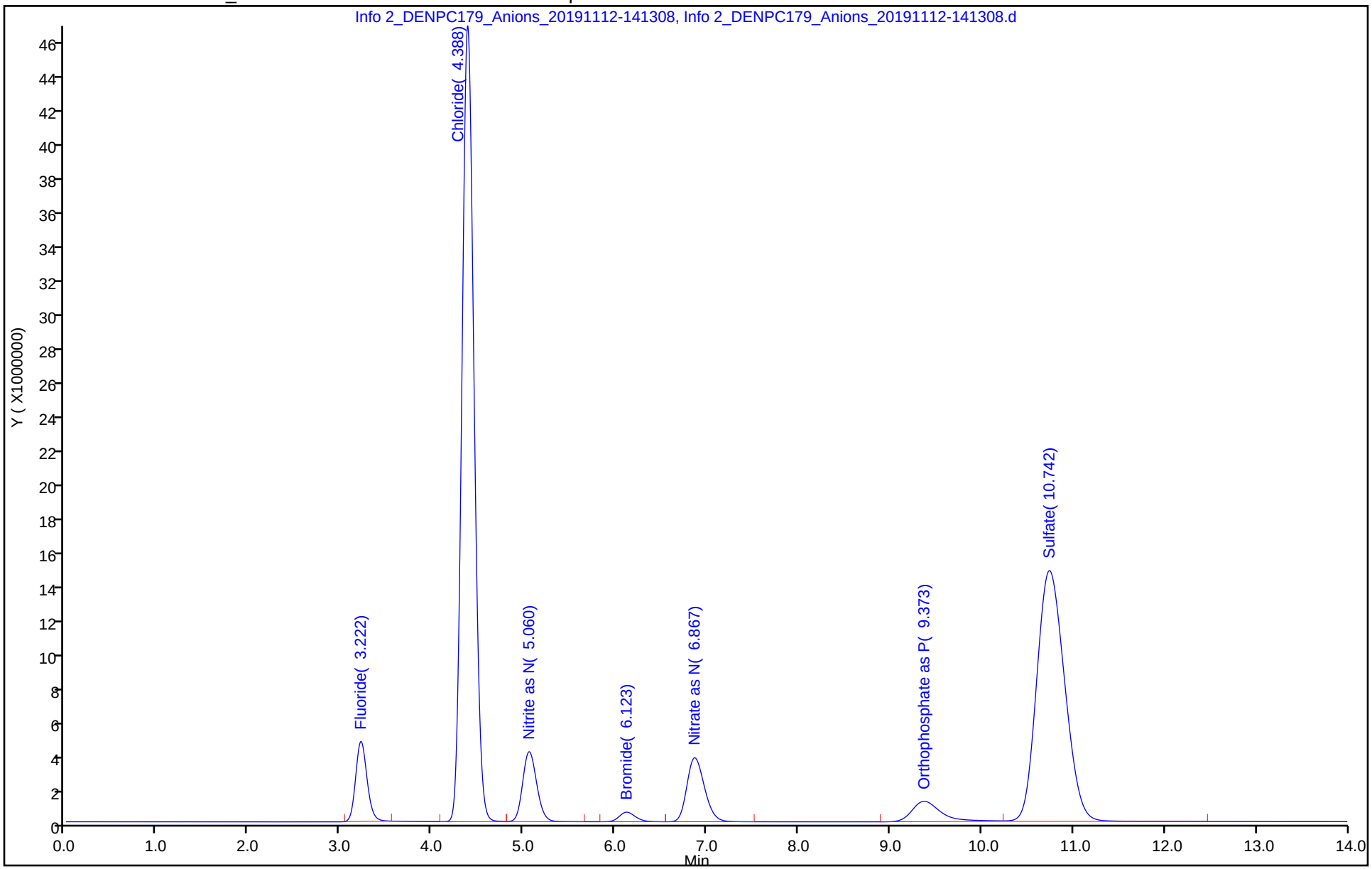
IC LCS_01709 Amount Added: 10.00 Units: mL

Report Date: 14-Nov-2019 08:17:28 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Info 2_DENPC179_Anions_20191112-141308.d

Injection Date:	12-Nov-2019 13:55:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	LCS			Worklist Smp#:	4
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Info 2_DENPC179_Anions_20191112-143
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 12-Nov-2019 14:13:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0087035-005
Misc. Info.: 280-0087035-005
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 14-Nov-2019 08:17:21 Calib Date: 16-Oct-2019 11:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-114

Column 1 : Det: Info 2_091554_1
Process Host: CTX0306

First Level Reviewer: pedrickj Date: 13-Nov-2019 08:53:06

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.222	3.233	-0.011	38730725	5.00	5.37	M
2 Chloride	4.388	4.402	-0.014	419178987	100.0	98.8	
3 Nitrite as N	5.058	5.072	-0.014	43096446	NC	NC	
4 Bromide	6.123	6.138	-0.015	6759774	5.00	4.88	
5 Nitrate as N	6.867	6.887	-0.020	48945300	NC	NC	
6 Orthophosphate as P	9.370	9.355	0.015	25047642	NC	NC	
7 Sulfate	10.738	10.688	0.050	303040666	100.0	97.1	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

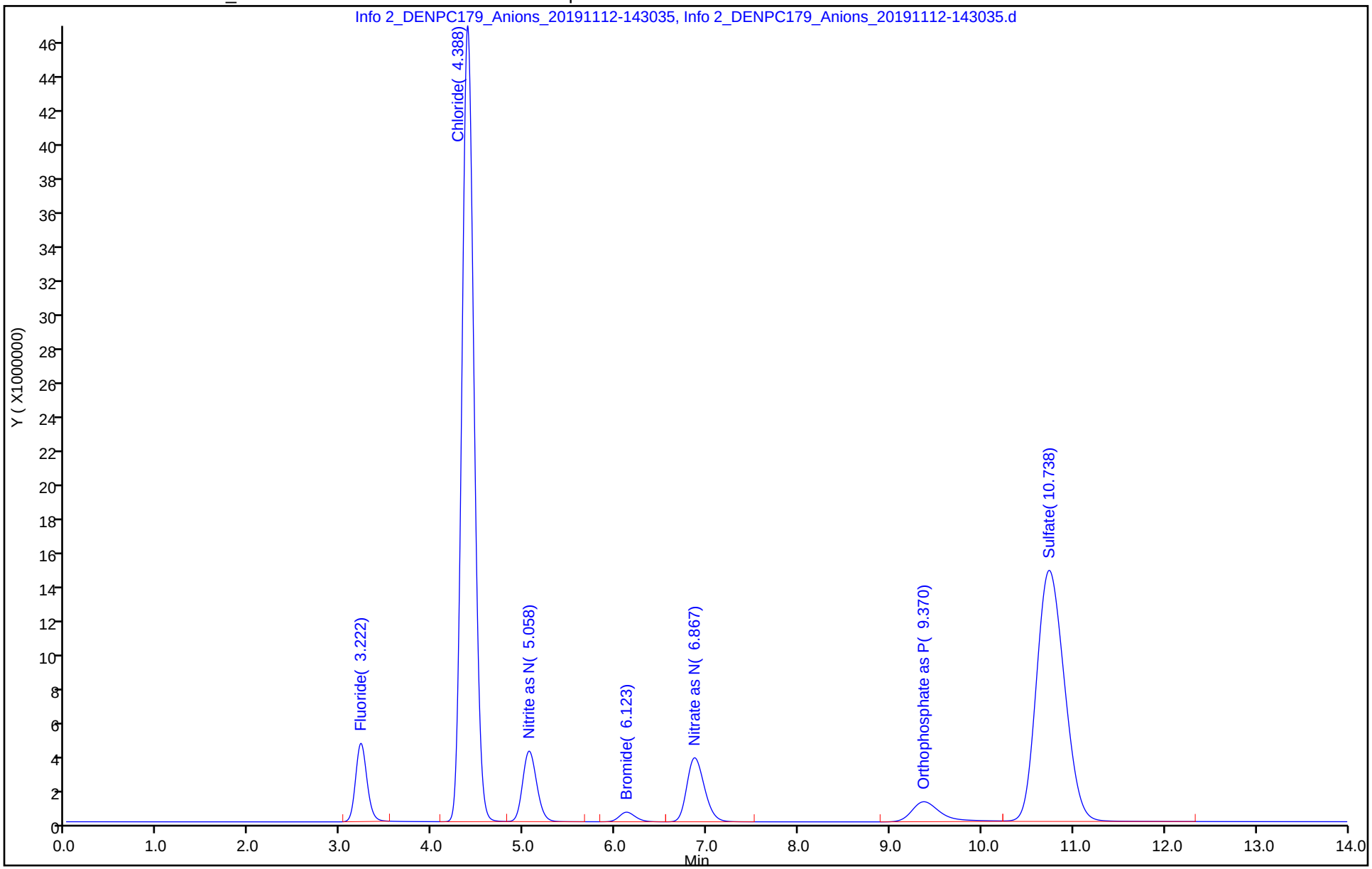
IC LCS_01709 Amount Added: 10.00 Units: mL

Report Date: 14-Nov-2019 08:17:31 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Info 2_DENPC179_Anions_20191112-143035.d

Injection Date:	12-Nov-2019 14:13:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	LCSD			Worklist Smp#:	5
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Info 2_DENPC179_Anions_20191112-144
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 12-Nov-2019 14:30:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0087035-006
Misc. Info.: 280-0087035-006
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 14-Nov-2019 08:17:21 Calib Date: 16-Oct-2019 11:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-114

Column 1 : Det: Info 2_091554_1
Process Host: CTX0306

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.233				ND	
2 Chloride	4.393	4.402	-0.009	28813		0.5126	
3 Nitrite as N		5.072				ND	
4 Bromide		6.138				ND	
5 Nitrate as N		6.887				ND	
6 Orthophosphate as P	9.472	9.355	0.117	143960		NC	
7 Sulfate		10.688				ND	

QC Flag Legend

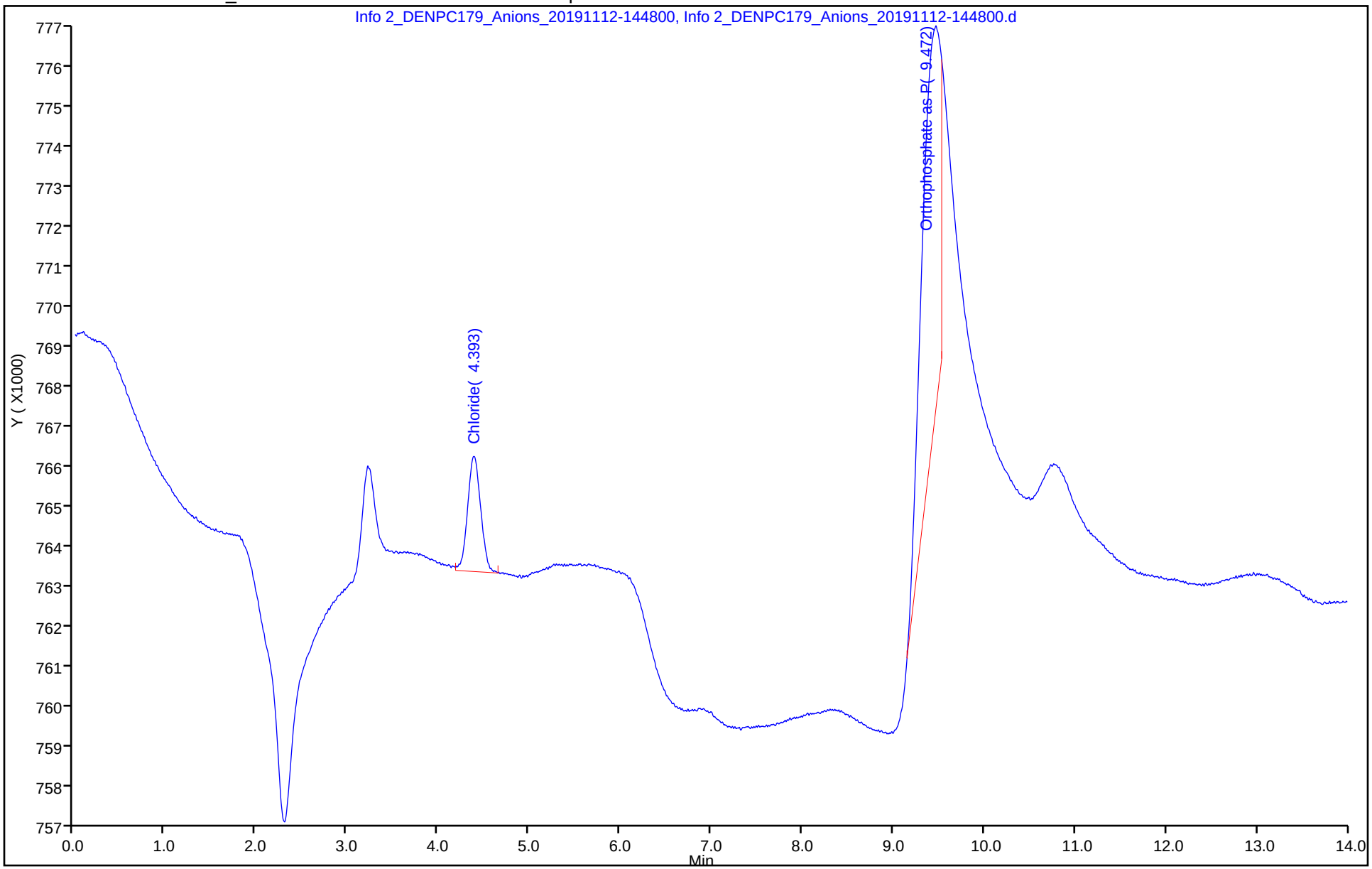
Processing Flags
NC - Not Calibrated

Report Date: 14-Nov-2019 08:17:33 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Info 2_DENPC179_Anions_20191112-144800.d

Injection Date:	12-Nov-2019 14:30:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	MB			Worklist Smp#:	6
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Info 2_DENPC179_Anions_20191113-092
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 13-Nov-2019 09:06:00 ALS Bottle#: 0 Worklist Smp#: 17
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0087035-017
Misc. Info.: 280-0087035-017
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub2

Method: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 14-Nov-2019 08:17:54 Calib Date: 16-Oct-2019 11:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-114

Column 1 : Det: Info 2_091554_1
Process Host: CTX0306

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.217	3.233	-0.016	37522473	5.00	5.21	
2 Chloride	4.383	4.402	-0.019	429955135	100.0	101.3	
3 Nitrite as N	5.055	5.072	-0.017	43069920	NC	NC	
4 Bromide	6.118	6.138	-0.020	6824109	5.00	4.93	
5 Nitrate as N	6.862	6.887	-0.025	49840956	NC	NC	
6 Orthophosphate as P	9.352	9.355	-0.003	23532013	NC	NC	
7 Sulfate	10.715	10.688	0.027	308079990	100.0	98.7	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

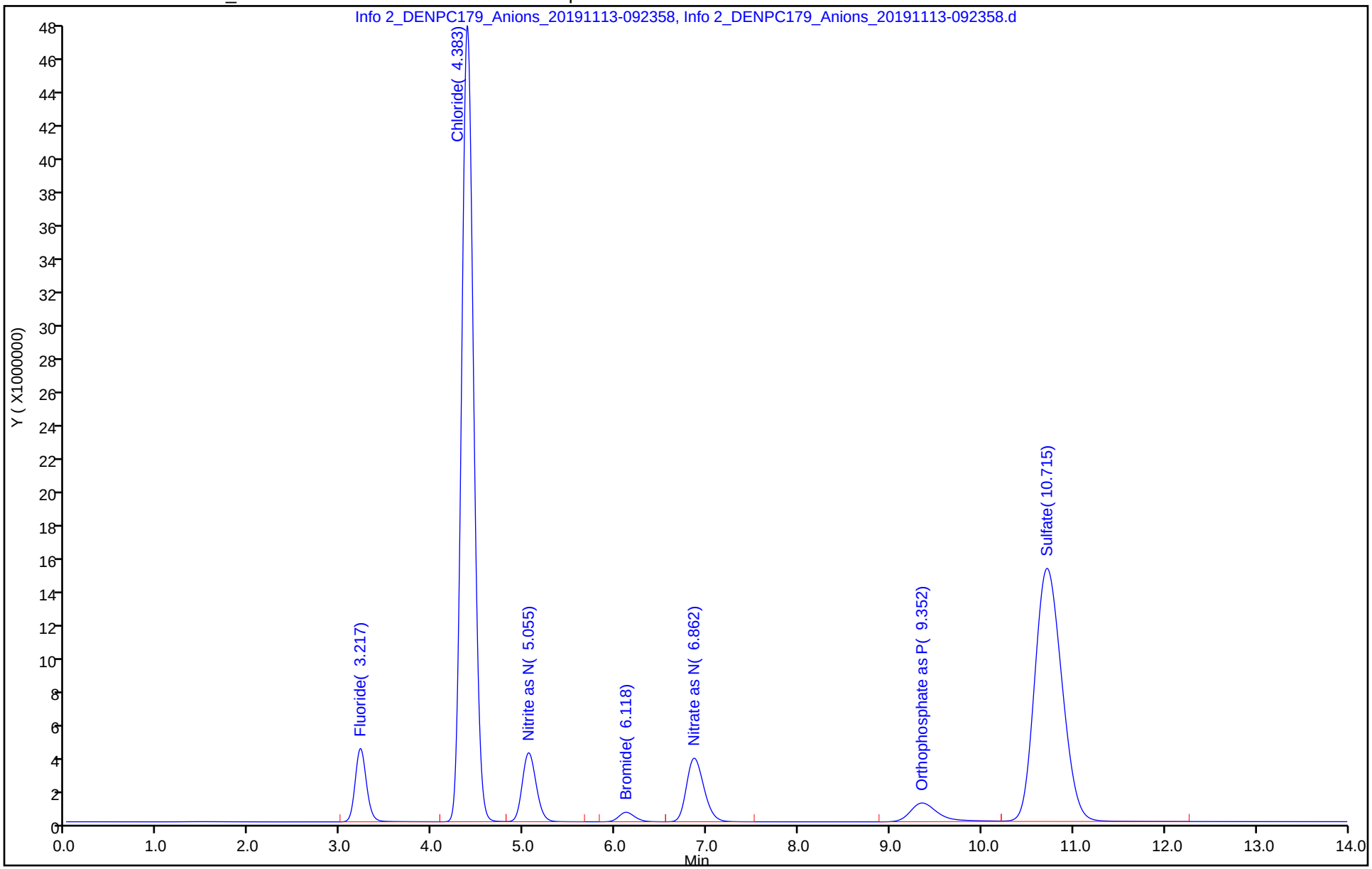
IC LCS_01709 Amount Added: 10.00 Units: mL

Report Date: 14-Nov-2019 08:17:54 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Info 2_DENPC179_Anions_20191113-092358.d

Injection Date:	13-Nov-2019 09:06:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ccv			Worklist Smp#:	17
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File:	\\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Info 2_DENPC179_Anions_20191113-094				
Lims ID:	ccb				
Client ID:					
Sample Type:	CCB				
Inject. Date:	13-Nov-2019 09:24:00	ALS Bottle#:	0	Worklist Smp#:	18
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0087035-018				
Misc. Info.:	280-0087035-018				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom10		
Method:	\\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Anions_IC10.m				
Limit Group:	Wet - Anions 28D				
Last Update:	14-Nov-2019 08:17:54	Calib Date:	16-Oct-2019 11:24:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-114				
Column 1 :			Det: Info 2_091554_1		
Process Host:	CTX0306				

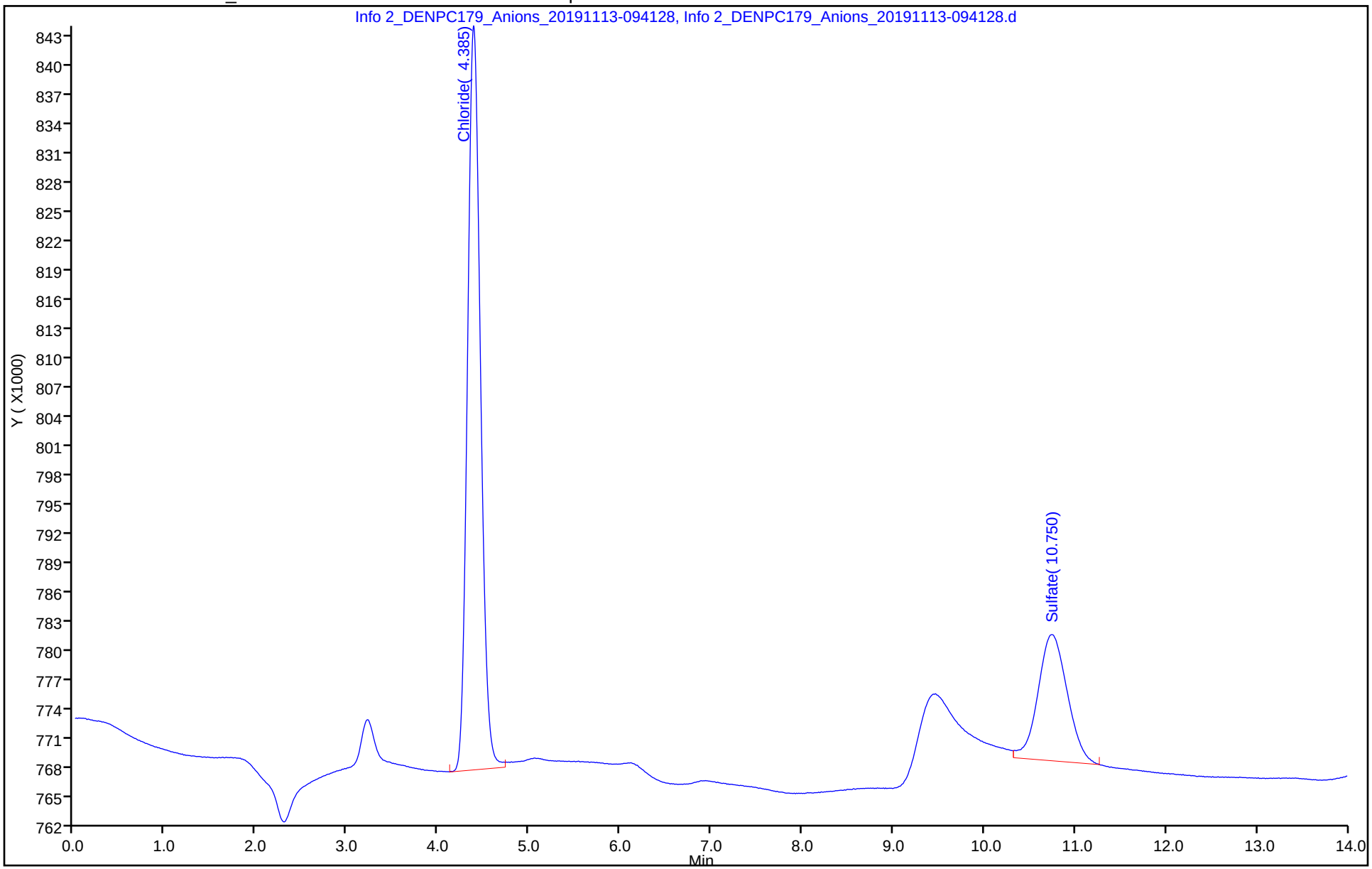
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.233				ND	
2 Chloride	4.385	4.402	-0.017	750116		0.6818	
3 Nitrite as N		5.072				ND	
4 Bromide		6.138				ND	
5 Nitrate as N		6.887				ND	
6 Orthophosphate as P		9.355				ND	
7 Sulfate	10.750	10.688	0.062	286246		0.6880	

Report Date: 14-Nov-2019 08:17:56 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Info 2_DENPC179_Anions_20191113-094128.d

Injection Date:	13-Nov-2019 09:24:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ccb			Worklist Smp#:	18
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File:	\\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Info 2_DENPC179_Anions_20191113-162				
Lims ID:	ccv				
Client ID:					
Sample Type:	CCV				
Inject. Date:	13-Nov-2019 16:06:00	ALS Bottle#:	0	Worklist Smp#:	41
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0087035-041				
Misc. Info.:	280-0087035-041				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom10		
Sublist:	chrom-Anions_IC10*sub2				
Method:	\\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Anions_IC10.m				
Limit Group:	Wet - Anions 28D				
Last Update:	14-Nov-2019 08:18:36	Calib Date:	16-Oct-2019 11:24:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-114				
Column 1 :			Det: Info 2_091554_1		
Process Host:	CTX0306				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.217	3.233	-0.016	37770666	5.00	5.24	
2 Chloride	4.383	4.402	-0.019	429715802	100.0	101.3	
3 Nitrite as N	5.053	5.072	-0.019	43253484	NC	NC	
4 Bromide	6.115	6.138	-0.023	6899195	5.00	4.98	
5 Nitrate as N	6.858	6.887	-0.029	50364100	NC	NC	
6 Orthophosphate as P	9.352	9.355	-0.003	23714261	NC	NC	
7 Sulfate	10.717	10.688	0.029	310564607	100.0	99.5	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

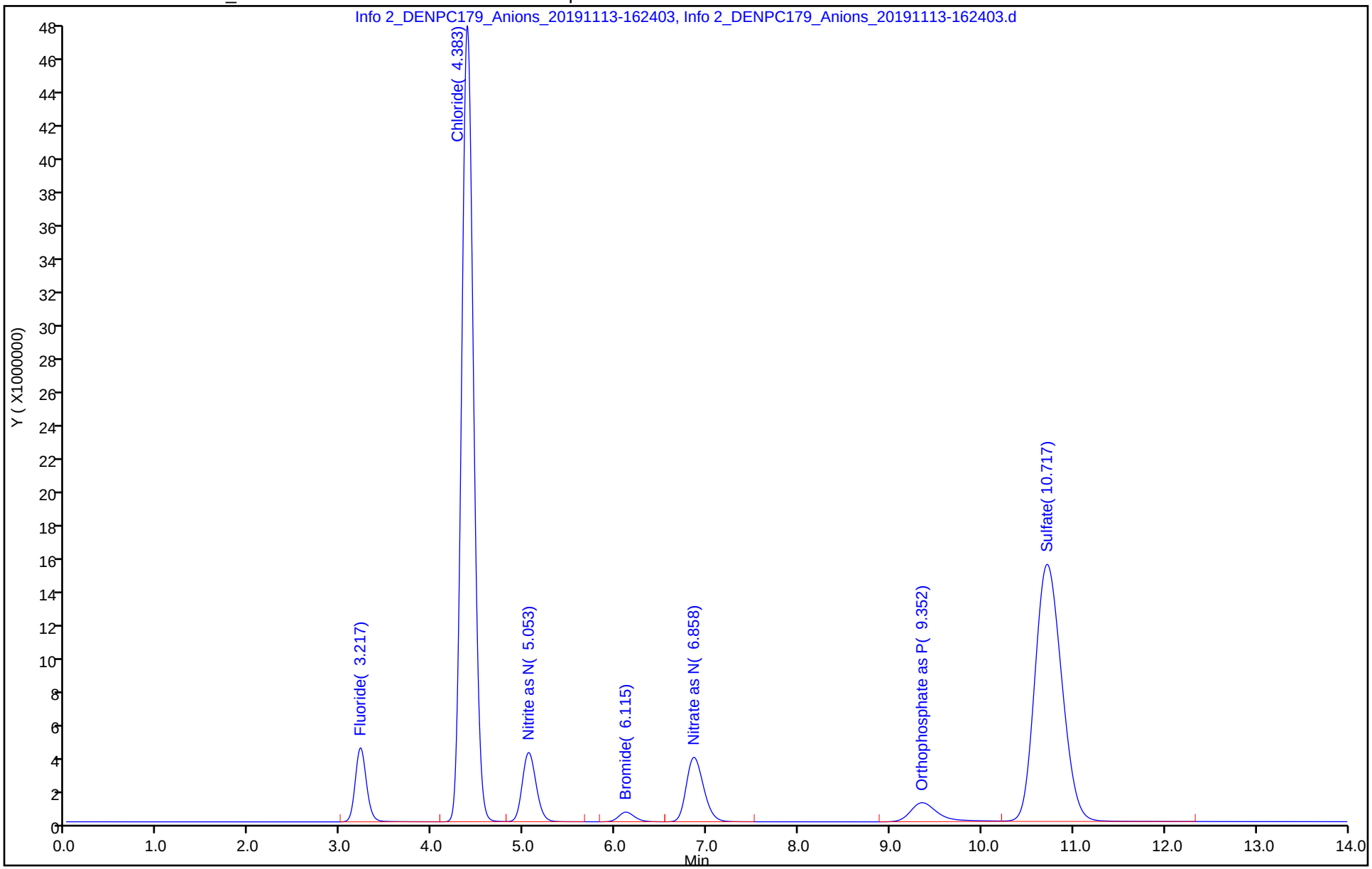
IC LCS_01709 Amount Added: 10.00 Units: mL

Report Date: 14-Nov-2019 08:18:37 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Info 2_DENPC179_Anions_20191113-162403.d

Injection Date:	13-Nov-2019 16:06:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ccv			Worklist Smp#:	41
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

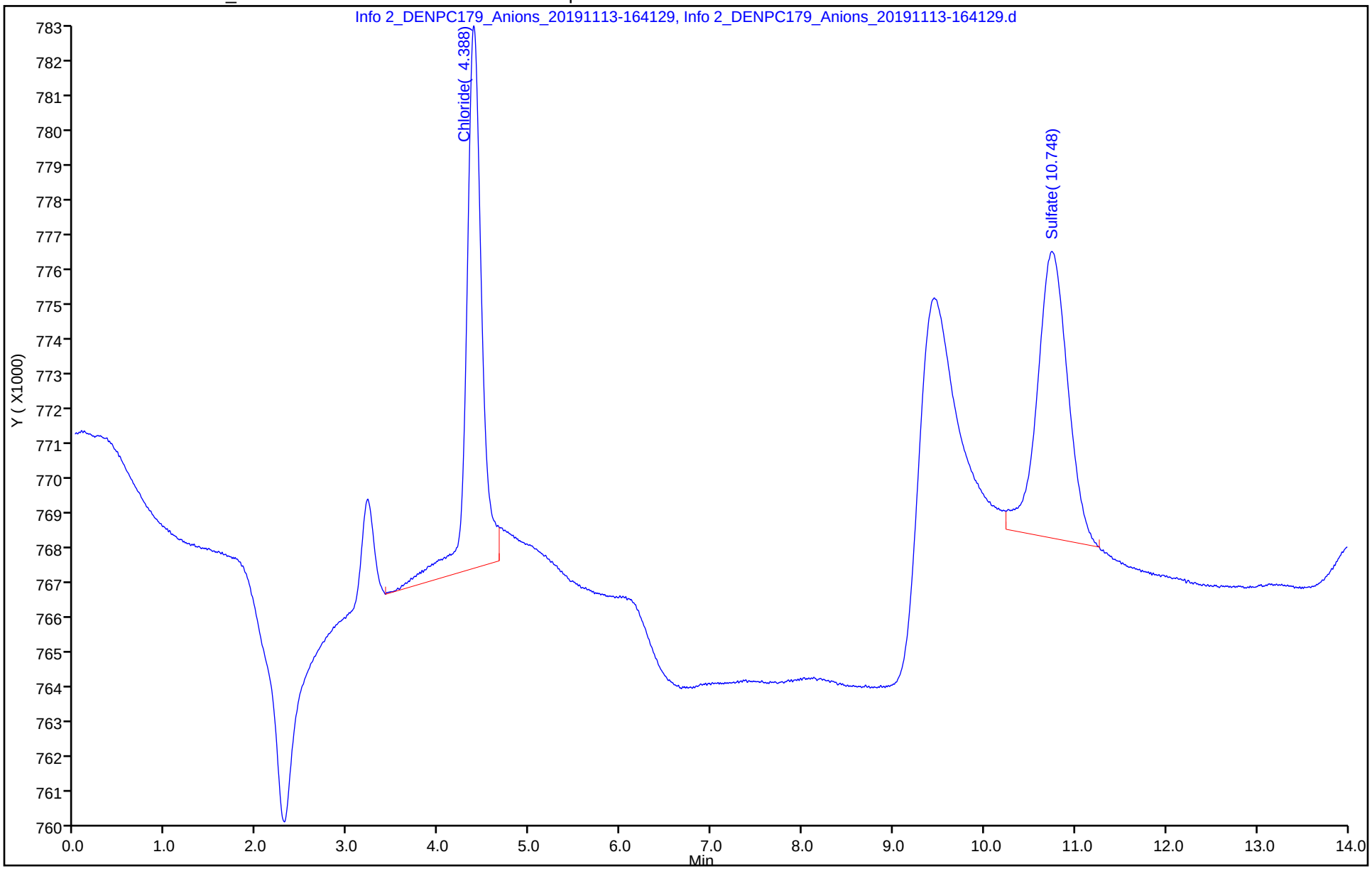
Data File:	\\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Info 2_DENPC179_Anions_20191113-164				
Lims ID:	ccb				
Client ID:					
Sample Type:	CCB				
Inject. Date:	13-Nov-2019 16:24:00	ALS Bottle#:	0	Worklist Smp#:	42
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0087035-042				
Misc. Info.:	280-0087035-042				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom10		
Method:	\\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Anions_IC10.m				
Limit Group:	Wet - Anions 28D				
Last Update:	14-Nov-2019 08:18:36	Calib Date:	16-Oct-2019 11:24:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-114				
Column 1 :			Det: Info 2_091554_1		
Process Host:	CTX0306				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.233				ND	
2 Chloride	4.388	4.402	-0.014	176099		0.5472	
3 Nitrite as N		5.072				ND	
4 Bromide		6.138				ND	
5 Nitrate as N		6.887				ND	
6 Orthophosphate as P		9.355				ND	
7 Sulfate	10.748	10.688	0.060	183738		0.6554	

Report Date: 14-Nov-2019 08:18:40 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

Data File:	\\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Info 2_DENPC179_Anions_20191113-164129.d				
Injection Date:	13-Nov-2019 16:24:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ccb			Worklist Smp#:	42
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Info 2_DENPC179_Anions_20191113-173
Lims ID: 280-129830-F-1
Client ID: EW7-PM23A-1-25
Sample Type: Client
Inject. Date: 13-Nov-2019 17:16:00 ALS Bottle#: 0 Worklist Smp#: 45
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0087035-045
Misc. Info.: 280-0087035-045
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 14-Nov-2019 08:18:36 Calib Date: 16-Oct-2019 11:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-114

Column 1 : Det: Info 2_091554_1
Process Host: CTX0306

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	3.215	3.233	-0.018	1492448	0.3032	
2 Chloride	4.380	4.402	-0.022	114082977	27.3	
3 Nitrite as N	5.075	5.072	0.003	464464	NC	
4 Bromide	6.147	6.138	0.009	196715	0.1938	
5 Nitrate as N	6.832	6.887	-0.055	267686491	NC	
6 Orthophosphate as P		9.355			ND	
7 Sulfate	10.727	10.688	0.039	281420098	90.2	

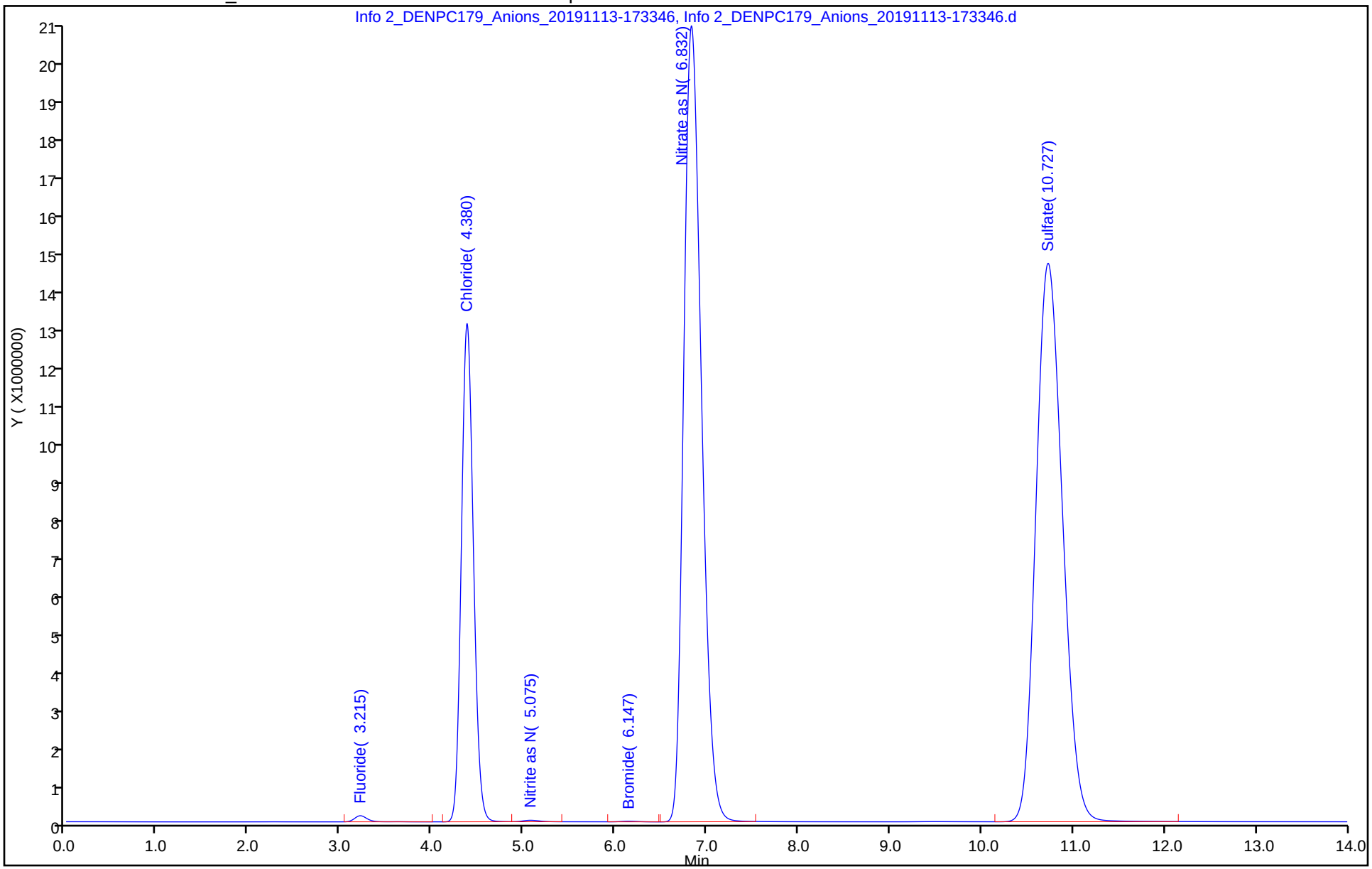
QC Flag Legend

Processing Flags
NC - Not Calibrated

Report Date: 14-Nov-2019 08:18:47 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

Data File:	\\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Info 2_DENPC179_Anions_20191113-173346.d				
Injection Date:	13-Nov-2019 17:16:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	280-129830-F-1	Lab Sample ID:	280-129830-1	Worklist Smp#:	45
Client ID:	EW7-PM23A-1-25				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Info 2_DENPC179_Anions_20191113-180
Lims ID: 280-129830-F-2
Client ID: EW7-PM25A-1-25
Sample Type: Client
Inject. Date: 13-Nov-2019 17:51:00 ALS Bottle#: 0 Worklist Smp#: 47
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0087035-047
Misc. Info.: 280-0087035-047
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 14-Nov-2019 08:18:36 Calib Date: 16-Oct-2019 11:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-114

Column 1 : Det: Info 2_091554_1
Process Host: CTX0306

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	3.215	3.233	-0.018	1674190	0.3280	
2 Chloride	4.380	4.402	-0.022	123245399	29.4	
3 Nitrite as N	5.075	5.072	0.003	472469	NC	
4 Bromide	6.147	6.138	0.009	224294	0.2135	
5 Nitrate as N	6.828	6.887	-0.059	304073889	NC	
6 Orthophosphate as P		9.355			ND	
7 Sulfate	10.728	10.688	0.040	272499703	87.4	

QC Flag Legend

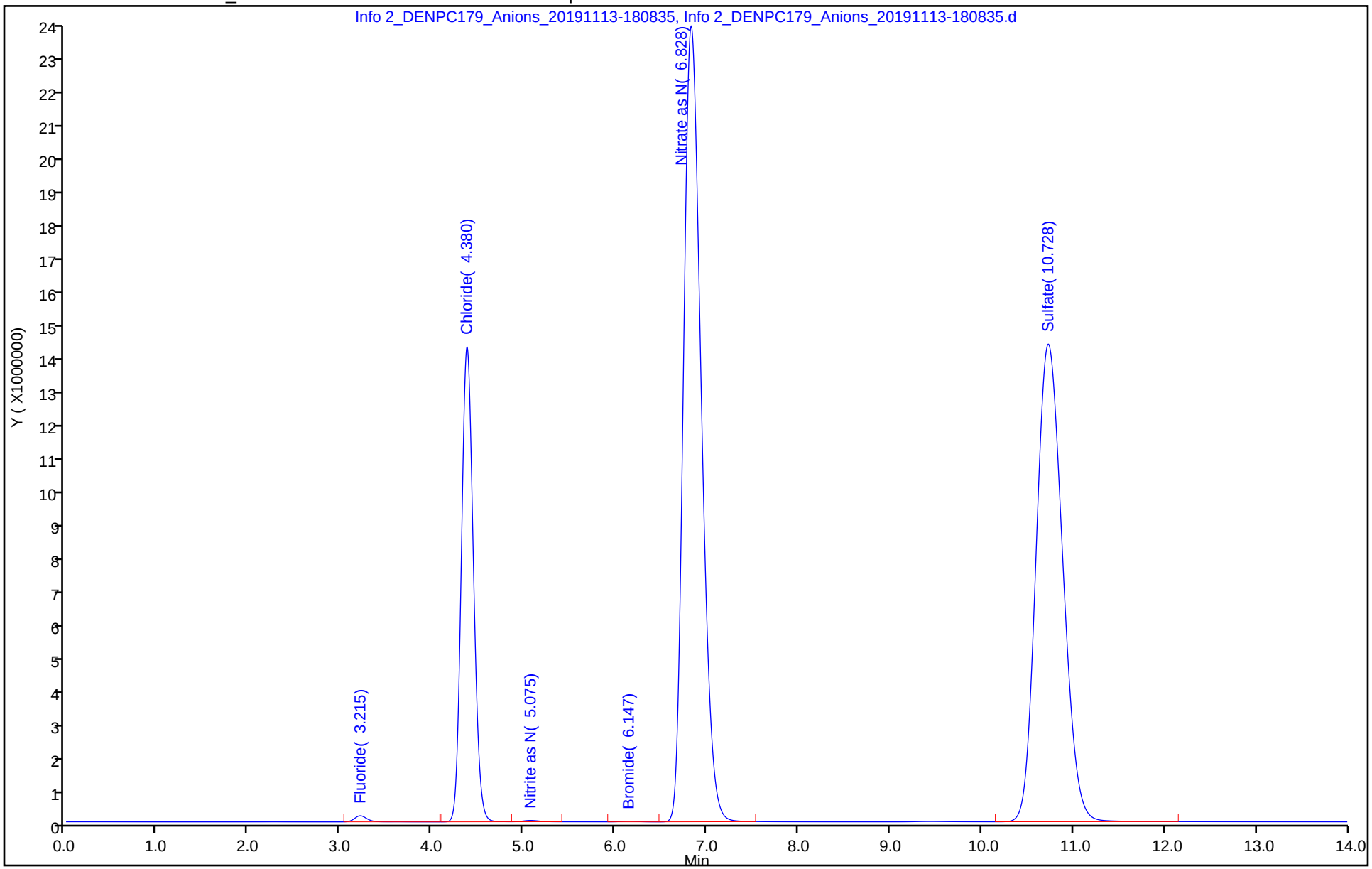
Processing Flags
NC - Not Calibrated

Report Date: 14-Nov-2019 08:18:51 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Info 2_DENPC179_Anions_20191113-180835.d

Injection Date:	13-Nov-2019 17:51:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	280-129830-F-2	Lab Sample ID:	280-129830-2	Worklist Smp#:	47
Client ID:	EW7-PM25A-1-25				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Info 2_DENPC179_Anions_20191113-184
Lims ID: 280-129830-F-3
Client ID: EW7-PM25B-1-35
Sample Type: Client
Inject. Date: 13-Nov-2019 18:26:00 ALS Bottle#: 0 Worklist Smp#: 49
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0087035-049
Misc. Info.: 280-0087035-049
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 14-Nov-2019 08:18:36 Calib Date: 16-Oct-2019 11:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-114

Column 1 : Det: Info 2_091554_1
Process Host: CTX0306

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	3.217	3.233	-0.016	1017636	0.2386	
2 Chloride	4.385	4.402	-0.017	196033584	46.5	
3 Nitrite as N	5.085	5.072	0.013	50861	NC	
4 Bromide	6.157	6.138	0.019	291531	0.2616	
5 Nitrate as N	6.900	6.887	0.013	13191636	NC	
6 Orthophosphate as P		9.355			ND	
7 Sulfate	10.728	10.688	0.040	332593046	106.5	

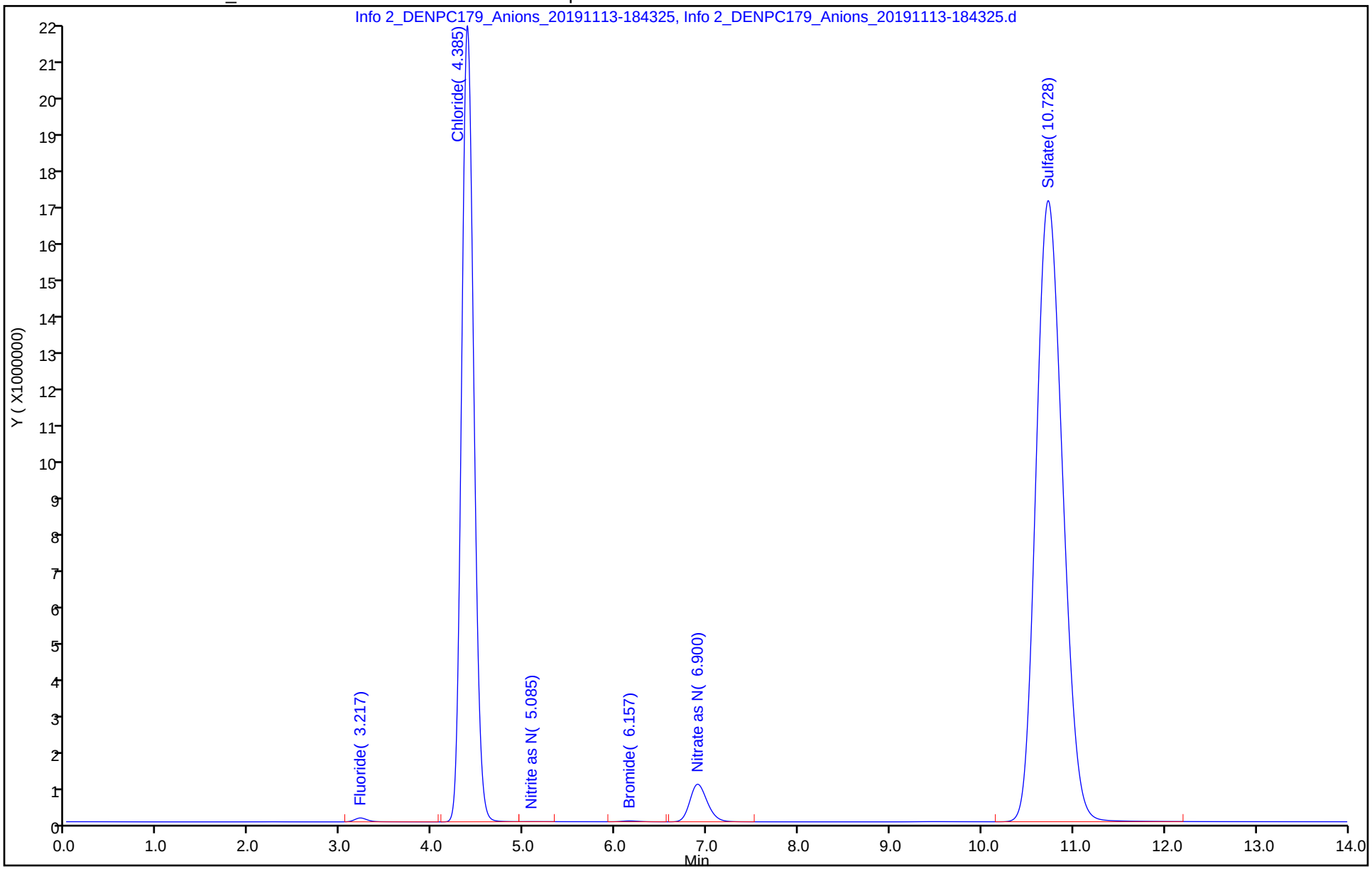
QC Flag Legend

Processing Flags
NC - Not Calibrated

Report Date: 14-Nov-2019 08:18:54 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

Data File:	\\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Info 2_DENPC179_Anions_20191113-184325.d				
Injection Date:	13-Nov-2019 18:26:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	280-129830-F-3	Lab Sample ID:	280-129830-3	Worklist Smp#:	49
Client ID:	EW7-PM25B-1-35				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Info 2_DENPC179_Anions_20191113-190
Lims ID: 280-129830-F-3 DU
Client ID:
Sample Type: DU
Inject. Date: 13-Nov-2019 18:43:00 ALS Bottle#: 0 Worklist Smp#: 50
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0087035-050
Misc. Info.: 280-0087035-050
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 14-Nov-2019 08:18:36 Calib Date: 16-Oct-2019 11:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-114

Column 1 : Det: Info 2_091554_1
Process Host: CTX0306

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.213	3.233	-0.020	1019008		0.2388	
2 Chloride	4.382	4.402	-0.020	195467699		46.3	
3 Nitrite as N	5.082	5.072	0.010	55436		NC	
4 Bromide	6.152	6.138	0.014	294472		0.2637	
5 Nitrate as N	6.895	6.887	0.008	13154230		NC	
6 Orthophosphate as P		9.355				ND	
7 Sulfate	10.718	10.688	0.030	331372874		106.1	

QC Flag Legend

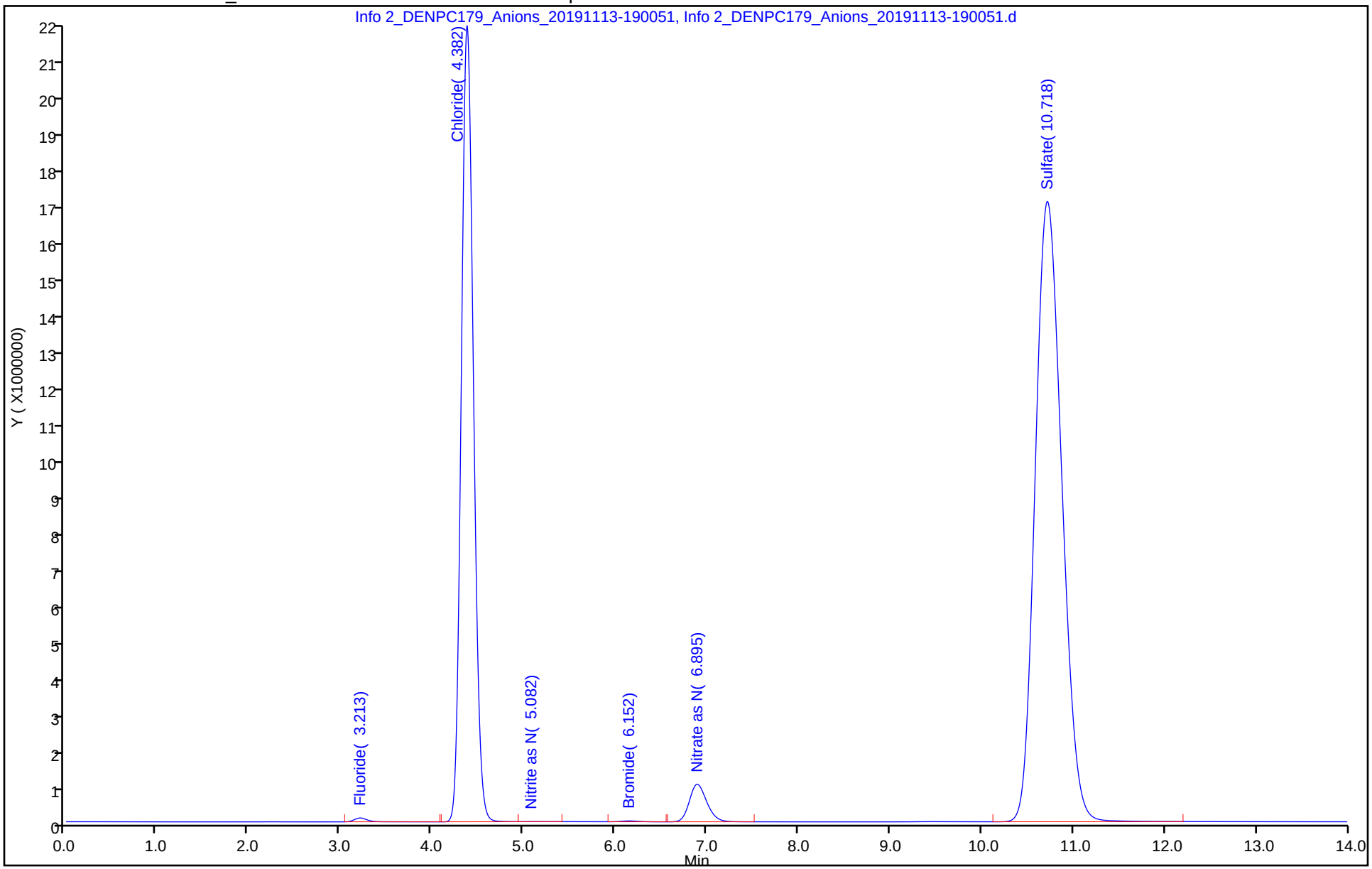
Processing Flags
NC - Not Calibrated

Report Date: 14-Nov-2019 08:18:55 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Info 2_DENPC179_Anions_20191113-190051.d

Injection Date:	13-Nov-2019 18:43:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	280-129830-F-3 DU			Worklist Smp#:	50
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Info 2_DENPC179_Anions_20191113-191
Lims ID: 280-129830-F-3 MS
Client ID: EW7-PM25B-1-35
Sample Type: MS
Inject. Date: 13-Nov-2019 19:00:00 ALS Bottle#: 0 Worklist Smp#: 51
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0087035-051
Misc. Info.: 280-0087035-051
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 14-Nov-2019 08:18:36 Calib Date: 16-Oct-2019 11:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-114

Column 1 : Det: Info 2_091554_1
Process Host: CTX0306

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.217	3.233	-0.016	37658215	5.00	5.22	
2 Chloride	4.387	4.402	-0.015	443742528	50.0	104.6	
3 Nitrite as N	5.077	5.072	0.005	45645635	NC	NC	
4 Bromide	6.138	6.138	0.000	7823179	5.00	5.64	
5 Nitrate as N	6.870	6.887	-0.017	70724353	NC	NC	
6 Orthophosphate as P	9.380	9.355	0.025	20601292	NC	NC	
7 Sulfate	10.715	10.688	0.027	515852073	50.0	164.9	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

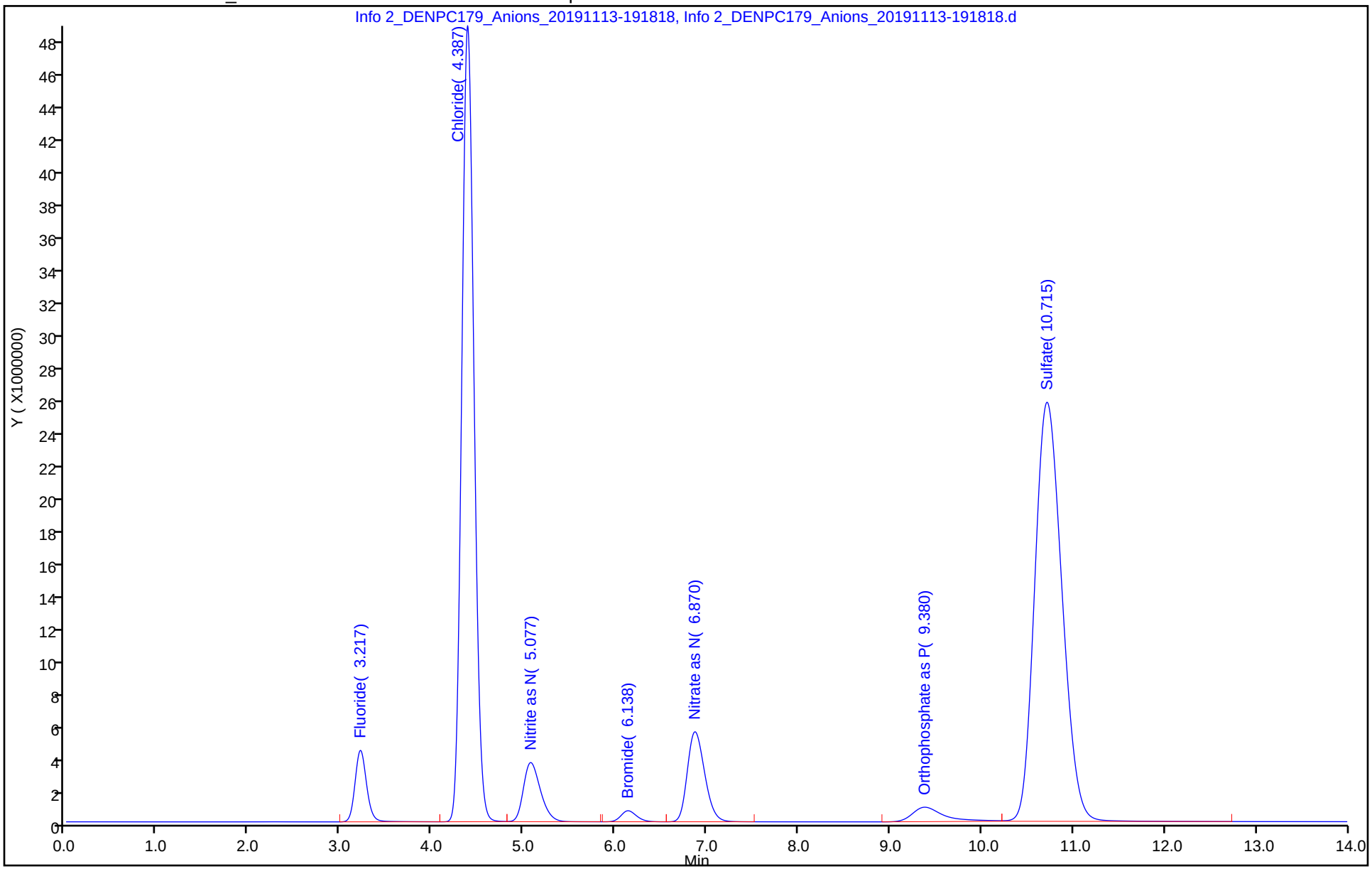
ICMS/MSD WEEK_00622 Amount Added: 0.10 Units: mL

Report Date: 14-Nov-2019 08:18:57 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Info 2_DENPC179_Anions_20191113-191818.d

Injection Date:	13-Nov-2019 19:00:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	280-129830-F-3 MS			Worklist Smp#:	51
Client ID:	EW7-PM25B-1-35				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Info 2_DENPC179_Anions_20191113-193
Lims ID: 280-129830-F-3 MSD
Client ID: EW7-PM25B-1-35
Sample Type: MSD
Inject. Date: 13-Nov-2019 19:18:00 ALS Bottle#: 0 Worklist Smp#: 52
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0087035-052
Misc. Info.: 280-0087035-052
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 14-Nov-2019 08:18:36 Calib Date: 16-Oct-2019 11:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-114

Column 1 : Det: Info 2_091554_1
Process Host: CTX0306

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.213	3.233	-0.020	38236557	5.00	5.30	
2 Chloride	4.383	4.402	-0.019	446976853	50.0	105.3	
3 Nitrite as N	5.072	5.072	0.000	46019847	NC	NC	
4 Bromide	6.133	6.138	-0.005	7941427	5.00	5.73	
5 Nitrate as N	6.865	6.887	-0.022	71437524	NC	NC	
6 Orthophosphate as P	9.373	9.355	0.018	22006790	NC	NC	
7 Sulfate	10.707	10.688	0.019	518637633	50.0	165.8	

QC Flag Legend

Processing Flags
NC - Not Calibrated

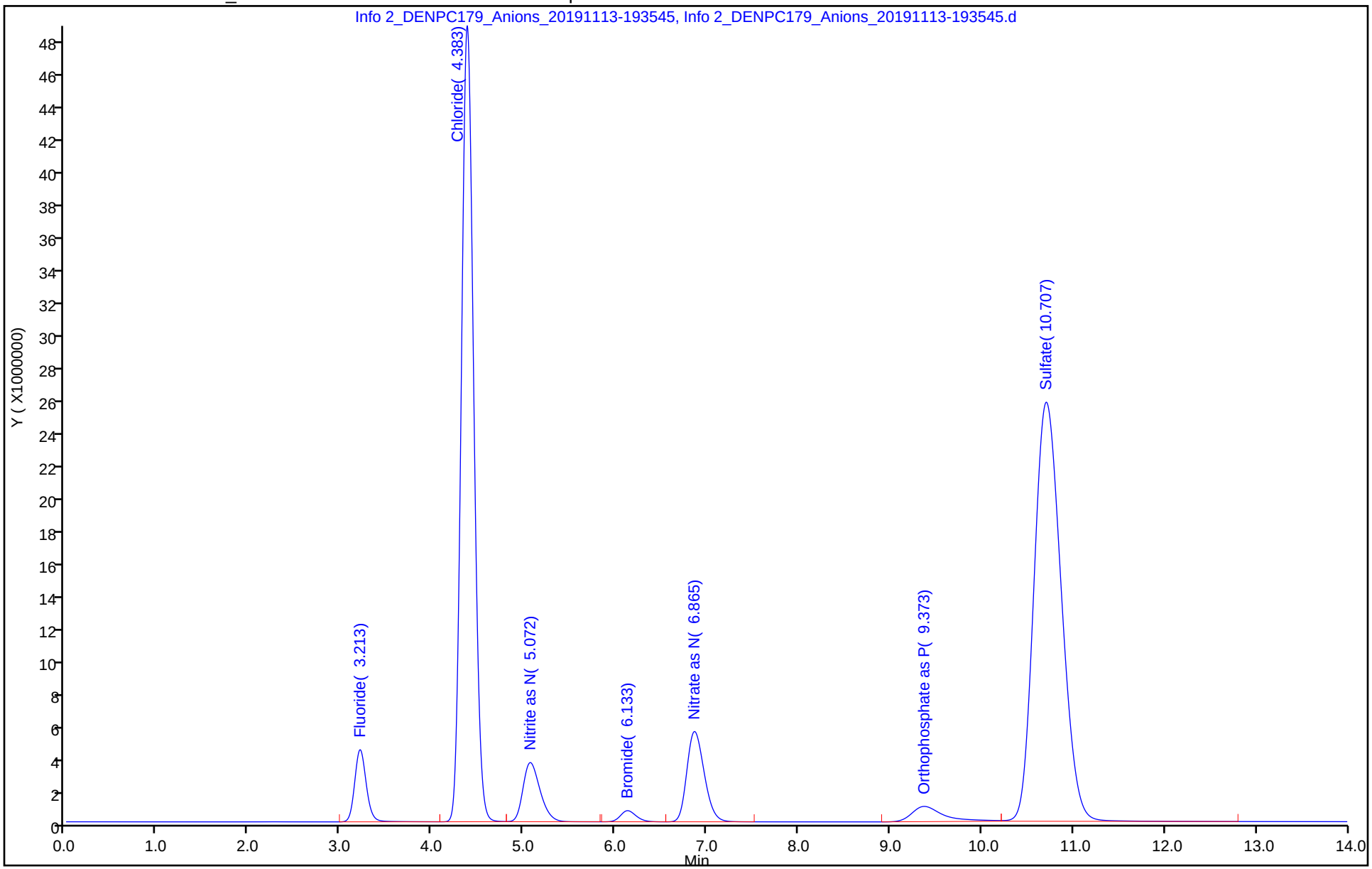
Reagents:

ICMS/MSD WEEK_00622 Amount Added: 0.10 Units: mL

Report Date: 14-Nov-2019 08:18:58 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

Data File:	\\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Info 2_DENPC179_Anions_20191113-193545.d				
Injection Date:	13-Nov-2019 19:18:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	280-129830-F-3 MSD			Worklist Smp#:	52
Client ID:	EW7-PM25B-1-35				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Info 2_DENPC179_Anions_20191113-195
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 13-Nov-2019 19:35:00 ALS Bottle#: 0 Worklist Smp#: 53
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0087035-053
Misc. Info.: 280-0087035-053
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub2

Method: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 14-Nov-2019 08:18:58 Calib Date: 16-Oct-2019 11:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-114

Column 1 : Det: Info 2_091554_1
Process Host: CTX0306

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.217	3.233	-0.016	37113708	5.00	5.15	
2 Chloride	4.383	4.402	-0.019	431673527	100.0	101.7	
3 Nitrite as N	5.055	5.072	-0.017	43591267	NC	NC	
4 Bromide	6.118	6.138	-0.020	6956420	5.00	5.02	
5 Nitrate as N	6.863	6.887	-0.024	50513119	NC	NC	
6 Orthophosphate as P	9.347	9.355	-0.008	24324800	NC	NC	
7 Sulfate	10.713	10.688	0.025	311798596	100.0	99.9	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

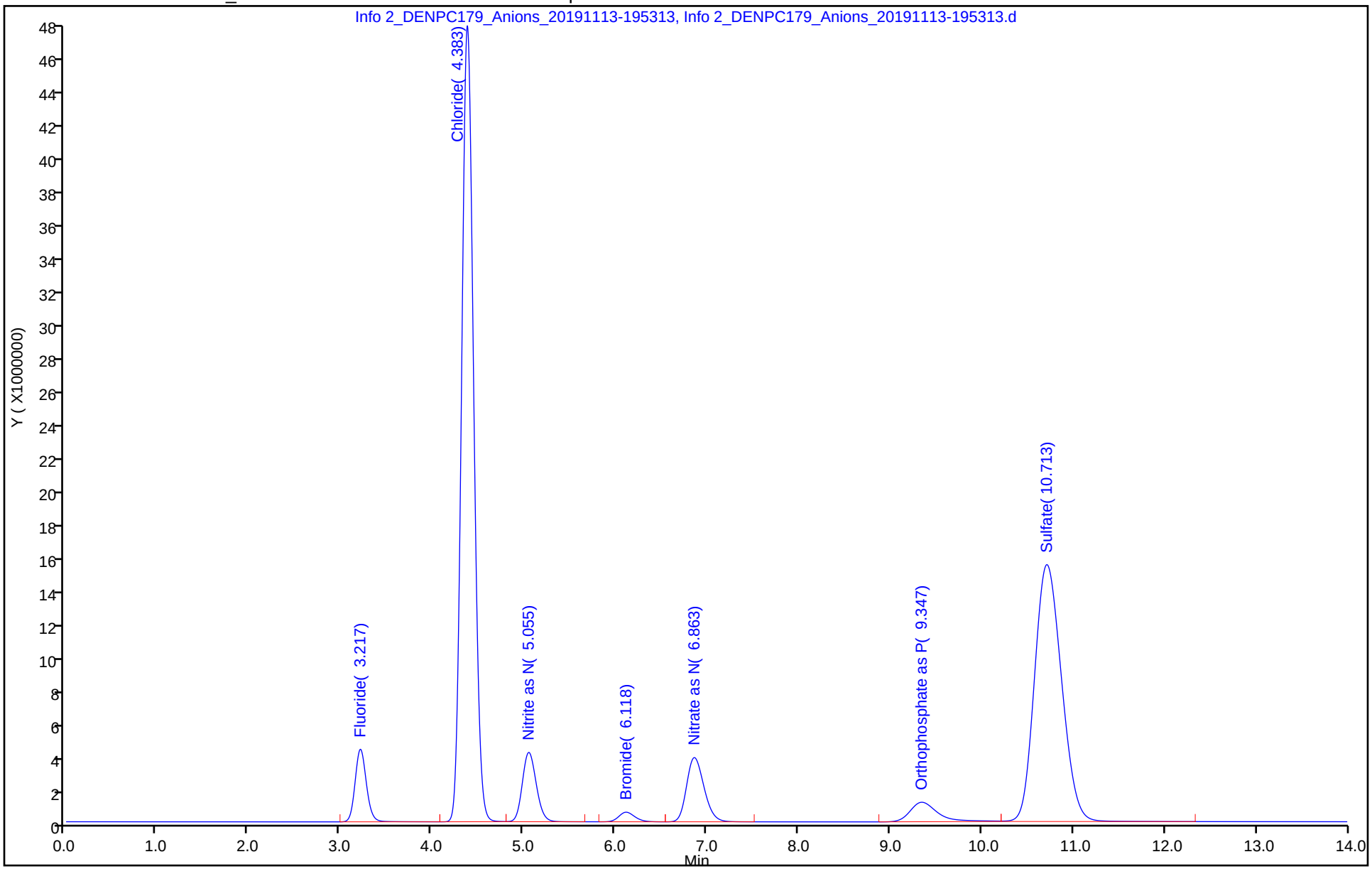
IC LCS_01709 Amount Added: 10.00 Units: mL

Report Date: 14-Nov-2019 08:18:59 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Info 2_DENPC179_Anions_20191113-195313.d

Injection Date:	13-Nov-2019 19:35:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ccv			Worklist Smp#:	53
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File:	\\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Info 2_DENPC179_Anions_20191113-201				
Lims ID:	ccb				
Client ID:					
Sample Type:	CCB				
Inject. Date:	13-Nov-2019 19:53:00	ALS Bottle#:	0	Worklist Smp#:	54
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0087035-054				
Misc. Info.:	280-0087035-054				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom10		
Method:	\\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Anions_IC10.m				
Limit Group:	Wet - Anions 28D				
Last Update:	14-Nov-2019 08:18:58	Calib Date:	16-Oct-2019 11:24:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-114				
Column 1 :			Det: Info 2_091554_1		
Process Host:	CTX0306				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.233				ND	
2 Chloride	4.388	4.402	-0.014	142680		0.5393	
3 Nitrite as N		5.072				ND	
4 Bromide		6.138				ND	
5 Nitrate as N		6.887				ND	
6 Orthophosphate as P	9.432	9.355	0.077	108993		NC	
7 Sulfate	10.753	10.688	0.065	177528		0.6534	

QC Flag Legend

Processing Flags

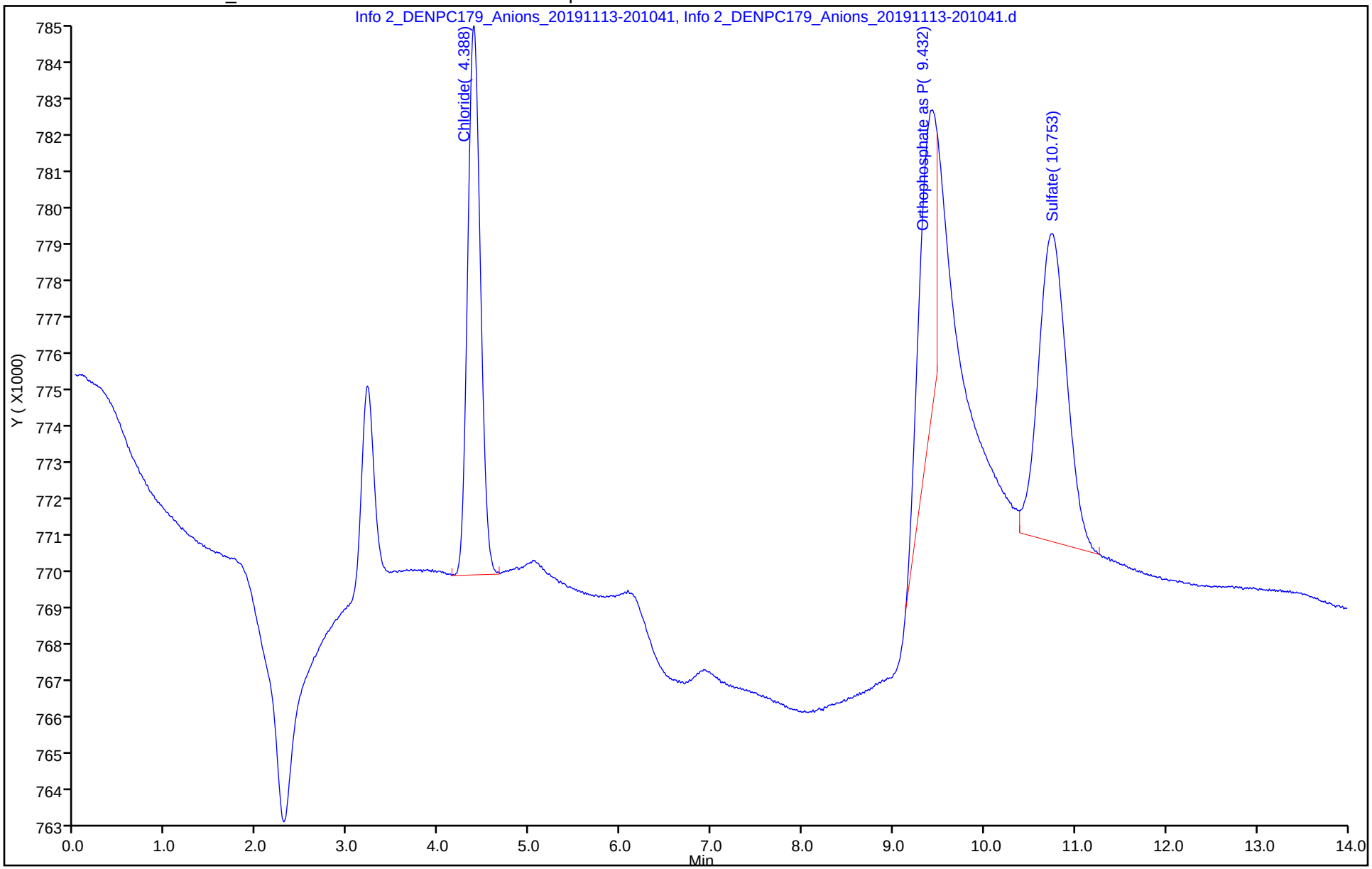
NC - Not Calibrated

Report Date: 14-Nov-2019 08:19:01 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Info 2_DENPC179_Anions_20191113-201041.d

Injection Date:	13-Nov-2019 19:53:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ccb			Worklist Smp#:	54
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Info 2_DENPC179_Anions_20191113-232
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 13-Nov-2019 23:05:00 ALS Bottle#: 0 Worklist Smp#: 65
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0087035-065
Misc. Info.: 280-0087035-065
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub2

Method: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 14-Nov-2019 08:19:11 Calib Date: 16-Oct-2019 11:24:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-114

Column 1 : Det: Info 2_091554_1
Process Host: CTX0306

First Level Reviewer: pedrickj Date: 14-Nov-2019 08:16:48

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.217	3.233	-0.016	38730698	5.00	5.37	M
2 Chloride	4.382	4.402	-0.020	437741138	100.0	103.2	
3 Nitrite as N	5.052	5.072	-0.020	44590807	NC	NC	
4 Bromide	6.113	6.138	-0.025	7322947	5.00	5.29	
5 Nitrate as N	6.855	6.887	-0.032	52154844	NC	NC	
6 Orthophosphate as P	9.325	9.355	-0.030	24897329	NC	NC	
7 Sulfate	10.685	10.688	-0.003	319696521	100.0	102.4	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Reagents:

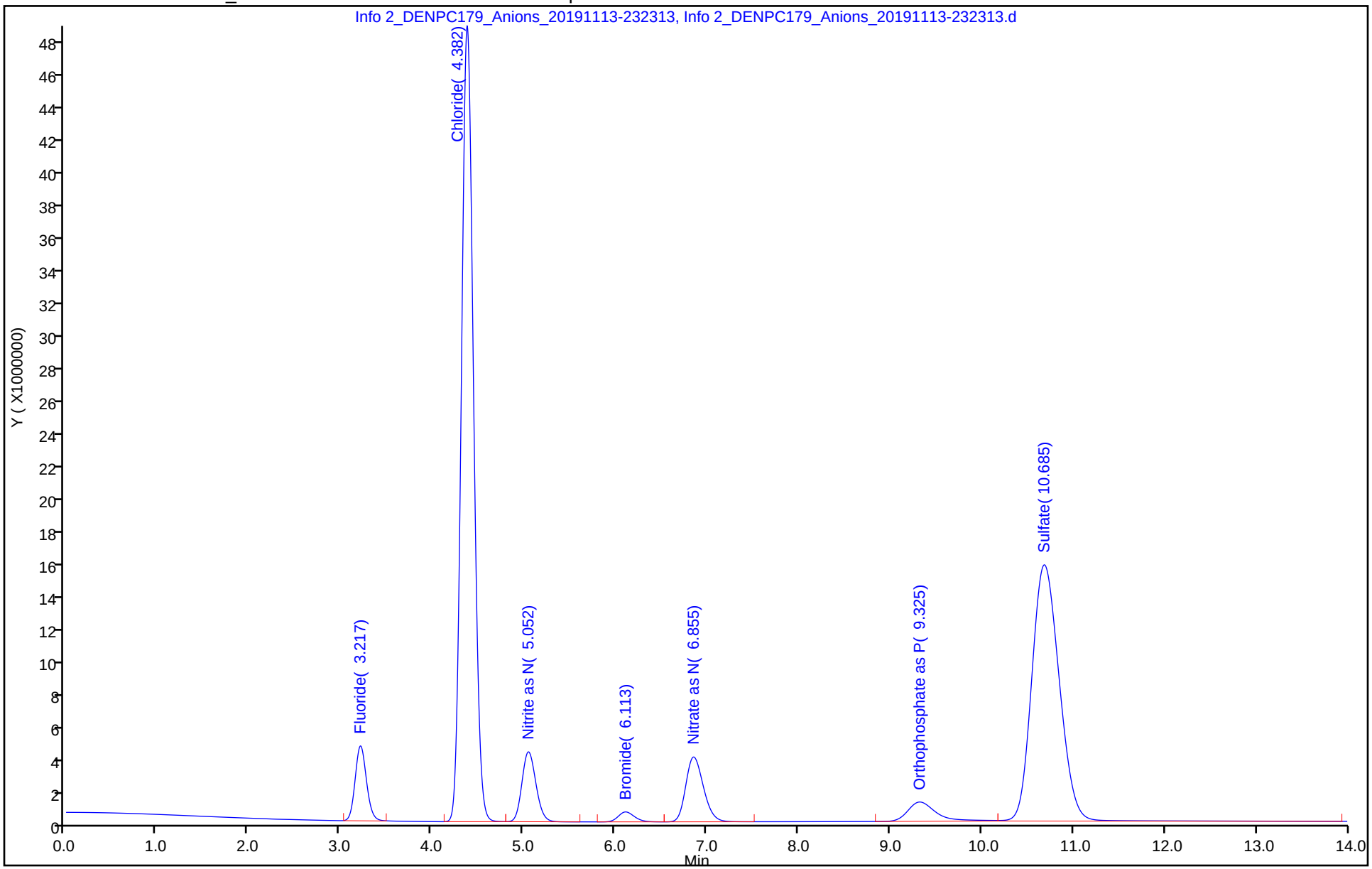
IC LCS_01709 Amount Added: 10.00 Units: mL

Report Date: 14-Nov-2019 08:19:11 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Info 2_DENPC179_Anions_20191113-232313.d

Injection Date:	13-Nov-2019 23:05:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ccv			Worklist Smp#:	65
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File:	\\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Info 2_DENPC179_Anions_20191113-234				
Lims ID:	ccb				
Client ID:					
Sample Type:	CCB				
Inject. Date:	13-Nov-2019 23:23:00	ALS Bottle#:	0	Worklist Smp#:	66
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0087035-066				
Misc. Info.:	280-0087035-066				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom10		
Method:	\\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Anions_IC10.m				
Limit Group:	Wet - Anions 28D				
Last Update:	14-Nov-2019 08:19:11	Calib Date:	16-Oct-2019 11:24:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Denver\ChromData\WC_IonChrom10\20191016-86204.b\Info 2_DENPC179_Anions_20191016-114				
Column 1 :			Det: Info 2_091554_1		
Process Host:	CTX0306				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.233				ND	
2 Chloride	4.383	4.402	-0.019	297610		0.5757	
3 Nitrite as N		5.072				ND	
4 Bromide		6.138				ND	
5 Nitrate as N		6.887				ND	
6 Orthophosphate as P	9.430	9.355	0.075	111222		NC	
7 Sulfate	10.728	10.688	0.040	130074		0.6383	

QC Flag Legend

Processing Flags

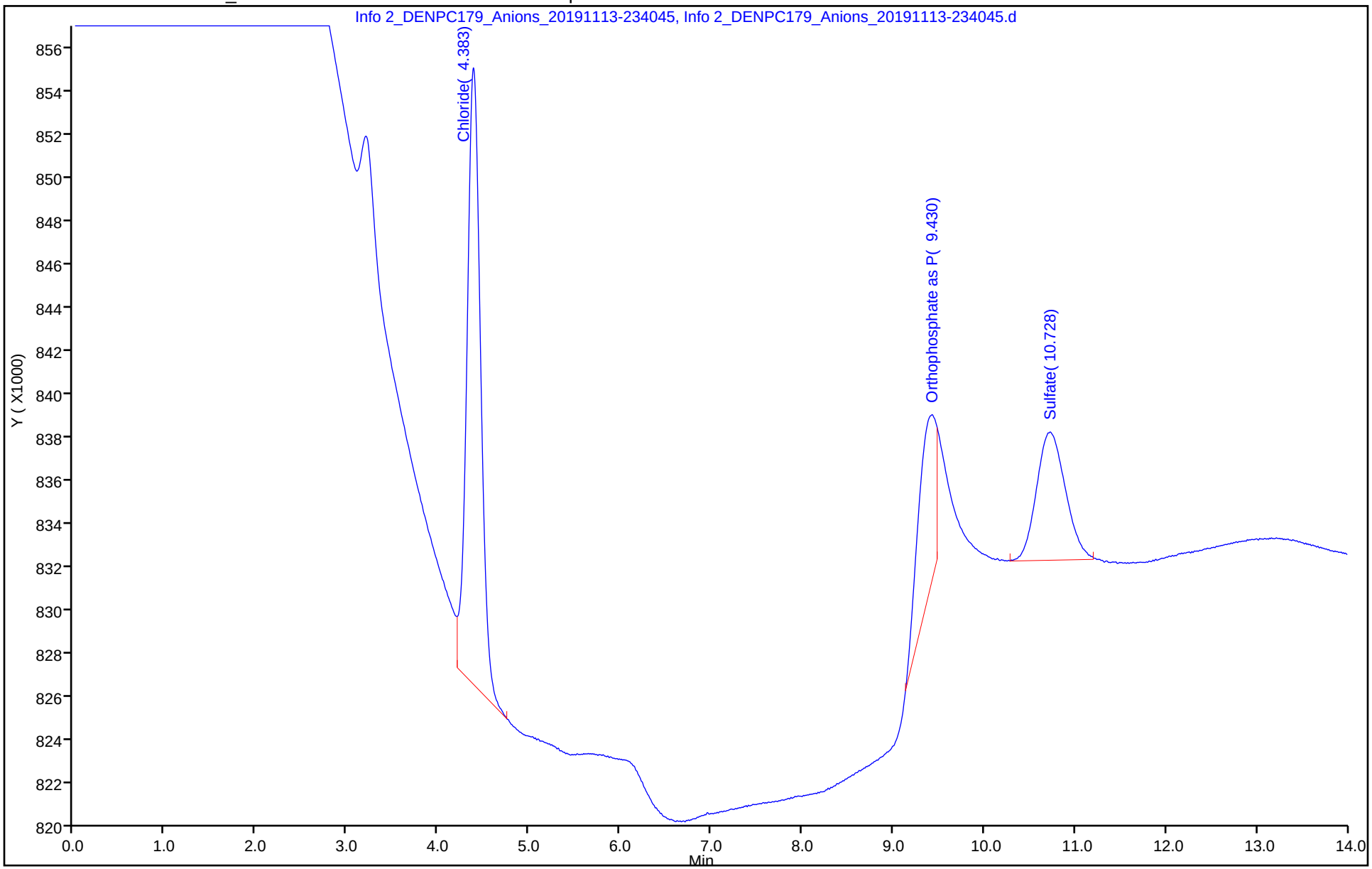
NC - Not Calibrated

Report Date: 14-Nov-2019 08:19:12 Chrom Revision: 2.3 09-Oct-2019 11:13:36

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\WC_IonChrom10\20191112-87035.b\Info 2_DENPC179_Anions_20191113-234045.d

Injection Date:	13-Nov-2019 23:23:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ccb			Worklist Smp#:	66
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



	Analysi	Sample Name	Manual	Result	Notes	Status	Date / Time	Vial
1	NPOC	icv	1.000	NPOC:19.75mg/L		Completed	11/4/2019 4:16:23	1
2	NPOC	icb	1.000	NPOC:0.1006mg/L		Completed	11/4/2019 4:31:06	2
3	NPOC	LCS 280-476389/1-A	1.000	NPOC:23.74mg/L		Completed	11/4/2019 4:45:50	3
4	NPOC	MB 280-476389/2-A	1.000	NPOC:0.2949mg/L		Completed	11/4/2019 5:00:33	4
5	NPOC	tic	1.000	NPOC:0.5173mg/L		Completed	11/4/2019 5:15:16	5
6	NPOC	280-129830-D-3-D	1.000	NPOC:4.844mg/L		Completed	11/4/2019 5:29:59	6
7	NPOC	280-129830-D-3-E MS	1.000	NPOC:28.78mg/L		Completed	11/4/2019 5:44:42	7
8	NPOC	280-129830-D-3-F MS	1.000	NPOC:28.94mg/L		Completed	11/4/2019 5:59:26	8
9	NPOC	280-129794-F-1-B	1.000	NPOC:3.753mg/L		Completed	11/4/2019 6:14:10	9
10	NPOC	280-129830-D-1-B	1.000	NPOC:3.588mg/L		Completed	11/4/2019 6:30:57	10
11	NPOC	280-129830-D-2-B	1.000	NPOC:4.362mg/L		Completed	11/4/2019 6:45:39	11
12	NPOC	280-129794-F-2-B	1.000	NPOC:3.519mg/L		Completed	11/4/2019 7:02:26	12
13	NPOC	280-129794-F-3-B	1.000	NPOC:3.336mg/L		Completed	11/4/2019 7:19:12	13
14	NPOC	280-129794-F-4-B	1.000	NPOC:3.722mg/L		Completed	11/4/2019 7:35:58	14
15	NPOC	ccv	1.000	NPOC:23.71mg/L		Completed	11/4/2019 7:50:40	15
16	NPOC	ccb	1.000	NPOC:0.2471mg/L		Completed	11/4/2019 8:07:27	16
17	NPOC	280-129794-F-5-B	1.000	NPOC:3.227mg/L		Completed	11/4/2019 8:22:09	17
18	NPOC	280-129794-F-6-B	1.000	NPOC:3.237mg/L		Completed	11/4/2019 8:38:56	18
19	NPOC	280-129857-F-1-E	1.000	NPOC:3.871mg/L		Completed	11/4/2019 8:53:38	19
20	NPOC	280-129857-F-3-B	1.000	NPOC:4.184mg/L		Completed	11/4/2019 9:08:22	20
21	NPOC	280-129857-F-3-C MS	1.000	NPOC:27.62mg/L		Completed	11/4/2019 9:23:05	21
22	NPOC	280-129857-F-3-D MS	1.000	NPOC:27.74mg/L		Completed	11/4/2019 9:37:48	22
23	NPOC	280-129857-F-2-E	1.000	NPOC:4.746mg/L		Completed	11/4/2019 9:54:36	23
24	NPOC	280-129857-F-4-B	1.000	NPOC:3.164mg/L		Completed	11/4/2019 10:11:2	24
25	NPOC	280-129857-F-5-B	1.000	NPOC:5.079mg/L		Completed	11/4/2019 10:26:2	25
26	NPOC	280-129936-D-1-B	1.000	NPOC:9.716mg/L		Completed	11/4/2019 10:41:0	26
27	NPOC	ccv	1.000	NPOC:23.42mg/L		Completed	11/4/2019 10:55:4	27
28	NPOC	ccb	1.000	NPOC:0.2314mg/L		Completed	11/4/2019 11:12:3	28
29	NPOC	280-129936-D-2-B	1.000	NPOC:4.332mg/L		Completed	11/4/2019 11:27:1	29
30	NPOC	280-129936-D-3-B	1.000	NPOC:2.558mg/L		Completed	11/4/2019 11:41:5	30
31	NPOC	280-129936-D-4-B	1.000	NPOC:3.753mg/L		Completed	11/4/2019 11:56:4	31
32	NPOC	280-129936-D-5-B	1.000	NPOC:3.747mg/L		Completed	11/5/2019 12:13:3	32
33	NPOC	280-129936-D-6-B	1.000	NPOC:3.105mg/L		Completed	11/5/2019 12:28:1	33
34	NPOC	LCS 280-476389/27-A	1.000	NPOC:23.68mg/L		Completed	11/5/2019 12:42:5	34
35	NPOC	MB 280-476389/28-A	1.000	NPOC:0.1844mg/L		Completed	11/5/2019 12:59:4	35
36	NPOC	tic	1.000	NPOC:0.1925mg/L		Completed	11/5/2019 1:14:29	36
37	NPOC	280-129936-D-9-D	1.000	NPOC:1.016mg/L		Completed	11/5/2019 1:29:13	37
38	NPOC	280-129936-D-9-E MS	1.000	NPOC:24.98mg/L		Completed	11/5/2019 1:43:57	38
39	NPOC	ccv	1.000	NPOC:24.23mg/L		Completed	11/5/2019 1:58:41	39
40	NPOC	ccb	1.000	NPOC:0.1173mg/L		Completed	11/5/2019 2:15:29	40
41	NPOC	280-129936-D-9-F MS	1.000	NPOC:24.36mg/L		Completed	11/5/2019 2:30:12	41
42	NPOC	280-129936-D-7-B	1.000	NPOC:4.817mg/L		Completed	11/5/2019 2:47:00	42
43	NPOC	280-129936-D-8-B	1.000	NPOC:6.505mg/L		Completed	11/5/2019 3:01:43	43
44	NPOC	280-129936-D-10-B	1.000	NPOC:2.223mg/L		Completed	11/5/2019 3:18:31	44
45	NPOC	280-129936-D-11-B	1.000	NPOC:7.156mg/L		Completed	11/5/2019 3:35:18	45
46	NPOC	280-129936-D-12-B	1.000	NPOC:7.799mg/L		Completed	11/5/2019 3:50:01	46
47	NPOC	280-129936-D-13-B	1.000	NPOC:3.390mg/L		Completed	11/5/2019 4:06:49	47
48	NPOC	280-129936-D-14-B	1.000	NPOC:3.181mg/L		Completed	11/5/2019 4:21:32	48
49	NPOC	280-129936-D-15-B	1.000	NPOC:2.907mg/L		Completed	11/5/2019 4:36:16	49
50	NPOC	280-129990-D-1-F	1.000	NPOC:2.925mg/L		Completed	11/5/2019 4:51:00	50
51	NPOC	ccv	1.000	NPOC:23.68mg/L		Completed	11/5/2019 5:05:44	51
52	NPOC	ccb	1.000	NPOC:0.1584mg/L		Completed	11/5/2019 5:22:32	52
53	NPOC	280-129990-D-2-H	1.000	NPOC:3.588mg/L		Completed	11/5/2019 5:37:15	53

	Analysi	Sample Name	Manual	Result	Notes	Status	Date / Time	Vial
54	NPOC	280-129990-D-2-I MS	1.000	NPOC:27.63mg/L		Completed	11/5/2019 5:51:59	54
55	NPOC	280-129990-D-2-J MS	1.000	NPOC:28.63mg/L		Completed	11/5/2019 6:06:44	55
56	NPOC	280-129990-D-3-B	1.000	NPOC:2.934mg/L		Completed	11/5/2019 6:25:37	56
57	NPOC	280-129990-D-4-B	1.000	NPOC:1.790mg/L		Completed	11/5/2019 6:42:19	57
58	NPOC	280-129990-D-5-B	1.000	NPOC:4.363mg/L		Completed	11/5/2019 6:57:03	58
59	NPOC	280-129990-D-6-B	1.000	NPOC:2.771mg/L		Completed	11/5/2019 7:11:48	59
60	NPOC	0-129990-D-7-B	1.000	NPOC:3.648mg/L		Completed	11/5/2019 7:26:33	60
61	NPOC	280-129990-D-8-B	1.000	NPOC:2.908mg/L		Completed	11/5/2019 7:41:18	61
62	NPOC	280-129990-D-9-B	1.000	NPOC:2.807mg/L		Completed	11/5/2019 7:56:03	62
63	NPOC	ccv	1.000	NPOC:24.05mg/L		Completed	11/5/2019 8:10:48	63
64	NPOC	ccb	1.000	NPOC:0.1877mg/L		Completed	11/5/2019 8:27:37	64
65	NPOC	280-129990-D-10-B	1.000	NPOC:4.660mg/L		Completed	11/5/2019 8:44:25	65
66	NPOC	280-129990-D-11-B	1.000	NPOC:4.502mg/L		Completed	11/5/2019 8:59:09	66
67	NPOC	280-127028-G-2_10x	10.00	NPOC:67.42mg/L		Completed	11/5/2019 9:18:02	67
68	NPOC	280-127028-G-2_50x	50.00	NPOC:47.84mg/L		Completed	11/5/2019 9:36:48	68
69	NPOC	280-127028-F-4_10x	10.00	NPOC:408.3mg/L		Completed	11/5/2019 9:51:27	69
70	NPOC	280-127028-F-4_50x	50.00	NPOC:46.47mg/L		Completed	11/5/2019 10:10:2	70
71	NPOC	280-127028-G-4_10x	10.00	NPOC:66.10mg/L		Completed	11/5/2019 10:29:0	71
72	NPOC	280-127028-G-4_50x	50.00	NPOC:38.45mg/L		Completed	11/5/2019 10:47:5	72
73	NPOC	ccv	1.000	NPOC:24.60mg/L		Completed	11/5/2019 11:02:3	73
74	NPOC	ccb	1.000	NPOC:0.1477mg/L		Completed	11/5/2019 11:17:1	74

TOC-V Cal Curve Information
C:¥TOC3201¥CalCurves¥TOC3.2019_10_28_16_08_18.cal

Date of Creation 5:11:50 PM 10/28/2019
User sgb
System TOC-V cpn 3

Cal. Curve

Sample Name: CAL 110716
Sample ID: Untitled
Object ID 0A-103108-04335027-1341734255C3-0000
Cal. Curve: TOC3.2019_10_28_16_08_18.cal
Status Completed
Comment:

Type	Anal.
Standard	NPOC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	0.3006	50uL	1	*******		10/28/2019 4:16:16 P
2	0.2177	50uL	1	*******		10/28/2019 4:18:20 P

Acid Add. 0.000%
Sp. Time 90.00sec
Mean Area 0.2591
SD Area 0.05862
CV Area 22.62%
Vial 86

Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	2.694	50uL	1	*******		10/28/2019 4:26:58 P
2	2.643	50uL	1	*******		10/28/2019 4:29:02 P

Acid Add. 0.000%
Sp. Time 90.00sec
Mean Area 2.668
SD Area 0.03606
CV Area 1.35%
Vial 87

Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	11.38	50uL	1	*******		10/28/2019 4:37:40 P
2	11.57	50uL	1	*******		10/28/2019 4:39:44 P

Acid Add. 0.000%
Sp. Time 90.00sec
Mean Area 11.48
SD Area 0.1344
CV Area 1.17%
Vial 88

Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	22.72	50uL	1	*******		10/28/2019 4:48:22 P
2	22.90	50uL	1	*******		10/28/2019 4:50:26 P

Acid Add. 0.000%
Sp. Time 90.00sec
Mean Area 22.81
SD Area 0.1273
CV Area 0.56%
Vial 89

Conc: 25.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	55.91	50uL	1	*******		10/28/2019 4:59:04 P
2	56.10	50uL	1	*******		10/28/2019 5:01:08 P

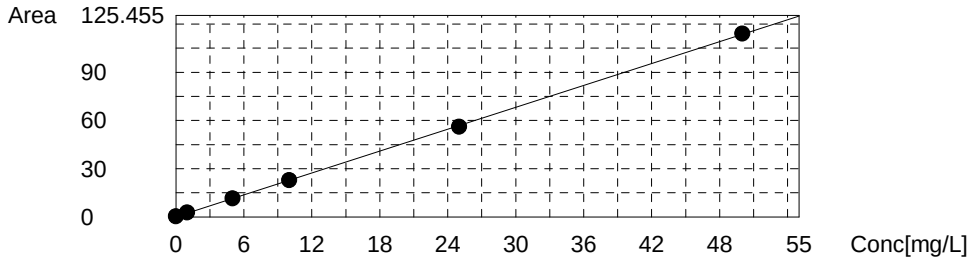
Acid Add. 0.000%
Sp. Time 90.00sec
Mean Area 56.01
SD Area 0.1344
CV Area 0.24%
Vial 90

Conc: 50.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	113.9	50uL	1	*******		10/28/2019 5:09:46 P
2	114.2	50uL	1	*******		10/28/2019 5:11:50 P

Acid Add. 0.000%
Sp. Time 90.00sec
Mean Area 114.1
SD Area 0.2121
CV Area 0.19%
Vial 91

Slope: 2.270
Intercept 0.1129
r^2 0.9999
r 0.9999
Zero Shift No



Instr.Information

System TOC-V cpn 3
Instrument Options TOC/ASI/
Catalyst Regular Sensitivity

Sample

Sample Name: icv
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

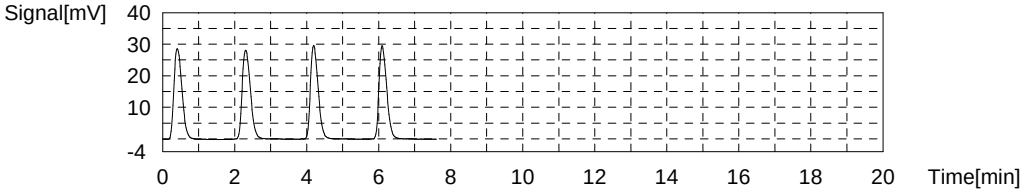
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:19.75mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	45.27	19.89mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 4:10:12 PM
2	45.38	19.94mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 4:12:16 PM
3	44.65	19.62mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 4:14:19 PM
4	44.49	19.55mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 4:16:23 PM

Mean Area 44.95
Mean Conc. 19.75mg/L



Sample

Sample Name: icb
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

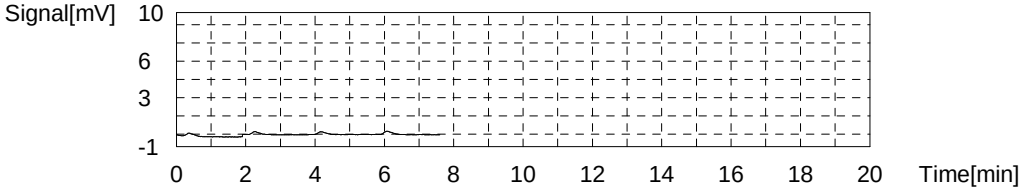
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1006mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.2998	0.08233mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 4:24:55 PM
2	0.3066	0.08533mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 4:26:59 PM
3	0.3414	0.1007mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 4:29:03 PM
4	0.4171	0.1340mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 4:31:06 PM

Mean Area 0.3412
Mean Conc. 0.1006mg/L



Sample

Sample Name: LCS 280-476389/1-A
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

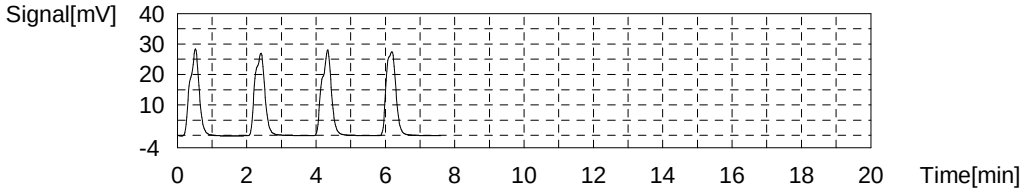
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:23.74mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	53.46	23.50mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 4:39:39 PM
2	54.27	23.86mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 4:41:43 PM
3	54.11	23.78mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 4:43:46 PM
4	54.22	23.83mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 4:45:50 PM

Mean Area 54.02
Mean Conc. 23.74mg/L



Sample

Sample Name: MB 280-476389/2-A
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

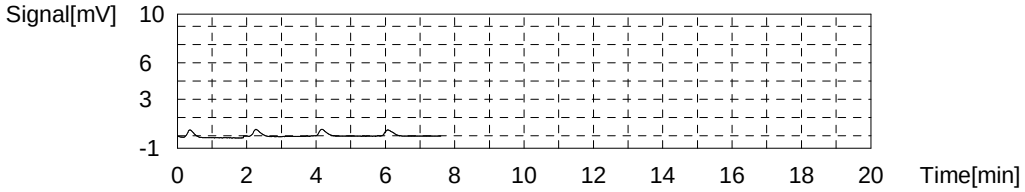
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.2949mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.7817	0.2946mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 4:54:22 PM
2	0.7743	0.2913mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 4:56:26 PM
3	0.7954	0.3006mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 4:58:29 PM
4	0.7783	0.2931mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 5:00:33 PM

Mean Area 0.7824
Mean Conc. 0.2949mg/L



Sample

Sample Name: tic
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

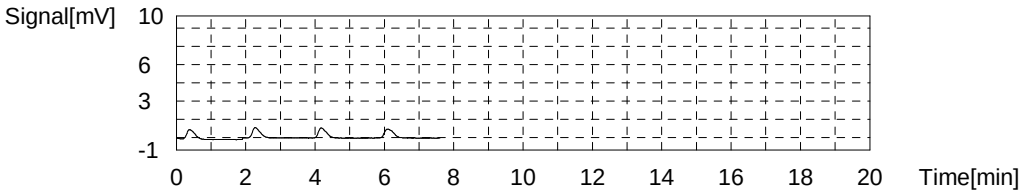
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.5173mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.169	0.4652mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 5:09:05 PM
2	1.305	0.5251mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 5:11:09 PM
3	1.357	0.5480mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 5:13:12 PM
4	1.318	0.5308mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 5:15:16 PM

Mean Area 1.287
Mean Conc. 0.5173mg/L



Sample

Sample Name: 280-129830-D-3-D
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

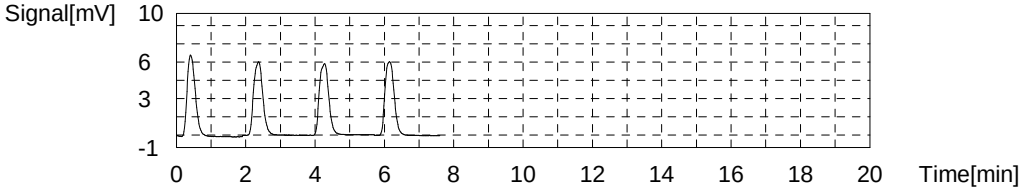
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:4.844mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	10.99	4.791mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 5:23:48 PM
2	11.16	4.866mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 5:25:52 PM
3	11.09	4.835mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 5:27:55 PM
4	11.20	4.884mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 5:29:59 PM

Mean Area 11.11
Mean Conc. 4.844mg/L



Sample

Sample Name: 280-129830-D-3-E MS
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

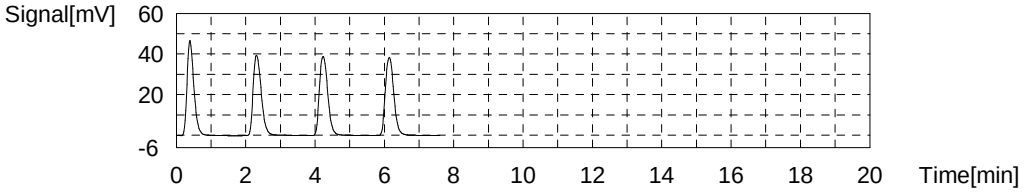
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:28.78mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	64.78	28.48mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 5:38:31 PM
2	65.16	28.65mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 5:40:35 PM
3	65.95	29.00mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 5:42:39 PM
4	65.87	28.97mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 5:44:42 PM

Mean Area 65.44
Mean Conc. 28.78mg/L



Sample

Sample Name: 280-129830-D-3-F MSD
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

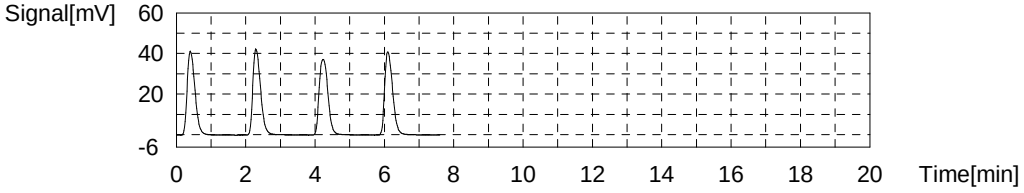
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:28.94mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	65.24	28.69mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 5:53:15 PM
2	66.33	29.17mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 5:55:19 PM
3	65.85	28.96mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 5:57:23 PM
4	65.86	28.96mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 5:59:26 PM

Mean Area 65.82
Mean Conc. 28.94mg/L



Sample

Sample Name: 280-129794-F-1-B
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

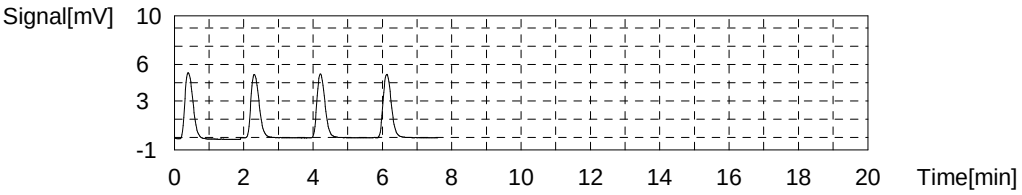
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:3.753mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.864	3.855mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 6:07:59 PM
2	8.620	3.747mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 6:10:03 PM
3	8.493	3.691mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 6:12:06 PM
4	8.553	3.718mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 6:14:10 PM

Mean Area 8.633
Mean Conc. 3.753mg/L



Sample

Sample Name: 280-129830-D-1-B
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

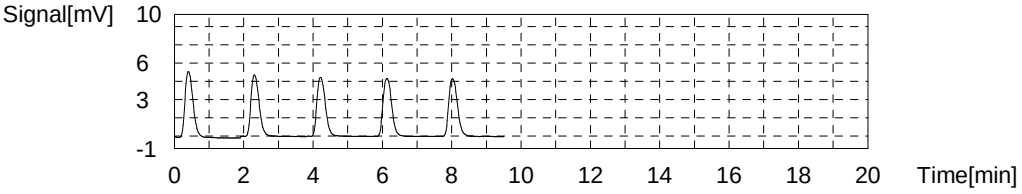
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:3.588mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.685	3.776mg/L	50uL	1	E	TOC3.2019_10_28_16_08_18.cal	11/4/2019 6:22:42 PM
2	8.291	3.602mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 6:24:46 PM
3	8.175	3.551mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 6:26:49 PM
4	8.226	3.574mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 6:28:53 PM
5	8.339	3.623mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 6:30:57 PM

Mean Area 8.258
Mean Conc. 3.588mg/L



Sample

Sample Name: 280-129830-D-2-B
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

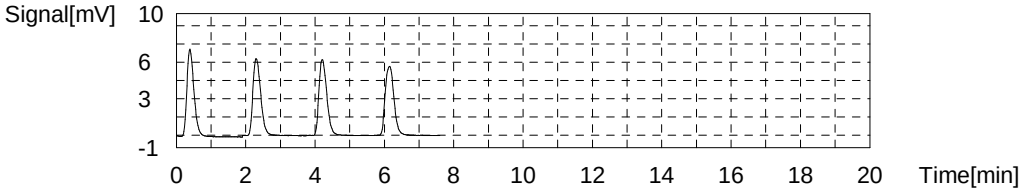
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:4.362mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	10.21	4.448mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 6:39:28 PM
2	9.937	4.327mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 6:41:32 PM
3	9.909	4.315mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 6:43:35 PM
4	10.01	4.360mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 6:45:39 PM

Mean Area 10.02
Mean Conc. 4.362mg/L



Sample

Sample Name: 280-129794-F-2-B
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

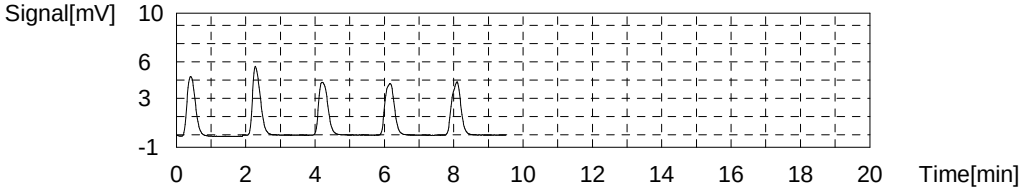
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:3.519mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.275	3.595mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 6:54:11 PM
2	8.848	3.848mg/L	50uL	1	E	TOC3.2019_10_28_16_08_18.cal	11/4/2019 6:56:15 PM
3	7.980	3.465mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 6:58:19 PM
4	8.013	3.480mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 7:00:22 PM
5	8.142	3.537mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 7:02:26 PM

Mean Area 8.103
Mean Conc. 3.519mg/L



Sample

Sample Name: 280-129794-F-3-B
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

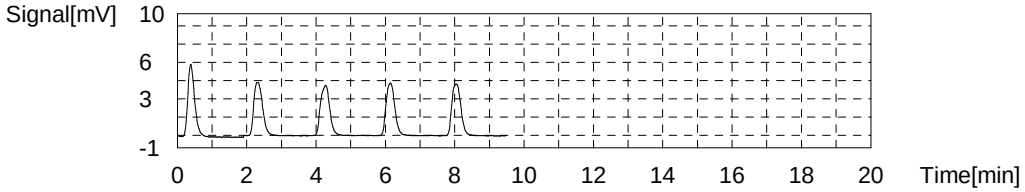
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:3.336mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.105	3.520mg/L	50uL	1	E	TOC3.2019_10_28_16_08_18.cal	11/4/2019 7:10:57 PM
2	7.729	3.355mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 7:13:01 PM
3	7.624	3.309mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 7:15:05 PM
4	7.618	3.306mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 7:17:08 PM
5	7.776	3.375mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 7:19:12 PM

Mean Area 7.687
Mean Conc. 3.336mg/L



Sample

Sample Name: 280-129794-F-4-B
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

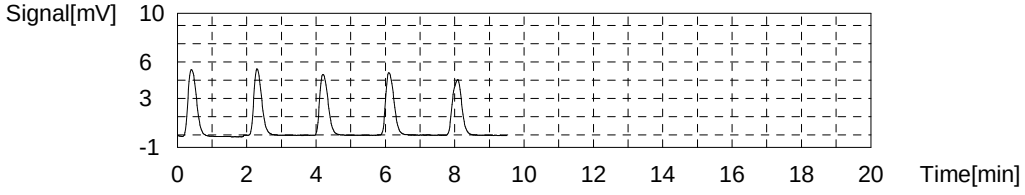
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:3.722mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.337	4.063mg/L	50uL	1	E	TOC3.2019_10_28_16_08_18.cal	11/4/2019 7:27:43 PM
2	8.643	3.757mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 7:29:47 PM
3	8.399	3.650mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 7:31:50 PM
4	8.597	3.737mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 7:33:54 PM
5	8.610	3.743mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 7:35:58 PM

Mean Area 8.562
Mean Conc. 3.722mg/L



Sample

Sample Name: ccv
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

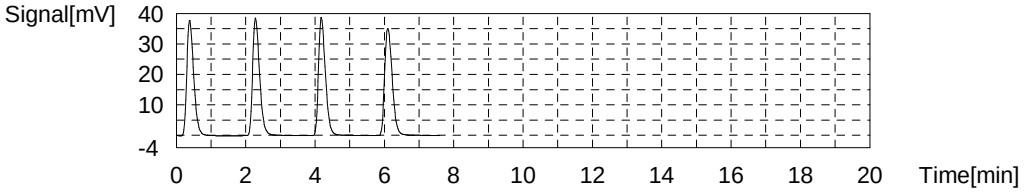
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:23.71mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	52.91	23.26mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 7:44:29 PM
2	54.59	24.00mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 7:46:33 PM
3	54.19	23.82mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 7:48:36 PM
4	54.08	23.77mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 7:50:40 PM

Mean Area 53.94
Mean Conc. 23.71mg/L



Sample

Sample Name: ccb
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

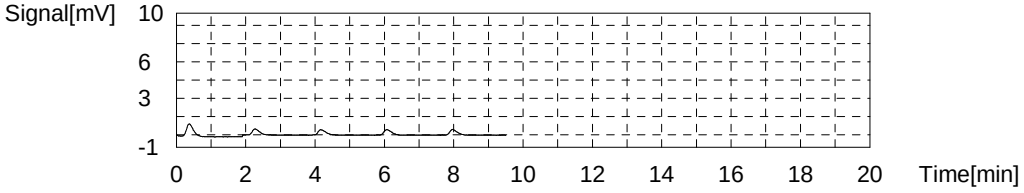
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.2471mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.398	0.5661mg/L	50uL	1	E	TOC3.2019_10_28_16_08_18.cal	11/4/2019 7:59:12 PM
2	0.7027	0.2598mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 8:01:16 PM
3	0.6538	0.2383mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 8:03:19 PM
4	0.6600	0.2410mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 8:05:23 PM
5	0.6791	0.2494mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 8:07:27 PM

Mean Area 0.6739
Mean Conc. 0.2471mg/L



Sample

Sample Name: 280-129794-F-5-B
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

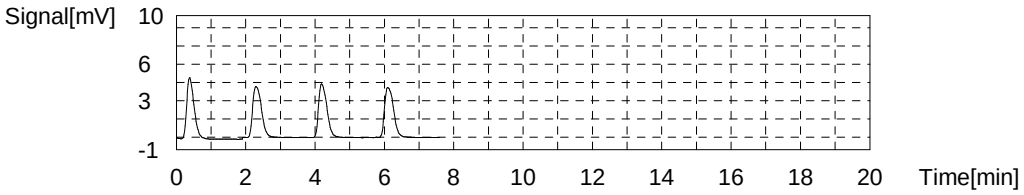
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:3.227mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.424	3.220mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 8:15:58 PM
2	7.456	3.235mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 8:18:02 PM
3	7.415	3.216mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 8:20:06 PM
4	7.460	3.236mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 8:22:09 PM

Mean Area 7.439
Mean Conc. 3.227mg/L



Sample

Sample Name: 280-129794-F-6-B
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

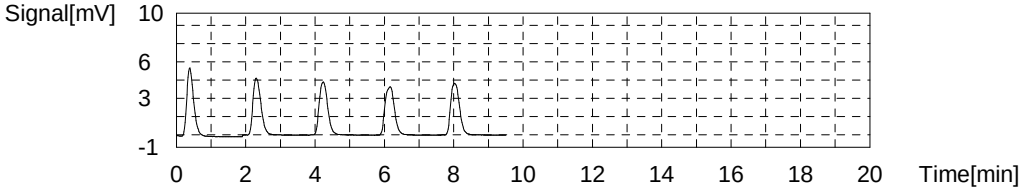
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:3.237mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.733	3.357mg/L	50uL	1	E	TOC3.2019_10_28_16_08_18.cal	11/4/2019 8:30:41 PM
2	7.460	3.236mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 8:32:45 PM
3	7.344	3.185mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 8:34:48 PM
4	7.533	3.268mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 8:36:52 PM
5	7.506	3.257mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 8:38:56 PM

Mean Area 7.461
Mean Conc. 3.237mg/L



Sample

Sample Name: 280-129857-F-1-E
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

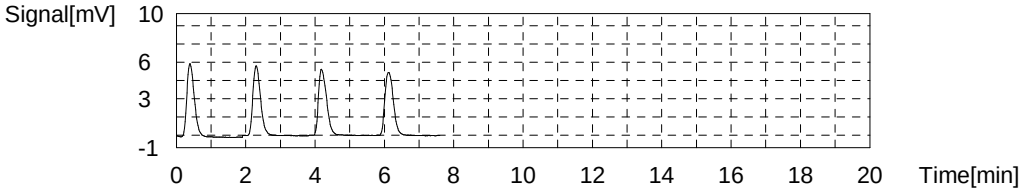
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:3.871mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.976	3.904mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 8:47:27 PM
2	8.886	3.864mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 8:49:31 PM
3	8.803	3.828mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 8:51:34 PM
4	8.940	3.888mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 8:53:38 PM

Mean Area 8.901
Mean Conc. 3.871mg/L



Sample

Sample Name: 280-129857-F-3-B
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

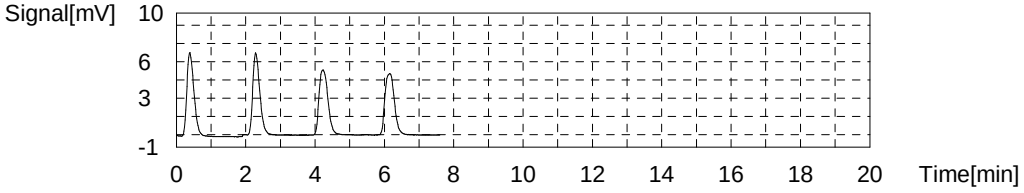
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:4.184mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.783	4.260mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 9:02:11 PM
2	9.498	4.134mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 9:04:15 PM
3	9.560	4.161mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 9:06:18 PM
4	9.604	4.181mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 9:08:22 PM

Mean Area 9.611
Mean Conc. 4.184mg/L



Sample

Sample Name: 280-129857-F-3-C MS
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

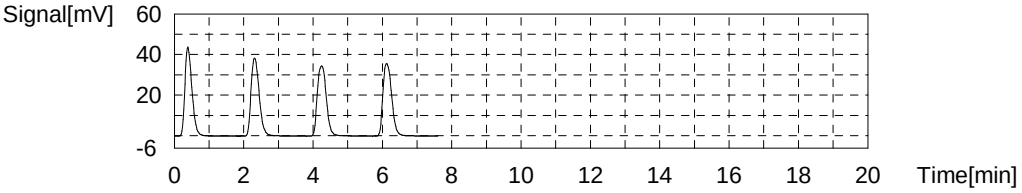
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:27.62mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	62.57	27.51mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 9:16:54 PM
2	63.22	27.80mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 9:18:58 PM
3	62.45	27.46mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 9:21:01 PM
4	63.04	27.72mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 9:23:05 PM

Mean Area 62.82
Mean Conc. 27.62mg/L



Sample

Sample Name: 280-129857-F-3-D MSD
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

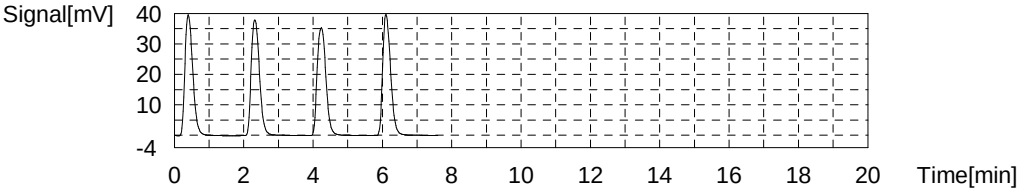
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:27.74mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	63.08	27.74mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 9:31:37 PM
2	63.50	27.92mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 9:33:41 PM
3	62.34	27.41mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 9:35:45 PM
4	63.40	27.88mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 9:37:48 PM

Mean Area 63.08
Mean Conc. 27.74mg/L



Sample

Sample Name: 280-129857-F-2-E
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

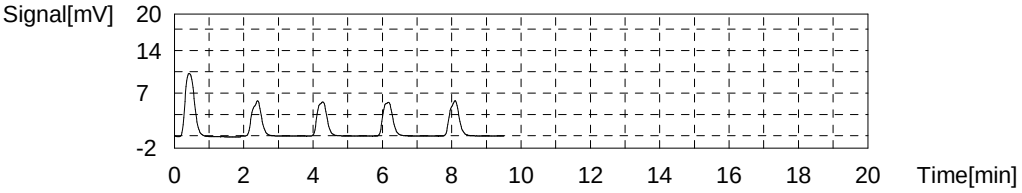
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:4.746mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	19.32	8.460mg/L	50uL	1	E	TOC3.2019_10_28_16_08_18.cal	11/4/2019 9:46:21 PM
2	10.95	4.774mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 9:48:25 PM
3	10.80	4.708mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 9:50:28 PM
4	10.82	4.716mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 9:52:32 PM
5	10.98	4.787mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 9:54:36 PM

Mean Area 10.89
Mean Conc. 4.746mg/L



Sample

Sample Name: 280-129857-F-4-B
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

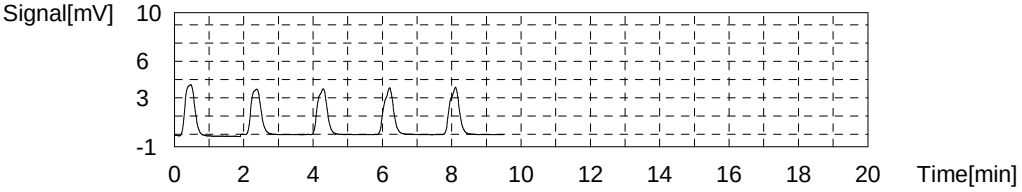
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:3.164mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.126	3.530mg/L	50uL	1	E	TOC3.2019_10_28_16_08_18.cal	11/4/2019 10:03:07 PM
2	7.274	3.154mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 10:05:11 PM
3	7.230	3.135mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 10:07:14 PM
4	7.246	3.142mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 10:09:18 PM
5	7.430	3.223mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 10:11:22 PM

Mean Area 7.295
Mean Conc. 3.164mg/L



Sample

Sample Name: 280-129857-F-5-B
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

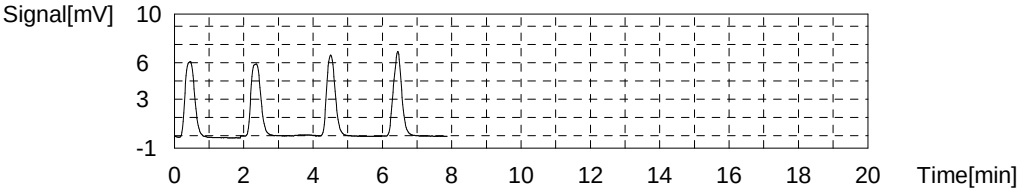
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:5.079mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	11.94	5.210mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 10:19:53 PM
2	11.57	5.047mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 10:22:12 PM
3	11.40	4.972mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 10:24:16 PM
4	11.66	5.086mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 10:26:20 PM

Mean Area 11.64
Mean Conc. 5.079mg/L



Sample

Sample Name: 280-129936-D-1-B
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

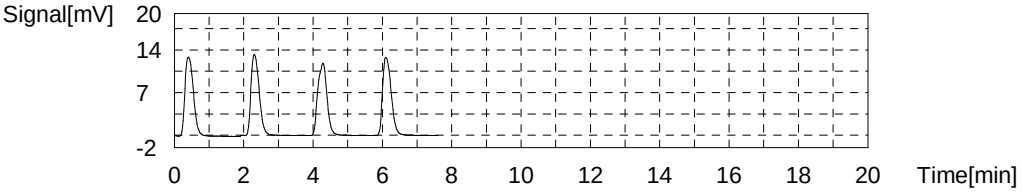
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:9.716mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	22.25	9.751mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 10:34:52 PM
2	22.13	9.698mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 10:36:56 PM
3	21.91	9.601mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 10:38:59 PM
4	22.39	9.813mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 10:41:03 PM

Mean Area 22.17
Mean Conc. 9.716mg/L



Sample

Sample Name: ccv
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

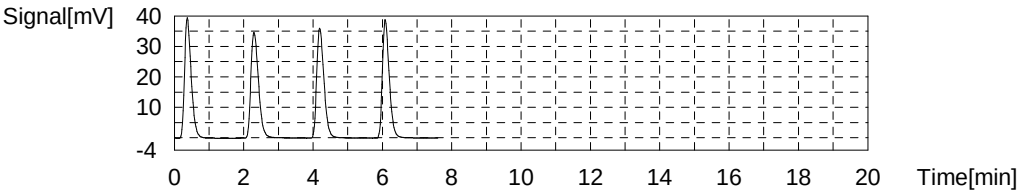
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:23.42mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	53.08	23.33mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 10:49:35 PM
2	53.64	23.58mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 10:51:38 PM
3	52.78	23.20mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 10:53:42 PM
4	53.67	23.59mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 10:55:46 PM

Mean Area 53.29
Mean Conc. 23.42mg/L



Sample

Sample Name: ccb
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

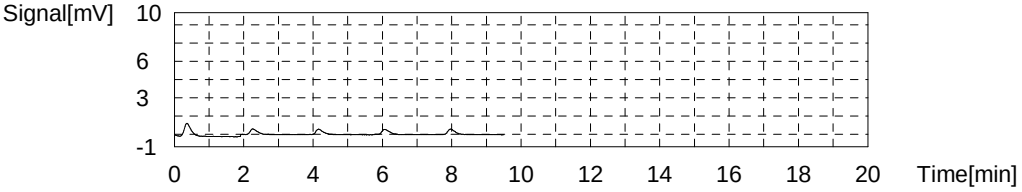
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.2314mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.396	0.5652mg/L	50uL	1	E	TOC3.2019_10_28_16_08_18.cal	11/4/2019 11:04:18 PM
2	0.6475	0.2355mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 11:06:22 PM
3	0.6157	0.2215mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 11:08:25 PM
4	0.6304	0.2280mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 11:10:29 PM
5	0.6595	0.2408mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 11:12:33 PM

Mean Area 0.6383
Mean Conc. 0.2314mg/L



Sample

Sample Name: 280-129936-D-2-B
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

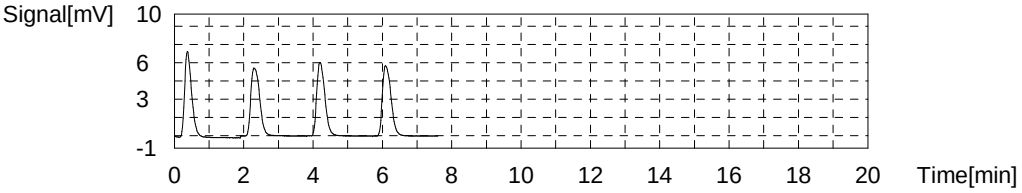
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:4.332mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.980	4.346mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 11:21:04 PM
2	9.907	4.314mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 11:23:08 PM
3	9.897	4.310mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 11:25:11 PM
4	10.01	4.360mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 11:27:15 PM

Mean Area 9.948
Mean Conc. 4.332mg/L



Sample

Sample Name: 280-129936-D-3-B
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

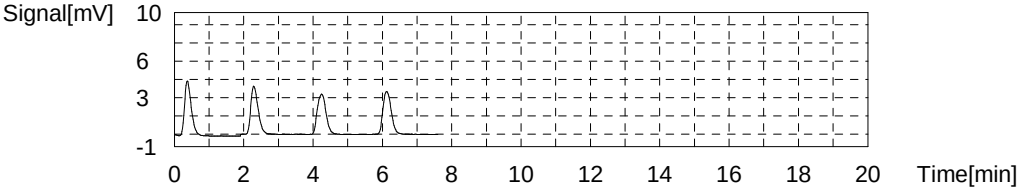
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.558mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.044	2.613mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 11:35:48 PM
2	5.881	2.541mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 11:37:51 PM
3	5.870	2.536mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 11:39:55 PM
4	5.882	2.541mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 11:41:59 PM

Mean Area 5.919
Mean Conc. 2.558mg/L



Sample

Sample Name: 280-129936-D-4-B
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

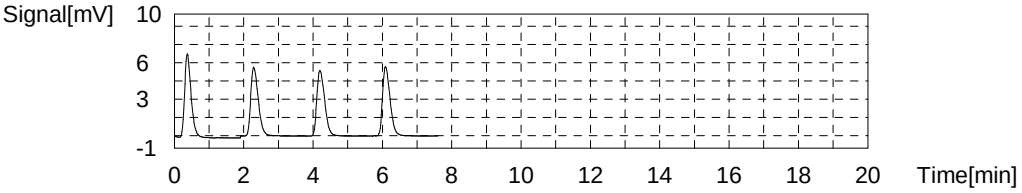
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:3.753mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.782	3.819mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 11:50:32 PM
2	8.570	3.725mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 11:52:36 PM
3	8.544	3.714mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 11:54:39 PM
4	8.638	3.755mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/4/2019 11:56:43 PM

Mean Area 8.633
Mean Conc. 3.753mg/L



Sample

Sample Name: 280-129936-D-5-B
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

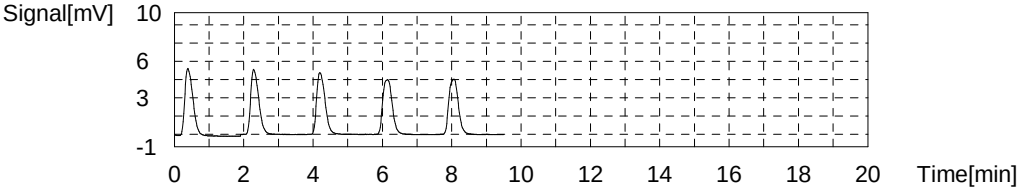
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:3.747mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.978	3.905mg/L	50uL	1	E	TOC3.2019_10_28_16_08_18.cal	11/5/2019 12:05:16 AM
2	8.646	3.759mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 12:07:19 AM
3	8.547	3.715mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 12:09:23 AM
4	8.599	3.738mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 12:11:27 AM
5	8.690	3.778mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 12:13:31 AM

Mean Area 8.620
Mean Conc. 3.747mg/L



Sample

Sample Name: 280-129936-D-6-B
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

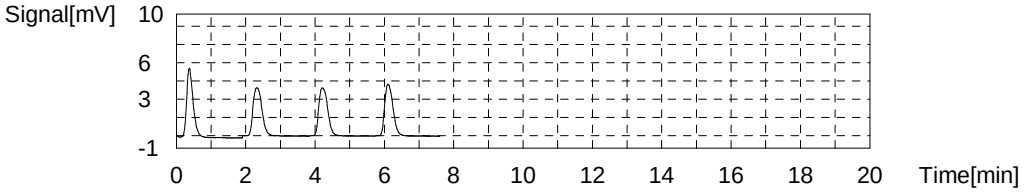
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:3.105mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.366	3.195mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 12:22:03 AM
2	7.101	3.078mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 12:24:07 AM
3	7.057	3.059mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 12:26:10 AM
4	7.122	3.087mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 12:28:14 AM

Mean Area 7.162
Mean Conc. 3.105mg/L



Sample

Sample Name: LCS 280-476389/27-A
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

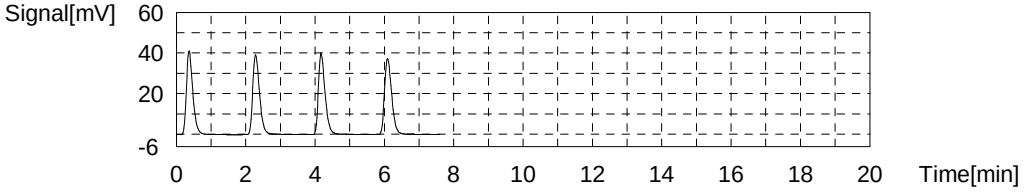
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:23.68mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	53.04	23.31mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 12:36:47 AM
2	54.20	23.82mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 12:38:51 AM
3	54.10	23.78mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 12:40:54 AM
4	54.19	23.82mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 12:42:58 AM

Mean Area 53.88
Mean Conc. 23.68mg/L



Sample

Sample Name: MB 280-476389/28-A
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

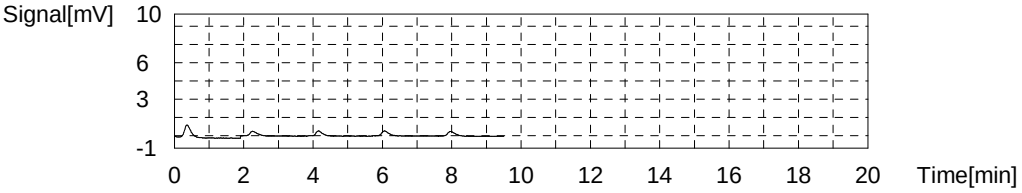
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1844mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.233	0.4934mg/L	50uL	1	E	TOC3.2019_10_28_16_08_18.cal	11/5/2019 12:51:31 AM
2	0.5406	0.1884mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 12:53:34 AM
3	0.5088	0.1744mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 12:55:38 AM
4	0.5238	0.1810mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 12:57:42 AM
5	0.5531	0.1939mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 12:59:46 AM

Mean Area 0.5316
Mean Conc. 0.1844mg/L



Sample

Sample Name: tic
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

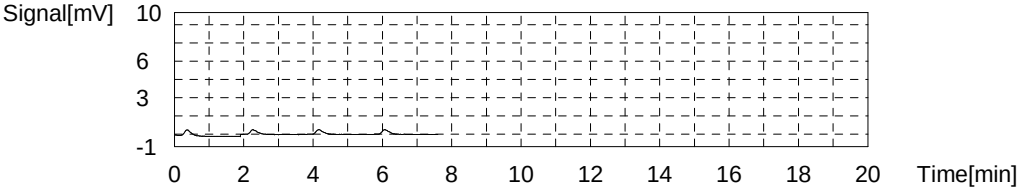
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1925mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.6083	0.2182mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 1:08:18 AM
2	0.5343	0.1856mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 1:10:22 AM
3	0.5304	0.1839mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 1:12:25 AM
4	0.5265	0.1822mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 1:14:29 AM

Mean Area 0.5499
Mean Conc. 0.1925mg/L



Sample

Sample Name: 280-129936-D-9-D
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

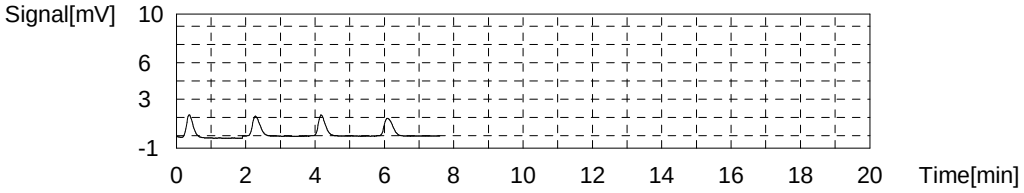
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.016mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2.382	0.9995mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 1:23:02 AM
2	2.439	1.025mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 1:25:05 AM
3	2.400	1.007mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 1:27:09 AM
4	2.455	1.032mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 1:29:13 AM

Mean Area 2.419
Mean Conc. 1.016mg/L



Sample

Sample Name: 280-129936-D-9-E MS
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

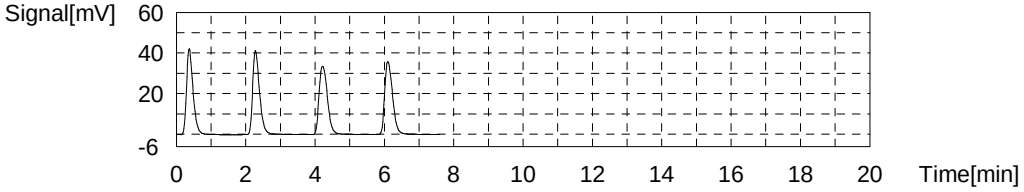
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.98mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	55.85	24.55mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 1:37:46 AM
2	57.41	25.24mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 1:39:50 AM
3	56.90	25.01mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 1:41:53 AM
4	57.16	25.13mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 1:43:57 AM

Mean Area 56.83
Mean Conc. 24.98mg/L



Sample

Sample Name: ccv
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

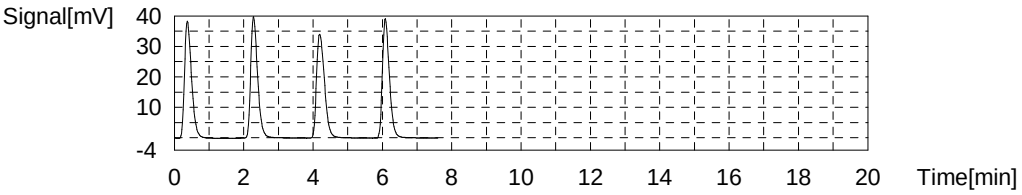
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.23mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	54.83	24.10mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 1:52:30 AM
2	55.64	24.46mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 1:54:33 AM
3	54.79	24.08mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 1:56:37 AM
4	55.26	24.29mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 1:58:41 AM

Mean Area 55.13
Mean Conc. 24.23mg/L



Sample

Sample Name: ccb
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

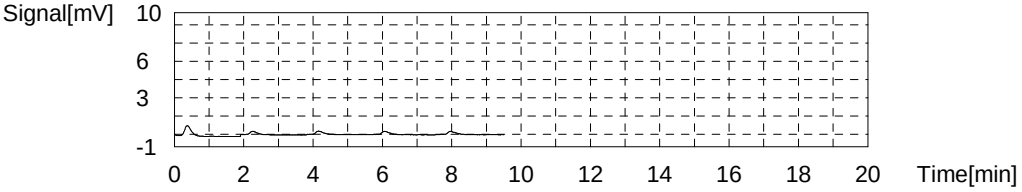
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1173mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.118	0.4427mg/L	50uL	1	E	TOC3.2019_10_28_16_08_18.cal	11/5/2019 2:07:14 AM
2	0.3738	0.1149mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 2:09:17 AM
3	0.3886	0.1214mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 2:11:21 AM
4	0.3648	0.1110mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 2:13:25 AM
5	0.3895	0.1218mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 2:15:29 AM

Mean Area 0.3792
Mean Conc. 0.1173mg/L



Sample

Sample Name: 280-129936-D-9-F MSD
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

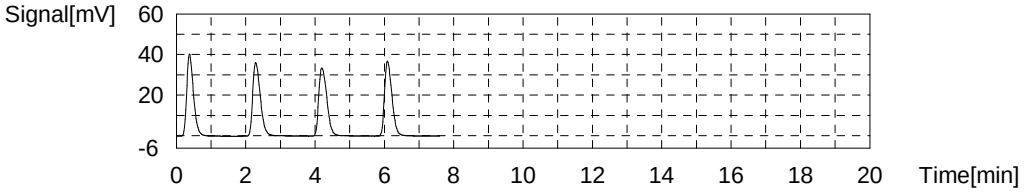
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.36mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	55.28	24.30mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 2:24:01 AM
2	55.95	24.60mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 2:26:05 AM
3	55.06	24.20mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 2:28:08 AM
4	55.41	24.36mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 2:30:12 AM

Mean Area 55.43
Mean Conc. 24.36mg/L



Sample

Sample Name: 280-129936-D-7-B
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

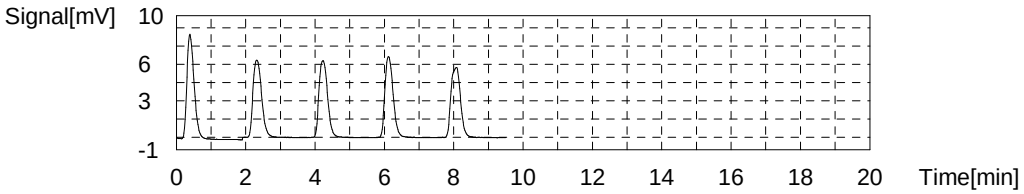
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:4.817mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	12.38	5.403mg/L	50uL	1	E	TOC3.2019_10_28_16_08_18.cal	11/5/2019 2:38:45 AM
2	11.13	4.853mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 2:40:48 AM
3	10.92	4.760mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 2:42:52 AM
4	11.06	4.822mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 2:44:56 AM
5	11.08	4.831mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 2:47:00 AM

Mean Area 11.05
Mean Conc. 4.817mg/L



Sample

Sample Name: 280-129936-D-8-B
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

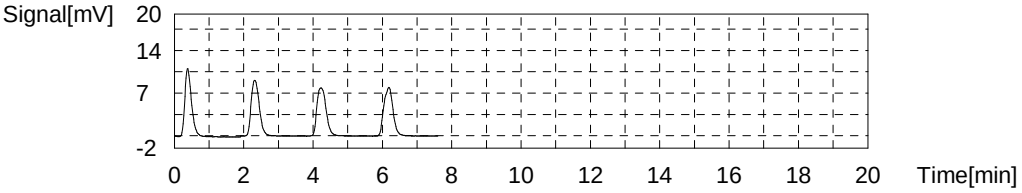
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:6.505mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	15.08	6.593mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 2:55:32 AM
2	15.00	6.558mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 2:57:36 AM
3	14.68	6.417mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 2:59:39 AM
4	14.76	6.452mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 3:01:43 AM

Mean Area 14.88
Mean Conc. 6.505mg/L



Sample

Sample Name: 280-129936-D-10-B
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

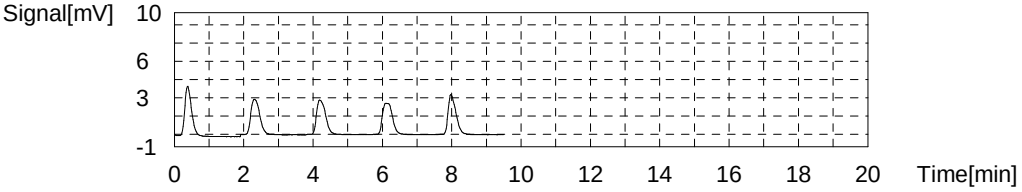
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.223mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.552	2.396mg/L	50uL	1	E	TOC3.2019_10_28_16_08_18.cal	11/5/2019 3:10:15 AM
2	5.163	2.224mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 3:12:19 AM
3	5.116	2.204mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 3:14:23 AM
4	5.177	2.231mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 3:16:27 AM
5	5.183	2.233mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 3:18:31 AM

Mean Area 5.160
Mean Conc. 2.223mg/L



Sample

Sample Name: 280-129936-D-11-B
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

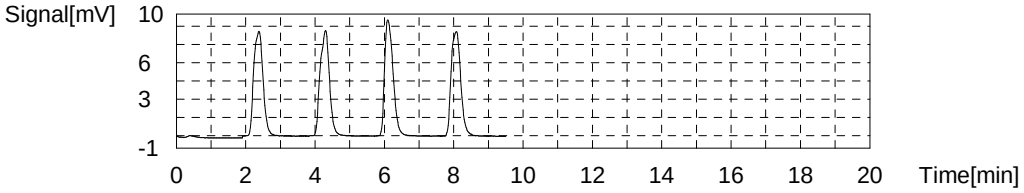
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:7.156mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.2034	0.03987mg/L	50uL	1	E	TOC3.2019_10_28_16_08_18.cal	11/5/2019 3:27:03 AM
2	16.22	7.095mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 3:29:06 AM
3	16.17	7.073mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 3:31:10 AM
4	16.36	7.157mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 3:33:14 AM
5	16.68	7.298mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 3:35:18 AM

Mean Area 16.36
Mean Conc. 7.156mg/L



Sample

Sample Name: 280-129936-D-12-B
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

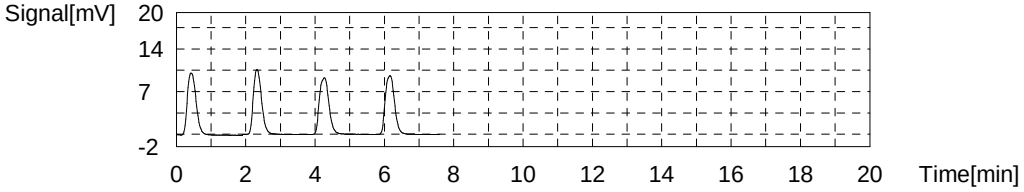
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:7.799mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	17.81	7.795mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 3:43:50 AM
2	17.72	7.756mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 3:45:53 AM
3	17.80	7.791mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 3:47:57 AM
4	17.94	7.853mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 3:50:01 AM

Mean Area 17.82
Mean Conc. 7.799mg/L



Sample

Sample Name: 280-129936-D-13-B
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

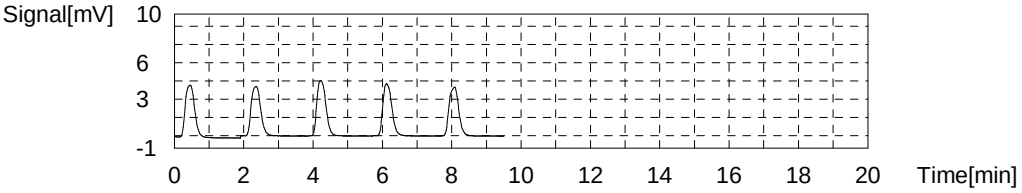
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:3.390mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.005	3.476mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 3:58:34 AM
2	7.759	3.368mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 4:00:37 AM
3	8.224	3.573mg/L	50uL	1	E	TOC3.2019_10_28_16_08_18.cal	11/5/2019 4:02:41 AM
4	7.709	3.346mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 4:04:45 AM
5	7.766	3.371mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 4:06:49 AM

Mean Area 7.810
Mean Conc. 3.390mg/L



Sample

Sample Name: 280-129936-D-14-B
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

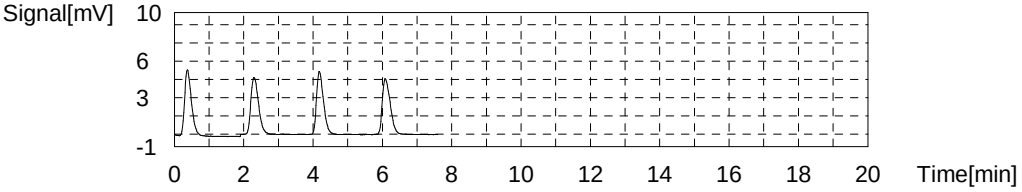
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:3.181mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.377	3.200mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 4:15:21 AM
2	7.311	3.171mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 4:17:24 AM
3	7.317	3.173mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 4:19:28 AM
4	7.333	3.180mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 4:21:32 AM

Mean Area 7.335
Mean Conc. 3.181mg/L



Sample

Sample Name: 280-129936-D-15-B
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

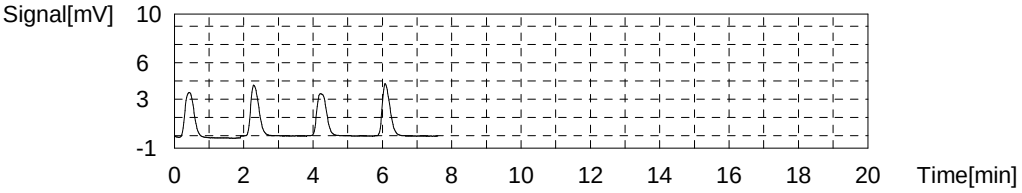
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.907mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.702	2.902mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 4:30:04 AM
2	6.833	2.960mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 4:32:08 AM
3	6.636	2.873mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 4:34:12 AM
4	6.683	2.894mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 4:36:16 AM

Mean Area 6.713
Mean Conc. 2.907mg/L



Sample

Sample Name: 280-129990-D-1-F
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

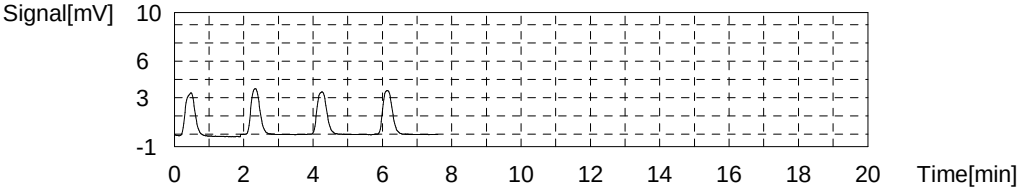
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.925mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.735	2.917mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 4:44:49 AM
2	6.709	2.905mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 4:46:52 AM
3	6.738	2.918mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 4:48:56 AM
4	6.827	2.957mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 4:51:00 AM

Mean Area 6.752
Mean Conc. 2.925mg/L



Sample

Sample Name: ccv
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

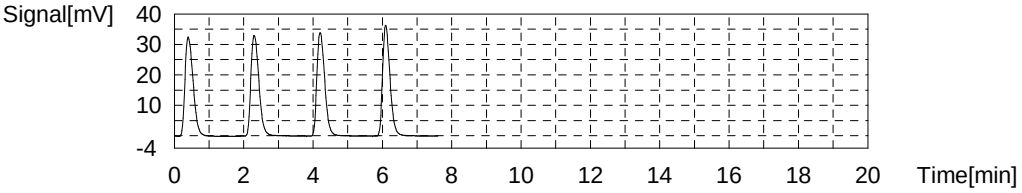
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:23.68mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	53.58	23.55mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 4:59:33 AM
2	53.83	23.66mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 5:01:36 AM
3	53.71	23.61mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 5:03:40 AM
4	54.34	23.89mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 5:05:44 AM

Mean Area 53.87
Mean Conc. 23.68mg/L



Sample

Sample Name: ccb
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

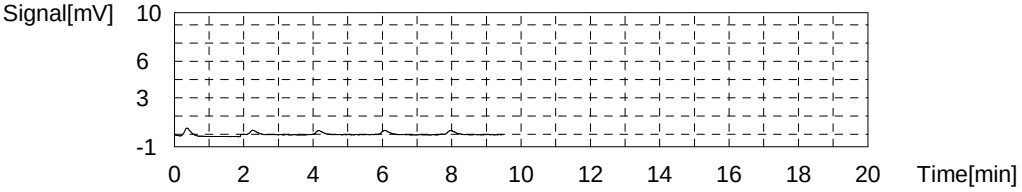
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1584mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.7726	0.2906mg/L	50uL	1	E	TOC3.2019_10_28_16_08_18.cal	11/5/2019 5:14:17 AM
2	0.4653	0.1552mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 5:16:20 AM
3	0.4486	0.1479mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 5:18:24 AM
4	0.4846	0.1637mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 5:20:28 AM
5	0.4917	0.1669mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 5:22:32 AM

Mean Area 0.4726
Mean Conc. 0.1584mg/L



Sample

Sample Name: 280-129990-D-2-H
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

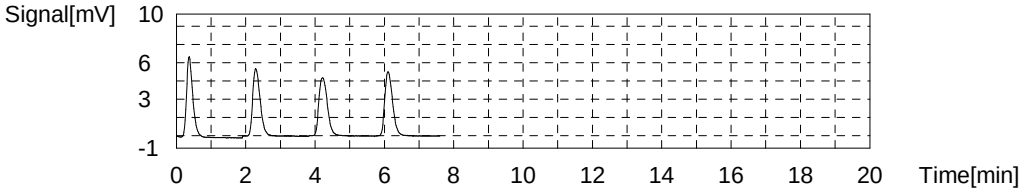
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:3.588mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.255	3.586mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 5:31:04 AM
2	8.324	3.617mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 5:33:07 AM
3	8.126	3.530mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 5:35:11 AM
4	8.325	3.617mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 5:37:15 AM

Mean Area 8.258
Mean Conc. 3.588mg/L



Sample

Sample Name: 280-129990-D-2-I MS
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

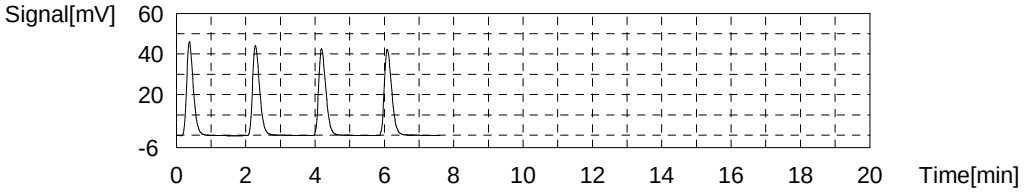
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:27.63mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	62.28	27.38mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 5:45:47 AM
2	63.50	27.92mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 5:47:51 AM
3	62.41	27.44mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 5:49:55 AM
4	63.19	27.78mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 5:51:59 AM

Mean Area 62.84
Mean Conc. 27.63mg/L



Sample

Sample Name: 280-129990-D-2-J MSD
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

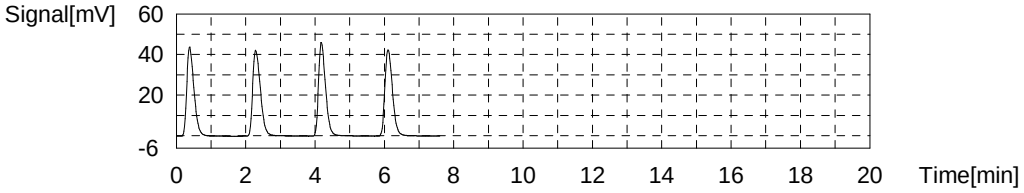
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:28.63mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	63.90	28.10mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 6:00:33 AM
2	66.19	29.11mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 6:02:36 AM
3	65.26	28.70mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 6:04:40 AM
4	65.13	28.64mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 6:06:44 AM

Mean Area 65.12
Mean Conc. 28.63mg/L



Sample

Sample Name: 280-129990-D-3-B
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

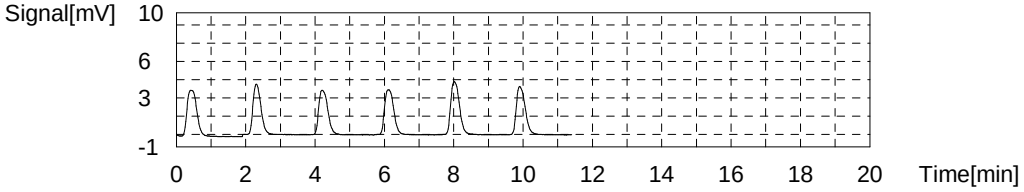
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.934mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.265	3.150mg/L	50uL	1	E	TOC3.2019_10_28_16_08_18.cal	11/5/2019 6:15:17 AM
2	6.629	2.870mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 6:17:21 AM
3	6.645	2.877mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 6:19:25 AM
4	6.777	2.935mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 6:21:29 AM
5	7.650	3.320mg/L	50uL	1	E	TOC3.2019_10_28_16_08_18.cal	11/5/2019 6:23:33 AM
6	7.041	3.052mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 6:25:37 AM

Mean Area 6.773
Mean Conc. 2.934mg/L



Sample

Sample Name: 280-129990-D-4-B
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

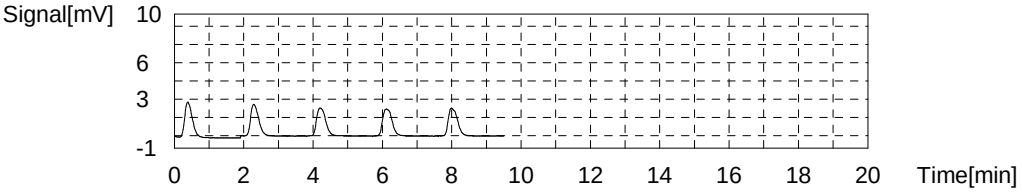
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:1.790mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.393	1.885mg/L	50uL	1	E	TOC3.2019_10_28_16_08_18.cal	11/5/2019 6:34:04 AM
2	4.201	1.801mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 6:36:07 AM
3	4.122	1.766mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 6:38:11 AM
4	4.200	1.800mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 6:40:15 AM
5	4.184	1.793mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 6:42:19 AM

Mean Area 4.177
Mean Conc. 1.790mg/L



Sample

Sample Name: 280-129990-D-5-B
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

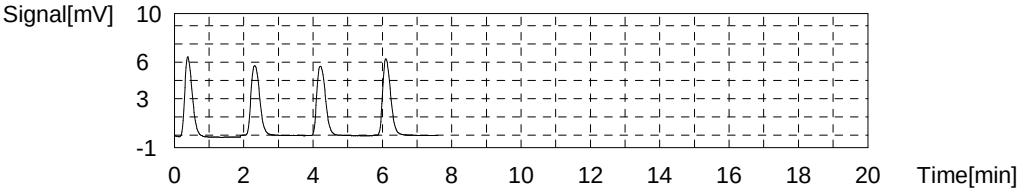
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:4.363mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.946	4.331mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 6:50:52 AM
2	10.12	4.408mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 6:52:55 AM
3	9.924	4.322mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 6:54:59 AM
4	10.08	4.390mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 6:57:03 AM

Mean Area 10.02
Mean Conc. 4.363mg/L



Sample

Sample Name: 280-129990-D-6-B
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

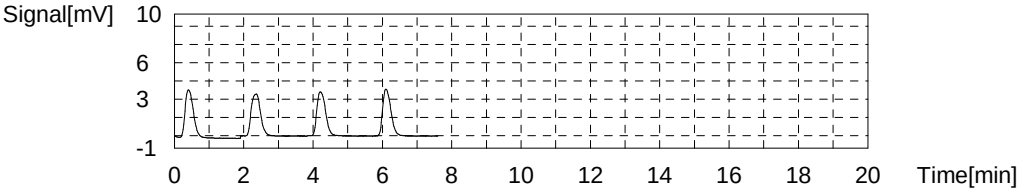
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.771mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.474	2.802mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 7:05:36 AM
2	6.419	2.778mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 7:07:40 AM
3	6.329	2.738mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 7:09:44 AM
4	6.393	2.766mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 7:11:48 AM

Mean Area 6.404
Mean Conc. 2.771mg/L



Sample

Sample Name: 0-129990-D-7-B
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

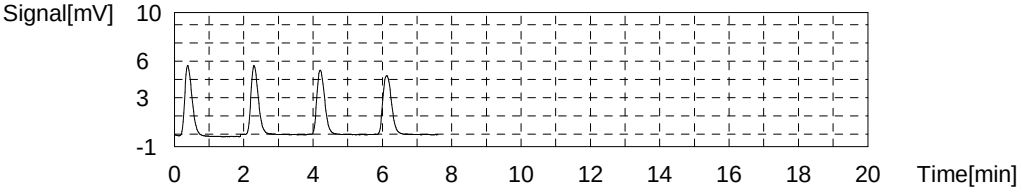
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:3.648mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.491	3.690mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 7:20:21 AM
2	8.423	3.660mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 7:22:25 AM
3	8.316	3.613mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 7:24:29 AM
4	8.347	3.627mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 7:26:33 AM

Mean Area 8.394
Mean Conc. 3.648mg/L



Sample

Sample Name: 280-129990-D-8-B
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

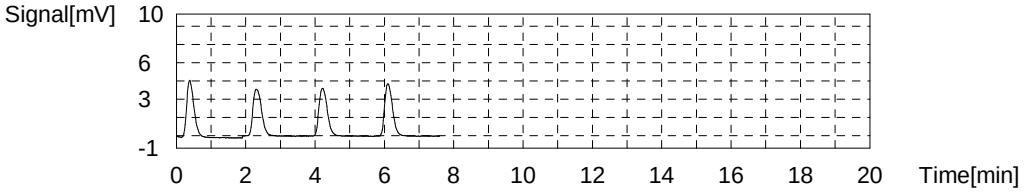
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.908mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.788	2.940mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 7:35:07 AM
2	6.663	2.885mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 7:37:10 AM
3	6.583	2.850mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 7:39:14 AM
4	6.821	2.955mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 7:41:18 AM

Mean Area 6.714
Mean Conc. 2.908mg/L



Sample

Sample Name: 280-129990-D-9-B
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

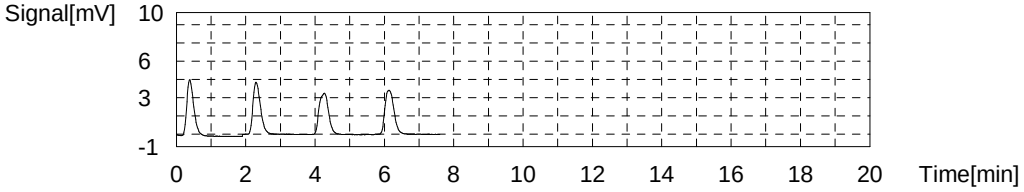
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:2.807mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.443	2.788mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 7:49:52 AM
2	6.506	2.816mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 7:51:55 AM
3	6.442	2.788mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 7:53:59 AM
4	6.555	2.838mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 7:56:03 AM

Mean Area 6.487
Mean Conc. 2.807mg/L



Sample

Sample Name: ccv
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

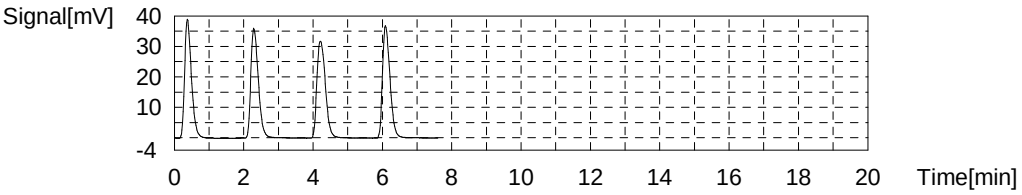
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.05mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	53.95	23.71mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 8:04:37 AM
2	54.57	23.99mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 8:06:40 AM
3	54.72	24.05mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 8:08:44 AM
4	55.57	24.43mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 8:10:48 AM

Mean Area 54.70
Mean Conc. 24.05mg/L



Sample

Sample Name: ccb
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

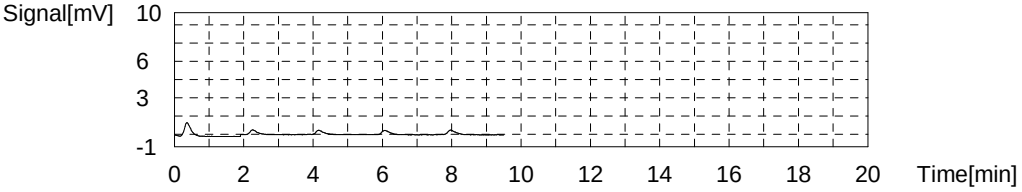
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1877mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1.405	0.5692mg/L	50uL	1	E	TOC3.2019_10_28_16_08_18.cal	11/5/2019 8:19:21 AM
2	0.5517	0.1933mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 8:21:25 AM
3	0.5061	0.1732mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 8:23:29 AM
4	0.5188	0.1788mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 8:25:33 AM
5	0.5794	0.2055mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 8:27:37 AM

Mean Area 0.5390
Mean Conc. 0.1877mg/L



Sample

Sample Name: 280-129990-D-10-B
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

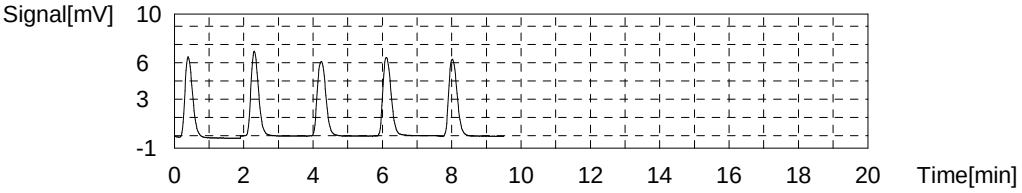
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:4.660mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	10.11	4.404mg/L	50uL	1	E	TOC3.2019_10_28_16_08_18.cal	11/5/2019 8:36:09 AM
2	10.65	4.641mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 8:38:13 AM
3	10.63	4.633mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 8:40:17 AM
4	10.75	4.685mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 8:42:21 AM
5	10.74	4.681mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 8:44:25 AM

Mean Area 10.69
Mean Conc. 4.660mg/L



Sample

Sample Name: 280-129990-D-11-B
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

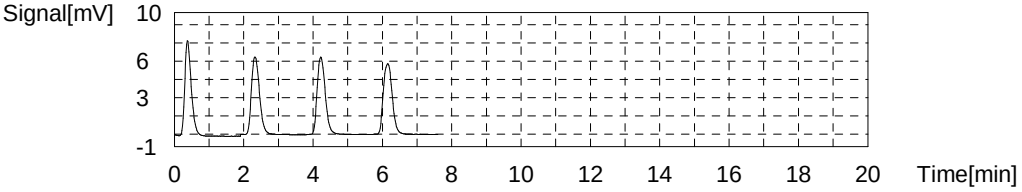
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:4.502mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	10.17	4.430mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 8:52:57 AM
2	10.39	4.527mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 8:55:01 AM
3	10.37	4.518mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 8:57:05 AM
4	10.40	4.531mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 8:59:09 AM

Mean Area 10.33
Mean Conc. 4.502mg/L



Sample

Sample Name: 280-127028-G-2_10x
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

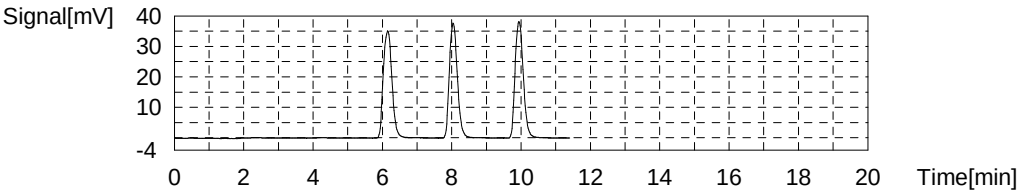
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	10.00	NPOC:67.42mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.1421	0.1287mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 9:07:43 AM
2	0.000	-0.4973mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 9:09:46 AM
3	0.1491	0.1595mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 9:11:50 AM
4	61.59	270.8mg/L	50uL	1	E	TOC3.2019_10_28_16_08_18.cal	11/5/2019 9:13:54 AM
5	61.38	269.9mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 9:15:58 AM
6	63.47	279.1mg/L	50uL	1	E	TOC3.2019_10_28_16_08_18.cal	11/5/2019 9:18:02 AM

Mean Area 15.42
Mean Conc. 67.42mg/L



Sample

Sample Name: 280-127028-G-2_50x
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

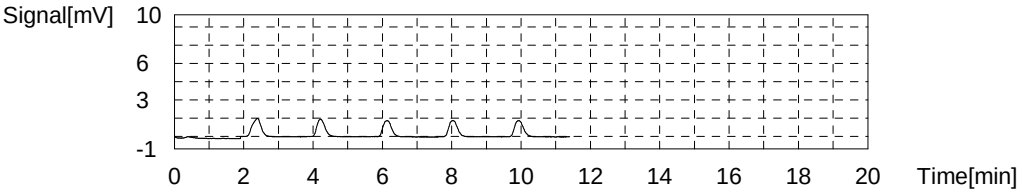
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	50.00	NPOC:47.84mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.1441	0.6874mg/L	50uL	1	E	TOC3.2019_10_28_16_08_18.cal	11/5/2019 9:26:29 AM
2	2.638	55.61mg/L	50uL	1	E	TOC3.2019_10_28_16_08_18.cal	11/5/2019 9:28:32 AM
3	2.286	47.86mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 9:30:36 AM
4	2.232	46.67mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 9:32:40 AM
5	2.307	48.32mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 9:34:44 AM
6	2.316	48.52mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 9:36:48 AM

Mean Area 2.285
Mean Conc. 47.84mg/L



Sample

Sample Name: 280-127028-F-4_10x
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

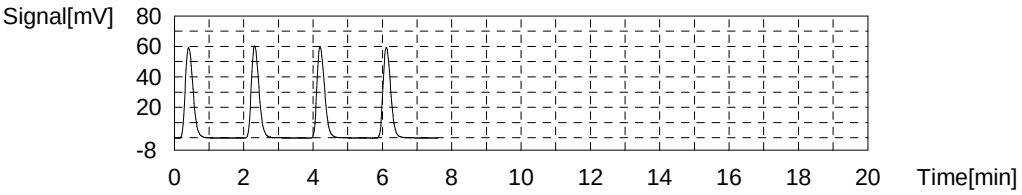
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	10.00	NPOC:408.3mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	93.37	410.8mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 9:45:15 AM
2	93.62	411.9mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 9:47:19 AM
3	92.27	405.9mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 9:49:23 AM
4	91.98	404.7mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 9:51:27 AM

Mean Area 92.81
Mean Conc. 408.3mg/L



Sample

Sample Name: 280-127028-F-4_50x
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

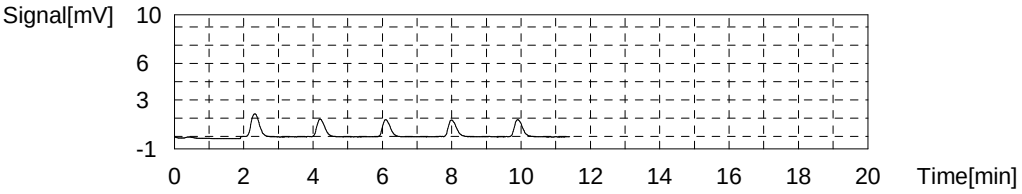
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	50.00	NPOC:46.47mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.1217	0.1940mg/L	50uL	1	E	TOC3.2019_10_28_16_08_18.cal	11/5/2019 10:00:00 AM
2	3.087	65.50mg/L	50uL	1	E	TOC3.2019_10_28_16_08_18.cal	11/5/2019 10:02:04 AM
3	2.282	47.77mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 10:04:08 AM
4	2.183	45.59mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 10:06:12 AM
5	2.188	45.70mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 10:08:16 AM
6	2.238	46.80mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 10:10:20 AM

Mean Area 2.223
Mean Conc. 46.47mg/L



Sample

Sample Name: 280-127028-G-4_10x
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

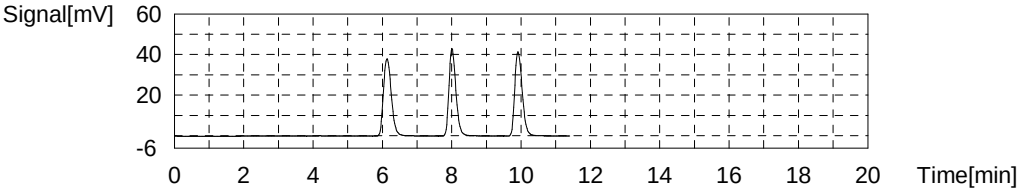
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	10.00	NPOC:66.10mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.000	-0.4973mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 10:18:46 AM
2	0.000	-0.4973mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 10:20:50 AM
3	0.000	-0.4973mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 10:22:54 AM
4	60.80	267.3mg/L	50uL	1	E	TOC3.2019_10_28_16_08_18.cal	11/5/2019 10:24:58 AM
5	60.48	265.9mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 10:27:02 AM
6	62.43	274.5mg/L	50uL	1	E	TOC3.2019_10_28_16_08_18.cal	11/5/2019 10:29:06 AM

Mean Area 15.12
Mean Conc. 66.10mg/L



Sample

Sample Name: 280-127028-G-4_50x
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

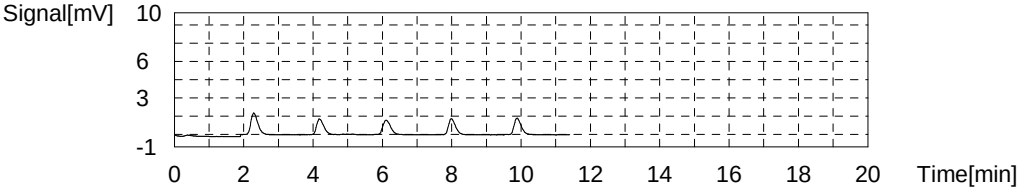
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	50.00	NPOC:38.45mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.1135	0.01342mg/L	50uL	1	E	TOC3.2019_10_28_16_08_18.cal	11/5/2019 10:37:32 AM
2	2.508	52.75mg/L	50uL	1	E	TOC3.2019_10_28_16_08_18.cal	11/5/2019 10:39:36 AM
3	1.862	38.52mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 10:41:40 AM
4	1.797	37.09mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 10:43:44 AM
5	1.849	38.24mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 10:45:48 AM
6	1.927	39.95mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 10:47:52 AM

Mean Area 1.859
Mean Conc. 38.45mg/L



Sample

Sample Name: ccv
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

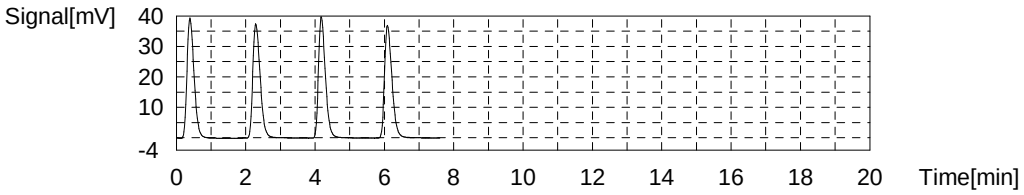
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:24.60mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	56.37	24.78mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 10:56:19 AM
2	56.19	24.70mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 10:58:23 AM
3	55.67	24.47mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 11:00:27 AM
4	55.57	24.43mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 11:02:31 AM

Mean Area 55.95
Mean Conc. 24.60mg/L



Sample

Sample Name: ccb
Sample ID:
Origin: NPOC.met
Status Completed
Chk. Result

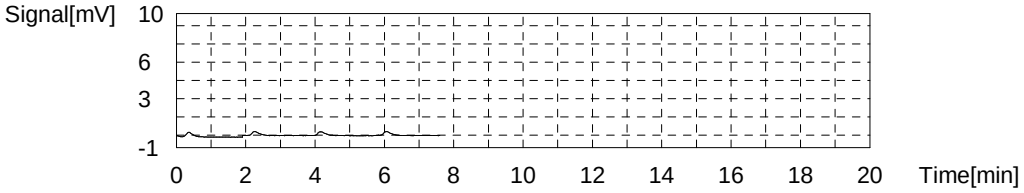
Type	Anal.	Manual Dilution	Result
Unknown	NPOC	1.000	NPOC:0.1477mg/L

1. Det

Anal.: NPOC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	0.4411	0.1446mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 11:11:05 AM
2	0.4721	0.1582mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 11:13:09 AM
3	0.4532	0.1499mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 11:15:13 AM
4	0.4260	0.1379mg/L	50uL	1		TOC3.2019_10_28_16_08_18.cal	11/5/2019 11:17:17 AM

Mean Area 0.4481
Mean Conc. 0.1477mg/L



order modified for analysis

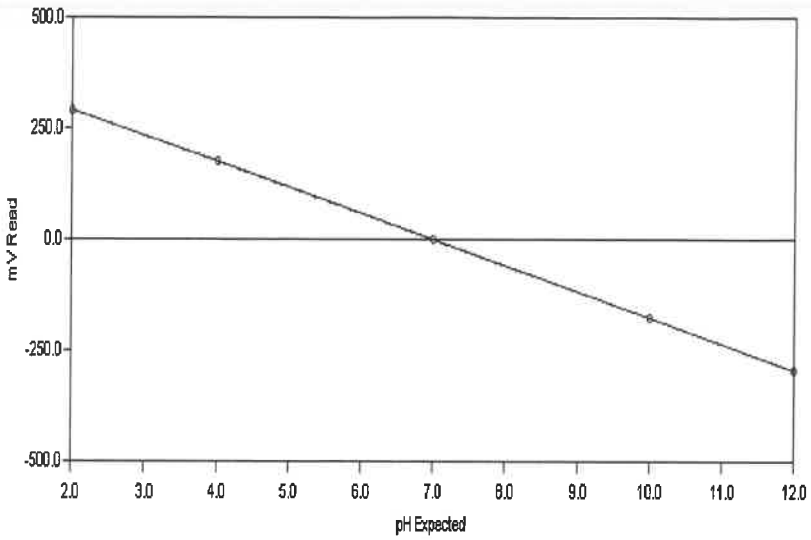
	Analysis	Sample Name	Manual Diluti	pH Result <2?	Notes	Status	Date / Time	Vial
1*	NPOC	icv	1.000	✓		Defined		1
2*	NPOC	icb	1.000	✓		Defined		2
3*	NPOC	LCS 280-475944/1-A	1.000	✓		Defined		3
4*	NPOC	MB 280-475944/2-A	1.000	✓		Defined		4
5*	NPOC	tic	1.000	✓		Defined		5
6*	NPOC	280-129830-D-3-A	1.000	?		Defined		6
7*	NPOC	280-129830-D-3-B MS	1.000	?		Defined		7
8*	NPOC	280-129830-D-3-C MSD	1.000	?		Defined		8
9*	NPOC	280-129794-F-1-A	1.000	?		Defined		9
10*	NPOC	280-129830-D-1-A	1.000	SCB 10/30/19 ~~6~~ ?		Defined		10
11*	NPOC	280-129830-D-2-A	1.000	?		Defined		11
12*	NPOC	280-129794-F-2-A	1.000	?		Defined		12
13*	NPOC	280-129794-F-3-A	1.000	?		Defined		13
14*	NPOC	280-129794-F-4-A	1.000	?		Defined		14
15*	NPOC	ccv	1.000	✓		Defined		15
16*	NPOC	ccb	1.000	✓		Defined		16
17*	NPOC	280-129794-F-5-A	1.000	?		Defined		17
18*	NPOC	280-129794-F-6-A	1.000	?		Defined		18
19*	NPOC	280-129857-F-1-A	1.000	?		Defined		19
20*	NPOC	280-129857-F-2-A	1.000	?		Defined		20
21*	NPOC	280-129857-F-2-B MS	1.000	?		Defined		21
22*	NPOC	280-129857-F-2-C MSD	1.000	?		Defined		22
23*	NPOC	280-129857-F-3-A	1.000	?		Defined		23
24*	NPOC	280-129857-F-4-A	1.000	?		Defined		24
25*	NPOC	280-129857-F-5-A	1.000	?		Defined		25
26*	NPOC	280-129936-D-1-A	1.000	?		Defined		26
27*	NPOC	ccv	1.000	✓		Defined		27
28*	NPOC	ccb	1.000	✓		Defined		28
29*	NPOC	280-129936-D-2-A	1.000	?		Defined		29
30*	NPOC	280-129936-D-3-A	1.000	?		Defined		30
31*	NPOC	280-129936-D-4-A	1.000	?		Defined		31
32*	NPOC	280-129936-D-5-A	1.000	?		Defined		32
33*	NPOC	280-129936-D-6-A	1.000	?		Defined		33
34*	NPOC	LCS 280-475944/27-A	1.000	✓		Defined		34
35*	NPOC	MB 280-475944/28-A	1.000	✓		Defined		35
36*	NPOC	tic	1.000	✓		Defined		36
37*	NPOC	280-129936-D-9-A	1.000	?		Defined		37
38*	NPOC	ms 280-129936-D-9-b	1.000	?		Defined		38
39*	NPOC	ccv	1.000	✓		Defined		39
40*	NPOC	ccb	1.000	✓		Defined		40
41*	NPOC	msd 280-129936-D-9-c	1.000	?		Defined		41
42*	NPOC	280-129936-D-7-A	1.000	?		Defined		42
43*	NPOC	280-129936-D-8-A	1.000	?		Defined		43
44*	NPOC	280-129936-D-10-A	1.000	?		Defined		44
45*	NPOC	280-129936-D-11-A	1.000	?		Defined		45
46*	NPOC	280-129936-D-12-A	1.000	?		Defined		46
47*	NPOC	280-129936-D-13-A	1.000	?		Defined		47
48*	NPOC	280-129936-D-14-A	1.000	?		Defined		48
49*	NPOC	280-~~129990-D-1-A~~ 936-15	1.000	?	~~removed~~	Defined		49
50*	NPOC	280-~~129990-D-2-A~~ 990-1	1.000	?	SCB 11/4/19	Defined		50
51*	NPOC	ccv SCB 10/30/19	1.000	✓		Defined		51

	Analysis	Sample Name	Manual Diluti	Result	Notes	Status	Date / Time	Vial
52*	NPOC	ccb	1.000	✓		Defined		52
53*	NPOC	280-129990-D-2-A	1.000	7		Defined		53
54*	NPOC	280-129990-D-2-B MS	1.000	7		Defined		54
55*	NPOC	280-129990-D-2-C MSD	1.000	7		Defined		55
56*	NPOC	280-129990-D-3-A	1.000	7		Defined		56
57*	NPOC	280-129990-D-4-A	1.000	5		Defined		57
58*	NPOC	280-129990-D-5-A	1.000	7		Defined		58
59*	NPOC	280-129990-D-6-A	1.000	7		Defined		59
60*	NPOC	280-129990-D-7-A	1.000	7		Defined		60
61*	NPOC	280-129990-D-8-A	1.000	7		Defined		61
62*	NPOC	280-129990-D-9-A	1.000	7		Defined		62
63*	NPOC	ccv	1.000	✓		Defined		63
64*	NPOC	ccb	1.000	✓		Defined		64
65*	NPOC	280-129990-D-10-A	1.000	7		Defined		65
66*	NPOC	280-129990-D-11-A	1.000	7		Defined		66
67*	NPOC	ccv	1.000	✓		Defined		67
68*	NPOC	ccb	1.000	✓		Defined		68

PC-TitratION PLUS
Calibration Report

Analyst: SG

Calibration Record # 1498



Calibration Settings

Calibration ID	PH	Date	10/24/2019	
Channel	1	Time	10:09 AM	
Probe Type	pH	Temperature	296.91 K	23.76 C
Probe ID	PH ELECTRODE	Analysis Type	Single Line Fit	

Calibration Results

Slope	-58.732	CorrCoeff	1.0000
Intercept	-1.050	Equation: Y = (-58.732) X + (-1.050)	

Calibration Validity **True** Operator

	Result	Minimum	Maximum
Slope	-58.732	-65.00	-53.00
Intercept	-1.050	-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	292.84
	4.00	175.41
	7.00	-1.83
	10.00	-177.49
	12.00	-294.18

PC-TitratION PLUS by Man-Tech Associates, Inc.
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Report Date: 10/24/2019 : 11:32 PM

Test America

Water Analysis Report

Analyst: SG

Run Number 4870 **Order Number** 20191024-2

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)
RINSE	10/24/2019	3:11 PM	23.89	-1.00	5.57	-1.00	-1.00	-1.00	.00	.15	.15	.00	.00	.00	.05	.09	.02
BUFFER 7	10/24/2019	3:28 PM	23.73	-1.00	6.97	-1.00	-1.00	-1.00	.00	.00	.00	.00	.00	.00	.00	.00	.02
INITIAL CHECK	10/24/2019	3:36 PM	23.46	-1.00	10.64	-1.00	-1.00	-1.00	101.63	203.65	.39	203.25	.00	2.54	5.09	-1.00	.02
LCS	10/24/2019	3:46 PM	23.28	-1.00	10.65	-1.00	-1.00	-1.00	103.48	206.12	.00	205.29	.84	2.59	5.15	-1.00	.02
LCSD	10/24/2019	3:55 PM	23.27	-1.00	10.65	-1.00	-1.00	-1.00	103.77	206.13	.00	204.70	1.42	2.59	5.15	-1.00	.02
MB	10/24/2019	4:03 PM	23.36	-1.00	8.44	-1.00	-1.00	-1.00	.00	1.73	1.73	.00	.00	.00	.09	.14	.02
280-129609-j-2	10/24/2019	4:12 PM	22.90	-1.00	8.23	-1.00	-1.00	-1.00	.00	345.49	345.49	.00	.00	.00	8.64	-1.00	.02
DU 280-129609-j-2	10/24/2019	4:23 PM	22.63	-1.00	8.27	-1.00	-1.00	-1.00	.00	362.13	362.13	.00	.00	.00	9.05	-1.00	.02
280-129609-j-3	10/24/2019	4:30 PM	22.55	-1.00	8.02	-1.00	-1.00	-1.00	.00	173.86	173.86	.00	.00	.00	4.35	-1.00	.02
280-129609-k-4	10/24/2019	4:38 PM	22.54	-1.00	7.86	-1.00	-1.00	-1.00	.00	146.81	146.81	.00	.00	.00	3.67	-1.00	.02
280-129609-k-5	10/24/2019	4:45 PM	22.55	-1.00	7.75	-1.00	-1.00	-1.00	.00	134.34	134.34	.00	.00	.00	3.36	-1.00	.02
280-129679-d-1	10/24/2019	4:55 PM	22.54	-1.00	7.04	-1.00	-1.00	-1.00	.00	406.29	406.29	.00	.00	.00	10.16	-1.00	.02
280-129679-e-3	10/24/2019	5:06 PM	22.77	-1.00	7.67	-1.00	-1.00	-1.00	.00	401.74	401.74	.00	.00	.00	10.04	-1.00	.02
280-129679-e-7	10/24/2019	5:14 PM	23.03	-1.00	7.92	-1.00	-1.00	-1.00	.00	258.56	258.56	.00	.00	.00	6.46	-1.00	.02
280-129679-e-8	10/24/2019	5:22 PM	22.60	-1.00	8.00	-1.00	-1.00	-1.00	.00	257.50	257.50	.00	.00	.00	6.44	-1.00	.02
280-129679-d-9	10/24/2019	5:31 PM	22.51	-1.00	7.95	-1.00	-1.00	-1.00	.00	263.87	263.87	.00	.00	.00	6.60	-1.00	.02
CCV	10/24/2019	5:41 PM	22.57	-1.00	10.61	-1.00	-1.00	-1.00	100.29	205.62	5.04	200.58	.00	2.51	5.14	-1.00	.02
CCB	10/24/2019	5:48 PM	22.55	-1.00	7.50	-1.00	-1.00	-1.00	.00	1.16	1.16	.00	.00	.00	.08	.13	.02
280-129679-e-10	10/24/2019	5:56 PM	22.52	-1.00	7.97	-1.00	-1.00	-1.00	.00	181.30	181.30	.00	.00	.00	4.53	-1.00	.02
280-129679-d-13	10/24/2019	6:06 PM	22.70	-1.00	7.63	-1.00	-1.00	-1.00	.00	427.54	427.54	.00	.00	.00	10.69	-1.00	.02
280-129679-d-16	10/24/2019	6:19 PM	23.20	-1.00	7.37	-1.00	-1.00	-1.00	.00	668.44	668.44	.00	.00	.00	16.71	-1.00	.02
280-129679-e-17	10/24/2019	6:28 PM	22.90	-1.00	8.07	-1.00	-1.00	-1.00	.00	277.27	277.27	.00	.00	.00	6.93	-1.00	.02
280-129679-e-19	10/24/2019	6:38 PM	22.66	-1.00	7.18	-1.00	-1.00	-1.00	.00	416.56	416.56	.00	.00	.00	10.41	-1.00	.02
280-129710-c-1	10/24/2019	6:54 PM	22.54	-1.00	7.99	-1.00	-1.00	-1.00	.00	.00	.00	.00	.00	.00	.00	.00	.02
280-129710-c-2	10/24/2019	7:10 PM	22.57	-1.00	8.31	-1.00	-1.00	-1.00	14.64	.00	-29.27	29.27	.00	.37	.00	.00	.02
280-129713-a-1	10/24/2019	7:18 PM	22.72	-1.00	7.66	-1.00	-1.00	-1.00	.00	41.52	41.52	.00	.00	.00	1.04	-1.00	.02
280-129713-a-2	10/24/2019	7:25 PM	22.77	-1.00	7.78	-1.00	-1.00	-1.00	.00	38.76	38.76	.00	.00	.00	.97	-1.00	.02

PC-TitratION PLUS by Man-Tech Associates, Inc.

GENERAL RESULTS REPORT.SRW

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Run Number 4870 **Order Number** 20191024-2

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)
280-129713-a-3	10/24/2019	7:33 PM	23.28	-1.00	7.84	-1.00	-1.00	-1.00	.00	51.54	51.54	.00	.00	.00	1.29	-1.00	.02
CCV	10/24/2019	7:42 PM	22.96	-1.00	10.54	-1.00	-1.00	-1.00	97.46	207.60	12.69	194.91	.00	2.44	5.19	-1.00	.02
CCB	10/24/2019	7:49 PM	22.81	-1.00	7.13	-1.00	-1.00	-1.00	.00	1.00	1.00	.00	.00	.00	.07	.12	.02
LCS	10/24/2019	7:58 PM	22.63	-1.00	10.54	-1.00	-1.00	-1.00	98.30	206.75	10.15	196.60	.00	2.46	5.17	-1.00	.02
LCSD	10/24/2019	8:08 PM	22.66	-1.00	10.55	-1.00	-1.00	-1.00	98.10	207.97	11.77	196.20	.00	2.45	5.20	-1.00	.02
MB	10/24/2019	8:15 PM	22.70	-1.00	7.42	-1.00	-1.00	-1.00	.00	.96	.96	.00	.00	.00	.07	.11	.02
280-129794-f-1	10/24/2019	8:24 PM	22.87	-1.00	7.56	-1.00	-1.00	-1.00	.00	339.47	339.47	.00	.00	.00	8.49	-1.00	.02
DU 280-129794-f-1	10/24/2019	8:33 PM	23.51	-1.00	7.59	-1.00	-1.00	-1.00	.00	339.40	339.40	.00	.00	.00	8.48	-1.00	.02
280-129794-f-2	10/24/2019	8:43 PM	23.17	-1.00	7.57	-1.00	-1.00	-1.00	.00	326.26	326.26	.00	.00	.00	8.16	-1.00	.02
280-129794-f-3	10/24/2019	8:51 PM	23.03	-1.00	7.42	-1.00	-1.00	-1.00	.00	304.35	304.35	.00	.00	.00	7.61	-1.00	.02
280-129794-f-4	10/24/2019	9:00 PM	22.87	-1.00	7.48	-1.00	-1.00	-1.00	.00	316.32	316.32	.00	.00	.00	7.91	-1.00	.02
280-129805-c-1	10/24/2019	9:09 PM	22.84	-1.00	7.97	-1.00	-1.00	-1.00	.00	198.24	198.24	.00	.00	.00	4.96	-1.00	.02
280-129805-c-2	10/24/2019	9:17 PM	22.87	-1.00	7.89	-1.00	-1.00	-1.00	.00	198.08	198.08	.00	.00	.00	4.95	-1.00	.02
280-129805-c-3	10/24/2019	9:24 PM	22.99	-1.00	8.06	-1.00	-1.00	-1.00	.00	190.25	190.25	.00	.00	.00	4.76	-1.00	.02
280-129830-f-1	10/24/2019	9:33 PM	23.46	-1.00	7.55	-1.00	-1.00	-1.00	.00	330.08	330.08	.00	.00	.00	8.25	-1.00	.02
280-129830-f-2	10/24/2019	9:43 PM	23.20	-1.00	7.55	-1.00	-1.00	-1.00	.00	322.44	322.44	.00	.00	.00	8.06	-1.00	.02
CCV	10/24/2019	9:52 PM	23.03	-1.00	10.49	-1.00	-1.00	-1.00	94.59	207.47	18.29	189.18	.00	2.36	5.19	-1.00	.02
CCB	10/24/2019	9:59 PM	23.07	-1.00	7.05	-1.00	-1.00	-1.00	.00	.85	.85	.00	.00	.00	.07	.12	.02
280-129830-f-3	10/24/2019	10:08 PM	23.01	-1.00	7.42	-1.00	-1.00	-1.00	.00	411.95	411.95	.00	.00	.00	10.30	-1.00	.02
280-129864-a-1	10/24/2019	10:25 PM	23.03	-1.00	7.37	-1.00	-1.00	-1.00	.00	.00	.00	.00	.00	.00	.00	.00	.02
280-129864-b-2	10/24/2019	10:32 PM	23.22	-1.00	6.48	-1.00	-1.00	-1.00	.00	3.80	3.80	.00	.00	.00	.15	.21	.02
280-129864-A-3	10/24/2019	10:44 PM	23.44	-1.00	7.15	-1.00	-1.00	-1.00	.00	540.38	540.38	.00	.00	.00	13.51	-1.00	.02
280-129864-b-4	10/24/2019	10:55 PM	23.33	-1.00	7.65	-1.00	-1.00	-1.00	.00	468.14	468.14	.00	.00	.00	11.70	-1.00	.02
280-129864-b-5	10/24/2019	11:07 PM	23.25	-1.00	7.25	-1.00	-1.00	-1.00	.00	580.86	580.86	.00	.00	.00	14.52	-1.00	.02
280-129914-b-2	10/24/2019	11:14 PM	23.19	-1.00	8.30	-1.00	-1.00	-1.00	.64	225.43	224.16	1.27	.00	.02	5.64	-1.00	.02
CCV	10/24/2019	11:24 PM	23.22	-1.00	10.42	-1.00	-1.00	-1.00	91.25	208.93	26.44	182.50	.00	2.28	5.22	-1.00	.02
CCB	10/24/2019	11:31 PM	23.22	-1.00	6.75	-1.00	-1.00	-1.00	.00	.93	.93	.00	.00	.00	.07	.11	.02

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Shipping and Receiving Documents

AECOM
12120 Shamrock Plaza Suite 300, Omaha, NE 68154 (402) 334-8181 Fax (402) 334-1984

CHAIN OF CUSTODY RECORD

Project Name: CHAAP 2019	AECOM Project Number: 60565355
Project Location: Grand Island, Nebraska	AECOM Project Manager: Dean Converse
Sampler(s): RH, TY	

Bill to: Brice Engineering

Remarks: standard TAT

Sample Date	Sample Time	Type Comp.	Type Grab	Sample Identification	Matrix	Containers No.	Containers Type	Explosives+MNX (8330A)	TKN (351.2), NH_3 (350.1), NO_2, NO_3 (353.2)	SO_4 (9056A), Alkalinity (2320B)	Sulfide (9034)	DOC (9060A)*	Methane (RSK 175)	
10-16-19	1045		X	EW7-PM23A-1-25	H_2O	9	ABCDEF	X	X	X	X	X	X	6°C
↓	1250		↓	EW7-PM25A-1-25	↓	↓	↓	X	X	X	X	X	X	

280-129830 Chain of Custody

Signatures	Date	Time	Shipping Details	Special Instructions
Relinquished by:	10/16/19	1700	Method of Shipment: Federal Express	* Filter groundwater sample before analyzing for DOC
Received by:	10/17/19	0915	Airbill Number: 8092 4626 7594	(A) (2) 500mL Ambers (Explosives) (B) (1) 500mL HDPE w/ H_2SO_4 (TKN, NH_3, NO_2/NO_3) (C) (1) 250mL HDPE (SO_4, Alkalinity) (D) (1) 250mL HDPE w/ ZnOAc/NaOH (Sulfide) (E) (1) 250mL Amber (DOC)* (F) (3) 40 mL VOA w/ HCl (Methane)
Relinquished by:			**Lab Address:** TestAmerica Lab, Inc. Attn: Patrick McEntee 4955 Yarrow St. Arvada, CO 80002 (303) 736-0107	TAL/Brice Project #: 28017805
Received for Laboratory by:				

4.3, 2.8 IRBCFO 1700/19 (AW)

White copy - Laboratory Yellow copy - Laboratory Pink copy - Sampler

2019501

AECOM
12120 Shamrock Plaza Suite 300, Omaha, NE 68154 (402) 334-8181 Fax (402) 334-1984

CHAIN OF CUSTODY RECORD

Project Name: CHAAP 2019	AECOM Project Number: 60565355
Project Location: Grand Island, Nebraska	AECOM Project Manager: Dean Converse
Sampler(s): RH, TY	

Bill to: Brice Engineering

Remarks: standard TAT

Sample Date	Sample Time	Type Comp.	Type Grab	Sample Identification	Matrix	Containers No.	Containers Type	Explosives+MNX (8330A)	TKN (351.2), NH_3 (350.1), NO_2+NO_3 (353.2)	SO_4 (9056A), Alkalinity (2320B)	Sulfide (9034)	DOC (9060A)*	Methane (RSK 175)		Remarks
10-16-19	1455		X	EW7-PM25B-1-35	H_2O	27	ABCDEF	X	X	X	X	X	X		6°C + MS/MSD

Analytical Parameters

Signatures	Date	Time	Shipping Details	Special Instructions
Relinquished by:	10/16/19	1700	Method of Shipment: Federal Express	* Filter groundwater sample before analyzing for DOC
Received by:	17Oct19	0915	Airbill Number: 8092 4626 7594	(A) (2) 500mL Ambers (Explosives) (B) (1) 500mL HDPE w/ H_2SO_4 (TKN, NH_3, NO_2/NO_3) (C) (1) 250mL HDPE (SO_4, Alkalinity) (D) (1) 250mL HDPE w/ ZnOAc/NaOH (Sulfide) (E) (1) 250mL Amber (DOC)* (F) (3) 40 mL VOA w/ HCl (Methane)
Relinquished by:			**Lab Address:** TestAmerica Lab, Inc. Attn: Patrick McEntee 4955 Yarrow St. Arvada, CO 80002 (303) 736-0107	TAL/Brice Project #: 28017805
Received for Laboratory by:				

White copy - Laboratory Yellow copy - Laboratory Pink copy - Sampler

2019503

ORIGIN ID:GRIA (402) 334-8181
RYAN HEROLD
URS GCP
12120 SHAMROCK PLZ STE 100

OMAHA, NE 68154
UNITED STATES US

SHIP DATE: 16OCT19
ACTWGT: 39.00 LB
CAD: 6994183/SSFE2021
DIMS: 24x13x13 IN

BILL THIRD PARTY

TO **SAMPLE RECEIVER**
TEST AMERICA
4955 YARROW ST

ARVADA CO 80002
(303) 736-0110

INV:
PO:
REF:
DEPT:

567J3/2A3C/0562

FedEx Express

1 of 2

TRK# 0201 **7803 1017 9241**

THU - 17 OCT 10:30A
PRIORITY OVERNIGHT

MASTER

XH WHHA

80002
CO-US **DEN**

280-129830 Waybill

Align Open End of FedEx Pouch Here

ORIGIN ID
RYAN
URS
1212

SHIP DATE: 16OCT19
ACTWGT: 39.00 LB
CAD: 6994183/SSFE2021
DIMS: 24x13x13 IN

BILL THIRD PARTY

ORIGIN ID:GRIA (402) 334-8181
RYAN HEROLD
URS GCP
12120 SHAMROCK PLZ STE 100

OMAHA, NE 68154
UNITED STATES US

SHIP DATE: 16OCT19
ACTWGT: 49.00 LB
CAD: 6994183/SSFE2021
DIMS: 24x13x13 IN

BILL THIRD PARTY

567J3/2A3C/05A2

TO **SAMPLE RECEIVER**
TEST AMERICA
4955 YARROW ST

ARVADA CO 80002
(303) 736-0110 REF:
INV: DEPT:
PO:

FedEx Express

J192119091901uv

THU - 17 OCT 10:30A
PRIORITY OVERNIGHT

2 of 2
MPS# 0263 **7803 1017 9252**
Mstr# 7803 1017 9241 0201

XH WHHA

80002
CO-US **DEN**

567J3/2A3C/05A2

FedEx Express

J192119091901uv

I - 17 OCT 10:30A
ORITY OVERNIGHT

80002
CO-US **DEN**

Align Open End of FedEx Pouch Here

Login Sample Receipt Checklist

Client: Brice Environmental Services, Corp

Job Number: 280-129830-1

Login Number: 129830
List Number: 1
Creator: Muniz, Ashley T

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.	True	
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	