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ANALYTICAL REPORT

PREPARED FOR

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JOB DESCRIPTION

RVAAP FWGW Spring 2023

JOB NUMBER

280-176268-1

Eurofins Denver
4955 Yarrow Street
Arvada CO 80002

See page two for job notes and contact information.

my EOL

Eurofins Denver

Job Notes

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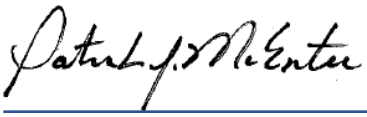

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Qualifiers

HPLC/IC

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
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.

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
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

CASE NARRATIVE

Client: Leidos, Inc.

Project: RVAAP FWGW Spring 2023

Report Number: 280-176268-1

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 5/10/2023 9:50 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.9º C.

EXPLOSIVES (HPLC)

Samples LL1mw-090-230301-GW (280-176268-1), LL1mw-091-230301-GW (280-176268-2), FWG-003-230301-ER (280-176268-3) and FWG-003-230301-FB (280-176268-4) were analyzed for Explosives (HPLC) in accordance with 8330B. The samples were prepared on 05/12/2023 and 05/18/2023 and analyzed on 05/15/2023, 05/16/2023 and 05/19/2023.

The laboratory control sample (LCS) for preparation batch 280-612937 and analytical batch 280-613045 recovered outside control limits for the following analytes:m-Nitrotoluene(73-125%R) at 72%R. The LCS recovered within control limit in the confirmation instrument. m-Nitrotoluene is ND in both primary and confirmation instrument. The associated samples are impacted: LL1mw-090-230301-GW (280-176268-1), LL1mw-091-230301-GW (280-176268-2), FWG-003-230301-ER (280-176268-3) and FWG-003-230301-FB (280-176268-4).

The following samples LL1mw-090-230301-GW (280-176268-1), LL1mw-091-230301-GW (280-176268-2), FWG-003-230301-ER (280-176268-3) and FWG-003-230301-FB (280-176268-4) in preparation batch 280-612937 and analytical batch 280-613045 are re-extraction due to LCS failure in the original extraction. m-Nitrotoluene and p-Nitrotoluene confirmed original ND result and are reported as secondary with RE suffix.

Surrogate recovery for the following sample in preparation batch 280-612275 and 280-612937 and analytical batch 280-612440 was outside the upper control limits: LL1mw-090-230301-GW (280-176268-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed. Surrogate recovered within control limit in the confirmation instrument.

The %RPD between the primary and confirmation column exceeded 40% for RDX for the following samples: LL1mw-091-230301-GW (280-176268-2), FWG-003-230301-ER (280-176268-3) and FWG-003-230301-FB (280-176268-4) in preparation batch 280-612275 and analytical batch 280-612440. The results from both columns has been qualified and reported in accordance with the laboratory's QAS.

In preparation batch 280-612275, the following sample required filtration to reduce matrix interferences: LL1mw-091-230301-GW (280-176268-2).

In preparation batch 280-612937, the following sample required filtration to reduce matrix interferences: LL1mw-091-230301-GW (280-176268-2).

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

Detection Summary

Client: Leidos, Inc.
Job ID: 280-176268-1
Project/Site: RVAAP FWGW Spring 2023

Client Sample ID: LL1mw-090-230301-GW
Lab Sample ID: 280-176268-1

No Detections.

Client Sample ID: LL1mw-091-230301-GW
Lab Sample ID: 280-176268-2

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
RDX	2.0	J1	0.21	0.20	0.052	ug/L	1		8330B	Total/NA
RDX	0.42	J1	0.21	0.20	0.052	ug/L	1		8330B	Total/NA

Client Sample ID: FWG-003-230301-ER
Lab Sample ID: 280-176268-3

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
RDX	0.13	J J1	0.22	0.21	0.053	ug/L	1		8330B	Total/NA
RDX	0.53	J1	0.22	0.21	0.053	ug/L	1		8330B	Total/NA

Client Sample ID: FWG-003-230301-FB
Lab Sample ID: 280-176268-4

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
RDX	0.16	J J1	0.21	0.20	0.052	ug/L	1		8330B	Total/NA
RDX	0.55	J1	0.21	0.20	0.052	ug/L	1		8330B	Total/NA

This Detection Summary does not include radiochemical test results.

Method: EPA 8330B - Nitroaromatics and Nitramines (HPLC)

Client Sample ID: LL1mw-090-230301-GW
Lab Sample ID: 280-176268-1
Date Collected: 05/09/23 15:03
Matrix: Water
Date Received: 05/10/23 09:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.20	U Q	0.21	0.20	0.084	ug/L		05/15/23 18:15	1
1,3-Dinitrobenzene	0.099	U M Q	0.11	0.099	0.037	ug/L		05/15/23 18:15	1
2,4,6-Trinitrotoluene	0.099	U M Q	0.11	0.099	0.045	ug/L		05/15/23 18:15	1
2,4-Dinitrotoluene	0.080	U Q	0.099	0.080	0.027	ug/L		05/15/23 18:15	1
2,6-Dinitrotoluene	0.080	U Q	0.099	0.080	0.040	ug/L		05/15/23 18:15	1
2-Amino-4,6-dinitrotoluene	0.099	U M Q	0.11	0.099	0.050	ug/L		05/15/23 18:15	1
2-Nitrotoluene	0.20	U Q	0.21	0.20	0.085	ug/L		05/15/23 18:15	1
3-Nitrotoluene	0.35	U Q M	0.40	0.35	0.19	ug/L		05/15/23 18:15	1
4-Amino-2,6-dinitrotoluene	0.12	U Q	0.15	0.12	0.057	ug/L		05/15/23 18:15	1
4-Nitrotoluene	0.40	U Q	0.41	0.40	0.099	ug/L		05/15/23 18:15	1
HMX	0.20	U	0.21	0.20	0.087	ug/L		05/16/23 21:58	1
Nitrobenzene	0.20	U M Q	0.21	0.20	0.091	ug/L		05/15/23 18:15	1
Nitroglycerin	2.0	U Q	2.1	2.0	0.92	ug/L		05/15/23 18:15	1
PETN	0.99	U Q	1.1	0.99	0.44	ug/L		05/15/23 18:15	1
RDX	0.20	U M Q	0.21	0.20	0.051	ug/L		05/15/23 18:15	1
Tetryl	0.099	U M Q	0.11	0.099	0.032	ug/L		05/15/23 18:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene	*125*	*M Q*	*83 - 119*	*05/12/23 15:04*	*05/15/23 18:15*	*1*
1,2-Dinitrobenzene	*101*		*83 - 119*	*05/12/23 15:04*	*05/16/23 21:58*	*1*

Client Sample ID: LL1mw-091-230301-GW
Lab Sample ID: 280-176268-2
Date Collected: 05/09/23 11:36
Matrix: Water
Date Received: 05/10/23 09:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.20	U	0.21	0.20	0.086	ug/L		05/15/23 18:38	1
1,3-Dinitrobenzene	0.10	U M	0.11	0.10	0.038	ug/L		05/15/23 18:38	1
2,4,6-Trinitrotoluene	0.10	U	0.11	0.10	0.046	ug/L		05/15/23 18:38	1
2,4-Dinitrotoluene	0.081	U	0.10	0.081	0.028	ug/L		05/15/23 18:38	1
2,6-Dinitrotoluene	0.081	U	0.10	0.081	0.041	ug/L		05/15/23 18:38	1
2-Amino-4,6-dinitrotoluene	0.10	U	0.11	0.10	0.052	ug/L		05/15/23 18:38	1
2-Nitrotoluene	0.20	U M	0.21	0.20	0.087	ug/L		05/15/23 18:38	1
3-Nitrotoluene	0.36	U Q	0.41	0.36	0.20	ug/L		05/15/23 18:38	1
4-Amino-2,6-dinitrotoluene	0.12	U	0.15	0.12	0.059	ug/L		05/15/23 18:38	1
4-Nitrotoluene	0.41	U Q	0.42	0.41	0.10	ug/L		05/15/23 18:38	1
HMX	0.20	U	0.21	0.20	0.089	ug/L		05/16/23 22:34	1
Nitrobenzene	0.20	U	0.21	0.20	0.093	ug/L		05/15/23 18:38	1
Nitroglycerin	2.0	U	2.1	2.0	0.94	ug/L		05/15/23 18:38	1
PETN	1.0	U	1.1	1.0	0.46	ug/L		05/15/23 18:38	1
RDX	**2.0**	**J1**	0.21	0.20	0.052	ug/L		05/15/23 18:38	1
RDX	**0.42**	**J1**	0.21	0.20	0.052	ug/L		05/16/23 22:34	1
Tetryl	0.10	U	0.11	0.10	0.032	ug/L		05/15/23 18:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene	*95*		*83 - 119*	*05/12/23 15:04*	*05/15/23 18:38*	*1*
1,2-Dinitrobenzene	*99*		*83 - 119*	*05/12/23 15:04*	*05/16/23 22:34*	*1*

Method: EPA 8330B - Nitroaromatics and Nitramines (HPLC)

Client Sample ID: FWG-003-230301-ER
Lab Sample ID: 280-176268-3
Date Collected: 05/09/23 14:42
Matrix: Water
Date Received: 05/10/23 09:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.21	U	0.22	0.21	0.086	ug/L		05/15/23 19:01	1
1,3-Dinitrobenzene	0.10	U	0.11	0.10	0.038	ug/L		05/15/23 19:01	1
2,4,6-Trinitrotoluene	0.10	U	0.11	0.10	0.046	ug/L		05/15/23 19:01	1
2,4-Dinitrotoluene	0.082	U	0.10	0.082	0.028	ug/L		05/15/23 19:01	1
2,6-Dinitrotoluene	0.082	U	0.10	0.082	0.041	ug/L		05/15/23 19:01	1
2-Amino-4,6-dinitrotoluene	0.10	U	0.11	0.10	0.052	ug/L		05/15/23 19:01	1
2-Nitrotoluene	0.21	U	0.22	0.21	0.088	ug/L		05/15/23 19:01	1
3-Nitrotoluene	0.36	U Q	0.41	0.36	0.20	ug/L		05/15/23 19:01	1
4-Amino-2,6-dinitrotoluene	0.12	U	0.15	0.12	0.059	ug/L		05/15/23 19:01	1
4-Nitrotoluene	0.41	U Q	0.42	0.41	0.10	ug/L		05/15/23 19:01	1
HMX	0.21	U	0.22	0.21	0.090	ug/L		05/15/23 19:01	1
Nitrobenzene	0.21	U	0.22	0.21	0.094	ug/L		05/15/23 19:01	1
Nitroglycerin	2.1	U	2.2	2.1	0.95	ug/L		05/15/23 19:01	1
PETN	1.0	U	1.1	1.0	0.46	ug/L		05/15/23 19:01	1
RDX	**0.13**	**J J1**	0.22	0.21	0.053	ug/L		05/15/23 19:01	1
RDX	**0.53**	**J1**	0.22	0.21	0.053	ug/L		05/16/23 23:10	1
Tetryl	0.10	U	0.11	0.10	0.033	ug/L		05/15/23 19:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene	*95*	*M*	*83 - 119*	*05/12/23 15:04*	*05/15/23 19:01*	*1*
1,2-Dinitrobenzene	*91*		*83 - 119*	*05/12/23 15:04*	*05/16/23 23:10*	*1*

Client Sample ID: FWG-003-230301-FB
Lab Sample ID: 280-176268-4
Date Collected: 05/09/23 08:15
Matrix: Water
Date Received: 05/10/23 09:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.20	U	0.21	0.20	0.085	ug/L		05/15/23 19:23	1
1,3-Dinitrobenzene	0.10	U	0.11	0.10	0.037	ug/L		05/15/23 19:23	1
2,4,6-Trinitrotoluene	0.10	U	0.11	0.10	0.046	ug/L		05/15/23 19:23	1
2,4-Dinitrotoluene	0.081	U	0.10	0.081	0.028	ug/L		05/15/23 19:23	1
2,6-Dinitrotoluene	0.081	U	0.10	0.081	0.041	ug/L		05/15/23 19:23	1
2-Amino-4,6-dinitrotoluene	0.10	U	0.11	0.10	0.051	ug/L		05/15/23 19:23	1
2-Nitrotoluene	0.20	U	0.21	0.20	0.086	ug/L		05/15/23 19:23	1
3-Nitrotoluene	0.35	U Q	0.40	0.35	0.20	ug/L		05/15/23 19:23	1
4-Amino-2,6-dinitrotoluene	0.12	U	0.15	0.12	0.058	ug/L		05/15/23 19:23	1
4-Nitrotoluene	0.40	U Q	0.41	0.40	0.10	ug/L		05/15/23 19:23	1
HMX	0.20	U	0.21	0.20	0.089	ug/L		05/15/23 19:23	1
Nitrobenzene	0.20	U	0.21	0.20	0.092	ug/L		05/15/23 19:23	1
Nitroglycerin	2.0	U	2.1	2.0	0.93	ug/L		05/15/23 19:23	1
PETN	1.0	U	1.1	1.0	0.45	ug/L		05/15/23 19:23	1
RDX	**0.16**	**J J1**	0.21	0.20	0.052	ug/L		05/15/23 19:23	1
RDX	**0.55**	**J1**	0.21	0.20	0.052	ug/L		05/16/23 23:46	1
Tetryl	0.10	U	0.11	0.10	0.032	ug/L		05/15/23 19:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene	*104*	*M*	*83 - 119*	*05/12/23 15:04*	*05/15/23 19:23*	*1*
1,2-Dinitrobenzene	*99*		*83 - 119*	*05/12/23 15:04*	*05/16/23 23:46*	*1*

Method: EPA 8330B - Nitroaromatics and Nitramines (HPLC) - RE

Client Sample ID: LL1mw-090-230301-GW **Lab Sample ID: 280-176268-1**
Date Collected: 05/09/23 15:03 **Matrix: Water**
Date Received: 05/10/23 09:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
3-Nitrotoluene	0.35	U M H	0.40	0.35	0.19	ug/L		05/19/23 17:55	1
4-Nitrotoluene	0.40	U H M Q	0.41	0.40	0.099	ug/L		05/19/23 00:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene	*152*	*M Q*	*83 - 119*	*05/18/23 13:20*	*05/19/23 00:27*	*1*
1,2-Dinitrobenzene	*104*	*M*	*83 - 119*	*05/18/23 13:20*	*05/19/23 17:55*	*1*

Client Sample ID: LL1mw-091-230301-GW **Lab Sample ID: 280-176268-2**
Date Collected: 05/09/23 11:36 **Matrix: Water**
Date Received: 05/10/23 09:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
3-Nitrotoluene	0.35	U H	0.40	0.35	0.20	ug/L		05/19/23 18:31	1
4-Nitrotoluene	0.40	U H	0.41	0.40	0.10	ug/L		05/19/23 00:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene	*95*		*83 - 119*	*05/18/23 13:20*	*05/19/23 00:49*	*1*
1,2-Dinitrobenzene	*103*		*83 - 119*	*05/18/23 13:20*	*05/19/23 18:31*	*1*

Client Sample ID: FWG-003-230301-ER **Lab Sample ID: 280-176268-3**
Date Collected: 05/09/23 14:42 **Matrix: Water**
Date Received: 05/10/23 09:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
3-Nitrotoluene	0.36	U H	0.41	0.36	0.20	ug/L		05/19/23 19:06	1
4-Nitrotoluene	0.41	U H	0.42	0.41	0.10	ug/L		05/19/23 01:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene	*105*	*M*	*83 - 119*	*05/18/23 13:20*	*05/19/23 01:12*	*1*
1,2-Dinitrobenzene	*102*		*83 - 119*	*05/18/23 13:20*	*05/19/23 19:06*	*1*

Client Sample ID: FWG-003-230301-FB **Lab Sample ID: 280-176268-4**
Date Collected: 05/09/23 08:15 **Matrix: Water**
Date Received: 05/10/23 09:50

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
3-Nitrotoluene	0.35	U H	0.40	0.35	0.20	ug/L		05/19/23 19:42	1
4-Nitrotoluene	0.40	U H	0.41	0.40	0.10	ug/L		05/19/23 01:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene	*107*	*M*	*83 - 119*	*05/18/23 13:20*	*05/19/23 01:35*	*1*
1,2-Dinitrobenzene	*103*		*83 - 119*	*05/18/23 13:20*	*05/19/23 19:42*	*1*

Default Detection Limits

Client: Leidos, Inc.
Project/Site: RVAAP FWGW Spring 2023

Job ID: 280-176268-1

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Prep: 3535

Analyte	LOQ	DL	Units
1,3,5-Trinitrobenzene	0.21	0.084	ug/L
1,3-Dinitrobenzene	0.11	0.037	ug/L
2,4,6-Trinitrotoluene	0.11	0.045	ug/L
2,4-Dinitrotoluene	0.10	0.027	ug/L
2,6-Dinitrotoluene	0.10	0.040	ug/L
2-Amino-4,6-dinitrotoluene	0.11	0.051	ug/L
2-Nitrotoluene	0.21	0.086	ug/L
3-Nitrotoluene	0.40	0.20	ug/L
4-Amino-2,6-dinitrotoluene	0.15	0.058	ug/L
4-Nitrotoluene	0.41	0.10	ug/L
HMX	0.21	0.088	ug/L
Nitrobenzene	0.21	0.091	ug/L
Nitroglycerin	2.1	0.92	ug/L
PETN	1.1	0.45	ug/L
RDX	0.21	0.052	ug/L
Tetryl	0.11	0.032	ug/L

Surrogate Summary

Client: Leidos, Inc.
Project/Site: RVAAP FWGW Spring 2023

Job ID: 280-176268-1

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	12DNB1 (83-119)
280-176268-1	LL1mw-090-230301-GW	125 M Q
280-176268-1 - RE	LL1mw-090-230301-GW	152 M Q
280-176268-2	LL1mw-091-230301-GW	95
280-176268-2 - RE	LL1mw-091-230301-GW	95
280-176268-3	FWG-003-230301-ER	95 M
280-176268-3 - RE	FWG-003-230301-ER	105 M
280-176268-4	FWG-003-230301-FB	104 M
280-176268-4 - RE	FWG-003-230301-FB	107 M
LCS 280-612275/2-A	Lab Control Sample	94
LCS 280-612937/2-A	Lab Control Sample	104
LCSD 280-612275/3-A	Lab Control Sample Dup	98
LCSD 280-612937/3-A	Lab Control Sample Dup	102
MB 280-612275/1-A	Method Blank	105
MB 280-612937/1-A	Method Blank	106 M

Surrogate Legend

12DNB = 1,2-Dinitrobenzene

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	12DNB2 (83-119)
280-176268-1	LL1mw-090-230301-GW	101
280-176268-1 - RE	LL1mw-090-230301-GW	104 M
280-176268-2	LL1mw-091-230301-GW	99
280-176268-2 - RE	LL1mw-091-230301-GW	103
280-176268-3	FWG-003-230301-ER	91
280-176268-3 - RE	FWG-003-230301-ER	102
280-176268-4	FWG-003-230301-FB	99
280-176268-4 - RE	FWG-003-230301-FB	103

Surrogate Legend

12DNB = 1,2-Dinitrobenzene

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Lab Sample ID: MB 280-612275/1-A
Matrix: Water
Analysis Batch: 612440

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 612275

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.20	U	0.21	0.20	0.084	ug/L		05/15/23 16:20	1
1,3-Dinitrobenzene	0.10	U	0.11	0.10	0.037	ug/L		05/15/23 16:20	1
2,4,6-Trinitrotoluene	0.10	U	0.11	0.10	0.045	ug/L		05/15/23 16:20	1
2,4-Dinitrotoluene	0.080	U	0.10	0.080	0.027	ug/L		05/15/23 16:20	1
2,6-Dinitrotoluene	0.080	U	0.10	0.080	0.040	ug/L		05/15/23 16:20	1
2-Amino-4,6-dinitrotoluene	0.10	U	0.11	0.10	0.051	ug/L		05/15/23 16:20	1
2-Nitrotoluene	0.20	U	0.21	0.20	0.086	ug/L		05/15/23 16:20	1
3-Nitrotoluene	0.35	U	0.40	0.35	0.20	ug/L		05/15/23 16:20	1
4-Amino-2,6-dinitrotoluene	0.12	U	0.15	0.12	0.058	ug/L		05/15/23 16:20	1
4-Nitrotoluene	0.40	U	0.41	0.40	0.10	ug/L		05/15/23 16:20	1
HMX	0.20	U	0.21	0.20	0.088	ug/L		05/15/23 16:20	1
Nitrobenzene	0.20	U	0.21	0.20	0.091	ug/L		05/15/23 16:20	1
Nitroglycerin	2.0	U	2.1	2.0	0.92	ug/L		05/15/23 16:20	1
PETN	1.0	U	1.1	1.0	0.45	ug/L		05/15/23 16:20	1
RDX	0.20	U	0.21	0.20	0.052	ug/L		05/15/23 16:20	1
Tetryl	0.10	U	0.11	0.10	0.032	ug/L		05/15/23 16:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene	*105*		*83 - 119*	*05/12/23 15:04*	*05/15/23 16:20*	*1*

Lab Sample ID: LCS 280-612275/2-A
Matrix: Water
Analysis Batch: 612440

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 612275

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1,3,5-Trinitrobenzene			2.00	1.92		ug/L		96	73 - 125		
1,3-Dinitrobenzene			2.00	1.79		ug/L		90	78 - 120		
2,4,6-Trinitrotoluene			2.00	1.71		ug/L		86	71 - 123		
2,4-Dinitrotoluene			2.00	1.68		ug/L		84	78 - 120		
2,6-Dinitrotoluene			2.00	1.75		ug/L		88	77 - 127		
2-Amino-4,6-dinitrotoluene			2.00	1.63		ug/L		82	79 - 120		
2-Nitrotoluene			2.00	1.41		ug/L		71	70 - 127		
3-Nitrotoluene			2.00	1.37	Q	ug/L		69	73 - 125		
4-Amino-2,6-dinitrotoluene			2.00	1.60		ug/L		80	76 - 125		
4-Nitrotoluene			2.00	1.39	Q	ug/L		70	71 - 127		
HMX			2.00	1.65	M	ug/L		82	65 - 135		
Nitrobenzene			2.00	1.61		ug/L		81	65 - 134		
Nitroglycerin			20.0	18.1		ug/L		90	74 - 127		
PETN			20.0	19.6		ug/L		98	73 - 127		
RDX			2.00	1.86		ug/L		93	68 - 130		
Tetryl			2.00	1.96		ug/L		98	64 - 128		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dinitrobenzene	*94*		*83 - 119*

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

Lab Sample ID: LCSD 280-612275/3-A
Client Sample ID: Lab Control Sample Dup
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 612440
Prep Batch: 612275

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,3,5-Trinitrobenzene			2.00	2.04		ug/L		102	73 - 125	6	20
1,3-Dinitrobenzene			2.00	1.90		ug/L		95	78 - 120	6	20
2,4,6-Trinitrotoluene			2.00	1.83		ug/L		92	71 - 123	7	20
2,4-Dinitrotoluene			2.00	1.81		ug/L		91	78 - 120	8	20
2,6-Dinitrotoluene			2.00	1.84		ug/L		92	77 - 127	5	20
2-Amino-4,6-dinitrotoluene			2.00	1.77		ug/L		89	79 - 120	8	20
2-Nitrotoluene			2.00	1.50		ug/L		75	70 - 127	6	20
3-Nitrotoluene			2.00	1.48		ug/L		74	73 - 125	8	20
4-Amino-2,6-dinitrotoluene			2.00	1.76		ug/L		88	76 - 125	10	20
4-Nitrotoluene			2.00	1.48		ug/L		74	71 - 127	7	20
HMX			2.00	1.70	M	ug/L		85	65 - 135	3	20
Nitrobenzene			2.00	1.71		ug/L		86	65 - 134	6	20
Nitroglycerin			20.0	18.8		ug/L		94	74 - 127	4	20
PETN			20.0	20.5		ug/L		103	73 - 127	5	20
RDX			2.00	1.89		ug/L		94	68 - 130	1	20
Tetryl			2.00	2.01		ug/L		101	64 - 128	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dinitrobenzene	*98*		*83 - 119*

Lab Sample ID: MB 280-612937/1-A
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 613045
Prep Batch: 612937

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.20	U	0.21	0.20	0.084	ug/L		05/18/23 22:09	1
1,3-Dinitrobenzene	0.10	U	0.11	0.10	0.037	ug/L		05/18/23 22:09	1
2,4,6-Trinitrotoluene	0.10	U	0.11	0.10	0.045	ug/L		05/18/23 22:09	1
2,4-Dinitrotoluene	0.080	U	0.10	0.080	0.027	ug/L		05/18/23 22:09	1
2,6-Dinitrotoluene	0.080	U	0.10	0.080	0.040	ug/L		05/18/23 22:09	1
2-Amino-4,6-dinitrotoluene	0.10	U	0.11	0.10	0.051	ug/L		05/18/23 22:09	1
2-Nitrotoluene	0.20	U	0.21	0.20	0.086	ug/L		05/18/23 22:09	1
3-Nitrotoluene	0.35	U	0.40	0.35	0.20	ug/L		05/18/23 22:09	1
4-Amino-2,6-dinitrotoluene	0.12	U	0.15	0.12	0.058	ug/L		05/18/23 22:09	1
4-Nitrotoluene	0.40	U	0.41	0.40	0.10	ug/L		05/18/23 22:09	1
HMX	0.20	U	0.21	0.20	0.088	ug/L		05/18/23 22:09	1
Nitrobenzene	0.20	U	0.21	0.20	0.091	ug/L		05/18/23 22:09	1
Nitroglycerin	2.0	U	2.1	2.0	0.92	ug/L		05/18/23 22:09	1
PETN	1.0	U	1.1	1.0	0.45	ug/L		05/18/23 22:09	1
RDX	0.20	U	0.21	0.20	0.052	ug/L		05/18/23 22:09	1
Tetryl	0.10	U	0.11	0.10	0.032	ug/L		05/18/23 22:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene	*106*	*M*	*83 - 119*	*05/18/23 13:20*	*05/18/23 22:09*	*1*

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

Lab Sample ID: LCS 280-612937/2-A
Matrix: Water
Analysis Batch: 613045

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 612937

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1,3,5-Trinitrobenzene			2.00	2.05		ug/L		103	73 - 125		
1,3-Dinitrobenzene			2.00	1.94		ug/L		97	78 - 120		
2,4,6-Trinitrotoluene			2.00	1.86		ug/L		93	71 - 123		
2,4-Dinitrotoluene			2.00	1.84		ug/L		92	78 - 120		
2,6-Dinitrotoluene			2.00	1.85		ug/L		92	77 - 127		
2-Amino-4,6-dinitrotoluene			2.00	1.82		ug/L		91	79 - 120		
2-Nitrotoluene			2.00	1.51		ug/L		76	70 - 127		
3-Nitrotoluene			2.00	1.45	Q	ug/L		72	73 - 125		
4-Amino-2,6-dinitrotoluene			2.00	1.76		ug/L		88	76 - 125		
4-Nitrotoluene			2.00	1.50		ug/L		75	71 - 127		
HMX			2.00	1.81	M	ug/L		90	65 - 135		
Nitrobenzene			2.00	1.71		ug/L		86	65 - 134		
Nitroglycerin			20.0	19.9		ug/L		99	74 - 127		
PETN			20.0	21.0		ug/L		105	73 - 127		
RDX			2.00	1.92	M	ug/L		96	68 - 130		
Tetryl			2.00	2.04		ug/L		102	64 - 128		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dinitrobenzene	*104*		*83 - 119*

Lab Sample ID: LCSD 280-612937/3-A
Matrix: Water
Analysis Batch: 613045

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 612937

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,3,5-Trinitrobenzene			2.00	2.05		ug/L		102	73 - 125	0	20
1,3-Dinitrobenzene			2.00	1.94		ug/L		97	78 - 120	0	20
2,4,6-Trinitrotoluene			2.00	1.87		ug/L		93	71 - 123	0	20
2,4-Dinitrotoluene			2.00	1.83		ug/L		92	78 - 120	0	20
2,6-Dinitrotoluene			2.00	1.91		ug/L		95	77 - 127	3	20
2-Amino-4,6-dinitrotoluene			2.00	1.79		ug/L		90	79 - 120	1	20
2-Nitrotoluene			2.00	1.54		ug/L		77	70 - 127	2	20
3-Nitrotoluene			2.00	1.46		ug/L		73	73 - 125	1	20
4-Amino-2,6-dinitrotoluene			2.00	1.81		ug/L		90	76 - 125	2	20
4-Nitrotoluene			2.00	1.50		ug/L		75	71 - 127	0	20
HMX			2.00	1.88	M	ug/L		94	65 - 135	4	20
Nitrobenzene			2.00	1.72		ug/L		86	65 - 134	1	20
Nitroglycerin			20.0	19.9		ug/L		100	74 - 127	0	20
PETN			20.0	20.9		ug/L		104	73 - 127	1	20
RDX			2.00	1.88	M	ug/L		94	68 - 130	2	20
Tetryl			2.00	2.07		ug/L		104	64 - 128	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dinitrobenzene	*102*		*83 - 119*

HPLC/IC

Prep Batch: 612275

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-176268-1	LL1mw-090-230301-GW	Total/NA	Water	3535	
280-176268-2	LL1mw-091-230301-GW	Total/NA	Water	3535	
280-176268-3	FWG-003-230301-ER	Total/NA	Water	3535	
280-176268-4	FWG-003-230301-FB	Total/NA	Water	3535	
MB 280-612275/1-A	Method Blank	Total/NA	Water	3535	
LCS 280-612275/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 280-612275/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

Analysis Batch: 612440

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-176268-1	LL1mw-090-230301-GW	Total/NA	Water	8330B	612275
280-176268-2	LL1mw-091-230301-GW	Total/NA	Water	8330B	612275
280-176268-3	FWG-003-230301-ER	Total/NA	Water	8330B	612275
280-176268-4	FWG-003-230301-FB	Total/NA	Water	8330B	612275
MB 280-612275/1-A	Method Blank	Total/NA	Water	8330B	612275
LCS 280-612275/2-A	Lab Control Sample	Total/NA	Water	8330B	612275
LCSD 280-612275/3-A	Lab Control Sample Dup	Total/NA	Water	8330B	612275

Analysis Batch: 612694

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-176268-1	LL1mw-090-230301-GW	Total/NA	Water	8330B	612275
280-176268-2	LL1mw-091-230301-GW	Total/NA	Water	8330B	612275
280-176268-3	FWG-003-230301-ER	Total/NA	Water	8330B	612275
280-176268-4	FWG-003-230301-FB	Total/NA	Water	8330B	612275

Prep Batch: 612937

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-176268-1 - RE	LL1mw-090-230301-GW	Total/NA	Water	3535	
280-176268-2 - RE	LL1mw-091-230301-GW	Total/NA	Water	3535	
280-176268-3 - RE	FWG-003-230301-ER	Total/NA	Water	3535	
280-176268-4 - RE	FWG-003-230301-FB	Total/NA	Water	3535	
MB 280-612937/1-A	Method Blank	Total/NA	Water	3535	
LCS 280-612937/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 280-612937/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

Analysis Batch: 613045

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-176268-1 - RE	LL1mw-090-230301-GW	Total/NA	Water	8330B	612937
280-176268-2 - RE	LL1mw-091-230301-GW	Total/NA	Water	8330B	612937
280-176268-3 - RE	FWG-003-230301-ER	Total/NA	Water	8330B	612937
280-176268-4 - RE	FWG-003-230301-FB	Total/NA	Water	8330B	612937
MB 280-612937/1-A	Method Blank	Total/NA	Water	8330B	612937
LCS 280-612937/2-A	Lab Control Sample	Total/NA	Water	8330B	612937
LCSD 280-612937/3-A	Lab Control Sample Dup	Total/NA	Water	8330B	612937

Analysis Batch: 613169

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-176268-1 - RE	LL1mw-090-230301-GW	Total/NA	Water	8330B	612937
280-176268-2 - RE	LL1mw-091-230301-GW	Total/NA	Water	8330B	612937
280-176268-3 - RE	FWG-003-230301-ER	Total/NA	Water	8330B	612937
280-176268-4 - RE	FWG-003-230301-FB	Total/NA	Water	8330B	612937

Client Sample ID: LL1mw-090-230301-GW — Lab Sample ID: 280-176268-1

Date Collected: 05/09/23 15:03 **Matrix: Water**
Date Received: 05/10/23 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			502.6 mL	5 mL	612275	05/12/23 15:04	DCL	EET DEN
Total/NA	Analysis	8330B		1	1 mL	1 mL	612694	05/16/23 21:58	JZ	EET DEN
Total/NA	Prep	3535	RE		503.6 mL	5 mL	612937	05/18/23 13:20	EH	EET DEN
Total/NA	Analysis	8330B	RE	1	1 mL	1 mL	613169	05/19/23 17:55	JZ	EET DEN
Total/NA	Prep	3535			502.6 mL	5 mL	612275	05/12/23 15:04	DCL	EET DEN
Total/NA	Analysis	8330B		1	1 mL	1 mL	612440	05/15/23 18:15	JZ	EET DEN
Total/NA	Prep	3535	RE		503.6 mL	5 mL	612937	05/18/23 13:20	EH	EET DEN
Total/NA	Analysis	8330B	RE	1	1 mL	1 mL	613045	05/19/23 00:27	JZ	EET DEN

Client Sample ID: LL1mw-091-230301-GW — Lab Sample ID: 280-176268-2

Date Collected: 05/09/23 11:36 **Matrix: Water**
Date Received: 05/10/23 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			490.9 mL	5 mL	612275	05/12/23 15:04	DCL	EET DEN
Total/NA	Analysis	8330B		1	1 mL	1 mL	612694	05/16/23 22:34	JZ	EET DEN
Total/NA	Prep	3535	RE		494.4 mL	5 mL	612937	05/18/23 13:20	EH	EET DEN
Total/NA	Analysis	8330B	RE	1	1 mL	1 mL	613169	05/19/23 18:31	JZ	EET DEN
Total/NA	Prep	3535			490.9 mL	5 mL	612275	05/12/23 15:04	DCL	EET DEN
Total/NA	Analysis	8330B		1	1 mL	1 mL	612440	05/15/23 18:38	JZ	EET DEN
Total/NA	Prep	3535	RE		494.4 mL	5 mL	612937	05/18/23 13:20	EH	EET DEN
Total/NA	Analysis	8330B	RE	1	1 mL	1 mL	613045	05/19/23 00:49	JZ	EET DEN

Client Sample ID: FWG-003-230301-ER — Lab Sample ID: 280-176268-3

Date Collected: 05/09/23 14:42 **Matrix: Water**
Date Received: 05/10/23 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			486.6 mL	5 mL	612275	05/12/23 15:04	DCL	EET DEN
Total/NA	Analysis	8330B		1	1 mL	1 mL	612694	05/16/23 23:10	JZ	EET DEN
Total/NA	Prep	3535	RE		487.1 mL	5 mL	612937	05/18/23 13:20	EH	EET DEN
Total/NA	Analysis	8330B	RE	1	1 mL	1 mL	613169	05/19/23 19:06	JZ	EET DEN
Total/NA	Prep	3535			486.6 mL	5 mL	612275	05/12/23 15:04	DCL	EET DEN
Total/NA	Analysis	8330B		1	1 mL	1 mL	612440	05/15/23 19:01	JZ	EET DEN
Total/NA	Prep	3535	RE		487.1 mL	5 mL	612937	05/18/23 13:20	EH	EET DEN
Total/NA	Analysis	8330B	RE	1	1 mL	1 mL	613045	05/19/23 01:12	JZ	EET DEN

Client Sample ID: FWG-003-230301-FB — Lab Sample ID: 280-176268-4

Date Collected: 05/09/23 08:15 **Matrix: Water**
Date Received: 05/10/23 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			494.3 mL	5 mL	612275	05/12/23 15:04	DCL	EET DEN
Total/NA	Analysis	8330B		1	1 mL	1 mL	612694	05/16/23 23:46	JZ	EET DEN

Lab Chronicle

Client: Leidos, Inc.
Job ID: 280-176268-1
Project/Site: RVAAP FWGW Spring 2023

Client Sample ID: FWG-003-230301-FB
Lab Sample ID: 280-176268-4

Date Collected: 05/09/23 08:15
Matrix: Water
Date Received: 05/10/23 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535	RE		497.6 mL	5 mL	612937	05/18/23 13:20	EH	EET DEN
Total/NA	Analysis	8330B	RE	1	1 mL	1 mL	613169	05/19/23 19:42	JZ	EET DEN
Total/NA	Prep	3535			494.3 mL	5 mL	612275	05/12/23 15:04	DCL	EET DEN
Total/NA	Analysis	8330B		1	1 mL	1 mL	612440	05/15/23 19:23	JZ	EET DEN
Total/NA	Prep	3535	RE		497.6 mL	5 mL	612937	05/18/23 13:20	EH	EET DEN
Total/NA	Analysis	8330B	RE	1	1 mL	1 mL	613045	05/19/23 01:35	JZ	EET DEN

Laboratory References:

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

Accreditation/Certification Summary

Client: Leidos, Inc. Job ID: 280-176268-1
Project/Site: RVAAP FWGW Spring 2023

Laboratory: Eurofins Denver

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-23

Method Summary

Client: Leidos, Inc.
Project/Site: RVAAP FWGW Spring 2023

Job ID: 280-176268-1

Method	Method Description	Protocol	Laboratory
8330B	Nitroaromatics and Nitramines (HPLC)	EPA	EET DEN
3535	Solid-Phase Extraction (SPE)	SW846	EET DEN

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

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

Sample Summary

Client: Leidos, Inc.
Job ID: 280-176268-1
Project/Site: RVAAP FWGW Spring 2023

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-176268-1	LL1mw-090-230301-GW	Water	05/09/23 15:03	05/10/23 09:50
280-176268-2	LL1mw-091-230301-GW	Water	05/09/23 11:36	05/10/23 09:50
280-176268-3	FWG-003-230301-ER	Water	05/09/23 14:42	05/10/23 09:50
280-176268-4	FWG-003-230301-FB	Water	05/09/23 08:15	05/10/23 09:50

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Analysis Batch Number: 607981

Lab Sample ID: IC 280-607981/10 Client Sample ID:

Date Analyzed: 04/07/23 19:03 Lab File ID: 04070010.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
DNX	6.08	Baseline	LV5D	04/07/23 20:06
2-Amino-4,6-dinitrotoluene	17.37	Baseline	LV5D	04/07/23 20:06
1,3,5-Trinitrobenzene	17.44	Unspecified		

Lab Sample ID: IC 280-607981/11 Client Sample ID:

Date Analyzed: 04/07/23 19:39 Lab File ID: 04070011.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
DNX	6.16	Baseline	LV5D	04/07/23 21:06
Picric acid	8.10	Baseline	LV5D	04/07/23 21:06

Lab Sample ID: IC 280-607981/15 Client Sample ID:

Date Analyzed: 04/07/23 22:02 Lab File ID: 04070015.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Nitrotoluene	15.83	Baseline	LV5D	04/08/23 10:38
4-Nitrotoluene	16.05	Baseline	LV5D	04/08/23 10:38
4-Amino-2,6-dinitrotoluene	16.59	Baseline	LV5D	04/08/23 10:38
3-Nitrotoluene	16.90	Baseline	LV5D	04/08/23 10:38
2-Amino-4,6-dinitrotoluene	17.41	Baseline	LV5D	04/08/23 10:38
1,3,5-Trinitrobenzene	17.57	Baseline	LV5D	04/08/23 10:38

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Analysis Batch Number: 607981

Lab Sample ID: IC 280-607981/16 Client Sample ID:

Date Analyzed: 04/07/23 22:38 Lab File ID: 04070016.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Nitrotoluene	15.84	Baseline	LV5D	04/08/23 10:39
4-Nitrotoluene	16.07	Baseline	LV5D	04/08/23 10:39
4-Amino-2,6-dinitrotoluene	16.61	Baseline	LV5D	04/08/23 10:39
3-Nitrotoluene	16.91	Baseline	LV5D	04/08/23 10:39
2-Amino-4,6-dinitrotoluene	17.43	Baseline	LV5D	04/08/23 10:39
1,3,5-Trinitrobenzene	17.59	Baseline	LV5D	04/08/23 10:39
PETN	24.55	Baseline	LV5D	04/08/23 10:40

Lab Sample ID: IC 280-607981/17 Client Sample ID:

Date Analyzed: 04/07/23 23:14 Lab File ID: 04070017.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Amino-4,6-dinitrotoluene	17.43	Baseline	LV5D	04/08/23 10:40
1,3,5-Trinitrobenzene	17.59	Baseline	LV5D	04/08/23 10:40
PETN	24.56	Baseline	LV5D	04/08/23 10:40

Lab Sample ID: IC 280-607981/18 Client Sample ID:

Date Analyzed: 04/07/23 23:50 Lab File ID: 04070018.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Nitrotoluene	15.84	Baseline	LV5D	04/08/23 10:40
4-Nitrotoluene	16.06	Baseline	LV5D	04/08/23 10:40
2-Amino-4,6-dinitrotoluene	17.42	Baseline	LV5D	04/08/23 10:40
1,3,5-Trinitrobenzene	17.58	Baseline	LV5D	04/08/23 10:40
PETN	24.57	Baseline	LV5D	04/08/23 10:40

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Analysis Batch Number: 607981

Lab Sample ID: ICV 280-607981/19 Client Sample ID:

Date Analyzed: 04/08/23 00:26 Lab File ID: 04070019.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PETN	24.53	Baseline	LV5D	04/08/23 10:42

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Analysis Batch Number: 612694

Lab Sample ID: CCV 280-612694/11 Client Sample ID:

Date Analyzed: 05/16/23 19:34 Lab File ID: 05160011.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Amino-4,6-dinitrotoluene	17.49	Baseline	LV5D	05/16/23 20:12
1,3,5-Trinitrobenzene	17.56	Unspecified		

Lab Sample ID: 280-176268-1 Client Sample ID: LL1mw-090-230301-GW

Date Analyzed: 05/16/23 21:58 Lab File ID: 05160015.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,4,6-Trinitrotoluene		Invalid Compound ID	K8YG	05/17/23 12:40
3-Nitrotoluene		Invalid Compound ID	K8YG	05/17/23 12:37
4-Nitrotoluene		Invalid Compound ID	K8YG	05/17/23 12:39
1,3-Dinitrobenzene	14.72	Baseline	K8YG	05/17/23 12:39

Lab Sample ID: 280-176268-2 Client Sample ID: LL1mw-091-230301-GW

Date Analyzed: 05/16/23 22:34 Lab File ID: 05160016.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitroglycerin		Invalid Compound ID	K8YG	05/17/23 12:42
2-Nitrotoluene	15.86	Baseline	K8YG	05/17/23 12:42

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Analysis Batch Number: 612694

Lab Sample ID: CCV 280-612694/22 Client Sample ID:

Date Analyzed: 05/17/23 02:10 Lab File ID: 05160022.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
3,5-Dinitroaniline	14.52	Baseline	LV5D	05/17/23 13:39
1,3-Dinitrobenzene	14.78	Baseline	LV5D	05/17/23 13:39
2-Nitrotoluene	15.83	Baseline	LV5D	05/17/23 13:39
4-Nitrotoluene	16.06	Baseline	LV5D	05/17/23 13:39
4-Amino-2,6-dinitrotoluene	16.61	Baseline	LV5D	05/17/23 13:39
3-Nitrotoluene	16.90	Baseline	LV5D	05/17/23 13:39
2-Amino-4,6-dinitrotoluene	17.44	Baseline	LV5D	05/17/23 13:39
1,3,5-Trinitrobenzene	17.58	Baseline	LV5D	05/17/23 13:39

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Analysis Batch Number: 613169

Lab Sample ID: CCV 280-613169/8 Client Sample ID:

Date Analyzed: 05/19/23 15:31 Lab File ID: 05190008.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PETN	24.38	Baseline	LV5D	05/19/23 16:07

Lab Sample ID: 280-176268-1 RE Client Sample ID: LL1mw-090-230301-GW RE

Date Analyzed: 05/19/23 17:55 Lab File ID: 05190013.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,4-Dinitrotoluene		Invalid Compound ID	LV5D	05/19/23 18:43
2,6-Dinitrotoluene		Invalid Compound ID	LV5D	05/19/23 18:43
2-Amino-4,6-dinitrotoluene		Invalid Compound ID	LV5D	05/19/23 18:43
3-Nitrotoluene		Invalid Compound ID	LV5D	05/19/23 18:43
Nitrobenzene		Invalid Compound ID	LV5D	05/19/23 18:43
Nitroglycerin		Invalid Compound ID	LV5D	05/19/23 18:43
PETN		Invalid Compound ID	LV5D	05/19/23 18:43
RDX		Invalid Compound ID	LV5D	05/19/23 18:43
1,2-Dinitrobenzene	12.59	Baseline	LV5D	05/19/23 18:43
2-Nitrotoluene	15.81	Baseline	LV5D	05/19/23 18:43
1,3,5-Trinitrobenzene	17.56	Baseline	LV5D	05/19/23 18:43
Tetryl	22.33	Baseline	LV5D	05/19/23 18:43
2,4,6-Trinitrotoluene	23.23	Baseline	LV5D	05/19/23 18:44

Lab Sample ID: 280-176268-3 RE Client Sample ID: FWG-003-230301-ER RE

Date Analyzed: 05/19/23 19:06 Lab File ID: 05190015.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.80	Baseline	LV5D	05/19/23 20:00
RDX	9.04	Baseline	LV5D	05/19/23 20:00
2-Nitrotoluene		Invalid Compound ID	LV5D	05/19/23 19:59
2,6-Dinitrotoluene	18.62	Baseline	LV5D	05/19/23 20:00

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Analysis Batch Number: 613169

Lab Sample ID: 280-176268-4 RE Client Sample ID: FWG-003-230301-FB RE

Date Analyzed: 05/19/23 19:42 Lab File ID: 05190016.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Amino-4,6-dinitrotoluene		Invalid Compound ID	LV5D	05/20/23 11:48
2-Nitrotoluene		Invalid Compound ID	LV5D	05/20/23 11:48

Lab Sample ID: CCV 280-613169/18 Client Sample ID:

Date Analyzed: 05/19/23 20:54 Lab File ID: 05190018.D GC Column: Luna-phenylhe ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
3,5-Dinitroaniline	14.44	Baseline	LV5D	05/20/23 11:48
1,3-Dinitrobenzene	14.70	Baseline	LV5D	05/20/23 11:48
2-Nitrotoluene	15.77	Baseline	LV5D	05/20/23 11:48
4-Nitrotoluene	16.00	Baseline	LV5D	05/20/23 11:48
4-Amino-2,6-dinitrotoluene	16.54	Baseline	LV5D	05/20/23 11:48
3-Nitrotoluene	16.84	Baseline	LV5D	05/20/23 11:48
2-Amino-4,6-dinitrotoluene	17.36	Baseline	LV5D	05/20/23 11:48
1,3,5-Trinitrobenzene	17.52	Baseline	LV5D	05/20/23 11:48

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Instrument ID: CHHPLC_X3 Analysis Batch Number: 601664

Lab Sample ID: IC 280-601664/11 Client Sample ID:

Date Analyzed: 02/08/23 15:38 Lab File ID: 02080011.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.55	Baseline Smoothing	LV5D	02/08/23 16:28

Lab Sample ID: IC 280-601664/12 Client Sample ID:

Date Analyzed: 02/08/23 16:01 Lab File ID: 02080012.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.55	Baseline Smoothing	LV5D	02/08/23 16:28

Lab Sample ID: IC 280-601664/13 Client Sample ID:

Date Analyzed: 02/08/23 16:24 Lab File ID: 02080013.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.54	Baseline Smoothing	LV5D	02/08/23 16:55
RDX	7.56	Baseline Smoothing	LV5D	02/08/23 19:09

Lab Sample ID: IC 280-601664/14 Client Sample ID:

Date Analyzed: 02/08/23 16:47 Lab File ID: 02080014.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.55	Baseline Smoothing	LV5D	02/08/23 17:11
RDX	7.56	Baseline Smoothing	LV5D	02/08/23 19:09

Lab Sample ID: IC 280-601664/15 Client Sample ID:

Date Analyzed: 02/08/23 17:10 Lab File ID: 02080015.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
RDX	7.57	Baseline Smoothing	LV5D	02/08/23 19:09

8330B

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Instrument ID: CHHPLC_X3 Analysis Batch Number: 601664

Lab Sample ID: IC 280-601664/16 Client Sample ID:

Date Analyzed: 02/08/23 17:33 Lab File ID: 02080016.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
RDX	7.56	Baseline Smoothing	LV5D	02/08/23 19:09
PETN	14.55	Baseline Smoothing	LV5D	02/08/23 19:08

Lab Sample ID: IC 280-601664/17 Client Sample ID:

Date Analyzed: 02/08/23 17:56 Lab File ID: 02080017.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.55	Baseline Smoothing	LV5D	02/08/23 19:07
RDX	7.57	Baseline Smoothing	LV5D	02/08/23 19:09
PETN	14.58	Baseline Smoothing	LV5D	02/08/23 19:08

Lab Sample ID: IC 280-601664/18 Client Sample ID:

Date Analyzed: 02/08/23 18:19 Lab File ID: 02080018.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.55	Baseline Smoothing	LV5D	02/08/23 19:09
RDX	7.56	Baseline Smoothing	LV5D	02/08/23 19:09
PETN	14.59	Baseline Smoothing	LV5D	02/08/23 19:08

Lab Sample ID: IC 280-601664/19 Client Sample ID:

Date Analyzed: 02/08/23 18:42 Lab File ID: 02080019.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.55	Baseline Smoothing	LV5D	02/08/23 19:09
RDX	7.56	Baseline Smoothing	LV5D	02/08/23 19:08
PETN	14.58	Unspecified		

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Instrument ID: CHHPLC_X3 Analysis Batch Number: 601664

Lab Sample ID: ICV 280-601664/20 Client Sample ID:

Date Analyzed: 02/08/23 19:05 Lab File ID: 02080020.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.55	Baseline Smoothing	LV5D	02/08/23 19:31
RDX	7.56	Baseline Smoothing	LV5D	02/08/23 19:32

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Instrument ID: CHHPLC_X3 Analysis Batch Number: 612440

Lab Sample ID: CCV 280-612440/8 Client Sample ID:

Date Analyzed: 05/15/23 15:34 Lab File ID: 05152308.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
TNX	6.44	Baseline	K8YG	05/16/23 07:39
HMX	6.56	Baseline	K8YG	05/16/23 07:39
DNX	6.76	Baseline	K8YG	05/16/23 07:38

Lab Sample ID: LCS 280-612275/2-A Client Sample ID:

Date Analyzed: 05/15/23 16:43 Lab File ID: 05152312.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.55	Baseline	K8YG	05/16/23 07:41

Lab Sample ID: LCSD 280-612275/3-A Client Sample ID:

Date Analyzed: 05/15/23 17:06 Lab File ID: 05152313.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.55	Baseline	K8YG	05/16/23 07:44

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Instrument ID: CHHPLC_X3 Analysis Batch Number: 612440

Lab Sample ID: 280-176268-1 Client Sample ID: LL1mw-090-230301-GW

Date Analyzed: 05/15/23 18:15 Lab File ID: 05152316.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.57	Baseline	LV5D	05/16/23 13:04
1,2-Dinitrobenzene	8.55	Baseline	K8YG	05/16/23 07:52
1,3-Dinitrobenzene		Invalid Compound ID	K8YG	05/16/23 07:52
2,4,6-Trinitrotoluene		Invalid Compound ID	K8YG	05/16/23 07:53
2-Amino-4,6-dinitrotoluene		Invalid Compound ID	K8YG	05/16/23 07:53
3-Nitrotoluene		Invalid Compound ID	K8YG	05/16/23 07:53
Nitrobenzene		Invalid Compound ID	K8YG	05/16/23 07:52
RDX		Invalid Compound ID	K8YG	05/16/23 07:52
Tetryl		Invalid Compound ID	K8YG	05/16/23 07:53

Lab Sample ID: 280-176268-2 Client Sample ID: LL1mw-091-230301-GW

Date Analyzed: 05/15/23 18:38 Lab File ID: 05152317.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.57	Baseline	K8YG	05/16/23 07:54
1,3-Dinitrobenzene		Baseline	K8YG	05/16/23 07:56
2-Nitrotoluene		Invalid Compound ID	K8YG	05/16/23 07:56

Lab Sample ID: 280-176268-3 Client Sample ID: FWG-003-230301-ER

Date Analyzed: 05/15/23 19:01 Lab File ID: 05152318.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dinitrobenzene	8.54	Baseline	LV5D	05/16/23 13:04

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Instrument ID: CHHPLC_X3 Analysis Batch Number: 612440

Lab Sample ID: 280-176268-4 Client Sample ID: FWG-003-230301-FB

Date Analyzed: 05/15/23 19:23 Lab File ID: 05152319.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dinitrobenzene	8.54	Baseline	LV5D	05/16/23 13:04

Lab Sample ID: CCV 280-612440/21 Client Sample ID:

Date Analyzed: 05/15/23 20:09 Lab File ID: 05152321.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
TNX	6.43	Baseline	K8YG	05/16/23 08:07
HMX	6.55	Baseline	K8YG	05/16/23 08:07
DNX	6.75	Baseline	K8YG	05/16/23 08:07

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Instrument ID: CHHPLC_X3 Analysis Batch Number: 613045

Lab Sample ID: MB 280-612937/1-A Client Sample ID:

Date Analyzed: 05/18/23 22:09 Lab File ID: 05180011.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dinitrobenzene	8.52	Baseline	LV5D	05/19/23 11:37
1,3,5-Trinitrobenzene		Baseline	LV5D	05/19/23 11:37

Lab Sample ID: LCS 280-612937/2-A Client Sample ID:

Date Analyzed: 05/18/23 22:32 Lab File ID: 05180012.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.55	Baseline	LV5D	05/19/23 11:28
RDX	7.57	Baseline	LV5D	05/19/23 11:28

Lab Sample ID: LCSD 280-612937/3-A Client Sample ID:

Date Analyzed: 05/18/23 22:55 Lab File ID: 05180013.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.55	Baseline	LV5D	05/19/23 11:29
RDX	7.57	Baseline	LV5D	05/19/23 11:29

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Instrument ID: CHHPLC_X3 Analysis Batch Number: 613045

Lab Sample ID: 280-176268-1 RE Client Sample ID: LL1mw-090-230301-GW RE

Date Analyzed: 05/19/23 00:27 Lab File ID: 05180017.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.56	Baseline	LV5D	05/19/23 11:38
1,2-Dinitrobenzene	8.53	Baseline	LV5D	05/19/23 11:38
2,4,6-Trinitrotoluene		Invalid Compound ID	LV5D	05/19/23 11:38
2,4-Dinitrotoluene		Invalid Compound ID	LV5D	05/19/23 11:38
2-Amino-4,6-dinitrotoluene		Invalid Compound ID	LV5D	05/19/23 11:38
3-Nitrotoluene		Invalid Compound ID	LV5D	05/19/23 11:38
4-Nitrotoluene		Invalid Compound ID	LV5D	05/19/23 11:38
Nitrobenzene		Invalid Compound ID	LV5D	05/19/23 11:38
RDX		Invalid Compound ID	LV5D	05/19/23 11:38

Lab Sample ID: 280-176268-2 RE Client Sample ID: LL1mw-091-230301-GW RE

Date Analyzed: 05/19/23 00:49 Lab File ID: 05180018.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3,5-Trinitrobenzene		Invalid Compound ID	LV5D	05/19/23 11:38
1,3-Dinitrobenzene		Invalid Compound ID	LV5D	05/19/23 11:38

Lab Sample ID: 280-176268-3 RE Client Sample ID: FWG-003-230301-ER RE

Date Analyzed: 05/19/23 01:12 Lab File ID: 05180019.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dinitrobenzene	8.52	Baseline	LV5D	05/19/23 11:39

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Instrument ID: CHHPLC_X3 Analysis Batch Number: 613045

Lab Sample ID: 280-176268-4 RE Client Sample ID: FWG-003-230301-FB RE

Date Analyzed: 05/19/23 01:35 Lab File ID: 05180020.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dinitrobenzene	8.52	Baseline	LV5D	05/19/23 11:36
1,3,5-Trinitrobenzene		Invalid Compound ID	LV5D	05/19/23 11:36
4-Amino-2,6-dinitrotoluene		Invalid Compound ID	LV5D	05/19/23 11:36

Lab Sample ID: CCV 280-613045/21 Client Sample ID:

Date Analyzed: 05/19/23 01:58 Lab File ID: 05180021.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
TNX	6.43	Baseline	LV5D	05/19/23 11:36
HMX	6.55	Baseline	LV5D	05/19/23 11:36
DNX	6.76	Baseline	LV5D	05/19/23 11:36

Lab Sample ID: CCV 280-613045/33 Client Sample ID:

Date Analyzed: 05/19/23 06:34 Lab File ID: 05180033.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
TNX	6.43	Baseline	LV5D	05/19/23 12:10
HMX	6.55	Baseline	LV5D	05/19/23 12:10
DNX	6.76	Baseline	LV5D	05/19/23 12:10

Lab Sample ID: CCV 280-613045/41 Client Sample ID:

Date Analyzed: 05/19/23 09:37 Lab File ID: 05180041.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
TNX	6.43	Baseline	LV5D	05/19/23 12:21
HMX	6.55	Baseline	LV5D	05/19/23 12:21
DNX	6.76	Baseline	LV5D	05/19/23 12:21

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
8330 DMT_00013	08/24/23	02/24/23	Acetonitrile, Lot ACN_237	5 mL	MNX,TNX,DNX_00076	1 mL	DNX	20.02 ug/mL
							MNX	23.34 ug/mL
							TNX	20.06 ug/mL
.MNX,TNX,DNX_00076	02/29/24		Agilent, Lot 0006725091		(Purchased Reagent)		DNX	100.1 ug/mL
							MNX	116.7 ug/mL
							TNX	100.3 ug/mL
8330 LCS_00121	07/21/23	01/21/23	Acetonitrile, Lot Acetonitrile_00073	50 mL	8330_NG_Stk_00118	0.6 mL	Nitroglycerin	100 ug/mL
					8330_NG_Stk_00120	0.4 mL	Nitroglycerin	100 ug/mL
					8330_PETN_Stk_00128	1 mL	PETN	100 ug/mL
					8330LCSMix1_00136	0.5 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_00034	0.5 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
.8330_NG_Stk_00118	12/24/23		Restek, Lot A0188553		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_NG_Stk_00120	01/21/24		Restek, Lot A0188553		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_PETN_Stk_00128	01/21/24		Restek, Lot A0187506		(Purchased Reagent)		PETN	5000 ug/mL
.8330LCSMix1_00136	10/19/23		Restek, Lot A0171502		(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_00034	01/21/24		Restek, Lot A0186475		(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_00125	12/23/23	04/03/23	Acetonitrile, Lot Acetonitrile_00073	100 mL	3,5-DNA Stock_00040	1 mL	3,5-Dinitroaniline	10 ug/mL
					8330_NG_Stk_00128	1 mL	Nitroglycerin	100 ug/mL
					8330_NG_Stk_00129	1 mL	Nitroglycerin	100 ug/mL
					8330_PETN_Stk_00133	1 mL	PETN	100 ug/mL

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					8330_PETN_Stk_00134	1 mL	PETN	100 ug/mL
					8330LCSMix1_00140	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_00038	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
					PicricARestek_00113	1 mL	2,4,6-Trinitrophenol	10 ug/mL
.3,5-DNA Stock_00040	04/03/24		Restek, Lot A0172723		(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
.8330_NG_Stk_00128	04/03/24		Restek, Lot A0194013		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_NG_Stk_00129	04/03/24		Restek, Lot A0194013		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_PETN_Stk_00133	04/03/24		Restek, Lot A0188550		(Purchased Reagent)		PETN	5000 ug/mL
.8330_PETN_Stk_00134	04/03/24		Restek, Lot A0188550		(Purchased Reagent)		PETN	5000 ug/mL
.8330LCSMix1_00140	04/03/24		Restek, Lot A0183848		(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_00038	04/03/24		Restek, Lot A0192237		(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
.PicricARestek_00113	04/03/24		Restek, Lot A0183202		(Purchased Reagent)		2,4,6-Trinitrophenol	1000 ug/mL
8330 LCS_00126	04/26/24	04/26/23	Acetonitrile, Lot Acetonitrile_00077	100 mL	3,5-DNA Stock_00042	1 mL	3,5-Dinitroaniline	10 ug/mL
					8330_NG_Stk_00130	1 mL	Nitroglycerin	100 ug/mL
					8330_NG_Stk_00131	1 mL	Nitroglycerin	100 ug/mL
					8330_PETN_Stk_00135	1 mL	PETN	100 ug/mL
					8330_PETN_Stk_00136	1 mL	PETN	100 ug/mL
					8330LCSMix1_00141	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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							RDX	10 ug/mL
					8330LCSmix2_00039	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
					PicricARestek_00114	1 mL	2,4,6-Trinitrophenol	10 ug/mL
.3,5-DNA Stock_00042	04/26/24		Restek, Lot A0185772		(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
.8330_NG_Stk_00130	04/26/24		Restek, Lot A0194013		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_NG_Stk_00131	04/26/24		Restek, Lot A0194013		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_PETN_Stk_00135	04/26/24		Restek, Lot A0188550		(Purchased Reagent)		PETN	5000 ug/mL
.8330_PETN_Stk_00136	04/26/24		Restek, Lot A0188550		(Purchased Reagent)		PETN	5000 ug/mL
.8330LCSMix1_00141	04/26/24		Restek, Lot A0183848		(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_00039	04/26/24		Restek, Lot A0192237		(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
.PicricARestek_00114	04/26/24		Restek, Lot A0183202		(Purchased Reagent)		2,4,6-Trinitrophenol	1000 ug/mL
8330_OP_DMT_00017	08/28/23	02/28/23	Acetonitrile, Lot Acetonitrile_00073	10 mL	MNX,TNX,DNX_00077	1 mL	DNX	10.01 ug/mL
							MNX	11.67 ug/mL
							TNX	10.03 ug/mL
.MNX,TNX,DNX_00077	02/29/24		Agilent, Lot 0006725091		(Purchased Reagent)		DNX	100.1 ug/mL
							MNX	116.7 ug/mL
							TNX	100.3 ug/mL
8330_OP_DMT_00020	02/29/24	05/09/23	Acetonitrile, Lot Acetonitrile_00077	10 mL	MNX,TNX,DNX_00079	1 mL	DNX	10.01 ug/mL
							MNX	11.67 ug/mL
							TNX	10.03 ug/mL
.MNX,TNX,DNX_00079	02/29/24		Agilent, Lot 0006725091		(Purchased Reagent)		DNX	100.1 ug/mL
							MNX	116.7 ug/mL
							TNX	100.3 ug/mL
8330IntermStk_00075	08/07/23	02/03/23	Acetonitrile, Lot ACN_238	10 mL	8330_NG1000_00007	1 mL	Nitroglycerin	100 ug/mL
					8330_PETN1000_00011	1 mL	PETN	100 ug/mL
					833035DNAStk_00053	1 mL	3,5-Dinitroaniline	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					8330ICALStock_00034	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
							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
							HMX	10 ug/mL
							Nitrobenzene	10 ug/mL
							RDX	10 ug/mL
							Tetryl	10 ug/mL
							1,2-Dinitrobenzene	10 ug/mL
					8330PAStkPS_00070	1 mL	2,4,6-Trinitrophenol	10 ug/mL
.8330_NG1000_00007	02/03/24		Restek, Lot A0175997		(Purchased Reagent)		Nitroglycerin	1000 ug/mL
.8330_PETN1000_00011	02/03/24		Restek, Lot A0187142		(Purchased Reagent)		PETN	1000 ug/mL
.833035DNAStk_00053	10/06/23		Accustandard, Lot 222011692-01		(Purchased Reagent)		3,5-Dinitroaniline	100 ug/mL
.8330ICALStock_00034	02/03/24	02/03/23	Acetonitrile, Lot ACN_238	10 mL	8330 Stock_TS_00023	1 mL	1,3,5-Trinitrobenzene	100 ug/mL
							1,3-Dinitrobenzene	100 ug/mL
							2,4,6-Trinitrotoluene	100 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dinitrotoluene	100 ug/mL
							2-Amino-4,6-dinitrotoluene	100 ug/mL
							2-Nitrotoluene	100 ug/mL
							3-Nitrotoluene	100 ug/mL
							4-Amino-2,6-dinitrotoluene	100 ug/mL
							4-Nitrotoluene	100 ug/mL
							HMX	100 ug/mL
							Nitrobenzene	100 ug/mL
							RDX	100 ug/mL
							Tetryl	100 ug/mL
					8330SurrStock_00172	1 mL	1,2-Dinitrobenzene	100 ug/mL
..8330 Stock_TS_00023	02/03/24		Agilent, Lot 0006684308		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Tetryl	1000 ug/mL
..8330SurrStock_00172	02/03/24	AccuStandard, Lot 219051500			(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330PAStkPS_00070	08/07/23	AccuStandard, Lot 218031154-03			(Purchased Reagent)		2,4,6-Trinitrophenol	100 ug/mL
8330IntermStk_00076	09/23/23	03/23/23	Acetonitrile, Lot ACN_237	10 mL	8330_NG1000_00010	1 mL	Nitroglycerin	100 ug/mL
					8330_PETN1000_00010	1 mL	PETN	100 ug/mL
					833035DNAStk_00054	1 mL	3,5-Dinitroaniline	10 ug/mL
					8330ICALStock_00034	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
							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
							HMX	10 ug/mL
							Nitrobenzene	10 ug/mL
							RDX	10 ug/mL
							Tetryl	10 ug/mL
							1,2-Dinitrobenzene	10 ug/mL
					8330PAStkPS_00071	1 mL	2,4,6-Trinitrophenol	10 ug/mL
.8330_NG1000_00010	03/23/24	Restek, Lot A0187280			(Purchased Reagent)		Nitroglycerin	1000 ug/mL
.8330_PETN1000_00010	03/23/24	Restek, Lot A0187142			(Purchased Reagent)		PETN	1000 ug/mL
.833035DNAStk_00054	10/06/23	Accustandard, Lot 222011692-01			(Purchased Reagent)		3,5-Dinitroaniline	100 ug/mL
.8330ICALStock_00034	02/03/24	02/03/23	Acetonitrile, Lot ACN_238	10 mL	8330 Stock_TS_00023	1 mL	1,3,5-Trinitrobenzene	100 ug/mL
							1,3-Dinitrobenzene	100 ug/mL
							2,4,6-Trinitrotoluene	100 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dinitrotoluene	100 ug/mL
							2-Amino-4,6-dinitrotoluene	100 ug/mL
							2-Nitrotoluene	100 ug/mL
							3-Nitrotoluene	100 ug/mL
							4-Amino-2,6-dinitrotoluene	100 ug/mL
							4-Nitrotoluene	100 ug/mL
							HMX	100 ug/mL
							Nitrobenzene	100 ug/mL
							RDX	100 ug/mL
							Tetryl	100 ug/mL
					8330SurrStock_00172	1 mL	1,2-Dinitrobenzene	100 ug/mL
..8330 Stock_TS_00023	02/03/24	Agilent, Lot 0006684308			(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..8330SurrStock_00172	02/03/24	AccuStandard, Lot 219051500			(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330PAStkPS_00071	03/23/24	AccuStandard, Lot 218031154-04			(Purchased Reagent)		2,4,6-Trinitrophenol	100 ug/mL
8330Surrogate_00138	08/02/23	02/02/23	Acetonitrile, Lot Acetonitrile_00074	500 mL	8330SurrStkSS_00245	1 mL	1,2-Dinitrobenzene	10 ug/mL
					8330SurrStkSS_00246	1 mL	1,2-Dinitrobenzene	10 ug/mL
					8330SurrStkSS_00247	1 mL	1,2-Dinitrobenzene	10 ug/mL
					8330SurrStkSS_00248	1 mL	1,2-Dinitrobenzene	10 ug/mL
					8330SurrStkSS_00249	1 mL	1,2-Dinitrobenzene	10 ug/mL
.8330SurrStkSS_00245	02/02/24	Restek, Lot A0192220			(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330SurrStkSS_00246	02/02/24	Restek, Lot A0192220			(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330SurrStkSS_00247	02/02/24	Restek, Lot A0192220			(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330SurrStkSS_00248	02/02/24	Restek, Lot A0192220			(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330SurrStkSS_00249	02/02/24	Restek, Lot A0192220			(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
8330Surrogate_00141	09/28/23	03/28/23	Acetonitrile, Lot Acetonitrile_00077	500 mL	8330SurrStkSS_00259	1.25 mL	1,2-Dinitrobenzene	10 ug/mL
					8330SurrStkSS_00260	1.25 mL	1,2-Dinitrobenzene	10 ug/mL
					8330SurrStkSS_00261	1.25 mL	1,2-Dinitrobenzene	10 ug/mL
					8330SurrStkSS_00262	1.25 mL	1,2-Dinitrobenzene	10 ug/mL
.8330SurrStkSS_00259	01/31/28	Restek, Lot A0193444			(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330SurrStkSS_00260	03/28/24	Restek, Lot A0193444			(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330SurrStkSS_00261	03/28/24	Restek, Lot A0193444			(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330SurrStkSS_00262	03/28/24	Restek, Lot A0193444			(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
8330Surrogate_00143	10/12/23	04/12/23	Acetonitrile, Lot Acetonitrile_00077	500 mL	8330SurrStkSS_00263	1 mL	1,2-Dinitrobenzene	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00265	1 mL	1,2-Dinitrobenzene	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00266	1 mL	1,2-Dinitrobenzene	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00267	1 mL	1,2-Dinitrobenzene	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00268	1 mL	1,2-Dinitrobenzene	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
.8330SurrStkSS_00263	04/12/24	Restek, Lot A0193444			(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00265	04/12/24	Restek, Lot A0193444			(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00266	04/12/24	Restek, Lot A0194831			(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.8330SurrStkSS_00267	04/12/24		Restek, Lot A0194831		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00268	04/12/24		Restek, Lot A0194831		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL

Reagent

3,5-DNA Stock_00040

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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. : 31661 **Lot No.:** A0172723

Description : 3,5-Dinitroaniline Standard

3, 5-Dinitroaniline Std 1000µg/mL, Acetonitrile, 1mL/ampul

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

Expiration Date : December 31, 2025 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	3,5-Dinitroaniline	1,000.0 µg/mL	+/- 10.0737	µg/mL	Gravimetric
	CAS # 618-87-1 (Lot 10311HS)		+/- 31.3469	µg/mL	Unstressed
	Purity 99%		+/- 31.3469	µg/mL	Stressed

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

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

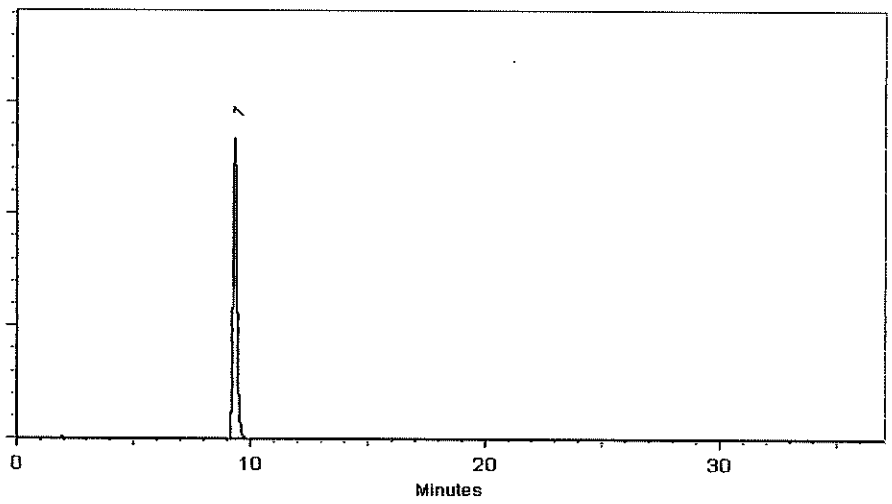
Flow Rate:
1.0 ml/min.

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

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm



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.

Jeremy Johnson - Mfg. Supervisor

Date Mixed: 25-May-2021 **Balance:** B251644995

Marlina Cowan - Operations Tech I

Date Passed: 27-May-2021

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep 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.

Reagent

3,5-DNA Stock_00042

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ISO 17034 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. : 31661 **Lot No.:** A0185772

Description : 3,5-Dinitroaniline Standard

3, 5-Dinitroaniline Std 1000µg/mL, Acetonitrile, 1mL/ampul

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

Expiration Date : December 31, 2026 **Storage:** 10°C or colder

Ship: Ambient

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	3,5-Dinitroaniline	1,008.0 µg/mL	+/- 10.1543 µg/mL	Gravimetric
	CAS # 618-87-1 (Lot 10311HS)		+/- 31.5977 µg/mL	Unstressed
	Purity 99%		+/- 31.5977 µg/mL	Stressed

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

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

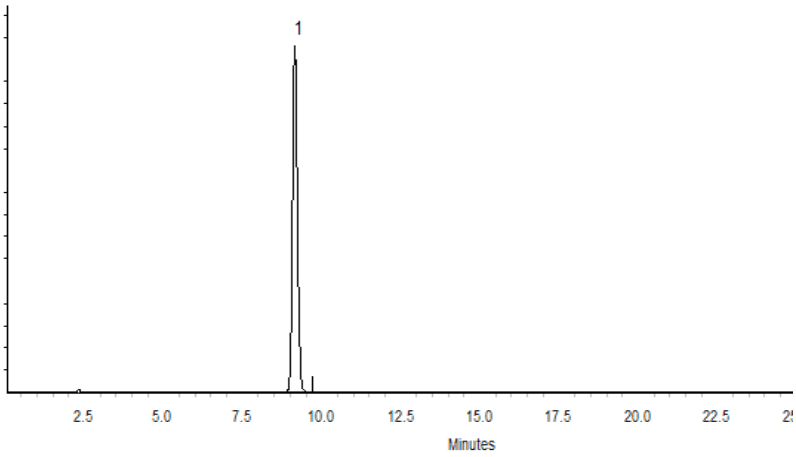
Flow Rate:
1.0 ml/min.

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

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm



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.

Morgan Craighead - Mix Technician

Date Mixed: 27-May-2022 **Balance:** 1128353505

Marlina Cowan - Operations Tech I

Date Passed: 02-Jun-2022

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep 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.

Reagent

8330 LCS_00121

Preliminary Report

Eurofins Denver

LCS, Lab Control Sample Report

Sample Path: \\chromfs\Denver\ChromData\CHHPLC_X\20230121-117963.b\01210012.D

Lims ID: 8330 LCS 121 Inj. Date: 21-Jan-2023 14:04:20

Worklist ID: 280-0117963-012 Instrument: CHHPLC_X3

Method: 8330_X3

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 3535	Limits 2 3535	Limits 3 3535
4 HMX	0.5000	0.4694	93.9	65-135	66-115	
8 RDX	0.5000	0.4904	98.1	68-130	69-122	
9 2,4,6-Trinitrophenol	0.5000	0.5399	108.0	80-120	63-135	
11 1,3,5-Trinitrobenzene	0.5000	0.5414	108.3	73-125	62-127	
12 1,3-Dinitrobenzene	0.5000	0.5314	106.3	78-120	59-131	
13 Nitrobenzene	0.5000	0.5214	104.3	65-134	46-144	
15 Tetryl	0.5000	0.5279	105.6	64-128	56-131	
16 Nitroglycerin	5.00	5.40	107.9	74-127	70-125	
17 2,4,6-Trinitrotoluene	0.5000	0.4569	91.4	71-123	46-139	
18 4-Amino-2,6-dinitrotolu	0.5000	0.5716	114.3	76-125	43-120	
19 2-Amino-4,6-dinitrotolu	0.5000	0.4927	98.5	79-120	46-124	
20 2,6-Dinitrotoluene	0.5000	0.5185	103.7	77-127	51-130	
21 2,4-Dinitrotoluene	0.5000	0.5353	107.1	78-120	53-127	
22 o-Nitrotoluene	0.5000	0.5106	102.1	70-127	37-138	
23 p-Nitrotoluene	0.5000	0.4984	99.7	71-127	41-137	
24 m-Nitrotoluene	0.5000	0.4984	99.7	73-125	31-140	
25 PETN	5.00	5.27	105.5	73-127	67-127	

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

280-171404-A-21-A 280-171267-A-1-A 280-171267-A-2-A
280-171267-A-3-A 280-171267-A-4-A 280-171267-A-5-A
280-171267-A-6-A 280-171267-A-7-A

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

550-196288-AO-1-A 570-123967-A-1-A

Samples for Limit Group: 3, Lims Prep Method: 3535

280-171237-A-1-A 280-171237-A-2-A 280-171237-A-3-A
280-171237-A-4-A

Reagent

8330 LCS_00126

Preliminary Report

Eurofins Denver

LCS, Lab Control Sample Report

Sample Path: \\chromfs\Denver\ChromData\CHHPLC_X\20230426-120796.b\04260006.D

Lims ID: C18column:B16162 Inj. Date: 26-Apr-2023 15:04:00

Worklist ID: 280-0120796-006 Instrument: CHHPLC_X3

Method: 8330_X3

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 0B_Sonc_	Limits 2 0B_Sonc_
4 HMX	0.5000	0.4359	87.2	80-120	74-124
8 RDX	0.5000	0.4718	94.4	80-124	67-129
9 2,4,6-Trinitrophenol	0.5000	0.5241	104.8	38-154	
11 1,3,5-Trinitrobenzene	0.5000	0.5064	101.3	80-120	80-116
12 1,3-Dinitrobenzene	0.5000	0.5004	100.1	80-120	73-119
13 Nitrobenzene	0.5000	0.5010	100.2	76-122	67-129
14 3,5-Dinitroaniline	0.5000	0.4725	94.5	80-120	86-118
15 Tetryl	0.5000	0.5711	114.2	80-120	68-135
16 Nitroglycerin	5.00	5.04	100.8	75-120	73-124
17 2,4,6-Trinitrotoluene	0.5000	0.4643	92.9	80-120	71-120
18 4-Amino-2,6-dinitrotolu	0.5000	0.4973	99.5	80-120	64-127
19 2-Amino-4,6-dinitrotolu	0.5000	0.4766	95.3	78-120	71-123
20 2,6-Dinitrotoluene	0.5000	0.4994	99.9	80-120	79-117
21 2,4-Dinitrotoluene	0.5000	0.4894	97.9	80-120	75-121
22 o-Nitrotoluene	0.5000	0.4896	97.9	80-124	70-124
23 p-Nitrotoluene	0.5000	0.4868	97.4	80-120	71-124
24 m-Nitrotoluene	0.5000	0.4890	97.8	80-122	67-129
25 PETN	5.00	5.34	106.9	80-120	72-128

Samples for Limit Group: 1, Lims Prep Method: 8330B_Sonc_10g

280-174348-A-25-B	280-174348-A-26-B	280-174348-A-27-B
280-174348-A-28-B	280-174348-A-29-B	280-174348-A-30-D
280-174348-A-31-B	280-174348-A-16-B	280-174348-A-18-B
280-174348-A-19-B	280-174348-A-20-B	280-174348-A-22-B
280-174348-A-24-B	280-174485-A-7-B	280-174485-A-8-B
280-174485-A-9-B	280-174482-A-1-B	280-174482-A-2-B
280-174482-A-3-B	280-174482-A-4-B	280-174482-A-5-B
280-174482-A-6-B	280-174482-A-7-B	280-174482-A-8-B
280-174482-A-9-D	280-174482-A-10-B	280-174482-A-11-B
280-174482-A-12-B	280-174482-A-13-B	280-174482-A-14-B
280-174482-A-15-B	280-174482-A-16-B	280-174482-A-17-B
280-174482-A-18-B	280-174482-A-19-C	

Samples for Limit Group: 2, Lims Prep Method: 8330B_Sonc_10g

280-174408-A-1-I	280-174408-A-2-I

Reagent

8330 Stock_TS_00023

Agilent
Trusted Answers

ISO 17034

Reference Material Certificate

Product Information Sheet

Product Name: Stock Standard
Product Number: NAIM-833E-1
Storage Conditions: Store at Room Temperature (15° to 30°C).

Lot Number: 0006684308
Lot Issue Date: 01-Jun-2022
Expiration Date: 30-Jun-2025

Component Name	CERTIFIED VALUES Concentration	Expanded Uncertainty	CAS#	Analyte Lot
HMX	1001	± 5 µg/mL	002691-41-0	RM06237
RDX	1001	± 5 µg/mL	000121-82-4	RM10915
1,3,5-trinitrobenzene	1001	± 5 µg/mL	000099-35-4	RM17843
m-dinitrobenzene	1002	± 5 µg/mL	000099-65-0	RM14290
nitrobenzene	1002	± 5 µg/mL	000098-95-3	RM11472
2,4,6-trinitrotoluene (TNT)	1001	± 5 µg/mL	000118-96-7	RM16204
2,4-dinitrotoluene	1002	± 5 µg/mL	000121-14-2	RM10279
tetryl	1003	± 5 µg/mL	000479-45-8	RM14651
2,6-dinitrotoluene	1003	± 5 µg/mL	000606-20-2	RM16636
2-nitrotoluene	1003	± 5 µg/mL	000088-72-2	NT01996
3-nitrotoluene	1002	± 5 µg/mL	000099-08-1	NT02212
4-nitrotoluene	1003	± 5 µg/mL	000099-99-0	NT02096
2-amino-4,6-dinitrotoluene	1003	± 5 µg/mL	035572-78-2	RM04232
4-amino-2,6-dinitrotoluene	1004	± 5 µg/mL	019406-51-0	RM04226

Matrix: acetonitrile

Description:
This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above.

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

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

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Reagent

8330_NG_Stk_00118

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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.:** A0188553

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, 2025 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

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 200507JLM)		+/- 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)

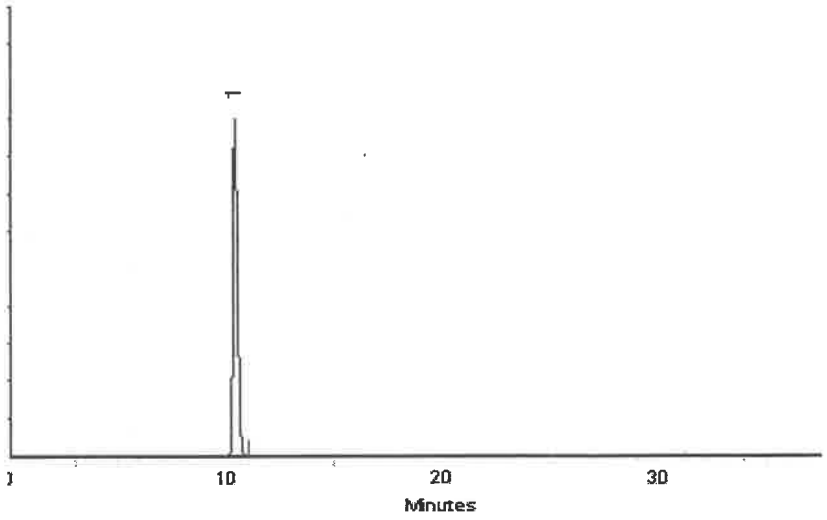
Flow Rate:
1.0 ml/min.

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

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm



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: 15-Aug-2022 **Balance:** 1128353505

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 16-Aug-2022

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep 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.

Reagent

8330_NG_Stk_00120

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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.:** A0188553

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, 2025 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

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 200507JLM)		+/- 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)

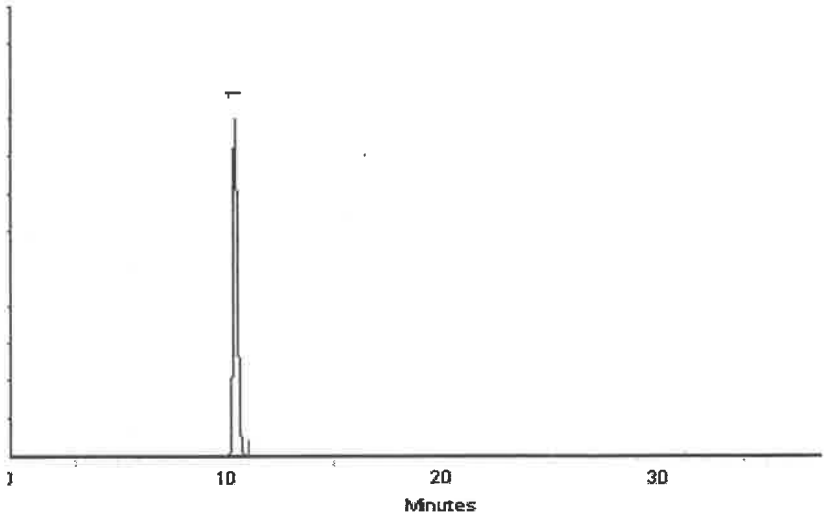
Flow Rate:
1.0 ml/min.

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

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm



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: 15-Aug-2022 **Balance:** 1128353505

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 16-Aug-2022

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
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0°C or colder (Freezer) -20°C or colder (Deep 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.

Reagent

8330_NG_Stk_00128

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110 Benner Circle
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Tel: 1-814-353-1300
Fax: 1-814-353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic

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.:** A0194013

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, 2026 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Nitroglycerin	55-63-0	200507JLM	99%	5,036.0 µg/mL	+/- 237.6858

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

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

Flow Rate:
1.0 ml/min.

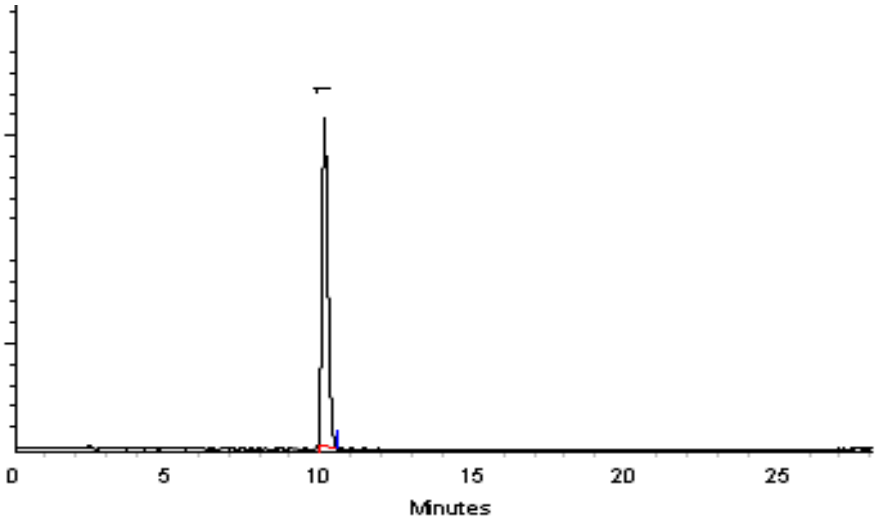
Mobile Phase A:
water:methanol (44:56 V/V)

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm

Inj. Vol
5µl



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.

Brandon Reish - Operations Technician II

Date Mixed: 27-Jan-2023 **Balance Serial #** B251644995

Christie Mills - Operations Tech II - ARM QC

Date Passed: 31-Jan-2023

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/µECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ uncertainty} = k\sqrt{u^2_{gravimetric} + u^2_{homogeneity} + u^2_{storage\ stability} + u^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls 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 ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330_NG_Stk_00129

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic

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.:** A0194013

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, 2026 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Nitroglycerin	55-63-0	200507JLM	99%	5,036.0 µg/mL	+/- 237.6858

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

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

Flow Rate:
1.0 ml/min.

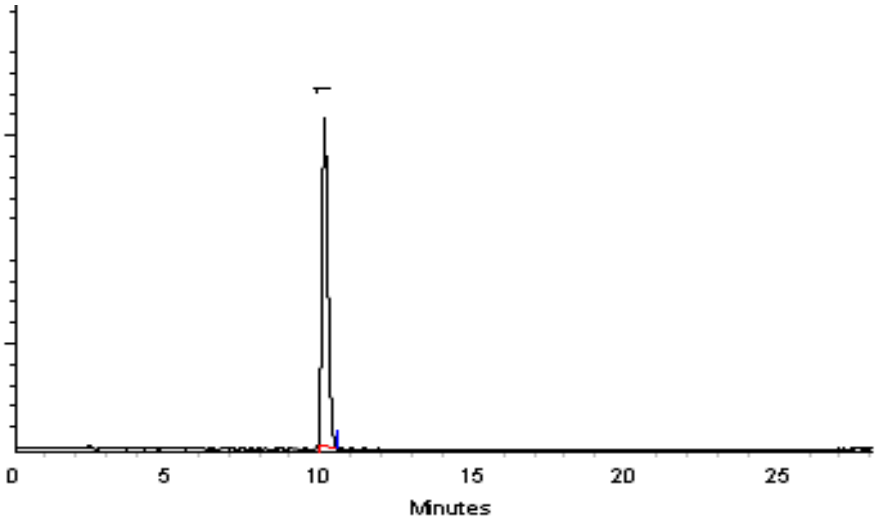
Mobile Phase A:
water:methanol (44:56 V/V)

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm

Inj. Vol
5µl



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.

Brandon Reish - Operations Technician II

Date Mixed: 27-Jan-2023 **Balance Serial #** B251644995

Christie Mills - Operations Tech II - ARM QC

Date Passed: 31-Jan-2023

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/µECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ uncertainty} = k\sqrt{u^2_{gravimetric} + u^2_{homogeneity} + u^2_{storage\ stability} + u^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls 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 ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330_NG_Stk_00130

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Tel: 1-814-353-1300
Fax: 1-814-353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic

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.:** A0194013

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, 2026 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Nitroglycerin	55-63-0	200507JLM	99%	5,036.0 µg/mL	+/- 237.6858

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

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

Flow Rate:
1.0 ml/min.

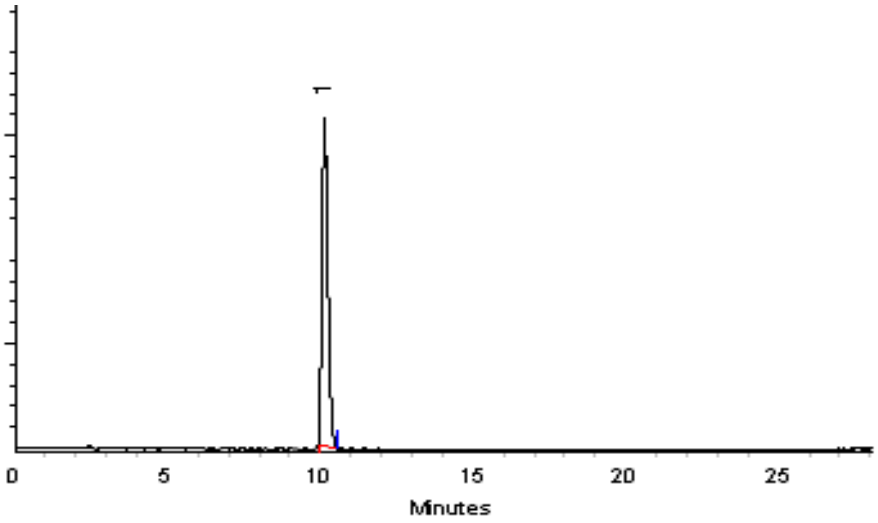
Mobile Phase A:
water:methanol (44:56 V/V)

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm

Inj. Vol
5µl



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.

Brandon Reish - Operations Technician II

Date Mixed: 27-Jan-2023 **Balance Serial #** B251644995

Christie Mills - Operations Tech II - ARM QC

Date Passed: 31-Jan-2023

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

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- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

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- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330_NG_Stk_00131

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Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

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Catalog No. : 568871 **Lot No.:** A0194013

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, 2026 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Nitroglycerin	55-63-0	200507JLM	99%	5,036.0 µg/mL	+/- 237.6858

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

Quality Confirmation Test

Column:
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Flow Rate:
1.0 ml/min.

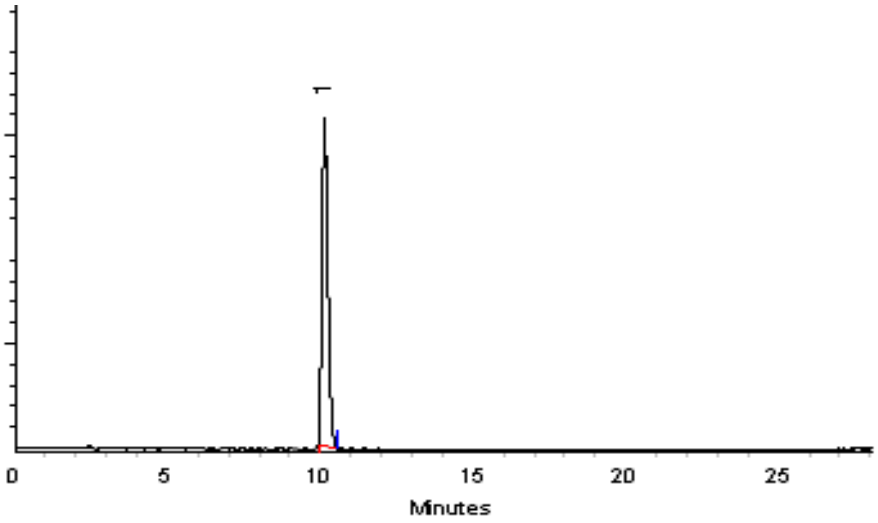
Mobile Phase A:
water:methanol (44:56 V/V)

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm

Inj. Vol
5µl



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.

Brandon Reish - Operations Technician II

Date Mixed: 27-Jan-2023 **Balance Serial #** B251644995

Christie Mills - Operations Tech II - ARM QC

Date Passed: 31-Jan-2023

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

General Certified Reference Material Notes

Expiration Notes:

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  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls 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 ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330_NG1000_00007

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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. : 31498 **Lot No.:** A0175997

Description : Nitroglycerin Standard

Nitroglycerin Standard 1,000µg/mL, Methanol, 1mL/ampul

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

Expiration Date : September 30, 2026 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Nitroglycerin	1,000.0 µg/mL	+/- 5.9397 µg/mL	Gravimetric
	CAS # 55-63-0 (Lot 200507JLM)		+/- 54.7830 µg/mL	Unstressed
	Purity 99%		+/- 63.8824 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) -20°C or colder (Deep 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.

Reagent

8330_NG1000_00010

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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. : 31498 **Lot No.:** A0187280

Description : Nitroglycerin Standard

Nitroglycerin Standard 1,000µg/mL, Methanol, 1mL/ampul

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

Expiration Date : July 31, 2027 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Nitroglycerin	1,004.0 µg/mL	+/- 5.9635	µg/mL	Gravimetric
	CAS # 55-63-0 (Lot 200507JLM)		+/- 55.0021	µg/mL	Unstressed
	Purity 99%		+/- 64.1379	µg/mL	Stressed

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

Reagent

8330_OP_DMT_00020

Preliminary Report

Eurofins Denver

LCS, Lab Control Sample Report

Sample Path: \\chromfs\Denver\ChromData\CHHPLC_X\20230509-121258.b\05090011.D

Lims ID: DMT LCS20 Inj. Date: 09-May-2023 16:32:44

Worklist ID: 280-0121258-011 Instrument: CHHPLC_X3

Method: 8330_X3

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 3535	Limits 2 0B_Sonc_	Limits 3 3535
3 TNX	0.5015	0.5099	101.7	50-150		
6 DNX	0.5005	0.5059	101.1	66-119	50-150	
7 MNX	0.5835	0.6032	103.4	57-132	68-123	

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

280-175420-A-1-A 280-175420-A-2-A 280-175459-A-1-A

280-175942-A-3-A 280-175942-A-4-A 280-175942-A-5-A

Samples for Limit Group: 2, Lims Prep Method: 8330B_Sonc_10g

410-124886-B-1-A 550-201589-N-1-A 550-201670-N-1-A

Samples for Limit Group: 3, Lims Prep Method: 3535

280-175990-A-1-A 280-175990-A-2-A 280-175990-A-3-A

280-175990-A-4-A 860-48196-C-1-A

Reagent

8330_PETN_Stk_00128

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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. : 568872 **Lot No.:** A0187506

Description : Custom PETN Standard

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

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

Expiration Date : July 31, 2025 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	PETN		5,028.0 µg/mL	+/-	46.7577	µg/mL	Gravimetric
	CAS # 78-11-5	(Lot 051108JLM)		+/-	277.7886	µg/mL	Unstressed
	Purity 99%			+/-	323.2092	µg/mL	Stressed

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

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

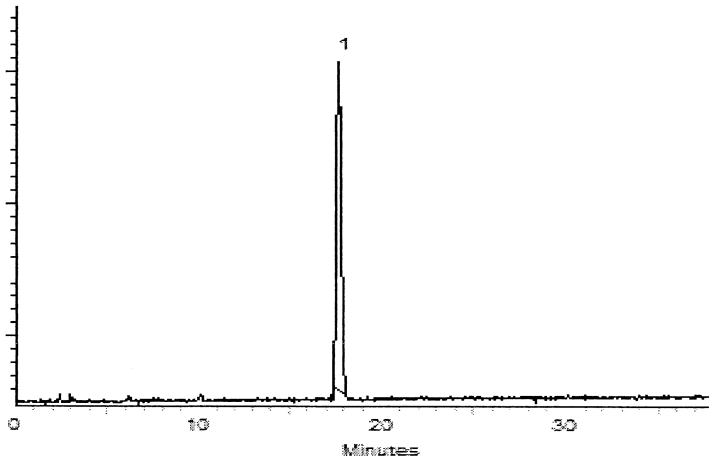
Flow Rate:
1.0 ml/min.

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

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm



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.

Miranda Kline

Miranda Kline - Operations Technician I **Date Mixed:** 19-Jul-2022 **Balance:** B345965662

Fang-Yun Weaver - Operations Lead Tech - ARM QC **Date Passed:** 22-Jul-2022

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep 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.

Reagent

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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. : 568872 **Lot No.:** A0188550

Description : Custom PETN Standard

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

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

Expiration Date : August 31, 2025 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	PETN	5,000.0 µg/mL	+/- 46.4973 µg/mL	Gravimetric
	CAS # 78-11-5 (Lot 051108JLM)		+/- 276.2417 µg/mL	Unstressed
	Purity 99%		+/- 321.4093 µg/mL	Stressed

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

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

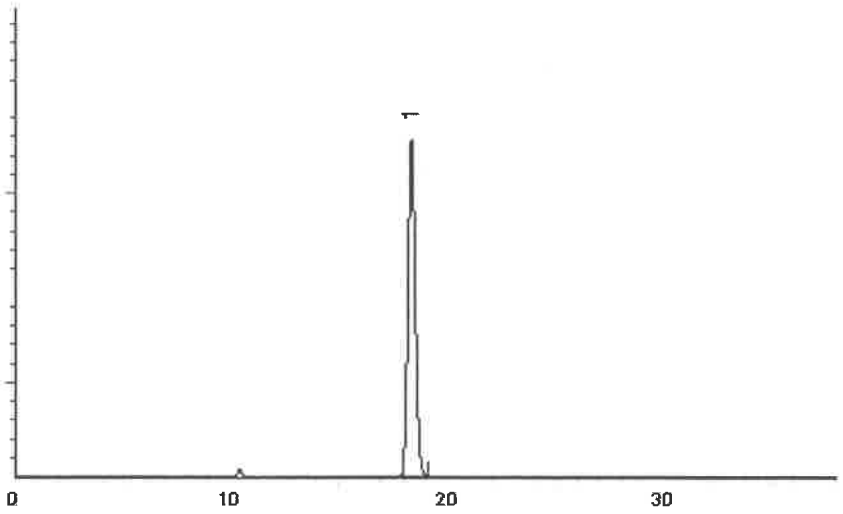
Flow Rate:
1.0 ml/min.

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

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm



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: 15-Aug-2022 **Balance:** 1128353505

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 16-Aug-2022

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
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0°C or colder (Freezer) -20°C or colder (Deep 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.

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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. : 568872 **Lot No.:** A0188550

Description : Custom PETN Standard

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

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

Expiration Date : August 31, 2025 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	PETN		5,000.0 µg/mL	+/- 46.4973	µg/mL	Gravimetric
	CAS # 78-11-5	(Lot 051108JLM)		+/- 276.2417	µg/mL	Unstressed
	Purity 99%			+/- 321.4093	µg/mL	Stressed

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

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

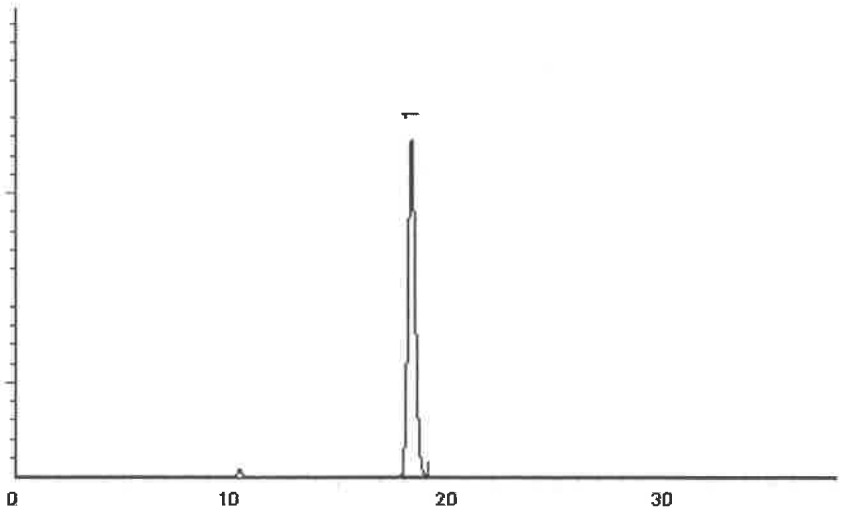
Flow Rate:
1.0 ml/min.

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

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm



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: 15-Aug-2022 **Balance:** 1128353505

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 16-Aug-2022

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

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- Purity values are rounded to the nearest whole number.

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0°C or colder (Freezer) -20°C or colder (Deep 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:

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Reagent

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Catalog No. : 568872 **Lot No.:** A0188550

Description : Custom PETN Standard

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

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

Expiration Date : August 31, 2025 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	PETN		5,000.0 µg/mL	+/- 46.4973	µg/mL	Gravimetric
	CAS # 78-11-5	(Lot 051108JLM)		+/- 276.2417	µg/mL	Unstressed
	Purity 99%			+/- 321.4093	µg/mL	Stressed

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

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

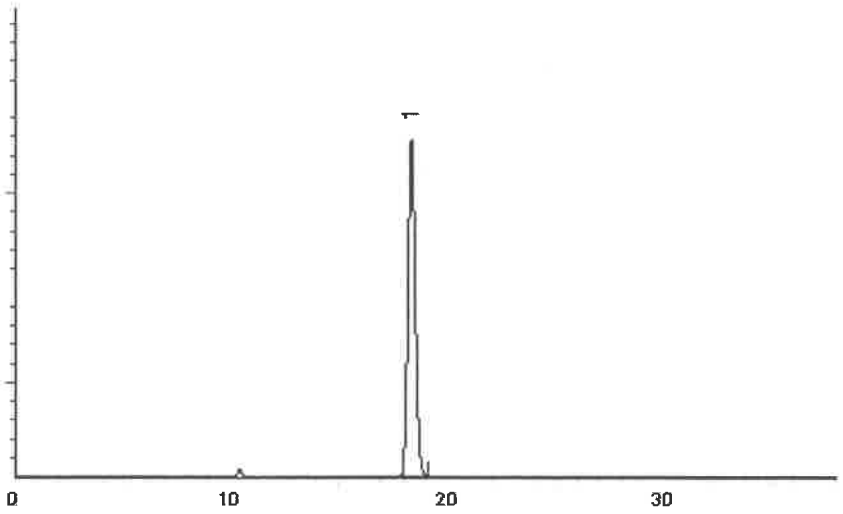
Flow Rate:
1.0 ml/min.

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

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm



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: 15-Aug-2022 **Balance:** 1128353505

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 16-Aug-2022

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep 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.

Reagent

8330_PETN_Stk_00136

RESTEK®
110 Benner Circle
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Tel: (800)356-1688
Fax: (814)353-1309

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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. : 568872 **Lot No.:** A0188550

Description : Custom PETN Standard

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

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

Expiration Date : August 31, 2025 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	PETN	5,000.0 µg/mL	+/- 46.4973 µg/mL	Gravimetric
	CAS # 78-11-5 (Lot 051108JLM)		+/- 276.2417 µg/mL	Unstressed
	Purity 99%		+/- 321.4093 µg/mL	Stressed

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

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

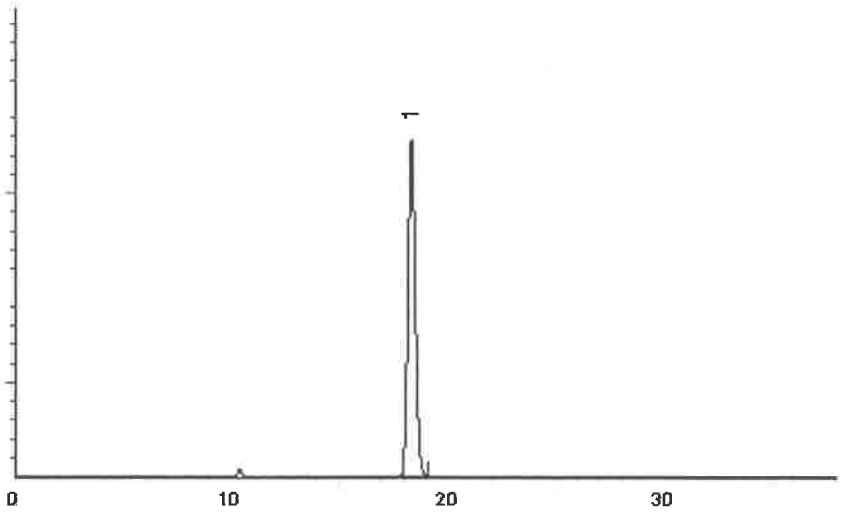
Flow Rate:
1.0 ml/min.

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

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm



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: 15-Aug-2022 **Balance:** 1128353505

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 16-Aug-2022

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep 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.

Reagent

8330_PETN1000_00010

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
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Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
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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. : 31600 **Lot No.:** A0187142

Description : PETN Standard

PETN Standard 1000µg/mL, Methanol, 1mL/ampul

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

Expiration Date : July 31, 2027 **Storage:** 10°C or colder

Handling: Sonicate prior to use. **Ship:** Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
I	PETN	1,001.0 µg/mL	+/- 5.9456	µg/mL	Gravimetric
	CAS # 78-11-5 (Lot 051108JLM)		+/- 54.8378	µg/mL	Unstressed
	Purity 99%		+/- 63.9463	µg/mL	Stressed

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

Reagent

8330_PETN1000_00011

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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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. : 31600 **Lot No.:** A0187142

Description : PETN Standard

PETN Standard 1000µg/mL, Methanol, 1mL/ampul

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

Expiration Date : July 31, 2027 **Storage:** 10°C or colder

Handling: Sonicate prior to use. **Ship:** Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
I	PETN	1,001.0 µg/mL	+/- 5.9456	µg/mL	Gravimetric
	CAS # 78-11-5 (Lot 051108JLM)		+/- 54.8378	µg/mL	Unstressed
	Purity 99%		+/- 63.9463	µg/mL	Stressed

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

Reagent

833035DNAStk_00053

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-4
Description: 3,5-Dinitroaniline
Lot: 222011692-01
Solvent: Methanol (50%)
Acetonitrile (50%)
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Sep 6, 2022
Expiration: Oct 6, 2023
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[2] (µg/mL)	Certified Analyte Concentration[1] (µg/mL)
3,5-Dinitroaniline	618-87-1	100.0	100.6	100.6

This Certified Reference Material was verified in accordance with ISO/IEC 17025

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.

[2] All weights are traceable through NIST, Test No. 684/289871-17

[1] 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

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

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

833035DNAStk_00054

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-4
Description: 3,5-Dinitroaniline
Lot: 222011692-01
Solvent: Methanol (50%)
Acetonitrile (50%)
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Sep 6, 2022
Expiration: Oct 6, 2023
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[2] (µg/mL)	Certified Analyte Concentration[1] (µg/mL)
3,5-Dinitroaniline	618-87-1	100.0	100.6	100.6

This Certified Reference Material was verified in accordance with ISO/IEC 17025

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.

[2] All weights are traceable through NIST, Test No. 684/289871-17

[1] 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.

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This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

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

QR-ORG/INO-001
Rev. 7/20

Reagent

8330LCSMix1_00136

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www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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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. : 31450 **Lot No.:** A0183848

Description : 8330 Calibration Mix #1

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

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

Expiration Date : April 30, 2027 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	HMX **CAS #** 2691-41-0 (Lot 210324JLM) **Purity** 99%	1,008.0 µg/mL	+/- 5.9872 µg/mL +/- 55.2213 µg/mL +/- 64.3934 µg/mL	Gravimetric Unstressed Stressed
2	RDX **CAS #** 121-82-4 (Lot 080228JLM) **Purity** 99%	1,007.0 µg/mL	+/- 5.9813 µg/mL +/- 55.1665 µg/mL +/- 64.3295 µg/mL	Gravimetric Unstressed Stressed
3	1,3,5-Trinitrobenzene **CAS #** 99-35-4 (Lot A6TDK) **Purity** 99%	1,008.0 µg/mL	+/- 5.9872 µg/mL +/- 55.2213 µg/mL +/- 64.3934 µg/mL	Gravimetric Unstressed Stressed
4	1,3-Dinitrobenzene **CAS #** 99-65-0 (Lot 1-DXX-24-1) **Purity** 99%	1,006.0 µg/mL	+/- 5.9753 µg/mL +/- 55.1117 µg/mL +/- 64.2657 µg/mL	Gravimetric Unstressed Stressed
5	Nitrobenzene **CAS #** 98-95-3 (Lot 10224044) **Purity** 99%	1,007.0 µg/mL	+/- 5.9813 µg/mL +/- 55.1665 µg/mL +/- 64.3295 µg/mL	Gravimetric Unstressed Stressed
6	2,4,6-Trinitrotoluene **CAS #** 118-96-7 (Lot D11836200) **Purity** 99%	1,002.0 µg/mL	+/- 5.9516 µg/mL +/- 54.8926 µg/mL +/- 64.0101 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)

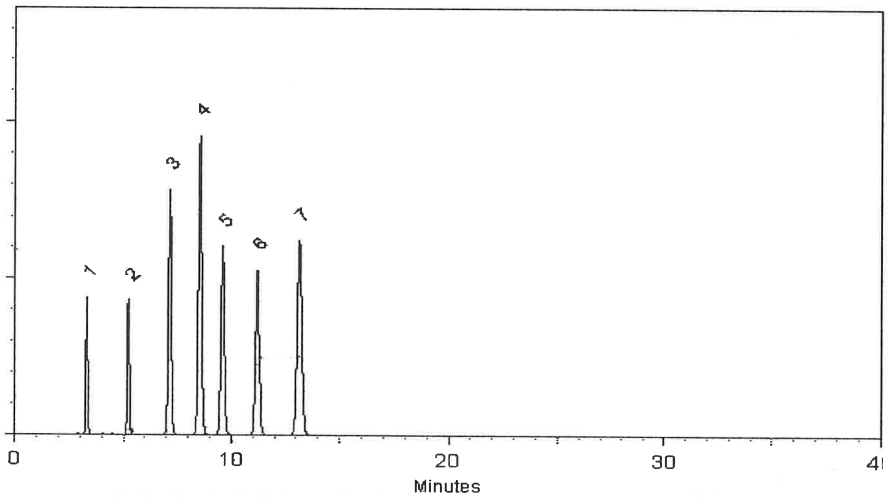
Flow Rate:
1.0 ml/min.

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

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 08-Apr-2022 **Balance:** B251644995

Feng-Yan Lo - QC Analyst

Date Passed: 13-Apr-2022

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
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- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 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) -20°C or colder (Deep 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.

Reagent

8330LCSMix1_00140

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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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. : 31450 **Lot No.:** A0183848

Description : 8330 Calibration Mix #1

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

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

Expiration Date : April 30, 2027 **Storage:** 10°C or colder

Ship: Ambient

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	HMX	1,008.0 µg/mL	+/- 5.9872 µg/mL	Gravimetric
	CAS # 2691-41-0 (Lot 210324JLM)		+/- 55.2213 µg/mL	Unstressed
	Purity 99%		+/- 64.3934 µg/mL	Stressed
2	RDX	1,007.0 µg/mL	+/- 5.9813 µg/mL	Gravimetric
	CAS # 121-82-4 (Lot 080228JLM)		+/- 55.1665 µg/mL	Unstressed
	Purity 99%		+/- 64.3295 µg/mL	Stressed
3	1,3,5-Trinitrobenzene	1,008.0 µg/mL	+/- 5.9872 µg/mL	Gravimetric
	CAS # 99-35-4 (Lot A6TDK)		+/- 55.2213 µg/mL	Unstressed
	Purity 99%		+/- 64.3934 µg/mL	Stressed
4	1,3-Dinitrobenzene	1,006.0 µg/mL	+/- 5.9753 µg/mL	Gravimetric
	CAS # 99-65-0 (Lot 1-DXX-24-1)		+/- 55.1117 µg/mL	Unstressed
	Purity 99%		+/- 64.2657 µg/mL	Stressed
5	Nitrobenzene	1,007.0 µg/mL	+/- 5.9813 µg/mL	Gravimetric
	CAS # 98-95-3 (Lot 10224044)		+/- 55.1665 µg/mL	Unstressed
	Purity 99%		+/- 64.3295 µg/mL	Stressed
6	2,4,6-Trinitrotoluene	1,002.0 µg/mL	+/- 5.9516 µg/mL	Gravimetric
	CAS # 118-96-7 (Lot D11836200)		+/- 54.8926 µg/mL	Unstressed
	Purity 99%		+/- 64.0101 µg/mL	Stressed
7	2,4-Dinitrotoluene	1,005.0 µg/mL	+/- 5.9694 µg/mL	Gravimetric
	CAS # 121-14-2 (Lot MKAA0690V)		+/- 55.0569 µg/mL	Unstressed
	Purity 99%		+/- 64.2018 µg/mL	Stressed

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

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

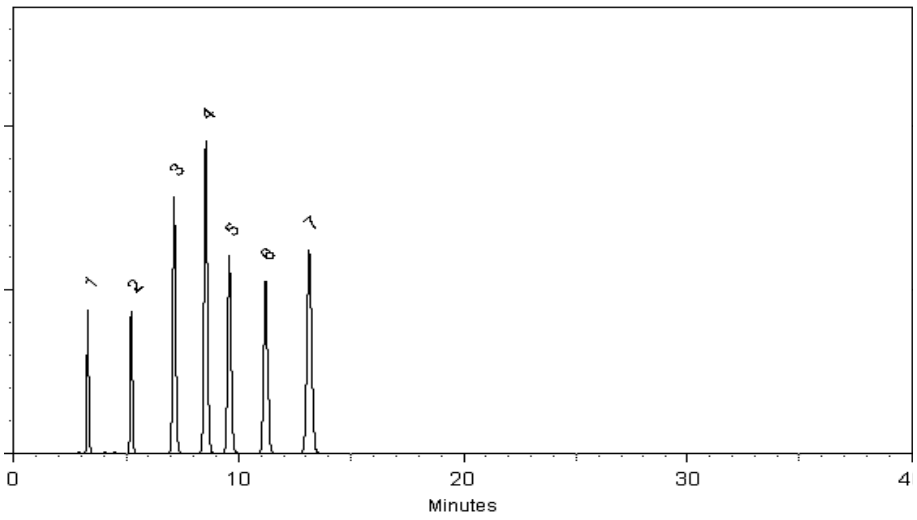
Flow Rate:
1.0 ml/min.

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

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 08-Apr-2022 **Balance:** B251644995

Fang-Yun Lo - QC Analyst

Date Passed: 13-Apr-2022

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep 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.

Reagent

8330LCSMix1_00141

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Certificate of Analysis

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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. : 31450 **Lot No.:** A0183848

Description : 8330 Calibration Mix #1

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

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

Expiration Date : April 30, 2027 **Storage:** 10°C or colder

Ship: Ambient

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	HMX	1,008.0 µg/mL	+/- 5.9872 µg/mL	Gravimetric
	CAS # 2691-41-0 (Lot 210324JLM)		+/- 55.2213 µg/mL	Unstressed
	Purity 99%		+/- 64.3934 µg/mL	Stressed
2	RDX	1,007.0 µg/mL	+/- 5.9813 µg/mL	Gravimetric
	CAS # 121-82-4 (Lot 080228JLM)		+/- 55.1665 µg/mL	Unstressed
	Purity 99%		+/- 64.3295 µg/mL	Stressed
3	1,3,5-Trinitrobenzene	1,008.0 µg/mL	+/- 5.9872 µg/mL	Gravimetric
	CAS # 99-35-4 (Lot A6TDK)		+/- 55.2213 µg/mL	Unstressed
	Purity 99%		+/- 64.3934 µg/mL	Stressed
4	1,3-Dinitrobenzene	1,006.0 µg/mL	+/- 5.9753 µg/mL	Gravimetric
	CAS # 99-65-0 (Lot 1-DXX-24-1)		+/- 55.1117 µg/mL	Unstressed
	Purity 99%		+/- 64.2657 µg/mL	Stressed
5	Nitrobenzene	1,007.0 µg/mL	+/- 5.9813 µg/mL	Gravimetric
	CAS # 98-95-3 (Lot 10224044)		+/- 55.1665 µg/mL	Unstressed
	Purity 99%		+/- 64.3295 µg/mL	Stressed
6	2,4,6-Trinitrotoluene	1,002.0 µg/mL	+/- 5.9516 µg/mL	Gravimetric
	CAS # 118-96-7 (Lot D11836200)		+/- 54.8926 µg/mL	Unstressed
	Purity 99%		+/- 64.0101 µg/mL	Stressed
7	2,4-Dinitrotoluene	1,005.0 µg/mL	+/- 5.9694 µg/mL	Gravimetric
	CAS # 121-14-2 (Lot MKAA0690V)		+/- 55.0569 µg/mL	Unstressed
	Purity 99%		+/- 64.2018 µg/mL	Stressed

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

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

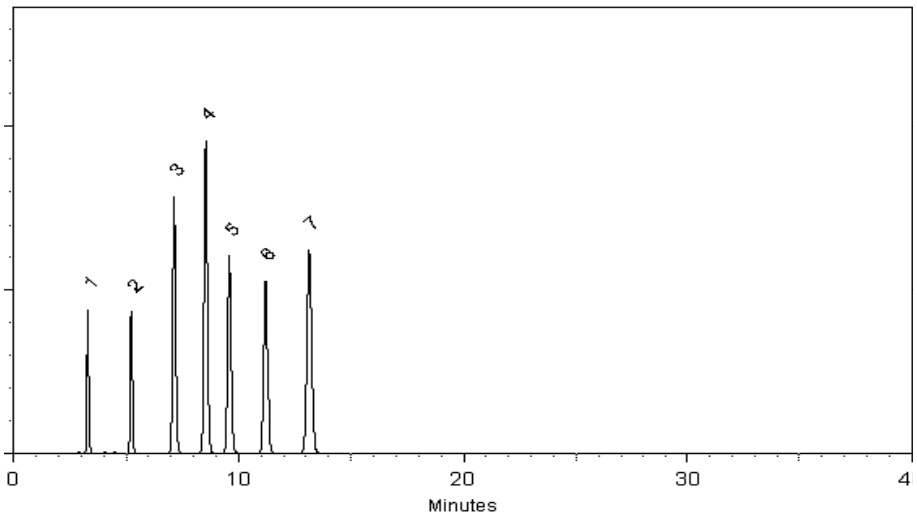
Flow Rate:
1.0 ml/min.

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

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 08-Apr-2022 **Balance:** B251644995

Fang-Yun Lo - QC Analyst

Date Passed: 13-Apr-2022

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep 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.

Reagent

8330LCSmix2_00034

4

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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.:** A0186475

Description : 8330 Calibration Mix #2

8330 Calibration Std #2 1000µg/mL, Acetonitrile, 1mL/ampul

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

Expiration Date : June 30, 2027 **Storage:** 10°C or colder

Ship: Ambient

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 211028JLM)	1,004.0 µg/mL	+/- 5.9635 µg/mL +/- 55.0021 µg/mL +/- 64.1379 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** 99% (Lot 29550-55)	1,002.0 µg/mL	+/- 5.9516 µg/mL +/- 54.8926 µg/mL +/- 64.0101 µg/mL	Gravimetric Unstressed Stressed
4	2,6-Dinitrotoluene **CAS #** 606-20-2 **Purity** 99% (Lot BCBB8606)	1,004.0 µg/mL	+/- 5.9635 µg/mL +/- 55.0021 µg/mL +/- 64.1379 µg/mL	Gravimetric Unstressed Stressed
5	2-Nitrotoluene **CAS #** 88-72-2 **Purity** 99% (Lot BCBZ7826)	1,002.0 µg/mL	+/- 5.9516 µg/mL +/- 54.8926 µg/mL +/- 64.0101 µg/mL	Gravimetric Unstressed Stressed
6	4-Nitrotoluene **CAS #** 99-99-0 **Purity** 99% (Lot BCCB0171)	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** 99% (Lot FBO01)	1,000.0 µg/mL	+/- 5.9397 µg/mL +/- 54.7830 µg/mL +/- 63.8824 µg/mL	Gravimetric Unstressed Stressed

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

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

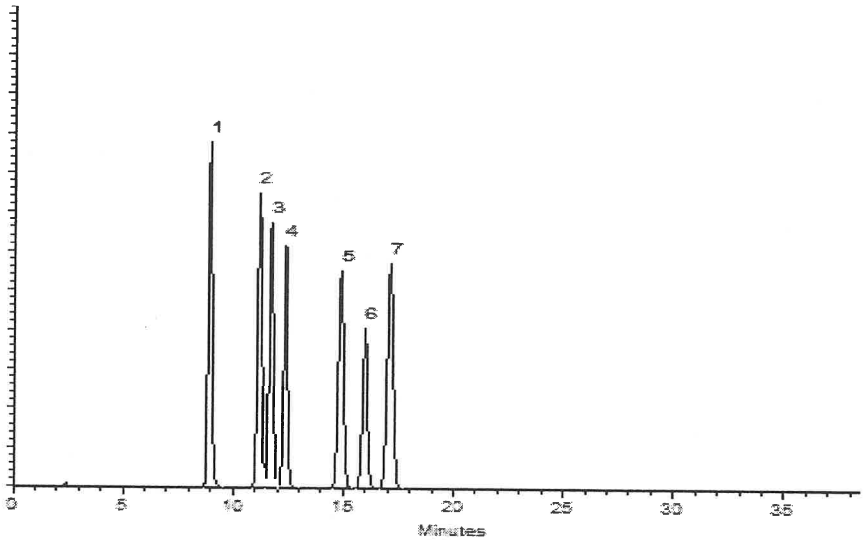
Flow Rate:
1.0 ml/min.

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

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm



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.

Ashley Frantz - Quoting Technician

Date Mixed: 21-Jun-2022 **Balance:** 1128360905

Christie Mills - Operations Tech II - ARM QC

Date Passed: 29-Jun-2022

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep 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.

Reagent

8330LCSmix2_00038

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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.:** A0192237

Description : 8330 Calibration Mix #2

8330 Calibration Std #2 1000µg/mL, Acetonitrile, 1mL/ampul

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

Expiration Date : December 31, 2027 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Tetryl	479-45-8	211028JLM	99%	1,006.0 µg/mL	+/- 46.9317
2	4-Amino-2,6-dinitrotoluene	19406-51-0	ER070908-01	99%	1,004.0 µg/mL	+/- 46.8384
3	2-Amino-4,6-dinitrotoluene	35572-78-2	A210503-001	99%	1,006.0 µg/mL	+/- 46.9317
4	2,6-Dinitrotoluene	606-20-2	BCCG1833	99%	1,004.0 µg/mL	+/- 46.8384
5	2-Nitrotoluene	88-72-2	BCBZ7826	99%	1,008.0 µg/mL	+/- 47.0250
6	4-Nitrotoluene	99-99-0	BCCB0171	99%	1,002.0 µg/mL	+/- 46.7451
7	3-Nitrotoluene	99-08-1	07329LG	99%	1,008.0 µg/mL	+/- 47.0250

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

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

Flow Rate:
1.0 ml/min.

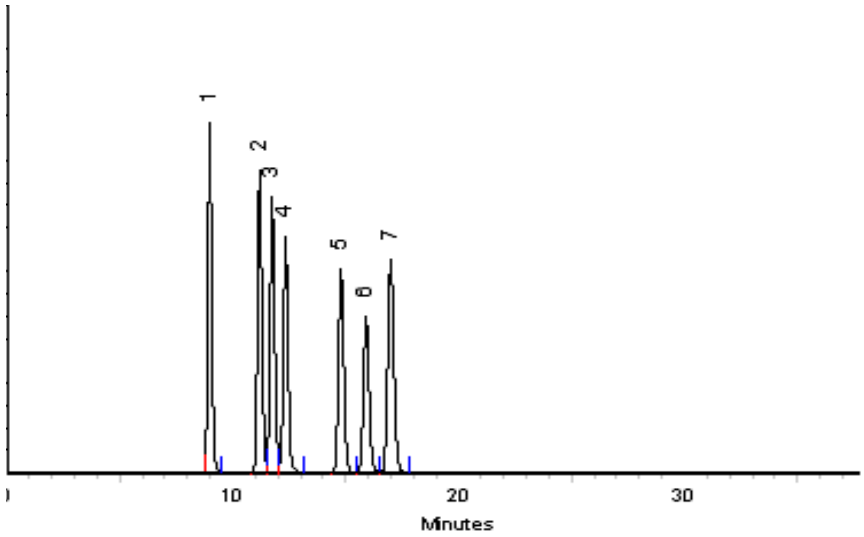
Mobile Phase A:
water:methanol (44:56 V/V)

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm

Inj. Vol
5µl



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.

John Friedline - Operations Technician I

Date Mixed: 05-Dec-2022 **Balance Serial #** 1128342314

Christie Mills - Operations Tech II - ARM QC

Date Passed: 07-Dec-2022

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/µECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ uncertainty} = k\sqrt{u^2_{gravimetric} + u^2_{homogeneity} + u^2_{storage\ stability} + u^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls 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 ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330LCSmix2_00039

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Bellefonte, PA 16823-8812
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Fax: 1-814-353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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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.:** A0192237

Description : 8330 Calibration Mix #2

8330 Calibration Std #2 1000µg/mL, Acetonitrile, 1mL/ampul

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

Expiration Date : December 31, 2027 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Tetryl	479-45-8	211028JLM	99%	1,006.0 µg/mL	+/- 46.9317
2	4-Amino-2,6-dinitrotoluene	19406-51-0	ER070908-01	99%	1,004.0 µg/mL	+/- 46.8384
3	2-Amino-4,6-dinitrotoluene	35572-78-2	A210503-001	99%	1,006.0 µg/mL	+/- 46.9317
4	2,6-Dinitrotoluene	606-20-2	BCCG1833	99%	1,004.0 µg/mL	+/- 46.8384
5	2-Nitrotoluene	88-72-2	BCBZ7826	99%	1,008.0 µg/mL	+/- 47.0250
6	4-Nitrotoluene	99-99-0	BCCB0171	99%	1,002.0 µg/mL	+/- 46.7451
7	3-Nitrotoluene	99-08-1	07329LG	99%	1,008.0 µg/mL	+/- 47.0250

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

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

Flow Rate:
1.0 ml/min.

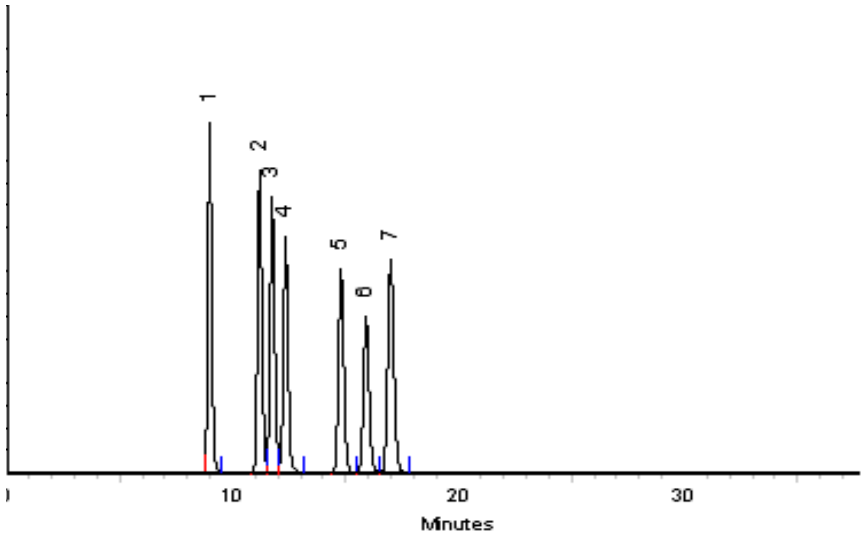
Mobile Phase A:
water:methanol (44:56 V/V)

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm

Inj. Vol
5µl



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.

John Friedline - Operations Technician I

Date Mixed: 05-Dec-2022 **Balance Serial #** 1128342314

Christie Mills - Operations Tech II - ARM QC

Date Passed: 07-Dec-2022

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/µECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ uncertainty} = k\sqrt{u^2_{gravimetric} + u^2_{homogeneity} + u^2_{storage\ stability} + u^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls 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 ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330PAStkPS_00070

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: 218031154-03
Solvent: Acetonitrile (50%)
Methanol (50%)
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Jul 7, 2021
Expiration: Aug 7, 2023
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (HPLC)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
Picric acid	88-89-1	99.1	100.1	99.2

31499

This Certified Reference Material was verified in accordance with ISO/IEC 17025

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.

² All weights are traceable through NIST, Test No. 822-275872-11

¹ 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

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

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

QR-ORG/INO-001
Rev. 7/20

Reagent

8330PAStkPS_00071

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: 218031154-04
Solvent: Acetonitrile (50%)
Methanol (50%)
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Aug 30, 2022
Expiration: Sep 30, 2024
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (HPLC)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
Picric acid	88-89-1	99.1	100.1	99.2

This Certified Reference Material was verified in accordance with ISO/IEC 17025

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.

² All weights are traceable through NIST, Test No. 822-275872-11

¹ 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

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

Reagent

8330Surrogate_00138

Preliminary Report

Eurofins Denver

LCS, Lab Control Sample Report

Sample Path: \\chromfs\Denver\ChromData\CHHPLC_X\20230202-118305.b\02020011.D

Lims ID: Surr138 Inj. Date: 02-Feb-2023 19:11:17

Worklist ID: 280-0118305-011 Instrument: CHHPLC_X3

Method: 8330_X3

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 0B_Sonc_
$ 10 1,2-Dinitrobenzene	0.5000	0.5112	102.2	78-119

Samples for Limit Group: 1, Lims Prep Method: 8330B_Sonc_10g

280-171573-C-4-B	280-171573-C-5-B	280-171573-C-6-B
280-171573-C-7-B	280-171573-C-8-B	280-171573-C-9-D
280-171573-C-10-B	280-171573-C-11-B	280-171573-B-12-B
280-171573-B-13-B	280-171573-B-14-B	280-171573-B-15-B
280-171573-B-16-B	280-171573-C-42-B	280-171573-B-43-B
280-171586-A-1-C	280-171586-A-2-C	280-171586-A-3-C
280-171586-A-4-C	280-171586-A-5-C	280-171586-A-6-J
280-171586-A-7-C		

Reagent

8330Surrogate_00141

Preliminary Report

Eurofins Denver

LCS, Lab Control Sample Report

Sample Path: \\chromfs\Denver\ChromData\CHHPLC_X\20230329-119943.b\03290011.D

Lims ID: 8330Surr141 Inj. Date: 29-Mar-2023 16:36:57

Worklist ID: 280-0119943-011 Instrument: CHHPLC_X3

Method: 8330_X3

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 3535	Limits 2 3535	Limits 3 3535
$ 10 1,2-Dinitrobenzene	0.5000	0.5368	107.4	63-127	83-119	

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

410-119649-AB-1-A 410-119649-AB-2-A 410-119649-AB-3-A

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

280-173931-A-1-A

Samples for Limit Group: 3, Lims Prep Method: 3535

280-173911-A-1-A 280-173911-A-2-A 860-45374-C-1-A

Reagent

8330Surrogate_00143

Preliminary Report

Eurofins Denver

LCS, Lab Control Sample Report

Sample Path: \\chromfs\Denver\ChromData\CHHPLC_X\20230413-120394.b\04130011.D

Lims ID: 8330Surr143 Inj. Date: 13-Apr-2023 17:28:02

Worklist ID: 280-0120394-011 Instrument: CHHPLC_X3

Method: 8330_X3

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 0B_Sonc_	Limits 2 0B_Sonc_
$ 10 1,2-Dinitrobenzene	0.5000	0.5398	108.0	83-122	78-119

Samples for Limit Group: 1, Lims Prep Method: 8330B_Sonc_10g

280-174145-A-1-E	280-174145-A-2-C	280-174145-A-3-B
280-174145-A-4-B	280-174145-A-5-B	280-174145-A-6-B
280-174145-A-7-C	280-174145-A-8-B	280-174145-A-9-B
280-174145-A-10-B	280-174145-A-11-B	280-174145-A-12-B
280-174145-A-13-B	280-174145-A-14-B	280-174145-A-15-D
280-174145-A-16-B	280-174145-A-17-B	280-174145-A-18-B
280-174145-A-19-B	280-174145-A-20-B	

Samples for Limit Group: 2, Lims Prep Method: 8330B_Sonc_10g

280-174388-A-1-C	280-174388-A-2-C	280-174388-A-3-C
280-174388-A-4-C	280-174388-A-5-C	280-174388-A-6-C
280-174388-A-7-G	280-174388-A-8-G	280-174388-A-9-C
280-174388-A-10-C	280-174388-A-11-C	280-174388-A-12-C
280-174388-A-13-C	280-174388-A-14-C	280-174388-A-15-C
280-174388-A-16-C	280-174388-A-17-C	280-174388-A-18-C
280-174388-A-19-C	280-174388-A-20-C	

Reagent

8330SurrStkSS_00245

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ilac-MRA A2LA ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ilac-MRA A2LA 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.:** A0192220

Description : 8330 Surrogate Mix

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

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

Expiration Date : December 31, 2027 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,2-Dinitrobenzene	528-29-0	MKCH6067	99%	1,000.0 µg/mL	+/- 56.1888

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

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

Flow Rate:
1.0 ml/min.

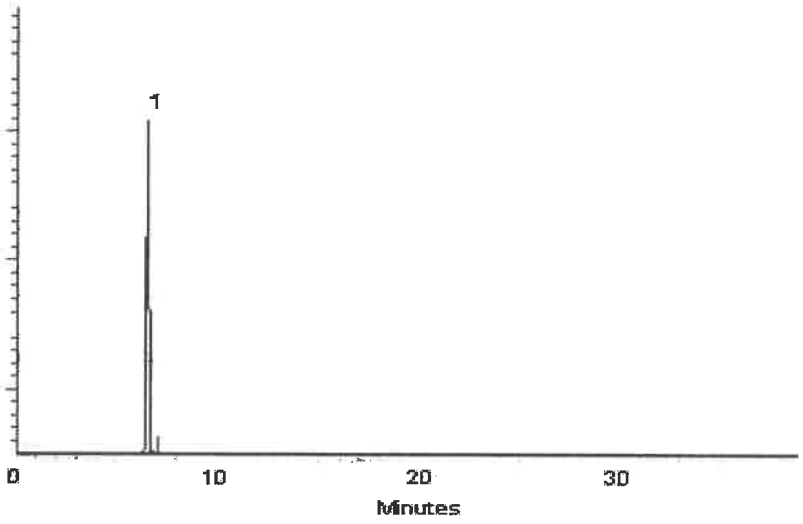
Mobile Phase A:
water:methanol (44:56 V/V)

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm

Inj. Vol
2µl



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.

Alicia Leathers - Operation Technician I **Date Mixed:** 04-Dec-2022 **Balance Serial #** 1128353505

Jennifer Pollino - Operations Tech III - ARM QC **Date Passed:** 06-Dec-2022

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ uncertainty} = k\sqrt{u^2_{gravimetric} + u^2_{homogeneity} + u^2_{storage\ stability} + u^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls 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 ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330SurrStkSS_00246

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ilac-MRA A2LA ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ilac-MRA A2LA 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.:** A0192220

Description : 8330 Surrogate Mix

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

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

Expiration Date : December 31, 2027 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,2-Dinitrobenzene	528-29-0	MKCH6067	99%	1,000.0 µg/mL	+/- 56.1888

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

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

Flow Rate:
1.0 ml/min.

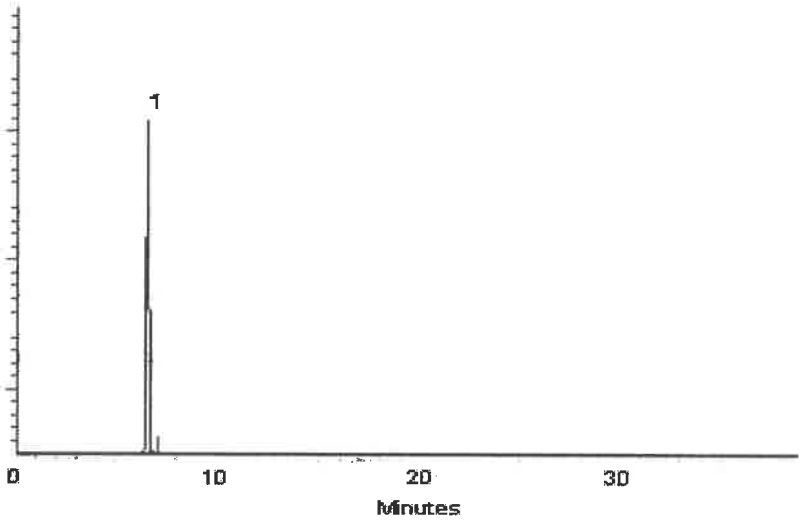
Mobile Phase A:
water:methanol (44:56 V/V)

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm

Inj. Vol
2µl



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.

Alicia Leathers - Operation Technician I **Date Mixed:** 04-Dec-2022 **Balance Serial #** 1128353505

Jennifer Pollino - Operations Tech III - ARM QC **Date Passed:** 06-Dec-2022

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ uncertainty} = k\sqrt{u^2_{gravimetric} + u^2_{homogeneity} + u^2_{storage\ stability} + u^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls 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 ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330SurrStkSS_00247

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ilac-MRA A2LA ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ilac-MRA A2LA 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.:** A0192220

Description : 8330 Surrogate Mix

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

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

Expiration Date : December 31, 2027 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,2-Dinitrobenzene	528-29-0	MKCH6067	99%	1,000.0 µg/mL	+/- 56.1888

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

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

Flow Rate:
1.0 ml/min.

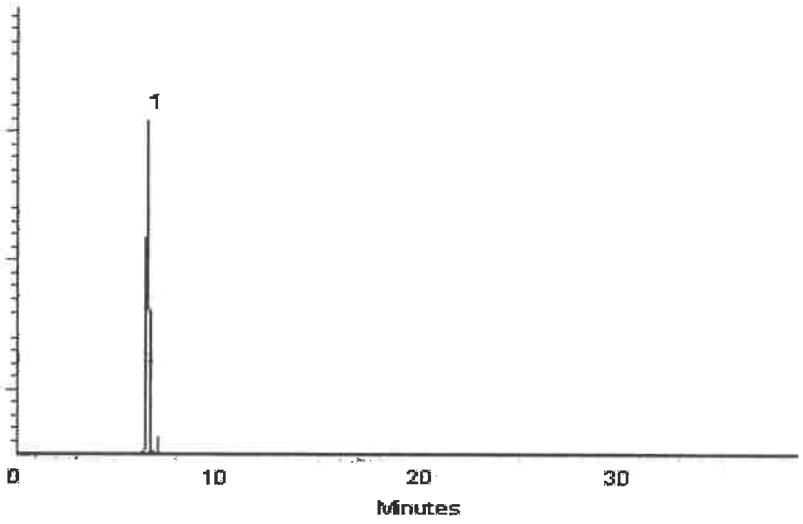
Mobile Phase A:
water:methanol (44:56 V/V)

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm

Inj. Vol
2µl



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.

Alicia Leathers - Operation Technician I **Date Mixed:** 04-Dec-2022 **Balance Serial #** 1128353505

Jennifer Pollino - Operations Tech III - ARM QC **Date Passed:** 06-Dec-2022

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ uncertainty} = k\sqrt{u^2_{gravimetric} + u^2_{homogeneity} + u^2_{storage\ stability} + u^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls 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:

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- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330SurrStkSS_00248

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ilac-MRA A2LA ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ilac-MRA A2LA 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.:** A0192220

Description : 8330 Surrogate Mix

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

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

Expiration Date : December 31, 2027 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,2-Dinitrobenzene	528-29-0	MKCH6067	99%	1,000.0 µg/mL	+/- 56.1888

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

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

Flow Rate:
1.0 ml/min.

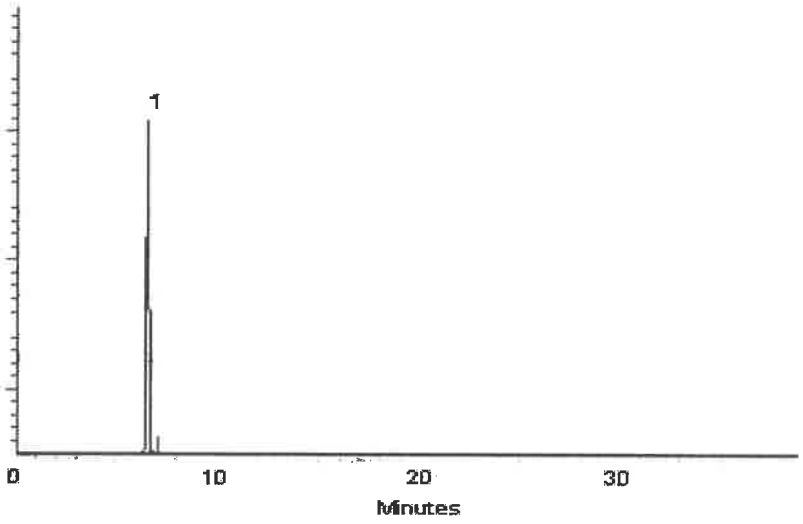
Mobile Phase A:
water:methanol (44:56 V/V)

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm

Inj. Vol
2µl



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.

Alicia Leathers - Operation Technician I **Date Mixed:** 04-Dec-2022 **Balance Serial #** 1128353505

Jennifer Pollino - Operations Tech III - ARM QC **Date Passed:** 06-Dec-2022

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ uncertainty} = k\sqrt{u^2_{gravimetric} + u^2_{homogeneity} + u^2_{storage\ stability} + u^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls 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 ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330SurrStkSS_00249

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

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.:** A0192220

Description : 8330 Surrogate Mix

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

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

Expiration Date : December 31, 2027 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,2-Dinitrobenzene	528-29-0	MKCH6067	99%	1,000.0 µg/mL	+/- 56.1888

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

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

Flow Rate:
1.0 ml/min.

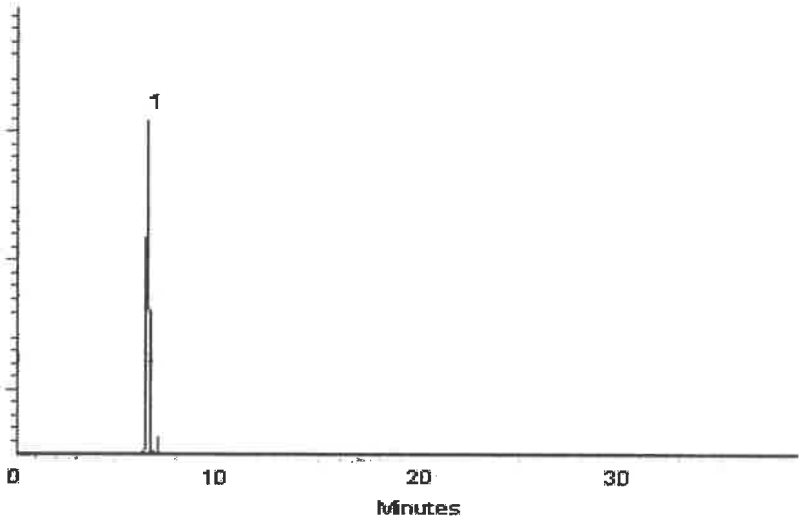
Mobile Phase A:
water:methanol (44:56 V/V)

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm

Inj. Vol
2µl



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.

Alicia Leathers - Operation Technician I **Date Mixed:** 04-Dec-2022 **Balance Serial #** 1128353505

Jennifer Pollino - Operations Tech III - ARM QC **Date Passed:** 06-Dec-2022

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ uncertainty} = k\sqrt{u^2_{gravimetric} + u^2_{homogeneity} + u^2_{storage\ stability} + u^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls 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 ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330SurrStkSS_00259

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

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.:** A0193444

Description : 8330 Surrogate Mix

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

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

Expiration Date : January 31, 2028 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,2-Dinitrobenzene	528-29-0	MKCH6067	99%	1,004.0 µg/mL	+/- 56.4136

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: Methanol

CAS # 67-56-1

Purity 99%

Quality Confirmation Test

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

Flow Rate:
1.0 ml/min.

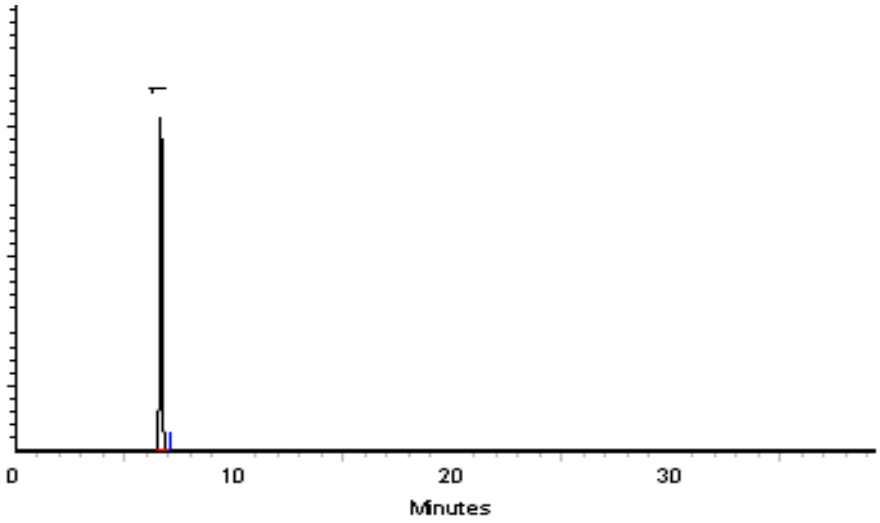
Mobile Phase A:
water:methanol (44:56 V/V)

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm

Inj. Vol
2µl



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.

Bryan Snyder - Operations Tech I

Date Mixed: 11-Jan-2023 **Balance Serial #** 1127510105

Christie Mills - Operations Tech II - ARM QC

Date Passed: 16-Jan-2023

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/µECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ uncertainty} = k\sqrt{u^2_{gravimetric} + u^2_{homogeneity} + u^2_{storage\ stability} + u^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls 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 ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330SurrStkSS_00260

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110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

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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.:** A0193444

Description : 8330 Surrogate Mix

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

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

Expiration Date : January 31, 2028 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,2-Dinitrobenzene	528-29-0	MKCH6067	99%	1,004.0 µg/mL	+/- 56.4136

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

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

Flow Rate:
1.0 ml/min.

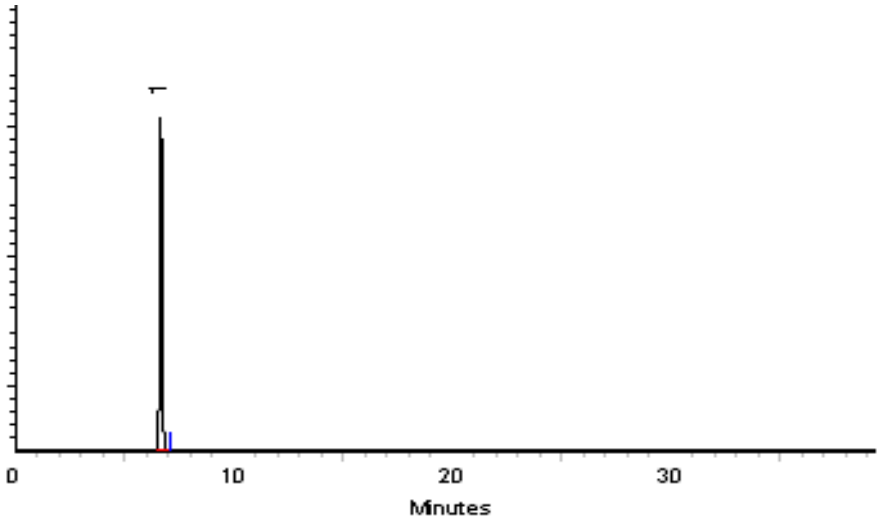
Mobile Phase A:
water:methanol (44:56 V/V)

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm

Inj. Vol
2µl



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.

Bryan Snyder - Operations Tech I

Date Mixed: 11-Jan-2023 **Balance Serial #** 1127510105

Christie Mills - Operations Tech II - ARM QC

Date Passed: 16-Jan-2023

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/µECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls 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 ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330SurrStkSS_00261

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED
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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.:** A0193444

Description : 8330 Surrogate Mix

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

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

Expiration Date : January 31, 2028 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,2-Dinitrobenzene	528-29-0	MKCH6067	99%	1,004.0 µg/mL	+/- 56.4136

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

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

Flow Rate:
1.0 ml/min.

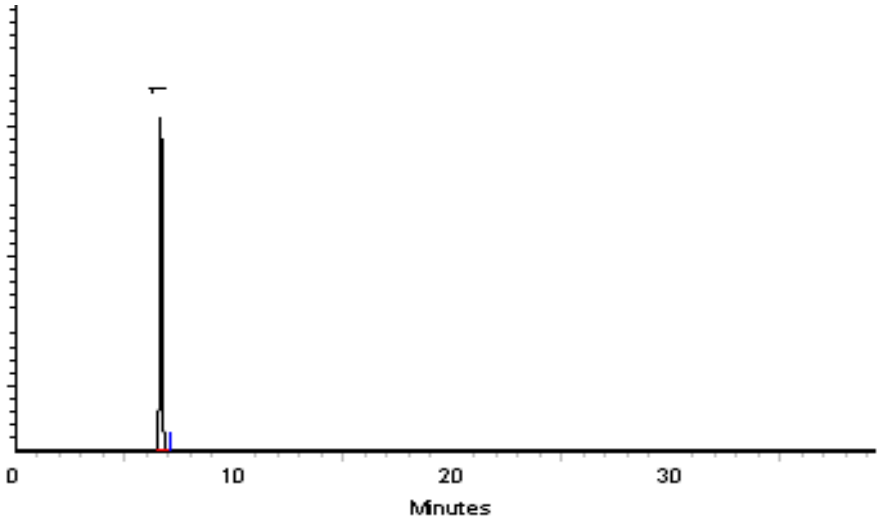
Mobile Phase A:
water:methanol (44:56 V/V)

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm

Inj. Vol
2µl



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.

Bryan Snyder - Operations Tech I

Date Mixed: 11-Jan-2023 **Balance Serial #** 1127510105

Christie Mills - Operations Tech II - ARM QC

Date Passed: 16-Jan-2023

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/µECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls 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 ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330SurrStkSS_00262

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

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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.:** A0193444

Description : 8330 Surrogate Mix

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

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

Expiration Date : January 31, 2028 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,2-Dinitrobenzene	528-29-0	MKCH6067	99%	1,004.0 µg/mL	+/- 56.4136

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

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

Flow Rate:
1.0 ml/min.

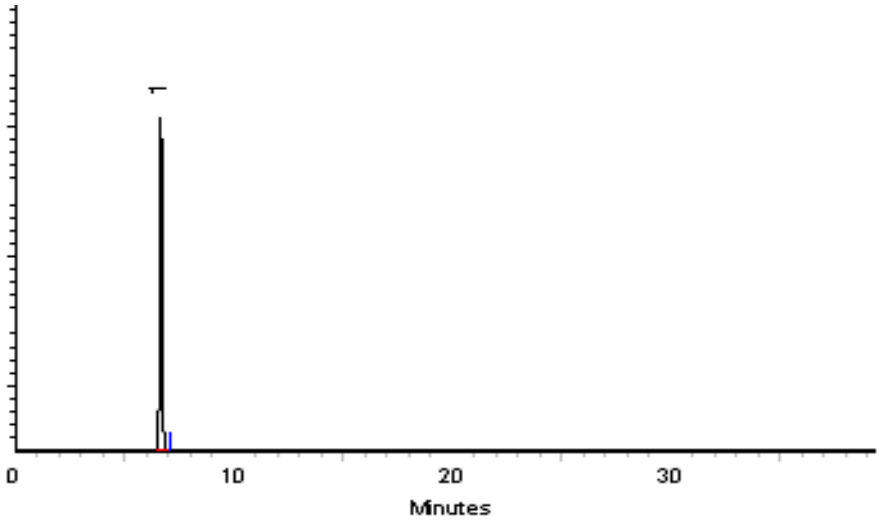
Mobile Phase A:
water:methanol (44:56 V/V)

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm

Inj. Vol
2µl



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.

Bryan Snyder - Operations Tech I

Date Mixed: 11-Jan-2023 **Balance Serial #** 1127510105

Christie Mills - Operations Tech II - ARM QC

Date Passed: 16-Jan-2023

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/µECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

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  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls 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 ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330SurrStkSS_00263

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

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ISO/IEC 17025 Accredited
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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.:** A0193444

Description : 8330 Surrogate Mix

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

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

Expiration Date : January 31, 2028 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,2-Dinitrobenzene	528-29-0	MKCH6067	99%	1,004.0 µg/mL	+/- 56.4136

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

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

Flow Rate:
1.0 ml/min.

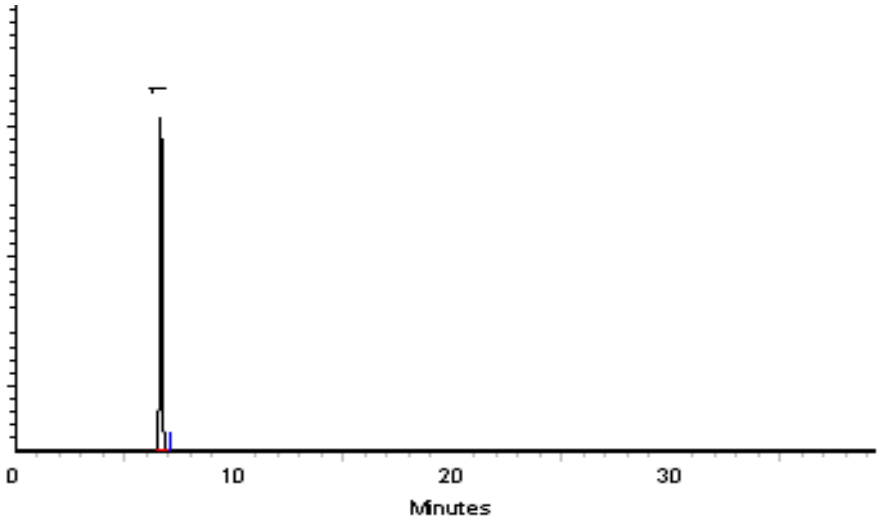
Mobile Phase A:
water:methanol (44:56 V/V)

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm

Inj. Vol
2µl



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.

Bryan Snyder - Operations Tech I

Date Mixed: 11-Jan-2023 **Balance Serial #** 1127510105

Christie Mills - Operations Tech II - ARM QC

Date Passed: 16-Jan-2023

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/µECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ uncertainty} = k\sqrt{u^2_{gravimetric} + u^2_{homogeneity} + u^2_{storage\ stability} + u^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls 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 ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330SurrStkSS_00265

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

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.:** A0193444

Description : 8330 Surrogate Mix

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

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

Expiration Date : January 31, 2028 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,2-Dinitrobenzene	528-29-0	MKCH6067	99%	1,004.0 µg/mL	+/- 56.4136

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

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

Flow Rate:
1.0 ml/min.

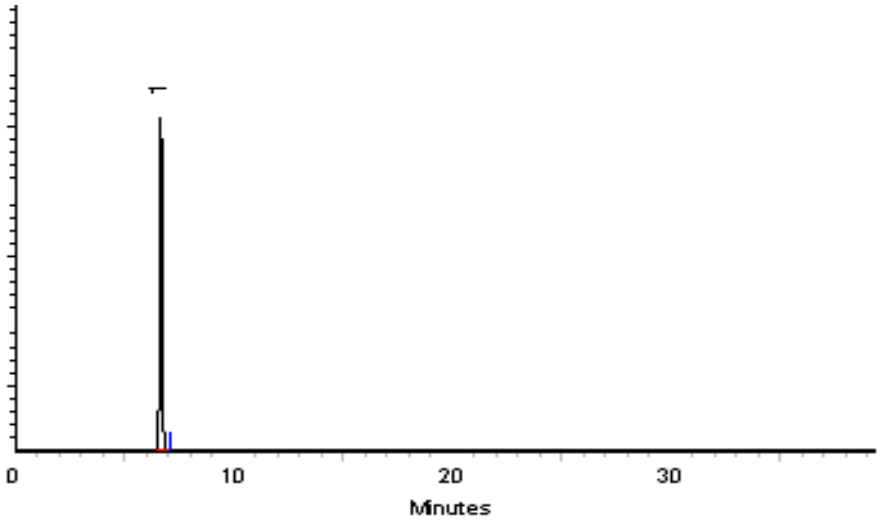
Mobile Phase A:
water:methanol (44:56 V/V)

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm

Inj. Vol
2µl



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.

Bryan Snyder - Operations Tech I

Date Mixed: 11-Jan-2023 **Balance Serial #** 1127510105

Christie Mills - Operations Tech II - ARM QC

Date Passed: 16-Jan-2023

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/µECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ uncertainty} = k\sqrt{u^2_{gravimetric} + u^2_{homogeneity} + u^2_{storage\ stability} + u^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls 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 ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330SurrStkSS_00266

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

Certificate of Analysis

chromatographic plus

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.:** A0194831

Description : 8330 Surrogate Mix

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

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

Expiration Date : February 29, 2028 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,2-Dinitrobenzene	528-29-0	MKCH6067	99%	1,004.8 µg/mL	+/- 56.4585

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

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

Flow Rate:
1.0 ml/min.

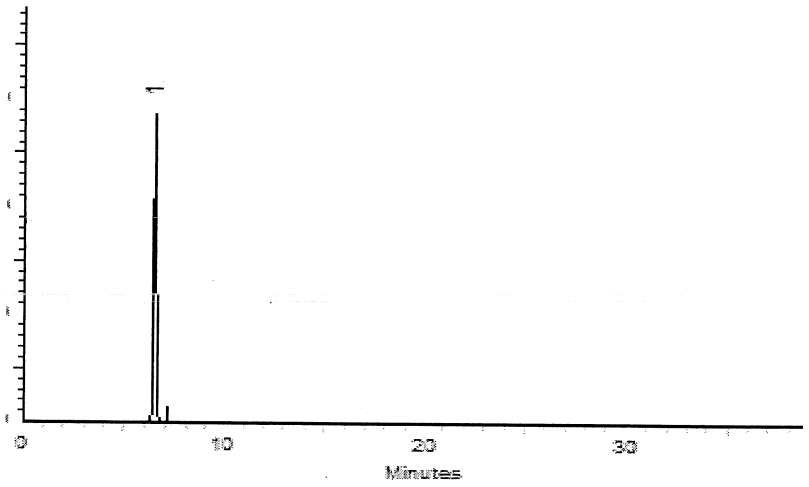
Mobile Phase A:
water:methanol (44:56 V/V)

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm

Inj. Vol
2µl



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.

Stacey Wanner - Operations Technician I **Date Mixed:** 20-Feb-2023 **Balance Serial #** B442140311

Jennifer Pollino - Operations Tech III - ARM QC **Date Passed:** 21-Feb-2023

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ uncertainty} = k\sqrt{u^2_{gravimetric} + u^2_{homogeneity} + u^2_{storage\ stability} + u^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls 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 ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330SurrStkSS_00267

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www.restek.com

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ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

Certificate of Analysis

chromatographic plus

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.:** A0194831

Description : 8330 Surrogate Mix

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

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

Expiration Date : February 29, 2028 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,2-Dinitrobenzene	528-29-0	MKCH6067	99%	1,004.8 µg/mL	+/- 56.4585

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

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

Flow Rate:
1.0 ml/min.

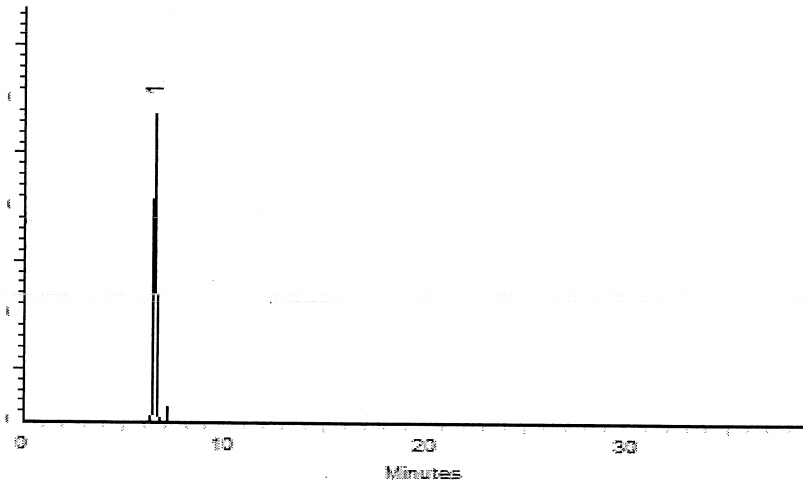
Mobile Phase A:
water:methanol (44:56 V/V)

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm

Inj. Vol
2µl



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.

Stacey Wanner - Operations Technician I **Date Mixed:** 20-Feb-2023 **Balance Serial #** B442140311

Jennifer Pollino - Operations Tech III - ARM QC **Date Passed:** 21-Feb-2023

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ uncertainty} = k\sqrt{u^2_{gravimetric} + u^2_{homogeneity} + u^2_{storage\ stability} + u^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls 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 ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330SurrStkSS_00268

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

Certificate of Analysis

chromatographic plus

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.:** A0194831

Description : 8330 Surrogate Mix

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

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

Expiration Date : February 29, 2028 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,2-Dinitrobenzene	528-29-0	MKCH6067	99%	1,004.8 µg/mL	+/- 56.4585

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

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

Flow Rate:
1.0 ml/min.

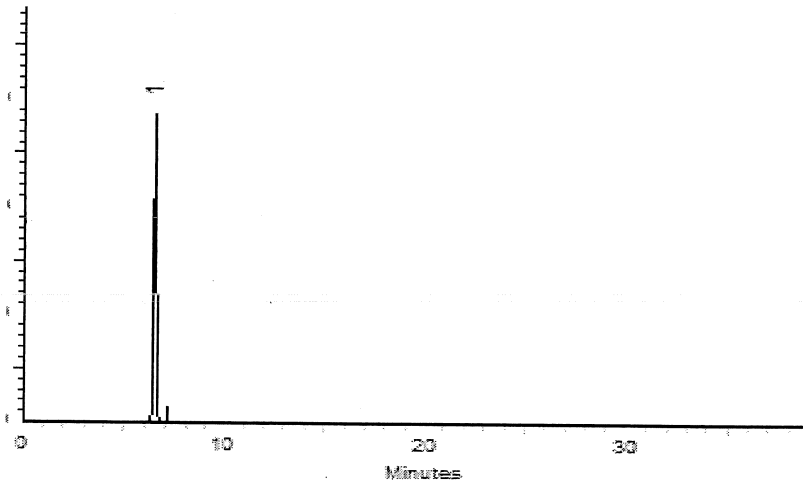
Mobile Phase A:
water:methanol (44:56 V/V)

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm

Inj. Vol
2µl



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.

Stacey Wanner - Operations Technician I **Date Mixed:** 20-Feb-2023 **Balance Serial #** B442140311

Jennifer Pollino - Operations Tech III - ARM QC **Date Passed:** 21-Feb-2023

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ uncertainty} = k\sqrt{u^2_{gravimetric} + u^2_{homogeneity} + u^2_{storage\ stability} + u^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls 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 ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330SurrStock_00172

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: 219051500
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: May 22, 2019
Expiration: May 22, 2029
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/FID)	Prepared Concentration[2] (µg/mL)	Certified Analyte Concentration[1] (µg/mL)
1,2-Dinitrobenzene	528-29-0	100.0	1002	1002

This Certified Reference Material was verified in accordance with ISO/IEC 17025

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.

[2] All weights are traceable through NIST, Test No. 684/289871-17

[1] 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

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

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

QR-ORG/INO-001
Rev. 7/20

Reagent

MNX,TNX,DNX_00076

Agilent

Trusted Answers

ISO 17034

Reference Material Certificate

Product Information Sheet

Product Name: Custom Standard

Product Number: CUS-23984

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

Lot Number: 0006725091

Lot Issue Date: 31-Jan-2023

Expiration Date: 29-Feb-2024

Component Name	Concentration		Uncertainty	CAS#	Analyte Lot
1,3,5-trinitroso-1,3,5-triazacyclohexane (TNX)	100.3	±	0.5 µg/mL	N/A	RM12426
1-nitro-3,5-dinitroso-1,3,5-triazacyclohexane (DNX)	100.1	±	0.5 µg/mL	N/A	RM12428
1-nitroso-3,5-dinitro-1,3,5-triazacyclohexane (MNX)	116.7	±	0.6 µg/mL	N/A	RM12428

Matrix: acetonitrile

Description:
This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material (RM) standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above. Purity values are taken from approved vendor raw material certificates.

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

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

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Safety:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this analytical reference material.

Intended Use:
This analytical reference (RM) standard 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.

Expiration of Certification:

Reagent

MNX,TNX,DNX_00077

Agilent

Trusted Answers

ISO 17034

Reference Material Certificate

Product Information Sheet

Product Name: Custom Standard

Product Number: CUS-23984

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

Lot Number: 0006725091

Lot Issue Date: 31-Jan-2023

Expiration Date: 29-Feb-2024

Component Name	Concentration		Uncertainty	CAS#	Analyte Lot
1,3,5-trinitroso-1,3,5-triazacyclohexane (TNX)	100.3	±	0.5 µg/mL	N/A	RM12426
1-nitro-3,5-dinitroso-1,3,5-triazacyclohexane (DNX)	100.1	±	0.5 µg/mL	N/A	RM12428
1-nitroso-3,5-dinitro-1,3,5-triazacyclohexane (MNX)	116.7	±	0.6 µg/mL	N/A	RM12428

Matrix: acetonitrile

Description:
This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material (RM) standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above. Purity values are taken from approved vendor raw material certificates.

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

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This analytical reference (RM) standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

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Safety:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this analytical reference material.

Intended Use:
This analytical reference (RM) standard 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.

Expiration of Certification:

Reagent

MNX,TNX,DNX_00079

Agilent

Trusted Answers

ISO 17034

Reference Material Certificate

Product Information Sheet

Product Name: Custom Standard

Product Number: CUS-23984

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

Lot Number: 0006725091

Lot Issue Date: 31-Jan-2023

Expiration Date: 29-Feb-2024

Component Name	Concentration		Uncertainty	CAS#	Analyte Lot
1,3,5-trinitroso-1,3,5-triazacyclohexane (TNX)	100.3	±	0.5 µg/mL	N/A	RM12426
1-nitro-3,5-dinitroso-1,3,5-triazacyclohexane (DNX)	100.1	±	0.5 µg/mL	N/A	RM12428
1-nitroso-3,5-dinitro-1,3,5-triazacyclohexane (MNX)	116.7	±	0.6 µg/mL	N/A	RM12428

Matrix: acetonitrile

Description:
This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material (RM) standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above. Purity values are taken from approved vendor raw material certificates.

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

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

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Safety:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this analytical reference material.

Intended Use:
This analytical reference (RM) standard 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.

Expiration of Certification:

Reagent

PicricARestek_00113

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.:** A0183202

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 : March 31, 2027 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Picric Acid	1,004.0 µg/mL	+/- 5.9635	µg/mL	Gravimetric
	CAS # 88-89-1 (Lot 06130CU)		+/- 55.0021	µg/mL	Unstressed
	Purity 99%		+/- 64.1379	µg/mL	Stressed

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

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

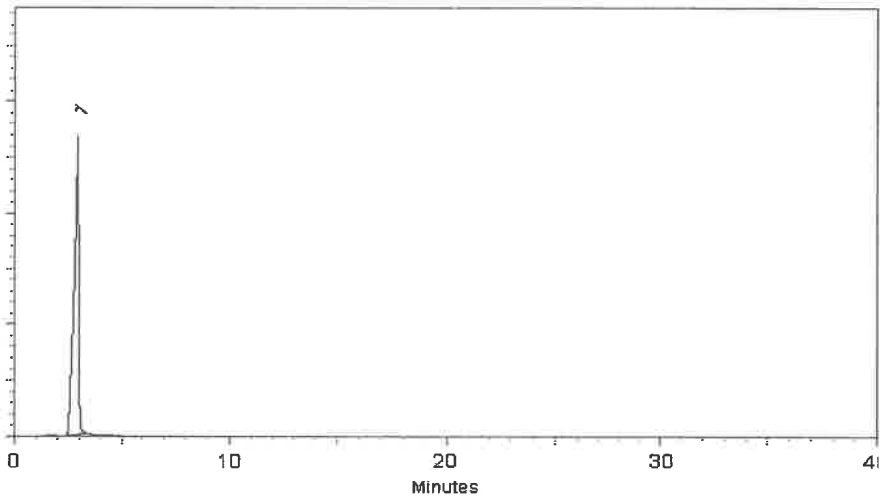
Flow Rate:
1.0 ml/min.

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

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm



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.

Brandon Reish - Mix Technician

Date Mixed: 23-Mar-2022 **Balance:** 1128360905

Amanda Miller - Operations Tech-ARM QC

Date Passed: 28-Mar-2022

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep 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.

Reagent

PicricARestek_00114

RESTEK®
110 Benner Circle
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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.

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Catalog No. : 31499 **Lot No.:** A0183202

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 : March 31, 2027 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
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	CAS # 88-89-1 (Lot 06130CU)		+/- 55.0021	µg/mL	Unstressed
	Purity 99%		+/- 64.1379	µg/mL	Stressed

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

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

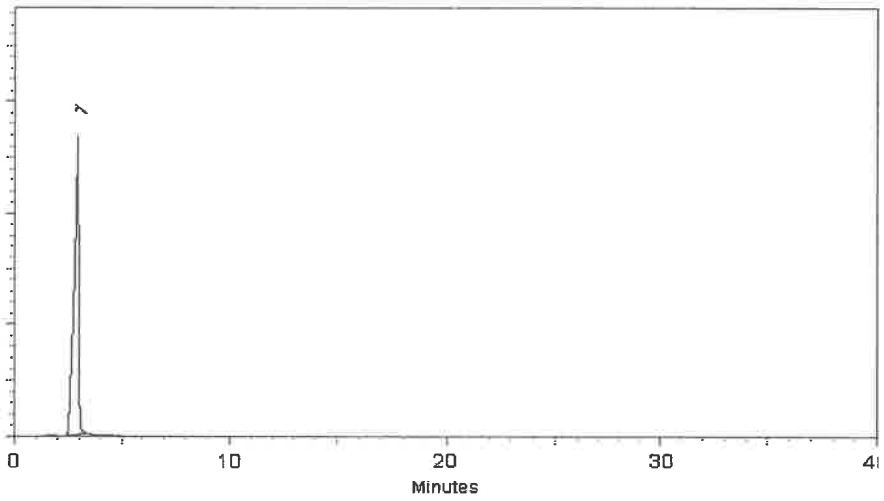
Flow Rate:
1.0 ml/min.

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

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm



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.

Brandon Reish - Mix Technician

Date Mixed: 23-Mar-2022 **Balance:** 1128360905

Amanda Miller - Operations Tech-ARM QC

Date Passed: 28-Mar-2022

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

General Certified Reference Material Notes

Expiration Notes:

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- 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.

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- 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:

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$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

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.
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- 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.

8330B_DOD5

Nitroaromatics and Nitramines (HPLC)

FORM II
HPLC/IC SURROGATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-176268-1

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 #
LL1mw-090-230301-GW	280-176268-1		101
LL1mw-090-230301-GW	280-176268-1	125 M Q	
LL1mw-090-230301-GW RE	280-176268-1 RE		104 M
LL1mw-090-230301-GW RE	280-176268-1 RE	152 M Q	
LL1mw-091-230301-GW	280-176268-2		99
LL1mw-091-230301-GW	280-176268-2	95	
LL1mw-091-230301-GW RE	280-176268-2 RE		103
LL1mw-091-230301-GW RE	280-176268-2 RE	95	
FWG-003-230301-ER	280-176268-3		91
FWG-003-230301-ER	280-176268-3	95 M	
FWG-003-230301-ER RE	280-176268-3 RE		102
FWG-003-230301-ER RE	280-176268-3 RE	105 M	
FWG-003-230301-FB	280-176268-4		99
FWG-003-230301-FB	280-176268-4	104 M	
FWG-003-230301-FB RE	280-176268-4 RE		103
FWG-003-230301-FB RE	280-176268-4 RE	107 M	
	MB 280-612275/1-A	105	
	MB 280-612937/1-A	106 M	
	LCS 280-612275/2-A	94	
	LCS 280-612937/2-A	104	
	LCSD 280-612275/3-A	98	
	LCSD 280-612937/3-A	102	

	QC LIMITS
12DNB = 1,2-Dinitrobenzene	83-119

Column to be used to flag recovery values

FORM II 8330B

FORM III
HPLC/IC LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 05152312.D

Lab ID: LCS 280-612275/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,3,5-Trinitrobenzene	2.00	1.92	96	73-125	
1,3-Dinitrobenzene	2.00	1.79	90	78-120	
2,4,6-Trinitrotoluene	2.00	1.71	86	71-123	
2,4-Dinitrotoluene	2.00	1.68	84	78-120	
2,6-Dinitrotoluene	2.00	1.75	88	77-127	
2-Amino-4,6-dinitrotoluene	2.00	1.63	82	79-120	
2-Nitrotoluene	2.00	1.41	71	70-127	
3-Nitrotoluene	2.00	1.37	69	73-125	Q
4-Amino-2,6-dinitrotoluene	2.00	1.60	80	76-125	
4-Nitrotoluene	2.00	1.39	70	71-127	Q
HMX	2.00	1.65	82	65-135	M
Nitrobenzene	2.00	1.61	81	65-134	
Nitroglycerin	20.0	18.1	90	74-127	
PETN	20.0	19.6	98	73-127	
RDX	2.00	1.86	93	68-130	
Tetryl	2.00	1.96	98	64-128	

Column to be used to flag recovery and RPD values

FORM III 8330B

FORM III
HPLC/IC LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 05180012.D

Lab ID: LCS 280-612937/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,3,5-Trinitrobenzene	2.00	2.05	103	73-125	
1,3-Dinitrobenzene	2.00	1.94	97	78-120	
2,4,6-Trinitrotoluene	2.00	1.86	93	71-123	
2,4-Dinitrotoluene	2.00	1.84	92	78-120	
2,6-Dinitrotoluene	2.00	1.85	92	77-127	
2-Amino-4,6-dinitrotoluene	2.00	1.82	91	79-120	
2-Nitrotoluene	2.00	1.51	76	70-127	
3-Nitrotoluene	2.00	1.45	72	73-125	Q
4-Amino-2,6-dinitrotoluene	2.00	1.76	88	76-125	
4-Nitrotoluene	2.00	1.50	75	71-127	
HMX	2.00	1.81	90	65-135	M
Nitrobenzene	2.00	1.71	86	65-134	
Nitroglycerin	20.0	19.9	99	74-127	
PETN	20.0	21.0	105	73-127	
RDX	2.00	1.92	96	68-130	M
Tetryl	2.00	2.04	102	64-128	

Column to be used to flag recovery and RPD values

FORM III 8330B

FORM III
HPLC/IC LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 05152313.D

Lab ID: LCSD 280-612275/3-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,3,5-Trinitrobenzene	2.00	2.04	102	6	20	73-125	
1,3-Dinitrobenzene	2.00	1.90	95	6	20	78-120	
2,4,6-Trinitrotoluene	2.00	1.83	92	7	20	71-123	
2,4-Dinitrotoluene	2.00	1.81	91	8	20	78-120	
2,6-Dinitrotoluene	2.00	1.84	92	5	20	77-127	
2-Amino-4,6-dinitrotoluene	2.00	1.77	89	8	20	79-120	
2-Nitrotoluene	2.00	1.50	75	6	20	70-127	
3-Nitrotoluene	2.00	1.48	74	8	20	73-125	
4-Amino-2,6-dinitrotoluene	2.00	1.76	88	10	20	76-125	
4-Nitrotoluene	2.00	1.48	74	7	20	71-127	
HMX	2.00	1.70	85	3	20	65-135	M
Nitrobenzene	2.00	1.71	86	6	20	65-134	
Nitroglycerin	20.0	18.8	94	4	20	74-127	
PETN	20.0	20.5	103	5	20	73-127	
RDX	2.00	1.89	94	1	20	68-130	
Tetryl	2.00	2.01	101	2	20	64-128	

Column to be used to flag recovery and RPD values

FORM III 8330B

FORM III
HPLC/IC LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 05180013.D

Lab ID: LCSD 280-612937/3-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,3,5-Trinitrobenzene	2.00	2.05	102	0	20	73-125	
1,3-Dinitrobenzene	2.00	1.94	97	0	20	78-120	
2,4,6-Trinitrotoluene	2.00	1.87	93	0	20	71-123	
2,4-Dinitrotoluene	2.00	1.83	92	0	20	78-120	
2,6-Dinitrotoluene	2.00	1.91	95	3	20	77-127	
2-Amino-4,6-dinitrotoluene	2.00	1.79	90	1	20	79-120	
2-Nitrotoluene	2.00	1.54	77	2	20	70-127	
3-Nitrotoluene	2.00	1.46	73	1	20	73-125	
4-Amino-2,6-dinitrotoluene	2.00	1.81	90	2	20	76-125	
4-Nitrotoluene	2.00	1.50	75	0	20	71-127	
HMX	2.00	1.88	94	4	20	65-135	M
Nitrobenzene	2.00	1.72	86	1	20	65-134	
Nitroglycerin	20.0	19.9	100	0	20	74-127	
PETN	20.0	20.9	104	1	20	73-127	
RDX	2.00	1.88	94	2	20	68-130	M
Tetryl	2.00	2.07	104	2	20	64-128	

Column to be used to flag recovery and RPD values

FORM III 8330B

FORM IV
HPLC/IC METHOD BLANK SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Lab Sample ID: MB 280-612275/1-A

Matrix: Water Date Extracted: 05/12/2023 15:04

Lab File ID:(1) 05152311.D Lab File ID:(2)

Date Analyzed:(1) 05/15/2023 16:20 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 280-612275/2-A	05/15/2023 16:43	
	LCSD 280-612275/3-A	05/15/2023 17:06	
LL1mw-090-230301-GW	280-176268-1	05/15/2023 18:15	05/16/2023 21:58
LL1mw-091-230301-GW	280-176268-2	05/15/2023 18:38	05/16/2023 22:34
FWG-003-230301-ER	280-176268-3	05/15/2023 19:01	05/16/2023 23:10
FWG-003-230301-FB	280-176268-4	05/15/2023 19:23	05/16/2023 23:46

FORM IV
HPLC/IC METHOD BLANK SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Lab Sample ID: MB 280-612937/1-A

Matrix: Water Date Extracted: 05/18/2023 13:20

Lab File ID:(1) 05180011.D Lab File ID:(2)

Date Analyzed:(1) 05/18/2023 22:09 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 280-612937/2-A	05/18/2023 22:32	
	LCSD 280-612937/3-A	05/18/2023 22:55	
LL1mw-090-230301-GW RE	280-176268-1 RE	05/19/2023 00:27	05/19/2023 17:55
LL1mw-091-230301-GW RE	280-176268-2 RE	05/19/2023 00:49	05/19/2023 18:31
FWG-003-230301-ER RE	280-176268-3 RE	05/19/2023 01:12	05/19/2023 19:06
FWG-003-230301-FB RE	280-176268-4 RE	05/19/2023 01:35	05/19/2023 19:42

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Client Sample ID: LL1mw-090-230301-GW RE Lab Sample ID: 280-176268-1 RE

Instrument ID (1): CHHPLC_X3 Instrument ID (2): CHHPLC_G2_LUNA

Date Analyzed (1): 05/19/2023 00:27 Date Analyzed (2): 05/19/2023 17:55

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-Dinitrobenzene	1		9.30	9.10	9.40	0.076		30.9
	2		14.74	14.55	14.85	0.10		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Client Sample ID: LL1mw-091-230301-GW Lab Sample ID: 280-176268-2

Instrument ID (1): CHHPLC_X3 Instrument ID (2): CHHPLC_G2_LUNA

Date Analyzed (1): 05/15/2023 18:38 Date Analyzed (2): 05/16/2023 22:34

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	
RDX	1		7.59	7.43	7.73	2.0		129.3
	2		9.14	9.02	9.32	0.42		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Client Sample ID: LL1mw-091-230301-GW RE Lab Sample ID: 280-176268-2 RE

Instrument ID (1): CHHPLC_X3 Instrument ID (2): CHHPLC_G2_LUNA

Date Analyzed (1): 05/19/2023 00:49 Date Analyzed (2): 05/19/2023 18:31

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	
RDX	1		7.59	7.41	7.71	1.7		147.9
	2		9.13	8.95	9.25	0.26		
2-Nitrotoluene	1		12.48	12.31	12.61	0.41		177.2
	2		15.83	15.60	15.90	6.9		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Client Sample ID: FWG-003-230301-ER Lab Sample ID: 280-176268-3

Instrument ID (1): CHHPLC_X3 Instrument ID (2): CHHPLC_G2_LUNA

Date Analyzed (1): 05/15/2023 19:01 Date Analyzed (2): 05/16/2023 23:10

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	
RDX	1		7.60	7.43	7.73	0.13		124.0
	2		9.10	9.02	9.32	0.53		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Client Sample ID: FWG-003-230301-ER RE Lab Sample ID: 280-176268-3 RE

Instrument ID (1): CHHPLC_X3 Instrument ID (2): CHHPLC_G2_LUNA

Date Analyzed (1): 05/19/2023 01:12 Date Analyzed (2): 05/19/2023 19:06

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	
RDX	1		7.58	7.41	7.71	0.11		136.1
	2		9.04	8.95	9.25	0.59		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Client Sample ID: FWG-003-230301-FB Lab Sample ID: 280-176268-4

Instrument ID (1): CHHPLC_X3 Instrument ID (2): CHHPLC_G2_LUNA

Date Analyzed (1): 05/15/2023 19:23 Date Analyzed (2): 05/16/2023 23:46

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	
RDX	1		7.59	7.43	7.73	0.16		110.4
	2		9.11	9.02	9.32	0.55		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Client Sample ID: FWG-003-230301-FB RE Lab Sample ID: 280-176268-4 RE

Instrument ID (1): CHHPLC_X3 Instrument ID (2): CHHPLC_G2_LUNA

Date Analyzed (1): 05/19/2023 01:35 Date Analyzed (2): 05/19/2023 19:42

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	
RDX	1		7.58	7.41	7.71	0.10		138.6
	2		9.05	8.95	9.25	0.56		

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-176268-1

SDG No.:

Client Sample ID: LL1mw-090-230301-GW | Lab Sample ID: 280-176268-1

Matrix: Water | Lab File ID: 05152316.D

Analysis Method: 8330B | Date Collected: 05/09/2023 15:03

Extraction Method: 3535 | Date Extracted: 05/12/2023 15:04

Sample wt/vol: 502.6(mL) | Date Analyzed: 05/15/2023 18:15

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: % Solids: | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 612440 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	0.20	U Q	0.21	0.20	0.084
99-65-0	1,3-Dinitrobenzene	0.099	U M Q	0.11	0.099	0.037
118-96-7	2,4,6-Trinitrotoluene	0.099	U M Q	0.11	0.099	0.045
121-14-2	2,4-Dinitrotoluene	0.080	U Q	0.099	0.080	0.027
606-20-2	2,6-Dinitrotoluene	0.080	U Q	0.099	0.080	0.040
35572-78-2	2-Amino-4,6-dinitrotoluene	0.099	U M Q	0.11	0.099	0.050
88-72-2	2-Nitrotoluene	0.20	U Q	0.21	0.20	0.085
99-08-1	3-Nitrotoluene	0.35	U Q M	0.40	0.35	0.19
19406-51-0	4-Amino-2,6-dinitrotoluene	0.12	U Q	0.15	0.12	0.057
99-99-0	4-Nitrotoluene	0.40	U Q	0.41	0.40	0.099
98-95-3	Nitrobenzene	0.20	U M Q	0.21	0.20	0.091
55-63-0	Nitroglycerin	2.0	U Q	2.1	2.0	0.92
78-11-5	PETN	0.99	U Q	1.1	0.99	0.44
121-82-4	RDX	0.20	U M Q	0.21	0.20	0.051
479-45-8	Tetryl	0.099	U M Q	0.11	0.099	0.032

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	125	M Q	83-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20230515-121447.b\05152316.D
Lims ID: 280-176268-B-1-A
Client ID: LL1mw-090-230301-GW
Sample Type: Client
Inject. Date: 15-May-2023 18:15:08 ALS Bottle#: 14 Worklist Smp#: 16
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-176268-B-1-A
Operator ID: JZ/JG Instrument ID: CHHPLC_X3

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20230515-121447.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 16-May-2023 13:24:37 Calib Date: 24-Feb-2023 17:41:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X\20230224-118952.b\02240018.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX1672

First Level Reviewer: K8YG Date: 16-May-2023 07:54:03

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/mL	Flags
	4 HMX	1	6.571	6.557	0.014	6610	0.0707	M
	8 RDX	1		7.583			ND	U
$	10 1,2-Dinitrobenzene	1	8.545	8.543	0.002	31678	0.2508	M
	11 1,3,5-Trinitrobenzene	1		8.663			ND	
	12 1,3-Dinitrobenzene	1		9.290			ND	U
	13 Nitrobenzene	1		9.663			ND	U
	15 Tetryl	1		10.043			ND	U
	16 Nitroglycerin	2		10.496			ND	
	17 2,4,6-Trinitrotoluene	1		10.936			ND	U
	18 4-Amino-2,6-dinitrotoluene	1		11.136			ND	
	19 2-Amino-4,6-dinitrotoluene	1		11.396			ND	U
	20 2,6-Dinitrotoluene	1		11.543			ND	
	21 2,4-Dinitrotoluene	1		11.710			ND	
	22 o-Nitrotoluene	1		12.536			ND	
	23 p-Nitrotoluene	1		12.956			ND	
	24 m-Nitrotoluene	1		13.536			ND	U
	25 PETN	2		14.716			ND	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated
U - Marked Undetected

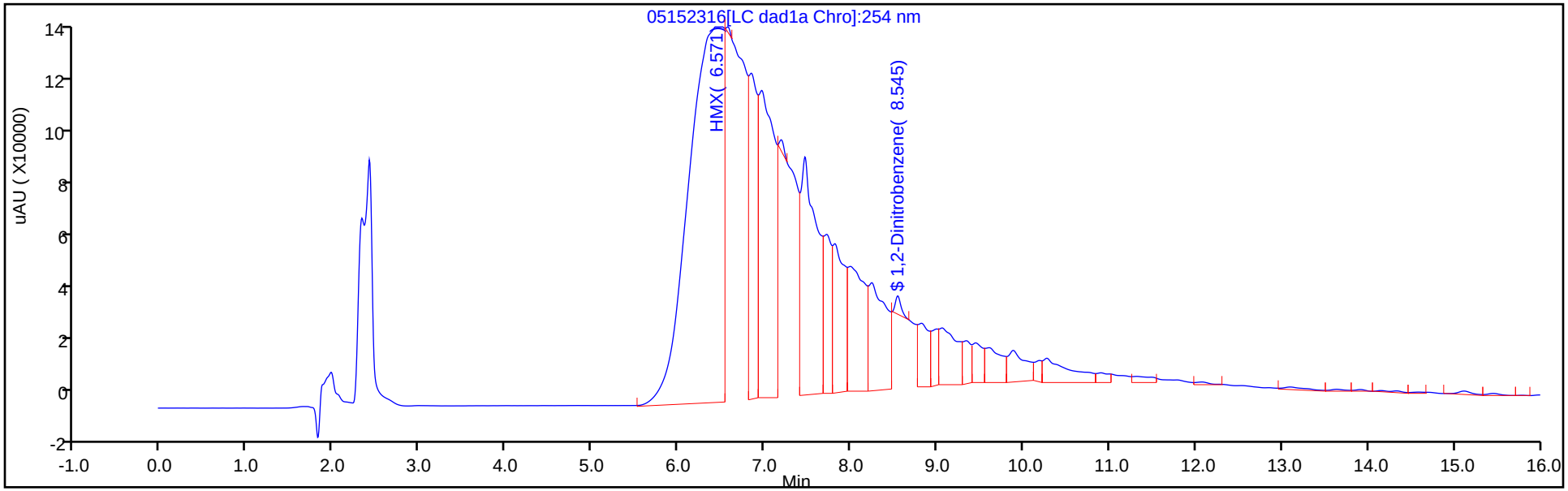
Report Date: 16-May-2023 13:24:41 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

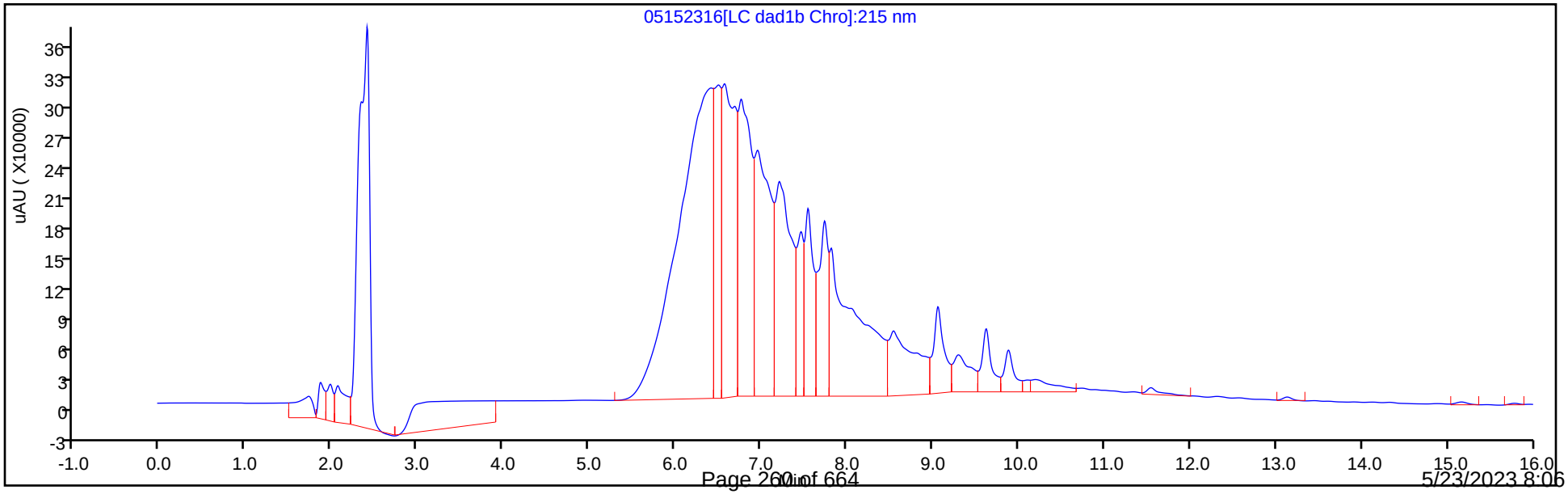
Data File: \\chromfs\denver\chromdata\chhplc_x\20230515-121447.b\05152316.d

Injection Date:	15-May-2023 18:15:08	Instrument ID:	CHHPLC_X3	Operator ID:	JZ/JG
Lims ID:	280-176268-B-1-A	Lab Sample ID:	280-176268-1	Worklist Smp#:	16
Client ID:	LL1mw-090-230301-GW				
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



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\CHHPLC_X\20230515-121447.b\05152316.D				
Lims ID:	280-176268-B-1-A				
Client ID:	LL1mw-090-230301-GW				
Sample Type:	Client				
Inject. Date:	15-May-2023 18:15:08	ALS Bottle#:	14	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-176268-B-1-A				
Operator ID:	JZ/JG	Instrument ID:	CHHPLC_X3		
Method:	\\chromfs\Denver\ChromData\CHHPLC_X\20230515-121447.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	16-May-2023 13:24:37	Calib Date:	24-Feb-2023 17:41:20		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\CHHPLC_X\20230224-118952.b\02240018.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX1672				

First Level Reviewer: K8YG Date: 16-May-2023 07:54:03

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2000	0.2508	125.40

Manual Integration/User Assign Peak Report

Eurofins Denver

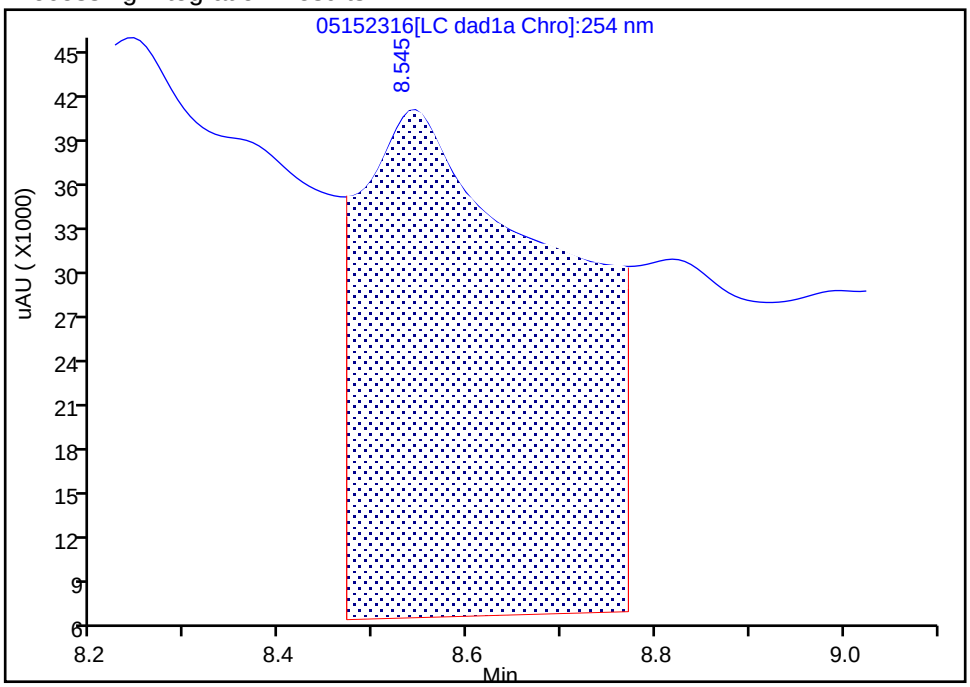
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230515-121447.b\05152316.d				
Injection Date:	15-May-2023 18:15:08	Instrument ID:	CHHPLC_X3		
Lims ID:	280-176268-B-1-A	Lab Sample ID:	280-176268-1		
Client ID:	LL1mw-090-230301-GW				
Operator ID:	JZ/JG	ALS Bottle#:	14	Worklist Smp#:	16
Injection Vol:	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 1,2-Dinitrobenzene, CAS: 528-29-0

Signal: 1

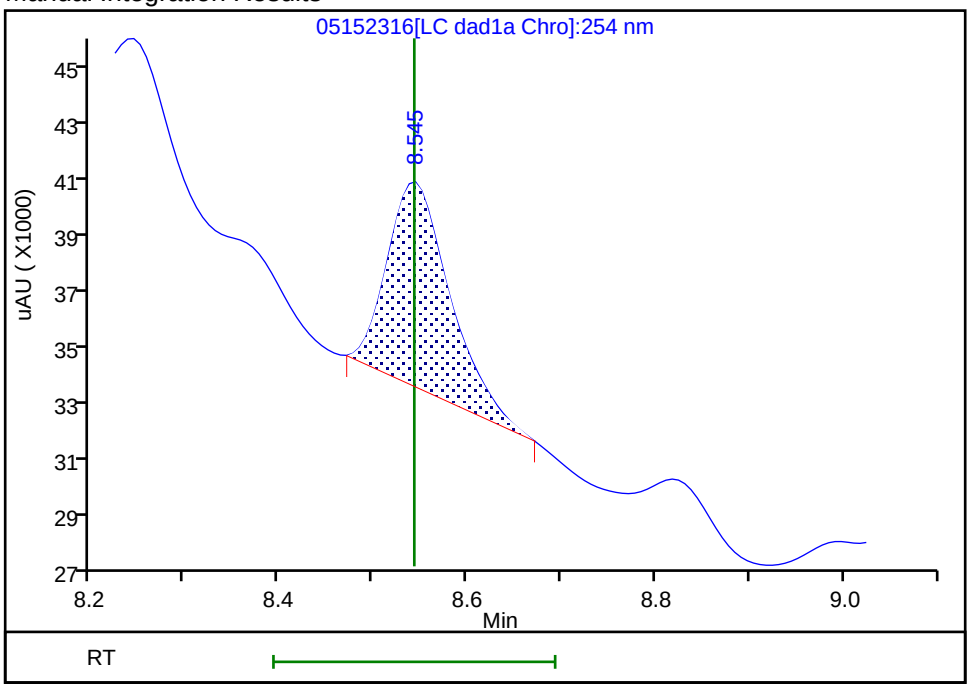
Processing Integration Results

RT: 8.54
Area: 489250
Amount: 3.873446
Amount Units: ug/mL



Manual Integration Results

RT: 8.54
Area: 31678
Amount: 0.250798
Amount Units: ug/mL



Reviewer: K8YG, 16-May-2023 07:52:41

Audit Action: Manually Integrated Audit Reason: Baseline

User Disabled Compound Report

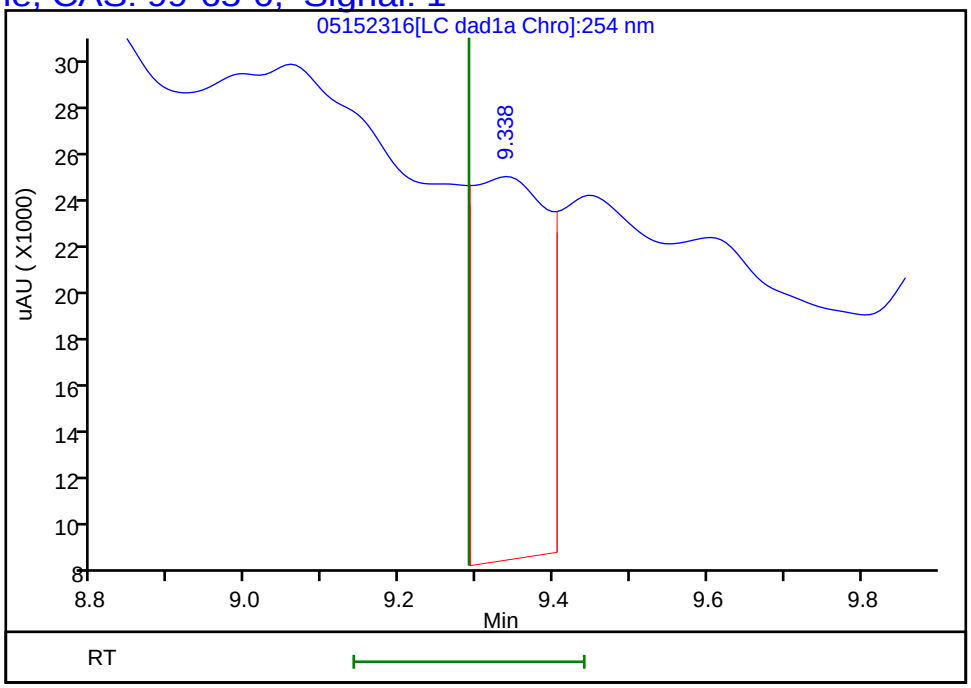
Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc_x\20230515-121447.b\05152316.d
Injection Date: 15-May-2023 18:15:08 Instrument ID: CHHPLC_X3
Lims ID: 280-176268-B-1-A Lab Sample ID: 280-176268-1
Client ID: LL1mw-090-230301-GW
Operator ID: JZ/JG ALS Bottle#: 14 Worklist Smp#: 16
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

12 1,3-Dinitrobenzene, CAS: 99-65-0, Signal: 1

RT: 9.34
Response: 103543
Amount: 0.351712



Reviewer: K8YG, 16-May-2023 07:54:03
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

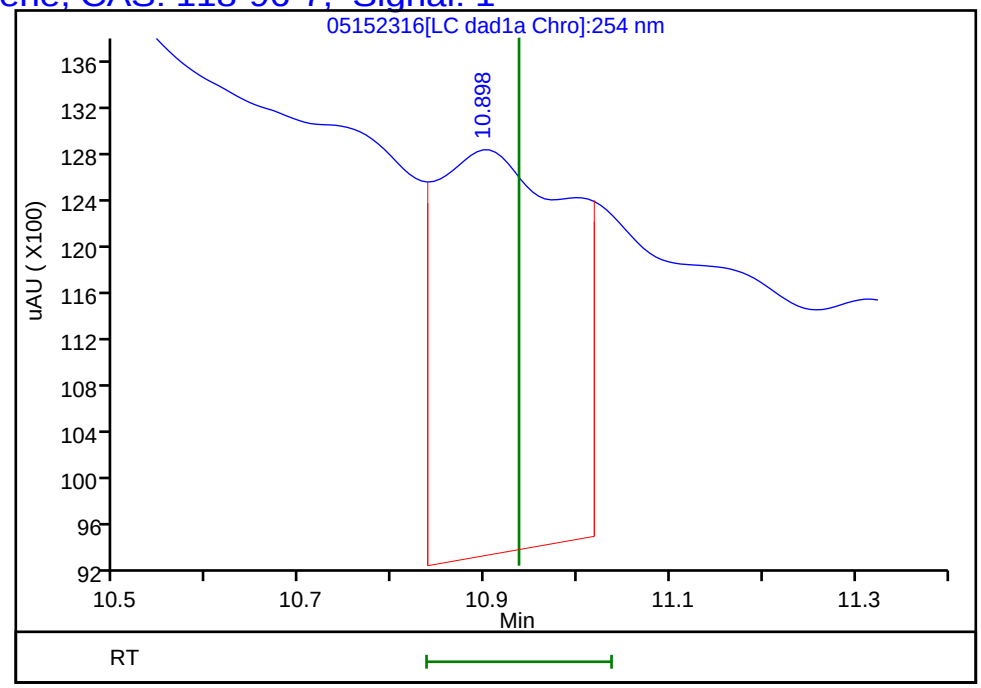
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\denver\chromdata\chhplc_x\20230515-121447.b\05152316.d				
Injection Date:	15-May-2023 18:15:08	Instrument ID:	CHHPLC_X3		
Lims ID:	280-176268-B-1-A	Lab Sample ID:	280-176268-1		
Client ID:	LL1mw-090-230301-GW				
Operator ID:	JZ/JG	ALS Bottle#:	14	Worklist Smp#:	16
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		

17 2,4,6-Trinitrotoluene, CAS: 118-96-7, Signal: 1

RT: 10.90
Response: 34544
Amount: 0.163685



Reviewer: K8YG, 16-May-2023 07:54:03
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

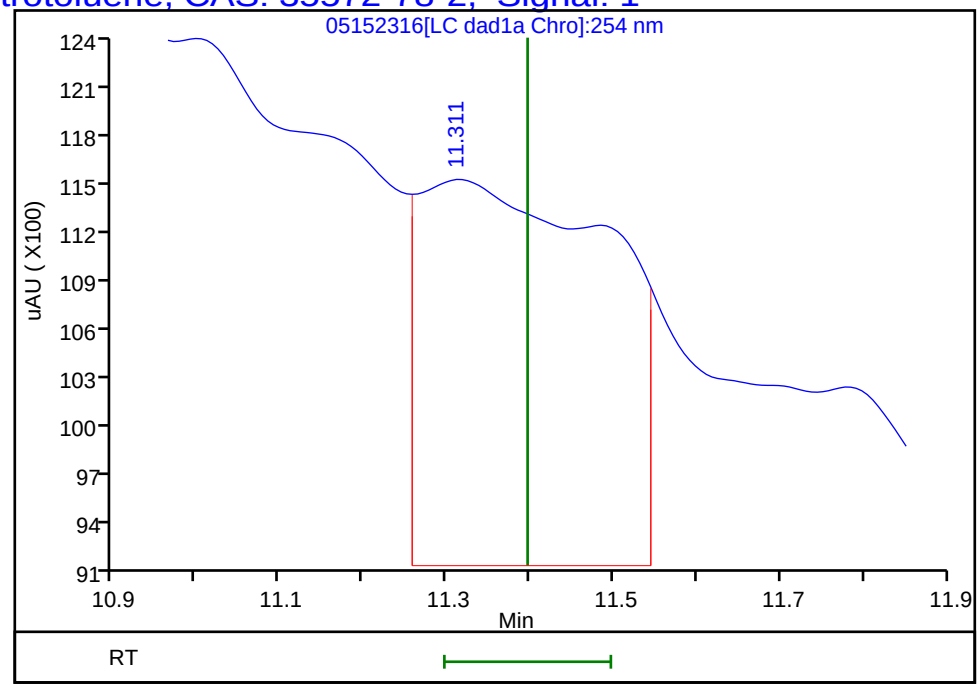
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\denver\chromdata\chhplc_x\20230515-121447.b\05152316.d				
Injection Date:	15-May-2023 18:15:08	Instrument ID:	CHHPLC_X3		
Lims ID:	280-176268-B-1-A	Lab Sample ID:	280-176268-1		
Client ID:	LL1mw-090-230301-GW				
Operator ID:	JZ/JG	ALS Bottle#:	14	Worklist Smp#:	16
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		

19 2-Amino-4,6-dinitrotoluene, CAS: 35572-78-2, Signal: 1

RT: 11.31
Response: 37407
Amount: 0.185725



Reviewer: K8YG, 16-May-2023 07:54:03
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

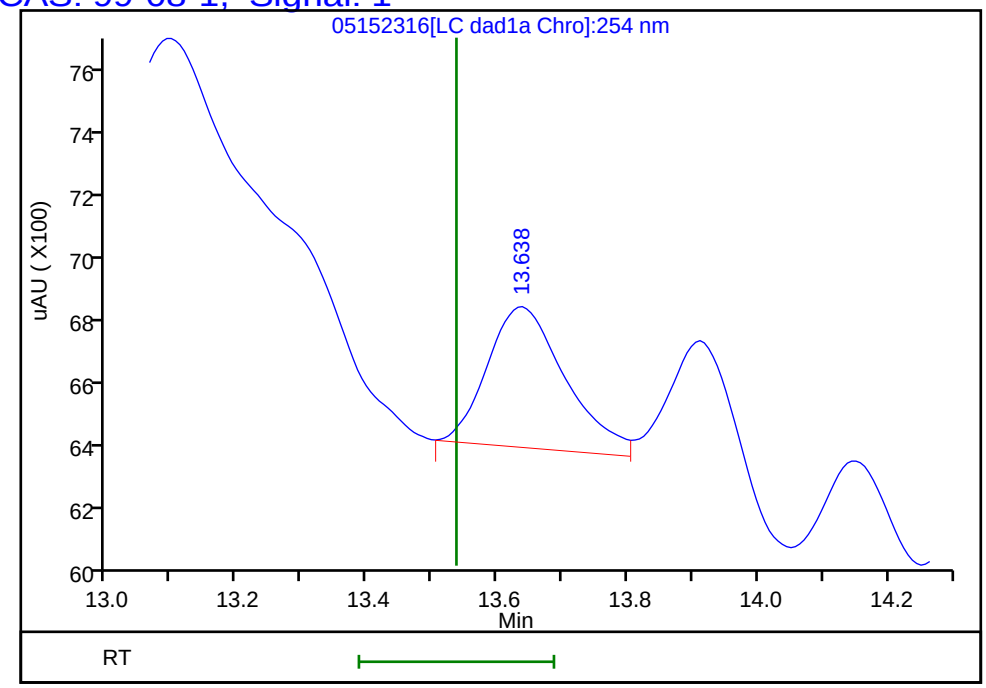
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\denver\chromdata\chhplc_x\20230515-121447.b\05152316.d				
Injection Date:	15-May-2023 18:15:08	Instrument ID:	CHHPLC_X3		
Lims ID:	280-176268-B-1-A	Lab Sample ID:	280-176268-1		
Client ID:	LL1mw-090-230301-GW				
Operator ID:	JZ/JG	ALS Bottle#:	14	Worklist Smp#:	16
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		

24 m-Nitrotoluene, CAS: 99-08-1, Signal: 1

RT: 13.64
Response: 3569
Amount: 0.025404



Reviewer: K8YG, 16-May-2023 07:54:03
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins Denver

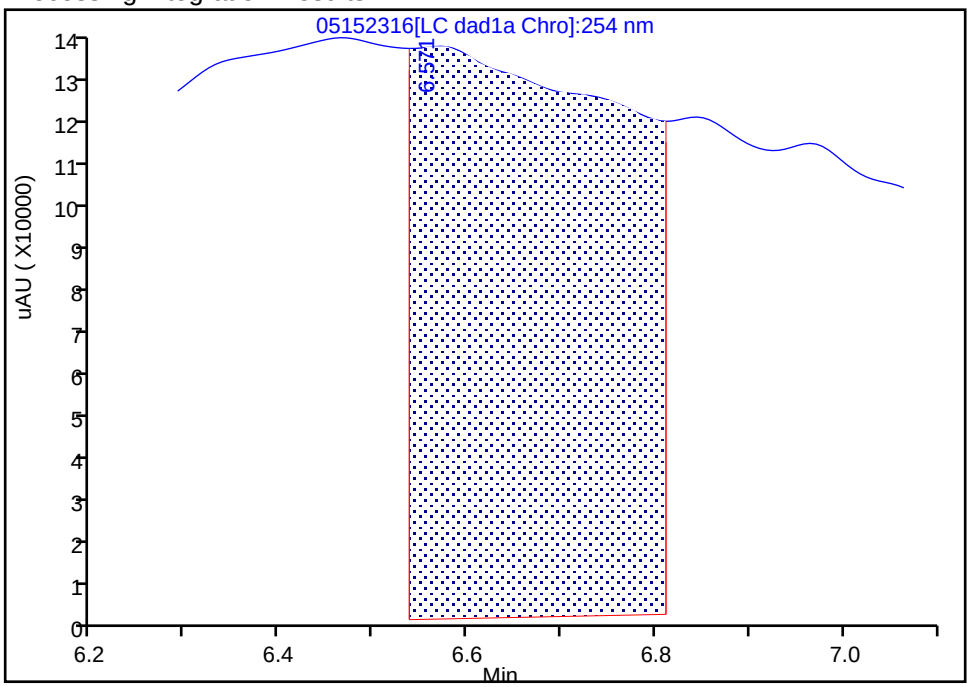
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230515-121447.b\05152316.d				
Injection Date:	15-May-2023 18:15:08	Instrument ID:	CHHPLC_X3		
Lims ID:	280-176268-B-1-A	Lab Sample ID:	280-176268-1		
Client ID:	LL1mw-090-230301-GW				
Operator ID:	JZ/JG	ALS Bottle#:	14	Worklist Smp#:	16
Injection Vol:	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		

4 HMX, CAS: 2691-41-0

Signal: 1

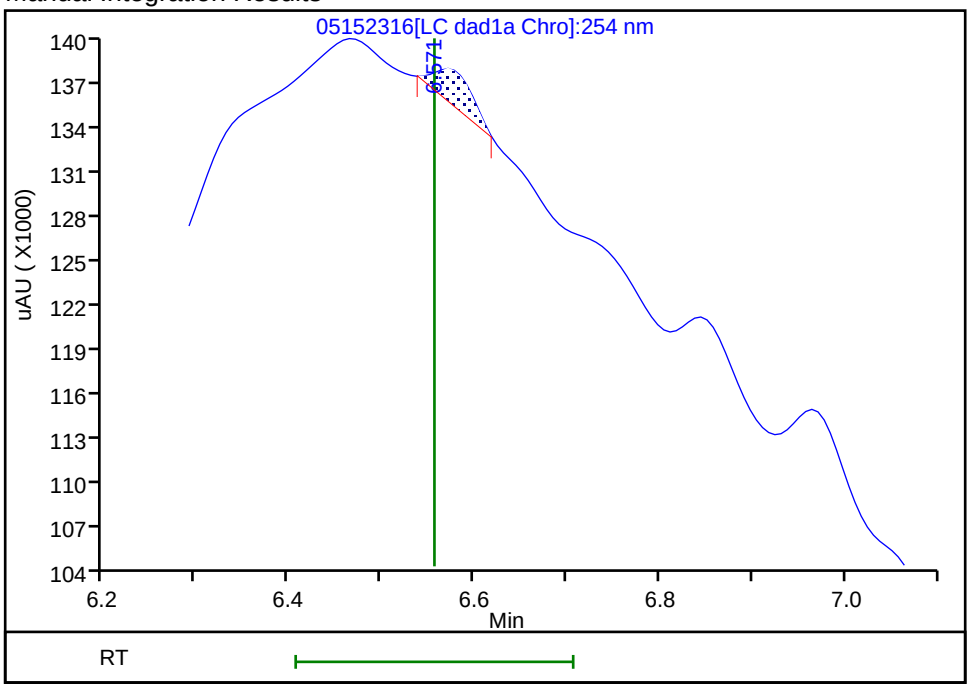
Processing Integration Results

RT: 6.57
Area: 2077983
Amount: 22.217728
Amount Units: ug/mL



Manual Integration Results

RT: 6.57
Area: 6610
Amount: 0.070674
Amount Units: ug/mL



Reviewer: LV5D, 16-May-2023 13:04:09

Audit Action: Manually Integrated Audit Reason: Baseline

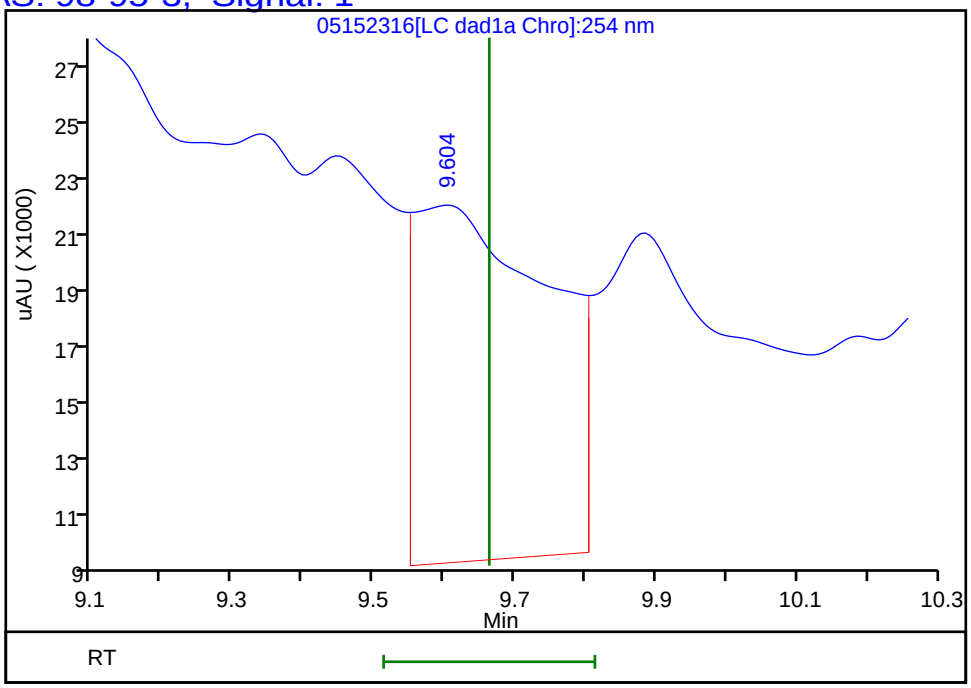
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\denver\chromdata\chhplc_x\20230515-121447.b\05152316.d				
Injection Date:	15-May-2023 18:15:08	Instrument ID:	CHHPLC_X3		
Lims ID:	280-176268-B-1-A	Lab Sample ID:	280-176268-1		
Client ID:	LL1mw-090-230301-GW				
Operator ID:	JZ/JG	ALS Bottle#:	14	Worklist Smp#:	16
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		

13 Nitrobenzene, CAS: 98-95-3, Signal: 1

RT: 9.60
Response: 165026
Amount: 0.862906



Reviewer: K8YG, 16-May-2023 07:54:03
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

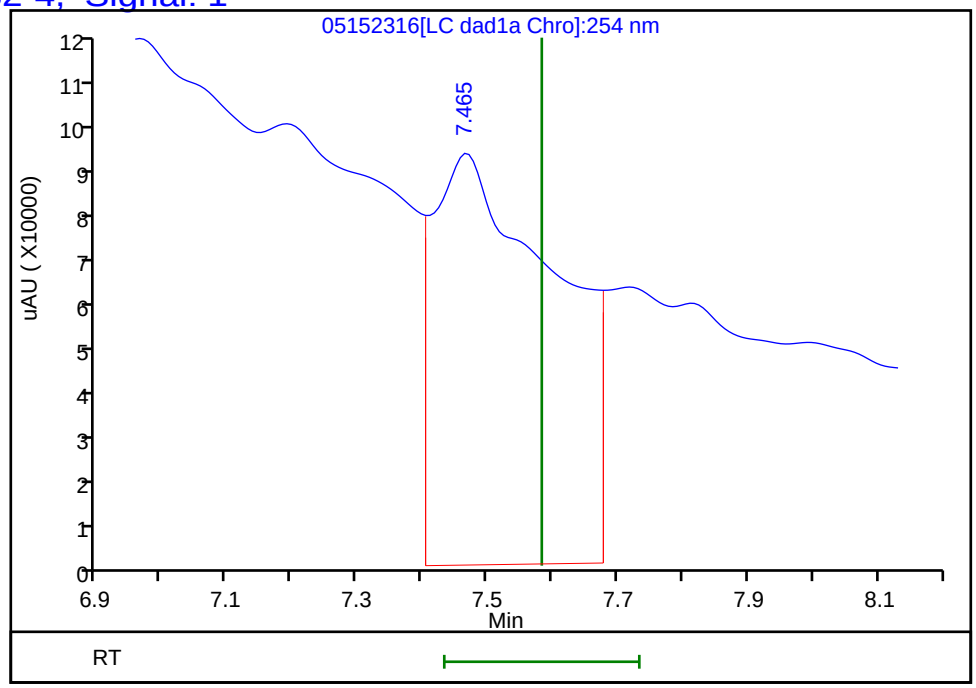
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\denver\chromdata\chhplc_x\20230515-121447.b\05152316.d				
Injection Date:	15-May-2023 18:15:08	Instrument ID:	CHHPLC_X3		
Lims ID:	280-176268-B-1-A	Lab Sample ID:	280-176268-1		
Client ID:	LL1mw-090-230301-GW				
Operator ID:	JZ/JG	ALS Bottle#:	14	Worklist Smp#:	16
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 RDX, CAS: 121-82-4, Signal: 1

RT: 7.46
Response: 1130151
Amount: 10.623736



Reviewer: K8YG, 16-May-2023 07:54:03
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

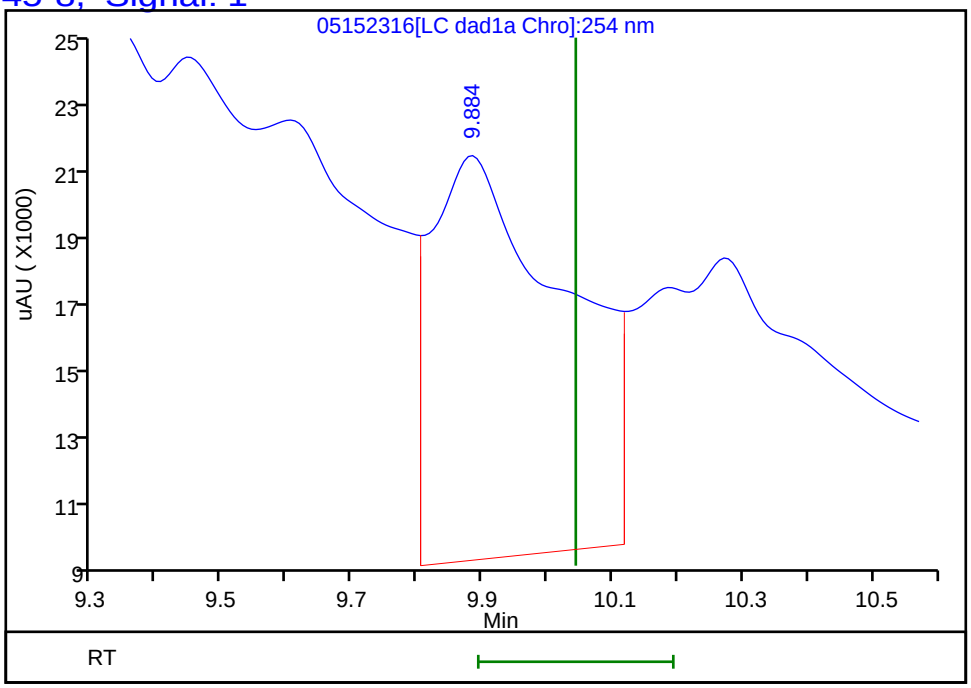
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\denver\chromdata\chhplc_x\20230515-121447.b\05152316.d				
Injection Date:	15-May-2023 18:15:08	Instrument ID:	CHHPLC_X3		
Lims ID:	280-176268-B-1-A	Lab Sample ID:	280-176268-1		
Client ID:	LL1mw-090-230301-GW				
Operator ID:	JZ/JG	ALS Bottle#:	14	Worklist Smp#:	16
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		

15 Tetryl, CAS: 479-45-8, Signal: 1

RT: 9.88
Response: 158716
Amount: 0.967069



Reviewer: K8YG, 16-May-2023 07:54:03
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-176268-1

SDG No.:

Client Sample ID: LL1mw-090-230301-GW | Lab Sample ID: 280-176268-1

Matrix: Water | Lab File ID: 05160015.D

Analysis Method: 8330B | Date Collected: 05/09/2023 15:03

Extraction Method: 3535 | Date Extracted: 05/12/2023 15:04

Sample wt/vol: 502.6(mL) | Date Analyzed: 05/16/2023 21:58

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: Luna-phenylhex ID: 4.6(mm)

% Moisture: % Solids: | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 612694 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
2691-41-0	HMX	0.20	U	0.21	0.20	0.087

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	101		83-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\G2_LUNA\20230516-121515.b\05160015.D
Lims ID: 280-176268-B-1-A
Client ID: LL1mw-090-230301-GW
Sample Type: Client
Inject. Date: 16-May-2023 21:58:21 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-176268-B-1-A
Operator ID: JZ/JG Instrument ID: CHHPLC_G2_LUNA

Method: \\chromfs\Denver\ChromData\G2_LUNA\20230516-121515.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 17-May-2023 13:45:47 Calib Date: 07-Apr-2023 23:50:31
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\04070018.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX1653

First Level Reviewer: K8YG Date: 17-May-2023 12:34:21

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
	6 HMX	1		6.888			ND	
	8 RDX	1	9.086	9.168	-0.082	30003	0.1391	
	9 Nitrobenzene	1		11.688			ND	
$	10 1,2-Dinitrobenzene	1	12.659	12.681	-0.022	53552	0.2018	
	12 1,3-Dinitrobenzene	1	14.719	14.814	-0.095	4113	0.007074	M
	13 Nitroglycerin	2	15.259	15.321	-0.062	36076	0.2901	
	14 o-Nitrotoluene	1	15.925	15.901	0.024	10429	0.0429	
	15 p-Nitrotoluene	1		16.128			ND	U
	16 4-Amino-2,6-dinitrotoluene	1		16.694			ND	
	17 m-Nitrotoluene	1		16.981			ND	U
	18 2-Amino-4,6-dinitrotoluene	1		17.541			ND	
	19 1,3,5-Trinitrobenzene	1		17.608			ND	
	20 2,6-Dinitrotoluene	1	18.839	18.814	0.025	9530	0.0340	
	21 2,4-Dinitrotoluene	1		19.274			ND	7
	22 Tetryl	1	22.559	22.621	-0.062	12543	0.0464	
	23 2,4,6-Trinitrotoluene	1		23.428			ND	U
	24 PETN	2		24.661			ND	

QC Flag Legend

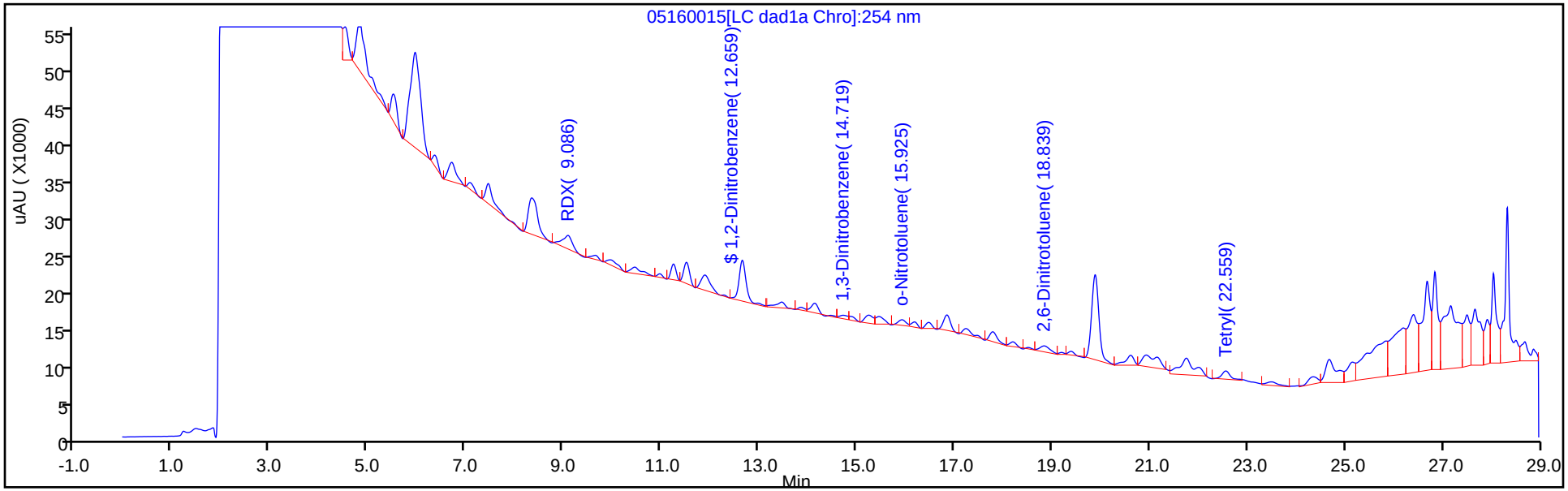
Processing Flags
7 - Failed Limit of Detection
Review Flags
M - Manually Integrated
U - Marked Undetected

Report Date: 17-May-2023 13:46:10 Chrom Revision: 2.3 16-May-2023 16:37:30

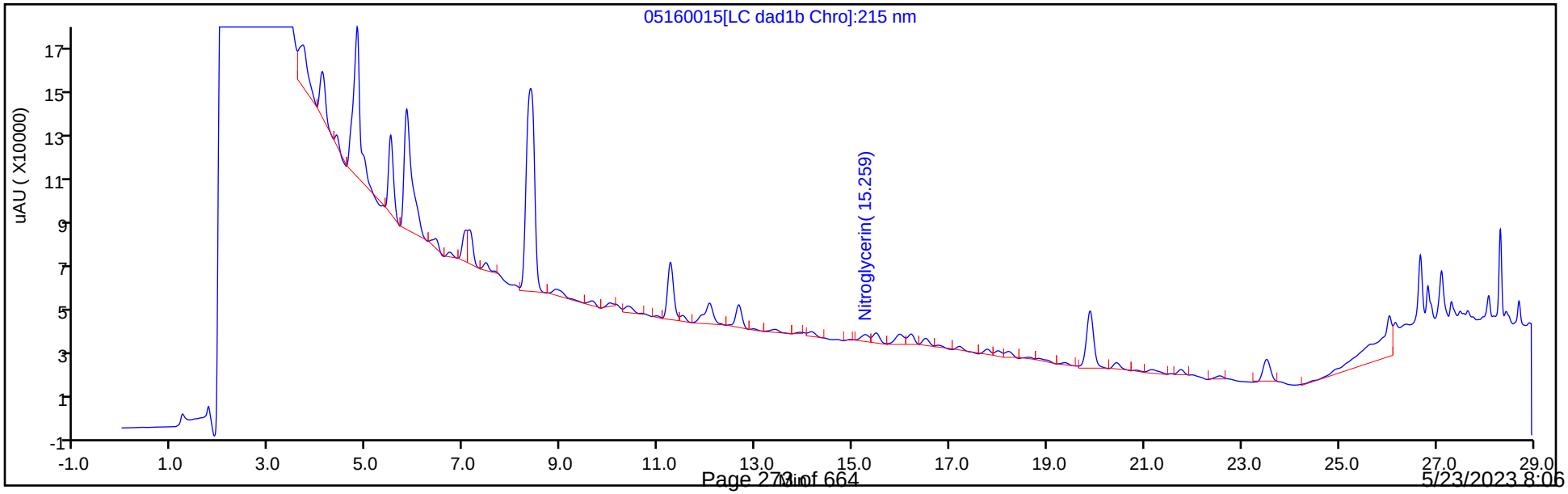
Eurofins Denver

Data File:	\\chromfs\denver\chromdata\g2_luna\20230516-121515.b\05160015.d				
Injection Date:	16-May-2023 21:58:21	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	JZ/JG
Lims ID:	280-176268-B-1-A	Lab Sample ID:	280-176268-1	Worklist Smp#:	15
Client ID:	LL1mw-090-230301-GW				
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 Target: 1



Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\G2_LUNA\20230516-121515.b\05160015.D				
Lims ID:	280-176268-B-1-A				
Client ID:	LL1mw-090-230301-GW				
Sample Type:	Client				
Inject. Date:	16-May-2023 21:58:21	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-176268-B-1-A				
Operator ID:	JZ/JG	Instrument ID:	CHHPLC_G2_LUNA		
Method:	\\chromfs\Denver\ChromData\G2_LUNA\20230516-121515.b\G2_8330_Luna.m				
Limit Group:	GCSV - 8330				
Last Update:	17-May-2023 13:45:47	Calib Date:	07-Apr-2023 23:50:31		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\04070018.D				
Column 1 :	Luna-Phenyl hexyl (4.60 mm)		Det: LC DAD1A, 254 nm		
Process Host:	CTX1653				

First Level Reviewer: K8YG Date: 17-May-2023 12:34:21

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2000	0.2018	100.89

Manual Integration/User Assign Peak Report

Eurofins Denver

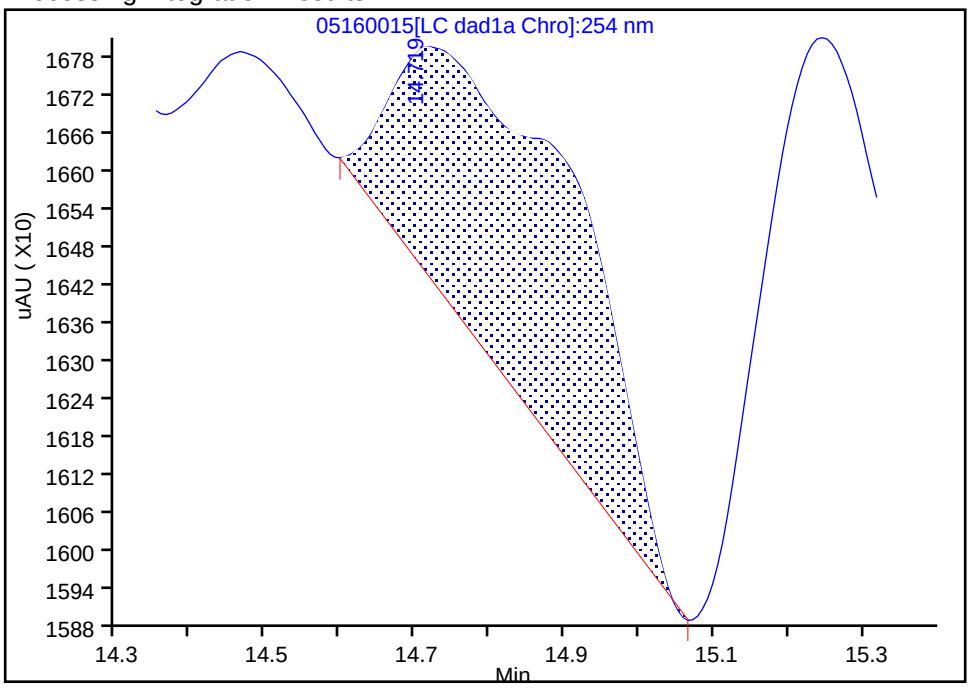
Data File:	\\chromfs\denver\chromdata\g2_luna\20230516-121515.b\05160015.d				
Injection Date:	16-May-2023 21:58:21	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-176268-B-1-A	Lab Sample ID:	280-176268-1		
Client ID:	LL1mw-090-230301-GW				
Operator ID:	JZ/JG	ALS Bottle#:	15	Worklist Smp#:	15
Injection 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

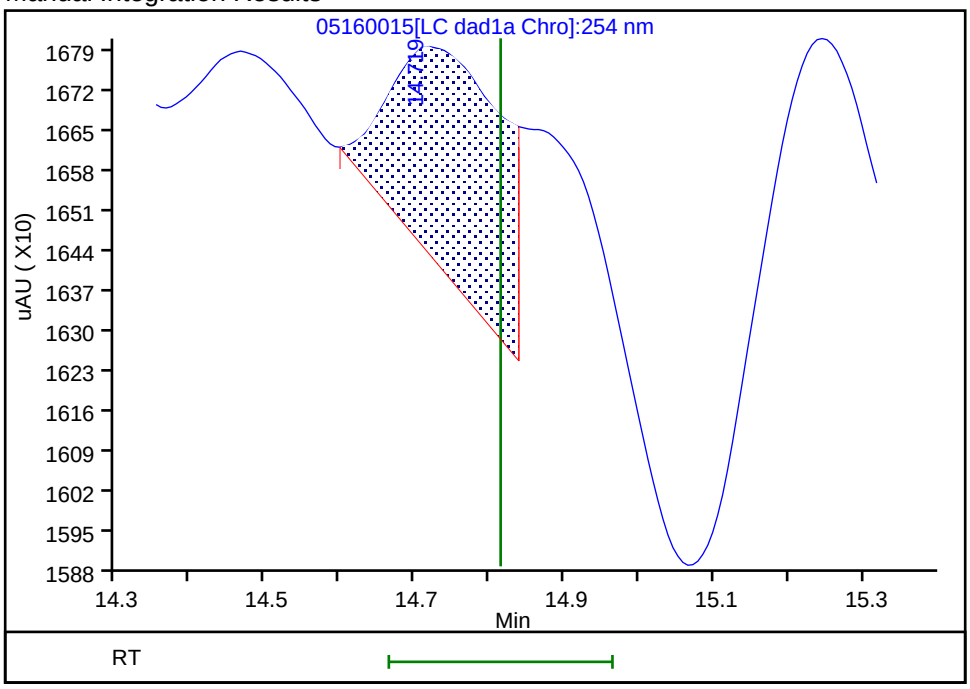
Processing Integration Results

RT: 14.72
Area: 8250
Amount: 0.014189
Amount Units: ug/ml



Manual Integration Results

RT: 14.72
Area: 4113
Amount: 0.007074
Amount Units: ug/ml



Reviewer: K8YG, 17-May-2023 12:39:07 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Baseline

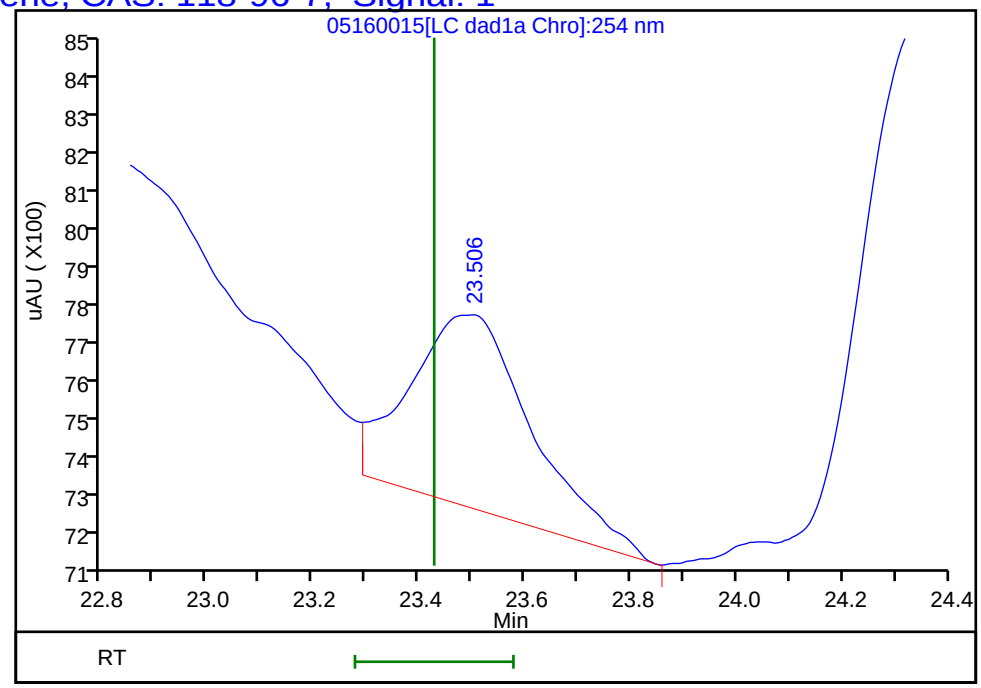
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\denver\chromdata\g2_luna\20230516-121515.b\05160015.d				
Injection Date:	16-May-2023 21:58:21	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-176268-B-1-A	Lab Sample ID:	280-176268-1		
Client ID:	LL1mw-090-230301-GW				
Operator ID:	JZ/JG	ALS Bottle#:	15	Worklist Smp#:	15
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

RT: 23.51
Response: 7329
Amount: 0.017801



Reviewer: K8YG, 17-May-2023 12:40:43
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

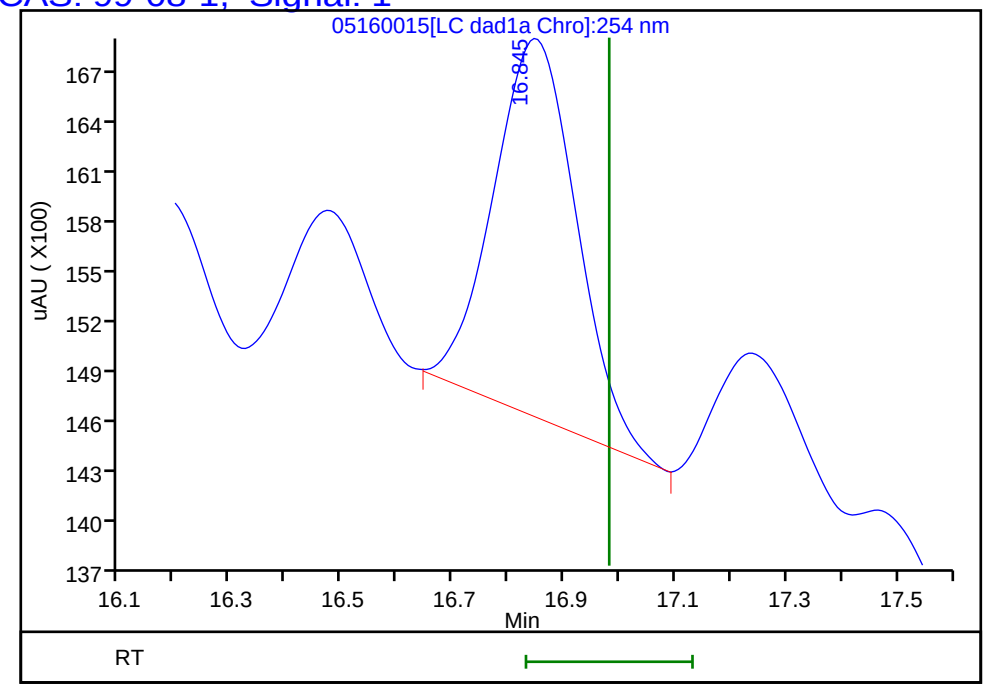
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\denver\chromdata\g2_luna\20230516-121515.b\05160015.d				
Injection Date:	16-May-2023 21:58:21	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-176268-B-1-A	Lab Sample ID:	280-176268-1		
Client ID:	LL1mw-090-230301-GW				
Operator ID:	JZ/JG	ALS Bottle#:	15	Worklist Smp#:	15
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: 16.85
Response: 23223
Amount: 0.086649



Reviewer: K8YG, 17-May-2023 12:38:08
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

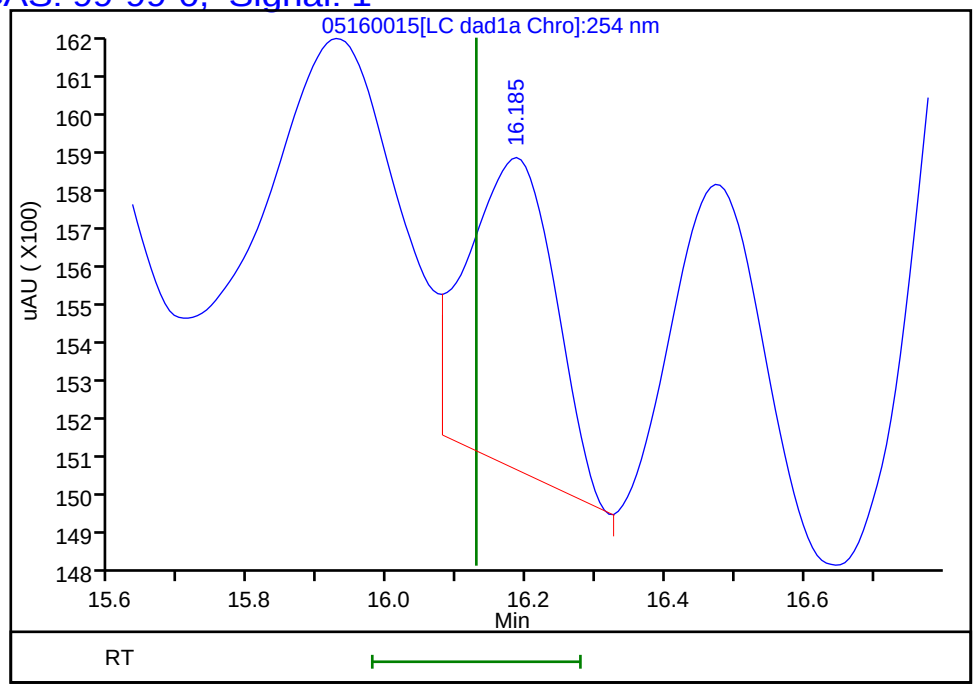
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\denver\chromdata\g2_luna\20230516-121515.b\05160015.d				
Injection Date:	16-May-2023 21:58:21	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-176268-B-1-A	Lab Sample ID:	280-176268-1		
Client ID:	LL1mw-090-230301-GW				
Operator ID:	JZ/JG	ALS Bottle#:	15	Worklist Smp#:	15
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: 16.19
Response: 6664
Amount: 0.030646



Reviewer: K8YG, 17-May-2023 12:40:43
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-176268-1

SDG No.:

Client Sample ID: LL1mw-090-230301-GW RE | Lab Sample ID: 280-176268-1 RE

Matrix: Water | Lab File ID: 05180017.D

Analysis Method: 8330B | Date Collected: 05/09/2023 15:03

Extraction Method: 3535 | Date Extracted: 05/18/2023 13:20

Sample wt/vol: 503.6(mL) | Date Analyzed: 05/19/2023 00:27

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: % Solids: | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 613045 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-99-0	*4-Nitrotoluene*	*0.40*	*U H M Q*	*0.41*	0.40	*0.099*

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	152	M Q	83-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\05180017.D
Lims ID: 280-176268-A-1-A
Client ID: LL1mw-090-230301-GW
Sample Type: Client
Inject. Date: 19-May-2023 00:27:01 ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-176268-A-1-A
Operator ID: JZ/JG Instrument ID: CHHPLC_X3

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 19-May-2023 12:21:50 Calib Date: 24-Feb-2023 17:41:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X\20230224-118952.b\02240018.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX1654

First Level Reviewer: LV5D Date: 19-May-2023 11:31:43

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/mL	Flags
4	HMX	1	6.561	6.546	0.015	6434	0.0688	M
8	RDX	1		7.560			ND	U
$ 10	1,2-Dinitrobenzene	1	8.528	8.513	0.015	38464	0.3045	M
11	1,3,5-Trinitrobenzene	1		8.640			ND	
12	1,3-Dinitrobenzene	1	9.301	9.253	0.048	2261	0.007680	
13	Nitrobenzene	1		9.626			ND	U
15	Tetryl	1		9.986			ND	
16	Nitroglycerin	2		10.439			ND	
17	2,4,6-Trinitrotoluene	1		10.873			ND	U
18	4-Amino-2,6-dinitrotoluene	1		11.066			ND	
19	2-Amino-4,6-dinitrotoluene	1		11.319			ND	U
20	2,6-Dinitrotoluene	1		11.473			ND	
21	2,4-Dinitrotoluene	1		11.639			ND	U
22	o-Nitrotoluene	1		12.459			ND	
23	p-Nitrotoluene	1		12.873			ND	U
24	m-Nitrotoluene	1		13.446			ND	U
25	PETN	2		14.599			ND	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated
U - Marked Undetected

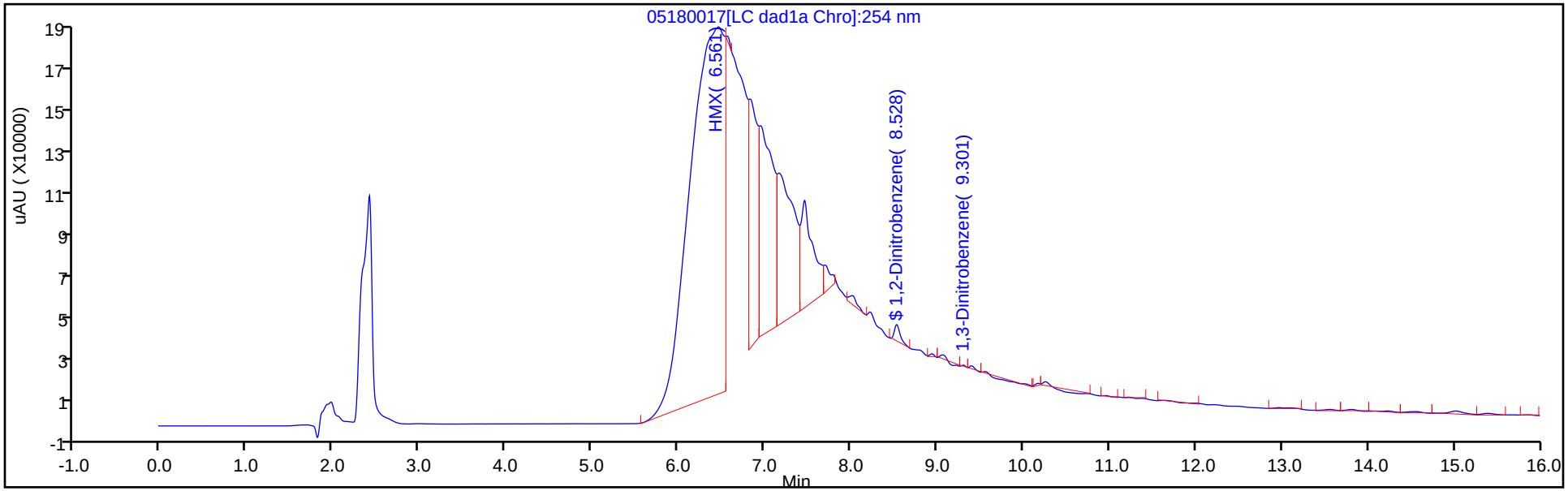
Report Date: 19-May-2023 12:21:54 Chrom Revision: 2.3 16-May-2023 16:37:30

Eurofins Denver

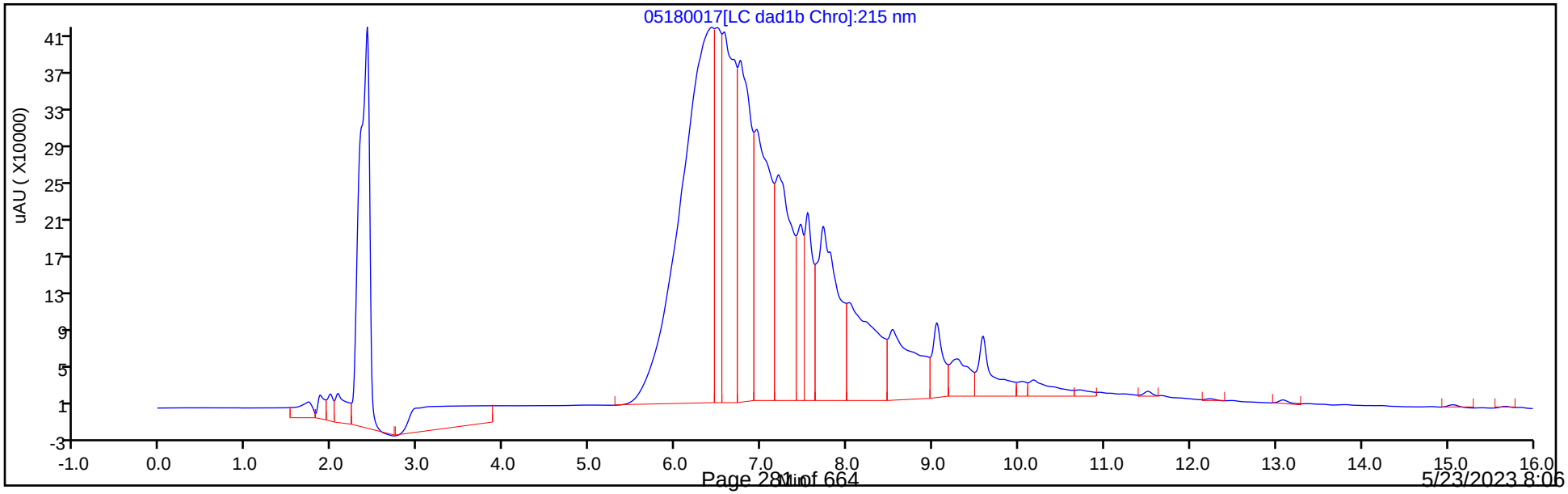
Data File: \\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180017.d

Injection Date:	19-May-2023 00:27:01	Instrument ID:	CHHPLC_X3	Operator ID:	JZ/JG
Lims ID:	280-176268-A-1-A	Lab Sample ID:	280-176268-1	Worklist Smp#:	17
Client ID:	LL1mw-090-230301-GW				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\05180017.D				
Lims ID:	280-176268-A-1-A				
Client ID:	LL1mw-090-230301-GW				
Sample Type:	Client				
Inject. Date:	19-May-2023 00:27:01	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-176268-A-1-A				
Operator ID:	JZ/JG	Instrument ID:	CHHPLC_X3		
Method:	\\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	19-May-2023 12:21:50	Calib Date:	24-Feb-2023 17:41:20		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\CHHPLC_X\20230224-118952.b\02240018.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX1654				

First Level Reviewer: LV5D Date: 19-May-2023 11:31:43

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2000	0.3045	152.26

Manual Integration/User Assign Peak Report

Eurofins Denver

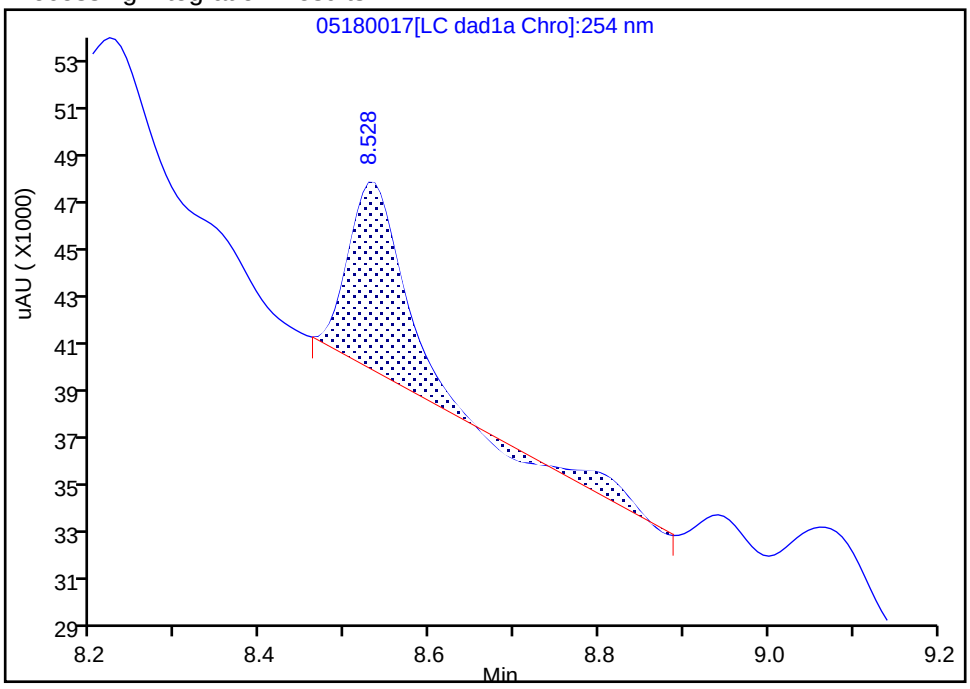
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180017.d				
Injection Date:	19-May-2023 00:27:01	Instrument ID:	CHHPLC_X3		
Lims ID:	280-176268-A-1-A	Lab Sample ID:	280-176268-1		
Client ID:	LL1mw-090-230301-GW				
Operator ID:	JZ/JG	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	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 1,2-Dinitrobenzene, CAS: 528-29-0

Signal: 1

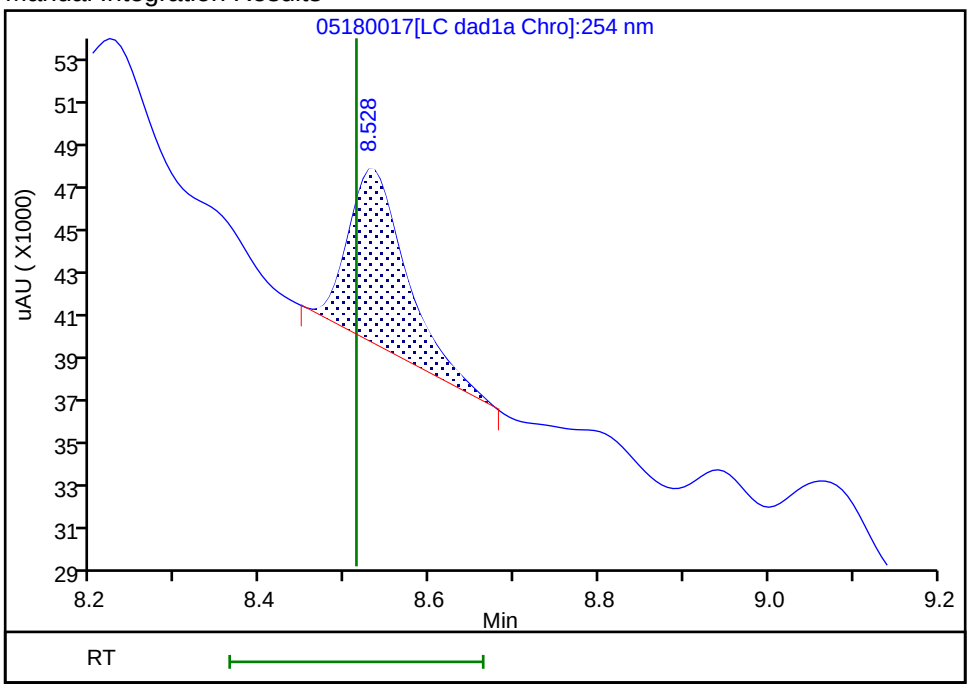
Processing Integration Results

RT: 8.53
Area: 46885
Amount: 0.371194
Amount Units: ug/mL



Manual Integration Results

RT: 8.53
Area: 38464
Amount: 0.304524
Amount Units: ug/mL



Reviewer: LV5D, 19-May-2023 11:38:29 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

User Disabled Compound Report

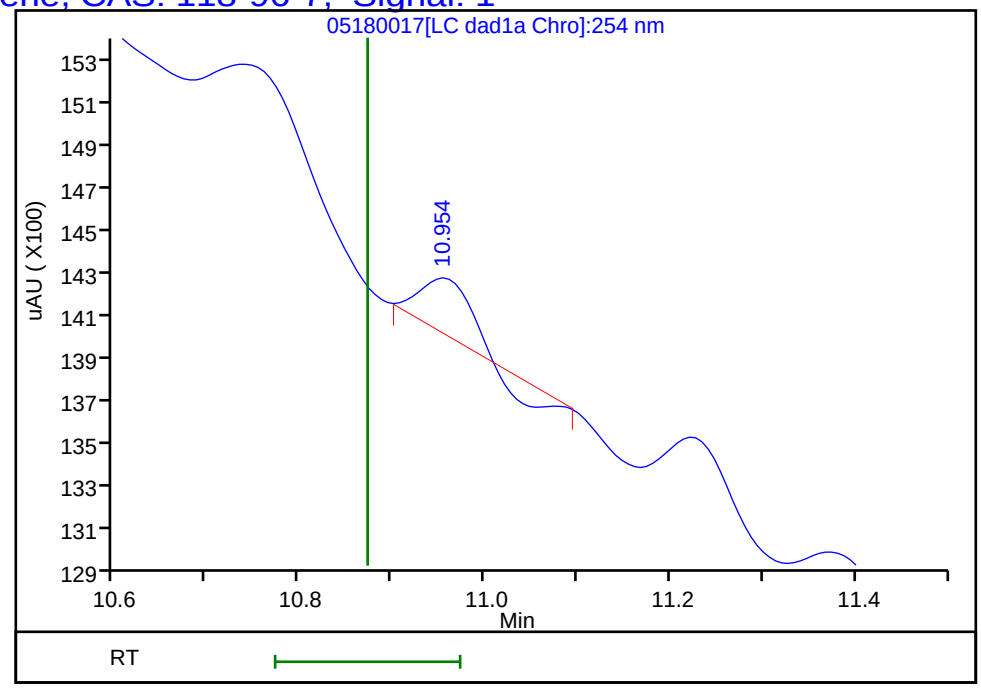
Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180017.d
Injection Date: 19-May-2023 00:27:01 Instrument ID: CHHPLC_X3
Lims ID: 280-176268-A-1-A Lab Sample ID: 280-176268-1
Client ID: LL1mw-090-230301-GW
Operator ID: JZ/JG ALS Bottle#: 17 Worklist Smp#: 17
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

17 2,4,6-Trinitrotoluene, CAS: 118-96-7, Signal: 1

RT: 10.95
Response: 1308
Amount: 0.006198



Reviewer: LV5D, 19-May-2023 11:38:38
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

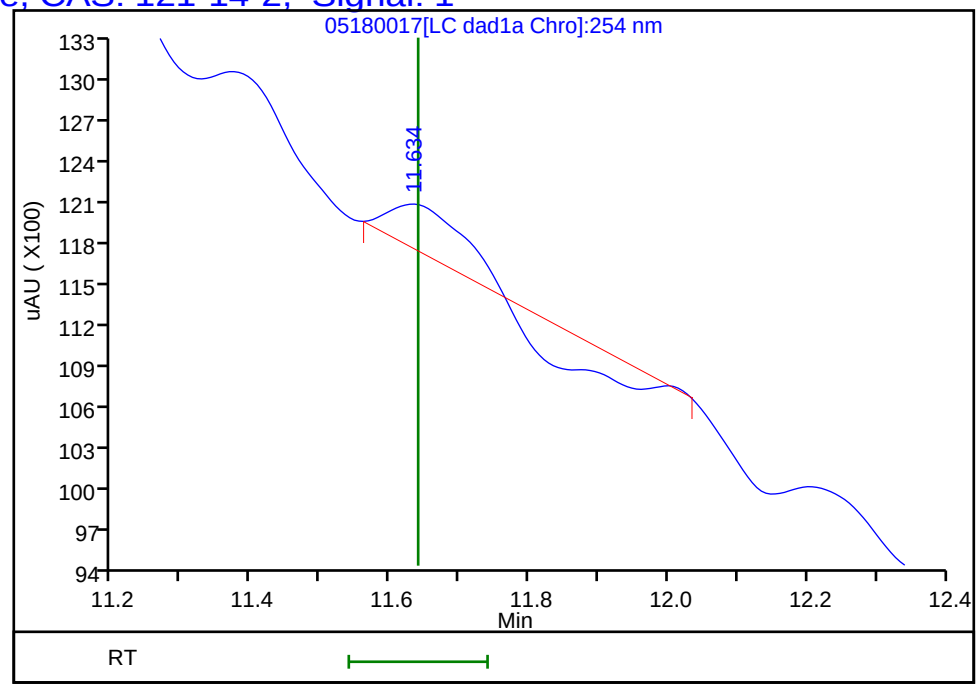
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180017.d				
Injection Date:	19-May-2023 00:27:01	Instrument ID:	CHHPLC_X3		
Lims ID:	280-176268-A-1-A	Lab Sample ID:	280-176268-1		
Client ID:	LL1mw-090-230301-GW				
Operator ID:	JZ/JG	ALS Bottle#:	17	Worklist Smp#:	17
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 2,4-Dinitrotoluene, CAS: 121-14-2, Signal: 1

RT: 11.63
Response: 4728
Amount: 0.015937



Reviewer: LV5D, 19-May-2023 11:38:38
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

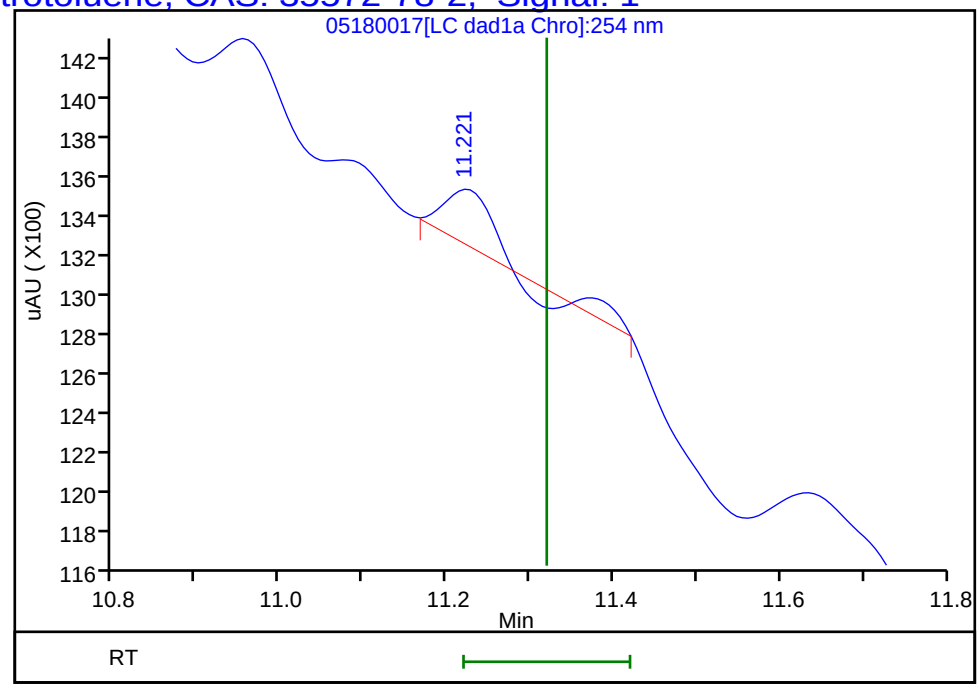
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180017.d				
Injection Date:	19-May-2023 00:27:01	Instrument ID:	CHHPLC_X3		
Lims ID:	280-176268-A-1-A	Lab Sample ID:	280-176268-1		
Client ID:	LL1mw-090-230301-GW				
Operator ID:	JZ/JG	ALS Bottle#:	17	Worklist Smp#:	17
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		

19 2-Amino-4,6-dinitrotoluene, CAS: 35572-78-2, Signal: 1

RT: 11.22
Response: 1560
Amount: 0.007745



Reviewer: LV5D, 19-May-2023 11:38:38
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

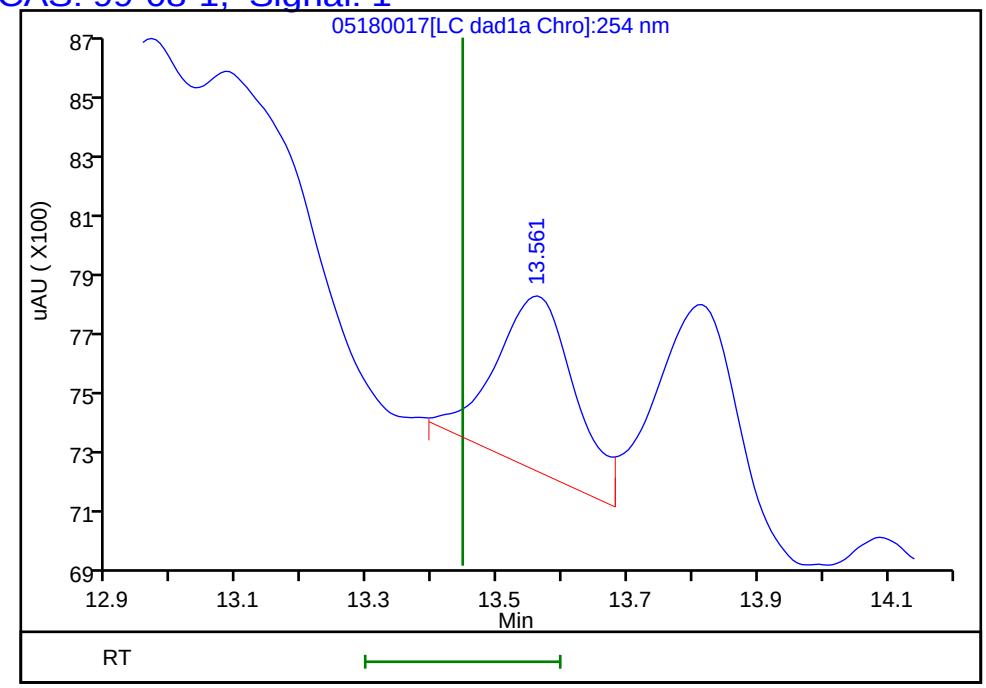
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180017.d				
Injection Date:	19-May-2023 00:27:01	Instrument ID:	CHHPLC_X3		
Lims ID:	280-176268-A-1-A	Lab Sample ID:	280-176268-1		
Client ID:	LL1mw-090-230301-GW				
Operator ID:	JZ/JG	ALS Bottle#:	17	Worklist Smp#:	17
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		

24 m-Nitrotoluene, CAS: 99-08-1, Signal: 1

RT: 13.56
Response: 4799
Amount: 0.034158



Reviewer: LV5D, 19-May-2023 11:38:38
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

User Disabled Compound Report

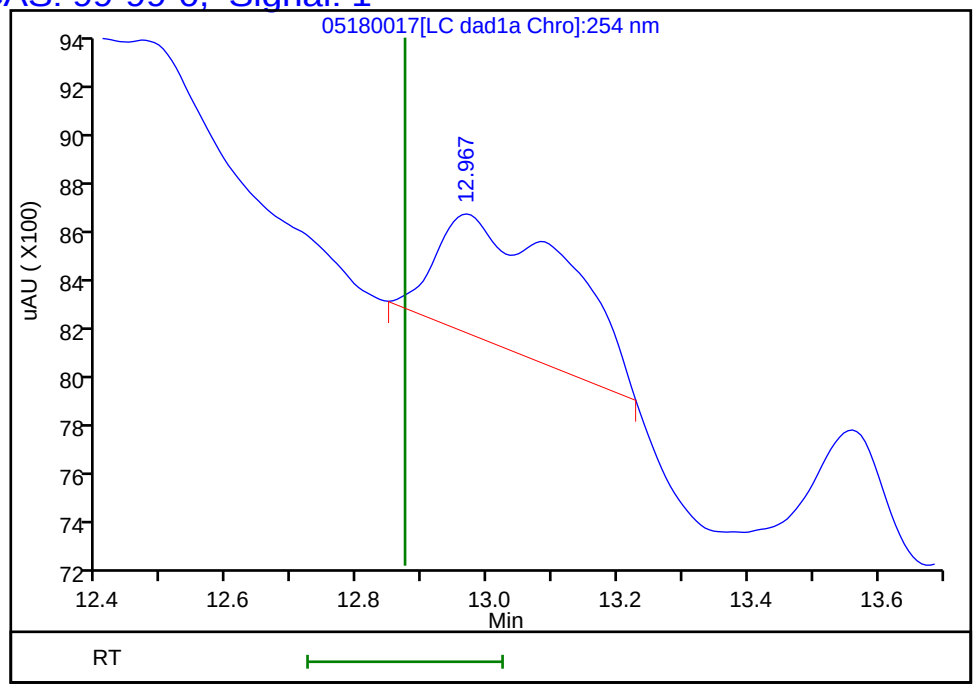
Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180017.d
Injection Date: 19-May-2023 00:27:01 Instrument ID: CHHPLC_X3
Lims ID: 280-176268-A-1-A Lab Sample ID: 280-176268-1
Client ID: LL1mw-090-230301-GW
Operator ID: JZ/JG ALS Bottle#: 17 Worklist Smp#: 17
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 p-Nitrotoluene, CAS: 99-99-0, Signal: 1

RT: 12.97
Response: 7126
Amount: 0.063693



Reviewer: LV5D, 19-May-2023 11:38:38
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins Denver

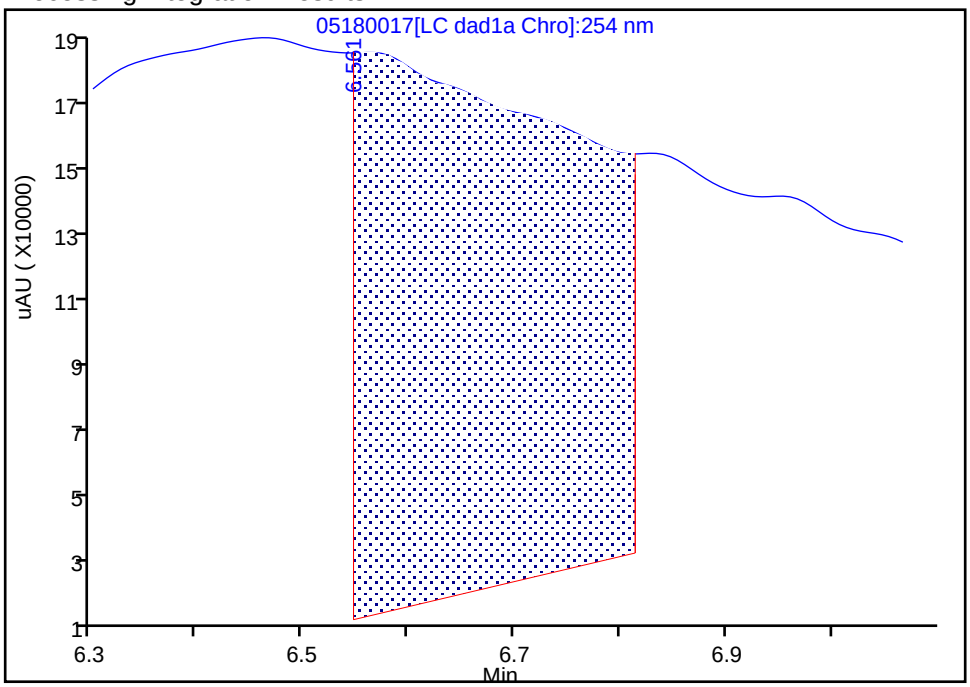
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180017.d				
Injection Date:	19-May-2023 00:27:01	Instrument ID:	CHHPLC_X3		
Lims ID:	280-176268-A-1-A	Lab Sample ID:	280-176268-1		
Client ID:	LL1mw-090-230301-GW				
Operator ID:	JZ/JG	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	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		

4 HMX, CAS: 2691-41-0

Signal: 1

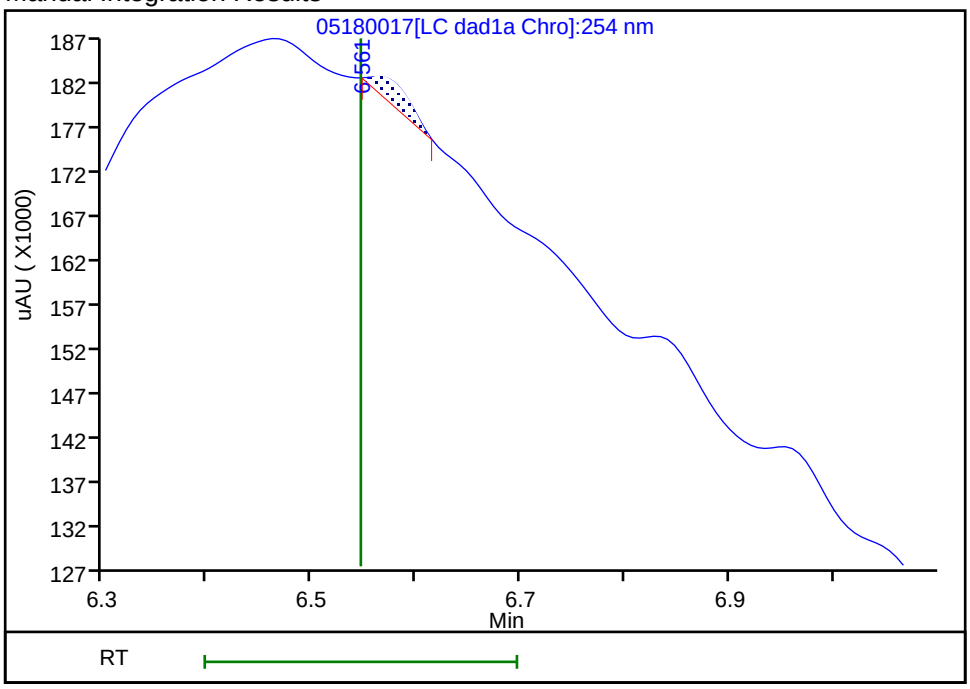
Processing Integration Results

RT: 6.56
Area: 2266543
Amount: 24.233806
Amount Units: ug/mL



Manual Integration Results

RT: 6.56
Area: 6434
Amount: 0.068792
Amount Units: ug/mL



Reviewer: LV5D, 19-May-2023 11:38:34 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

User Disabled Compound Report

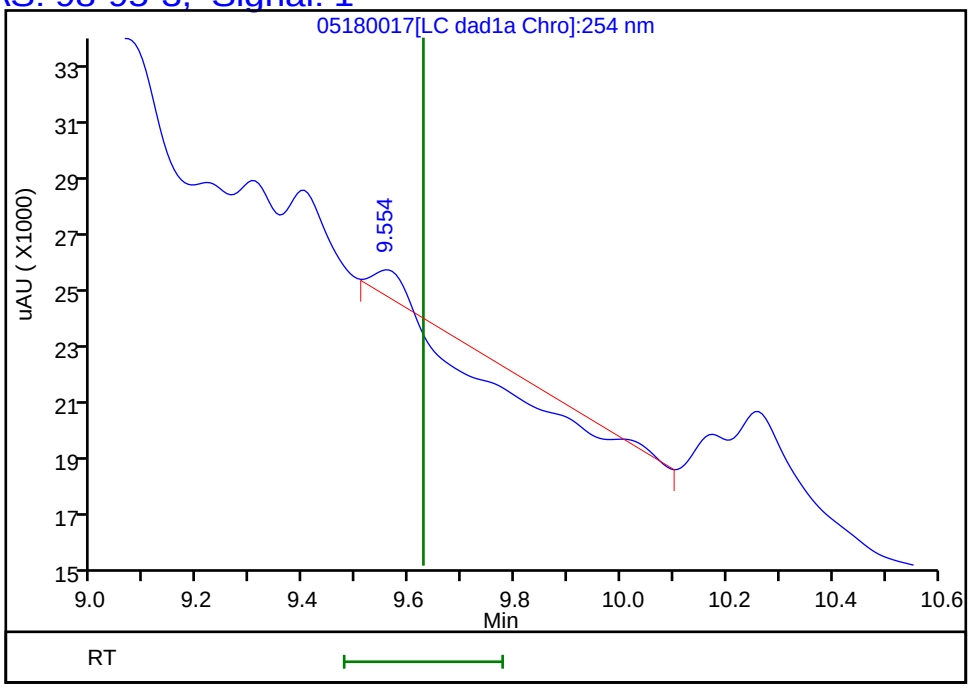
Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180017.d

Injection Date:	19-May-2023 00:27:01	Instrument ID:	CHHPLC_X3		
Lims ID:	280-176268-A-1-A	Lab Sample ID:	280-176268-1		
Client ID:	LL1mw-090-230301-GW				
Operator ID:	JZ/JG	ALS Bottle#:	17	Worklist Smp#:	17
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		

13 Nitrobenzene, CAS: 98-95-3, Signal: 1

RT: 9.55
Response: 17654
Amount: 0.092311



Reviewer: LV5D, 19-May-2023 11:38:38
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

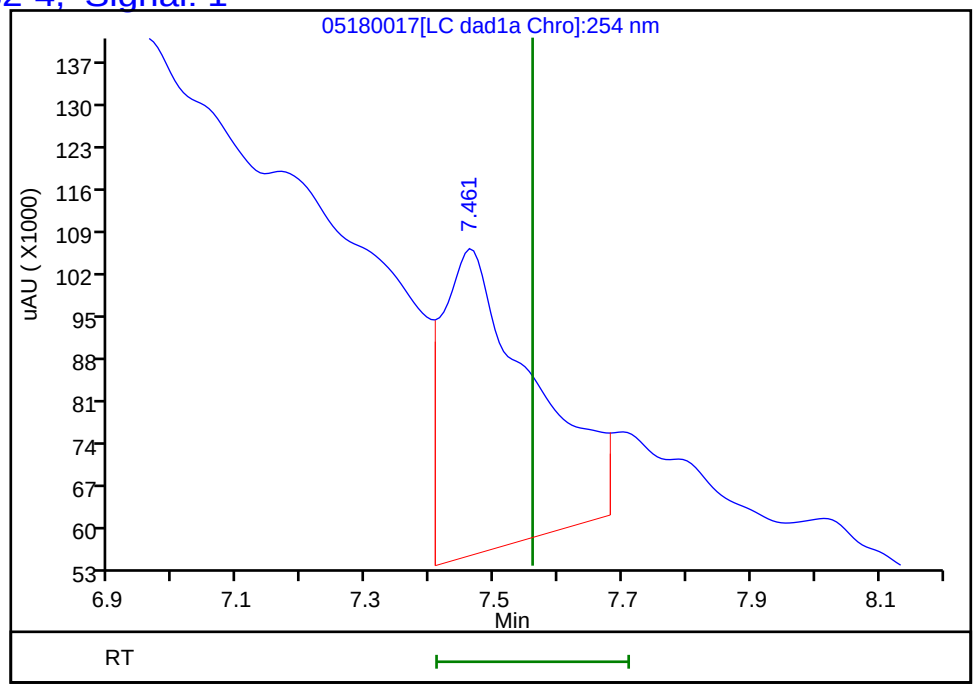
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180017.d				
Injection Date:	19-May-2023 00:27:01	Instrument ID:	CHHPLC_X3		
Lims ID:	280-176268-A-1-A	Lab Sample ID:	280-176268-1		
Client ID:	LL1mw-090-230301-GW				
Operator ID:	JZ/JG	ALS Bottle#:	17	Worklist Smp#:	17
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 RDX, CAS: 121-82-4, Signal: 1

RT: 7.46
Response: 490387
Amount: 4.609775



Reviewer: LV5D, 19-May-2023 11:38:38
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-176268-1

SDG No.:

Client Sample ID: LL1mw-090-230301-GW RE | Lab Sample ID: 280-176268-1 RE

Matrix: Water | Lab File ID: 05190013.D

Analysis Method: 8330B | Date Collected: 05/09/2023 15:03

Extraction Method: 3535 | Date Extracted: 05/18/2023 13:20

Sample wt/vol: 503.6(mL) | Date Analyzed: 05/19/2023 17:55

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: Luna-phenylhex ID: 4.6(mm)

% Moisture: % Solids: | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 613169 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-08-1	*3-Nitrotoluene*	*0.35*	*U M H*	*0.40*	0.35	*0.19*

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	104	*M*	83-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\G2_LUNA\20230519-121648.b\05190013.D
Lims ID: 280-176268-A-1-A
Client ID: LL1mw-090-230301-GW
Sample Type: Client
Inject. Date: 19-May-2023 17:55:04 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-176268-A-1-A
Operator ID: JZ/JG Instrument ID: CHHPLC_G2_LUNA

Method: \\chromfs\Denver\ChromData\G2_LUNA\20230519-121648.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 20-May-2023 11:50:48 Calib Date: 07-Apr-2023 23:50:31
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\04070018.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX1663

First Level Reviewer: LV5D Date: 19-May-2023 18:44:13

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
	6 HMX	1		6.835			ND	
	8 RDX	1		9.102			ND	U
	9 Nitrobenzene	1		11.622			ND	U
$	10 1,2-Dinitrobenzene	1	12.594	12.582	0.012	55173	0.2079	M
	12 1,3-Dinitrobenzene	1	14.741	14.695	0.046	6099	0.0105	
	13 Nitroglycerin	2		15.169			ND	U
	14 o-Nitrotoluene	1	15.808	15.749	0.059	9529	0.0392	M
	15 p-Nitrotoluene	1		15.969			ND	
	16 4-Amino-2,6-dinitrotoluene	1		16.509			ND	
	17 m-Nitrotoluene	1		16.809			ND	U
	18 2-Amino-4,6-dinitrotoluene	1		17.329			ND	U
	19 1,3,5-Trinitrobenzene	1	17.561	17.502	0.059	15198	0.0402	M
	20 2,6-Dinitrotoluene	1		18.622			ND	U
	21 2,4-Dinitrotoluene	1		19.082			ND	U
	22 Tetryl	1	22.334	22.355	-0.021	12750	0.0471	M
	23 2,4,6-Trinitrotoluene	1	23.228	23.182	0.046	4163	0.0101	M
	24 PETN	2		24.382			ND	U

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated
U - Marked Undetected

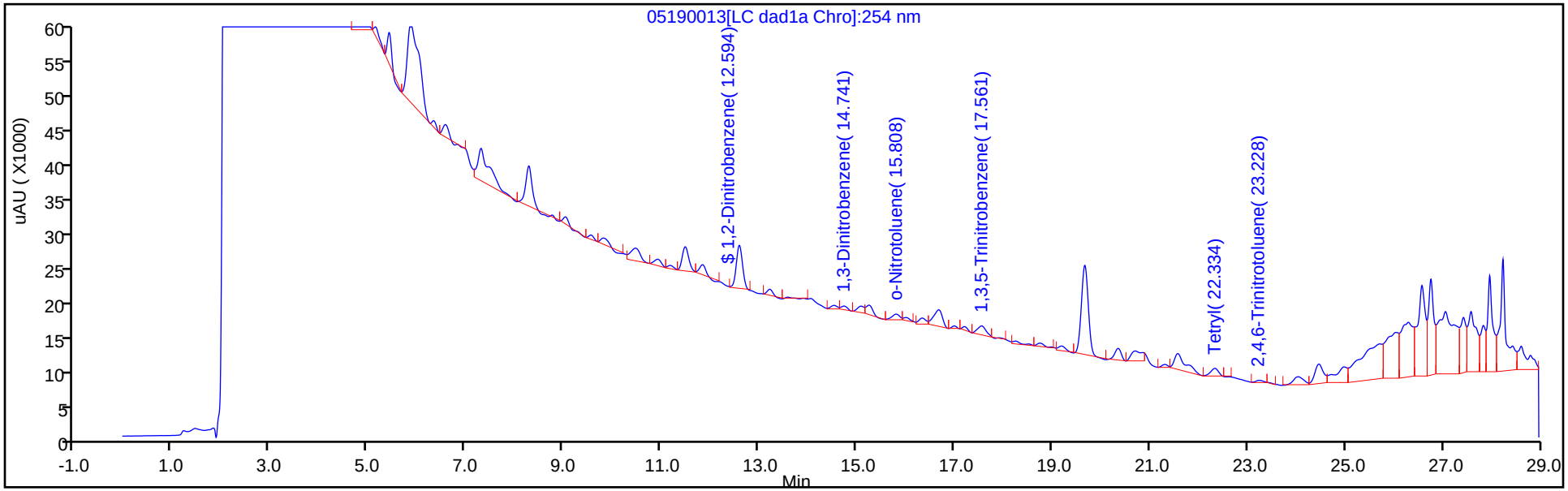
Report Date: 20-May-2023 11:50:50 Chrom Revision: 2.3 16-May-2023 16:37:30

Eurofins Denver

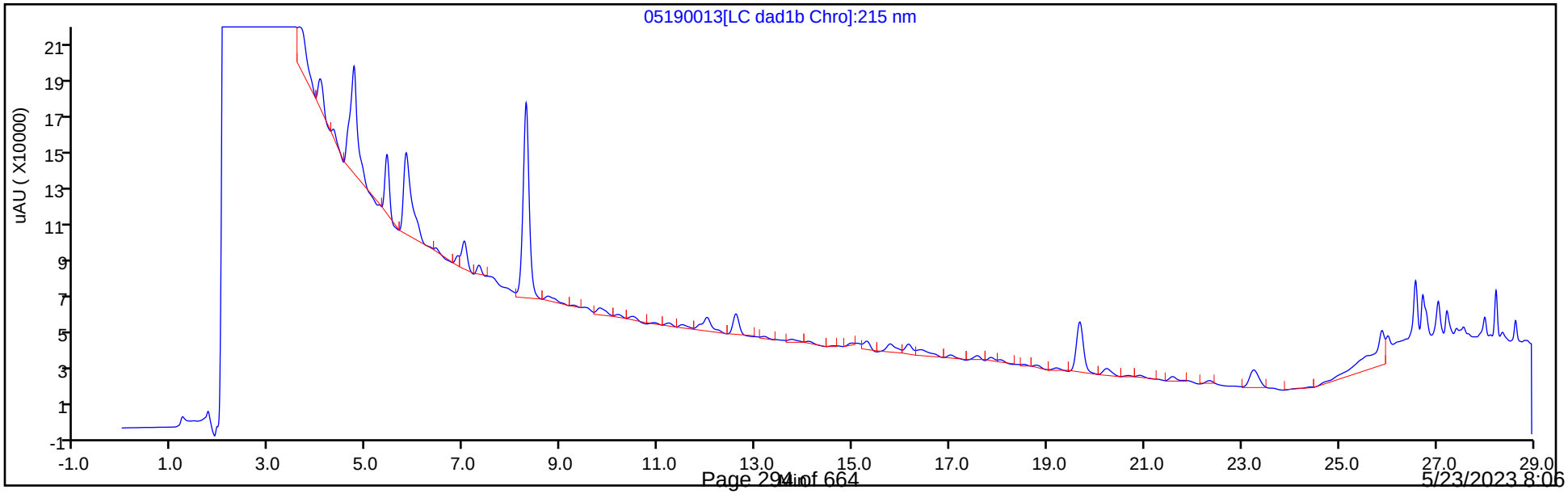
Data File: \\chromfs\denver\chromdata\g2_luna\20230519-121648.b\05190013.d

Injection Date:	19-May-2023 17:55:04	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	JZ/JG
Lims ID:	280-176268-A-1-A	Lab Sample ID:	280-176268-1	Worklist Smp#:	13
Client ID:	LL1mw-090-230301-GW				
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 Target: 1



Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\G2_LUNA\20230519-121648.b\05190013.D				
Lims ID:	280-176268-A-1-A				
Client ID:	LL1mw-090-230301-GW				
Sample Type:	Client				
Inject. Date:	19-May-2023 17:55:04	ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-176268-A-1-A				
Operator ID:	JZ/JG	Instrument ID:	CHHPLC_G2_LUNA		
Method:	\\chromfs\Denver\ChromData\G2_LUNA\20230519-121648.b\G2_8330_Luna.m				
Limit Group:	GCSV - 8330				
Last Update:	20-May-2023 11:50:48	Calib Date:	07-Apr-2023 23:50:31		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\04070018.D				
Column 1 :	Luna-Phenyl hexyl (4.60 mm)		Det: LC DAD1A, 254 nm		
Process Host:	CTX1663				

First Level Reviewer: LV5D Date: 19-May-2023 18:44:13

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2000	0.2079	103.94

Manual Integration/User Assign Peak Report

Eurofins Denver

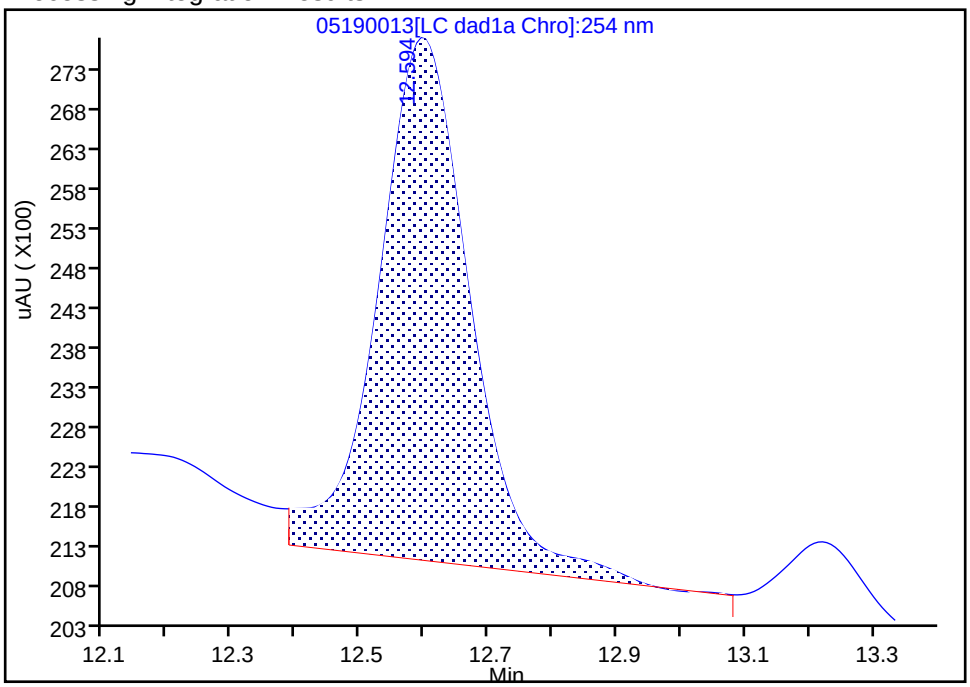
Data File:	\\chromfs\denver\chromdata\g2_luna\20230519-121648.b\05190013.d				
Injection Date:	19-May-2023 17:55:04	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-176268-A-1-A	Lab Sample ID:	280-176268-1		
Client ID:	LL1mw-090-230301-GW				
Operator ID:	JZ/JG	ALS Bottle#:	13	Worklist Smp#:	13
Injection 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		

$ 10 1,2-Dinitrobenzene, CAS: 528-29-0

Signal: 1

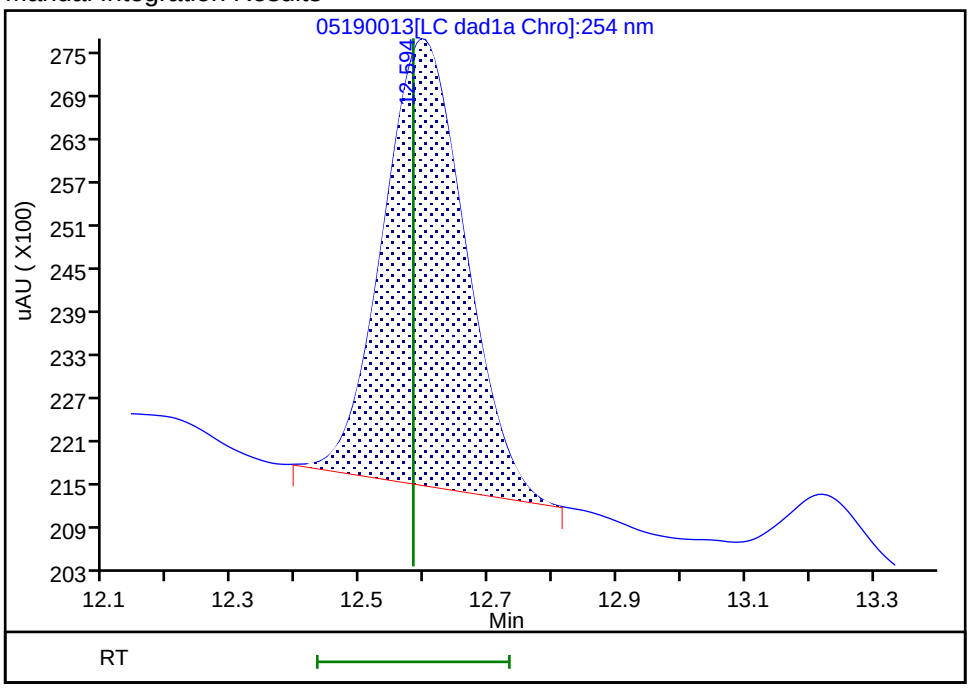
Processing Integration Results

RT: 12.59
Area: 66126
Amount: 0.249151
Amount Units: ug/ml



Manual Integration Results

RT: 12.59
Area: 55173
Amount: 0.207882
Amount Units: ug/ml



Reviewer: LV5D, 19-May-2023 18:43:37 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

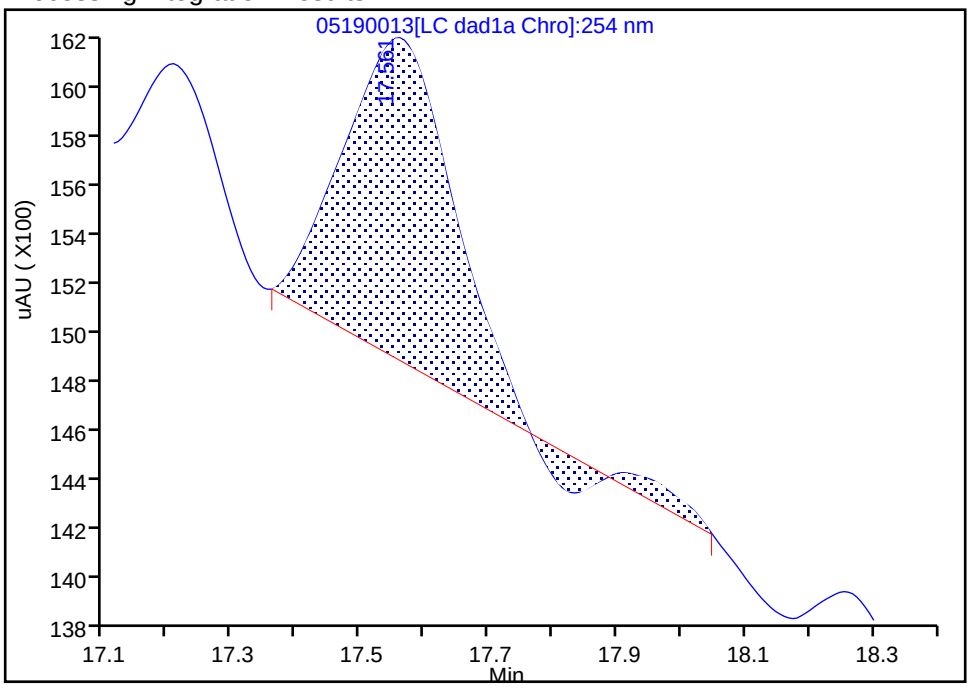
Data File:	\\chromfs\denver\chromdata\g2_luna\20230519-121648.b\05190013.d				
Injection Date:	19-May-2023 17:55:04	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-176268-A-1-A	Lab Sample ID:	280-176268-1		
Client ID:	LL1mw-090-230301-GW				
Operator ID:	JZ/JG	ALS Bottle#:	13	Worklist Smp#:	13
Injection 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		

19 1,3,5-Trinitrobenzene, CAS: 99-35-4

Signal: 1

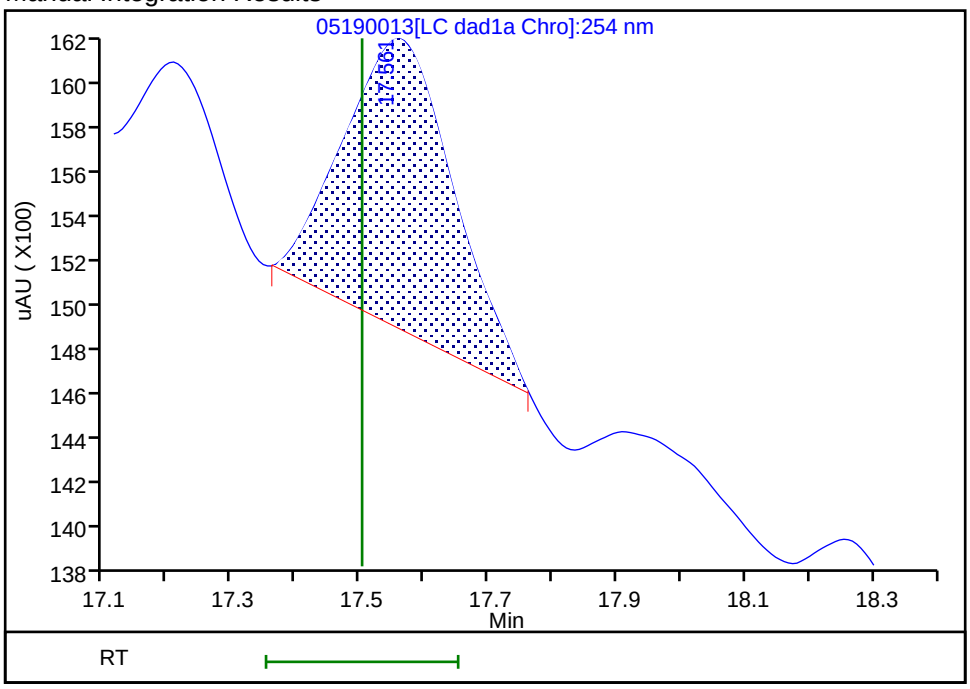
Processing Integration Results

RT: 17.56
Area: 17689
Amount: 0.046736
Amount Units: ug/ml



Manual Integration Results

RT: 17.56
Area: 15198
Amount: 0.040154
Amount Units: ug/ml



Reviewer: LV5D, 19-May-2023 18:43:52 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

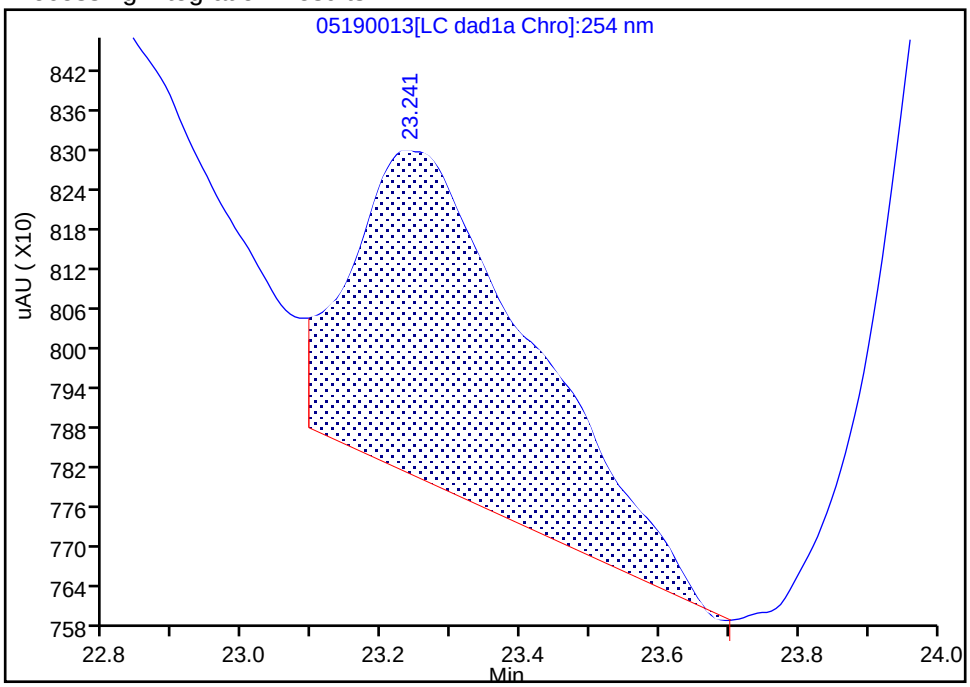
Data File:	\\chromfs\denver\chromdata\g2_luna\20230519-121648.b\05190013.d				
Injection Date:	19-May-2023 17:55:04	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-176268-A-1-A	Lab Sample ID:	280-176268-1		
Client ID:	LL1mw-090-230301-GW				
Operator ID:	JZ/JG	ALS Bottle#:	13	Worklist Smp#:	13
Injection 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

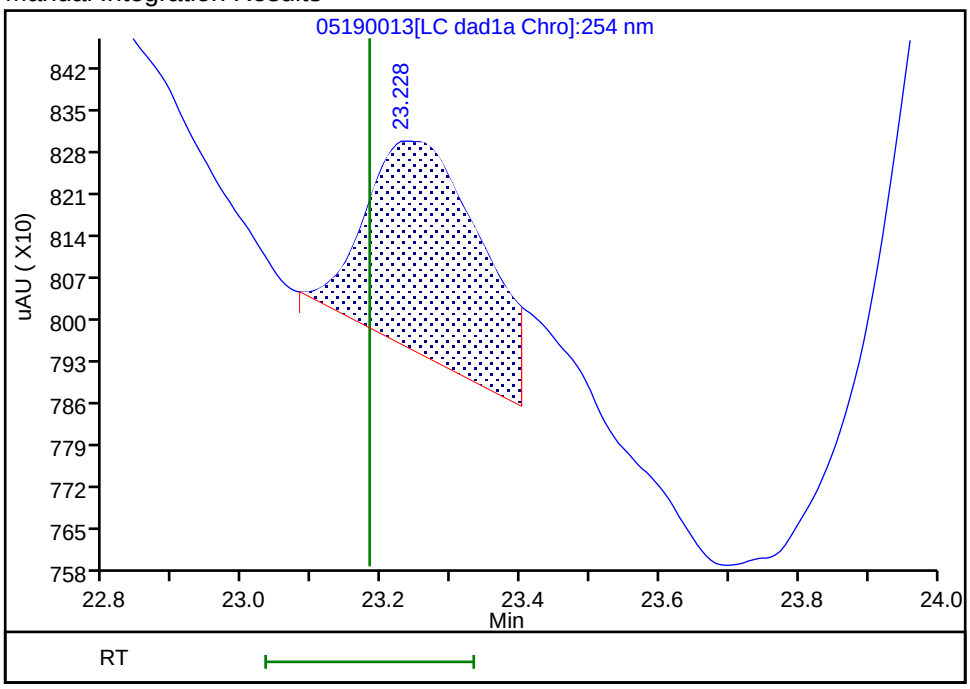
Processing Integration Results

RT: 23.24
Area: 9275
Amount: 0.022528
Amount Units: ug/ml



Manual Integration Results

RT: 23.23
Area: 4163
Amount: 0.010111
Amount Units: ug/ml



Reviewer: LV5D, 19-May-2023 18:44:09 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Baseline

User Disabled Compound Report

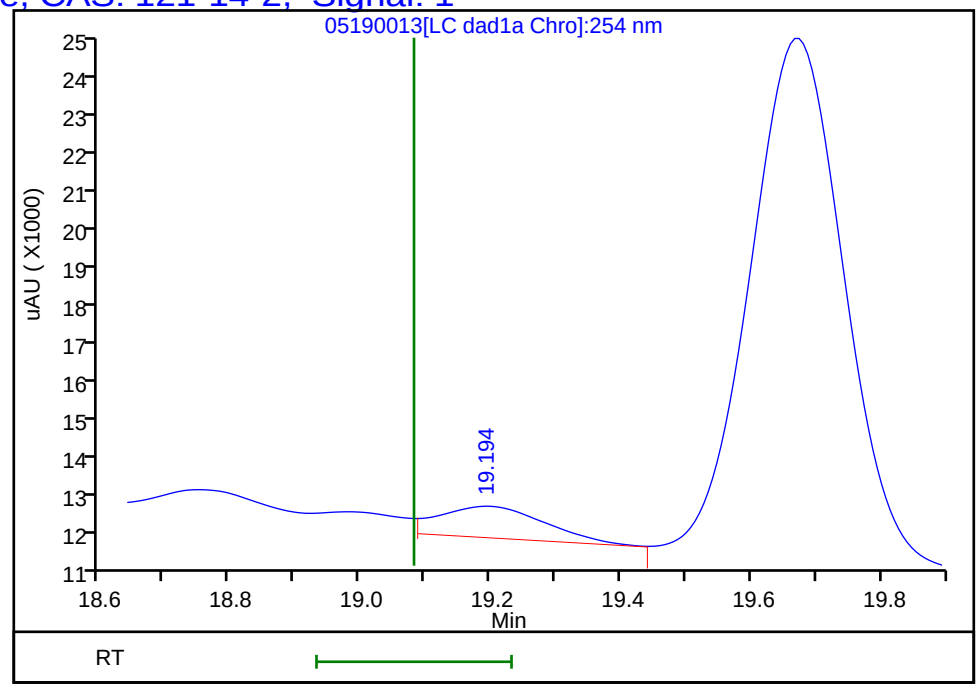
Eurofins Denver

Data File: \\chromfs\denver\chromdata\g2_luna\20230519-121648.b\05190013.d

Injection Date:	19-May-2023 17:55:04	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-176268-A-1-A	Lab Sample ID:	280-176268-1		
Client ID:	LL1mw-090-230301-GW				
Operator ID:	JZ/JG	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		

21 2,4-Dinitrotoluene, CAS: 121-14-2, Signal: 1

RT: 19.19
Response: 8533
Amount: 0.015234



Reviewer: LV5D, 19-May-2023 18:44:13
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

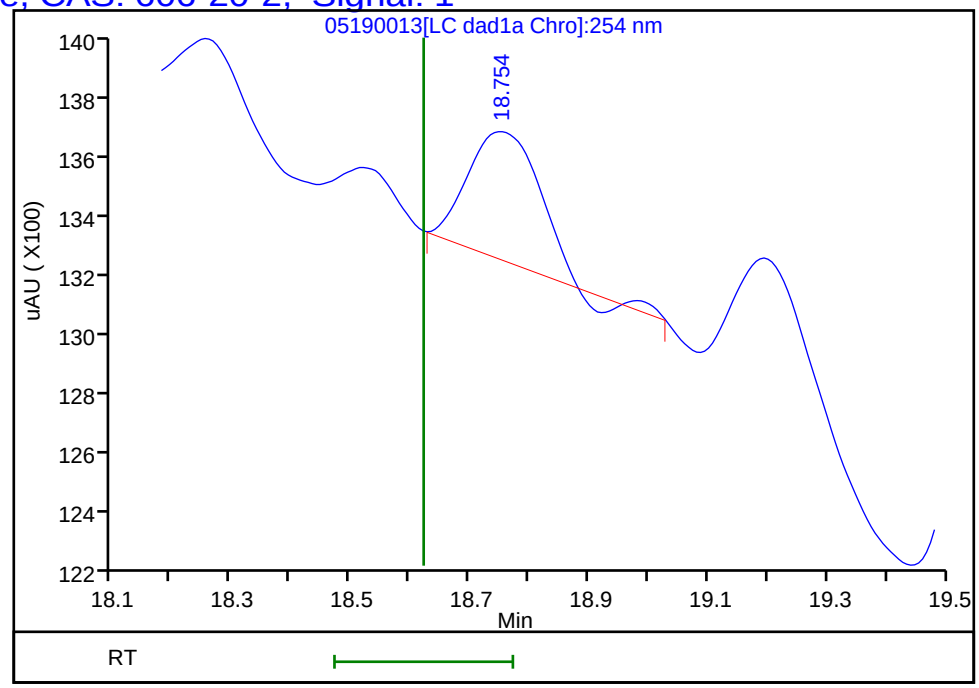
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\denver\chromdata\g2_luna\20230519-121648.b\05190013.d				
Injection Date:	19-May-2023 17:55:04	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-176268-A-1-A	Lab Sample ID:	280-176268-1		
Client ID:	LL1mw-090-230301-GW				
Operator ID:	JZ/JG	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		

20 2,6-Dinitrotoluene, CAS: 606-20-2, Signal: 1

RT: 18.75
Response: 3965
Amount: 0.014166



Reviewer: LV5D, 19-May-2023 18:44:13
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

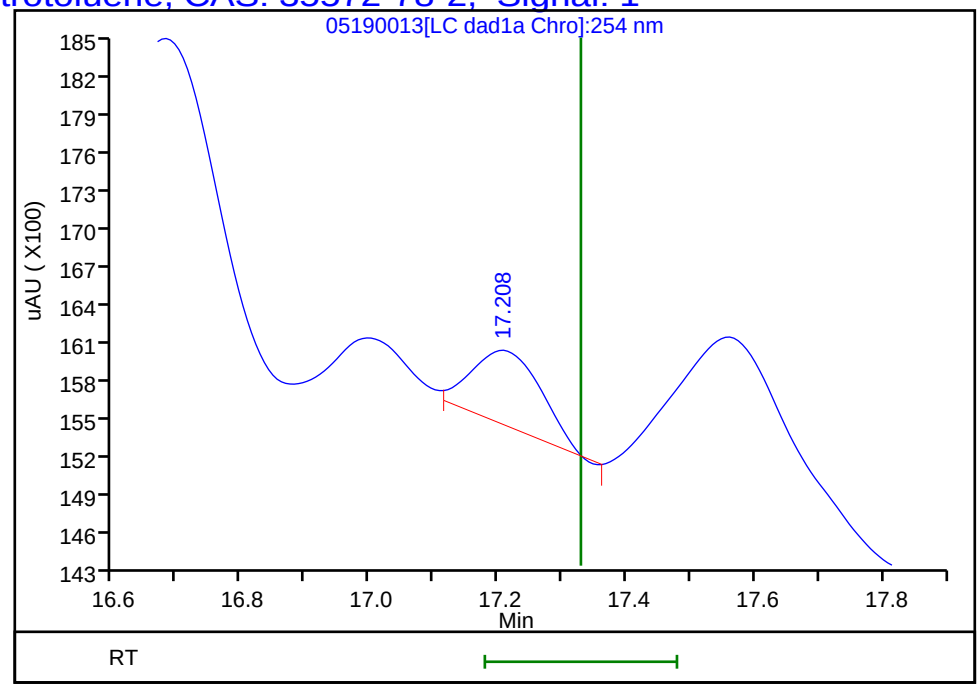
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\denver\chromdata\g2_luna\20230519-121648.b\05190013.d				
Injection Date:	19-May-2023 17:55:04	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-176268-A-1-A	Lab Sample ID:	280-176268-1		
Client ID:	LL1mw-090-230301-GW				
Operator ID:	JZ/JG	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		

18 2-Amino-4,6-dinitrotoluene, CAS: 35572-78-2, Signal: 1

RT: 17.21
Response: 4529
Amount: 0.011314



Reviewer: LV5D, 19-May-2023 18:44:13
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins Denver

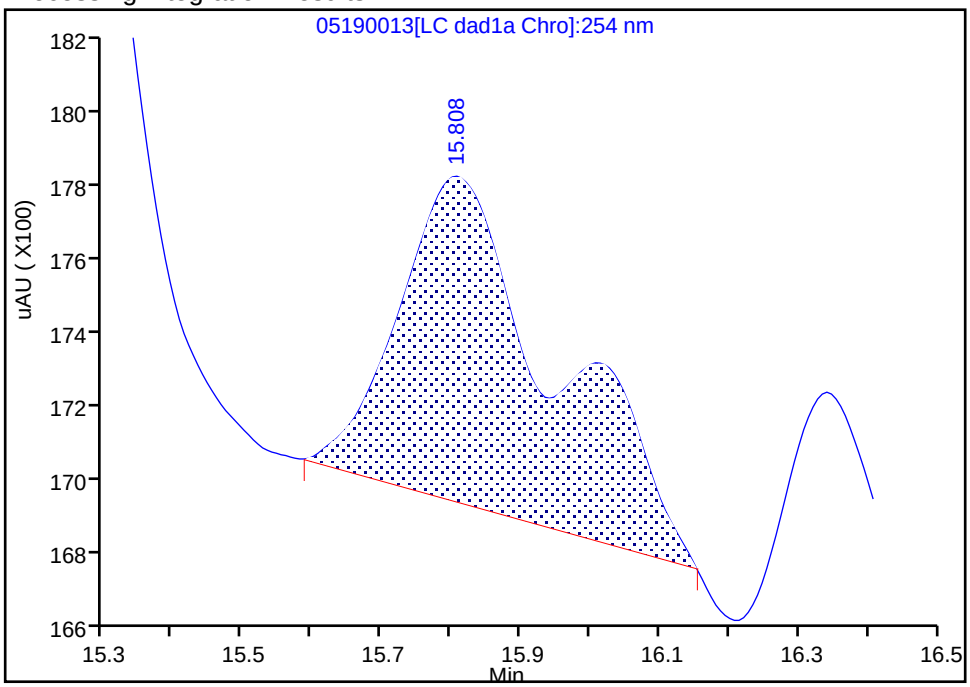
Data File:	\\chromfs\denver\chromdata\g2_luna\20230519-121648.b\05190013.d				
Injection Date:	19-May-2023 17:55:04	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-176268-A-1-A	Lab Sample ID:	280-176268-1		
Client ID:	LL1mw-090-230301-GW				
Operator ID:	JZ/JG	ALS Bottle#:	13	Worklist Smp#:	13
Injection 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		

14 o-Nitrotoluene, CAS: 88-72-2

Signal: 1

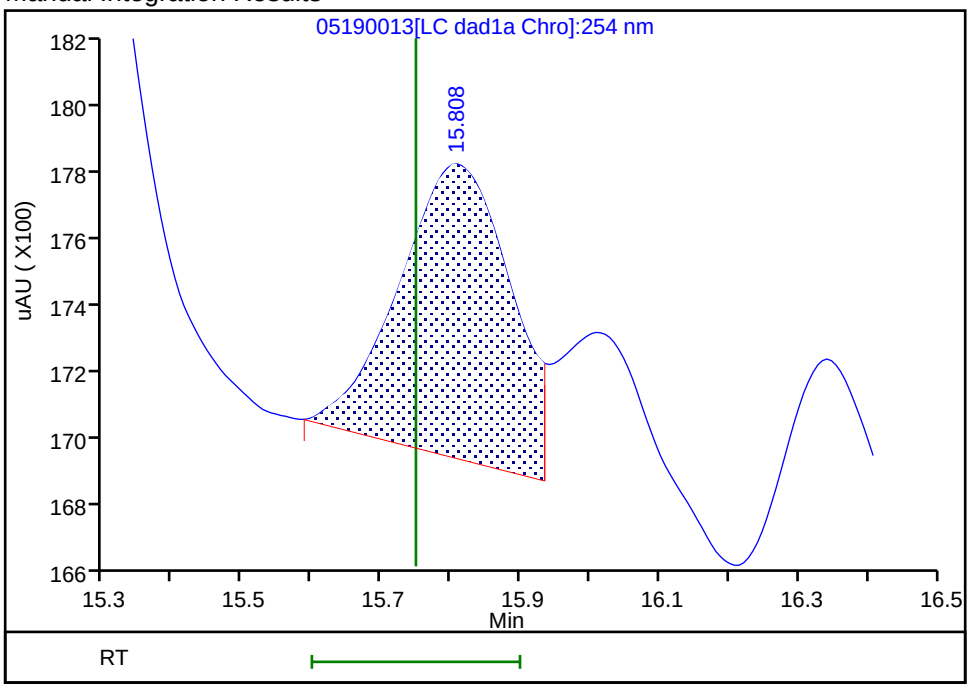
Processing Integration Results

RT: 15.81
Area: 13566
Amount: 0.055784
Amount Units: ug/ml



Manual Integration Results

RT: 15.81
Area: 9529
Amount: 0.039184
Amount Units: ug/ml



Reviewer: LV5D, 19-May-2023 18:43:48 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Baseline

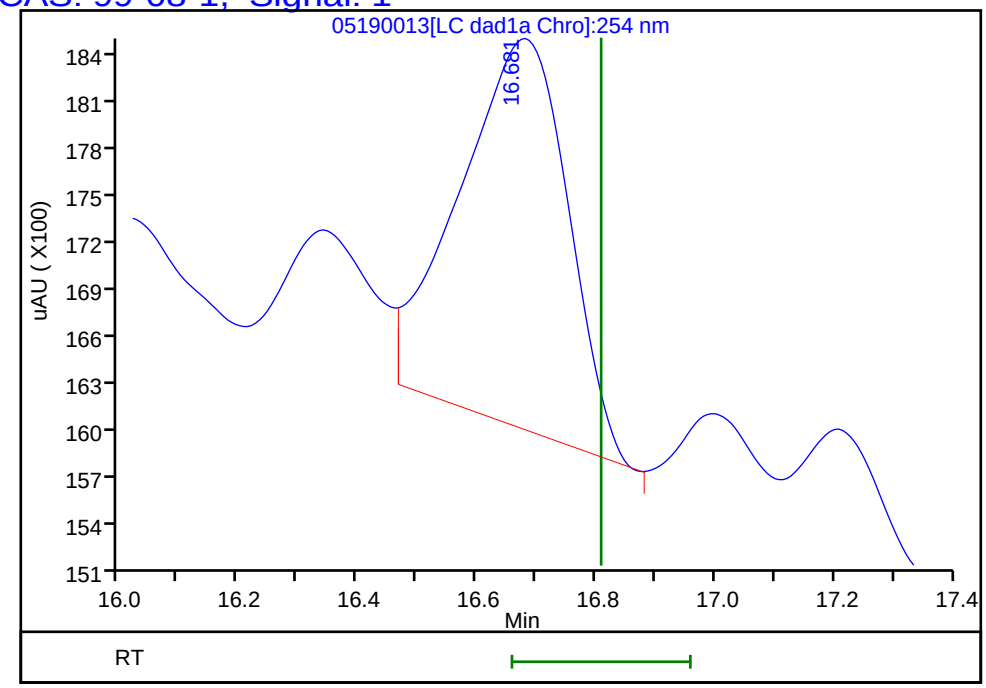
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\denver\chromdata\g2_luna\20230519-121648.b\05190013.d				
Injection Date:	19-May-2023 17:55:04	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-176268-A-1-A	Lab Sample ID:	280-176268-1		
Client ID:	LL1mw-090-230301-GW				
Operator ID:	JZ/JG	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		

17 m-Nitrotoluene, CAS: 99-08-1, Signal: 1

RT: 16.68
Response: 30692
Amount: 0.114517



Reviewer: LV5D, 19-May-2023 18:44:13
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

User Disabled Compound Report

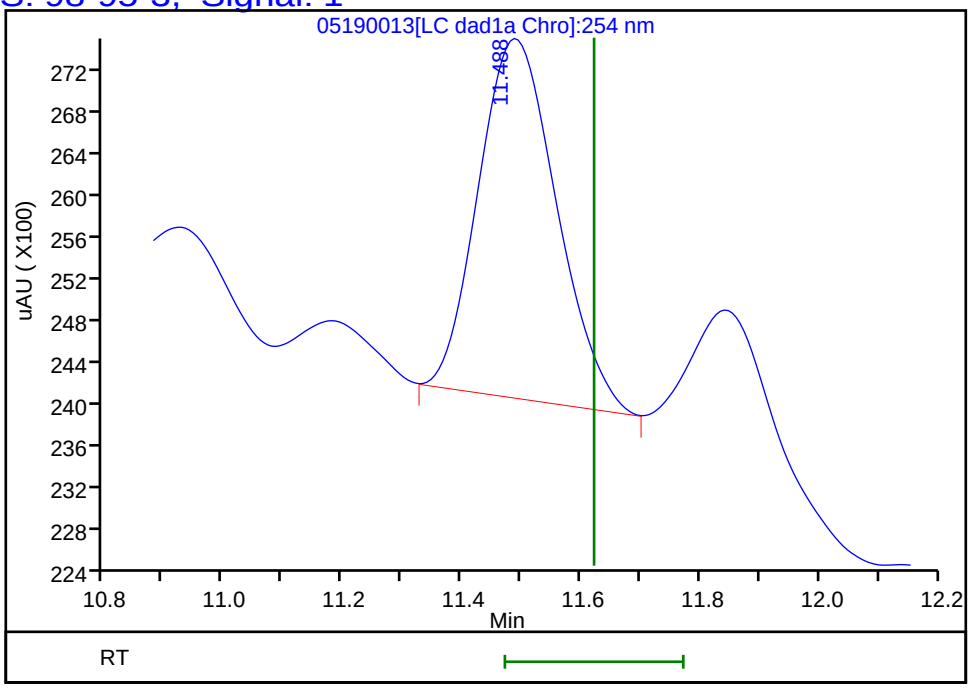
Eurofins Denver

Data File: \\chromfs\denver\chromdata\g2_luna\20230519-121648.b\05190013.d

Injection Date:	19-May-2023 17:55:04	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-176268-A-1-A	Lab Sample ID:	280-176268-1		
Client ID:	LL1mw-090-230301-GW				
Operator ID:	JZ/JG	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		

9 Nitrobenzene, CAS: 98-95-3, Signal: 1

RT: 11.49
Response: 31100
Amount: 0.081851



Reviewer: LV5D, 19-May-2023 18:44:13
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

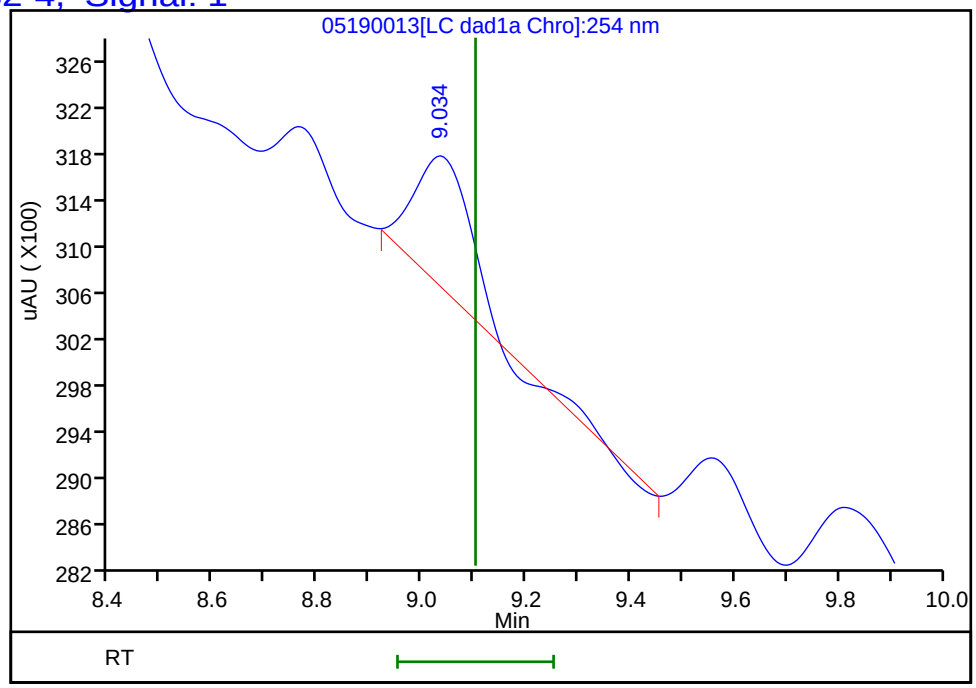
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\denver\chromdata\g2_luna\20230519-121648.b\05190013.d				
Injection Date:	19-May-2023 17:55:04	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-176268-A-1-A	Lab Sample ID:	280-176268-1		
Client ID:	LL1mw-090-230301-GW				
Operator ID:	JZ/JG	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		

8 RDX, CAS: 121-82-4, Signal: 1

RT: 9.03
Response: 11962
Amount: 0.055453



Reviewer: LV5D, 19-May-2023 18:44:13
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins Denver

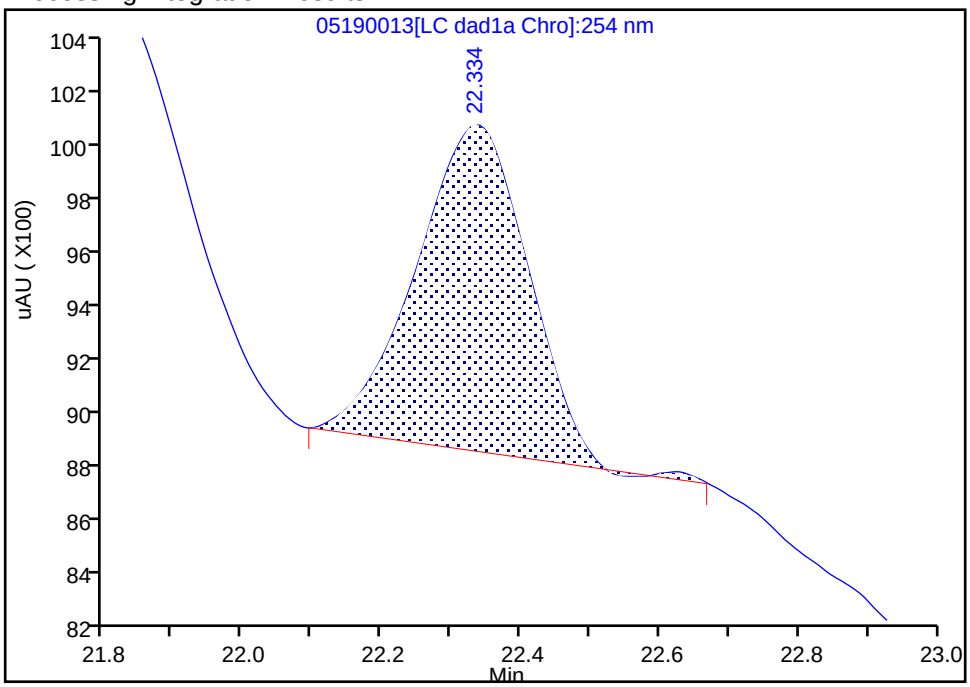
Data File:	\\chromfs\denver\chromdata\g2_luna\20230519-121648.b\05190013.d				
Injection Date:	19-May-2023 17:55:04	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-176268-A-1-A	Lab Sample ID:	280-176268-1		
Client ID:	LL1mw-090-230301-GW				
Operator ID:	JZ/JG	ALS Bottle#:	13	Worklist Smp#:	13
Injection 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

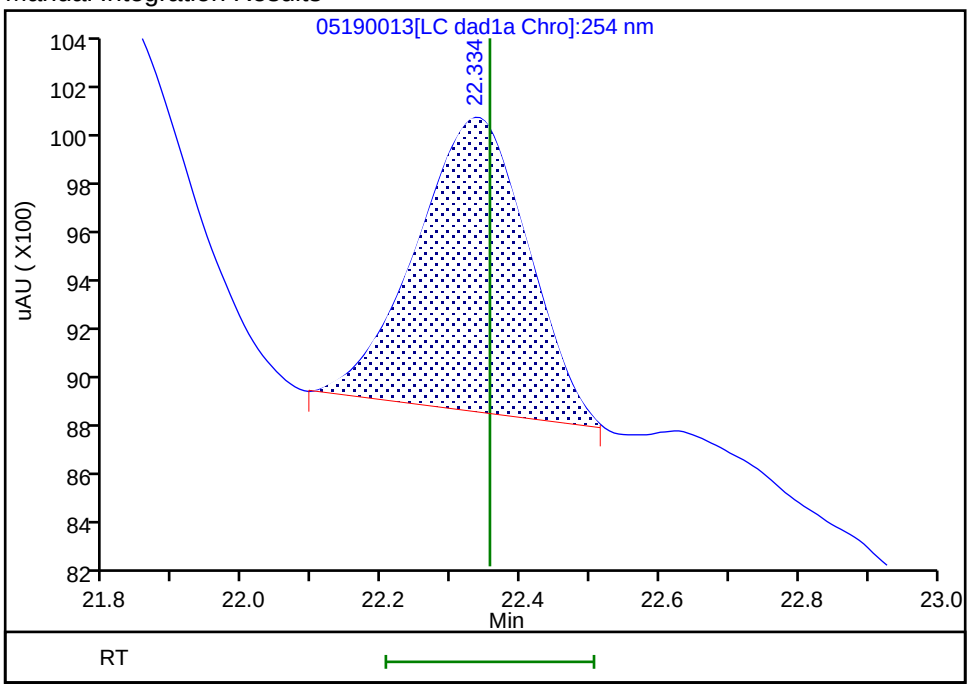
Processing Integration Results

RT: 22.33
Area: 12992
Amount: 0.048023
Amount Units: ug/ml



Manual Integration Results

RT: 22.33
Area: 12750
Amount: 0.047128
Amount Units: ug/ml



Reviewer: LV5D, 19-May-2023 18:43:57 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Baseline

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-176268-1

SDG No.:

Client Sample ID: LL1mw-091-230301-GW | Lab Sample ID: 280-176268-2

Matrix: Water | Lab File ID: 05152317.D

Analysis Method: 8330B | Date Collected: 05/09/2023 11:36

Extraction Method: 3535 | Date Extracted: 05/12/2023 15:04

Sample wt/vol: 490.9(mL) | Date Analyzed: 05/15/2023 18:38

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: % Solids: | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 612440 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	0.20	U	0.21	0.20	0.086
99-65-0	1,3-Dinitrobenzene	0.10	U M	0.11	0.10	0.038
118-96-7	2,4,6-Trinitrotoluene	0.10	U	0.11	0.10	0.046
121-14-2	2,4-Dinitrotoluene	0.081	U	0.10	0.081	0.028
606-20-2	2,6-Dinitrotoluene	0.081	U	0.10	0.081	0.041
35572-78-2	2-Amino-4,6-dinitrotoluene	0.10	U	0.11	0.10	0.052
88-72-2	2-Nitrotoluene	0.20	U M	0.21	0.20	0.087
99-08-1	3-Nitrotoluene	0.36	U Q	0.41	0.36	0.20
19406-51-0	4-Amino-2,6-dinitrotoluene	0.12	U	0.15	0.12	0.059
99-99-0	4-Nitrotoluene	0.41	U Q	0.42	0.41	0.10
98-95-3	Nitrobenzene	0.20	U	0.21	0.20	0.093
55-63-0	Nitroglycerin	2.0	U	2.1	2.0	0.94
78-11-5	PETN	1.0	U	1.1	1.0	0.46
121-82-4	RDX	2.0	J1	0.21	0.20	0.052
479-45-8	Tetryl	0.10	U	0.11	0.10	0.032

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	95		83-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20230515-121447.b\05152317.D
Lims ID: 280-176268-A-2-A
Client ID: LL1mw-091-230301-GW
Sample Type: Client
Inject. Date: 15-May-2023 18:38:04 ALS Bottle#: 15 Worklist Smp#: 17
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-176268-A-2-A
Operator ID: JZ/JG Instrument ID: CHHPLC_X3

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20230515-121447.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 16-May-2023 13:24:37 Calib Date: 24-Feb-2023 17:41:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X\20230224-118952.b\02240018.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX1672

First Level Reviewer: K8YG Date: 16-May-2023 08:04:16

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/mL	Flags
	4 HMX	1	6.569	6.557	0.012	1962	0.0210	M
	8 RDX	1	7.589	7.583	0.006	20465	0.1924	
$	10 1,2-Dinitrobenzene	1	8.542	8.543	-0.001	23888	0.1891	
	11 1,3,5-Trinitrobenzene	1		8.663			ND	
	12 1,3-Dinitrobenzene	1		9.290			ND	MU
	13 Nitrobenzene	1		9.663			ND	
	15 Tetryl	1		10.043			ND	
	16 Nitroglycerin	2		10.496			ND	
	17 2,4,6-Trinitrotoluene	1		10.936			ND	
	18 4-Amino-2,6-dinitrotoluene	1		11.136			ND	
	19 2-Amino-4,6-dinitrotoluene	1		11.396			ND	
	20 2,6-Dinitrotoluene	1		11.543			ND	
	21 2,4-Dinitrotoluene	1		11.710			ND	
	22 o-Nitrotoluene	1		12.536			ND	U
	23 p-Nitrotoluene	1		12.956			ND	
	24 m-Nitrotoluene	1		13.536			ND	
	25 PETN	2		14.716			ND	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated
U - Marked Undetected

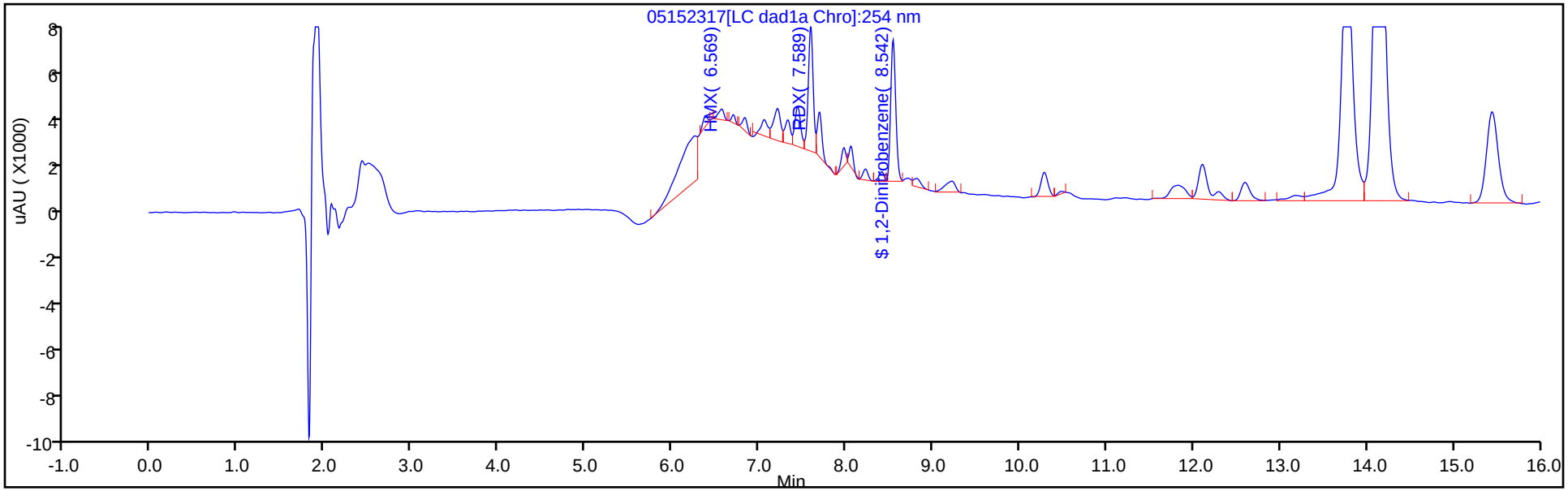
Report Date: 16-May-2023 13:24:42 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

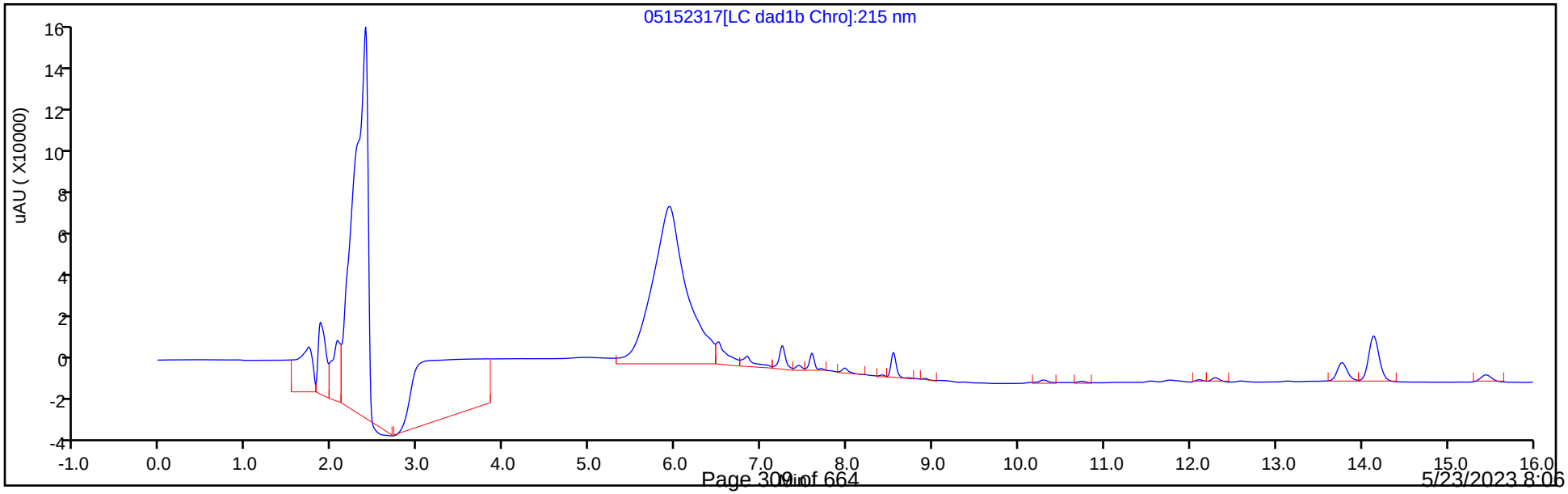
Data File: \\chromfs\denver\chromdata\chhplc_x\20230515-121447.b\05152317.d

Injection Date:	15-May-2023 18:38:04	Instrument ID:	CHHPLC_X3	Operator ID:	JZ/JG
Lims ID:	280-176268-A-2-A	Lab Sample ID:	280-176268-2	Worklist Smp#:	17
Client ID:	LL1mw-091-230301-GW				
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



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\CHHPLC_X\20230515-121447.b\05152317.D				
Lims ID:	280-176268-A-2-A				
Client ID:	LL1mw-091-230301-GW				
Sample Type:	Client				
Inject. Date:	15-May-2023 18:38:04	ALS Bottle#:	15	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-176268-A-2-A				
Operator ID:	JZ/JG	Instrument ID:	CHHPLC_X3		
Method:	\\chromfs\Denver\ChromData\CHHPLC_X\20230515-121447.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	16-May-2023 13:24:37	Calib Date:	24-Feb-2023 17:41:20		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\CHHPLC_X\20230224-118952.b\02240018.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX1672				

First Level Reviewer: K8YG Date: 16-May-2023 08:04:16

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2000	0.1891	94.56

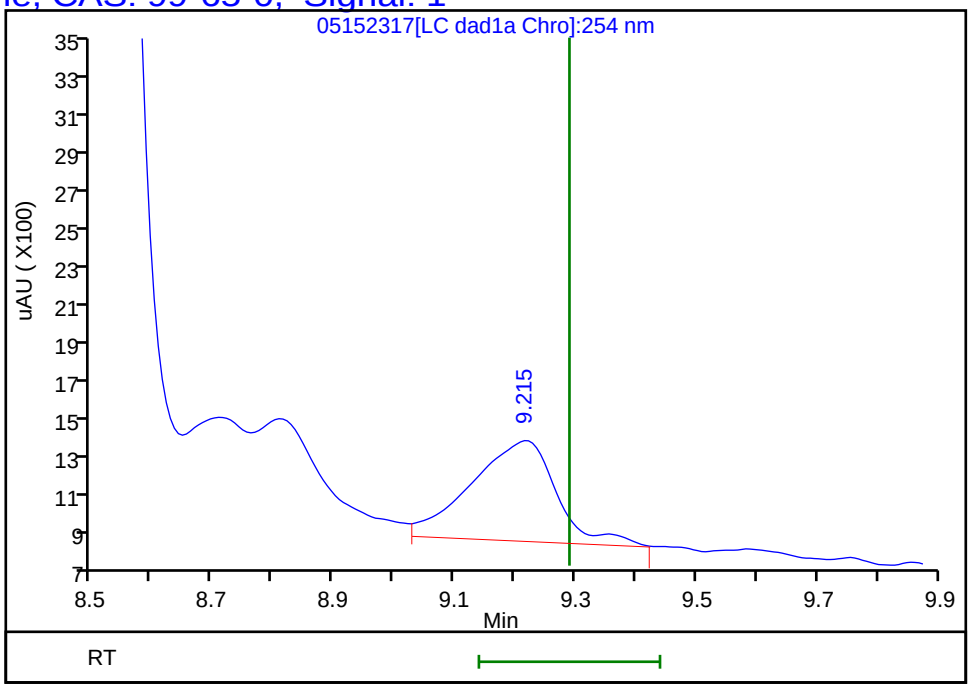
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\denver\chromdata\chhplc_x\20230515-121447.b\05152317.d				
Injection Date:	15-May-2023 18:38:04	Instrument ID:	CHHPLC_X3		
Lims ID:	280-176268-A-2-A	Lab Sample ID:	280-176268-2		
Client ID:	LL1mw-091-230301-GW				
Operator ID:	JZ/JG	ALS Bottle#:	15	Worklist Smp#:	17
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		

12 1,3-Dinitrobenzene, CAS: 99-65-0, Signal: 1

RT: 9.22
Response: 4963
Amount: 0.016858



Reviewer: K8YG, 16-May-2023 08:04:16
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

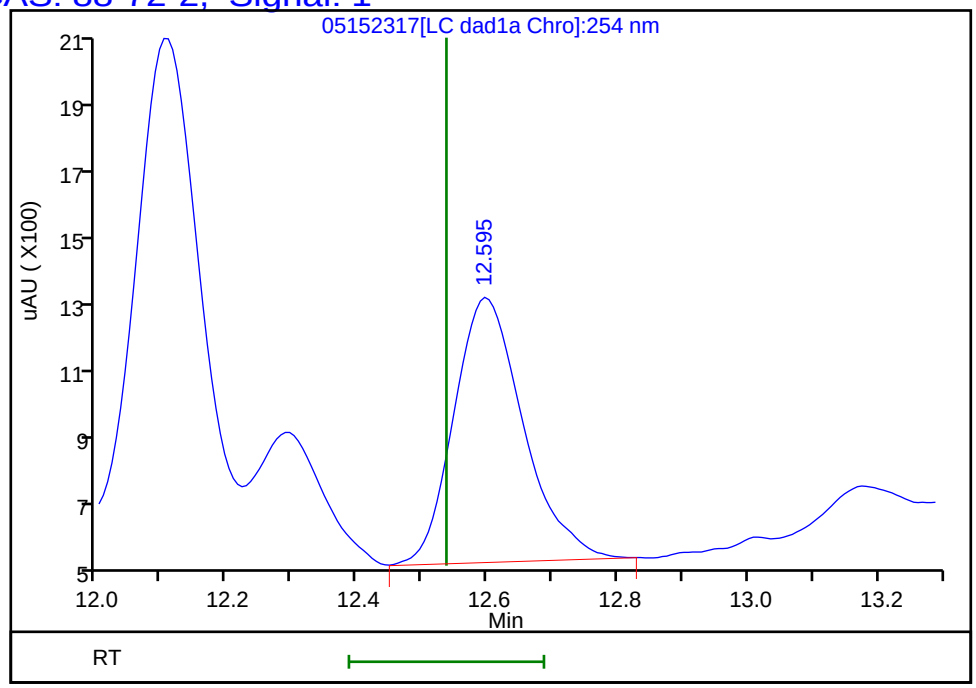
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\denver\chromdata\chhplc_x\20230515-121447.b\05152317.d				
Injection Date:	15-May-2023 18:38:04	Instrument ID:	CHHPLC_X3		
Lims ID:	280-176268-A-2-A	Lab Sample ID:	280-176268-2		
Client ID:	LL1mw-091-230301-GW				
Operator ID:	JZ/JG	ALS Bottle#:	15	Worklist Smp#:	17
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 o-Nitrotoluene, CAS: 88-72-2, Signal: 1

RT: 12.60
Response: 5673
Amount: 0.044356



Reviewer: K8YG, 16-May-2023 08:04:16
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins Denver

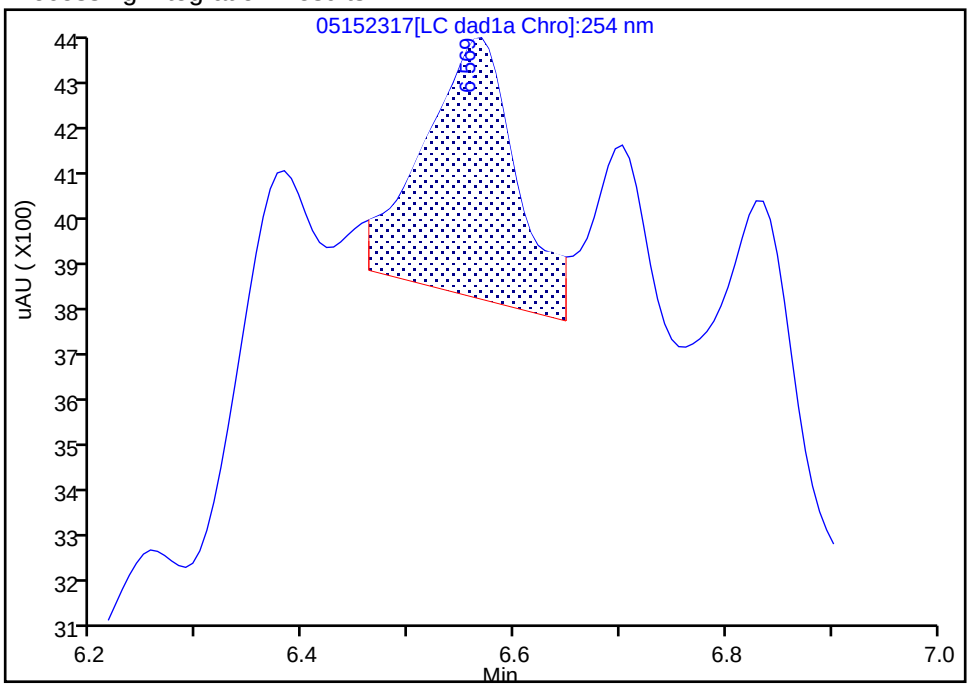
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230515-121447.b\05152317.d				
Injection Date:	15-May-2023 18:38:04	Instrument ID:	CHHPLC_X3		
Lims ID:	280-176268-A-2-A	Lab Sample ID:	280-176268-2		
Client ID:	LL1mw-091-230301-GW				
Operator ID:	JZ/JG	ALS Bottle#:	15	Worklist Smp#:	17
Injection Vol:	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		

4 HMX, CAS: 2691-41-0

Signal: 1

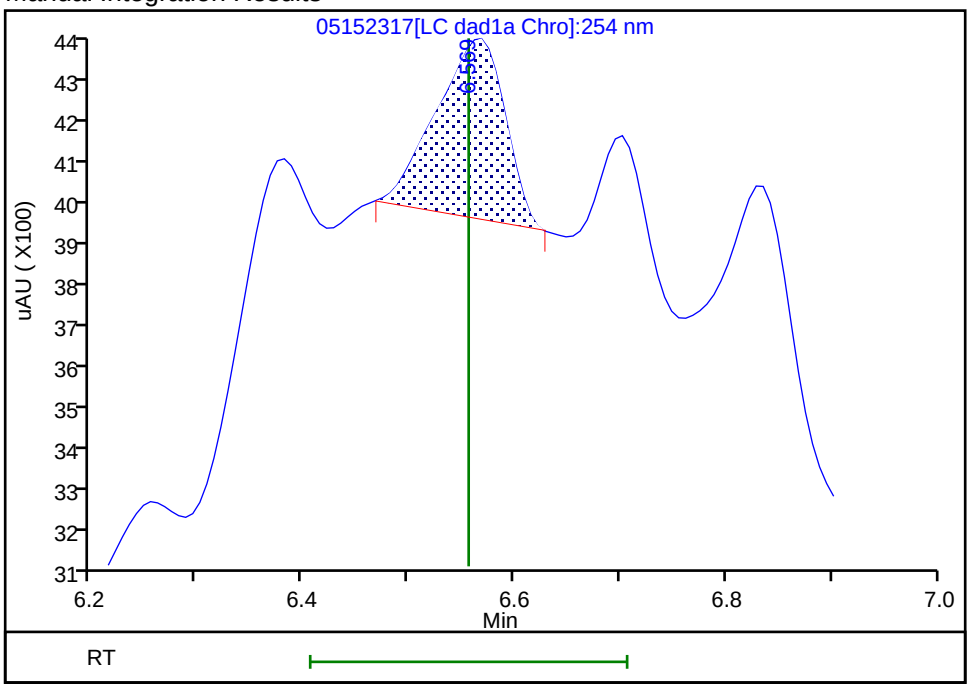
Processing Integration Results

RT: 6.57
Area: 3445
Amount: 0.036834
Amount Units: ug/mL



Manual Integration Results

RT: 6.57
Area: 1962
Amount: 0.020978
Amount Units: ug/mL



Reviewer: K8YG, 16-May-2023 07:54:59

Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-176268-1

SDG No.:

Client Sample ID: LL1mw-091-230301-GW | Lab Sample ID: 280-176268-2

Matrix: Water | Lab File ID: 05160016.D

Analysis Method: 8330B | Date Collected: 05/09/2023 11:36

Extraction Method: 3535 | Date Extracted: 05/12/2023 15:04

Sample wt/vol: 490.9(mL) | Date Analyzed: 05/16/2023 22:34

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: Luna-phenylhex ID: 4.6(mm)

% Moisture: % Solids: | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 612694 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
2691-41-0	HMX	0.20	U	0.21	0.20	0.089
121-82-4	*RDX*	*0.42*	*J1*	*0.21*	0.20	*0.052*

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	99		83-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\G2_LUNA\20230516-121515.b\05160016.D
Lims ID: 280-176268-A-2-A
Client ID: LL1mw-091-230301-GW
Sample Type: Client
Inject. Date: 16-May-2023 22:34:15 ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-176268-A-2-A
Operator ID: JZ/JG Instrument ID: CHHPLC_G2_LUNA

Method: \\chromfs\Denver\ChromData\G2_LUNA\20230516-121515.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 17-May-2023 13:45:47 Calib Date: 07-Apr-2023 23:50:31
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\04070018.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX1653

First Level Reviewer: K8YG Date: 17-May-2023 12:36:49

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
	6 HMX	1		6.888			ND	
	8 RDX	1	9.137	9.168	-0.031	8906	0.0413	
	9 Nitrobenzene	1	11.617	11.688	-0.071	8360	0.0220	
$	10 1,2-Dinitrobenzene	1	12.624	12.681	-0.057	52642	0.1983	
	12 1,3-Dinitrobenzene	1		14.814			ND	
	13 Nitroglycerin	2		15.321			ND	U
	14 o-Nitrotoluene	1	15.864	15.901	-0.037	188260	0.7741	M
	15 p-Nitrotoluene	1		16.128			ND	
	16 4-Amino-2,6-dinitrotoluene	1		16.694			ND	
	17 m-Nitrotoluene	1		16.981			ND	
	18 2-Amino-4,6-dinitrotoluene	1	17.457	17.541	-0.084	30039	0.0750	
	19 1,3,5-Trinitrobenzene	1		17.608			ND	
	20 2,6-Dinitrotoluene	1		18.814			ND	
	21 2,4-Dinitrotoluene	1		19.274			ND	
	22 Tetryl	1		22.621			ND	
	23 2,4,6-Trinitrotoluene	1		23.428			ND	
	24 PETN	2		24.661			ND	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated
U - Marked Undetected

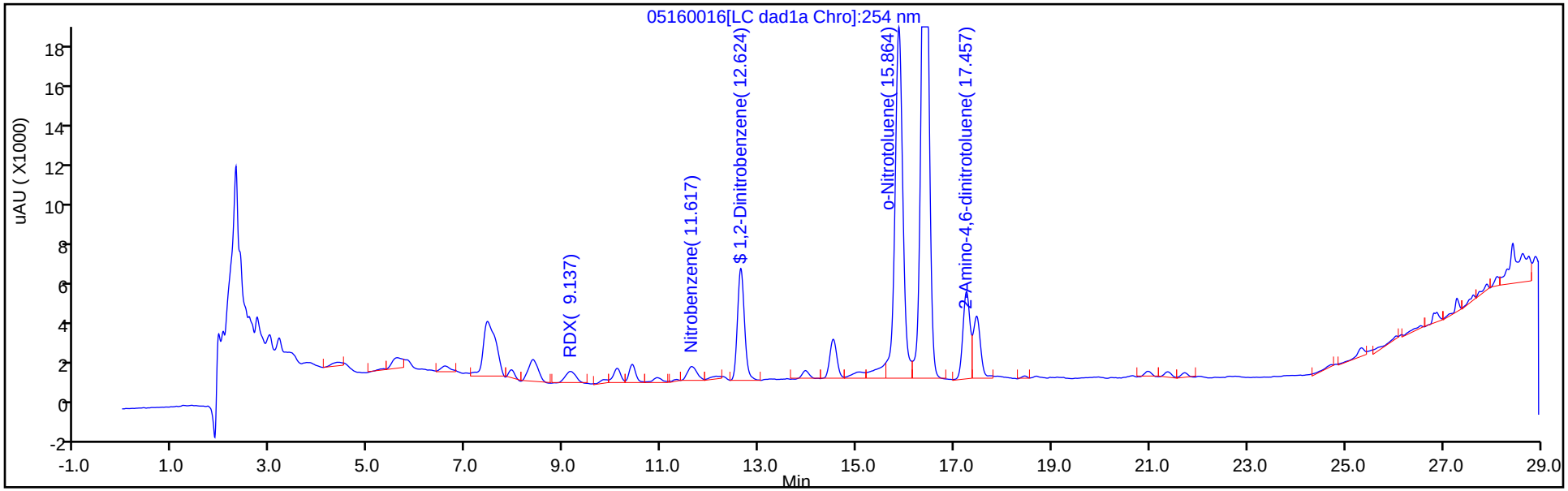
Report Date: 17-May-2023 13:46:11 Chrom Revision: 2.3 16-May-2023 16:37:30

Eurofins Denver

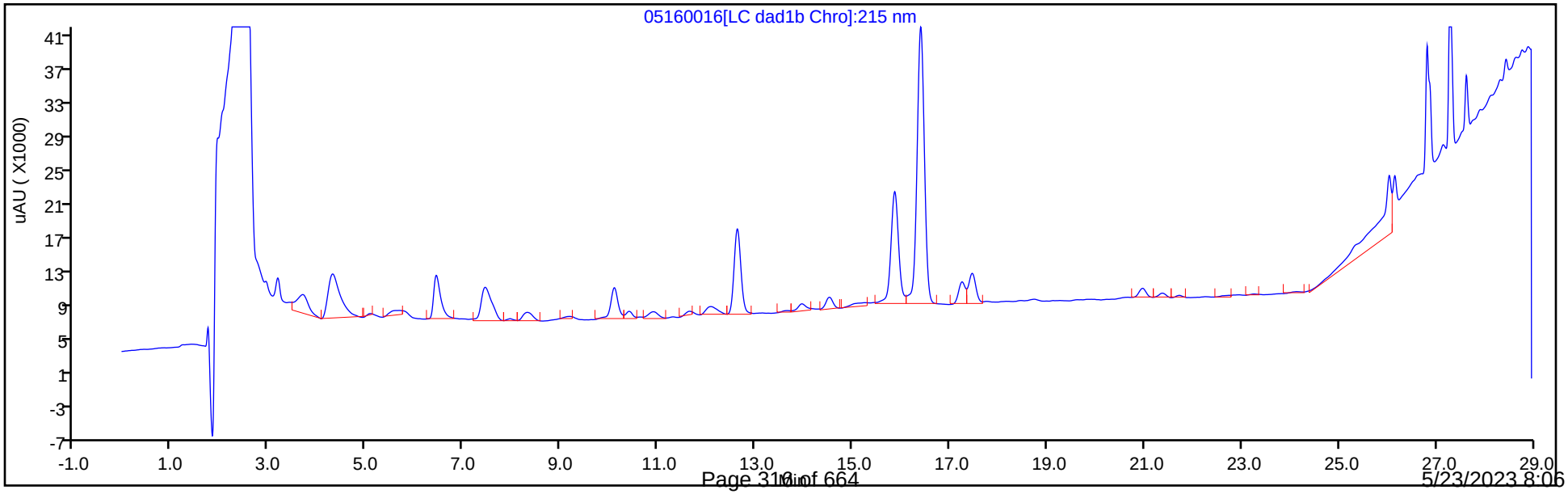
Data File: \\chromfs\denver\chromdata\g2_luna\20230516-121515.b\05160016.d

Injection Date:	16-May-2023 22:34:15	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	JZ/JG
Lims ID:	280-176268-A-2-A	Lab Sample ID:	280-176268-2	Worklist Smp#:	16
Client ID:	LL1mw-091-230301-GW				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\G2_LUNA\20230516-121515.b\05160016.D
Lims ID: 280-176268-A-2-A
Client ID: LL1mw-091-230301-GW
Sample Type: Client
Inject. Date: 16-May-2023 22:34:15 ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-176268-A-2-A
Operator ID: JZ/JG Instrument ID: CHHPLC_G2_LUNA

Method: \\chromfs\Denver\ChromData\G2_LUNA\20230516-121515.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 17-May-2023 13:45:47 Calib Date: 07-Apr-2023 23:50:31
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\04070018.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX1653

First Level Reviewer: K8YG Date: 17-May-2023 12:36:49

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2000	0.1983	99.17

Manual Integration/User Assign Peak Report

Eurofins Denver

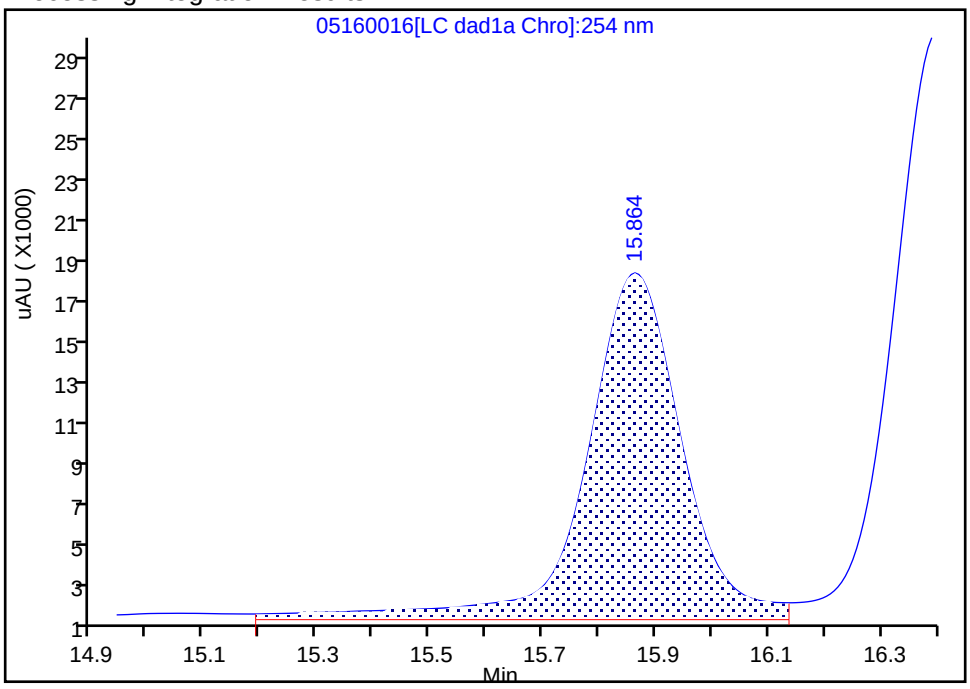
Data File:	\\chromfs\denver\chromdata\g2_luna\20230516-121515.b\05160016.d				
Injection Date:	16-May-2023 22:34:15	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-176268-A-2-A	Lab Sample ID:	280-176268-2		
Client ID:	LL1mw-091-230301-GW				
Operator ID:	JZ/JG	ALS Bottle#:	16	Worklist Smp#:	16
Injection 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

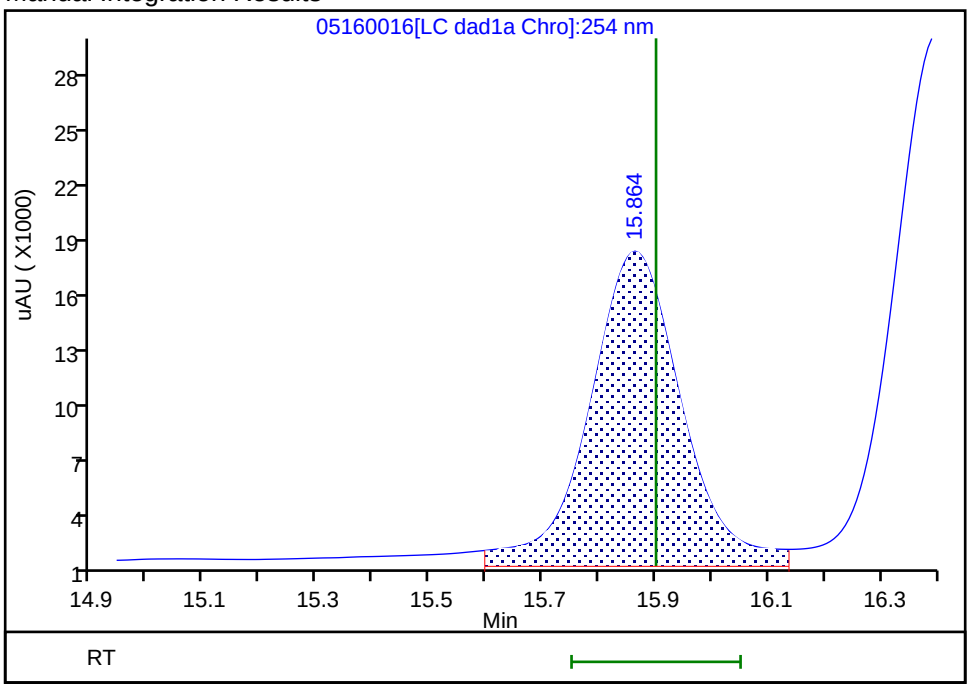
Processing Integration Results

RT: 15.86
Area: 199776
Amount: 0.821487
Amount Units: ug/ml



Manual Integration Results

RT: 15.86
Area: 188260
Amount: 0.774133
Amount Units: ug/ml



Reviewer: K8YG, 17-May-2023 12:42:09 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Baseline

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-176268-1

SDG No.:

Client Sample ID: LL1mw-091-230301-GW RE | Lab Sample ID: 280-176268-2 RE

Matrix: Water | Lab File ID: 05180018.D

Analysis Method: 8330B | Date Collected: 05/09/2023 11:36

Extraction Method: 3535 | Date Extracted: 05/18/2023 13:20

Sample wt/vol: 494.4(mL) | Date Analyzed: 05/19/2023 00:49

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: % Solids: | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 613045 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-99-0	*4-Nitrotoluene*	*0.40*	*U H*	*0.41*	0.40	*0.10*

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	95		83-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\05180018.D
Lims ID: 280-176268-B-2-A
Client ID: LL1mw-091-230301-GW
Sample Type: Client
Inject. Date: 19-May-2023 00:49:57 ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-176268-B-2-A
Operator ID: JZ/JG Instrument ID: CHHPLC_X3

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 19-May-2023 12:21:50 Calib Date: 24-Feb-2023 17:41:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X\20230224-118952.b\02240018.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX1654

First Level Reviewer: LV5D Date: 19-May-2023 11:32:01

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/mL	Flags
4 HMX	1	6.565	6.546	0.019	2817	0.0301	
8 RDX	1	7.591	7.560	0.031	18050	0.1697	
$ 10 1,2-Dinitrobenzene	1	8.531	8.513	0.018	23876	0.1890	
11 1,3,5-Trinitrobenzene	1		8.640			ND	U
12 1,3-Dinitrobenzene	1		9.253			ND	U
13 Nitrobenzene	1		9.626			ND	
15 Tetryl	1		9.986			ND	
16 Nitroglycerin	2		10.439			ND	
17 2,4,6-Trinitrotoluene	1		10.873			ND	
18 4-Amino-2,6-dinitrotoluene	1		11.066			ND	
19 2-Amino-4,6-dinitrotoluene	1		11.319			ND	
20 2,6-Dinitrotoluene	1		11.473			ND	
21 2,4-Dinitrotoluene	1		11.639			ND	
22 o-Nitrotoluene	1	12.478	12.459	0.019	5241	0.0410	
23 p-Nitrotoluene	1		12.873			ND	
24 m-Nitrotoluene	1		13.446			ND	
25 PETN	2		14.599			ND	

QC Flag Legend

Processing Flags
Review Flags
U - Marked Undetected

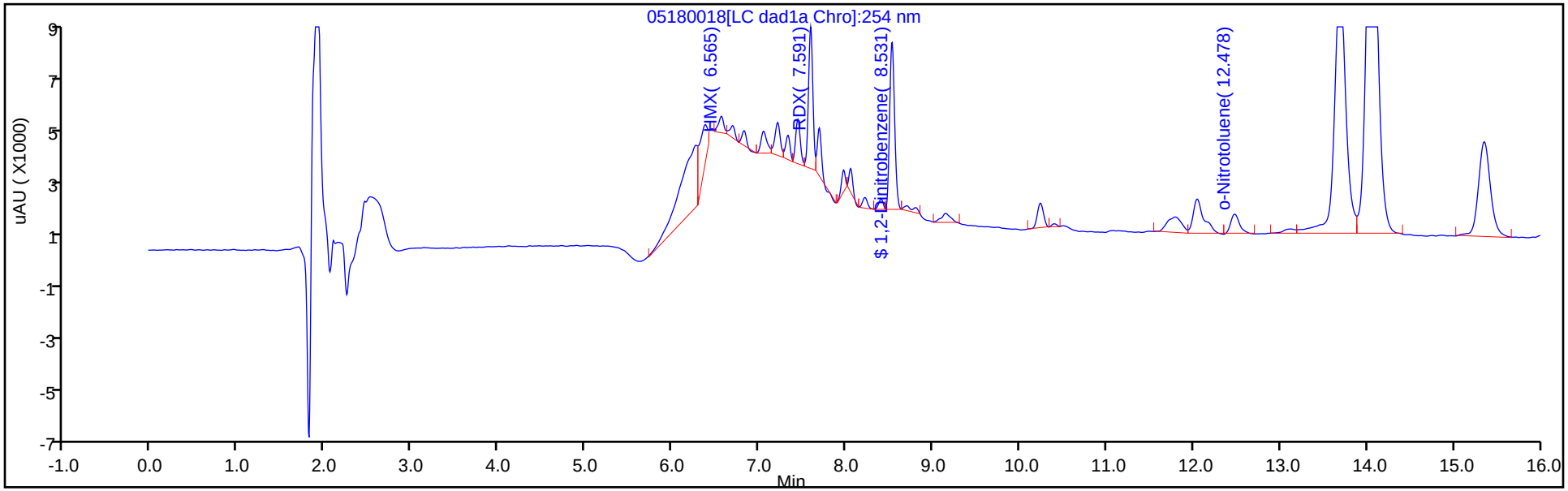
Report Date: 19-May-2023 12:21:55 Chrom Revision: 2.3 16-May-2023 16:37:30

Eurofins Denver

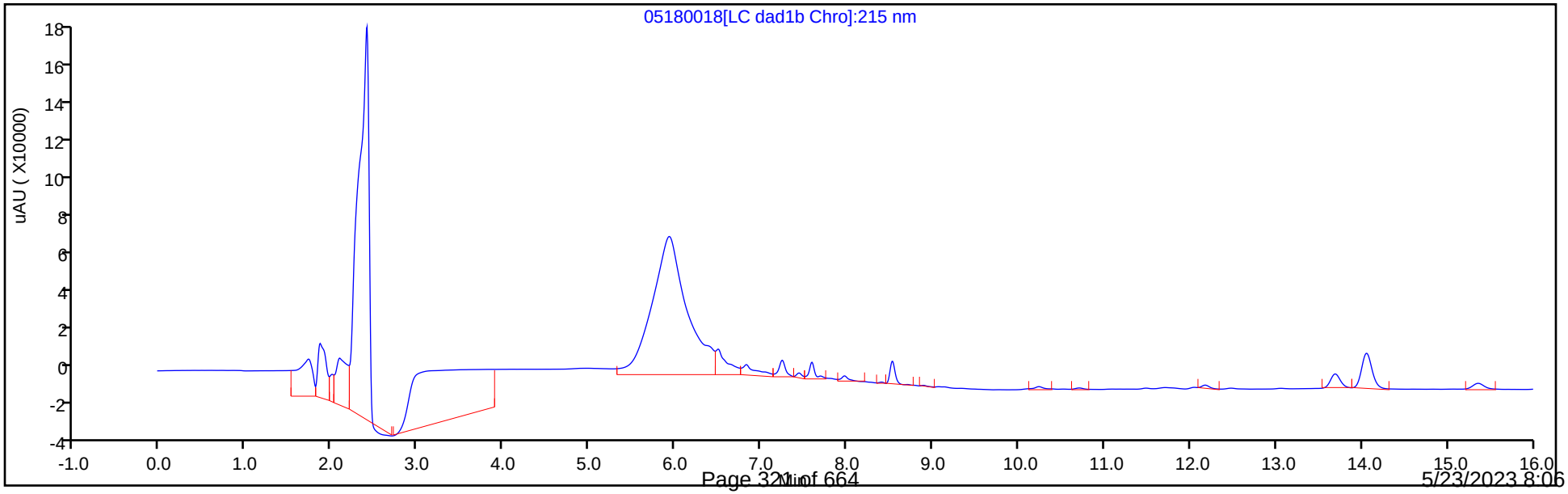
Data File: \\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180018.d

Injection Date:	19-May-2023 00:49:57	Instrument ID:	CHHPLC_X3	Operator ID:	JZ/JG
Lims ID:	280-176268-B-2-A	Lab Sample ID:	280-176268-2	Worklist Smp#:	18
Client ID:	LL1mw-091-230301-GW				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\05180018.D				
Lims ID:	280-176268-B-2-A				
Client ID:	LL1mw-091-230301-GW				
Sample Type:	Client				
Inject. Date:	19-May-2023 00:49:57	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-176268-B-2-A				
Operator ID:	JZ/JG	Instrument ID:	CHHPLC_X3		
Method:	\\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	19-May-2023 12:21:50	Calib Date:	24-Feb-2023 17:41:20		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\CHHPLC_X\20230224-118952.b\02240018.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX1654				

First Level Reviewer: LV5D Date: 19-May-2023 11:32:01

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2000	0.1890	94.51

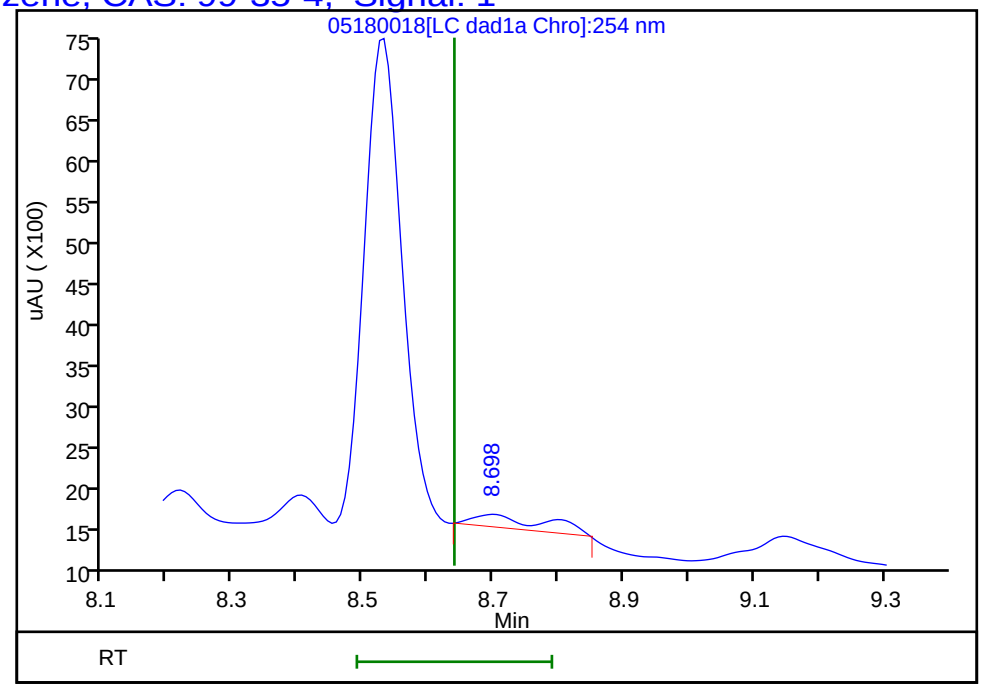
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180018.d				
Injection Date:	19-May-2023 00:49:57	Instrument ID:	CHHPLC_X3		
Lims ID:	280-176268-B-2-A	Lab Sample ID:	280-176268-2		
Client ID:	LL1mw-091-230301-GW				
Operator ID:	JZ/JG	ALS Bottle#:	18	Worklist Smp#:	18
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 1,3,5-Trinitrobenzene, CAS: 99-35-4, Signal: 1

RT: 8.70
Response: 1388
Amount: 0.006392



Reviewer: LV5D, 19-May-2023 11:39:00
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

User Disabled Compound Report

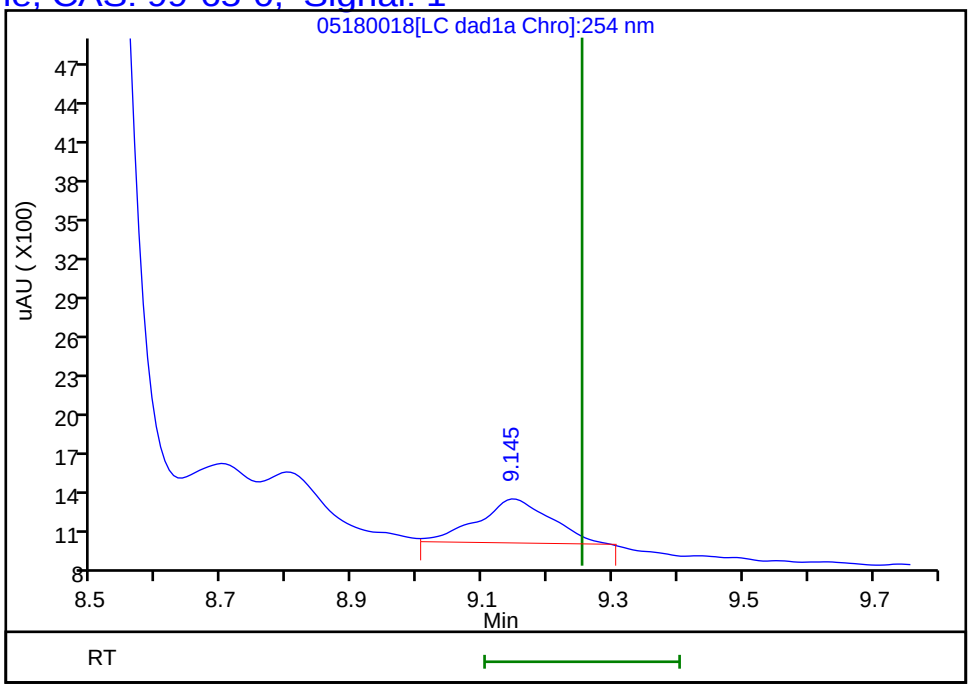
Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180018.d

Injection Date:	19-May-2023 00:49:57	Instrument ID:	CHHPLC_X3		
Lims ID:	280-176268-B-2-A	Lab Sample ID:	280-176268-2		
Client ID:	LL1mw-091-230301-GW				
Operator ID:	JZ/JG	ALS Bottle#:	18	Worklist Smp#:	18
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		

12 1,3-Dinitrobenzene, CAS: 99-65-0, Signal: 1

RT: 9.14
Response: 2725
Amount: 0.009256



Reviewer: LV5D, 19-May-2023 11:39:00
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-176268-1

SDG No.:

Client Sample ID: LL1mw-091-230301-GW RE | Lab Sample ID: 280-176268-2 RE

Matrix: Water | Lab File ID: 05190014.D

Analysis Method: 8330B | Date Collected: 05/09/2023 11:36

Extraction Method: 3535 | Date Extracted: 05/18/2023 13:20

Sample wt/vol: 494.4(mL) | Date Analyzed: 05/19/2023 18:31

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: Luna-phenylhex ID: 4.6(mm)

% Moisture: % Solids: | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 613169 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-08-1	*3-Nitrotoluene*	*0.35*	*U H*	*0.40*	0.35	*0.20*

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	103		83-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\G2_LUNA\20230519-121648.b\05190014.D
Lims ID: 280-176268-B-2-A
Client ID: LL1mw-091-230301-GW
Sample Type: Client
Inject. Date: 19-May-2023 18:31:01 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-176268-B-2-A
Operator ID: JZ/JG Instrument ID: CHHPLC_G2_LUNA

Method: \\chromfs\Denver\ChromData\G2_LUNA\20230519-121648.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 20-May-2023 11:50:48 Calib Date: 07-Apr-2023 23:50:31
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\04070018.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX1663

First Level Reviewer: LV5D Date: 19-May-2023 19:17:46

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
6 HMX	1		6.835			ND	
8 RDX	1	9.134	9.102	0.032	5482	0.0254	
9 Nitrobenzene	1	11.627	11.622	0.005	8879	0.0234	
$ 10 1,2-Dinitrobenzene	1	12.594	12.582	0.012	54454	0.2052	
12 1,3-Dinitrobenzene	1		14.695			ND	
13 Nitroglycerin	2		15.169			ND	7
14 o-Nitrotoluene	1	15.827	15.749	0.078	164771	0.6775	
15 p-Nitrotoluene	1		15.969			ND	
16 4-Amino-2,6-dinitrotoluene	1		16.509			ND	
17 m-Nitrotoluene	1		16.809			ND	
18 2-Amino-4,6-dinitrotoluene	1	17.407	17.329	0.078	25312	0.0632	
19 1,3,5-Trinitrobenzene	1		17.502			ND	
20 2,6-Dinitrotoluene	1		18.622			ND	7
21 2,4-Dinitrotoluene	1		19.082			ND	
22 Tetryl	1		22.355			ND	
23 2,4,6-Trinitrotoluene	1		23.182			ND	
24 PETN	2		24.382			ND	

QC Flag Legend

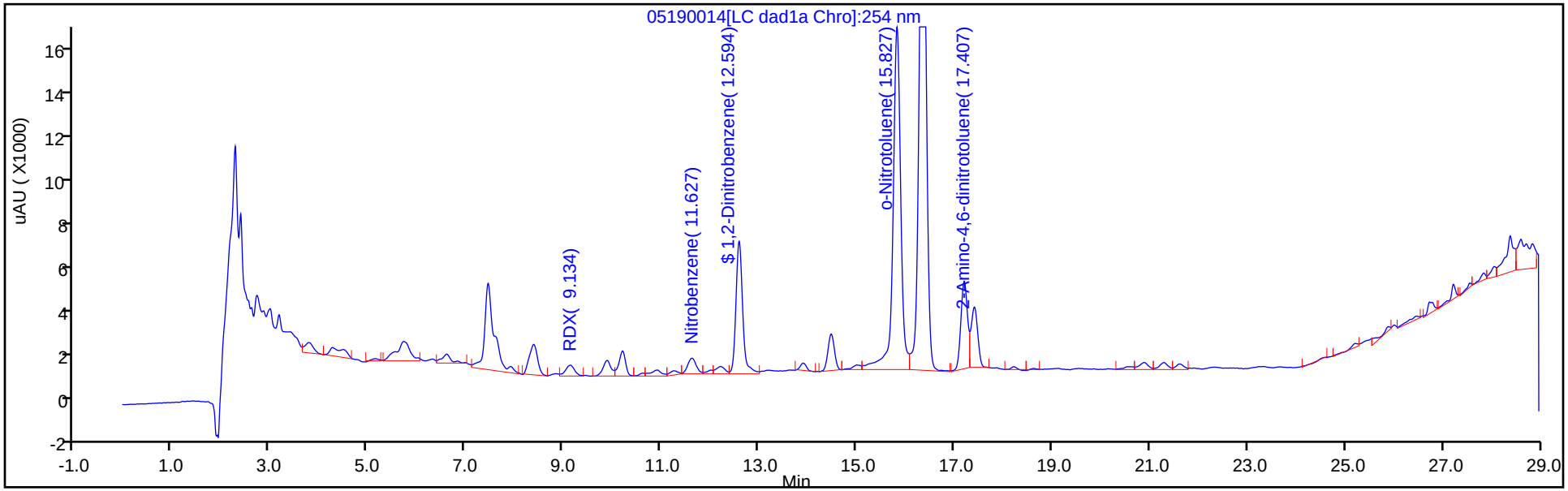
Processing Flags
7 - Failed Limit of Detection

Report Date: 20-May-2023 11:50:51 Chrom Revision: 2.3 16-May-2023 16:37:30

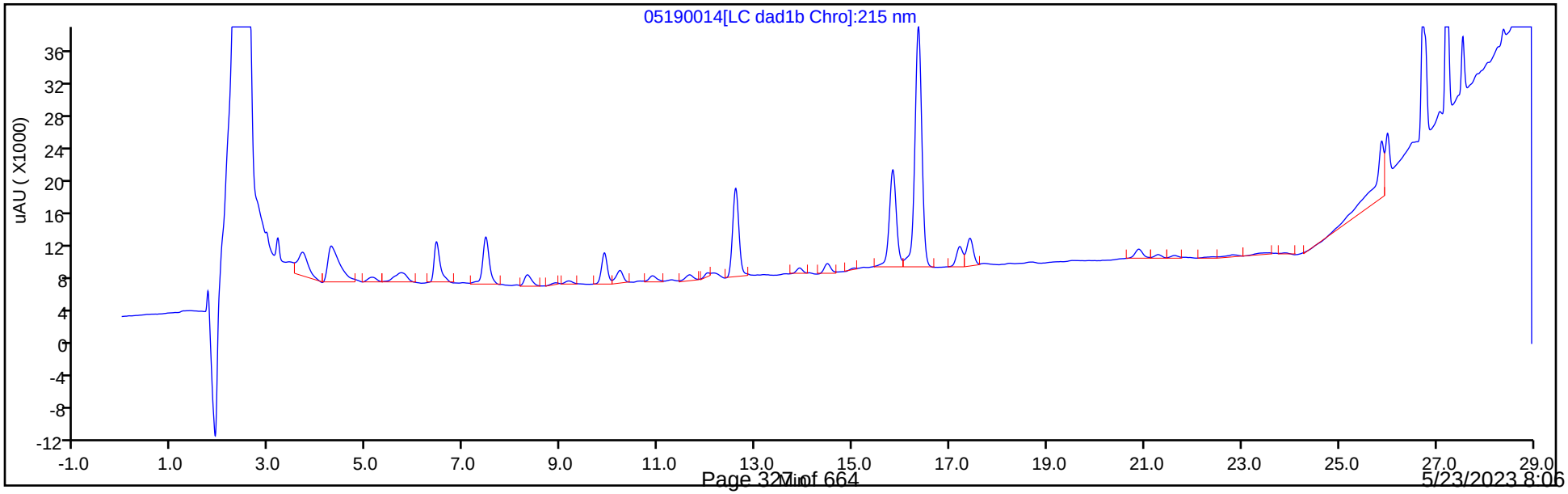
Eurofins Denver

Data File:	\\chromfs\denver\chromdata\g2_luna\20230519-121648.b\05190014.d				
Injection Date:	19-May-2023 18:31:01	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	JZ/JG
Lims ID:	280-176268-B-2-A	Lab Sample ID:	280-176268-2	Worklist Smp#:	14
Client ID:	LL1mw-091-230301-GW				
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 Target: 1



Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\G2_LUNA\20230519-121648.b\05190014.D				
Lims ID:	280-176268-B-2-A				
Client ID:	LL1mw-091-230301-GW				
Sample Type:	Client				
Inject. Date:	19-May-2023 18:31:01	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-176268-B-2-A				
Operator ID:	JZ/JG	Instrument ID:	CHHPLC_G2_LUNA		
Method:	\\chromfs\Denver\ChromData\G2_LUNA\20230519-121648.b\G2_8330_Luna.m				
Limit Group:	GCSV - 8330				
Last Update:	20-May-2023 11:50:48	Calib Date:	07-Apr-2023 23:50:31		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\04070018.D				
Column 1 :	Luna-Phenyl hexyl (4.60 mm)		Det: LC DAD1A, 254 nm		
Process Host:	CTX1663				
First Level Reviewer: LV5D		Date:	19-May-2023 19:17:46		

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2000	0.2052	102.59

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-176268-1

SDG No.:

Client Sample ID: FWG-003-230301-ER | Lab Sample ID: 280-176268-3

Matrix: Water | Lab File ID: 05152318.D

Analysis Method: 8330B | Date Collected: 05/09/2023 14:42

Extraction Method: 3535 | Date Extracted: 05/12/2023 15:04

Sample wt/vol: 486.6(mL) | Date Analyzed: 05/15/2023 19:01

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: % Solids: | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 612440 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	0.21	U	0.22	0.21	0.086
99-65-0	1,3-Dinitrobenzene	0.10	U	0.11	0.10	0.038
118-96-7	2,4,6-Trinitrotoluene	0.10	U	0.11	0.10	0.046
121-14-2	2,4-Dinitrotoluene	0.082	U	0.10	0.082	0.028
606-20-2	2,6-Dinitrotoluene	0.082	U	0.10	0.082	0.041
35572-78-2	2-Amino-4,6-dinitrotoluene	0.10	U	0.11	0.10	0.052
88-72-2	2-Nitrotoluene	0.21	U	0.22	0.21	0.088
99-08-1	3-Nitrotoluene	0.36	U Q	0.41	0.36	0.20
19406-51-0	4-Amino-2,6-dinitrotoluene	0.12	U	0.15	0.12	0.059
99-99-0	4-Nitrotoluene	0.41	U Q	0.42	0.41	0.10
2691-41-0	HMX	0.21	U	0.22	0.21	0.090
98-95-3	Nitrobenzene	0.21	U	0.22	0.21	0.094
55-63-0	Nitroglycerin	2.1	U	2.2	2.1	0.95
78-11-5	PETN	1.0	U	1.1	1.0	0.46
121-82-4	RDX	0.13	J J1	0.22	0.21	0.053
479-45-8	Tetryl	0.10	U	0.11	0.10	0.033

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	95	M	83-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20230515-121447.b\05152318.D
Lims ID: 280-176268-A-3-A
Client ID: FWG-003-230301-ER
Sample Type: Client
Inject. Date: 15-May-2023 19:01:01 ALS Bottle#: 16 Worklist Smp#: 18
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-176268-A-3-A
Operator ID: JZ/JG Instrument ID: CHHPLC_X3

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20230515-121447.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 16-May-2023 13:24:37 Calib Date: 24-Feb-2023 17:41:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X\20230224-118952.b\02240018.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX1672

First Level Reviewer: K8YG Date: 16-May-2023 08:06:13

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/mL	Flags
	4 HMX	1		6.557			ND	
	8 RDX	1	7.596	7.583	0.013	1299	0.0122	
$	10 1,2-Dinitrobenzene	1	8.543	8.543	0.000	23923	0.1894	M
	11 1,3,5-Trinitrobenzene	1		8.663			ND	
	12 1,3-Dinitrobenzene	1		9.290			ND	7
	13 Nitrobenzene	1		9.663			ND	
	15 Tetryl	1		10.043			ND	
	16 Nitroglycerin	2		10.496			ND	
	17 2,4,6-Trinitrotoluene	1		10.936			ND	
	18 4-Amino-2,6-dinitrotoluene	1		11.136			ND	
	19 2-Amino-4,6-dinitrotoluene	1		11.396			ND	
	20 2,6-Dinitrotoluene	1		11.543			ND	
	21 2,4-Dinitrotoluene	1		11.710			ND	
	22 o-Nitrotoluene	1		12.536			ND	
	23 p-Nitrotoluene	1		12.956			ND	
	24 m-Nitrotoluene	1		13.536			ND	
	25 PETN	2		14.716			ND	

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection
Review Flags
M - Manually Integrated

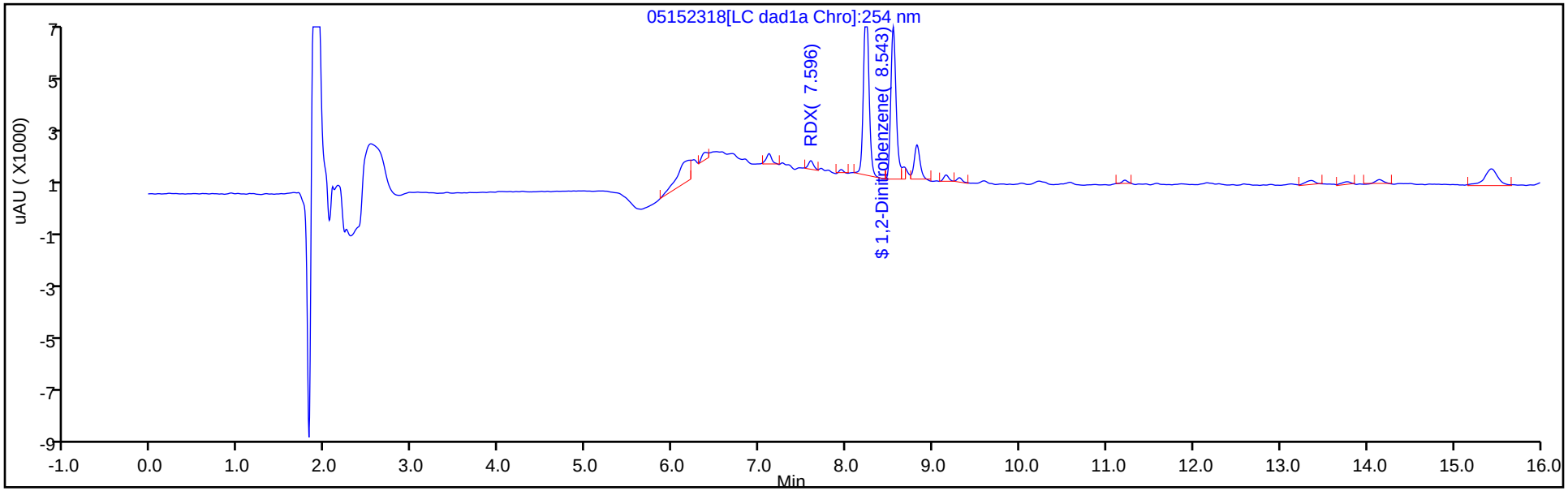
Report Date: 16-May-2023 13:24:43 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

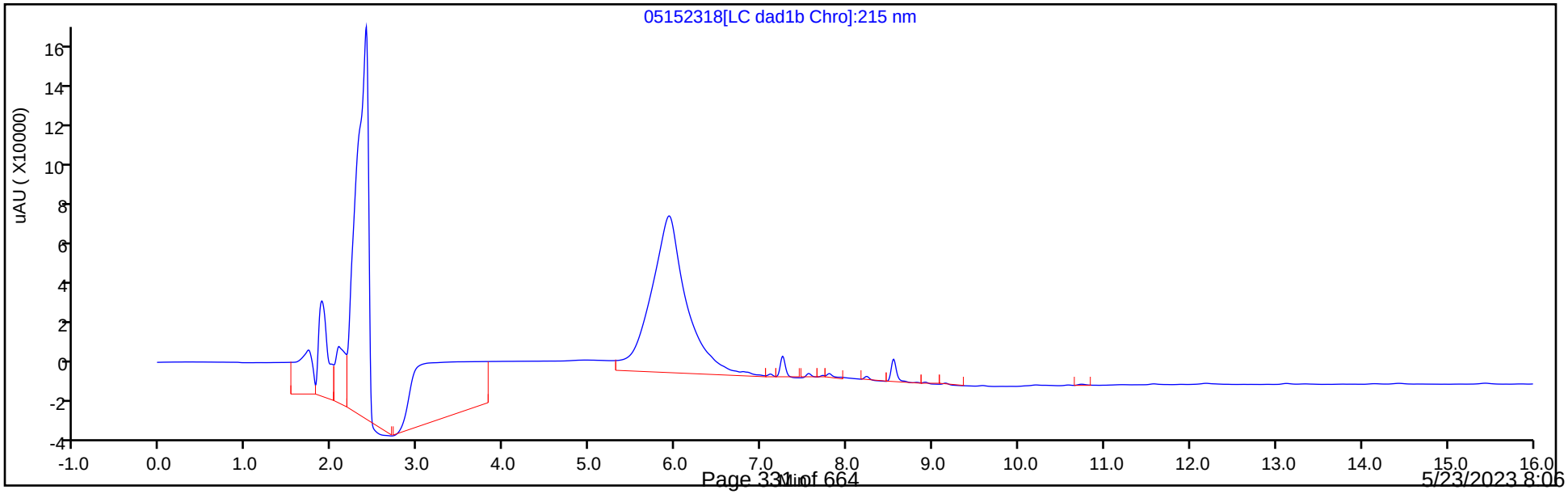
Data File: \\chromfs\denver\chromdata\chhplc_x\20230515-121447.b\05152318.d

Injection Date:	15-May-2023 19:01:01	Instrument ID:	CHHPLC_X3	Operator ID:	JZ/JG
Lims ID:	280-176268-A-3-A	Lab Sample ID:	280-176268-3	Worklist Smp#:	18
Client ID:	FWG-003-230301-ER				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\CHHPLC_X\20230515-121447.b\05152318.D				
Lims ID:	280-176268-A-3-A				
Client ID:	FWG-003-230301-ER				
Sample Type:	Client				
Inject. Date:	15-May-2023 19:01:01	ALS Bottle#:	16	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-176268-A-3-A				
Operator ID:	JZ/JG	Instrument ID:	CHHPLC_X3		
Method:	\\chromfs\Denver\ChromData\CHHPLC_X\20230515-121447.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	16-May-2023 13:24:37	Calib Date:	24-Feb-2023 17:41:20		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\CHHPLC_X\20230224-118952.b\02240018.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX1672				

First Level Reviewer: K8YG Date: 16-May-2023 08:06:13

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2000	0.1894	94.70

Manual Integration/User Assign Peak Report

Eurofins Denver

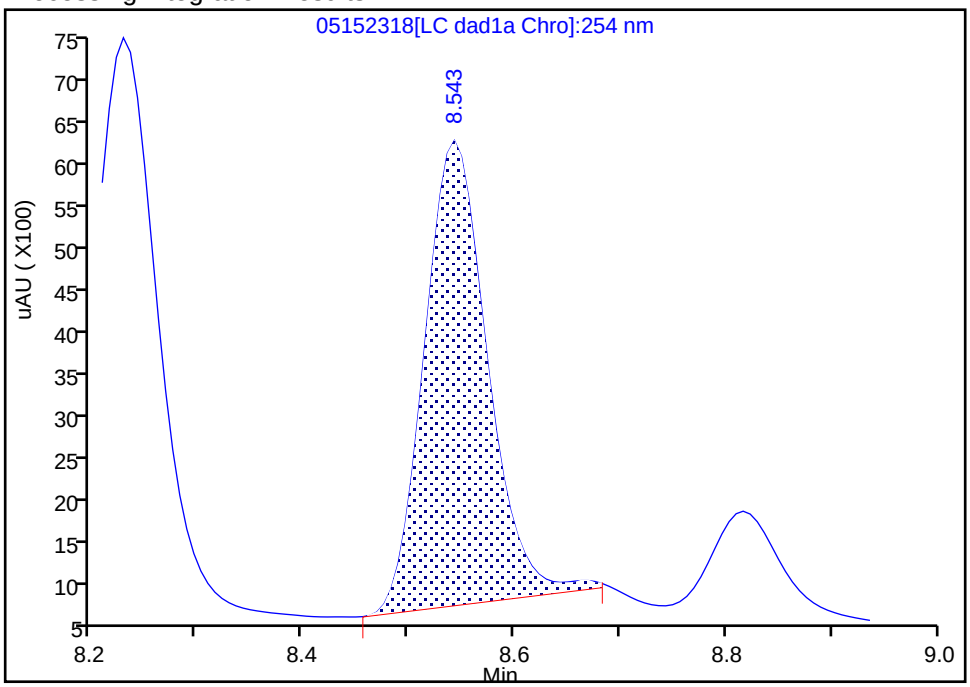
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230515-121447.b\05152318.d				
Injection Date:	15-May-2023 19:01:01	Instrument ID:	CHHPLC_X3		
Lims ID:	280-176268-A-3-A	Lab Sample ID:	280-176268-3		
Client ID:	FWG-003-230301-ER				
Operator ID:	JZ/JG	ALS Bottle#:	16	Worklist Smp#:	18
Injection Vol:	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 1,2-Dinitrobenzene, CAS: 528-29-0

Signal: 1

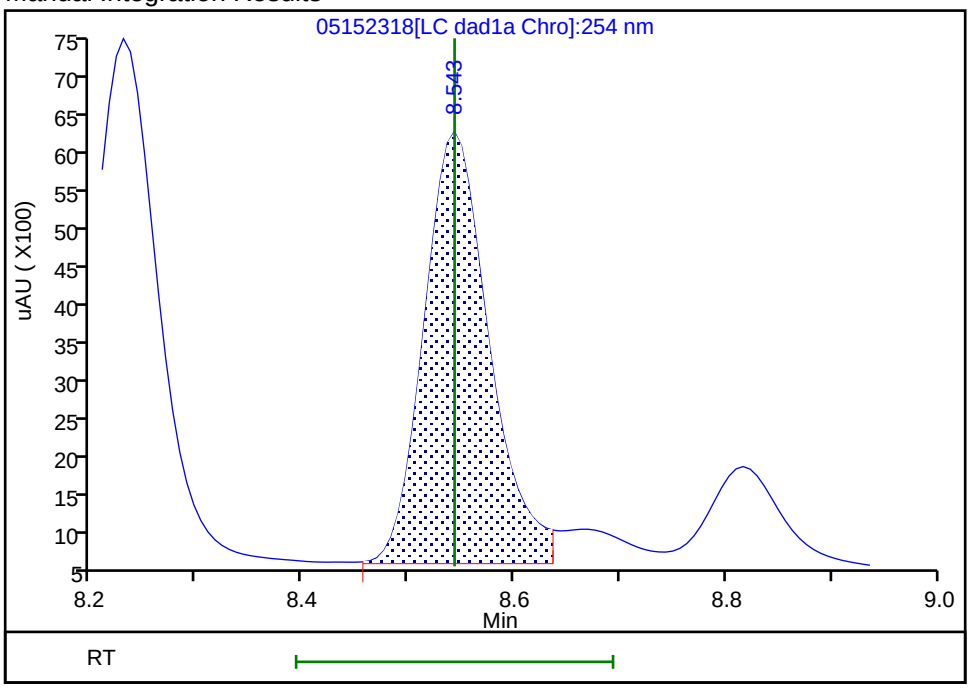
Processing Integration Results

RT: 8.54
Area: 22582
Amount: 0.178784
Amount Units: ug/mL



Manual Integration Results

RT: 8.54
Area: 23923
Amount: 0.189401
Amount Units: ug/mL



Reviewer: LV5D, 16-May-2023 13:04:52
Audit Action: Split an Integrated Peak Audit Reason: Baseline

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-176268-1

SDG No.:

Client Sample ID: FWG-003-230301-ER | Lab Sample ID: 280-176268-3

Matrix: Water | Lab File ID: 05160017.D

Analysis Method: 8330B | Date Collected: 05/09/2023 14:42

Extraction Method: 3535 | Date Extracted: 05/12/2023 15:04

Sample wt/vol: 486.6(mL) | Date Analyzed: 05/16/2023 23:10

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: Luna-phenylhex ID: 4.6(mm)

% Moisture: % Solids: | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 612694 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
121-82-4	*RDX*	*0.53*	*J1*	*0.22*	0.21	*0.053*

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	91		83-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\G2_LUNA\20230516-121515.b\05160017.D
Lims ID: 280-176268-A-3-A
Client ID: FWG-003-230301-ER
Sample Type: Client
Inject. Date: 16-May-2023 23:10:16 ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-176268-A-3-A
Operator ID: JZ/JG Instrument ID: CHHPLC_G2_LUNA

Method: \\chromfs\Denver\ChromData\G2_LUNA\20230516-121515.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 17-May-2023 13:45:47 Calib Date: 07-Apr-2023 23:50:31
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\04070018.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX1653

First Level Reviewer: K8YG Date: 17-May-2023 12:37:04

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
6 HMX	1	6.827	6.888	-0.061	3585	0.0198	
8 RDX	1	9.100	9.168	-0.068	11222	0.0520	
9 Nitrobenzene	1		11.688			ND	
$ 10 1,2-Dinitrobenzene	1	12.673	12.681	-0.008	48552	0.1829	
12 1,3-Dinitrobenzene	1		14.814			ND	
13 Nitroglycerin	2		15.321			ND	7
14 o-Nitrotoluene	1		15.901			ND	
15 p-Nitrotoluene	1		16.128			ND	
16 4-Amino-2,6-dinitrotoluene	1		16.694			ND	
17 m-Nitrotoluene	1		16.981			ND	
18 2-Amino-4,6-dinitrotoluene	1		17.541			ND	
19 1,3,5-Trinitrobenzene	1		17.608			ND	
20 2,6-Dinitrotoluene	1		18.814			ND	
21 2,4-Dinitrotoluene	1		19.274			ND	
22 Tetryl	1		22.621			ND	
23 2,4,6-Trinitrotoluene	1		23.428			ND	
24 PETN	2		24.661			ND	

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection

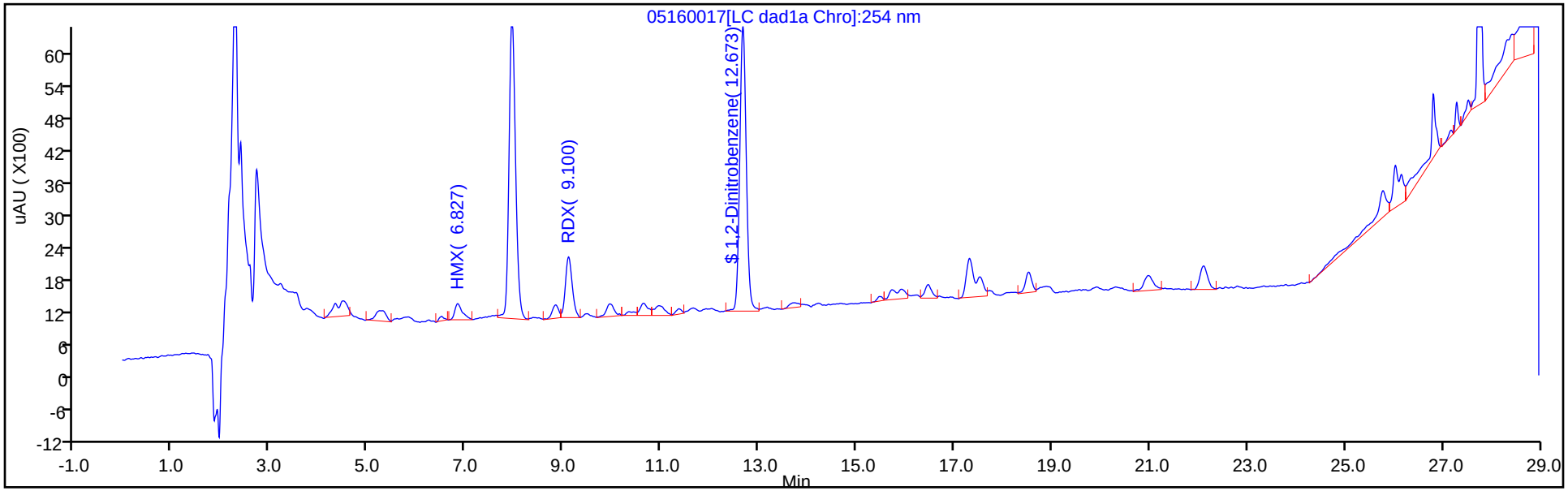
Report Date: 17-May-2023 13:46:12 Chrom Revision: 2.3 16-May-2023 16:37:30

Eurofins Denver

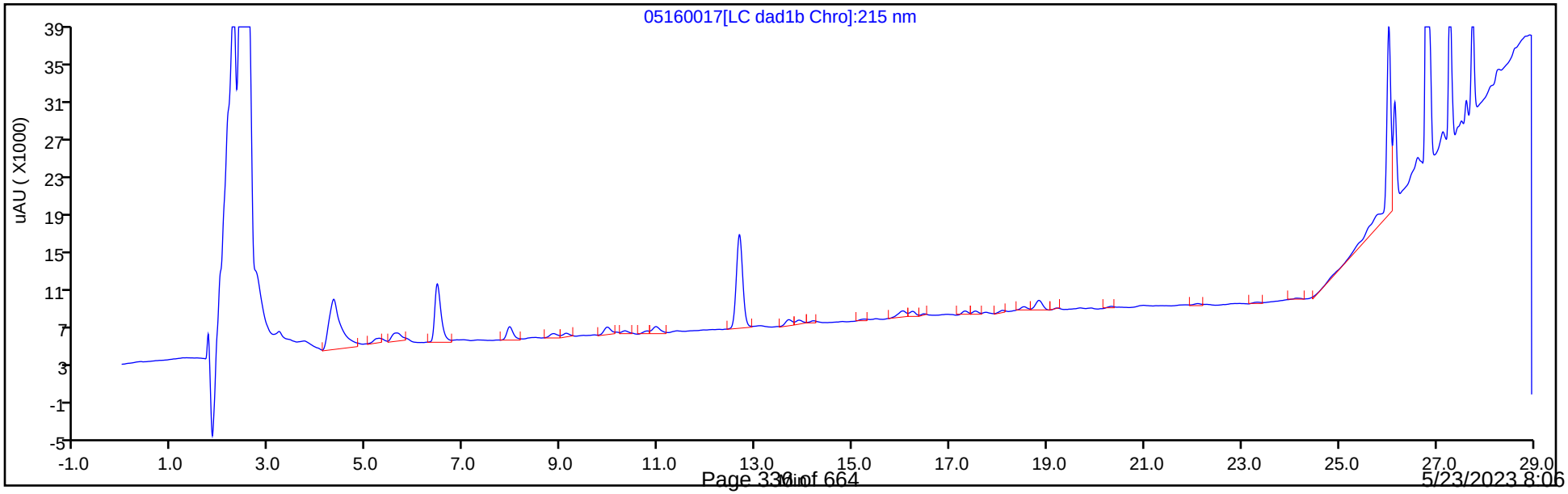
Data File: \\chromfs\denver\chromdata\g2_luna\20230516-121515.b\05160017.d

Injection Date:	16-May-2023 23:10:16	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	JZ/JG
Lims ID:	280-176268-A-3-A	Lab Sample ID:	280-176268-3	Worklist Smp#:	17
Client ID:	FWG-003-230301-ER				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\G2_LUNA\20230516-121515.b\05160017.D				
Lims ID:	280-176268-A-3-A				
Client ID:	FWG-003-230301-ER				
Sample Type:	Client				
Inject. Date:	16-May-2023 23:10:16	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-176268-A-3-A				
Operator ID:	JZ/JG	Instrument ID:	CHHPLC_G2_LUNA		
Method:	\\chromfs\Denver\ChromData\G2_LUNA\20230516-121515.b\G2_8330_Luna.m				
Limit Group:	GCSV - 8330				
Last Update:	17-May-2023 13:45:47	Calib Date:	07-Apr-2023 23:50:31		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\04070018.D				
Column 1 :	Luna-Phenyl hexyl (4.60 mm)		Det: LC DAD1A, 254 nm		
Process Host:	CTX1653				

First Level Reviewer: K8YG Date: 17-May-2023 12:37:04

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2000	0.1829	91.47

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-176268-1

SDG No.:

Client Sample ID: FWG-003-230301-ER RE | Lab Sample ID: 280-176268-3 RE

Matrix: Water | Lab File ID: 05180019.D

Analysis Method: 8330B | Date Collected: 05/09/2023 14:42

Extraction Method: 3535 | Date Extracted: 05/18/2023 13:20

Sample wt/vol: 487.1(mL) | Date Analyzed: 05/19/2023 01:12

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: % Solids: | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 613045 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-99-0	*4-Nitrotoluene*	*0.41*	*U H*	*0.42*	0.41	*0.10*

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	105	M	83-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\05180019.D
Lims ID: 280-176268-B-3-A
Client ID: FWG-003-230301-ER
Sample Type: Client
Inject. Date: 19-May-2023 01:12:52 ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-176268-B-3-A
Operator ID: JZ/JG Instrument ID: CHHPLC_X3

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 19-May-2023 12:21:50 Calib Date: 24-Feb-2023 17:41:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X\20230224-118952.b\02240018.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX1654

First Level Reviewer: LV5D Date: 19-May-2023 11:32:12

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/mL	Flags
	4 HMX	1		6.546			ND	
	8 RDX	1	7.580	7.560	0.020	1155	0.0109	
$	10 1,2-Dinitrobenzene	1	8.520	8.513	0.007	26613	0.2107	M
	11 1,3,5-Trinitrobenzene	1		8.640			ND	
	12 1,3-Dinitrobenzene	1		9.253			ND	7
	13 Nitrobenzene	1		9.626			ND	
	15 Tetryl	1		9.986			ND	
	16 Nitroglycerin	2		10.439			ND	
	17 2,4,6-Trinitrotoluene	1		10.873			ND	
	18 4-Amino-2,6-dinitrotoluene	1		11.066			ND	
	19 2-Amino-4,6-dinitrotoluene	1		11.319			ND	
	20 2,6-Dinitrotoluene	1		11.473			ND	
	21 2,4-Dinitrotoluene	1		11.639			ND	
	22 o-Nitrotoluene	1		12.459			ND	
	23 p-Nitrotoluene	1		12.873			ND	
	24 m-Nitrotoluene	1		13.446			ND	
	25 PETN	2		14.599			ND	

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection
Review Flags
M - Manually Integrated

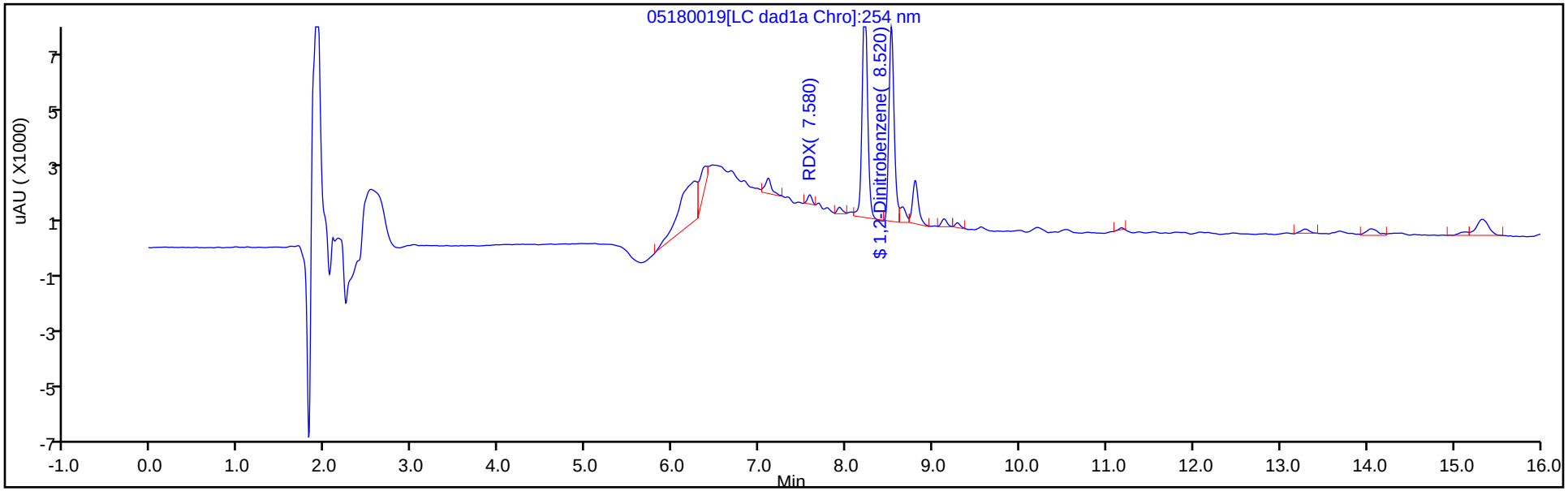
Report Date: 19-May-2023 12:21:56 Chrom Revision: 2.3 16-May-2023 16:37:30

Eurofins Denver

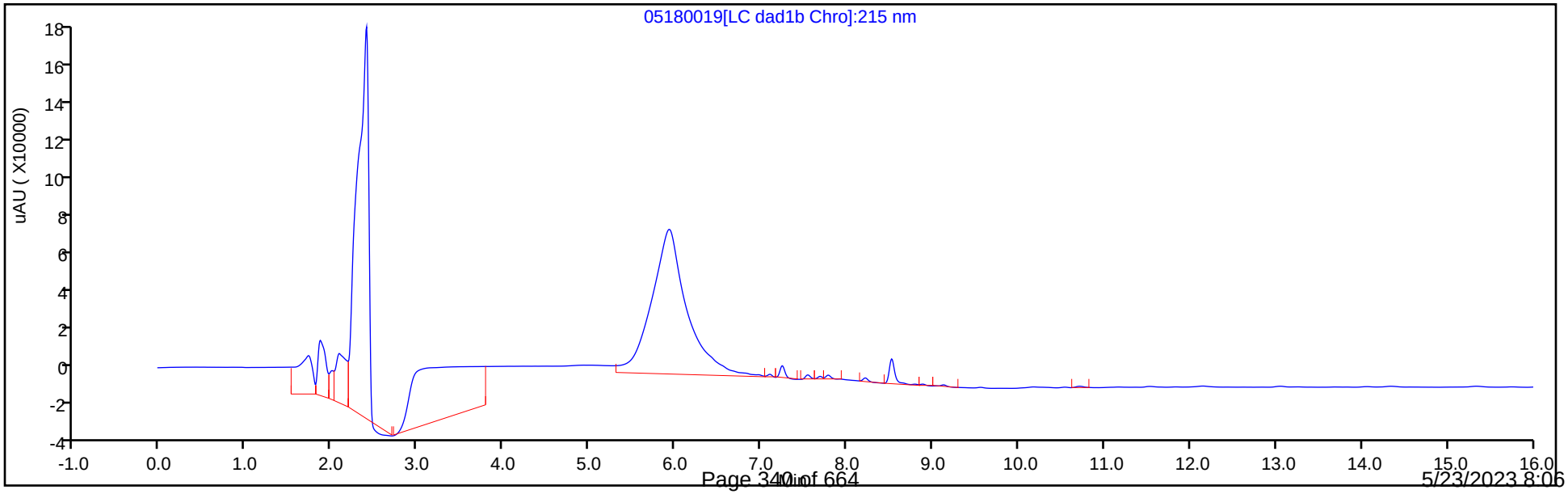
Data File: \\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180019.d

Injection Date:	19-May-2023 01:12:52	Instrument ID:	CHHPLC_X3	Operator ID:	JZ/JG
Lims ID:	280-176268-B-3-A	Lab Sample ID:	280-176268-3	Worklist Smp#:	19
Client ID:	FWG-003-230301-ER				
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



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\05180019.D				
Lims ID:	280-176268-B-3-A				
Client ID:	FWG-003-230301-ER				
Sample Type:	Client				
Inject. Date:	19-May-2023 01:12:52	ALS Bottle#:	19	Worklist Smp#:	19
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-176268-B-3-A				
Operator ID:	JZ/JG	Instrument ID:	CHHPLC_X3		
Method:	\\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	19-May-2023 12:21:50	Calib Date:	24-Feb-2023 17:41:20		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\CHHPLC_X\20230224-118952.b\02240018.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX1654				

First Level Reviewer: LV5D Date: 19-May-2023 11:32:12

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2000	0.2107	105.35

Manual Integration/User Assign Peak Report

Eurofins Denver

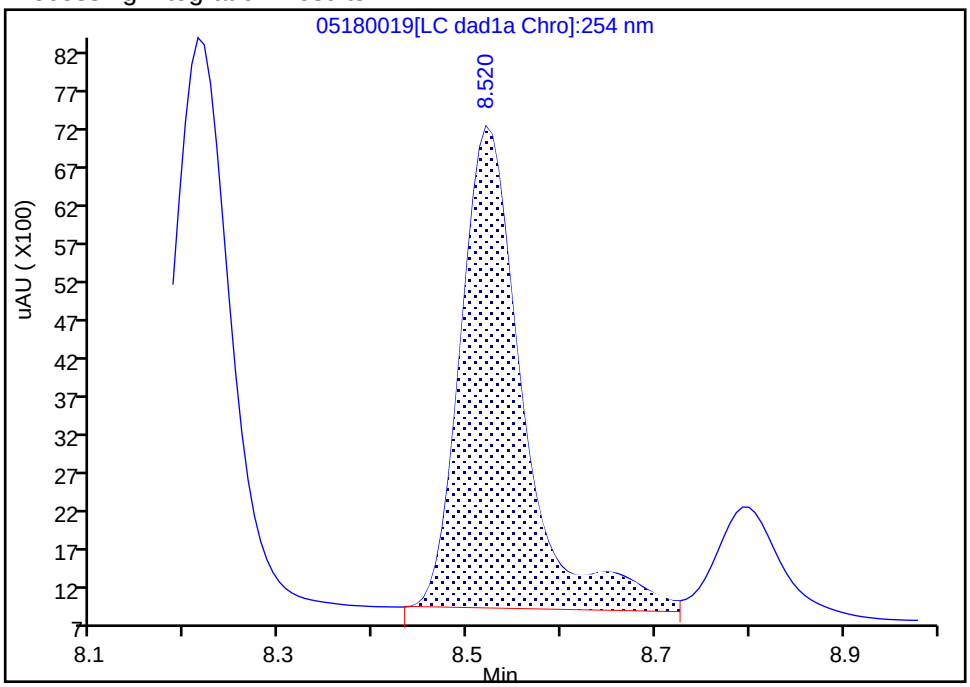
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180019.d				
Injection Date:	19-May-2023 01:12:52	Instrument ID:	CHHPLC_X3		
Lims ID:	280-176268-B-3-A	Lab Sample ID:	280-176268-3		
Client ID:	FWG-003-230301-ER				
Operator ID:	JZ/JG	ALS Bottle#:	19	Worklist Smp#:	19
Injection Vol:	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		

$ 10 1,2-Dinitrobenzene, CAS: 528-29-0

Signal: 1

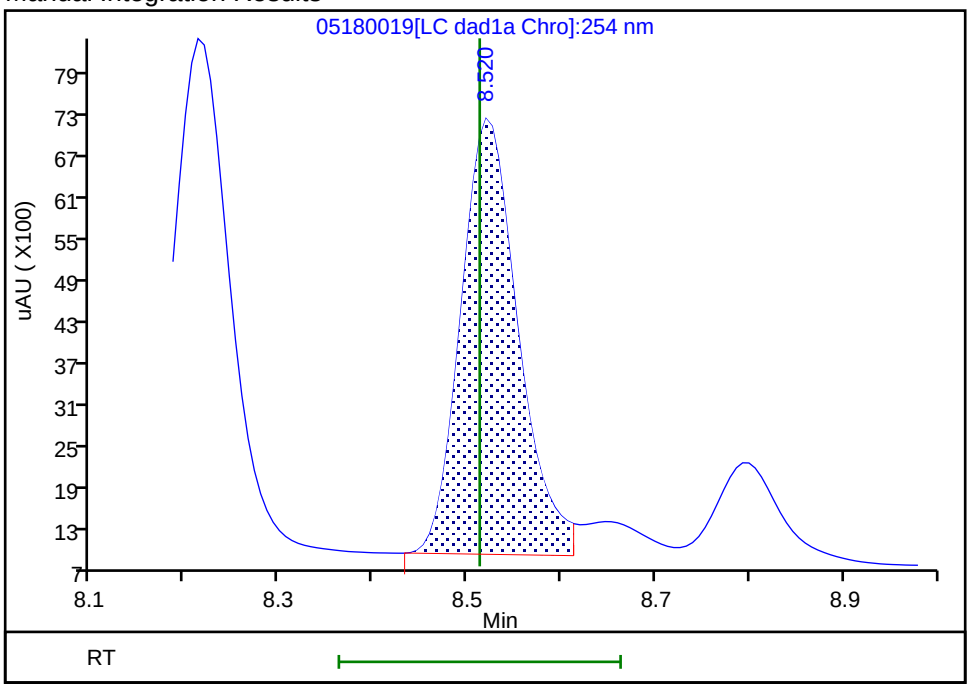
Processing Integration Results

RT: 8.52
Area: 29026
Amount: 0.229802
Amount Units: ug/mL



Manual Integration Results

RT: 8.52
Area: 26613
Amount: 0.210698
Amount Units: ug/mL



Reviewer: LV5D, 19-May-2023 11:39:11 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Baseline

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-176268-1

SDG No.:

Client Sample ID: FWG-003-230301-ER RE | Lab Sample ID: 280-176268-3 RE

Matrix: Water | Lab File ID: 05190015.D

Analysis Method: 8330B | Date Collected: 05/09/2023 14:42

Extraction Method: 3535 | Date Extracted: 05/18/2023 13:20

Sample wt/vol: 487.1(mL) | Date Analyzed: 05/19/2023 19:06

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: Luna-phenylhex ID: 4.6(mm)

% Moisture: % Solids: | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 613169 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-08-1	*3-Nitrotoluene*	*0.36*	*U H*	*0.41*	0.36	*0.20*

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	102		83-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\G2_LUNA\20230519-121648.b\05190015.D
Lims ID: 280-176268-B-3-A
Client ID: FWG-003-230301-ER
Sample Type: Client
Inject. Date: 19-May-2023 19:06:57 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-176268-B-3-A
Operator ID: JZ/JG Instrument ID: CHHPLC_G2_LUNA

Method: \\chromfs\Denver\ChromData\G2_LUNA\20230519-121648.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 20-May-2023 11:50:48 Calib Date: 07-Apr-2023 23:50:31
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\04070018.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX1663

First Level Reviewer: LV5D Date: 19-May-2023 20:00:20

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
6 HMX	1	6.803	6.835	-0.032	3368	0.0186	M
8 RDX	1	9.043	9.102	-0.059	12312	0.0571	M
9 Nitrobenzene	1		11.622			ND	
$ 10 1,2-Dinitrobenzene	1	12.570	12.582	-0.012	53924	0.2032	
12 1,3-Dinitrobenzene	1		14.695			ND	
13 Nitroglycerin	2		15.169			ND	
14 o-Nitrotoluene	1		15.749			ND	U
15 p-Nitrotoluene	1		15.969			ND	
16 4-Amino-2,6-dinitrotoluene	1		16.509			ND	
17 m-Nitrotoluene	1		16.809			ND	
18 2-Amino-4,6-dinitrotoluene	1		17.329			ND	
19 1,3,5-Trinitrobenzene	1		17.502			ND	
20 2,6-Dinitrotoluene	1	18.617	18.622	-0.005	2364	0.008446	M
21 2,4-Dinitrotoluene	1		19.082			ND	
22 Tetryl	1		22.355			ND	
23 2,4,6-Trinitrotoluene	1		23.182			ND	
24 PETN	2		24.382			ND	

QC Flag Legend

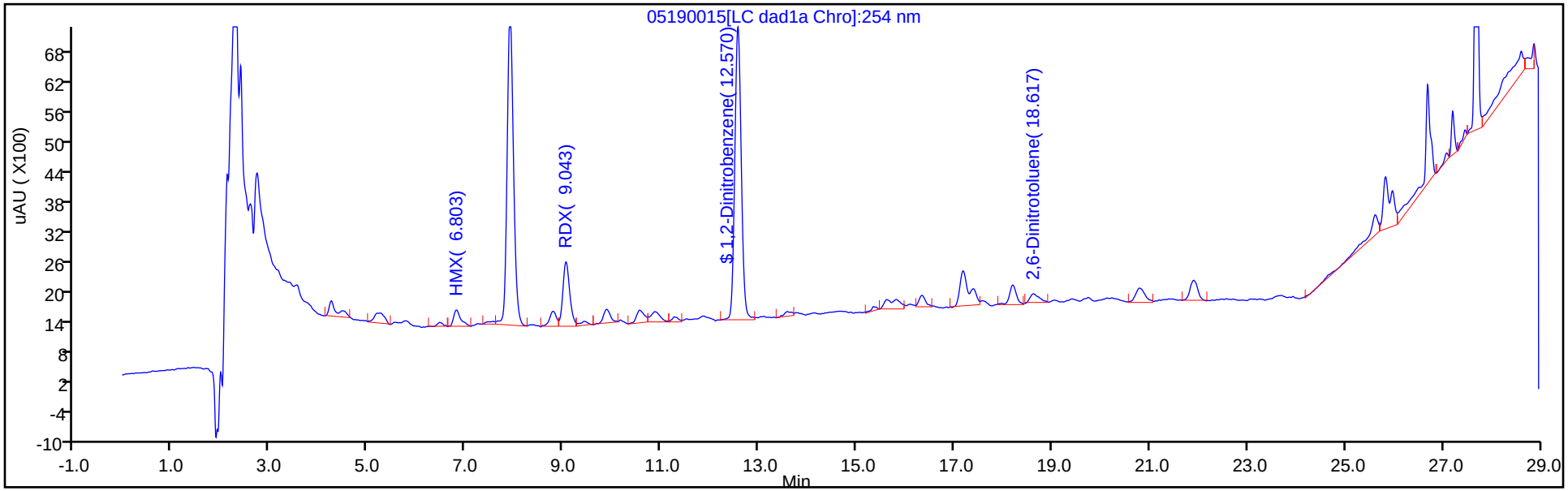
Processing Flags
Review Flags
M - Manually Integrated
U - Marked Undetected

Report Date: 20-May-2023 11:50:51 Chrom Revision: 2.3 16-May-2023 16:37:30

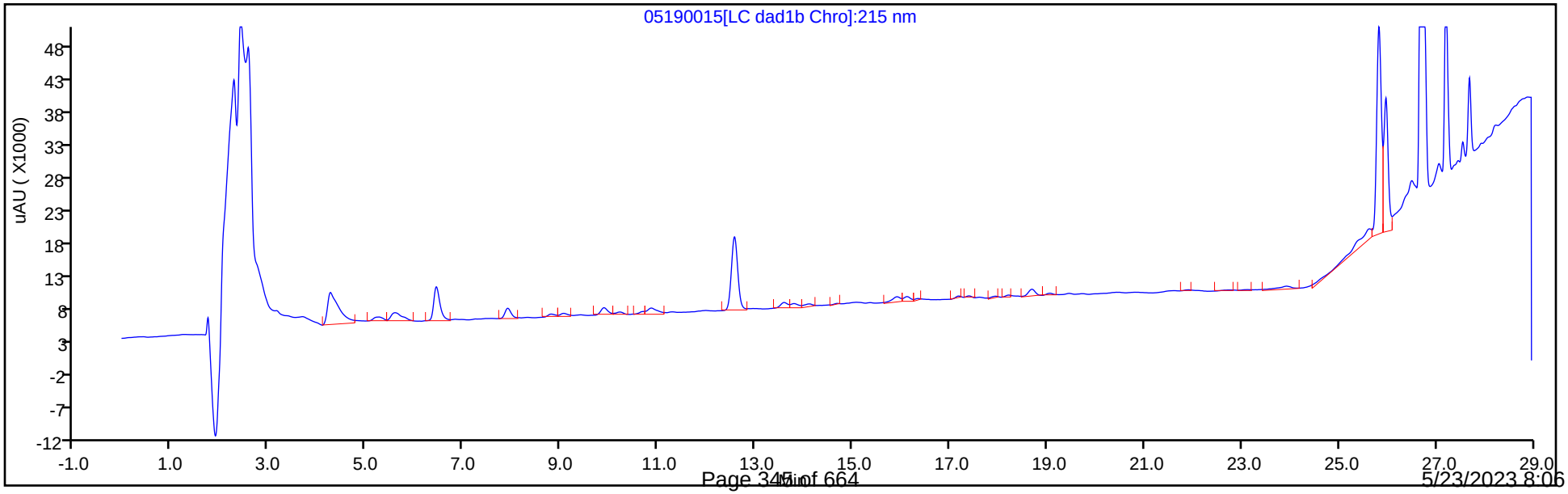
Eurofins Denver

Data File:	\\chromfs\denver\chromdata\g2_luna\20230519-121648.b\05190015.d				
Injection Date:	19-May-2023 19:06:57	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	JZ/JG
Lims ID:	280-176268-B-3-A	Lab Sample ID:	280-176268-3	Worklist Smp#:	15
Client ID:	FWG-003-230301-ER				
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 Target: 1



Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\G2_LUNA\20230519-121648.b\05190015.D				
Lims ID:	280-176268-B-3-A				
Client ID:	FWG-003-230301-ER				
Sample Type:	Client				
Inject. Date:	19-May-2023 19:06:57	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-176268-B-3-A				
Operator ID:	JZ/JG	Instrument ID:	CHHPLC_G2_LUNA		
Method:	\\chromfs\Denver\ChromData\G2_LUNA\20230519-121648.b\G2_8330_Luna.m				
Limit Group:	GCSV - 8330				
Last Update:	20-May-2023 11:50:48	Calib Date:	07-Apr-2023 23:50:31		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\04070018.D				
Column 1 :	Luna-Phenyl hexyl (4.60 mm)		Det: LC DAD1A, 254 nm		
Process Host:	CTX1663				

First Level Reviewer: LV5D Date: 19-May-2023 20:00:20

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2000	0.2032	101.59

Manual Integration/User Assign Peak Report

Eurofins Denver

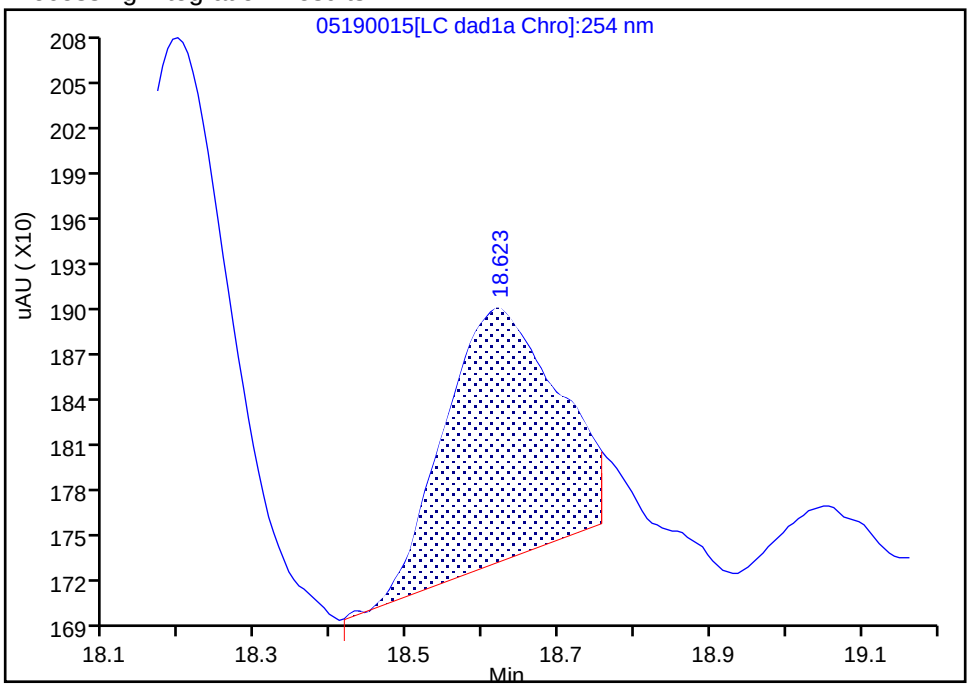
Data File:	\\chromfs\denver\chromdata\g2_luna\20230519-121648.b\05190015.d				
Injection Date:	19-May-2023 19:06:57	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-176268-B-3-A	Lab Sample ID:	280-176268-3		
Client ID:	FWG-003-230301-ER				
Operator ID:	JZ/JG	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	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

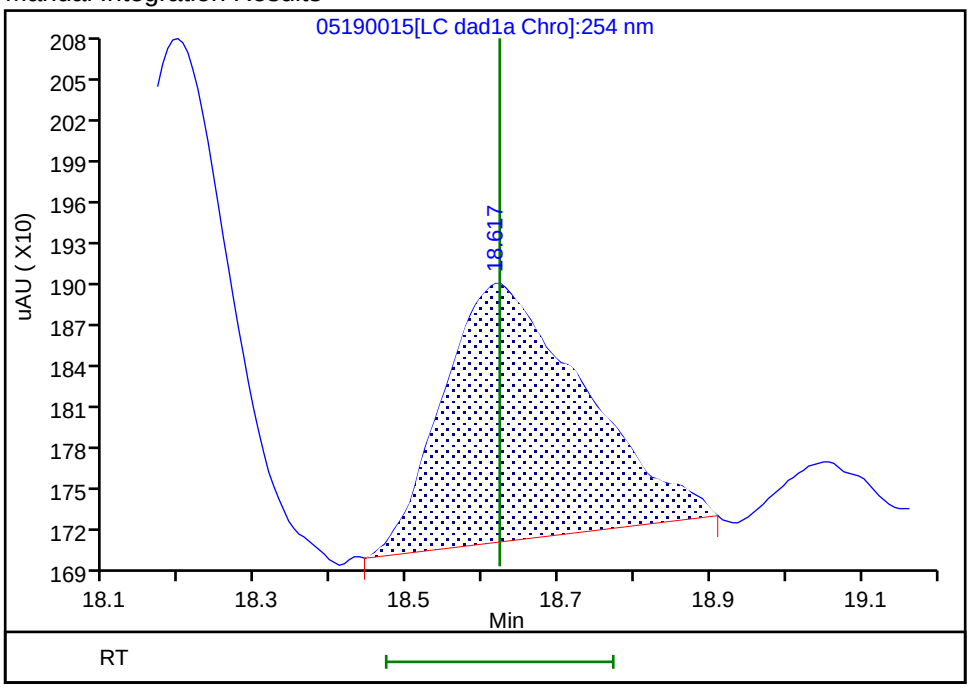
Processing Integration Results

RT: 18.62
Area: 1685
Amount: 0.006020
Amount Units: ug/ml



Manual Integration Results

RT: 18.62
Area: 2364
Amount: 0.008446
Amount Units: ug/ml



Reviewer: LV5D, 19-May-2023 20:00:05 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

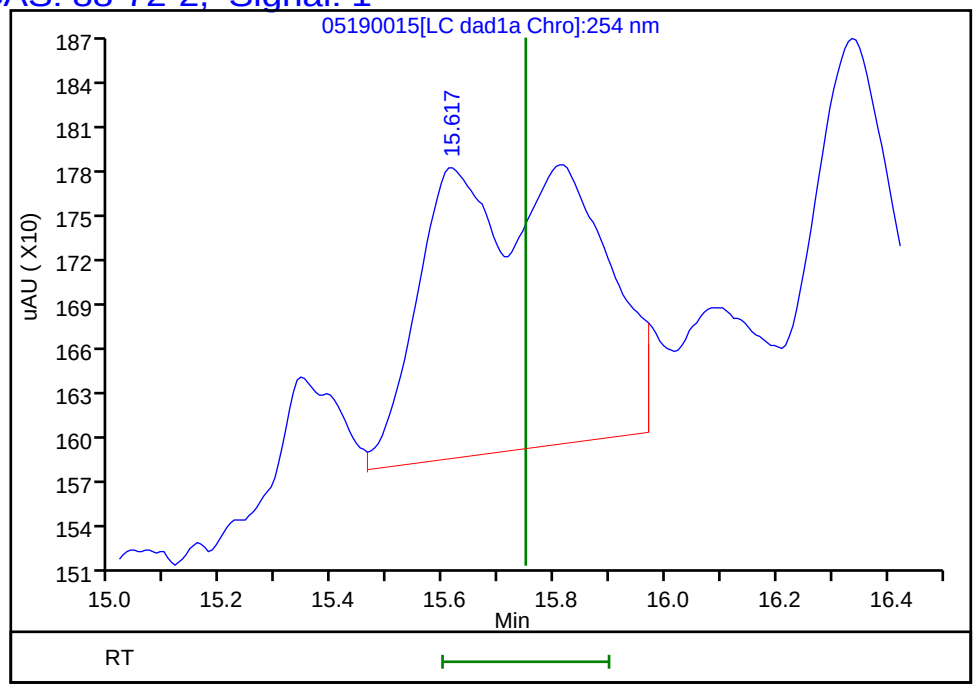
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\denver\chromdata\g2_luna\20230519-121648.b\05190015.d				
Injection Date:	19-May-2023 19:06:57	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-176268-B-3-A	Lab Sample ID:	280-176268-3		
Client ID:	FWG-003-230301-ER				
Operator ID:	JZ/JG	ALS Bottle#:	15	Worklist Smp#:	15
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: 15.62
Response: 3973
Amount: 0.016337



Reviewer: LV5D, 19-May-2023 20:00:20
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins Denver

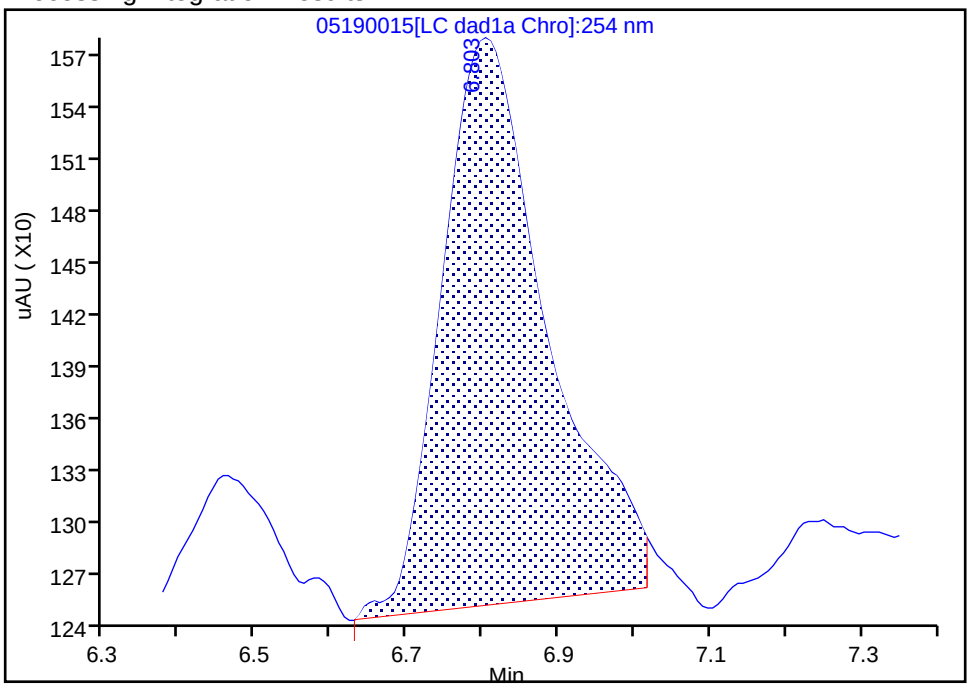
Data File:	\\chromfs\denver\chromdata\g2_luna\20230519-121648.b\05190015.d				
Injection Date:	19-May-2023 19:06:57	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-176268-B-3-A	Lab Sample ID:	280-176268-3		
Client ID:	FWG-003-230301-ER				
Operator ID:	JZ/JG	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	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

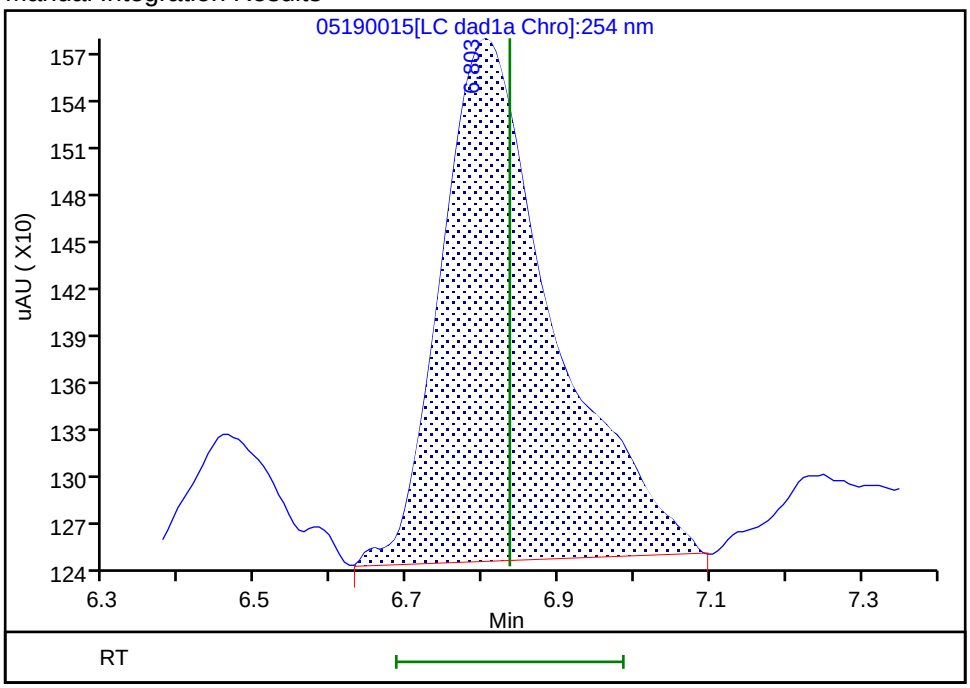
Processing Integration Results

RT: 6.80
Area: 3137
Amount: 0.017327
Amount Units: ug/ml



Manual Integration Results

RT: 6.80
Area: 3368
Amount: 0.018603
Amount Units: ug/ml



Reviewer: LV5D, 19-May-2023 20:00:13 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

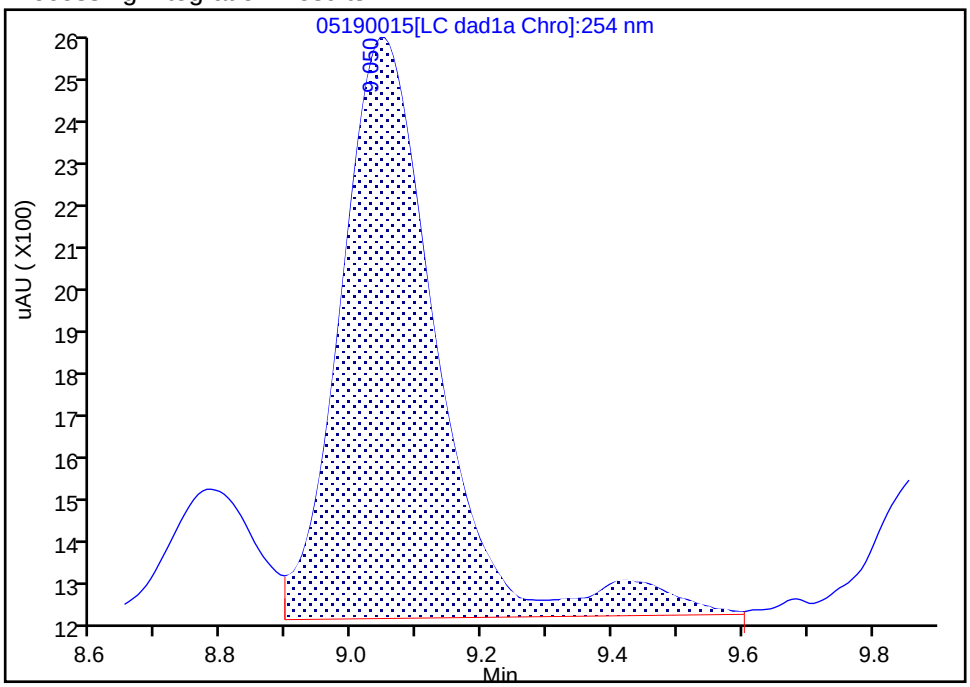
Data File:	\\chromfs\denver\chromdata\g2_luna\20230519-121648.b\05190015.d				
Injection Date:	19-May-2023 19:06:57	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-176268-B-3-A	Lab Sample ID:	280-176268-3		
Client ID:	FWG-003-230301-ER				
Operator ID:	JZ/JG	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	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

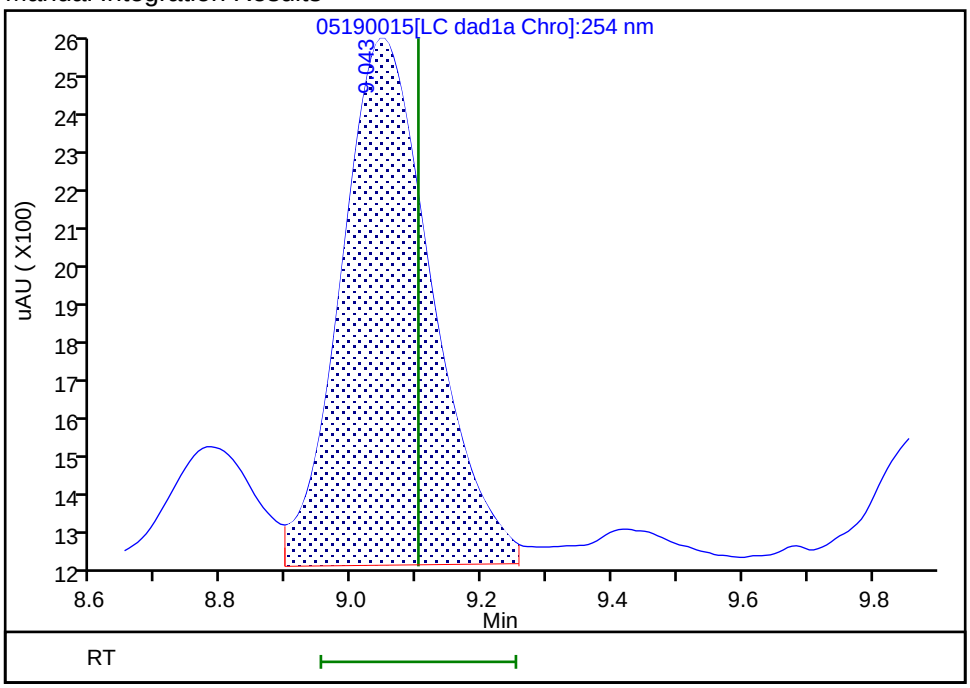
Processing Integration Results

RT: 9.05
Area: 13188
Amount: 0.061137
Amount Units: ug/ml



Manual Integration Results

RT: 9.04
Area: 12312
Amount: 0.057076
Amount Units: ug/ml



Reviewer: LV5D, 19-May-2023 20:00:17 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Baseline

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-176268-1

SDG No.:

Client Sample ID: FWG-003-230301-FB | Lab Sample ID: 280-176268-4

Matrix: Water | Lab File ID: 05152319.D

Analysis Method: 8330B | Date Collected: 05/09/2023 08:15

Extraction Method: 3535 | Date Extracted: 05/12/2023 15:04

Sample wt/vol: 494.3(mL) | Date Analyzed: 05/15/2023 19:23

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: % Solids: | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 612440 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	0.20	U	0.21	0.20	0.085
99-65-0	1,3-Dinitrobenzene	0.10	U	0.11	0.10	0.037
118-96-7	2,4,6-Trinitrotoluene	0.10	U	0.11	0.10	0.046
121-14-2	2,4-Dinitrotoluene	0.081	U	0.10	0.081	0.028
606-20-2	2,6-Dinitrotoluene	0.081	U	0.10	0.081	0.041
35572-78-2	2-Amino-4,6-dinitrotoluene	0.10	U	0.11	0.10	0.051
88-72-2	2-Nitrotoluene	0.20	U	0.21	0.20	0.086
99-08-1	3-Nitrotoluene	0.35	U Q	0.40	0.35	0.20
19406-51-0	4-Amino-2,6-dinitrotoluene	0.12	U	0.15	0.12	0.058
99-99-0	4-Nitrotoluene	0.40	U Q	0.41	0.40	0.10
2691-41-0	HMX	0.20	U	0.21	0.20	0.089
98-95-3	Nitrobenzene	0.20	U	0.21	0.20	0.092
55-63-0	Nitroglycerin	2.0	U	2.1	2.0	0.93
78-11-5	PETN	1.0	U	1.1	1.0	0.45
121-82-4	RDX	0.16	J J1	0.21	0.20	0.052
479-45-8	Tetryl	0.10	U	0.11	0.10	0.032

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	104	M	83-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20230515-121447.b\05152319.D
Lims ID: 280-176268-A-4-A
Client ID: FWG-003-230301-FB
Sample Type: Client
Inject. Date: 15-May-2023 19:23:57 ALS Bottle#: 17 Worklist Smp#: 19
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-176268-A-4-A
Operator ID: JZ/JG Instrument ID: CHHPLC_X3

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20230515-121447.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 16-May-2023 13:24:37 Calib Date: 24-Feb-2023 17:41:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X\20230224-118952.b\02240018.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX1672

First Level Reviewer: K8YG Date: 16-May-2023 08:06:50

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/mL	Flags
	4 HMX	1		6.557			ND	
	8 RDX	1	7.594	7.583	0.011	1681	0.0158	
$	10 1,2-Dinitrobenzene	1	8.541	8.543	-0.002	26212	0.2075	M
	11 1,3,5-Trinitrobenzene	1		8.663			ND	
	12 1,3-Dinitrobenzene	1		9.290			ND	7
	13 Nitrobenzene	1		9.663			ND	7
	15 Tetryl	1		10.043			ND	
	16 Nitroglycerin	2		10.496			ND	
	17 2,4,6-Trinitrotoluene	1		10.936			ND	
	18 4-Amino-2,6-dinitrotoluene	1		11.136			ND	
	19 2-Amino-4,6-dinitrotoluene	1		11.396			ND	
	20 2,6-Dinitrotoluene	1		11.543			ND	
	21 2,4-Dinitrotoluene	1		11.710			ND	
	22 o-Nitrotoluene	1		12.536			ND	
	23 p-Nitrotoluene	1		12.956			ND	
	24 m-Nitrotoluene	1		13.536			ND	
	25 PETN	2		14.716			ND	

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection
Review Flags
M - Manually Integrated

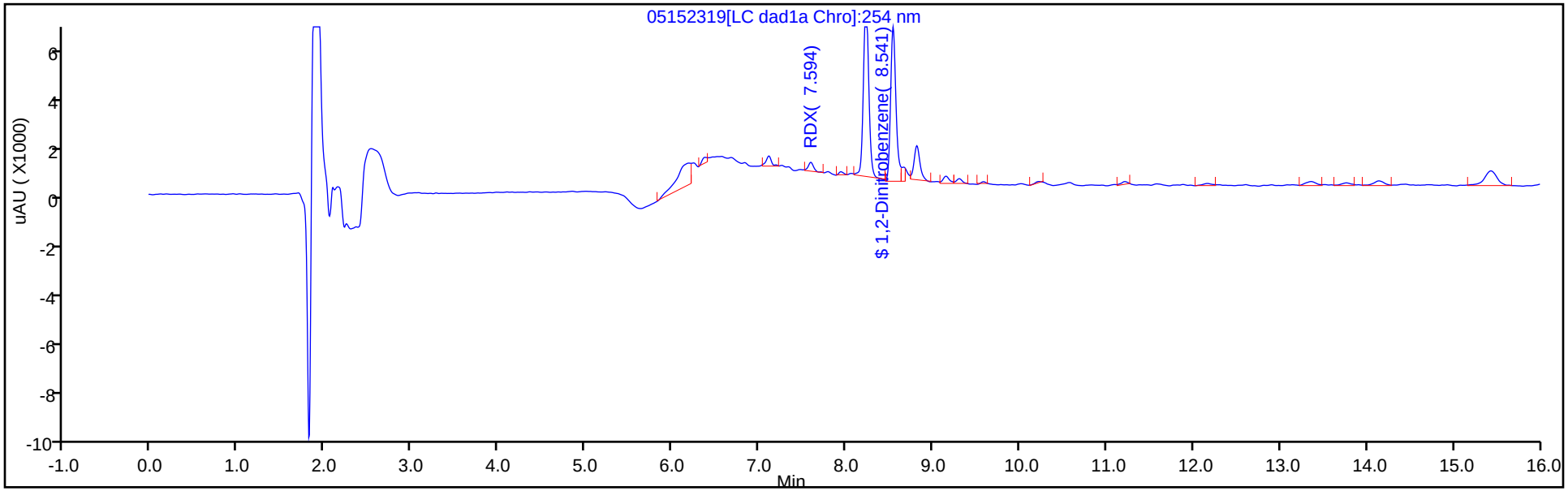
Report Date: 16-May-2023 13:24:43 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

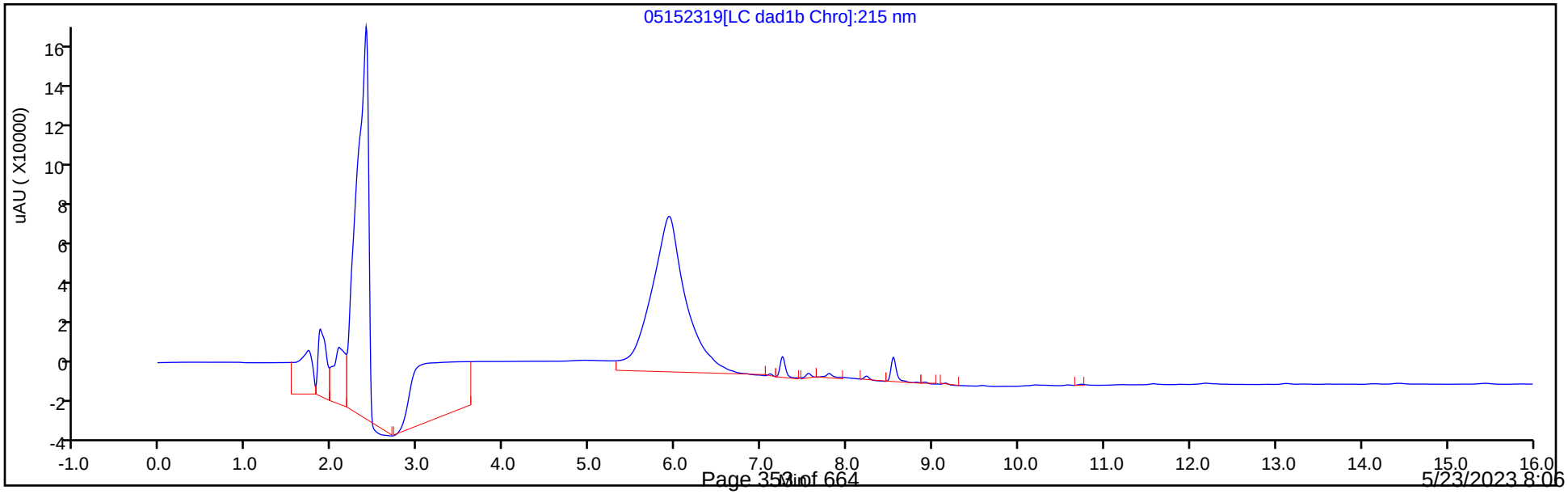
Data File: \\chromfs\denver\chromdata\chhplc_x\20230515-121447.b\05152319.d

Injection Date:	15-May-2023 19:23:57	Instrument ID:	CHHPLC_X3	Operator ID:	JZ/JG
Lims ID:	280-176268-A-4-A	Lab Sample ID:	280-176268-4	Worklist Smp#:	19
Client ID:	FWG-003-230301-FB				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\CHHPLC_X\20230515-121447.b\05152319.D				
Lims ID:	280-176268-A-4-A				
Client ID:	FWG-003-230301-FB				
Sample Type:	Client				
Inject. Date:	15-May-2023 19:23:57	ALS Bottle#:	17	Worklist Smp#:	19
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-176268-A-4-A				
Operator ID:	JZ/JG	Instrument ID:	CHHPLC_X3		
Method:	\\chromfs\Denver\ChromData\CHHPLC_X\20230515-121447.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	16-May-2023 13:24:37	Calib Date:	24-Feb-2023 17:41:20		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\CHHPLC_X\20230224-118952.b\02240018.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX1672				

First Level Reviewer: K8YG Date: 16-May-2023 08:06:50

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2000	0.2075	103.76

Manual Integration/User Assign Peak Report

Eurofins Denver

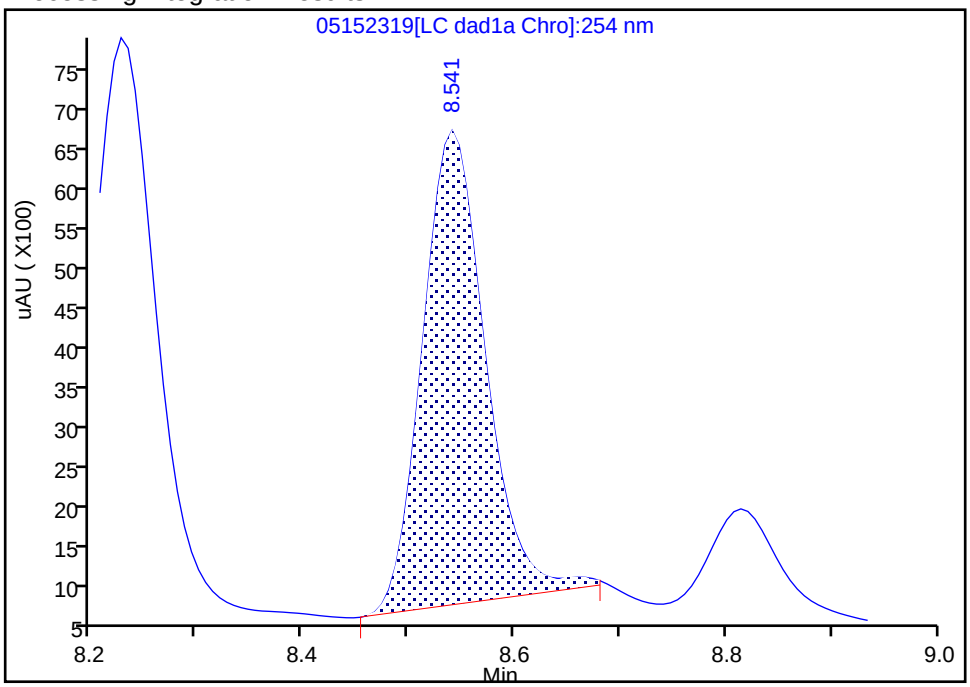
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230515-121447.b\05152319.d				
Injection Date:	15-May-2023 19:23:57	Instrument ID:	CHHPLC_X3		
Lims ID:	280-176268-A-4-A	Lab Sample ID:	280-176268-4		
Client ID:	FWG-003-230301-FB				
Operator ID:	JZ/JG	ALS Bottle#:	17	Worklist Smp#:	19
Injection Vol:	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		

$ 10 1,2-Dinitrobenzene, CAS: 528-29-0

Signal: 1

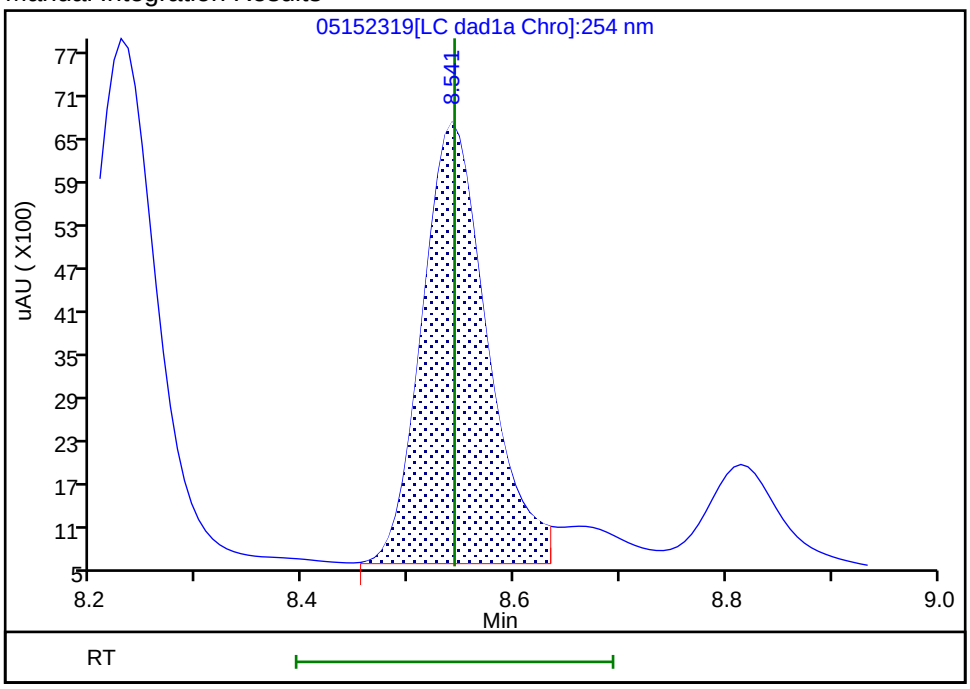
Processing Integration Results

RT: 8.54
Area: 24581
Amount: 0.194610
Amount Units: ug/mL



Manual Integration Results

RT: 8.54
Area: 26212
Amount: 0.207523
Amount Units: ug/mL



Reviewer: LV5D, 16-May-2023 13:04:57
Audit Action: Split an Integrated Peak Audit Reason: Baseline

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-176268-1

SDG No.:

Client Sample ID: FWG-003-230301-FB | Lab Sample ID: 280-176268-4

Matrix: Water | Lab File ID: 05160018.D

Analysis Method: 8330B | Date Collected: 05/09/2023 08:15

Extraction Method: 3535 | Date Extracted: 05/12/2023 15:04

Sample wt/vol: 494.3(mL) | Date Analyzed: 05/16/2023 23:46

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: Luna-phenylhex ID: 4.6(mm)

% Moisture: % Solids: | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 612694 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
121-82-4	*RDX*	*0.55*	*J1*	*0.21*	0.20	*0.052*

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	99		83-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\G2_LUNA\20230516-121515.b\05160018.D
Lims ID: 280-176268-A-4-A
Client ID: FWG-003-230301-FB
Sample Type: Client
Inject. Date: 16-May-2023 23:46:11 ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-176268-A-4-A
Operator ID: JZ/JG Instrument ID: CHHPLC_G2_LUNA

Method: \\chromfs\Denver\ChromData\G2_LUNA\20230516-121515.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 17-May-2023 13:45:47 Calib Date: 07-Apr-2023 23:50:31
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\04070018.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX1653

First Level Reviewer: K8YG Date: 17-May-2023 12:43:51

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
6 HMX	1	6.838	6.888	-0.050	3824	0.0211	
8 RDX	1	9.105	9.168	-0.063	11805	0.0547	
9 Nitrobenzene	1		11.688			ND	
$ 10 1,2-Dinitrobenzene	1	12.685	12.681	0.004	52302	0.1971	
12 1,3-Dinitrobenzene	1		14.814			ND	
13 Nitroglycerin	2		15.321			ND	
14 o-Nitrotoluene	1		15.901			ND	
15 p-Nitrotoluene	1		16.128			ND	
16 4-Amino-2,6-dinitrotoluene	1		16.694			ND	
17 m-Nitrotoluene	1		16.981			ND	
18 2-Amino-4,6-dinitrotoluene	1		17.541			ND	
19 1,3,5-Trinitrobenzene	1		17.608			ND	
20 2,6-Dinitrotoluene	1		18.814			ND	
21 2,4-Dinitrotoluene	1		19.274			ND	
22 Tetryl	1		22.621			ND	
23 2,4,6-Trinitrotoluene	1		23.428			ND	
24 PETN	2		24.661			ND	

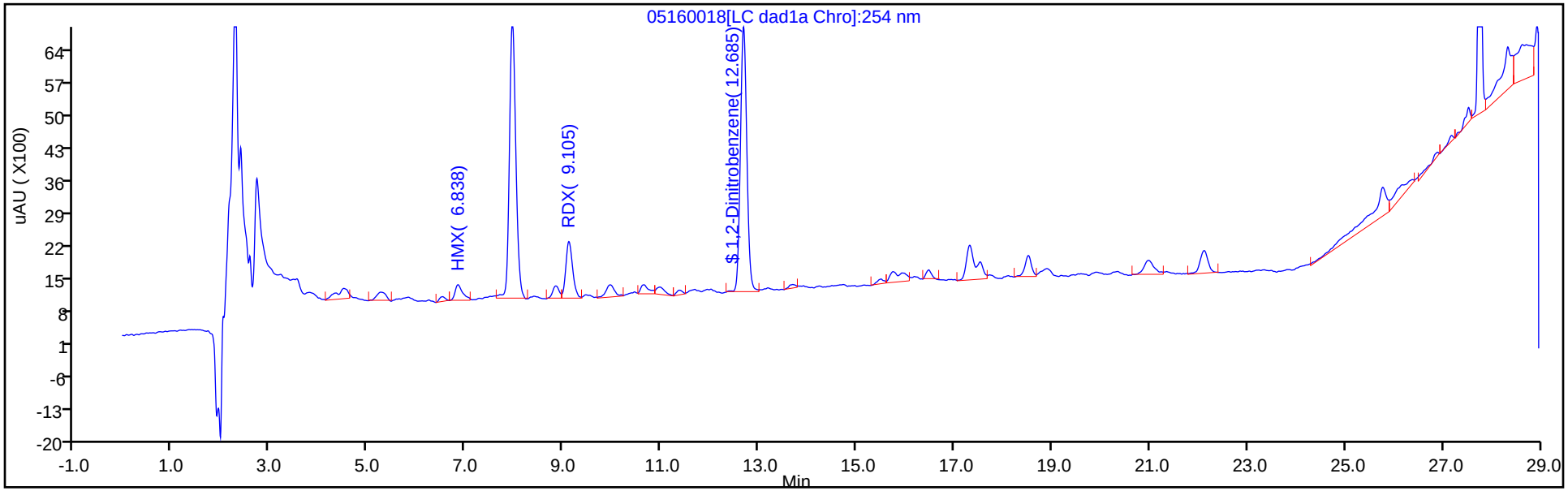
QC Flag Legend
Processing Flags

Report Date: 17-May-2023 13:46:13 Chrom Revision: 2.3 16-May-2023 16:37:30

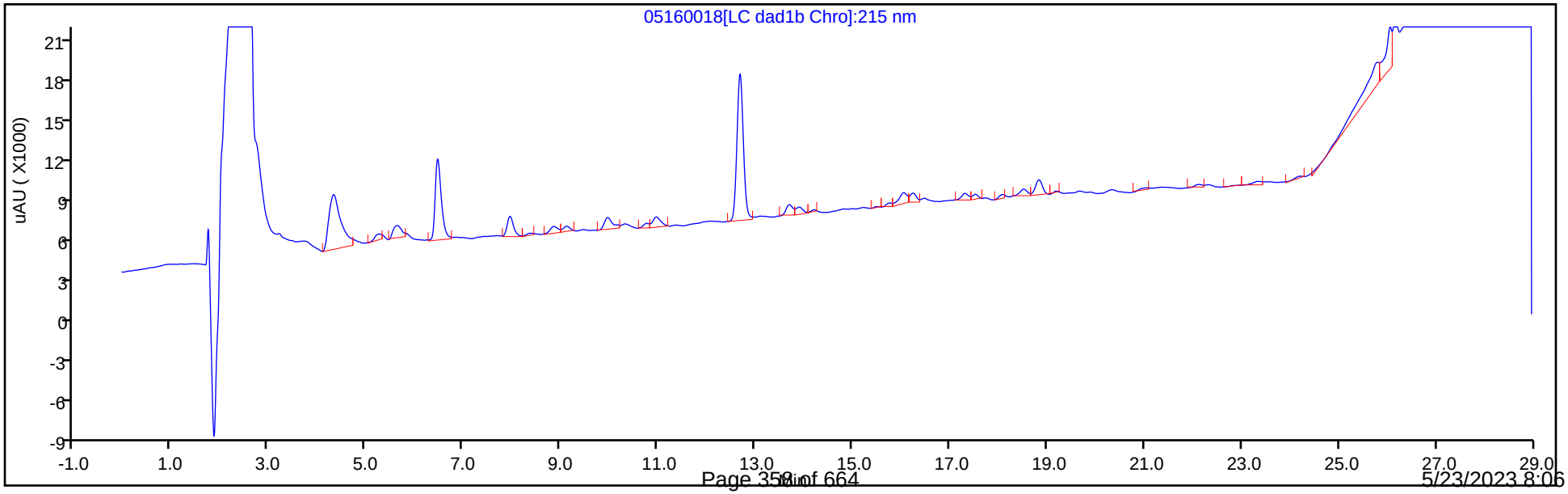
Eurofins Denver

Data File:	\\chromfs\denver\chromdata\g2_luna\20230516-121515.b\05160018.d				
Injection Date:	16-May-2023 23:46:11	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	JZ/JG
Lims ID:	280-176268-A-4-A	Lab Sample ID:	280-176268-4	Worklist Smp#:	18
Client ID:	FWG-003-230301-FB				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\G2_LUNA\20230516-121515.b\05160018.D				
Lims ID:	280-176268-A-4-A				
Client ID:	FWG-003-230301-FB				
Sample Type:	Client				
Inject. Date:	16-May-2023 23:46:11	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-176268-A-4-A				
Operator ID:	JZ/JG	Instrument ID:	CHHPLC_G2_LUNA		
Method:	\\chromfs\Denver\ChromData\G2_LUNA\20230516-121515.b\G2_8330_Luna.m				
Limit Group:	GCSV - 8330				
Last Update:	17-May-2023 13:45:47	Calib Date:	07-Apr-2023 23:50:31		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\04070018.D				
Column 1 :	Luna-Phenyl hexyl (4.60 mm)		Det: LC DAD1A, 254 nm		
Process Host:	CTX1653				

First Level Reviewer: K8YG Date: 17-May-2023 12:43:51

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2000	0.1971	98.53

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-176268-1

SDG No.:

Client Sample ID: FWG-003-230301-FB RE | Lab Sample ID: 280-176268-4 RE

Matrix: Water | Lab File ID: 05180020.D

Analysis Method: 8330B | Date Collected: 05/09/2023 08:15

Extraction Method: 3535 | Date Extracted: 05/18/2023 13:20

Sample wt/vol: 497.6(mL) | Date Analyzed: 05/19/2023 01:35

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: % Solids: | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 613045 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-99-0	*4-Nitrotoluene*	*0.40*	*U H*	*0.41*	0.40	*0.10*

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	107	M	83-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\05180020.D
Lims ID: 280-176268-B-4-A
Client ID: FWG-003-230301-FB
Sample Type: Client
Inject. Date: 19-May-2023 01:35:52 ALS Bottle#: 20 Worklist Smp#: 20
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-176268-B-4-A
Operator ID: JZ/JG Instrument ID: CHHPLC_X3

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 19-May-2023 12:21:50 Calib Date: 24-Feb-2023 17:41:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X\20230224-118952.b\02240018.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX1654

First Level Reviewer: LV5D Date: 19-May-2023 11:36:39

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/mL	Flags
4 HMX	1		6.546			ND	
8 RDX	1	7.581	7.560	0.021	1081	0.0102	
$ 10 1,2-Dinitrobenzene	1	8.515	8.513	0.002	26954	0.2134	M
11 1,3,5-Trinitrobenzene	1		8.640			ND	U
12 1,3-Dinitrobenzene	1		9.253			ND	7
13 Nitrobenzene	1		9.626			ND	7
15 Tetryl	1		9.986			ND	
16 Nitroglycerin	2		10.439			ND	
17 2,4,6-Trinitrotoluene	1		10.873			ND	
18 4-Amino-2,6-dinitrotoluene	1		11.066			ND	U
19 2-Amino-4,6-dinitrotoluene	1		11.319			ND	
20 2,6-Dinitrotoluene	1		11.473			ND	
21 2,4-Dinitrotoluene	1		11.639			ND	
22 o-Nitrotoluene	1		12.459			ND	
23 p-Nitrotoluene	1		12.873			ND	
24 m-Nitrotoluene	1		13.446			ND	
25 PETN	2		14.599			ND	

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection
Review Flags
M - Manually Integrated
U - Marked Undetected

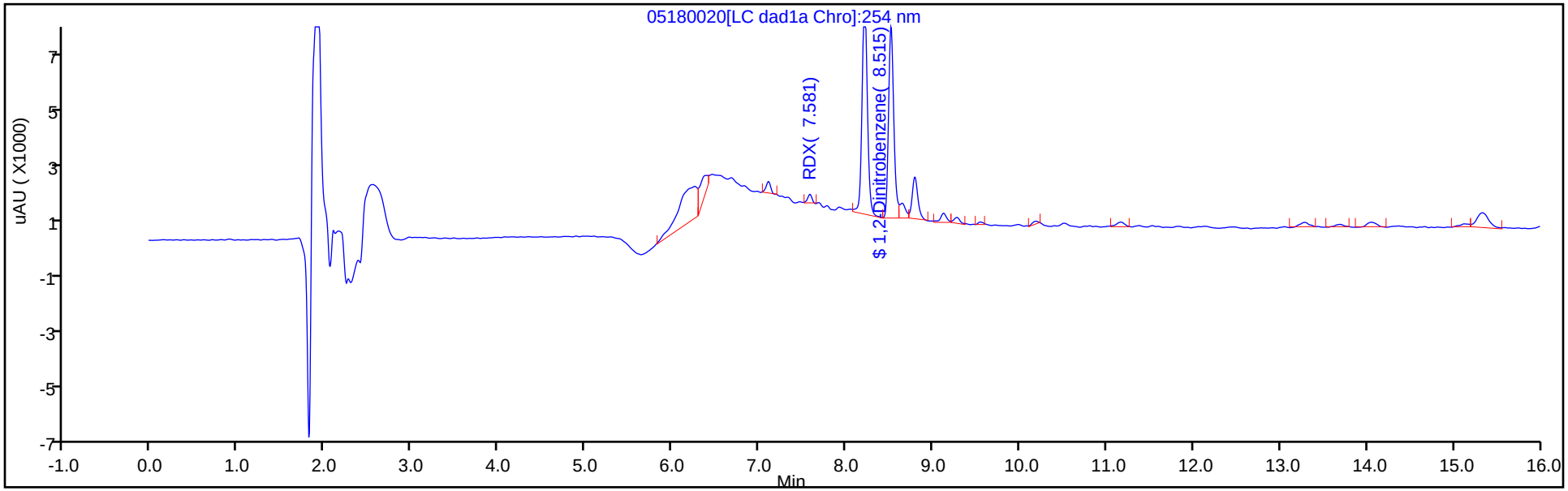
Report Date: 19-May-2023 12:21:56 Chrom Revision: 2.3 16-May-2023 16:37:30

Eurofins Denver

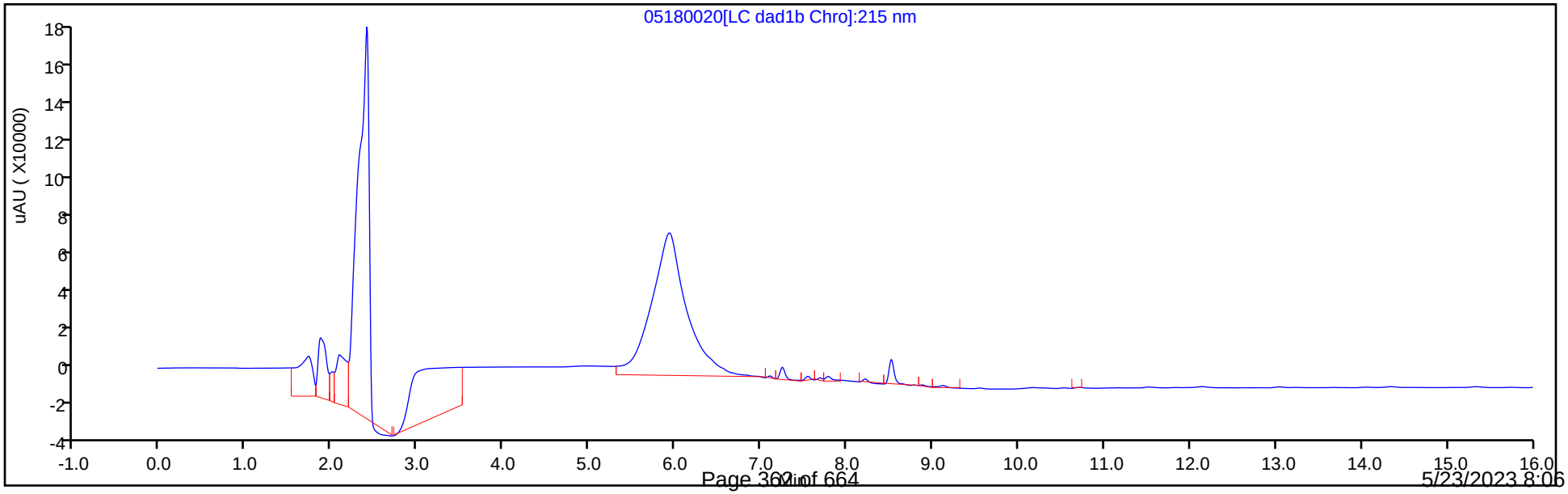
Data File: \\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180020.d

Injection Date:	19-May-2023 01:35:52	Instrument ID:	CHHPLC_X3	Operator ID:	JZ/JG
Lims ID:	280-176268-B-4-A	Lab Sample ID:	280-176268-4	Worklist Smp#:	20
Client ID:	FWG-003-230301-FB				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\05180020.D				
Lims ID:	280-176268-B-4-A				
Client ID:	FWG-003-230301-FB				
Sample Type:	Client				
Inject. Date:	19-May-2023 01:35:52	ALS Bottle#:	20	Worklist Smp#:	20
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-176268-B-4-A				
Operator ID:	JZ/JG	Instrument ID:	CHHPLC_X3		
Method:	\\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	19-May-2023 12:21:50	Calib Date:	24-Feb-2023 17:41:20		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\CHHPLC_X\20230224-118952.b\02240018.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX1654				

First Level Reviewer: LV5D Date: 19-May-2023 11:36:39

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2000	0.2134	106.70

Manual Integration/User Assign Peak Report

Eurofins Denver

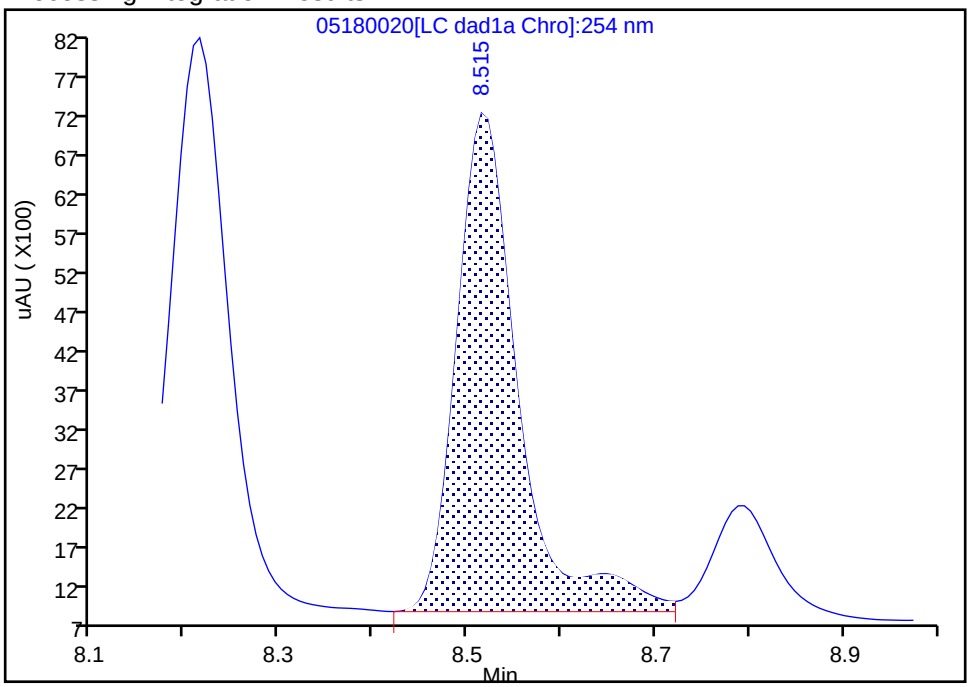
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180020.d				
Injection Date:	19-May-2023 01:35:52	Instrument ID:	CHHPLC_X3		
Lims ID:	280-176268-B-4-A	Lab Sample ID:	280-176268-4		
Client ID:	FWG-003-230301-FB				
Operator ID:	JZ/JG	ALS Bottle#:	20	Worklist Smp#:	20
Injection Vol:	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 1,2-Dinitrobenzene, CAS: 528-29-0

Signal: 1

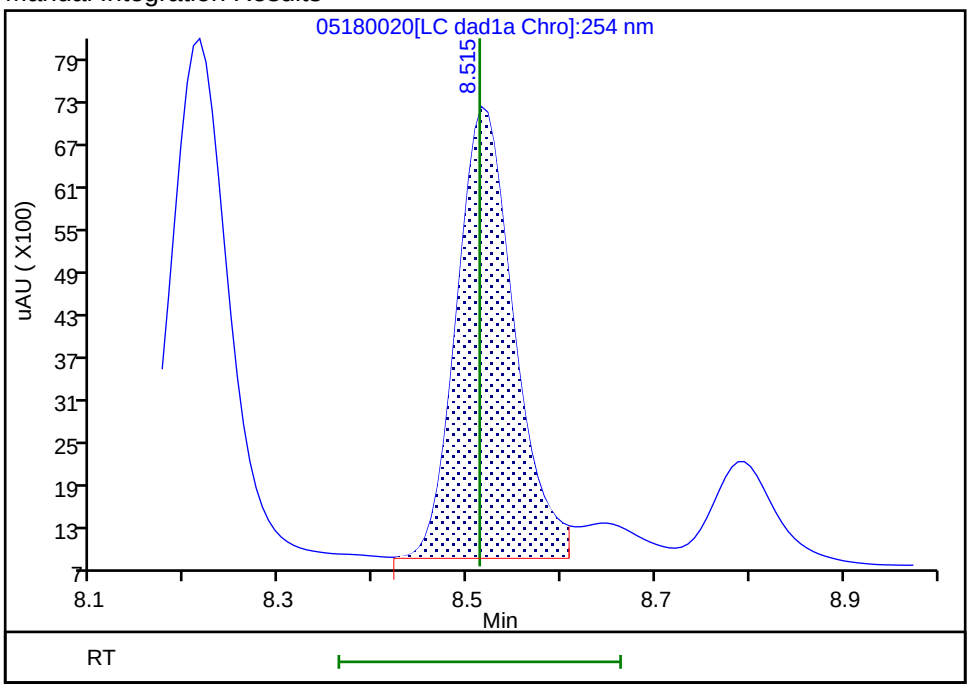
Processing Integration Results

RT: 8.51
Area: 29374
Amount: 0.232557
Amount Units: ug/mL



Manual Integration Results

RT: 8.51
Area: 26954
Amount: 0.213398
Amount Units: ug/mL



Reviewer: LV5D, 19-May-2023 11:36:38 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Baseline

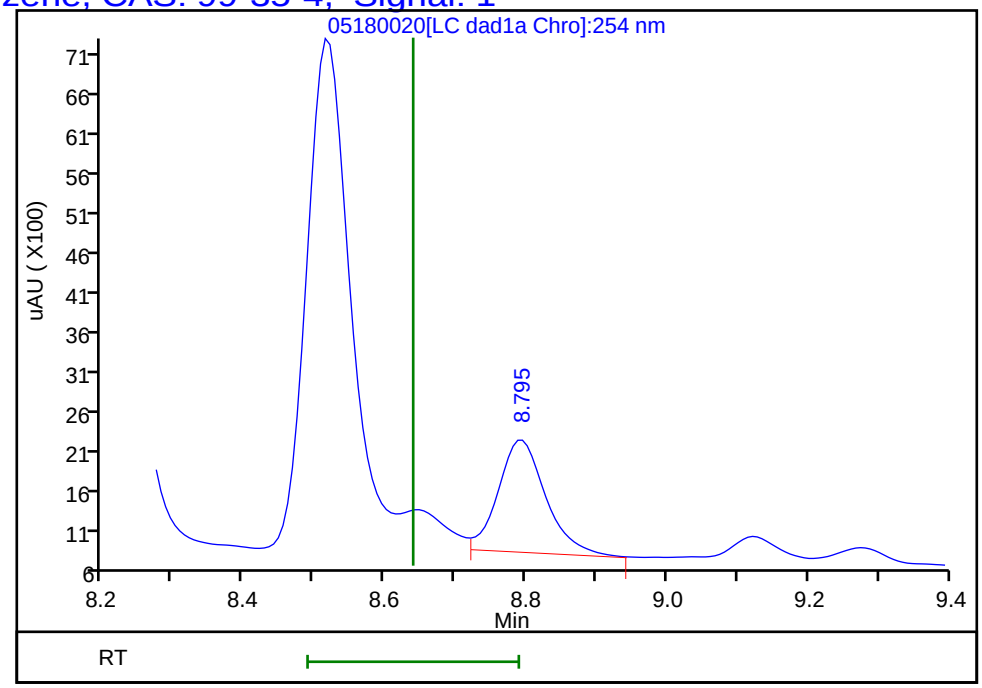
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180020.d				
Injection Date:	19-May-2023 01:35:52	Instrument ID:	CHHPLC_X3		
Lims ID:	280-176268-B-4-A	Lab Sample ID:	280-176268-4		
Client ID:	FWG-003-230301-FB				
Operator ID:	JZ/JG	ALS Bottle#:	20	Worklist Smp#:	20
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 1,3,5-Trinitrobenzene, CAS: 99-35-4, Signal: 1

RT: 8.79
Response: 6485
Amount: 0.029865



Reviewer: LV5D, 19-May-2023 11:36:39
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

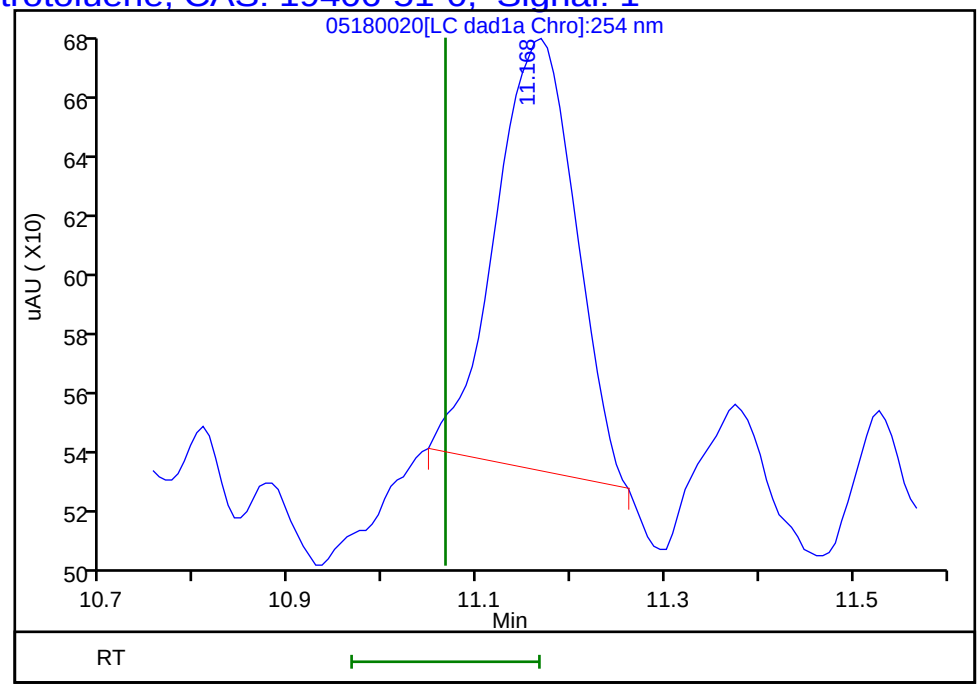
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180020.d				
Injection Date:	19-May-2023 01:35:52	Instrument ID:	CHHPLC_X3		
Lims ID:	280-176268-B-4-A	Lab Sample ID:	280-176268-4		
Client ID:	FWG-003-230301-FB				
Operator ID:	JZ/JG	ALS Bottle#:	20	Worklist Smp#:	20
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		

18 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0, Signal: 1

RT: 11.17
Response: 811
Amount: 0.005235



Reviewer: LV5D, 19-May-2023 11:36:39
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-176268-1

SDG No.:

Client Sample ID: FWG-003-230301-FB RE | Lab Sample ID: 280-176268-4 RE

Matrix: Water | Lab File ID: 05190016.D

Analysis Method: 8330B | Date Collected: 05/09/2023 08:15

Extraction Method: 3535 | Date Extracted: 05/18/2023 13:20

Sample wt/vol: 497.6(mL) | Date Analyzed: 05/19/2023 19:42

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: Luna-phenylhex ID: 4.6(mm)

% Moisture: % Solids: | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 613169 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-08-1	*3-Nitrotoluene*	*0.35*	*U H*	*0.40*	0.35	*0.20*

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	103		83-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\G2_LUNA\20230519-121648.b\05190016.D
Lims ID: 280-176268-B-4-A
Client ID: FWG-003-230301-FB
Sample Type: Client
Inject. Date: 19-May-2023 19:42:53 ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-176268-B-4-A
Operator ID: JZ/JG Instrument ID: CHHPLC_G2_LUNA

Method: \\chromfs\Denver\ChromData\G2_LUNA\20230519-121648.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 20-May-2023 11:50:48 Calib Date: 07-Apr-2023 23:50:31
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\04070018.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX1663

First Level Reviewer: LV5D Date: 20-May-2023 11:48:09

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
	6 HMX	1	6.819	6.835	-0.016	3177	0.0175	
	8 RDX	1	9.052	9.102	-0.050	12079	0.0560	
	9 Nitrobenzene	1		11.622			ND	
$	10 1,2-Dinitrobenzene	1	12.572	12.582	-0.010	54667	0.2060	
	12 1,3-Dinitrobenzene	1		14.695			ND	
	13 Nitroglycerin	2		15.169			ND	
	14 o-Nitrotoluene	1		15.749			ND	U
	15 p-Nitrotoluene	1		15.969			ND	
	16 4-Amino-2,6-dinitrotoluene	1		16.509			ND	
	17 m-Nitrotoluene	1		16.809			ND	
	18 2-Amino-4,6-dinitrotoluene	1		17.329			ND	U
	19 1,3,5-Trinitrobenzene	1		17.502			ND	
	20 2,6-Dinitrotoluene	1	18.612	18.622	-0.010	2326	0.008310	
	21 2,4-Dinitrotoluene	1		19.082			ND	
	22 Tetryl	1		22.355			ND	
	23 2,4,6-Trinitrotoluene	1		23.182			ND	
	24 PETN	2		24.382			ND	

QC Flag Legend

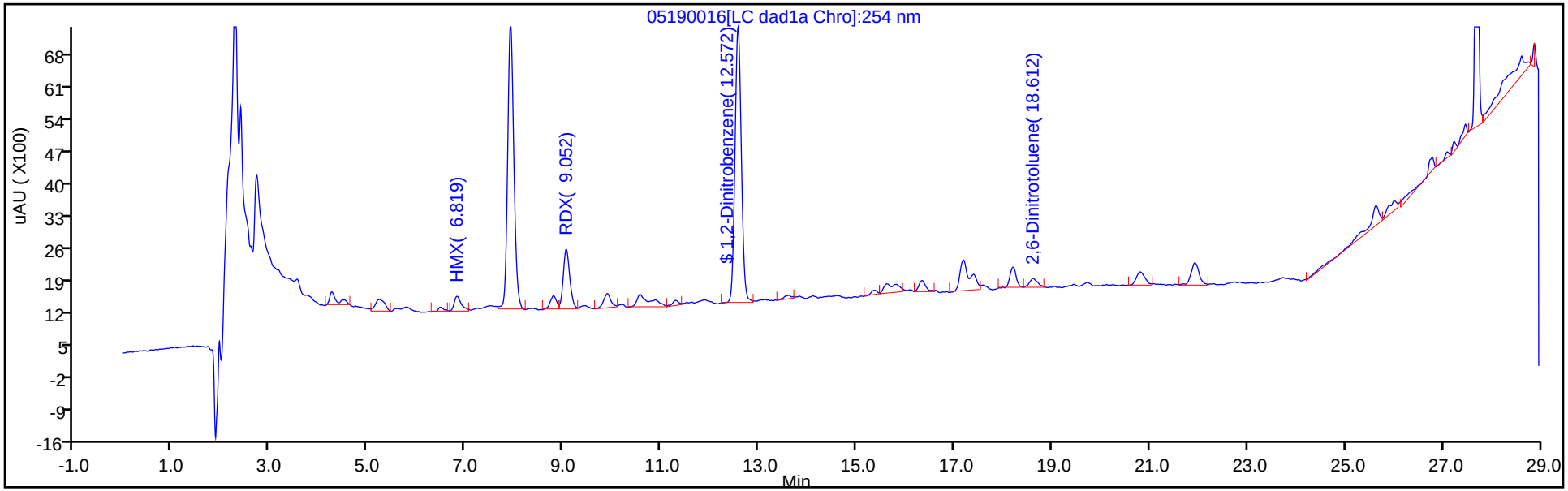
Processing Flags
Review Flags
U - Marked Undetected

Report Date: 20-May-2023 11:50:52 Chrom Revision: 2.3 16-May-2023 16:37:30

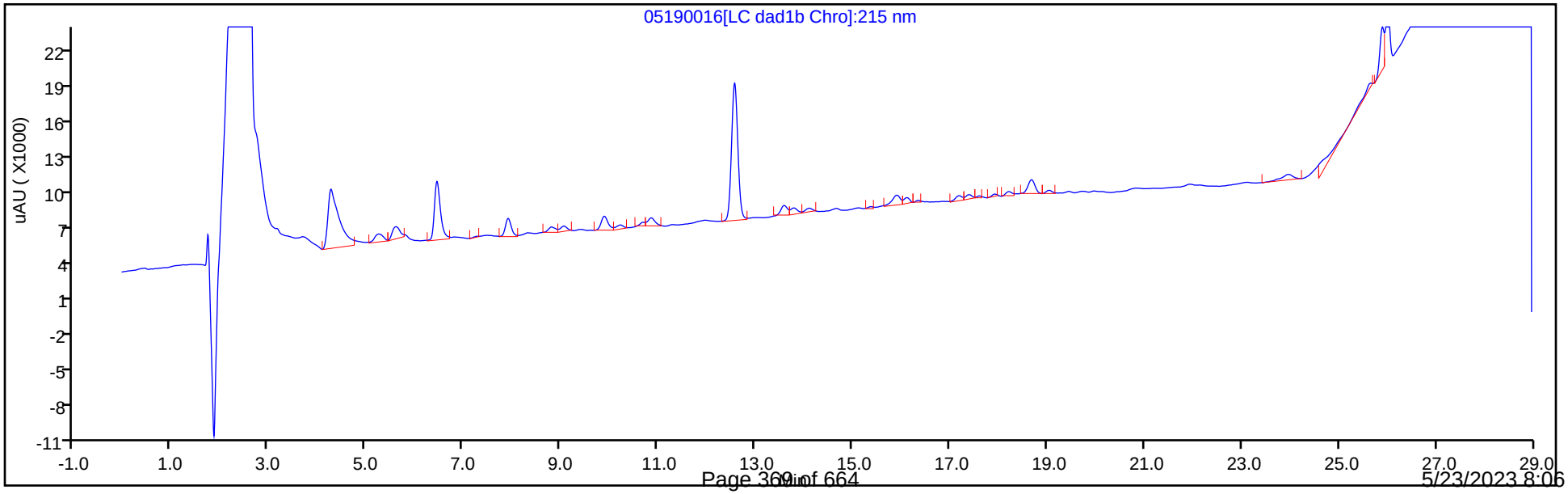
Eurofins Denver

Data File:	\\chromfs\denver\chromdata\g2_luna\20230519-121648.b\05190016.d				
Injection Date:	19-May-2023 19:42:53	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	JZ/JG
Lims ID:	280-176268-B-4-A	Lab Sample ID:	280-176268-4	Worklist Smp#:	16
Client ID:	FWG-003-230301-FB				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\G2_LUNA\20230519-121648.b\05190016.D				
Lims ID:	280-176268-B-4-A				
Client ID:	FWG-003-230301-FB				
Sample Type:	Client				
Inject. Date:	19-May-2023 19:42:53	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-176268-B-4-A				
Operator ID:	JZ/JG	Instrument ID:	CHHPLC_G2_LUNA		
Method:	\\chromfs\Denver\ChromData\G2_LUNA\20230519-121648.b\G2_8330_Luna.m				
Limit Group:	GCSV - 8330				
Last Update:	20-May-2023 11:50:48	Calib Date:	07-Apr-2023 23:50:31		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\04070018.D				
Column 1 :	Luna-Phenyl hexyl (4.60 mm)		Det: LC DAD1A, 254 nm		
Process Host:	CTX1663				

First Level Reviewer: LV5D Date: 20-May-2023 11:48:09

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2000	0.2060	102.99

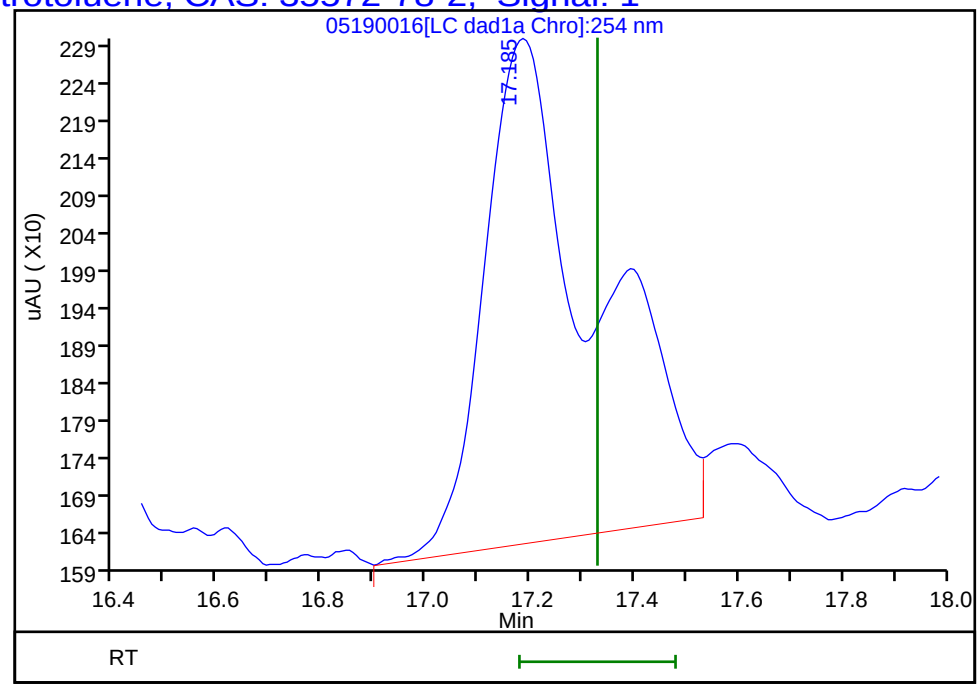
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\denver\chromdata\g2_luna\20230519-121648.b\05190016.d				
Injection Date:	19-May-2023 19:42:53	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-176268-B-4-A	Lab Sample ID:	280-176268-4		
Client ID:	FWG-003-230301-FB				
Operator ID:	JZ/JG	ALS Bottle#:	16	Worklist Smp#:	16
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

RT: 17.19
Response: 10021
Amount: 0.025035



Reviewer: LV5D, 20-May-2023 11:48:16
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

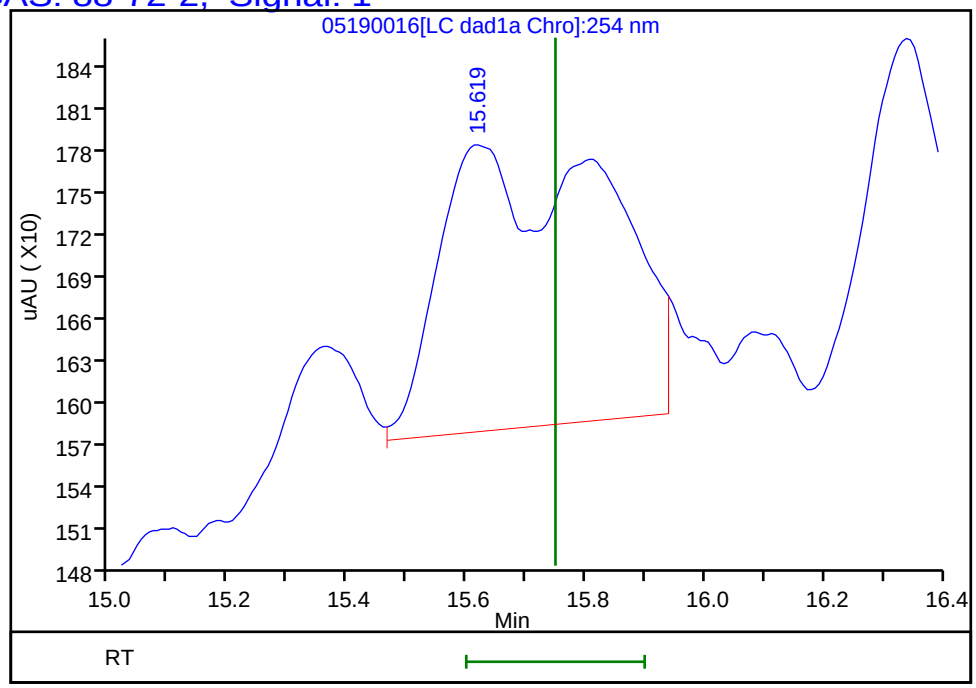
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\denver\chromdata\g2_luna\20230519-121648.b\05190016.d				
Injection Date:	19-May-2023 19:42:53	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-176268-B-4-A	Lab Sample ID:	280-176268-4		
Client ID:	FWG-003-230301-FB				
Operator ID:	JZ/JG	ALS Bottle#:	16	Worklist Smp#:	16
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: 15.62
Response: 3874
Amount: 0.015930



Reviewer: LV5D, 20-May-2023 11:48:09
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 Denver Job No.: 280-176268-1 Analy Batch No.: 607981

SDG No.:

Instrument ID: CHHPLC_G2_LUNA GC Column: Luna-phenyl ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 19:03 Calibration End Date: 04/07/2023 23:50 Calibration ID: 79168

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-607981/18	04070018.D
Level 2	IC 280-607981/17	04070017.D
Level 3	IC 280-607981/16	04070016.D
Level 4	IC 280-607981/15	04070015.D
Level 5	IC 280-607981/14	04070014.D
Level 6	IC 280-607981/13	04070013.D
Level 7	IC 280-607981/12	04070012.D
Level 8	IC 280-607981/11	04070011.D
Level 9	IC 280-607981/10	04070010.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8	LVL 9		RT WINDOW	AVG RT
TNX	5.328	5.338	5.338	5.334	5.321	5.320	5.310	5.302	5.225		5.171 - 5.471	5.313
DNX	6.195	6.212	6.205	6.201	6.194	6.187	6.177	6.162	6.078		6.044 - 6.344	6.179
HMX	6.855	6.865	6.858	6.854	6.847	6.840	6.837	6.829	6.745		6.697 - 6.997	6.837
MNX	7.715	7.732	7.732	7.721	7.714	7.700	7.697	7.682	7.591		7.564 - 7.864	7.698
Picric acid	8.215	8.245	8.245	8.221	8.187	8.153	8.124	8.095	+++++		8.037 - 8.337	8.186
RDX	9.135	9.145	9.145	9.134	9.127	9.113	9.110	9.095	9.005		8.977 - 9.277	9.112
Nitrobenzene	11.661	11.672	11.672	11.654	11.654	11.640	11.623	11.615	11.518		11.504 - 11.804	11.634
3,5-Dinitroaniline	14.481	14.498	14.492	14.474	14.480	14.453	14.443	14.435	14.378		14.330 - 14.630	14.459
1,3-Dinitrobenzene	14.761	14.765	14.765	14.747	14.754	14.727	14.717	14.709	14.624		14.604 - 14.904	14.730
Nitroglycerin	15.268	15.278	15.278	15.267	15.274	15.247	15.243	15.235	15.178		15.124 - 15.424	15.252
2-Nitrotoluene	15.835	15.845	15.838	15.827	15.827	15.807	15.797	15.789	15.731		15.677 - 15.977	15.811
4-Nitrotoluene	16.055	16.072	16.072	16.054	16.054	16.033	16.023	16.015	15.904		15.904 - 16.204	16.031
4-Amino-2,6-dinitrotoluene	16.608	16.605	16.605	16.594	16.594	16.567	16.557	16.549	16.478		16.444 - 16.744	16.573
3-Nitrotoluene	16.908	16.912	16.912	16.901	16.900	16.880	16.870	16.862	16.791		16.750 - 17.050	16.882
2-Amino-4,6-dinitrotoluene	17.421	17.425	17.425	17.414	17.414	17.387	17.377	17.369	17.371		17.264 - 17.564	17.400
1,3,5-Trinitrobenzene	17.581	17.592	17.585	17.574	17.574	17.553	17.550	17.542	17.438		17.424 - 17.724	17.554
2,6-Dinitrotoluene	18.728	18.732	18.725	18.714	18.714	18.693	18.683	18.675	18.611		18.564 - 18.864	18.697
2,4-Dinitrotoluene	19.175	19.185	19.178	19.174	19.174	19.153	19.143	19.135	19.071		19.024 - 19.324	19.154
Tetryl	22.495	22.492	22.485	22.474	22.481	22.447	22.450	22.429	22.378		22.331 - 22.631	22.459
2,4,6-Trinitrotoluene	23.302	23.312	23.305	23.301	23.301	23.267	23.277	23.249	23.205		23.151 - 23.451	23.280
PETN	24.568	24.558	24.545	24.541	24.547	24.520	24.530	24.502	24.478		24.397 - 24.697	24.532
1,2-Dinitrobenzene	12.628	12.645	12.638	12.621	12.627	12.600	12.590	12.582	12.491		12.477 - 12.777	12.602

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-176268-1 Analy Batch No.: 607981

SDG No.:

Instrument ID: CHHPLC_G2_LUNA GC Column: Luna-phenyl ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 19:03 Calibration End Date: 04/07/2023 23:50 Calibration ID: 79168

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-607981/18	04070018.D
Level 2	IC 280-607981/17	04070017.D
Level 3	IC 280-607981/16	04070016.D
Level 4	IC 280-607981/15	04070015.D
Level 5	IC 280-607981/14	04070014.D
Level 6	IC 280-607981/13	04070013.D
Level 7	IC 280-607981/12	04070012.D
Level 8	IC 280-607981/11	04070011.D
Level 9	IC 280-607981/10	04070010.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD /RSE	#	MAX %RSD /RSE	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								
TNX	465503 385731 393451	400548 373592	406720 387204	392213 387967	Ave		399214.403				6.7		20.0			
DNX	309391 281722 284665	294505 271389	285075 282166	284875 282014	Ave		286200.308				3.7		20.0			
HMX	211600 169036 174964	191550 174635	182080 173619	177110 174813	Ave		181045.130				7.2		20.0			
MNX	271208 255969 286553	265081 247519	261919 257565	259135 256473	Ave		262380.384				4.3		20.0			
Picric acid	160100 146960 +++++	159050 153050	162080 153380	156040 154224	Ave		155610.500				3.1		20.0			
RDX	254300 201916 209153	227100 208078	215980 206971	210150 207770	Ave		215713.081				7.5		20.0			
Nitrobenzene	400200 363800 377966	387200 370995	388100 375580	379000 376803	Ave		379960.400				2.8		20.0			
3,5-Dinitroaniline	472500 427012 391169	440550 442010	445360 440969	441460 444605	Lin2	402.650561	429933.502							0.9980		0.9900

Note: The M1 coefficient is the same as Ave CF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-176268-1 Analy Batch No.: 607981

SDG No.:

Instrument ID: CHHPLC_G2_LUNA GC Column: Luna-phenyl ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 19:03 Calibration End Date: 04/07/2023 23:50 Calibration ID: 79168

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD /RSE	#	MAX %RSD /RSE	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								
1,3-Dinitrobenzene	620200 550236 629665	571250 567240	589440 569037	562610 573365	Ave		581449.216				4.6		20.0			
Nitroglycerin	127250 119170 122979	126325 122944	128966 122575	125509 123389	Ave		124345.324				2.4		20.0			
2-Nitrotoluene	259600 232616 248130	238950 239330	243700 242191	241150 243027	Ave		243188.270				3.1		20.0			
4-Nitrotoluene	238800 207820 211238	222200 213408	218540 214554	215370 215111	Ave		217448.976				4.1		20.0			
4-Amino-2,6-dinitrotoluene	300400 264248 275631	242000 273790	274440 273276	274610 275101	Ave		272610.657				5.5		20.0			
3-Nitrotoluene	267300 262304 274153	251050 269340	270580 272416	271500 273461	Ave		268011.502				2.7		20.0			
2-Amino-4,6-dinitrotoluene	414800 392412 354280	414750 406103	403820 402883	408660 404845	Ave		400283.640				4.6		20.0			
1,3,5-Trinitrobenzene	374800 362856 434595	358900 372675	367000 377386	376350 381831	Ave		378488.102				5.9		20.0			
2,6-Dinitrotoluene	350900 258664 269431	293450 267680	271600 267216	270760 269366	Ave		279896.324				10.1		20.0			
2,4-Dinitrotoluene	665000 523424 547166	569100 539635	562660 540656	547910 545578	Ave		560125.368				7.4		20.0			
Tetryl	284700 259416 268784	273000 265883	268940 265971	279690 268469	Ave		270539.259				2.8		20.0			
2,4,6-Trinitrotoluene	404200 386072 401631	476500 398653	420760 398173	418170 401312	Ave		411718.951				6.4		20.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-176268-1 Analy Batch No.: 607981

SDG No.:

Instrument ID: CHHPLC_G2_LUNA GC Column: Luna-phenyl ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 19:03 Calibration End Date: 04/07/2023 23:50 Calibration ID: 79168

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD /RSE	#	MAX %RSD /RSE	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								
PETN	92140 120485 127411	107635 124296	117230 125039	124639 126431	Ave		118367.323				9.8		20.0			
1,2-Dinitrobenzene	284000 249520 258328	281350 258703	276120 256417	266300 257906	Ave		265404.894				4.6		20.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver Job No.: 280-176268-1 Analy Batch No.: 607981

SDG No.:

Instrument ID: CHHPLC_G2_LUNA GC Column: Luna-phenyl ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 19:03 Calibration End Date: 04/07/2023 23:50 Calibration ID: 79168

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-607981/18	04070018.D
Level 2	IC 280-607981/17	04070017.D
Level 3	IC 280-607981/16	04070016.D
Level 4	IC 280-607981/15	04070015.D
Level 5	IC 280-607981/14	04070014.D
Level 6	IC 280-607981/13	04070013.D
Level 7	IC 280-607981/12	04070012.D
Level 8	IC 280-607981/11	04070011.D
Level 9	IC 280-607981/10	04070010.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		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
TNX	Ave	4669 149885	8035 271856	20397 389131	39339 986578	96722	0.0100 0.401	0.0201 0.702	0.0502 1.00	0.100 2.51	0.251
DNX	Ave	3097 108664	5896 197714	14268 282296	28516 712375	70501	0.0100 0.400	0.0200 0.701	0.0501 1.00	0.100 2.50	0.250
HMX	Ave	2116 69854	3831 121533	9104 174813	17711 437409	42259	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
MNX	Ave	3165 115542	6187 210405	15283 299304	30241 836019	74679	0.0117 0.467	0.0233 0.817	0.0584 1.17	0.117 2.92	0.292
Picric acid	Ave	1601 61220	3181 107366	8104 154224	15604 +++++	36740	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 +++++	0.250
RDX	Ave	2543 83231	4542 144880	10799 207770	21015 522882	50479	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
Nitrobenzene	Ave	4002 148398	7744 262906	19405 376803	37900 944914	90950	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
3,5-Dinitroaniline	Lin2	4725 176804	8811 308678	22268 444605	44146 977923	106753	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
1,3-Dinitrobenzene	Ave	6202 226896	11425 398326	29472 573365	56261 1574162	137559	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
Nitroglycerin	Ave	12725 491776	25265 858025	64483 1233892	125509 3074483	297926	0.100 4.00	0.200 7.00	0.500 10.0	1.00 25.0	2.50
2-Nitrotoluene	Ave	2596 95732	4779 169534	12185 243027	24115 620325	58154	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
4-Nitrotoluene	Ave	2388 85363	4444 150188	10927 215111	21537 528095	51955	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
4-Amino-2,6-dinitrotoluene	Ave	3004	4840	13722	27461	66062	0.0100	0.0200	0.0500	0.100	0.250

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver Job No.: 280-176268-1 Analy Batch No.: 607981

SDG No.:

Instrument ID: CHHPLC_G2_LUNA GC Column: Luna-phenyl ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/07/2023 19:03 Calibration End Date: 04/07/2023 23:50 Calibration ID: 79168

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		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
		109516	191293	275101	689078		0.400	0.700	1.00	2.50	
3-Nitrotoluene	Ave	2673	5021	13529	27150	65576	0.0100	0.0200	0.0500	0.100	0.250
		107736	190691	273461	685382		0.400	0.700	1.00	2.50	
2-Amino-4,6-dinitrotoluene	Ave	4148	8295	20191	40866	98103	0.0100	0.0200	0.0500	0.100	0.250
		162441	282018	404845	885701		0.400	0.700	1.00	2.50	
1,3,5-Trinitrobenzene	Ave	3748	7178	18350	37635	90714	0.0100	0.0200	0.0500	0.100	0.250
		149070	264170	381831	1086488		0.400	0.700	1.00	2.50	
2,6-Dinitrotoluene	Ave	3509	5869	13580	27076	64666	0.0100	0.0200	0.0500	0.100	0.250
		107072	187051	269366	673578		0.400	0.700	1.00	2.50	
2,4-Dinitrotoluene	Ave	6650	11382	28133	54791	130856	0.0100	0.0200	0.0500	0.100	0.250
		215854	378459	545578	1367914		0.400	0.700	1.00	2.50	
Tetryl	Ave	2847	5460	13447	27969	64854	0.0100	0.0200	0.0500	0.100	0.250
		106353	186180	268469	671961		0.400	0.700	1.00	2.50	
2,4,6-Trinitrotoluene	Ave	4042	9530	21038	41817	96518	0.0100	0.0200	0.0500	0.100	0.250
		159461	278721	401312	1004078		0.400	0.700	1.00	2.50	
PETN	Ave	9214	21527	58615	124639	301212	0.100	0.200	0.500	1.00	2.50
		497183	875273	1264310	3185284		4.00	7.00	10.0	25.0	
1,2-Dinitrobenzene	Ave	2840	5627	13806	26630	62380	0.0100	0.0200	0.0500	0.100	0.250
		103481	179492	257906	645821		0.400	0.700	1.00	2.50	

Curve Type Legend
Ave = Average
Lin2 = Linear 1/conc^2

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\04070010.D
Lims ID: IC INT DMT 9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 07-Apr-2023 19:03:08 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC INT DMT 9
Operator ID: JZ Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub18

Method: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 12-Apr-2023 15:55:23 Calib Date: 07-Apr-2023 23:50:31
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\04070018.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX1657

First Level Reviewer: LV5D Date: 07-Apr-2023 20:07:11

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 TNX	1	5.225	5.321	-0.096	986578	2.51	2.47	
4 DNX	1	6.078	6.194	-0.116	712375	2.50	2.49	a
6 HMX	1	6.745	6.847	-0.102	437409	2.50	2.42	
7 MNX	1	7.591	7.714	-0.123	836019	2.92	3.19	
5 2,4,6-Trinitrophenol	1	8.018	8.187	-0.169	230437	2.50	1.48	
8 RDX	1	9.005	9.127	-0.122	522882	2.50	2.42	
9 Nitrobenzene	1	11.518	11.654	-0.136	944914	2.50	2.49	
$ 10 1,2-Dinitrobenzene	1	12.491	12.627	-0.136	645821	2.50	2.43	
11 3,5-Dinitroaniline	1	14.378	14.480	-0.102	977923	2.50	2.27	
12 1,3-Dinitrobenzene	1	14.624	14.754	-0.130	1574162	2.50	2.71	
13 Nitroglycerin	2	15.178	15.274	-0.096	3074483	25.0	24.7	
14 o-Nitrotoluene	1	15.731	15.827	-0.096	620325	2.50	2.55	
15 p-Nitrotoluene	1	15.904	16.054	-0.150	528095	2.50	2.43	
16 4-Amino-2,6-dinitrotoluene	1	16.478	16.594	-0.116	689078	2.50	2.53	
17 m-Nitrotoluene	1	16.791	16.900	-0.109	685382	2.50	2.56	
18 2-Amino-4,6-dinitrotoluene	1	17.371	17.414	-0.043	885701	2.50	2.21	M
19 1,3,5-Trinitrobenzene	1	17.438	17.574	-0.136	1086488	2.50	2.87	M
20 2,6-Dinitrotoluene	1	18.611	18.714	-0.103	673578	2.50	2.41	
21 2,4-Dinitrotoluene	1	19.071	19.174	-0.103	1367914	2.50	2.44	
22 Tetryl	1	22.378	22.481	-0.103	671961	2.50	2.48	
23 2,4,6-Trinitrotoluene	1	23.205	23.301	-0.096	1004078	2.50	2.44	
24 PETN	2	24.478	24.547	-0.069	3185284	25.0	26.9	

QC Flag Legend
Processing Flags

Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

8330IntermStk_00076	Amount Added: 250.00	Units: uL
8330 DMT_00013	Amount Added: 125.00	Units: uL

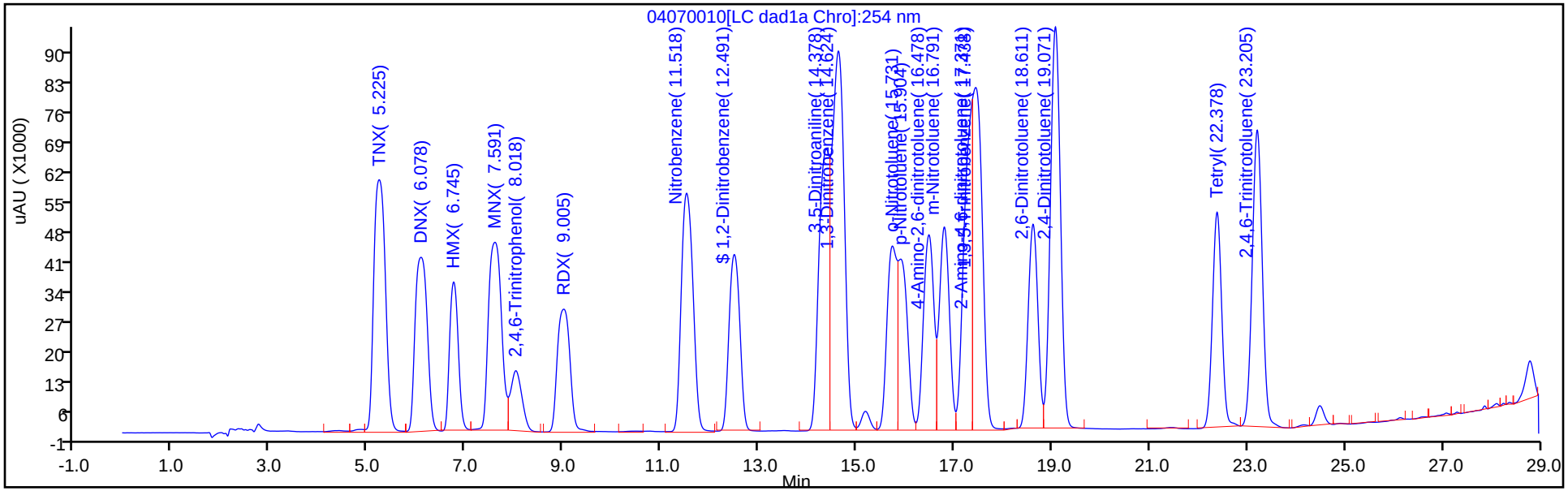
Report Date: 12-Apr-2023 15:55:23 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

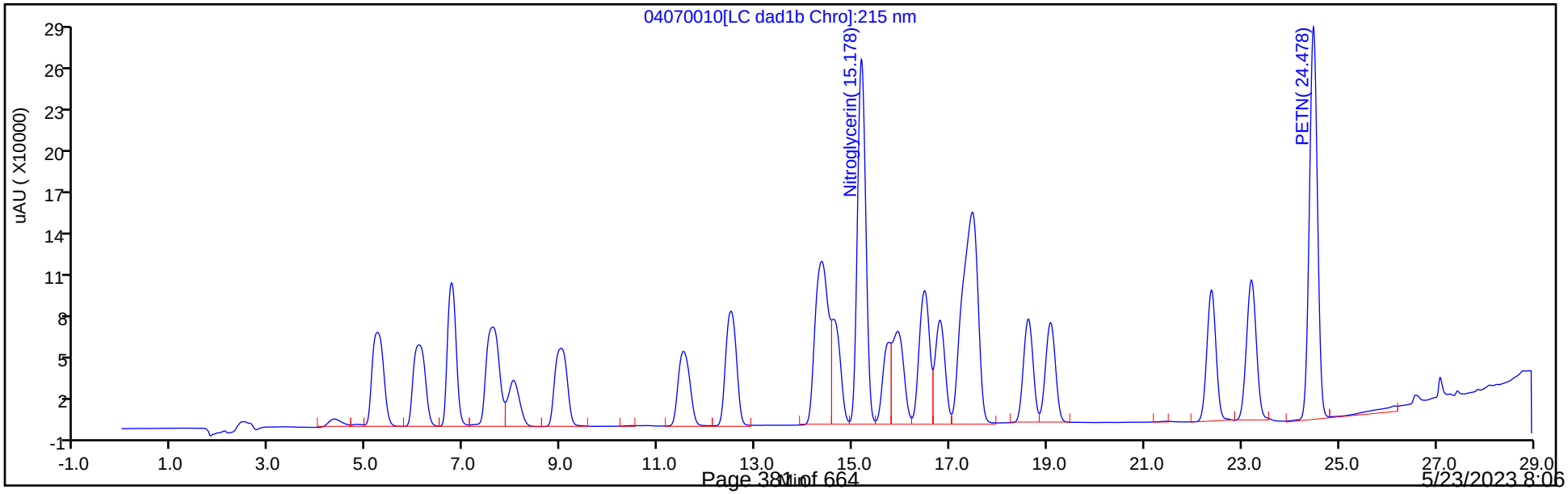
Data File: \\chromfs\denver\chromdata\g2_luna\20230407-120232.b\04070010.d

Injection Date:	07-Apr-2023 19:03:08	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	JZ
Lims ID:	IC INT DMT 9			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



Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



5/23/2023 8:06 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

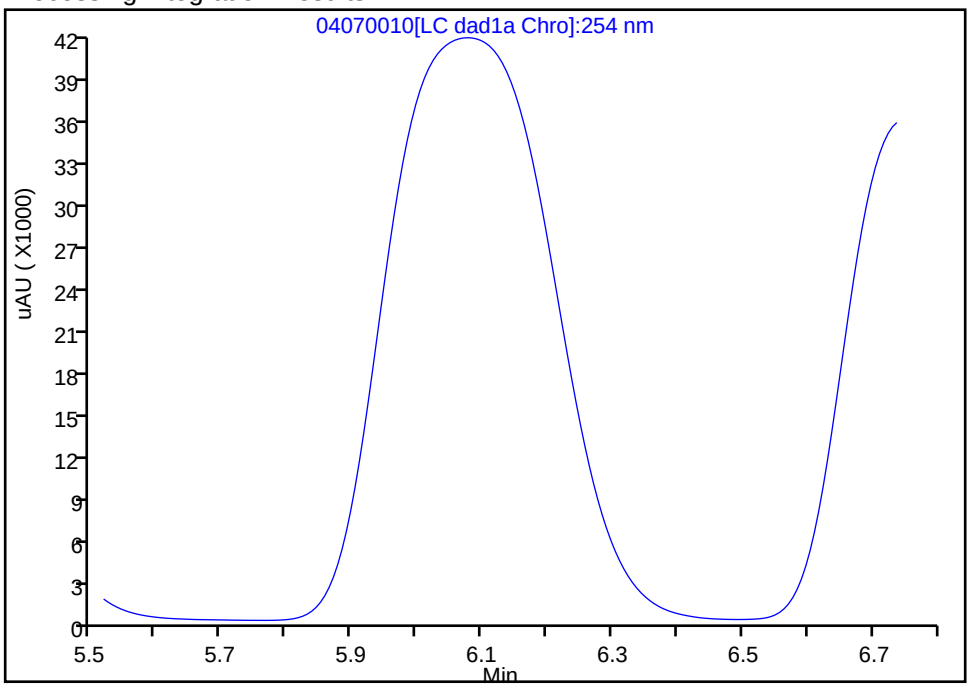
Data File:	\\chromfs\denver\chromdata\g2_luna\20230407-120232.b\04070010.d				
Injection Date:	07-Apr-2023 19:03:08	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT DMT 9				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

4 DNX, CAS: 80251-29-2

Signal: 1

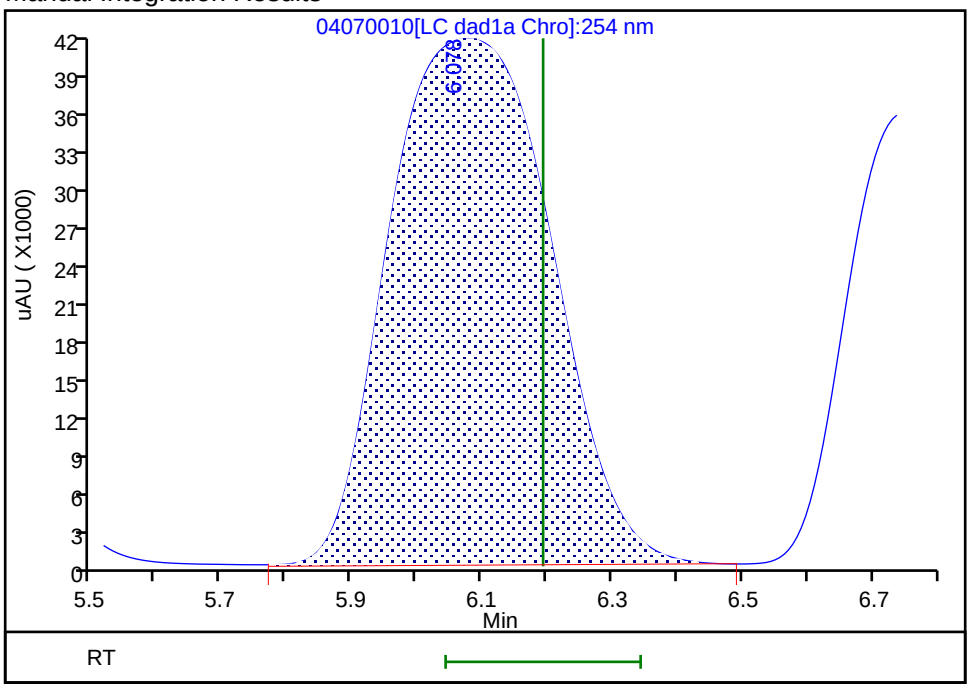
Processing Integration Results

Not Detected
Expected RT: 6.19



Manual Integration Results

RT: 6.08
Area: 712375
Amount: 2.489078
Amount Units: ug/ml



Reviewer: LV5D, 07-Apr-2023 20:06:38
Audit Action: Assigned Compound ID Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

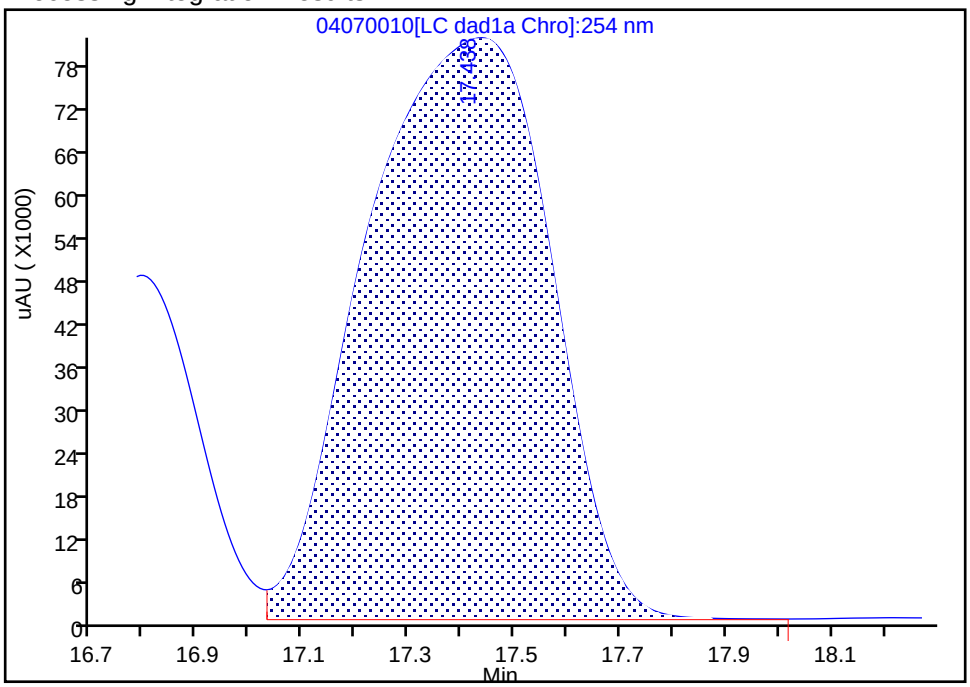
Data File: \\chromfs\denver\chromdata\g2_luna\20230407-120232.b\04070010.d
Injection Date: 07-Apr-2023 19:03:08 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC INT DMT 9
Client ID:
Operator ID: JZ ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

18 2-Amino-4,6-dinitrotoluene, CAS: 35572-78-2

Signal: 1

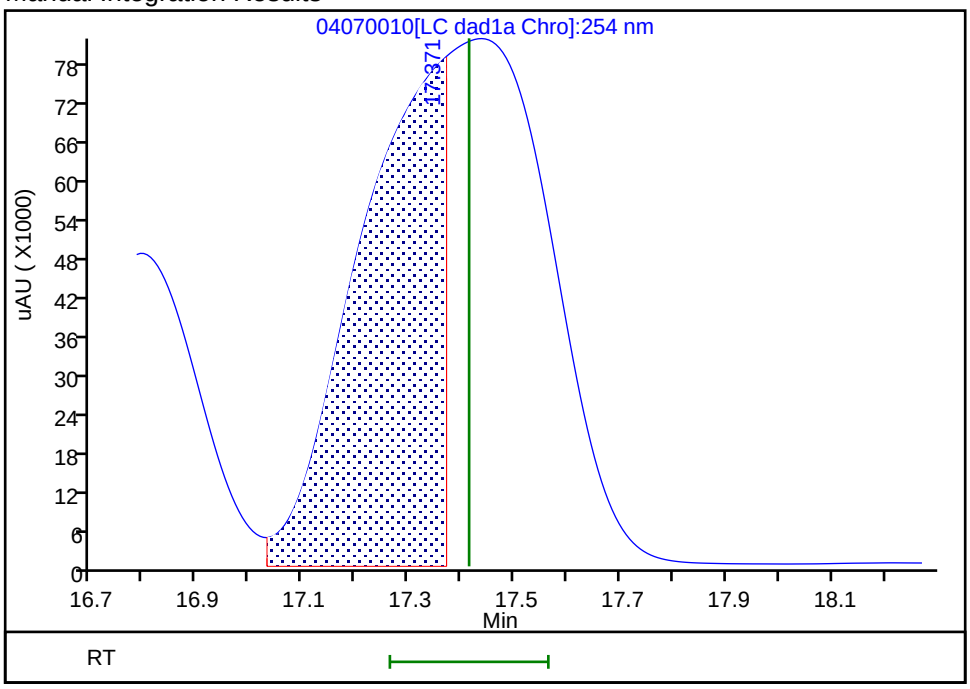
Processing Integration Results

RT: 17.44
Area: 1972184
Amount: 2.500000
Amount Units: ug/ml



Manual Integration Results

RT: 17.37
Area: 885701
Amount: 2.212683
Amount Units: ug/ml



Reviewer: LV5D, 07-Apr-2023 20:06:29
Audit Action: Split an Integrated Peak Audit Reason: Baseline

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\04070011.D
Lims ID: IC INT DMT 8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 07-Apr-2023 19:39:05 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC INT DMT 8
Operator ID: JZ Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub18

Method: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 12-Apr-2023 15:55:24 Calib Date: 07-Apr-2023 23:50:31
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\04070018.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX1657

First Level Reviewer: LV5D Date: 07-Apr-2023 20:28:24

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 TNX	1	5.302	5.321	-0.019	389131	1.00	0.9747	
4 DNX	1	6.162	6.194	-0.032	282296	1.00	0.9864	a
6 HMX	1	6.829	6.847	-0.018	174813	1.00	0.9656	
7 MNX	1	7.682	7.714	-0.032	299304	1.17	1.14	
5 2,4,6-Trinitrophenol	1	8.095	8.187	-0.092	154224	1.00	0.99	a
8 RDX	1	9.095	9.127	-0.032	207770	1.00	0.9632	
9 Nitrobenzene	1	11.615	11.654	-0.039	376803	1.00	0.99	
$ 10 1,2-Dinitrobenzene	1	12.582	12.627	-0.045	257906	1.00	0.9717	
11 3,5-Dinitroaniline	1	14.435	14.480	-0.045	444605	1.00	1.03	
12 1,3-Dinitrobenzene	1	14.709	14.754	-0.045	573365	1.00	0.9861	
13 Nitroglycerin	2	15.235	15.274	-0.039	1233892	10.0	9.92	
14 o-Nitrotoluene	1	15.789	15.827	-0.038	243027	1.00	1.00	
15 p-Nitrotoluene	1	16.015	16.054	-0.039	215111	1.00	0.9892	
16 4-Amino-2,6-dinitrotoluene	1	16.549	16.594	-0.045	275101	1.00	1.01	
17 m-Nitrotoluene	1	16.862	16.900	-0.038	273461	1.00	1.02	
18 2-Amino-4,6-dinitrotoluene	1	17.369	17.414	-0.045	404845	1.00	1.01	
19 1,3,5-Trinitrobenzene	1	17.542	17.574	-0.032	381831	1.00	1.01	
20 2,6-Dinitrotoluene	1	18.675	18.714	-0.039	269366	1.00	0.9624	
21 2,4-Dinitrotoluene	1	19.135	19.174	-0.039	545578	1.00	0.9740	
22 Tetryl	1	22.429	22.481	-0.052	268469	1.00	0.99	
23 2,4,6-Trinitrotoluene	1	23.249	23.301	-0.052	401312	1.00	0.9747	
24 PETN	2	24.502	24.547	-0.045	1264310	10.0	10.7	

QC Flag Legend

Processing Flags
Review Flags
a - User Assigned ID

Reagents:

8330IntermStk_00076	Amount Added: 100.00	Units: uL
8330 DMT_00013	Amount Added: 50.00	Units: uL

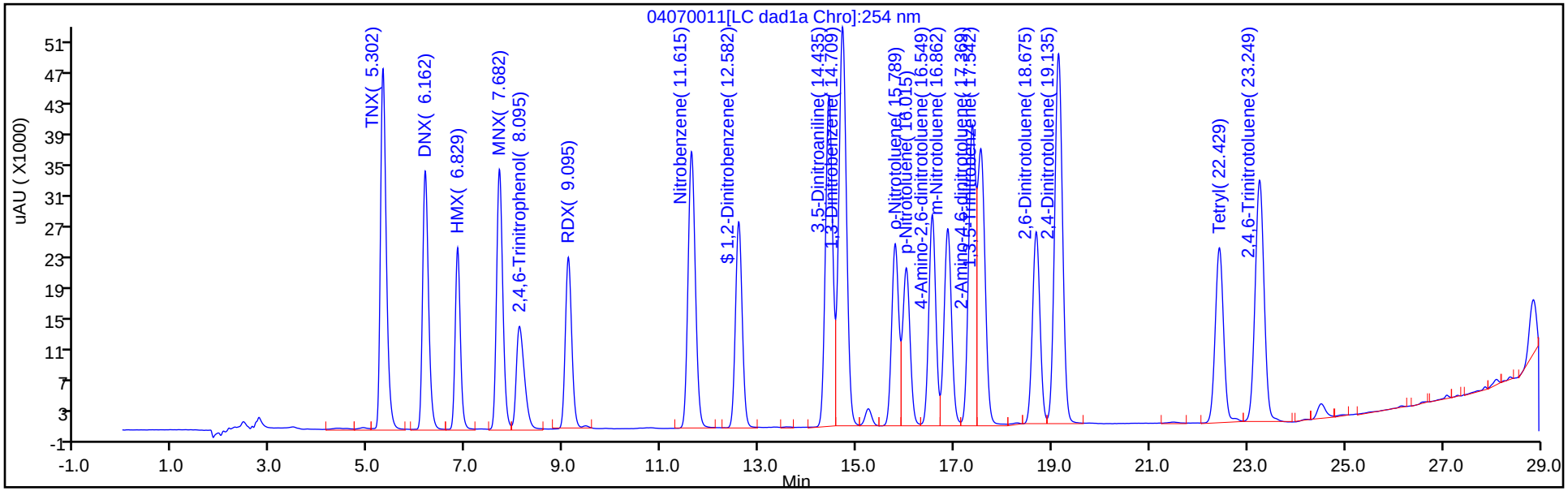
Report Date: 12-Apr-2023 15:55:24 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

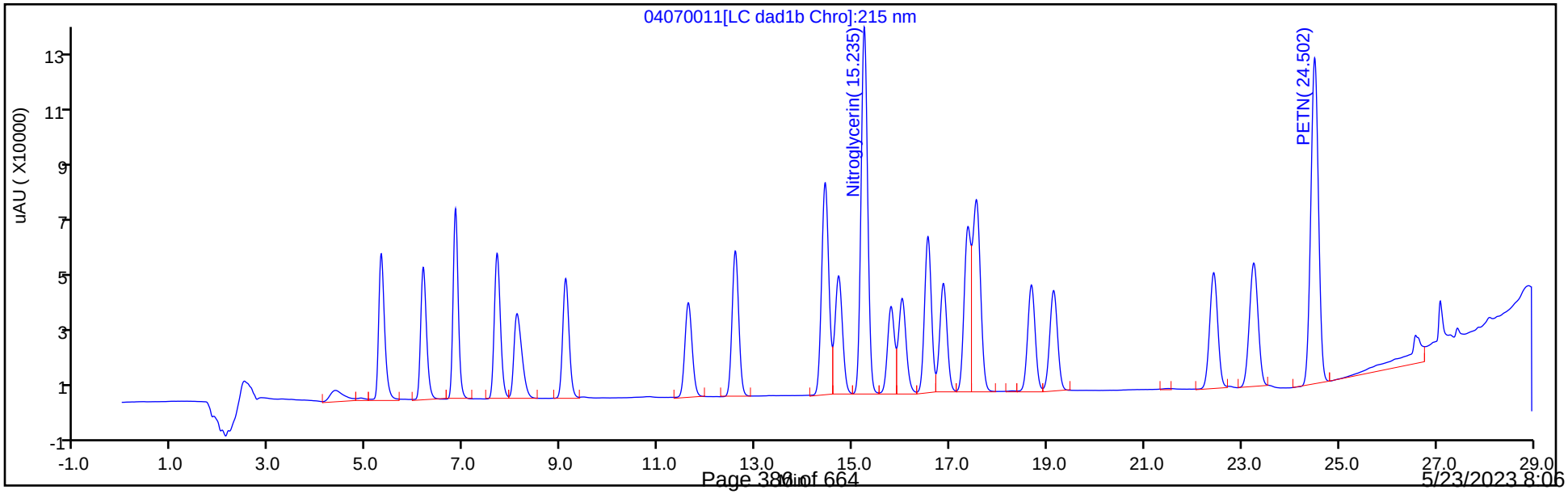
Data File: \\chromfs\denver\chromdata\g2_luna\20230407-120232.b\04070011.d

Injection Date:	07-Apr-2023 19:39:05	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	JZ
Lims ID:	IC INT DMT 8			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



Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins Denver

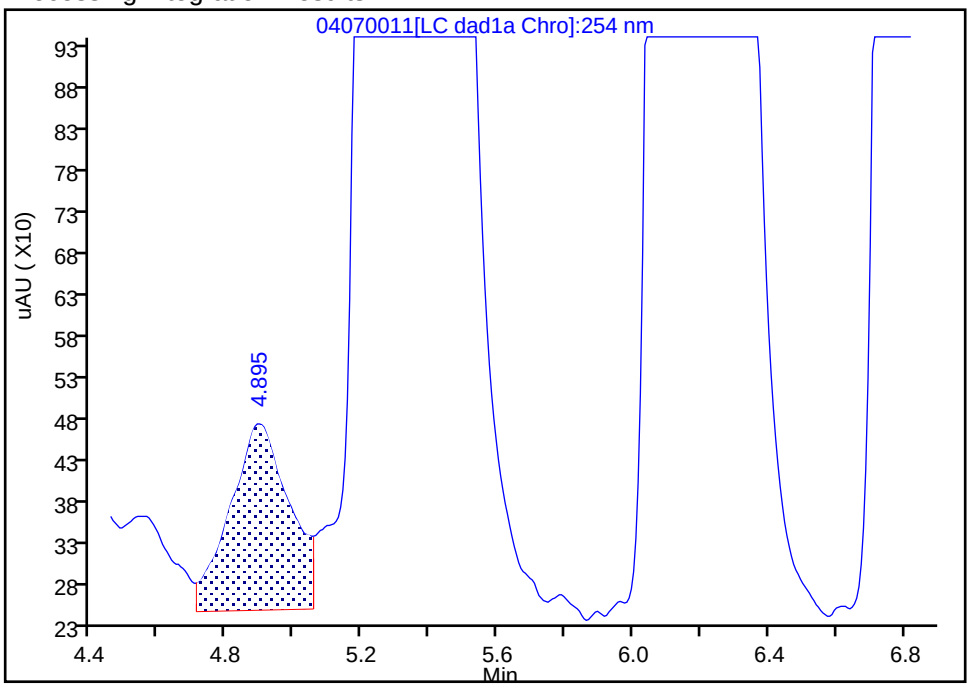
Data File: \\chromfs\denver\chromdata\g2_luna\20230407-120232.b\04070011.d
Injection Date: 07-Apr-2023 19:39:05 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC INT DMT 8
Client ID:
Operator ID: JZ ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

4 DNX, CAS: 80251-29-2

Signal: 1

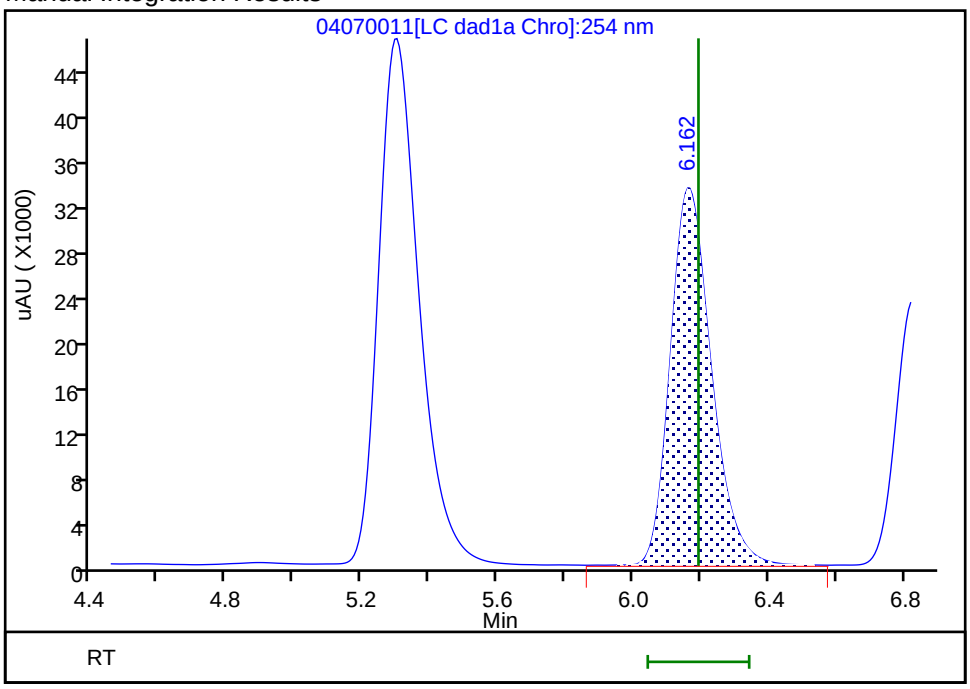
Processing Integration Results

RT: 4.90
Area: 2755
Amount: 0.014511
Amount Units: ug/ml



Manual Integration Results

RT: 6.16
Area: 282296
Amount: 0.986358
Amount Units: ug/ml



Reviewer: LV5D, 07-Apr-2023 21:06:28
Audit Action: Assigned Compound ID Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

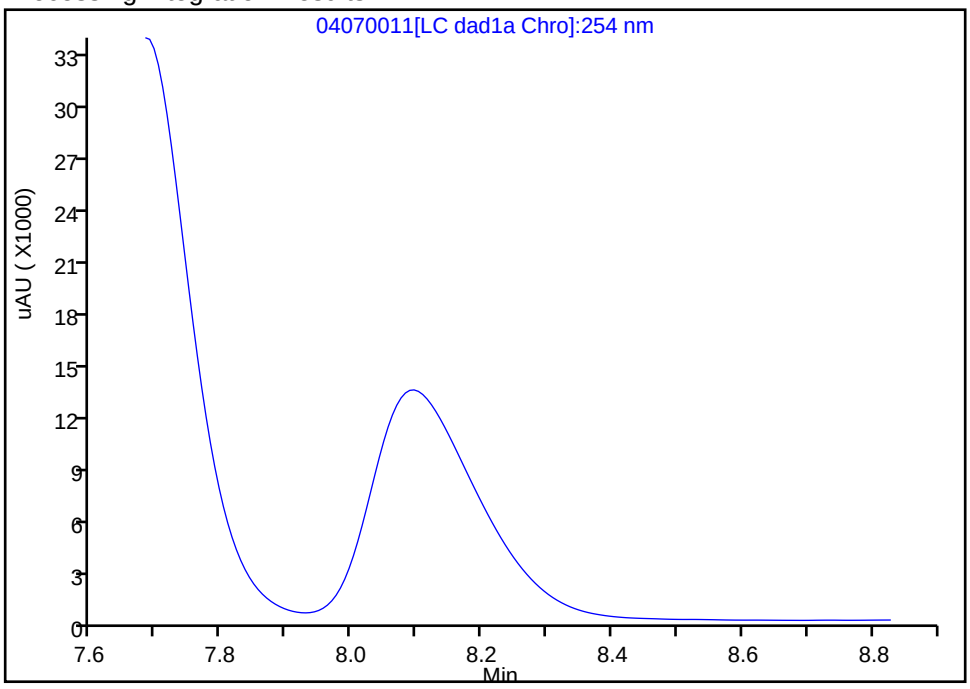
Data File:	\\chromfs\denver\chromdata\g2_luna\20230407-120232.b\04070011.d				
Injection Date:	07-Apr-2023 19:39:05	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT DMT 8				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	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

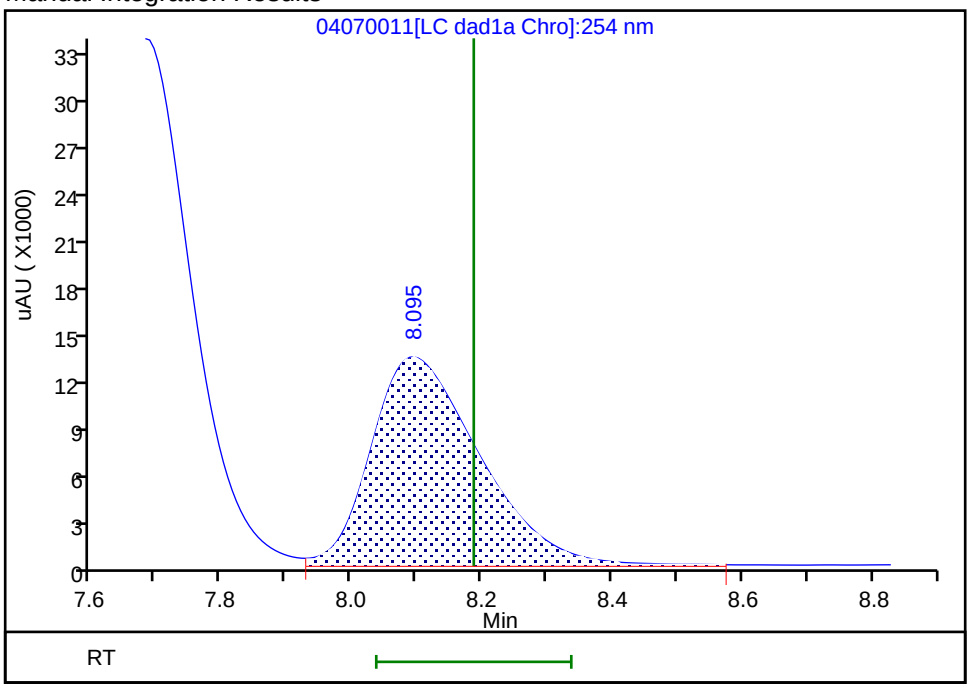
Not Detected
Expected RT: 8.19

Processing Integration Results



Manual Integration Results

RT: 8.10
Area: 154224
Amount: 0.991090
Amount Units: ug/ml



Reviewer: LV5D, 07-Apr-2023 21:06:31
Audit Action: Assigned Compound ID Audit Reason: Baseline

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\04070012.D
Lims ID: IC INT DMT 7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 07-Apr-2023 20:14:59 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC INT DMT 7
Operator ID: JZ Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub18

Method: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 12-Apr-2023 15:55:25 Calib Date: 07-Apr-2023 23:50:31
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\04070018.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX1657

First Level Reviewer: LV5D Date: 07-Apr-2023 21:06:15

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 TNX	1	5.310	5.321	-0.011	271856	0.7021	0.6810	
4 DNX	1	6.177	6.194	-0.017	197714	0.7007	0.6908	
6 HMX	1	6.837	6.847	-0.010	121533	0.7000	0.6713	
7 MNX	1	7.697	7.714	-0.017	210405	0.8169	0.8019	
5 2,4,6-Trinitrophenol	1	8.124	8.187	-0.063	107366	0.7000	0.6900	
8 RDX	1	9.110	9.127	-0.017	144880	0.7000	0.6716	
9 Nitrobenzene	1	11.623	11.654	-0.031	262906	0.7000	0.6919	
$ 10 1,2-Dinitrobenzene	1	12.590	12.627	-0.037	179492	0.7000	0.6763	
11 3,5-Dinitroaniline	1	14.443	14.480	-0.037	308678	0.7000	0.7170	
12 1,3-Dinitrobenzene	1	14.717	14.754	-0.037	398326	0.7000	0.6851	
13 Nitroglycerin	2	15.243	15.274	-0.031	858025	7.00	6.90	
14 o-Nitrotoluene	1	15.797	15.827	-0.030	169534	0.7000	0.6971	
15 p-Nitrotoluene	1	16.023	16.054	-0.031	150188	0.7000	0.6907	
16 4-Amino-2,6-dinitrotoluene	1	16.557	16.594	-0.037	191293	0.7000	0.7017	
17 m-Nitrotoluene	1	16.870	16.900	-0.030	190691	0.7000	0.7115	
18 2-Amino-4,6-dinitrotoluene	1	17.377	17.414	-0.037	282018	0.7000	0.7045	
19 1,3,5-Trinitrobenzene	1	17.550	17.574	-0.024	264170	0.7000	0.6980	
20 2,6-Dinitrotoluene	1	18.683	18.714	-0.031	187051	0.7000	0.6683	
21 2,4-Dinitrotoluene	1	19.143	19.174	-0.031	378459	0.7000	0.6757	
22 Tetryl	1	22.450	22.481	-0.031	186180	0.7000	0.6882	
23 2,4,6-Trinitrotoluene	1	23.277	23.301	-0.024	278721	0.7000	0.6770	
24 PETN	2	24.530	24.547	-0.017	875273	7.00	7.39	

QC Flag Legend
Processing Flags

Reagents:

8330IntermStk_00076	Amount Added:	70.00	Units: uL
8330 DMT_00013	Amount Added:	35.00	Units: uL

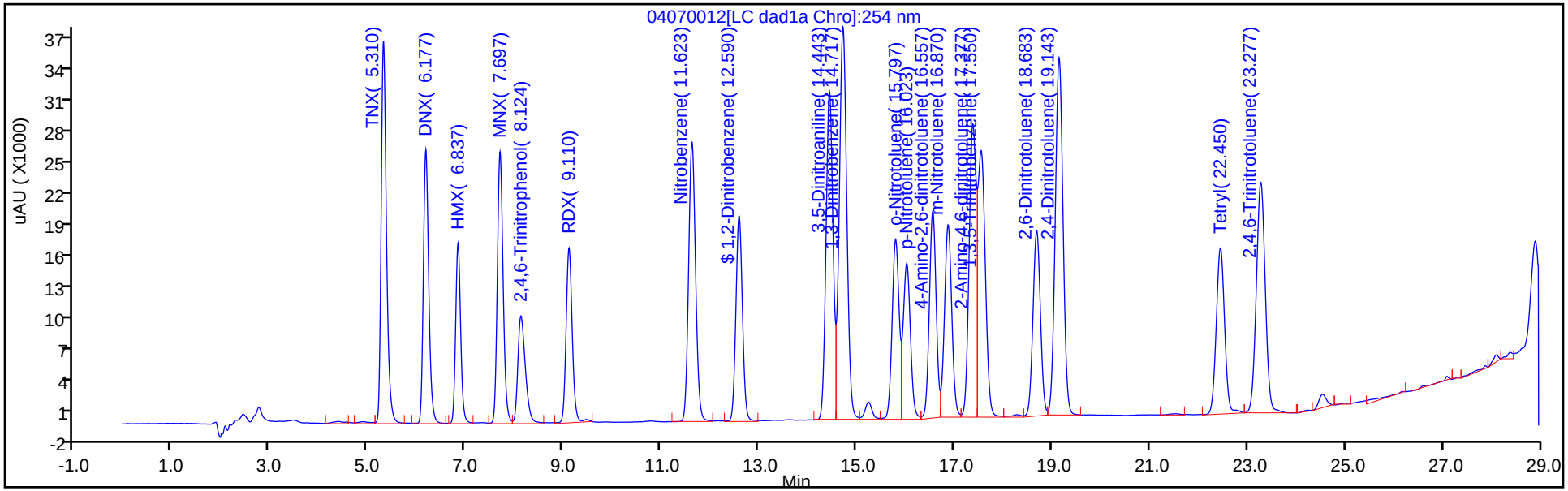
Report Date: 12-Apr-2023 15:55:25 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

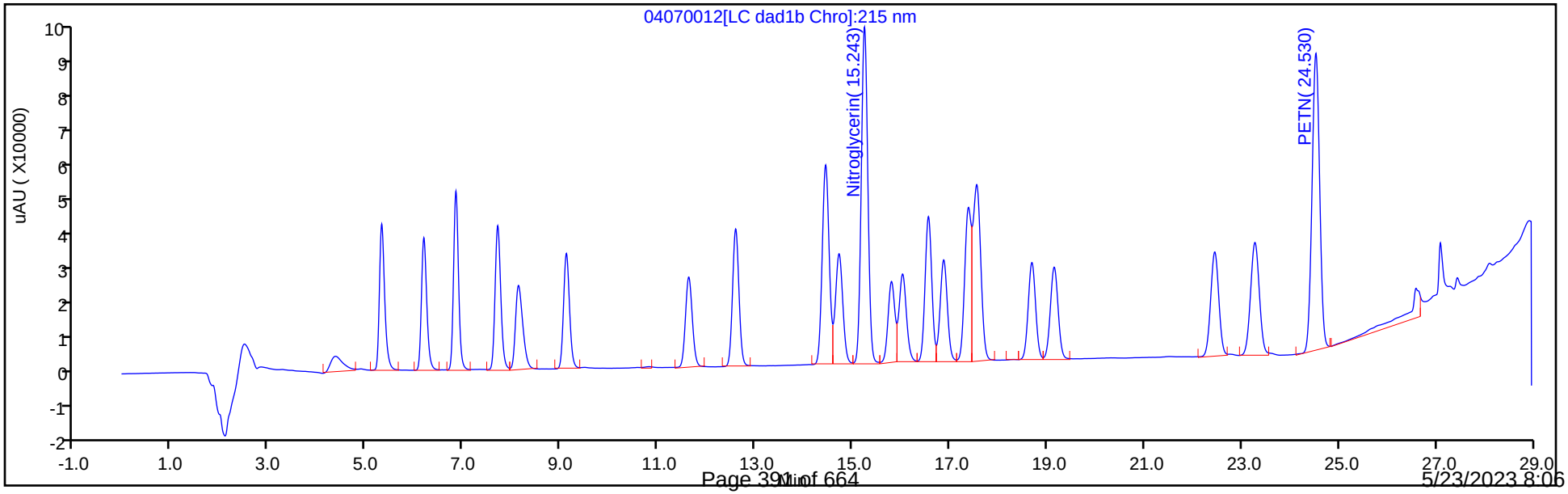
Data File: \\chromfs\denver\chromdata\g2_luna\20230407-120232.b\04070012.d

Injection Date:	07-Apr-2023 20:14:59	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	JZ
Lims ID:	IC INT DMT 7			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



Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\04070013.D
Lims ID: IC INT DMT 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 07-Apr-2023 20:50:53 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC INT DMT 6
Operator ID: JZ Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub18

Method: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 12-Apr-2023 15:55:26 Calib Date: 07-Apr-2023 23:50:31
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\04070018.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX1657

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 TNX	1	5.320	5.321	-0.001	149885	0.4012	0.3754	
4 DNX	1	6.187	6.194	-0.007	108664	0.4004	0.3797	
6 HMX	1	6.840	6.847	-0.007	69854	0.4000	0.3858	
7 MNX	1	7.700	7.714	-0.014	115542	0.4668	0.4404	
5 2,4,6-Trinitrophenol	1	8.153	8.187	-0.034	61220	0.4000	0.3934	
8 RDX	1	9.113	9.127	-0.014	83231	0.4000	0.3858	
9 Nitrobenzene	1	11.640	11.654	-0.014	148398	0.4000	0.3906	
$ 10 1,2-Dinitrobenzene	1	12.600	12.627	-0.027	103481	0.4000	0.3899	
11 3,5-Dinitroaniline	1	14.453	14.480	-0.027	176804	0.4000	0.4103	
12 1,3-Dinitrobenzene	1	14.727	14.754	-0.027	226896	0.4000	0.3902	
13 Nitroglycerin	2	15.247	15.274	-0.027	491776	4.00	3.95	
14 o-Nitrotoluene	1	15.807	15.827	-0.020	95732	0.4000	0.3937	
15 p-Nitrotoluene	1	16.033	16.054	-0.021	85363	0.4000	0.3926	
16 4-Amino-2,6-dinitrotoluene	1	16.567	16.594	-0.027	109516	0.4000	0.4017	
17 m-Nitrotoluene	1	16.880	16.900	-0.020	107736	0.4000	0.4020	
18 2-Amino-4,6-dinitrotoluene	1	17.387	17.414	-0.027	162441	0.4000	0.4058	
19 1,3,5-Trinitrobenzene	1	17.553	17.574	-0.021	149070	0.4000	0.3939	
20 2,6-Dinitrotoluene	1	18.693	18.714	-0.021	107072	0.4000	0.3825	
21 2,4-Dinitrotoluene	1	19.153	19.174	-0.021	215854	0.4000	0.3854	
22 Tetryl	1	22.447	22.481	-0.034	106353	0.4000	0.3931	
23 2,4,6-Trinitrotoluene	1	23.267	23.301	-0.034	159461	0.4000	0.3873	
24 PETN	2	24.520	24.547	-0.027	497183	4.00	4.20	

Reagents:

8330IntermStk_00076 Amount Added: 40.00 Units: uL
8330 DMT_00013 Amount Added: 20.00 Units: uL

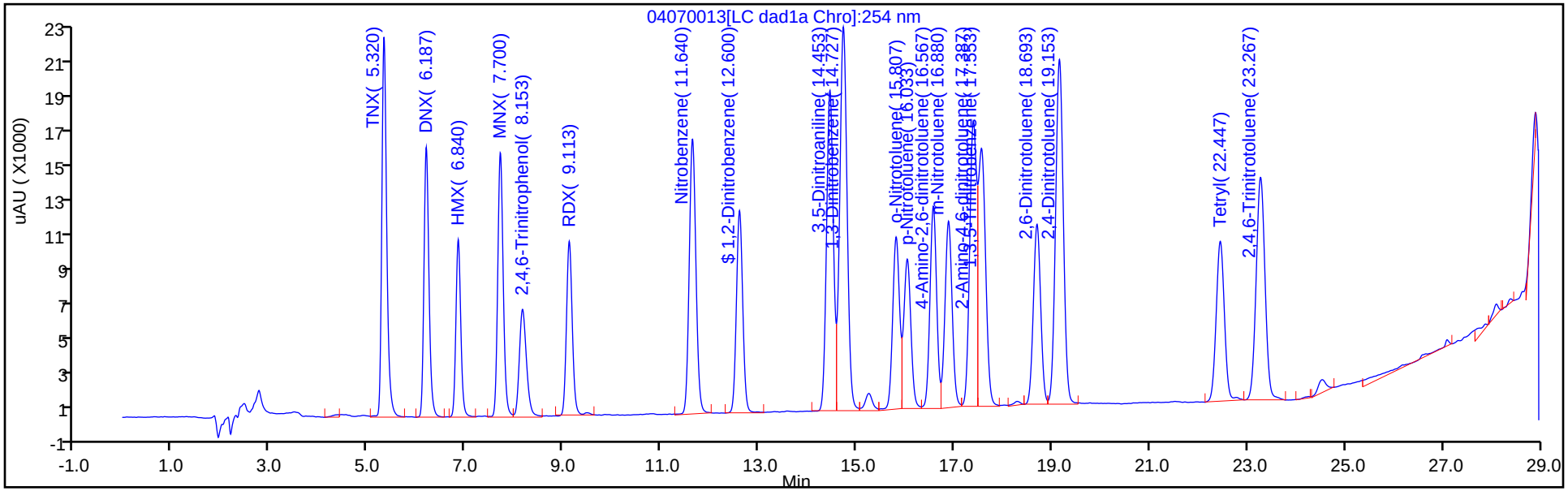
Report Date: 12-Apr-2023 15:55:26 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

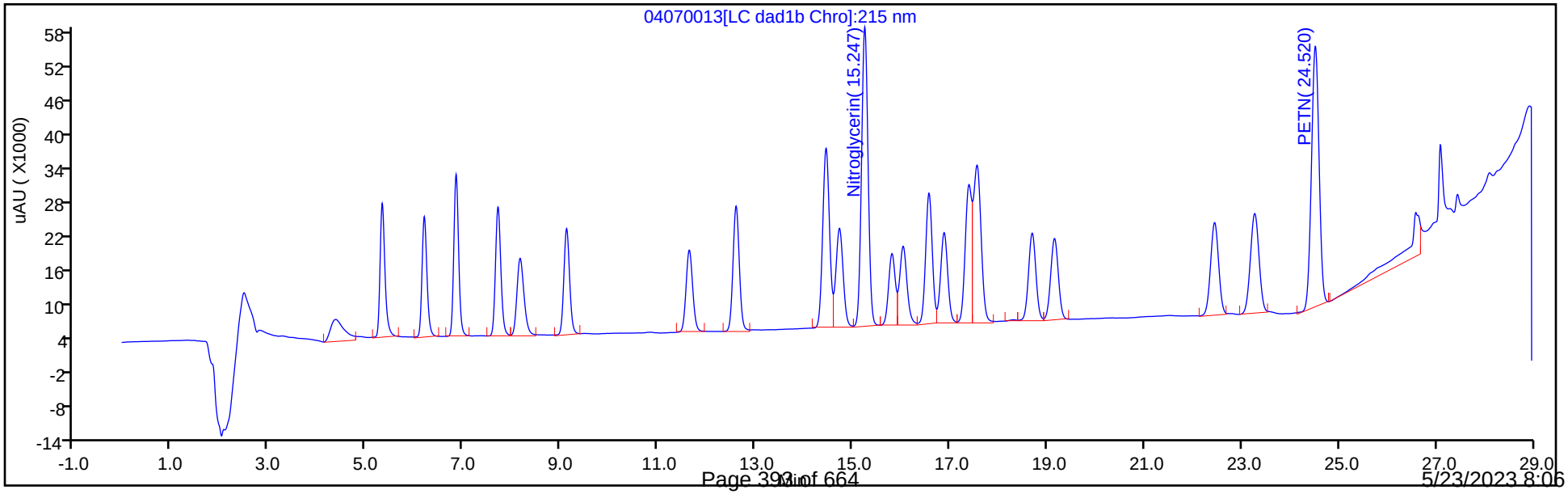
Data File: \\chromfs\denver\chromdata\g2_luna\20230407-120232.b\04070013.d

Injection Date:	07-Apr-2023 20:50:53	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	JZ
Lims ID:	IC INT DMT 6			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



Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



5/23/2023 8:06 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\04070014.D
Lims ID: IC INT DMT 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 07-Apr-2023 21:26:49 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC INT DMT 5
Operator ID: JZ Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub18

Method: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 12-Apr-2023 15:55:26 Calib Date: 07-Apr-2023 23:50:31
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\04070018.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX1657

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 TNX	1	5.321	5.321	0.000	96722	0.2508	0.2423	
4 DNX	1	6.194	6.194	0.000	70501	0.2503	0.2463	
6 HMX	1	6.847	6.847	0.000	42259	0.2500	0.2334	
7 MNX	1	7.714	7.714	0.000	74679	0.2918	0.2846	
5 2,4,6-Trinitrophenol	1	8.187	8.187	0.000	36740	0.2500	0.2361	
8 RDX	1	9.127	9.127	0.000	50479	0.2500	0.2340	
9 Nitrobenzene	1	11.654	11.654	0.000	90950	0.2500	0.2394	
$ 10 1,2-Dinitrobenzene	1	12.627	12.627	0.000	62380	0.2500	0.2350	
11 3,5-Dinitroaniline	1	14.480	14.480	0.000	106753	0.2500	0.2474	
12 1,3-Dinitrobenzene	1	14.754	14.754	0.000	137559	0.2500	0.2366	
13 Nitroglycerin	2	15.274	15.274	0.000	297926	2.50	2.40	
14 o-Nitrotoluene	1	15.827	15.827	0.000	58154	0.2500	0.2391	
15 p-Nitrotoluene	1	16.054	16.054	0.000	51955	0.2500	0.2389	
16 4-Amino-2,6-dinitrotoluene	1	16.594	16.594	0.000	66062	0.2500	0.2423	
17 m-Nitrotoluene	1	16.900	16.900	0.000	65576	0.2500	0.2447	
18 2-Amino-4,6-dinitrotoluene	1	17.414	17.414	0.000	98103	0.2500	0.2451	
19 1,3,5-Trinitrobenzene	1	17.574	17.574	0.000	90714	0.2500	0.2397	
20 2,6-Dinitrotoluene	1	18.714	18.714	0.000	64666	0.2500	0.2310	
21 2,4-Dinitrotoluene	1	19.174	19.174	0.000	130856	0.2500	0.2336	
22 Tetryl	1	22.481	22.481	0.000	64854	0.2500	0.2397	
23 2,4,6-Trinitrotoluene	1	23.301	23.301	0.000	96518	0.2500	0.2344	
24 PETN	2	24.547	24.547	0.000	301212	2.50	2.54	

Reagents:

8330IntermStk_00076 Amount Added: 25.00 Units: uL
8330 DMT_00013 Amount Added: 12.50 Units: uL

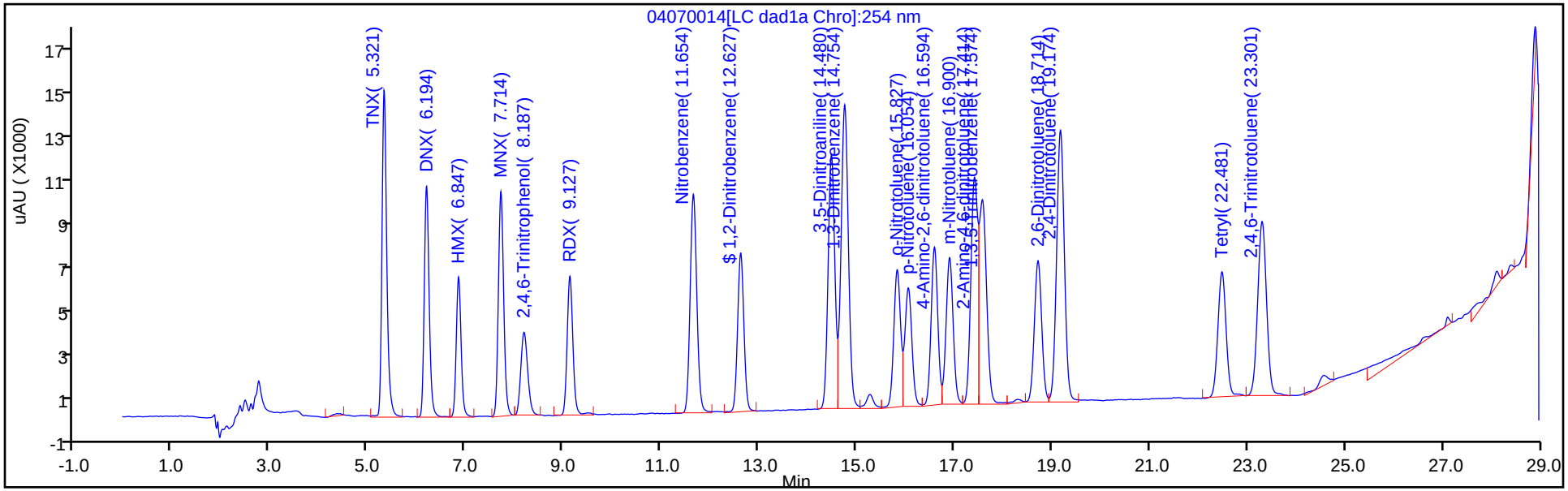
Report Date: 12-Apr-2023 15:55:26 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

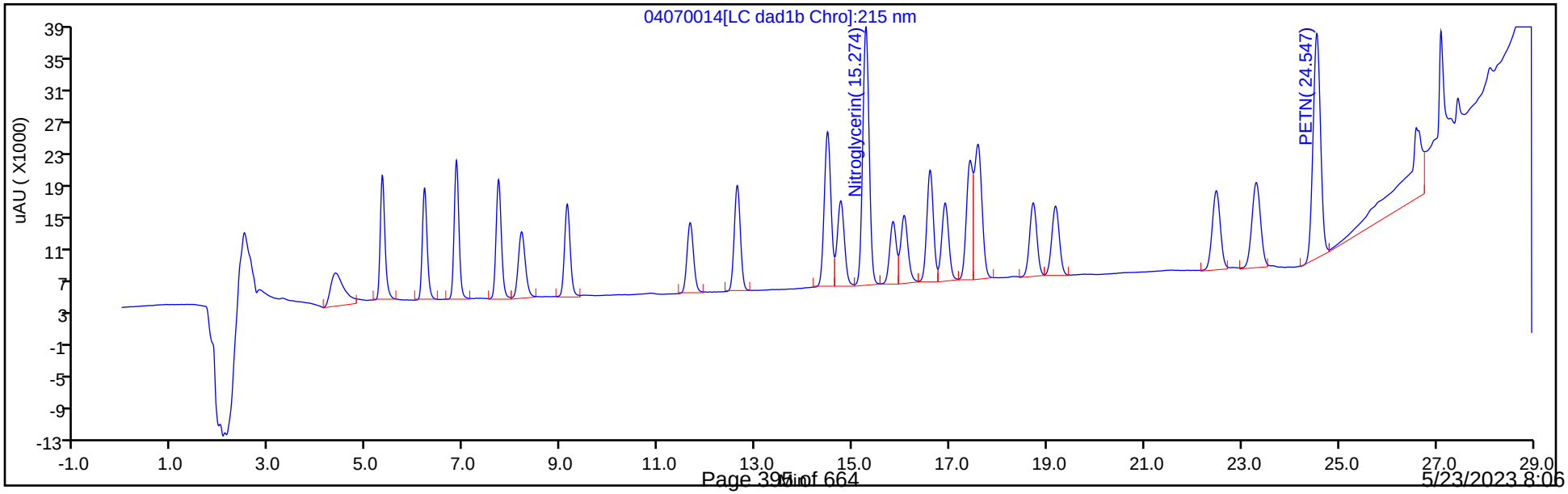
Data File: \\chromfs\denver\chromdata\g2_luna\20230407-120232.b\04070014.d

Injection Date:	07-Apr-2023 21:26:49	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	JZ
Lims ID:	IC INT DMT 5			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



Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



5/23/2023 8:06 PM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\04070015.D
Lims ID: IC INT DMT 4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 07-Apr-2023 22:02:48 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC INT DMT 4
Operator ID: JZ Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub18

Method: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 12-Apr-2023 15:55:27 Calib Date: 07-Apr-2023 23:50:31
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\04070018.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX1657

First Level Reviewer: LV5D Date: 08-Apr-2023 10:39:08

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 TNX	1	5.334	5.321	0.013	39339	0.1003	0.0985	
4 DNX	1	6.201	6.194	0.007	28516	0.1001	0.0996	
6 HMX	1	6.854	6.847	0.007	17711	0.1000	0.0978	
7 MNX	1	7.721	7.714	0.007	30241	0.1167	0.1153	
5 2,4,6-Trinitrophenol	1	8.221	8.187	0.034	15604	0.1000	0.1003	
8 RDX	1	9.134	9.127	0.007	21015	0.1000	0.0974	
9 Nitrobenzene	1	11.654	11.654	0.000	37900	0.1000	0.0997	
$ 10 1,2-Dinitrobenzene	1	12.621	12.627	-0.006	26630	0.1000	0.1003	
11 3,5-Dinitroaniline	1	14.474	14.480	-0.006	44146	0.1000	0.1017	
12 1,3-Dinitrobenzene	1	14.747	14.754	-0.007	56261	0.1000	0.0968	
13 Nitroglycerin	2	15.267	15.274	-0.007	125509	1.00	1.01	
14 o-Nitrotoluene	1	15.827	15.827	0.000	24115	0.1000	0.0992	Ma
15 p-Nitrotoluene	1	16.054	16.054	0.000	21537	0.1000	0.0990	Ma
16 4-Amino-2,6-dinitrotoluene	1	16.594	16.594	0.000	27461	0.1000	0.1007	Ma
17 m-Nitrotoluene	1	16.901	16.900	0.001	27150	0.1000	0.1013	Ma
18 2-Amino-4,6-dinitrotoluene	1	17.414	17.414	0.000	40866	0.1000	0.1021	Ma
19 1,3,5-Trinitrobenzene	1	17.574	17.574	0.000	37635	0.1000	0.0994	Ma
20 2,6-Dinitrotoluene	1	18.714	18.714	0.000	27076	0.1000	0.0967	
21 2,4-Dinitrotoluene	1	19.174	19.174	0.000	54791	0.1000	0.0978	
22 Tetryl	1	22.474	22.481	-0.007	27969	0.1000	0.1034	
23 2,4,6-Trinitrotoluene	1	23.301	23.301	0.000	41817	0.1000	0.1016	
24 PETN	2	24.541	24.547	-0.006	124639	1.00	1.05	

QC Flag Legend
Processing Flags

Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

8330IntermStk_00076	Amount Added:	10.00	Units: uL
8330 DMT_00013	Amount Added:	5.00	Units: uL

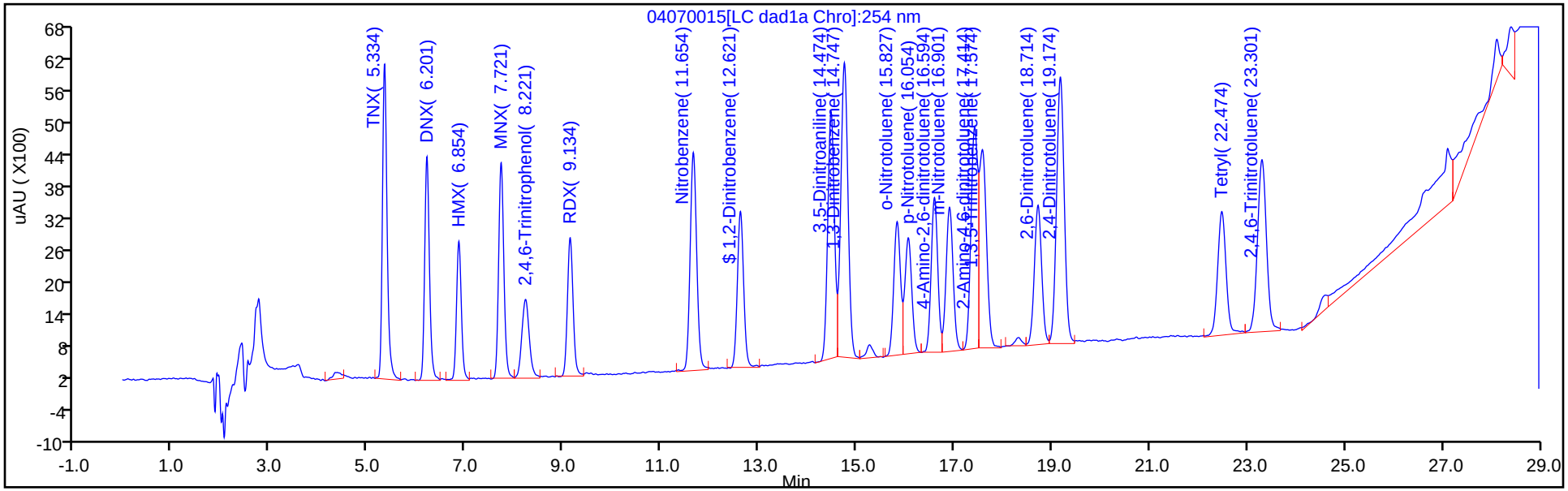
Report Date: 12-Apr-2023 15:55:27 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

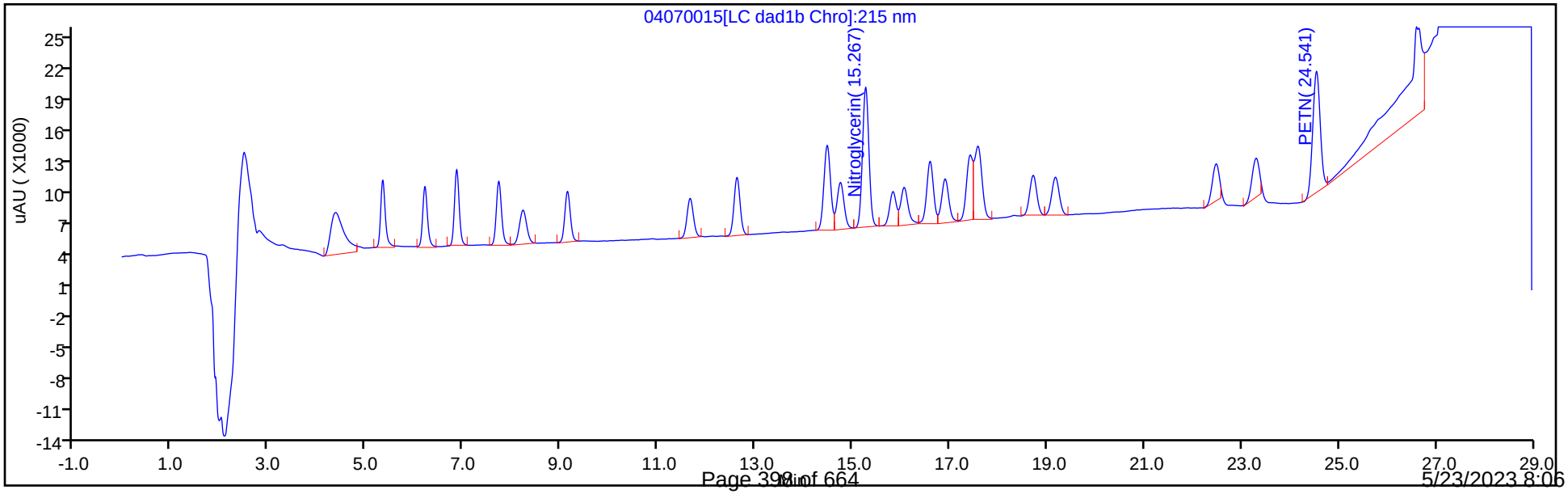
Data File: \\chromfs\denver\chromdata\g2_luna\20230407-120232.b\04070015.d

Injection Date:	07-Apr-2023 22:02:48	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	JZ
Lims ID:	IC INT DMT 4			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



Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



5/23/2023 8:06 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

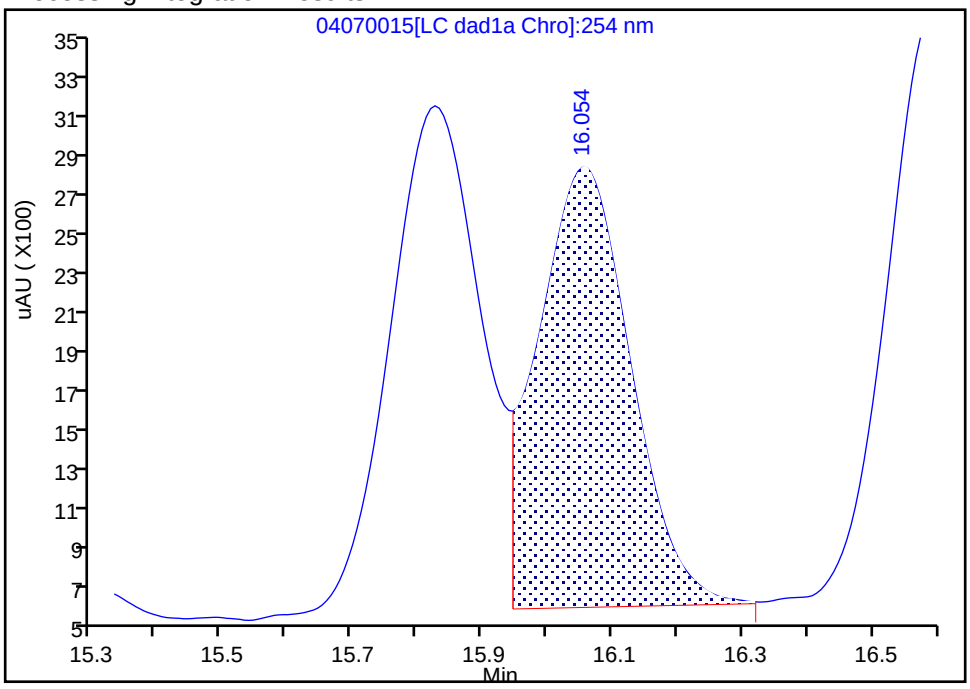
Data File:	\\chromfs\denver\chromdata\g2_luna\20230407-120232.b\04070015.d				
Injection Date:	07-Apr-2023 22:02:48	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT DMT 4				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	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

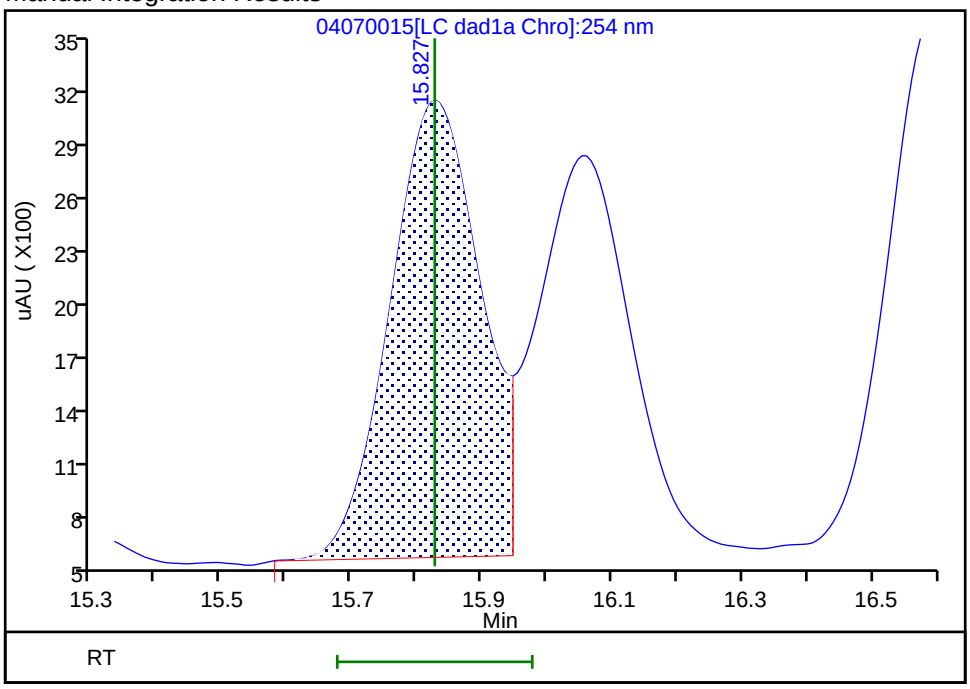
Processing Integration Results

RT: 16.05
Area: 21537
Amount: 0.080916
Amount Units: ug/ml



Manual Integration Results

RT: 15.83
Area: 24115
Amount: 0.099162
Amount Units: ug/ml



Reviewer: LV5D, 08-Apr-2023 10:38:38

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

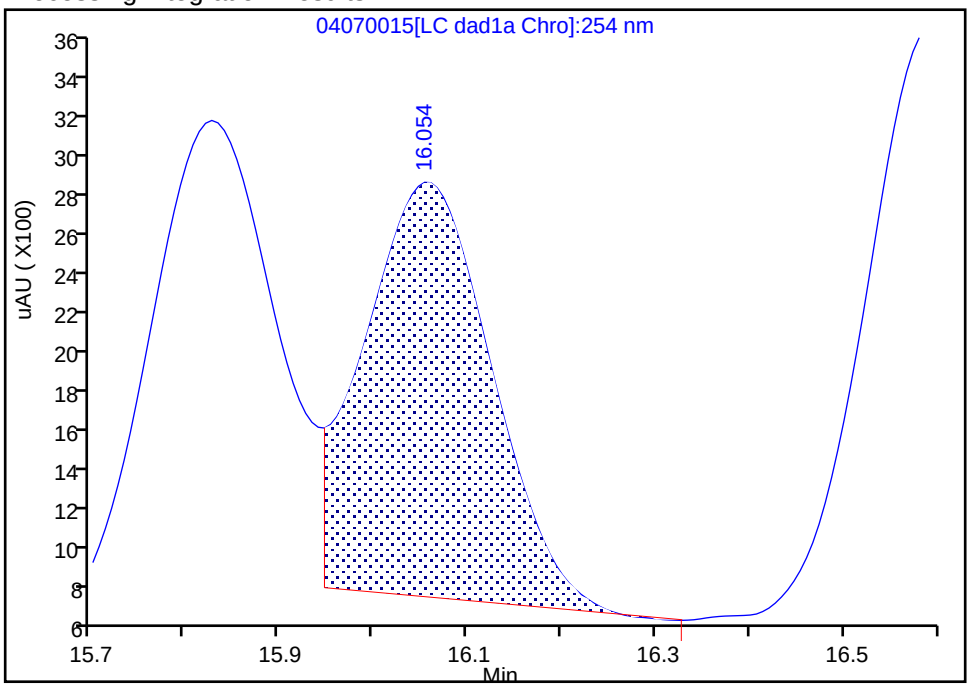
Data File: \\chromfs\denver\chromdata\g2_luna\20230407-120232.b\04070015.d
Injection Date: 07-Apr-2023 22:02:48 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC INT DMT 4
Client ID:
Operator ID: JZ ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

15 p-Nitrotoluene, CAS: 99-99-0

Signal: 1

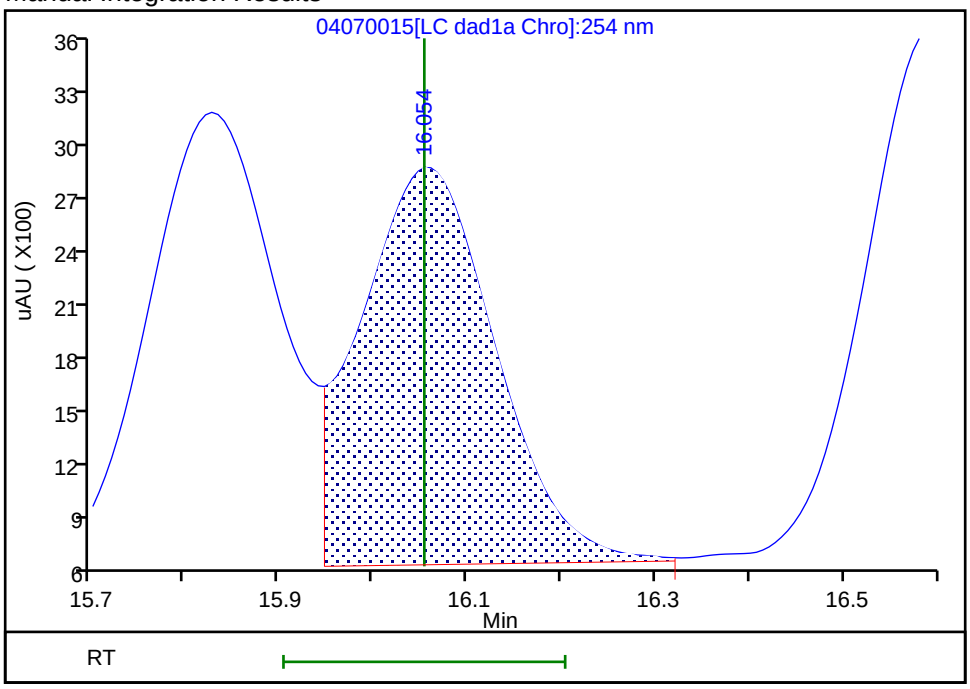
Processing Integration Results

RT: 16.05
Area: 19182
Amount: 0.091061
Amount Units: ug/ml



Manual Integration Results

RT: 16.05
Area: 21537
Amount: 0.099044
Amount Units: ug/ml



Reviewer: LV5D, 08-Apr-2023 10:38:39
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

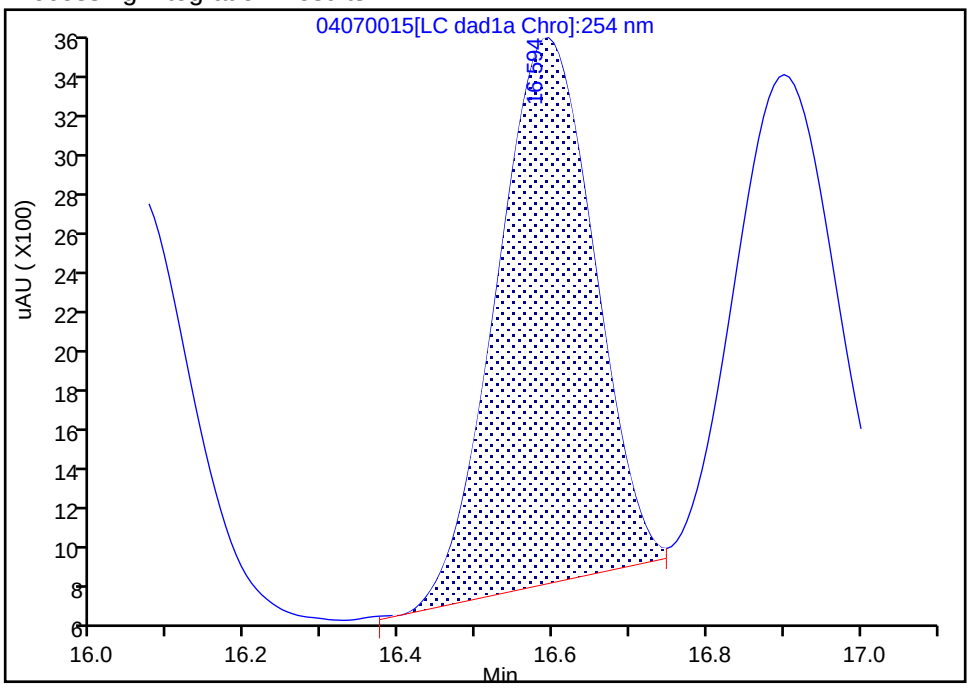
Data File:	\\chromfs\denver\chromdata\g2_luna\20230407-120232.b\04070015.d				
Injection Date:	07-Apr-2023 22:02:48	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT DMT 4				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	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

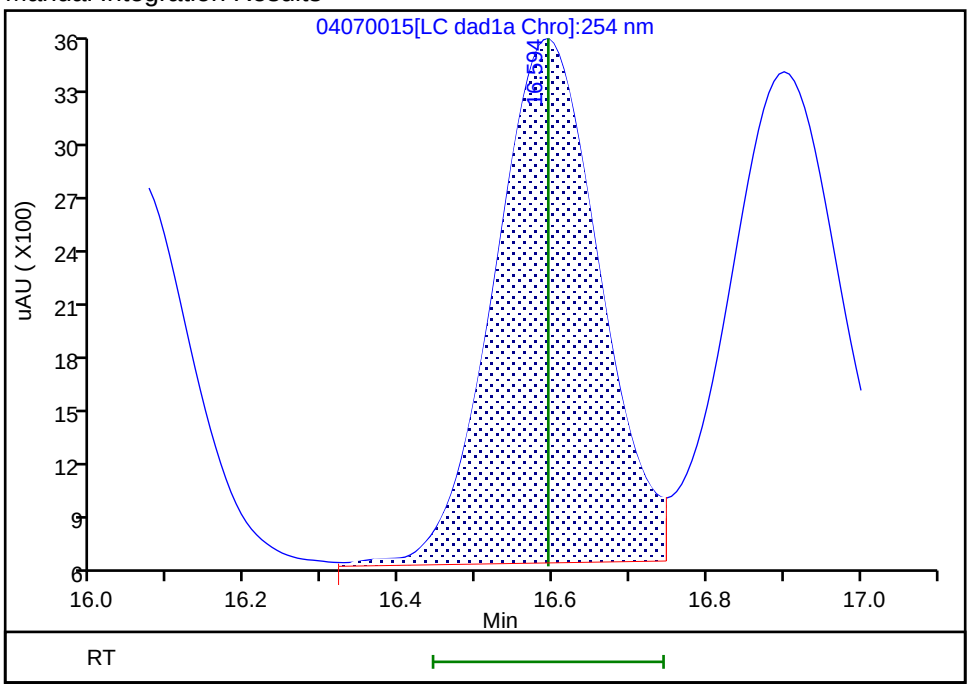
Processing Integration Results

RT: 16.59
Area: 24031
Amount: 0.090376
Amount Units: ug/ml



Manual Integration Results

RT: 16.59
Area: 27461
Amount: 0.100733
Amount Units: ug/ml



Reviewer: LV5D, 08-Apr-2023 10:38:40
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

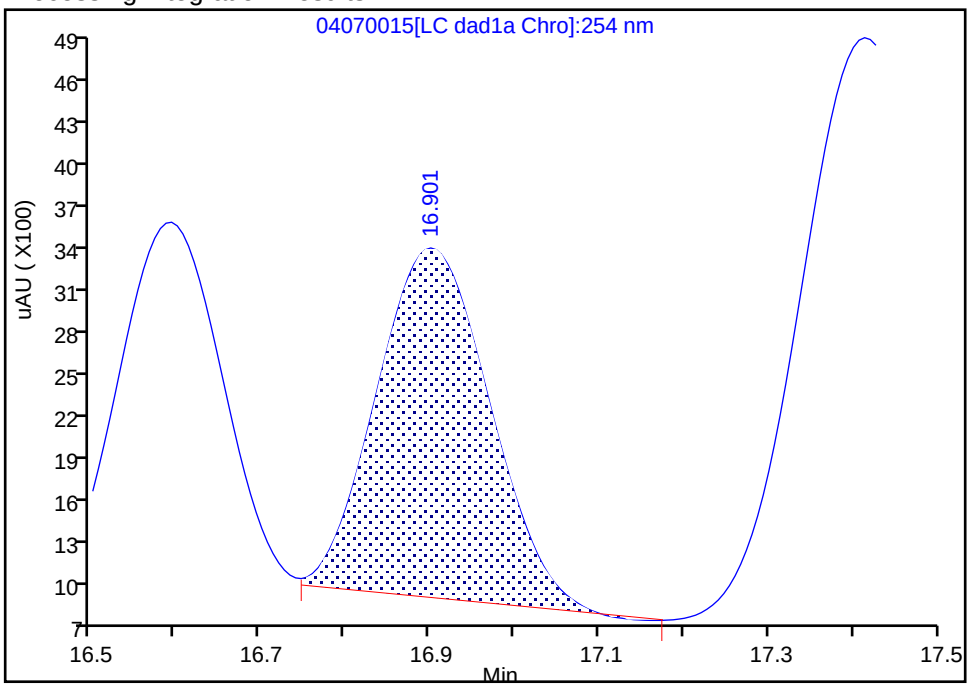
Data File: \\chromfs\denver\chromdata\g2_luna\20230407-120232.b\04070015.d
Injection Date: 07-Apr-2023 22:02:48 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC INT DMT 4
Client ID:
Operator ID: JZ ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

17 m-Nitrotoluene, CAS: 99-08-1

Signal: 1

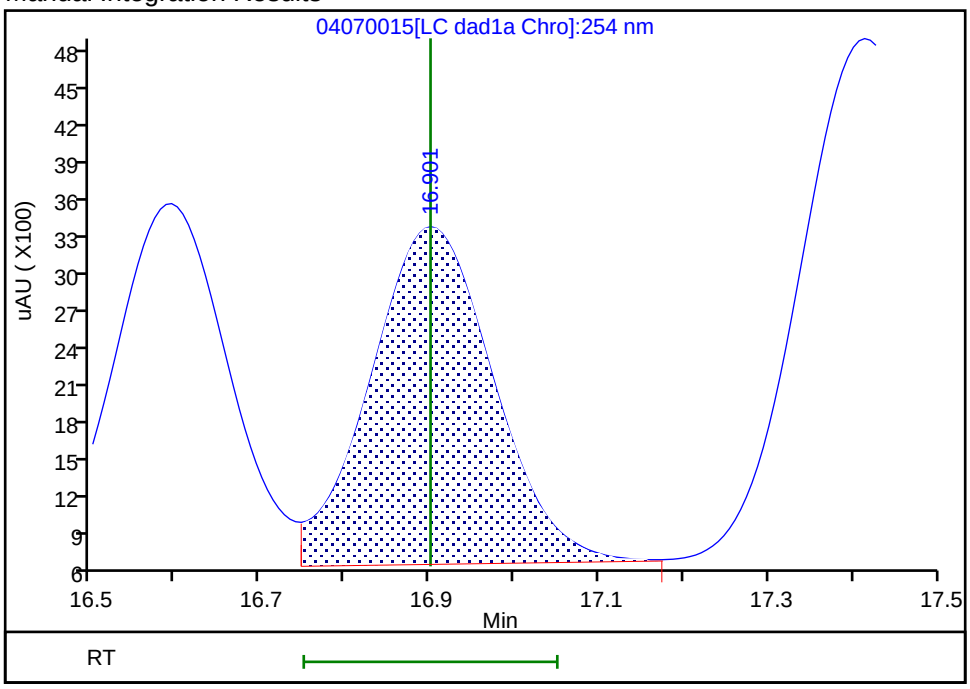
Processing Integration Results

RT: 16.90
Area: 23442
Amount: 0.089730
Amount Units: ug/ml



Manual Integration Results

RT: 16.90
Area: 27150
Amount: 0.101302
Amount Units: ug/ml



Reviewer: LV5D, 08-Apr-2023 10:38:41
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

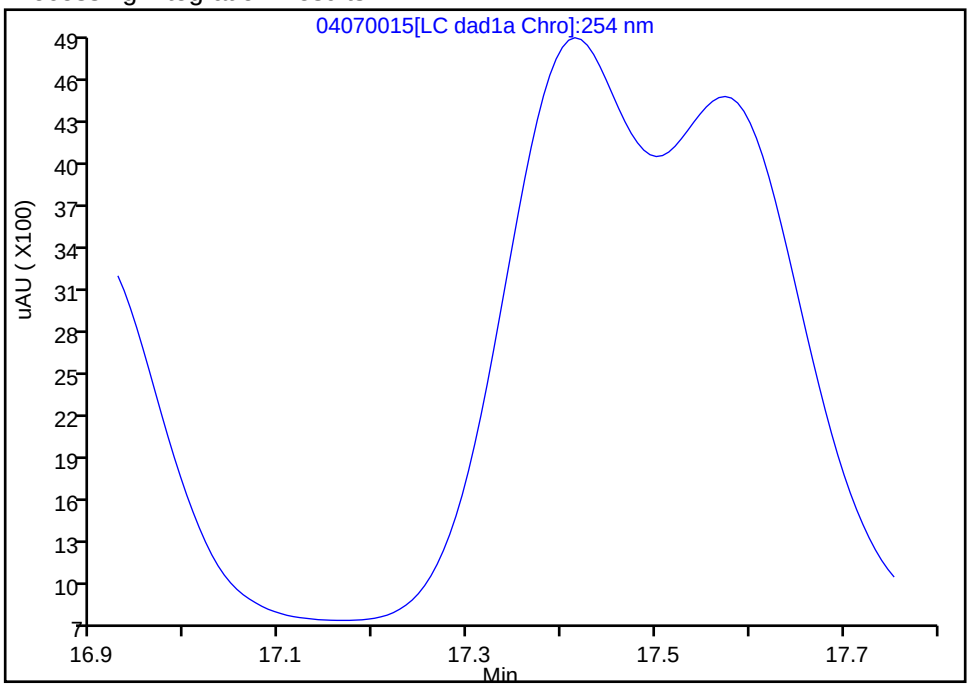
Data File:	\\chromfs\denver\chromdata\g2_luna\20230407-120232.b\04070015.d				
Injection Date:	07-Apr-2023 22:02:48	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT DMT 4				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	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

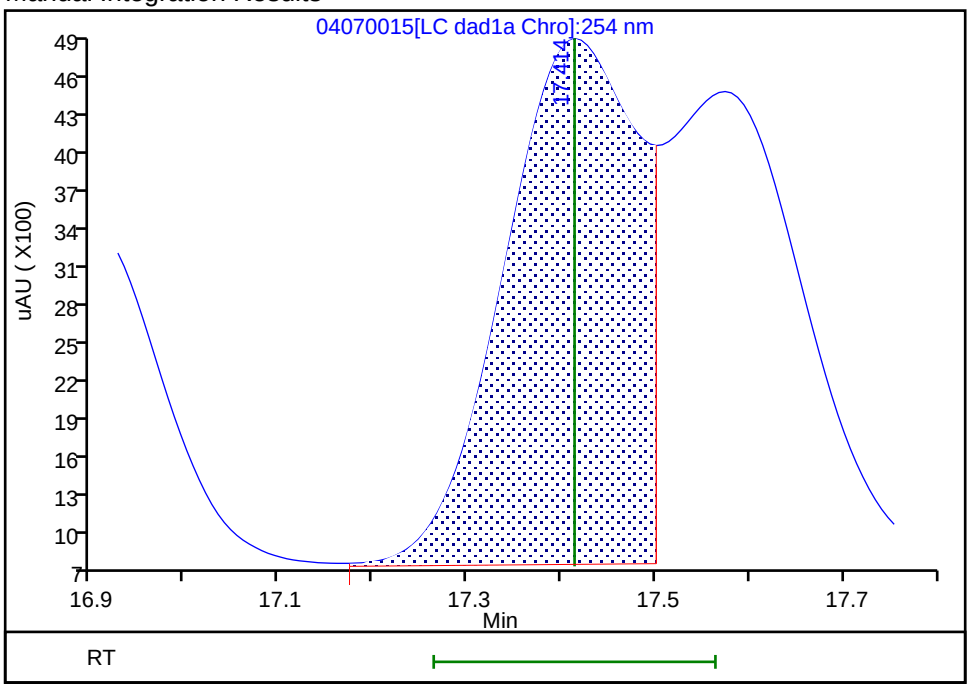
Not Detected
Expected RT: 17.41

Processing Integration Results



Manual Integration Results

RT: 17.41
Area: 40866
Amount: 0.102093
Amount Units: ug/ml



Reviewer: LV5D, 08-Apr-2023 10:38:42
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

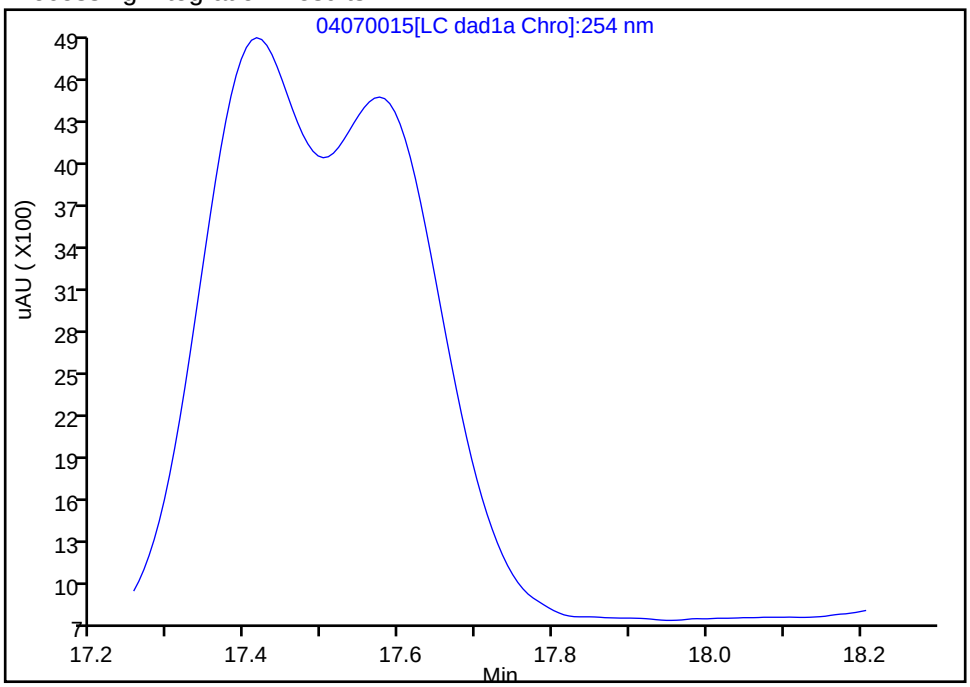
Data File:	\\chromfs\denver\chromdata\g2_luna\20230407-120232.b\04070015.d				
Injection Date:	07-Apr-2023 22:02:48	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT DMT 4				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	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

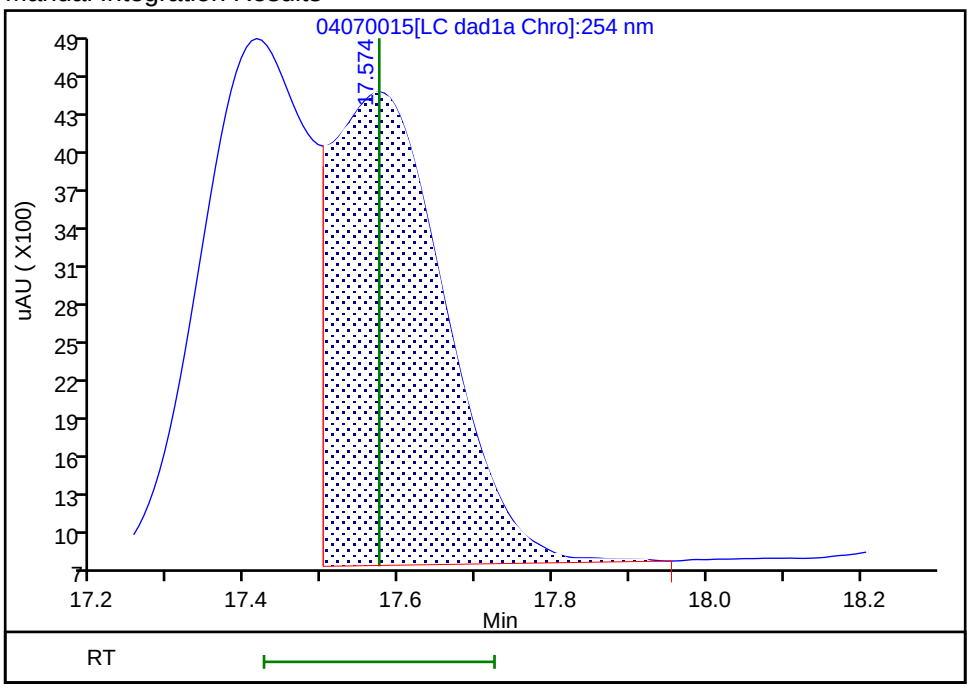
Not Detected
Expected RT: 17.57

Processing Integration Results



Manual Integration Results

RT: 17.57
Area: 37635
Amount: 0.099435
Amount Units: ug/ml



Reviewer: LV5D, 08-Apr-2023 10:38:43
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\04070016.D
Lims ID: IC INT DMT 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 07-Apr-2023 22:38:44 ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC INT DMT 3
Operator ID: JZ Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub18

Method: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 12-Apr-2023 15:55:28 Calib Date: 07-Apr-2023 23:50:31
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\04070018.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX1657

First Level Reviewer: LV5D Date: 08-Apr-2023 10:39:45

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 TNX	1	5.338	5.321	0.017	20397	0.0502	0.0511	
4 DNX	1	6.205	6.194	0.011	14268	0.0501	0.0499	
6 HMX	1	6.858	6.847	0.011	9104	0.0500	0.0503	
7 MNX	1	7.732	7.714	0.018	15283	0.0584	0.0582	
5 2,4,6-Trinitrophenol	1	8.245	8.187	0.058	8104	0.0500	0.0521	
8 RDX	1	9.145	9.127	0.018	10799	0.0500	0.0501	
9 Nitrobenzene	1	11.672	11.654	0.018	19405	0.0500	0.0511	
$ 10 1,2-Dinitrobenzene	1	12.638	12.627	0.011	13806	0.0500	0.0520	
11 3,5-Dinitroaniline	1	14.492	14.480	0.012	22268	0.0500	0.0509	
12 1,3-Dinitrobenzene	1	14.765	14.754	0.011	29472	0.0500	0.0507	
13 Nitroglycerin	2	15.278	15.274	0.004	64483	0.5000	0.5186	
14 o-Nitrotoluene	1	15.838	15.827	0.011	12185	0.0500	0.0501	M
15 p-Nitrotoluene	1	16.072	16.054	0.018	10927	0.0500	0.0503	M
16 4-Amino-2,6-dinitrotoluene	1	16.605	16.594	0.011	13722	0.0500	0.0503	M
17 m-Nitrotoluene	1	16.912	16.900	0.012	13529	0.0500	0.0505	M
18 2-Amino-4,6-dinitrotoluene	1	17.425	17.414	0.011	20191	0.0500	0.0504	M
19 1,3,5-Trinitrobenzene	1	17.585	17.574	0.011	18350	0.0500	0.0485	Ma
20 2,6-Dinitrotoluene	1	18.725	18.714	0.011	13580	0.0500	0.0485	
21 2,4-Dinitrotoluene	1	19.178	19.174	0.004	28133	0.0500	0.0502	
22 Tetryl	1	22.485	22.481	0.004	13447	0.0500	0.0497	
23 2,4,6-Trinitrotoluene	1	23.305	23.301	0.004	21038	0.0500	0.0511	
24 PETN	2	24.545	24.547	-0.002	58615	0.5000	0.4952	M

QC Flag Legend
Processing Flags

Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

8330IntermStk_00076	Amount Added:	5.00	Units: uL
8330 DMT_00013	Amount Added:	2.50	Units: uL

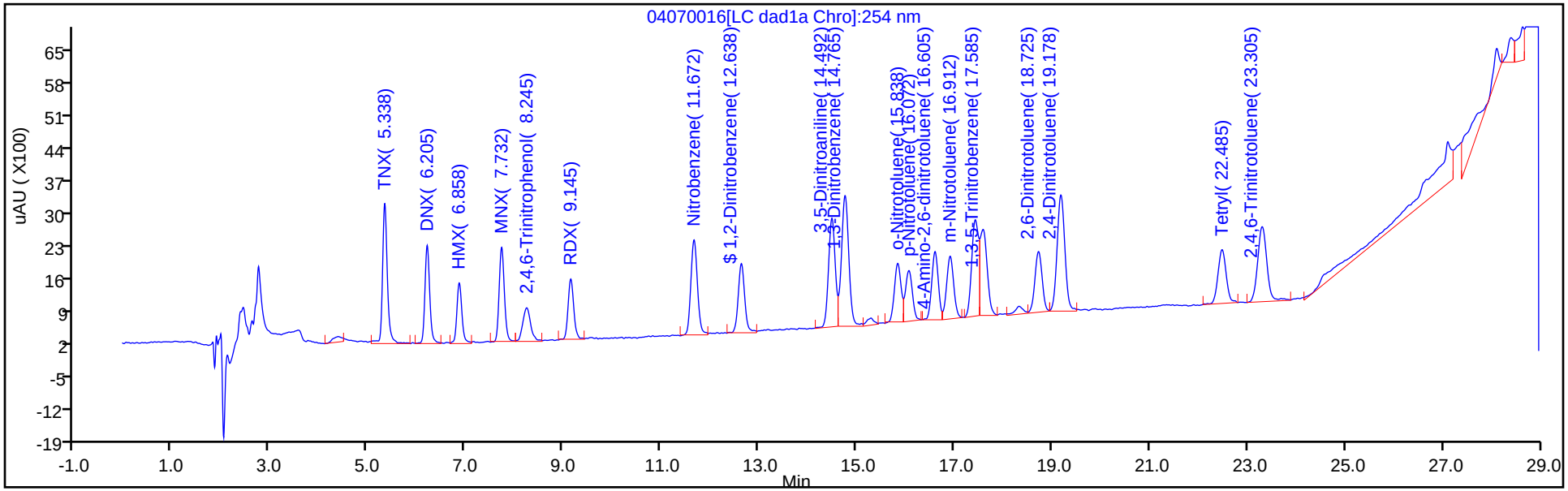
Report Date: 12-Apr-2023 15:55:28 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

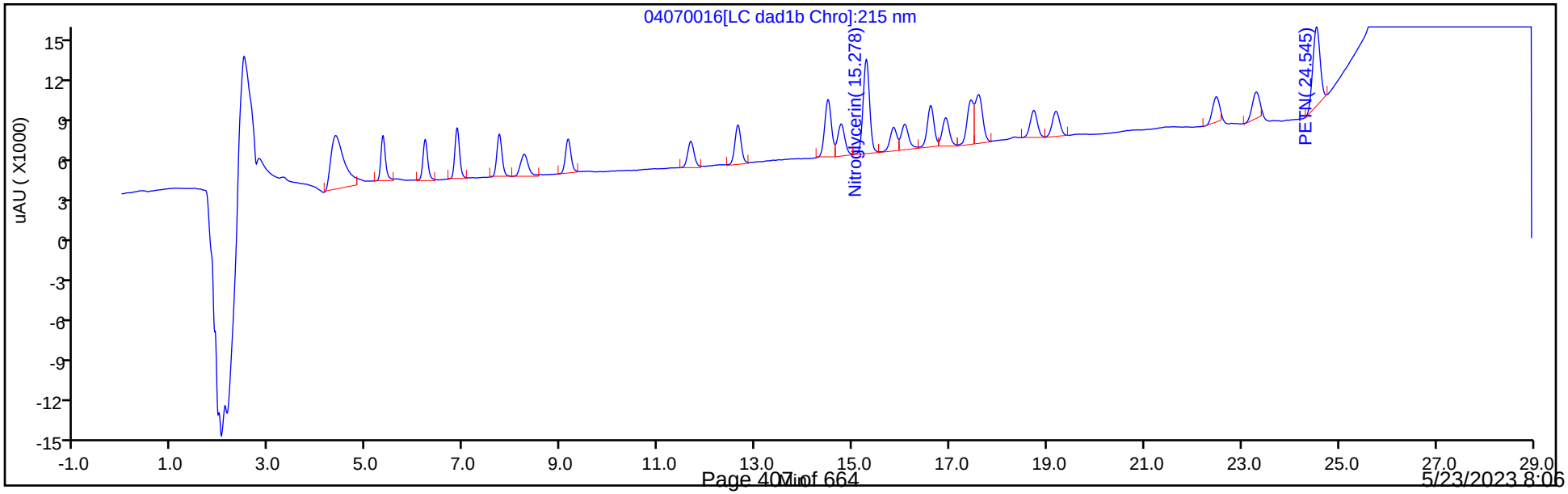
Data File: \\chromfs\denver\chromdata\g2_luna\20230407-120232.b\04070016.d

Injection Date:	07-Apr-2023 22:38:44	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	JZ
Lims ID:	IC INT DMT 3			Worklist Smp#:	16
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	16
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



Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



5/23/2023 8:06 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

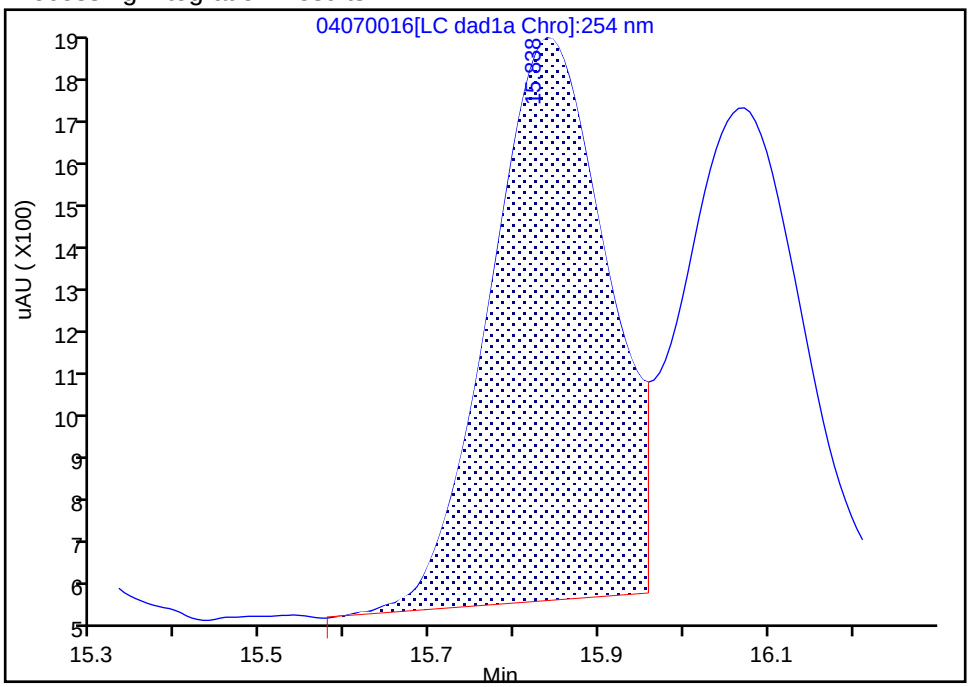
Data File:	\\chromfs\denver\chromdata\g2_luna\20230407-120232.b\04070016.d				
Injection Date:	07-Apr-2023 22:38:44	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT DMT 3				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	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

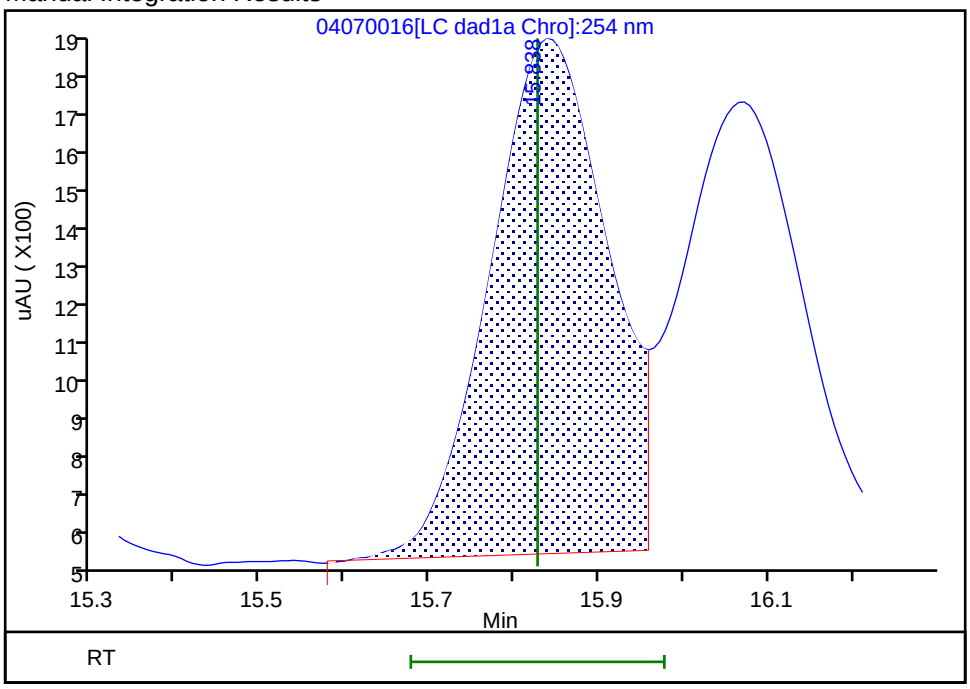
Processing Integration Results

RT: 15.84
Area: 11923
Amount: 0.044319
Amount Units: ug/ml



Manual Integration Results

RT: 15.84
Area: 12185
Amount: 0.050105
Amount Units: ug/ml



Reviewer: LV5D, 08-Apr-2023 10:39:29
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

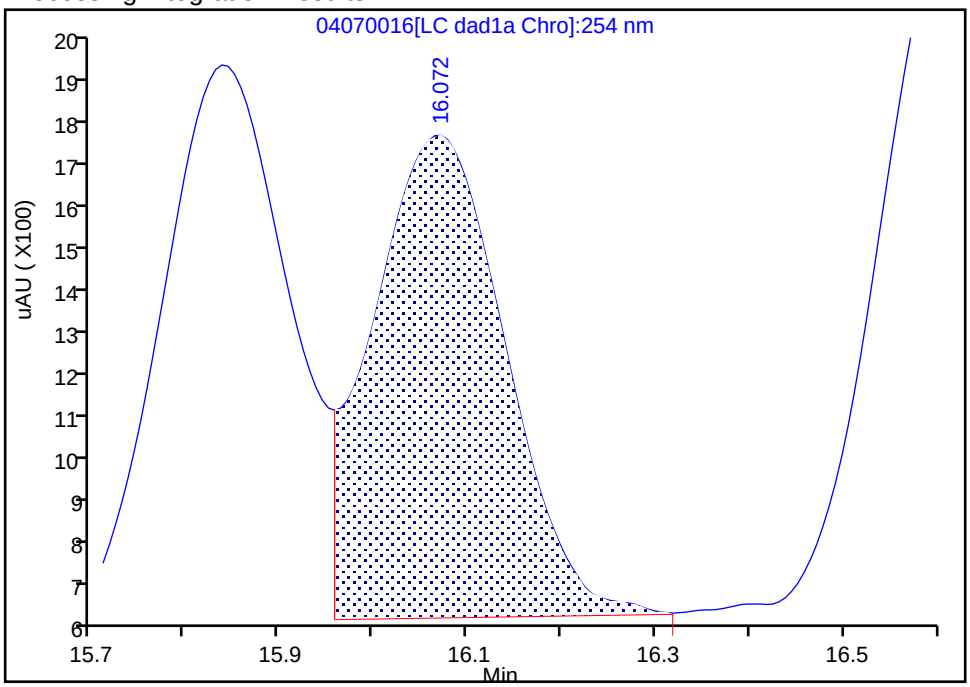
Data File:	\\chromfs\denver\chromdata\g2_luna\20230407-120232.b\04070016.d				
Injection Date:	07-Apr-2023 22:38:44	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT DMT 3				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	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

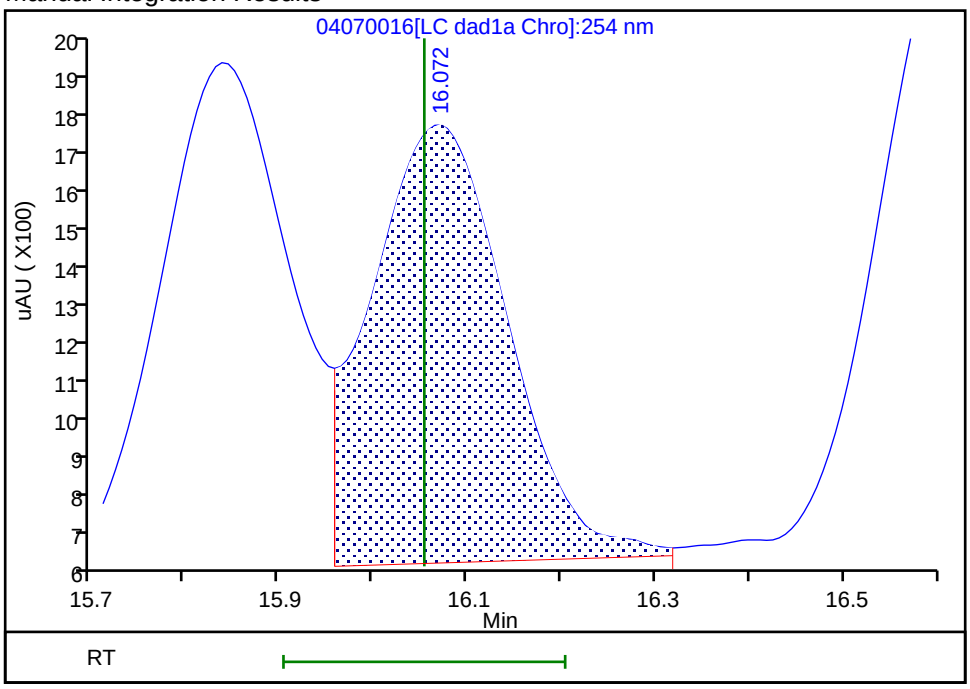
Processing Integration Results

RT: 16.07
Area: 10452
Amount: 0.048934
Amount Units: ug/ml



Manual Integration Results

RT: 16.07
Area: 10927
Amount: 0.050251
Amount Units: ug/ml



Reviewer: LV5D, 08-Apr-2023 10:39:29
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

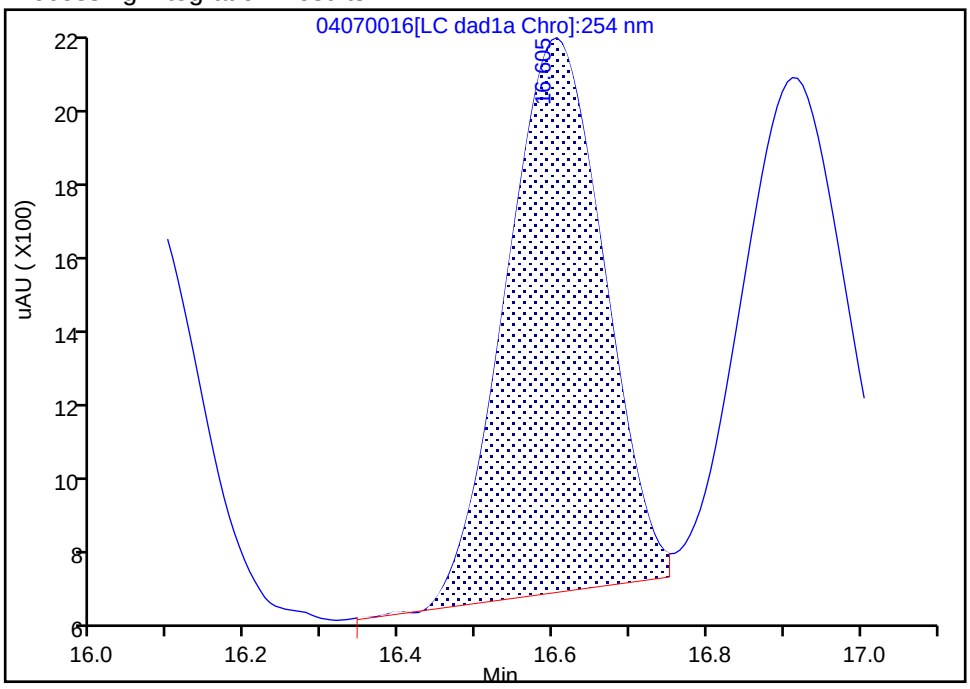
Data File: \\chromfs\denver\chromdata\g2_luna\20230407-120232.b\04070016.d
Injection Date: 07-Apr-2023 22:38:44 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC INT DMT 3
Client ID:
Operator ID: JZ ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: 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

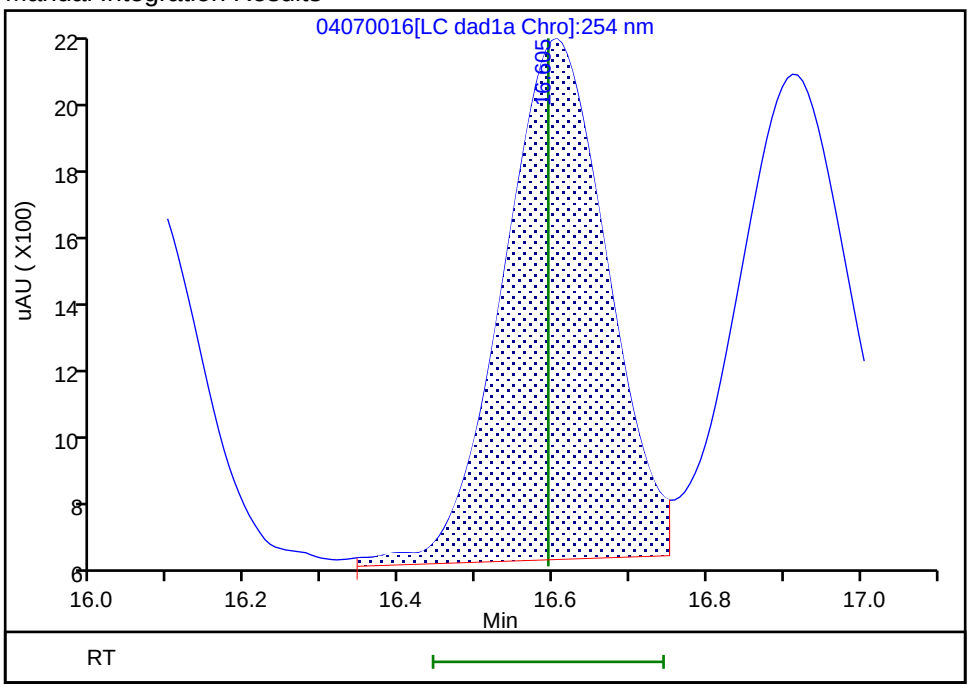
Processing Integration Results

RT: 16.60
Area: 12417
Amount: 0.046038
Amount Units: ug/ml



Manual Integration Results

RT: 16.60
Area: 13722
Amount: 0.050336
Amount Units: ug/ml



Reviewer: LV5D, 08-Apr-2023 10:39:29
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

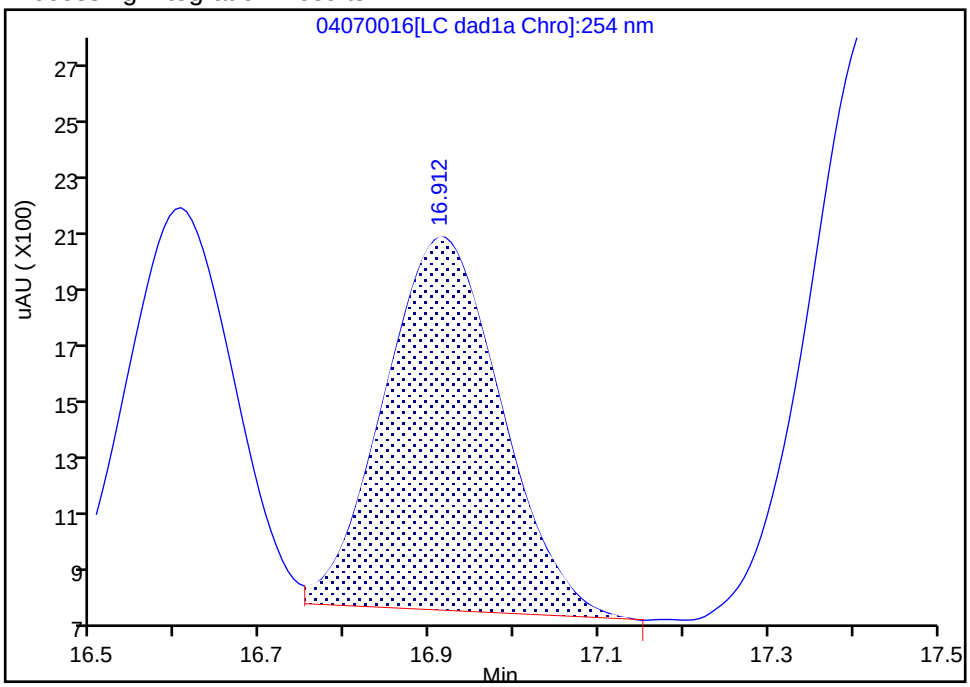
Data File:	\\chromfs\denver\chromdata\g2_luna\20230407-120232.b\04070016.d				
Injection Date:	07-Apr-2023 22:38:44	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT DMT 3				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	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

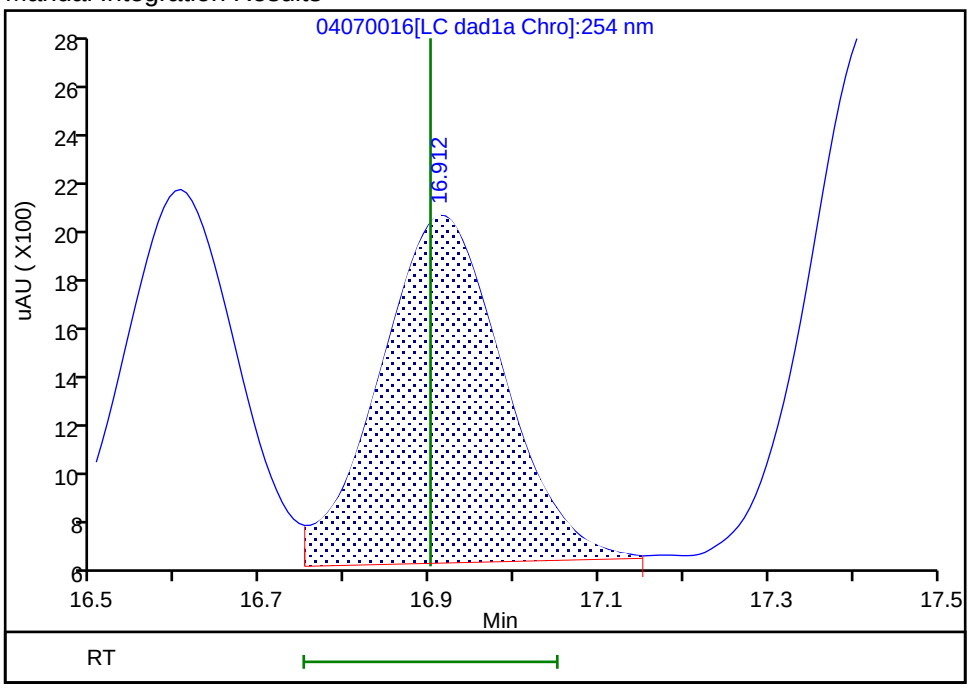
Processing Integration Results

RT: 16.91
Area: 12341
Amount: 0.046505
Amount Units: ug/ml



Manual Integration Results

RT: 16.91
Area: 13529
Amount: 0.050479
Amount Units: ug/ml



Reviewer: LV5D, 08-Apr-2023 10:39:29
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

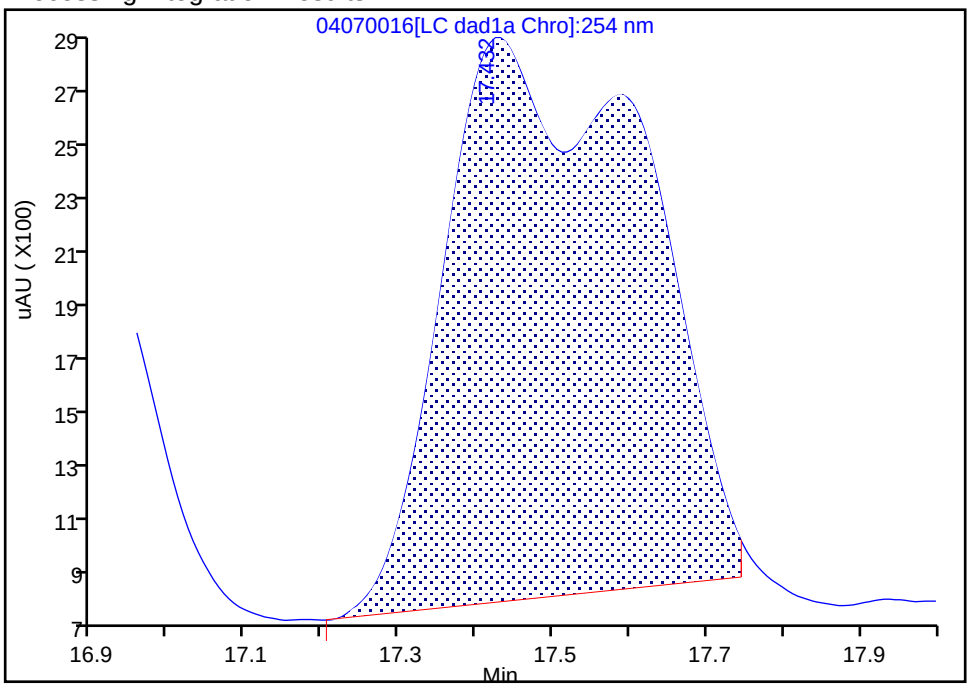
Data File: \\chromfs\denver\chromdata\g2_luna\20230407-120232.b\04070016.d
Injection Date: 07-Apr-2023 22:38:44 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC INT DMT 3
Client ID:
Operator ID: JZ ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: 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

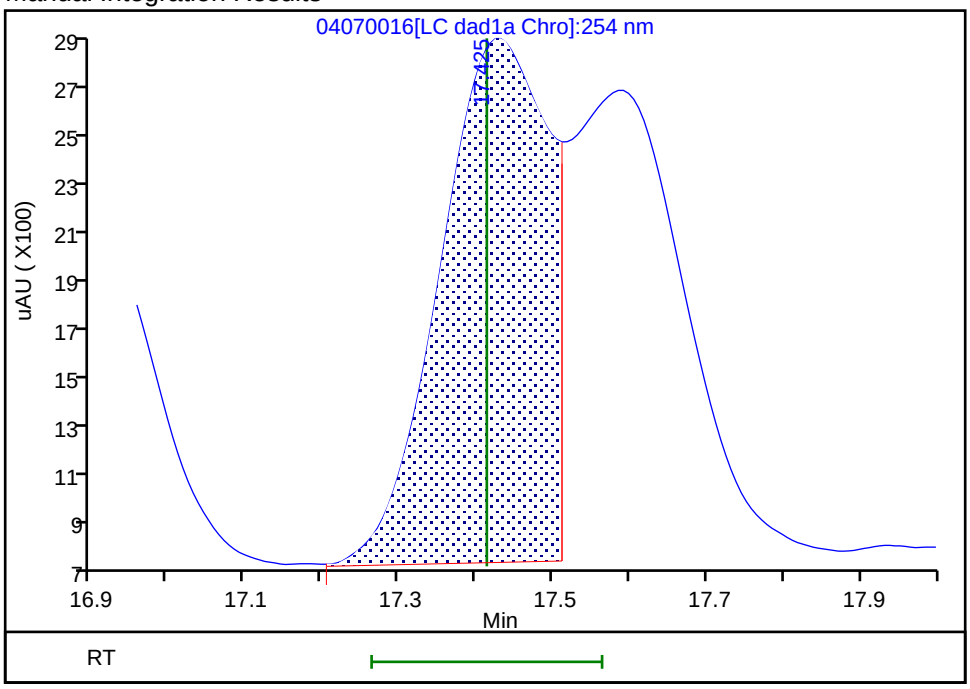
Processing Integration Results

RT: 17.43
Area: 36682
Amount: 0.079883
Amount Units: ug/ml



Manual Integration Results

RT: 17.42
Area: 20191
Amount: 0.050442
Amount Units: ug/ml



Reviewer: LV5D, 08-Apr-2023 10:39:29
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

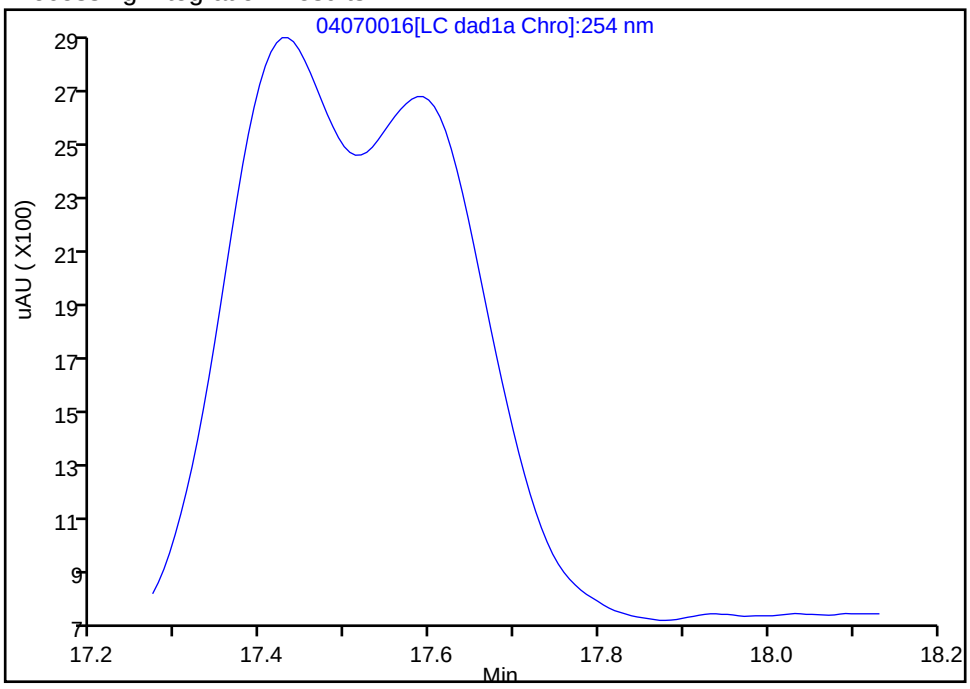
Data File:	\\chromfs\denver\chromdata\g2_luna\20230407-120232.b\04070016.d				
Injection Date:	07-Apr-2023 22:38:44	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT DMT 3				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	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

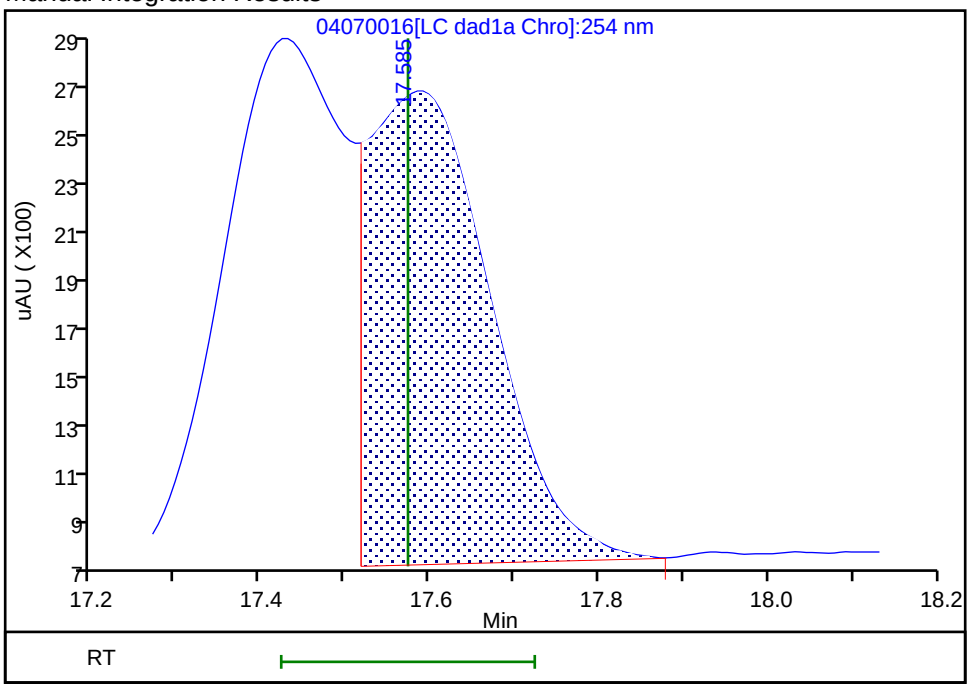
Not Detected
Expected RT: 17.57

Processing Integration Results



Manual Integration Results

RT: 17.58
Area: 18350
Amount: 0.048482
Amount Units: ug/ml



Reviewer: LV5D, 08-Apr-2023 10:39:42
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

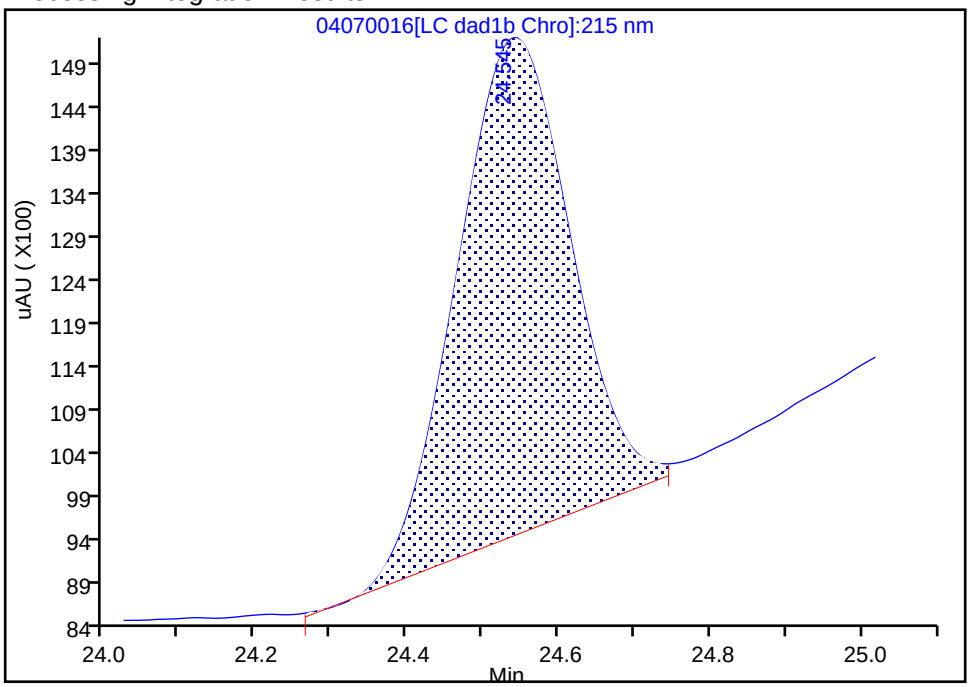
Data File:	\\chromfs\denver\chromdata\g2_luna\20230407-120232.b\04070016.d				
Injection Date:	07-Apr-2023 22:38:44	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT DMT 3				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1B, 215 nm		

24 PETN, CAS: 78-11-5

Signal: 1

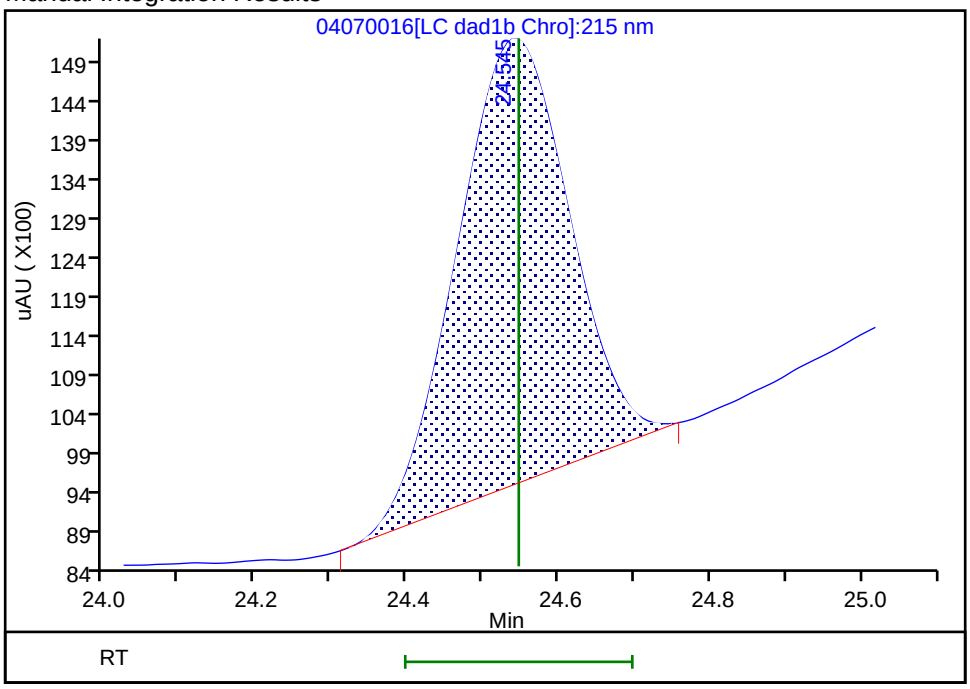
Processing Integration Results

RT: 24.55
Area: 59907
Amount: 0.504886
Amount Units: ug/ml



Manual Integration Results

RT: 24.55
Area: 58615
Amount: 0.495196
Amount Units: ug/ml



Reviewer: LV5D, 08-Apr-2023 10:40:46

Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\04070017.D
Lims ID: IC INT DMT 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 07-Apr-2023 23:14:38 ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC INT DMT 2
Operator ID: JZ Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub18

Method: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 12-Apr-2023 15:55:29 Calib Date: 07-Apr-2023 23:50:31
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\04070018.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX1657

First Level Reviewer: LV5D Date: 08-Apr-2023 10:40:04

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 TNX	1	5.338	5.321	0.017	8035	0.0201	0.0201	
4 DNX	1	6.212	6.194	0.018	5896	0.0200	0.0206	
6 HMX	1	6.865	6.847	0.018	3831	0.0200	0.0212	
7 MNX	1	7.732	7.714	0.018	6187	0.0233	0.0236	
5 2,4,6-Trinitrophenol	1	8.245	8.187	0.058	3181	0.0200	0.0204	
8 RDX	1	9.145	9.127	0.018	4542	0.0200	0.0211	
9 Nitrobenzene	1	11.672	11.654	0.018	7744	0.0200	0.0204	
$ 10 1,2-Dinitrobenzene	1	12.645	12.627	0.018	5627	0.0200	0.0212	
11 3,5-Dinitroaniline	1	14.498	14.480	0.018	8811	0.0200	0.0196	
12 1,3-Dinitrobenzene	1	14.765	14.754	0.011	11425	0.0200	0.0196	
13 Nitroglycerin	2	15.278	15.274	0.004	25265	0.2000	0.2032	
14 o-Nitrotoluene	1	15.845	15.827	0.018	4779	0.0200	0.0197	
15 p-Nitrotoluene	1	16.072	16.054	0.018	4444	0.0200	0.0204	
16 4-Amino-2,6-dinitrotoluene	1	16.605	16.594	0.011	4840	0.0200	0.0178	
17 m-Nitrotoluene	1	16.912	16.900	0.012	5021	0.0200	0.0187	
18 2-Amino-4,6-dinitrotoluene	1	17.425	17.414	0.011	8295	0.0200	0.0207	M
19 1,3,5-Trinitrobenzene	1	17.592	17.574	0.018	7178	0.0200	0.0190	Ma
20 2,6-Dinitrotoluene	1	18.732	18.714	0.018	5869	0.0200	0.0210	
21 2,4-Dinitrotoluene	1	19.185	19.174	0.011	11382	0.0200	0.0203	
22 Tetryl	1	22.492	22.481	0.011	5460	0.0200	0.0202	
23 2,4,6-Trinitrotoluene	1	23.312	23.301	0.011	9530	0.0200	0.0231	
24 PETN	2	24.558	24.547	0.011	21527	0.2000	0.1819	M

QC Flag Legend
Processing Flags

Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

8330IntermStk_00076	Amount Added:	2.00	Units: uL
8330 DMT_00013	Amount Added:	1.00	Units: uL

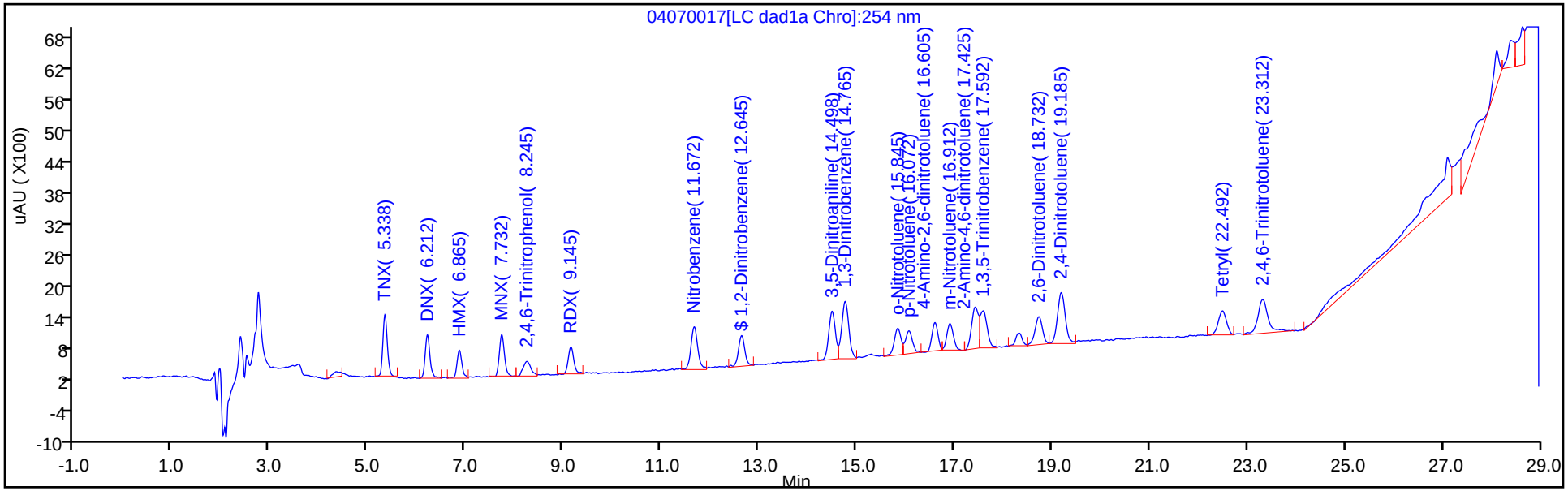
Report Date: 12-Apr-2023 15:55:29 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

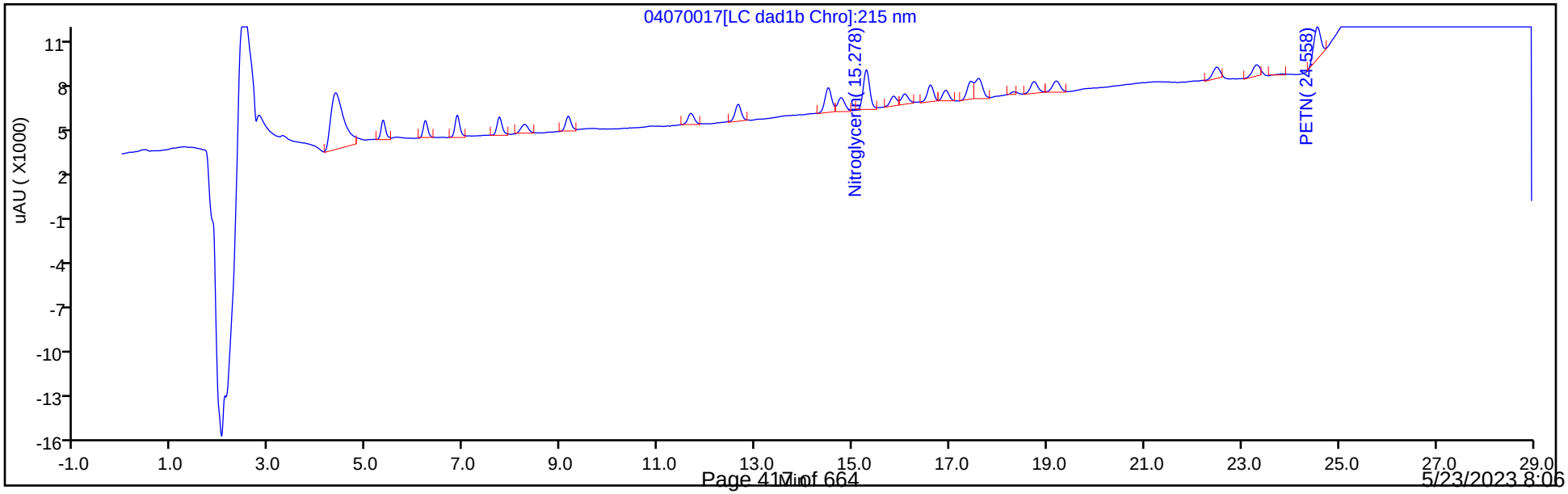
Data File: \\chromfs\denver\chromdata\g2_luna\20230407-120232.b\04070017.d

Injection Date:	07-Apr-2023 23:14:38	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	JZ
Lims ID:	IC INT DMT 2			Worklist Smp#:	17
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	17
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



Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

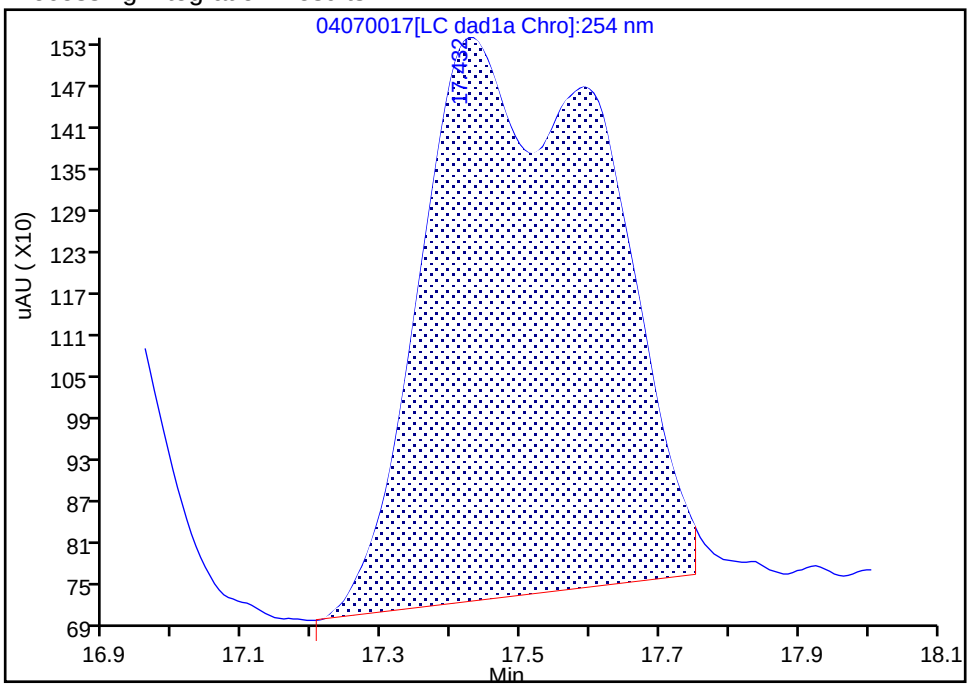
Data File:	\\chromfs\denver\chromdata\g2_luna\20230407-120232.b\04070017.d				
Injection Date:	07-Apr-2023 23:14:38	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT DMT 2				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	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

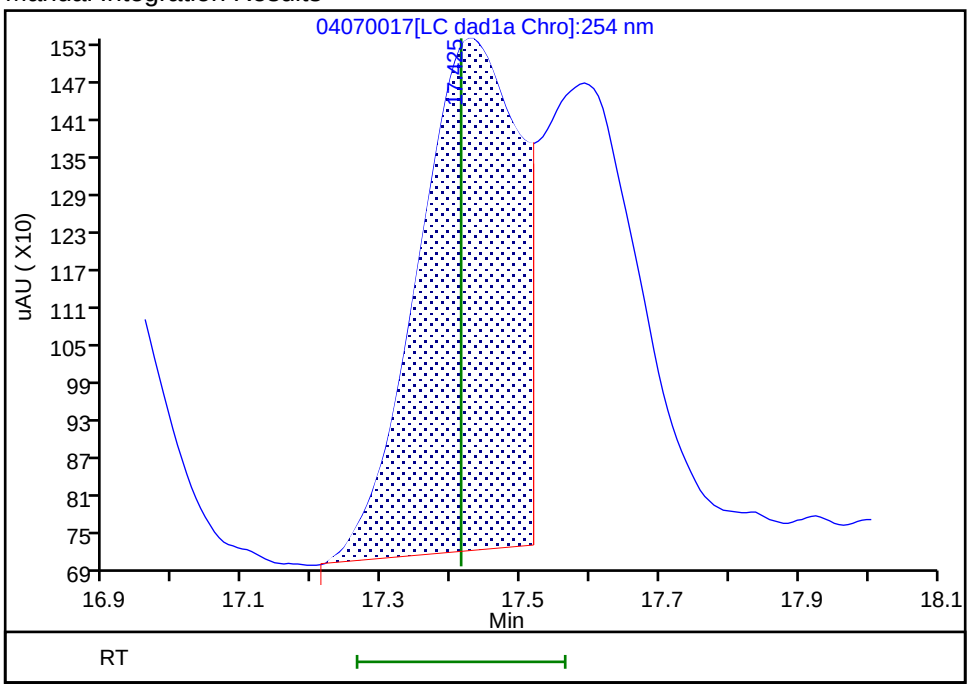
Processing Integration Results

RT: 17.43
Area: 15089
Amount: 0.026510
Amount Units: ug/ml



Manual Integration Results

RT: 17.42
Area: 8295
Amount: 0.020723
Amount Units: ug/ml



Reviewer: LV5D, 08-Apr-2023 10:40:01

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

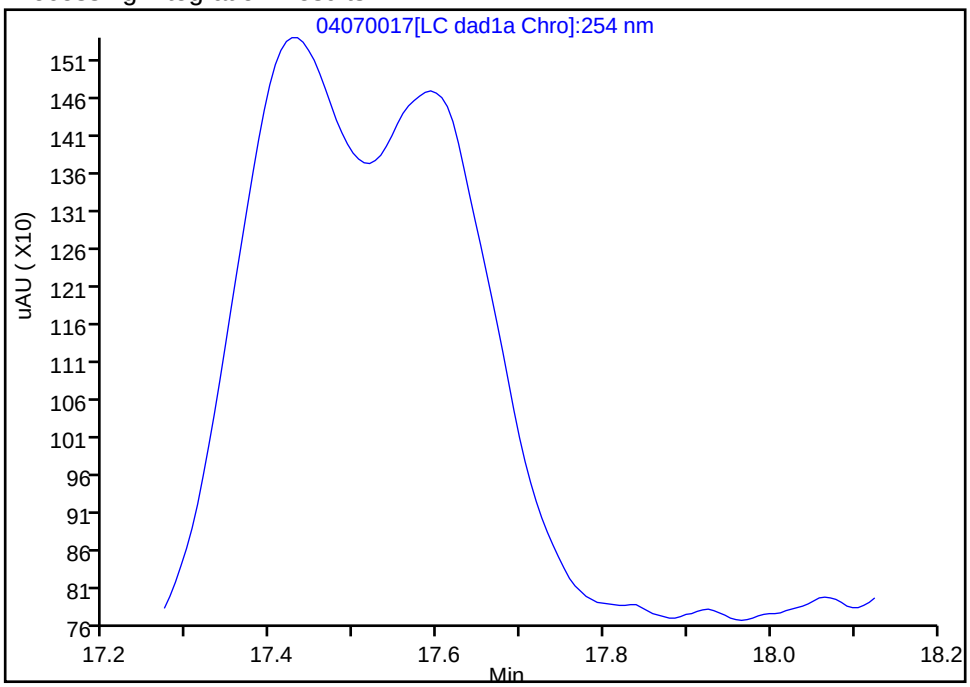
Data File:	\\chromfs\denver\chromdata\g2_luna\20230407-120232.b\04070017.d				
Injection Date:	07-Apr-2023 23:14:38	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT DMT 2				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	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

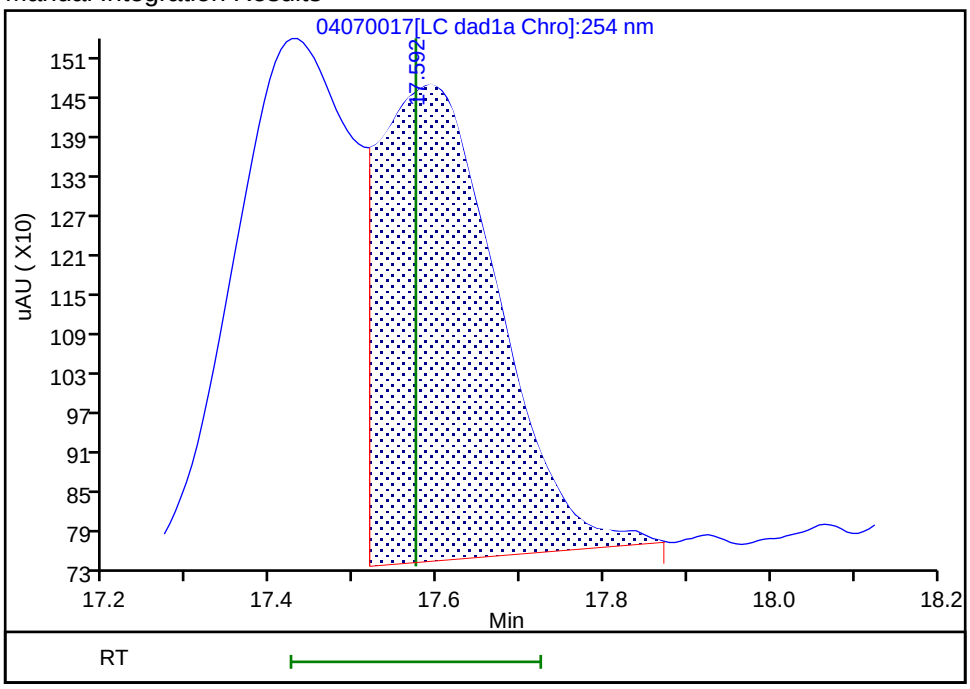
Not Detected
Expected RT: 17.57

Processing Integration Results



Manual Integration Results

RT: 17.59
Area: 7178
Amount: 0.018965
Amount Units: ug/ml



Reviewer: LV5D, 08-Apr-2023 10:40:03
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

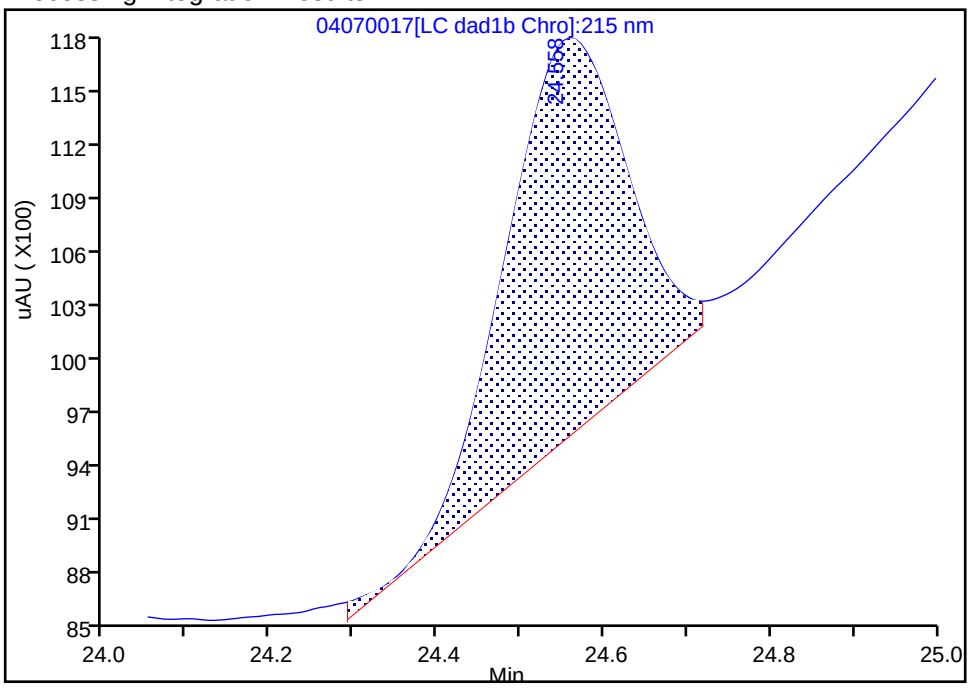
Data File:	\\chromfs\denver\chromdata\g2_luna\20230407-120232.b\04070017.d				
Injection Date:	07-Apr-2023 23:14:38	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT DMT 2				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1B, 215 nm		

24 PETN, CAS: 78-11-5

Signal: 1

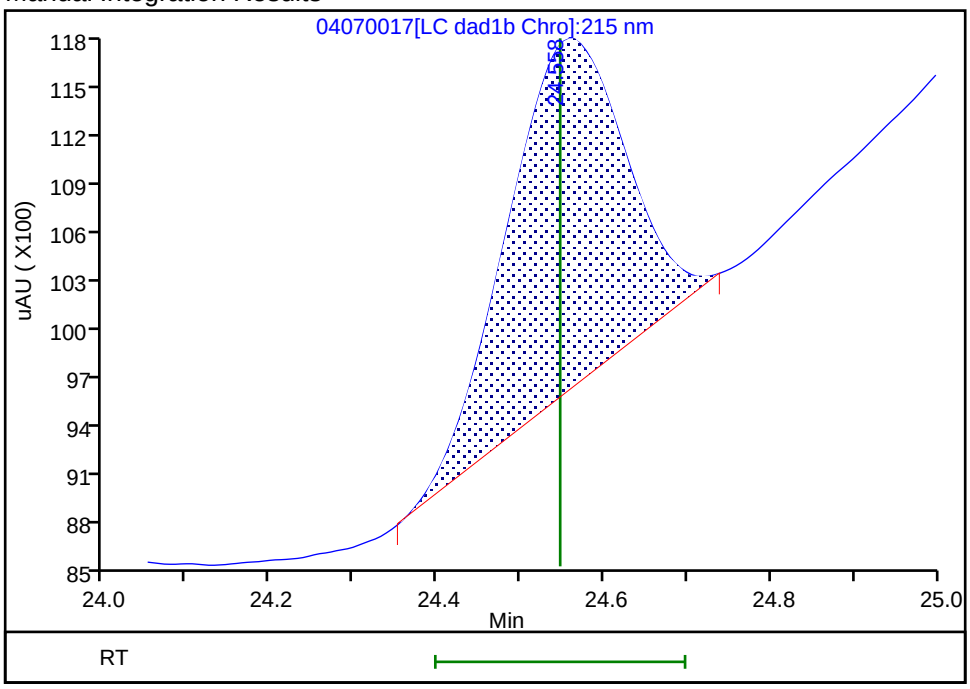
Processing Integration Results

RT: 24.56
Area: 22662
Amount: 0.189982
Amount Units: ug/ml



Manual Integration Results

RT: 24.56
Area: 21527
Amount: 0.181866
Amount Units: ug/ml



Reviewer: LV5D, 08-Apr-2023 10:40:41

Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\04070018.D
Lims ID: IC INT DMT 1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 07-Apr-2023 23:50:31 ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC INT DMT 1
Operator ID: JZ Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub18

Method: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 12-Apr-2023 15:55:29 Calib Date: 07-Apr-2023 23:50:31
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\04070018.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX1657

First Level Reviewer: LV5D Date: 12-Apr-2023 15:55:06

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 TNX	1	5.328	5.321	0.007	4669	0.0100	0.0117	
4 DNX	1	6.195	6.194	0.001	3097	0.0100	0.0108	
6 HMX	1	6.855	6.847	0.008	2116	0.0100	0.0117	
7 MNX	1	7.715	7.714	0.001	3165	0.0117	0.0121	
5 2,4,6-Trinitrophenol	1	8.215	8.187	0.028	1601	0.0100	0.0103	
8 RDX	1	9.135	9.127	0.008	2543	0.0100	0.0118	
9 Nitrobenzene	1	11.661	11.654	0.007	4002	0.0100	0.0105	
$ 10 1,2-Dinitrobenzene	1	12.628	12.627	0.001	2840	0.0100	0.0107	
11 3,5-Dinitroaniline	1	14.481	14.480	0.001	4725	0.0100	0.0101	
12 1,3-Dinitrobenzene	1	14.761	14.754	0.007	6202	0.0100	0.0107	
13 Nitroglycerin	2	15.268	15.274	-0.006	12725	0.1000	0.1023	
14 o-Nitrotoluene	1	15.835	15.827	0.008	2596	0.0100	0.0107	M
15 p-Nitrotoluene	1	16.055	16.054	0.001	2388	0.0100	0.0110	Ma
16 4-Amino-2,6-dinitrotoluene	1	16.608	16.594	0.014	3004	0.0100	0.0110	
17 m-Nitrotoluene	1	16.908	16.900	0.008	2673	0.0100	0.0100	
18 2-Amino-4,6-dinitrotoluene	1	17.421	17.414	0.007	4148	0.0100	0.0104	M
19 1,3,5-Trinitrobenzene	1	17.581	17.574	0.007	3748	0.0100	0.0099	Ma
20 2,6-Dinitrotoluene	1	18.728	18.714	0.014	3509	0.0100	0.0125	
21 2,4-Dinitrotoluene	1	19.175	19.174	0.001	6650	0.0100	0.0119	
22 Tetryl	1	22.495	22.481	0.014	2847	0.0100	0.0105	
23 2,4,6-Trinitrotoluene	1	23.302	23.301	0.001	4042	0.0100	0.009817	
24 PETN	2	24.568	24.547	0.021	9214	0.1000	0.0778	M

QC Flag Legend
Processing Flags

Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

8330IntermStk_00076	Amount Added:	1.00	Units: uL
8330 DMT_00013	Amount Added:	0.50	Units: uL

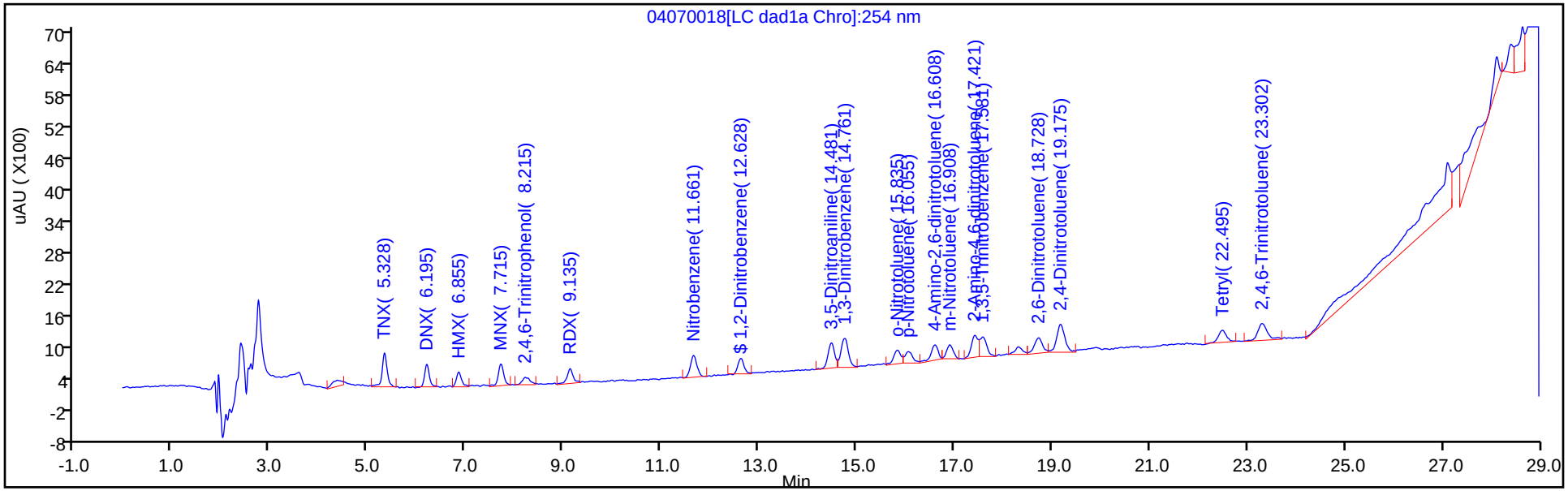
Report Date: 12-Apr-2023 15:55:29 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

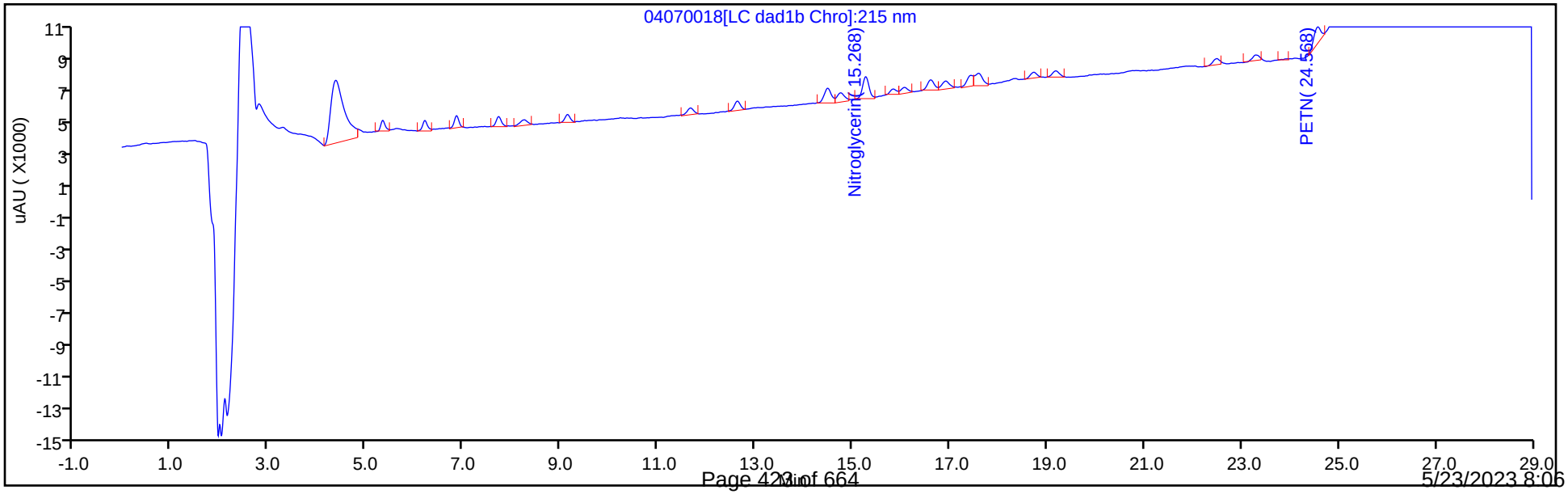
Data File: \\chromfs\denver\chromdata\g2_luna\20230407-120232.b\04070018.d

Injection Date:	07-Apr-2023 23:50:31	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	JZ
Lims ID:	IC INT DMT 1			Worklist Smp#:	18
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	18
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



Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



5/23/2023 8:06 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

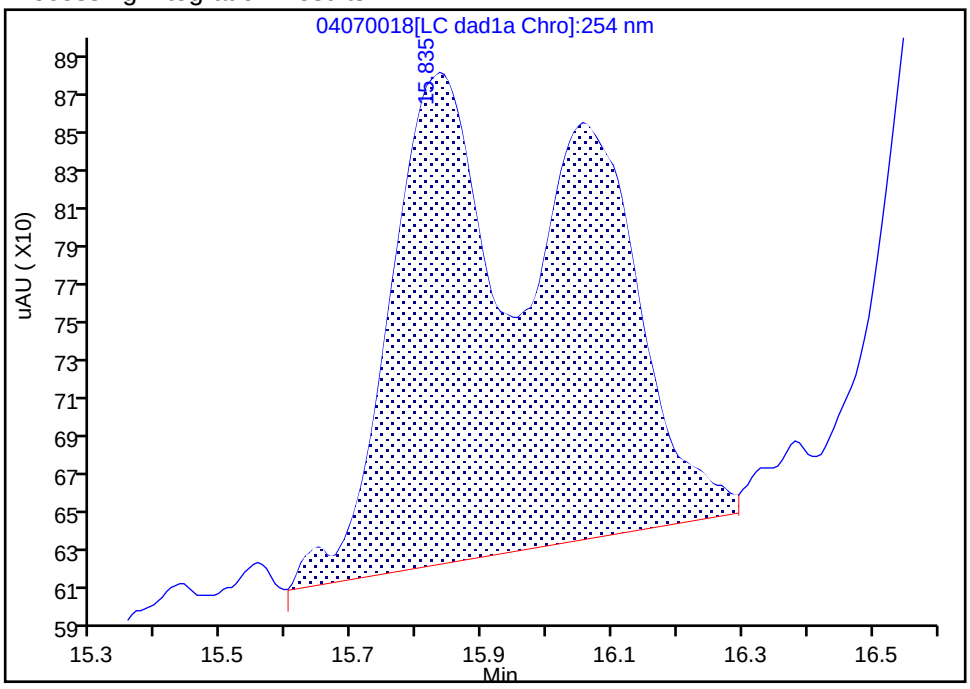
Data File:	\\chromfs\denver\chromdata\g2_luna\20230407-120232.b\04070018.d				
Injection Date:	07-Apr-2023 23:50:31	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT DMT 1				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	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

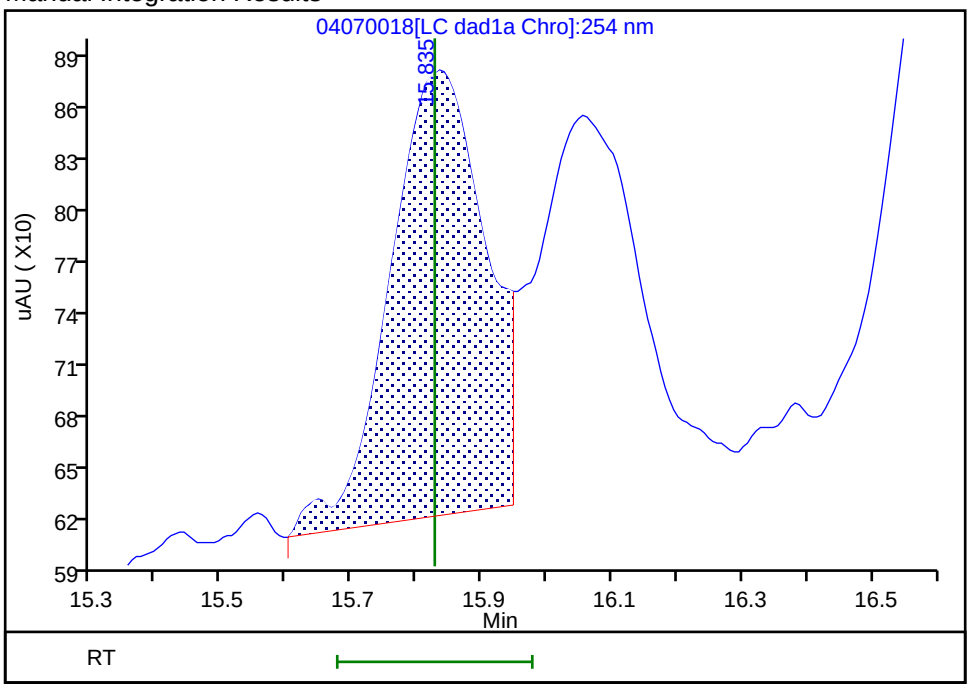
Processing Integration Results

RT: 15.83
Area: 4974
Amount: 0.018449
Amount Units: ug/ml



Manual Integration Results

RT: 15.83
Area: 2596
Amount: 0.010675
Amount Units: ug/ml



Reviewer: LV5D, 08-Apr-2023 10:40:09

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

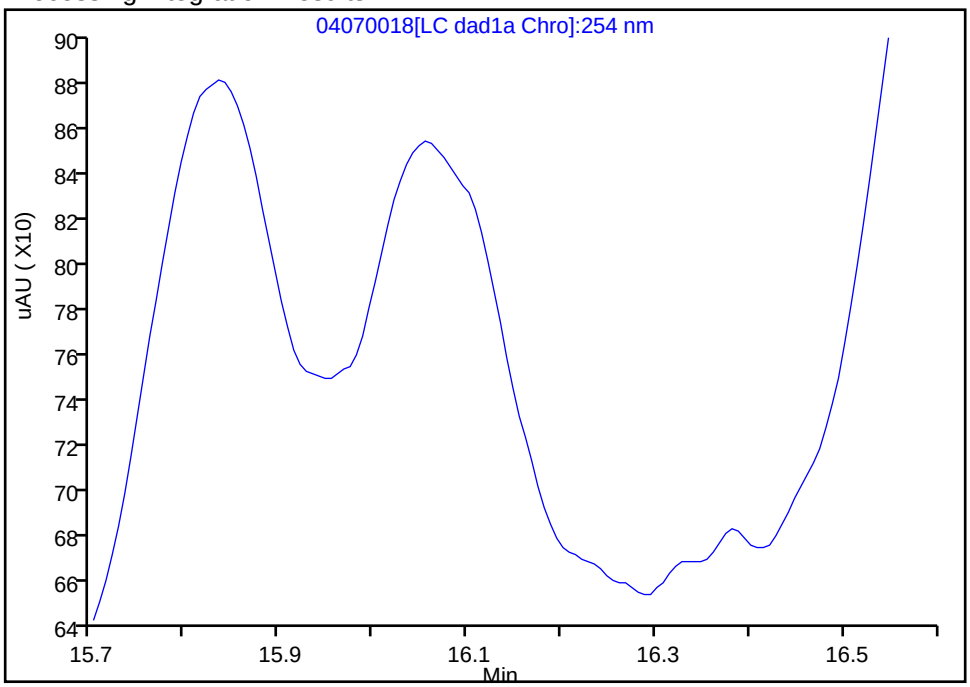
Data File:	\\chromfs\denver\chromdata\g2_luna\20230407-120232.b\04070018.d				
Injection Date:	07-Apr-2023 23:50:31	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT DMT 1				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	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

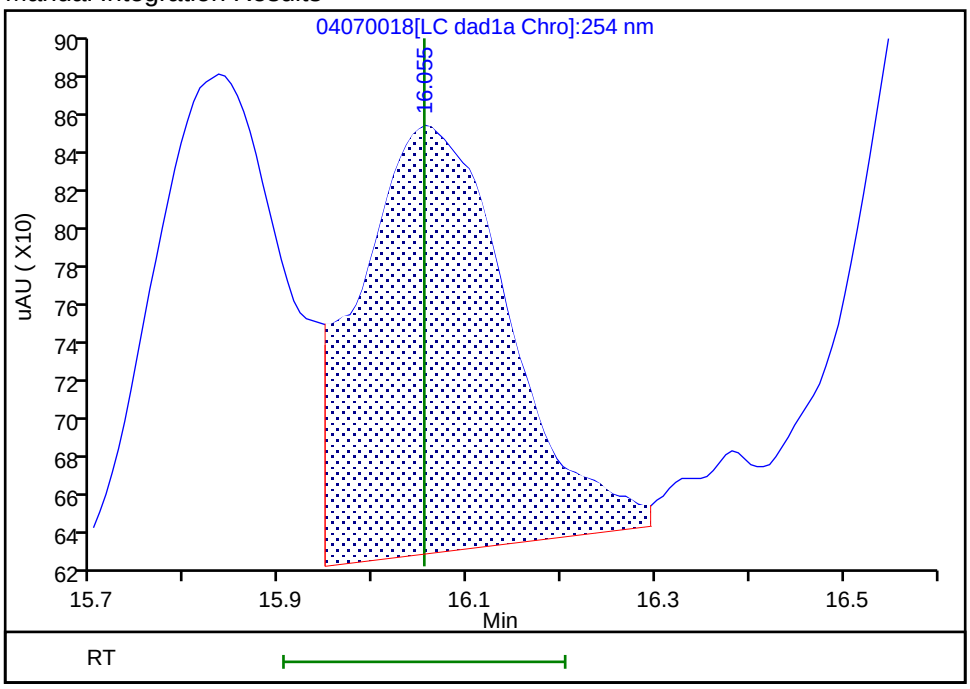
Not Detected
Expected RT: 16.05

Processing Integration Results



Manual Integration Results

RT: 16.05
Area: 2388
Amount: 0.010982
Amount Units: ug/ml



Reviewer: LV5D, 08-Apr-2023 10:40:12
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

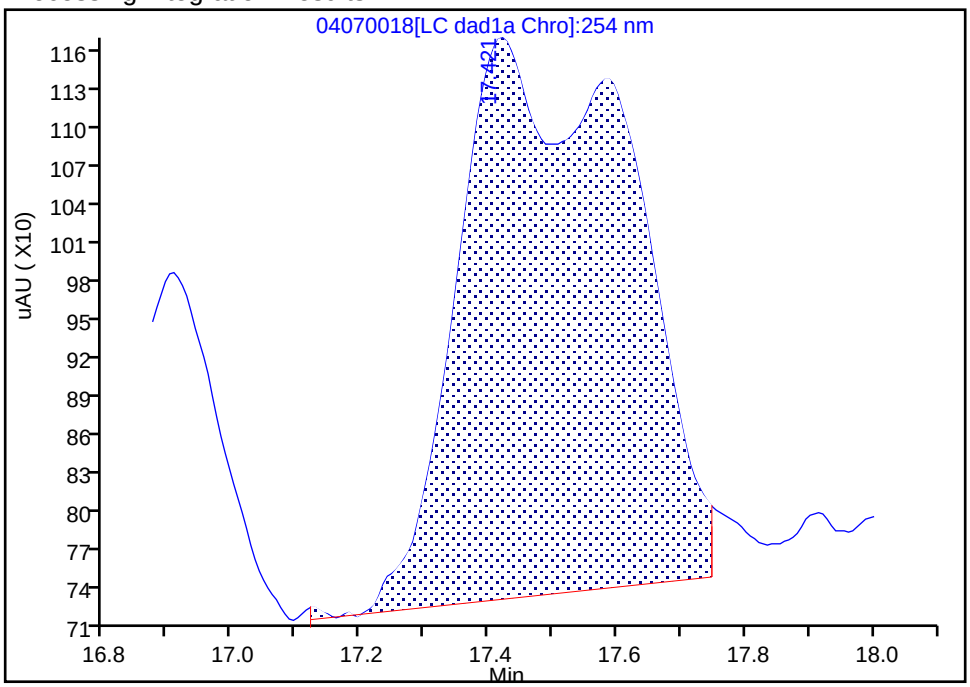
Data File:	\\chromfs\denver\chromdata\g2_luna\20230407-120232.b\04070018.d				
Injection Date:	07-Apr-2023 23:50:31	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT DMT 1				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	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

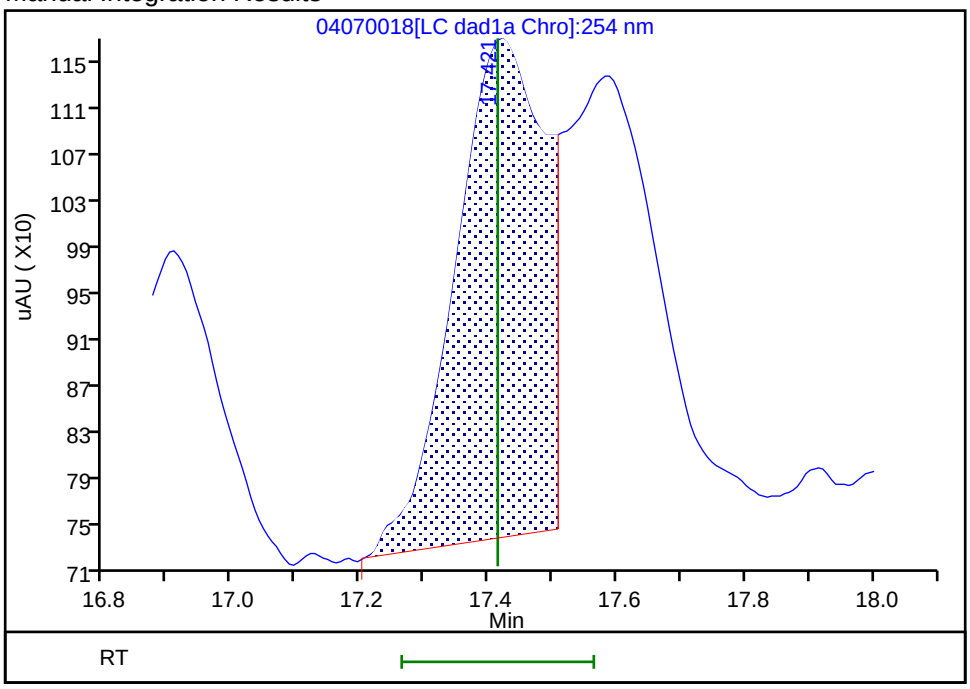
Processing Integration Results

RT: 17.42
Area: 8095
Amount: 0.012716
Amount Units: ug/ml



Manual Integration Results

RT: 17.42
Area: 4148
Amount: 0.010363
Amount Units: ug/ml



Reviewer: LV5D, 08-Apr-2023 10:40:27

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Eurofins Denver

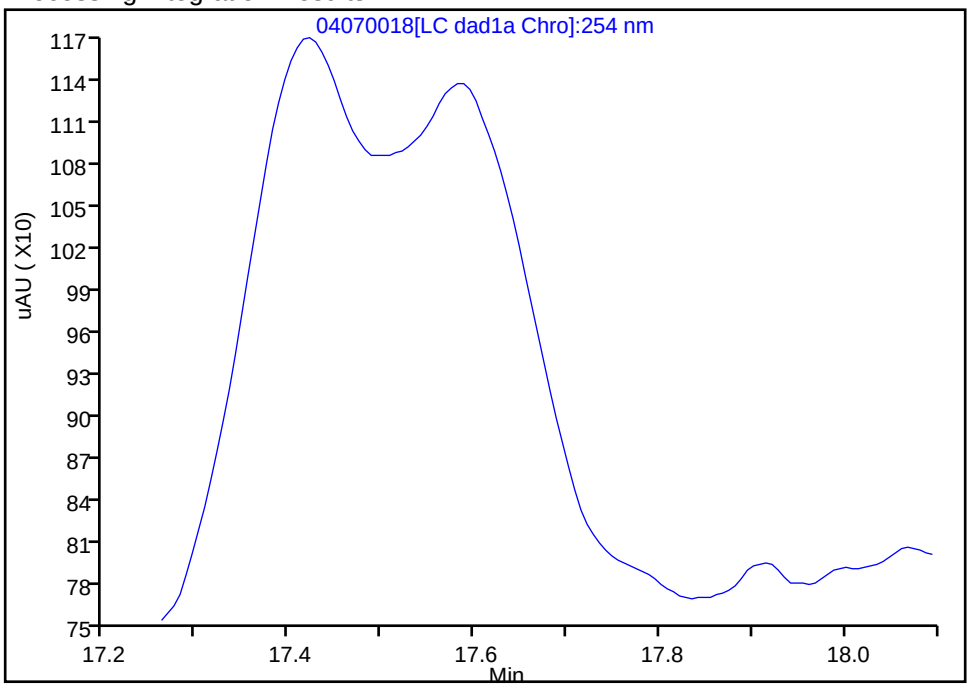
Data File:	\\chromfs\denver\chromdata\g2_luna\20230407-120232.b\04070018.d				
Injection Date:	07-Apr-2023 23:50:31	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT DMT 1				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	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

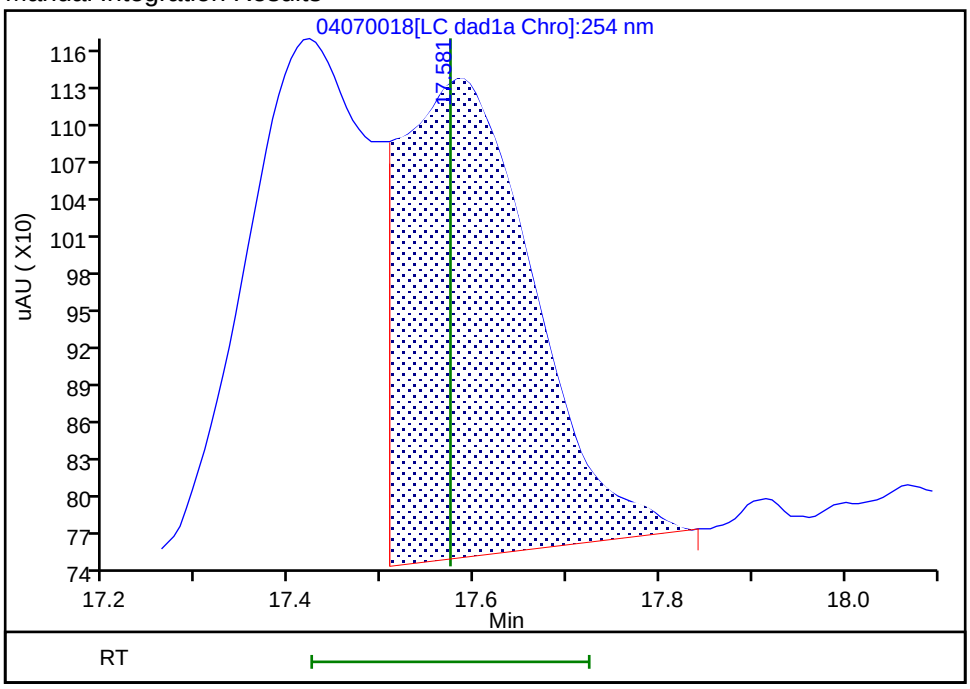
Not Detected
Expected RT: 17.57

Processing Integration Results



Manual Integration Results

RT: 17.58
Area: 3748
Amount: 0.009903
Amount Units: ug/ml



Reviewer: LV5D, 08-Apr-2023 10:40:30
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

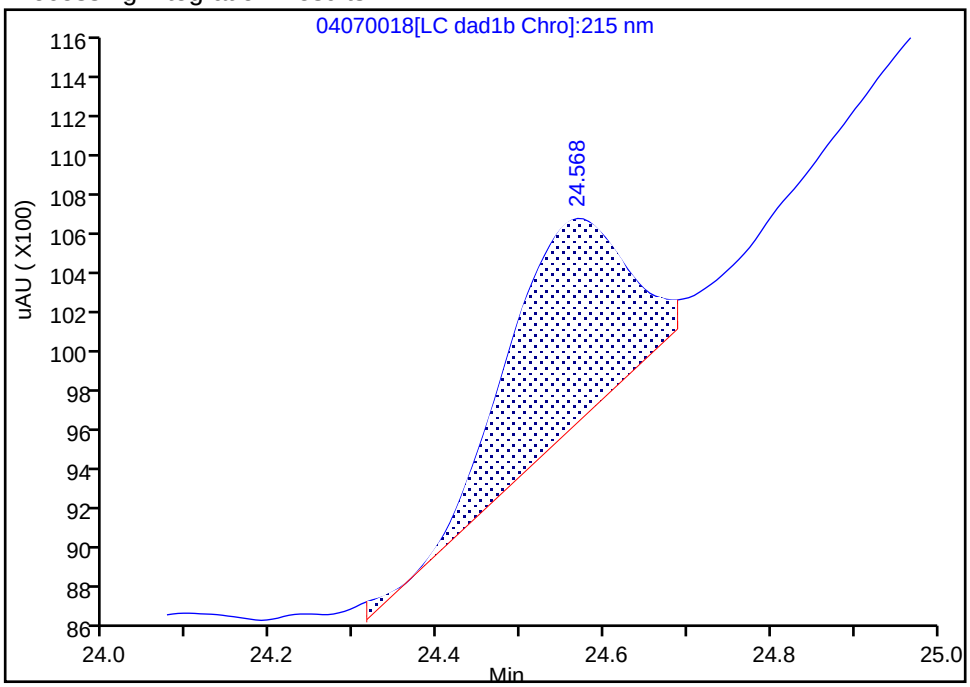
Data File: \\chromfs\denver\chromdata\g2_luna\20230407-120232.b\04070018.d
Injection Date: 07-Apr-2023 23:50:31 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC INT DMT 1
Client ID:
Operator ID: JZ ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1B, 215 nm

24 PETN, CAS: 78-11-5

Signal: 1

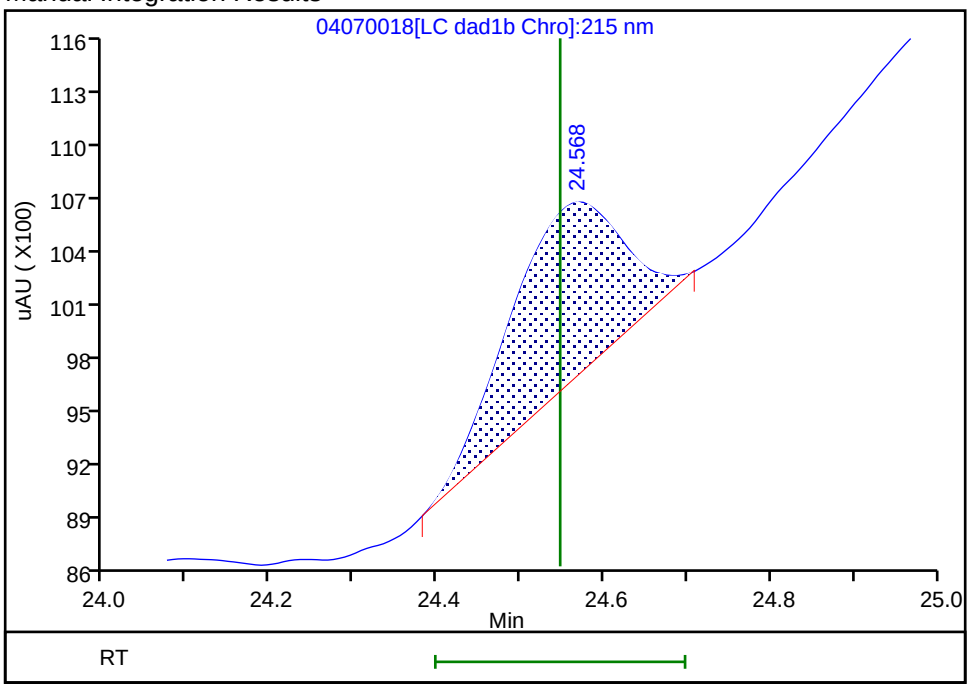
Processing Integration Results

RT: 24.57
Area: 10181
Amount: 0.084588
Amount Units: ug/ml



Manual Integration Results

RT: 24.57
Area: 9214
Amount: 0.077842
Amount Units: ug/ml



Reviewer: LV5D, 08-Apr-2023 10:40:36
Audit Action: Manually Integrated Audit Reason: Baseline

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

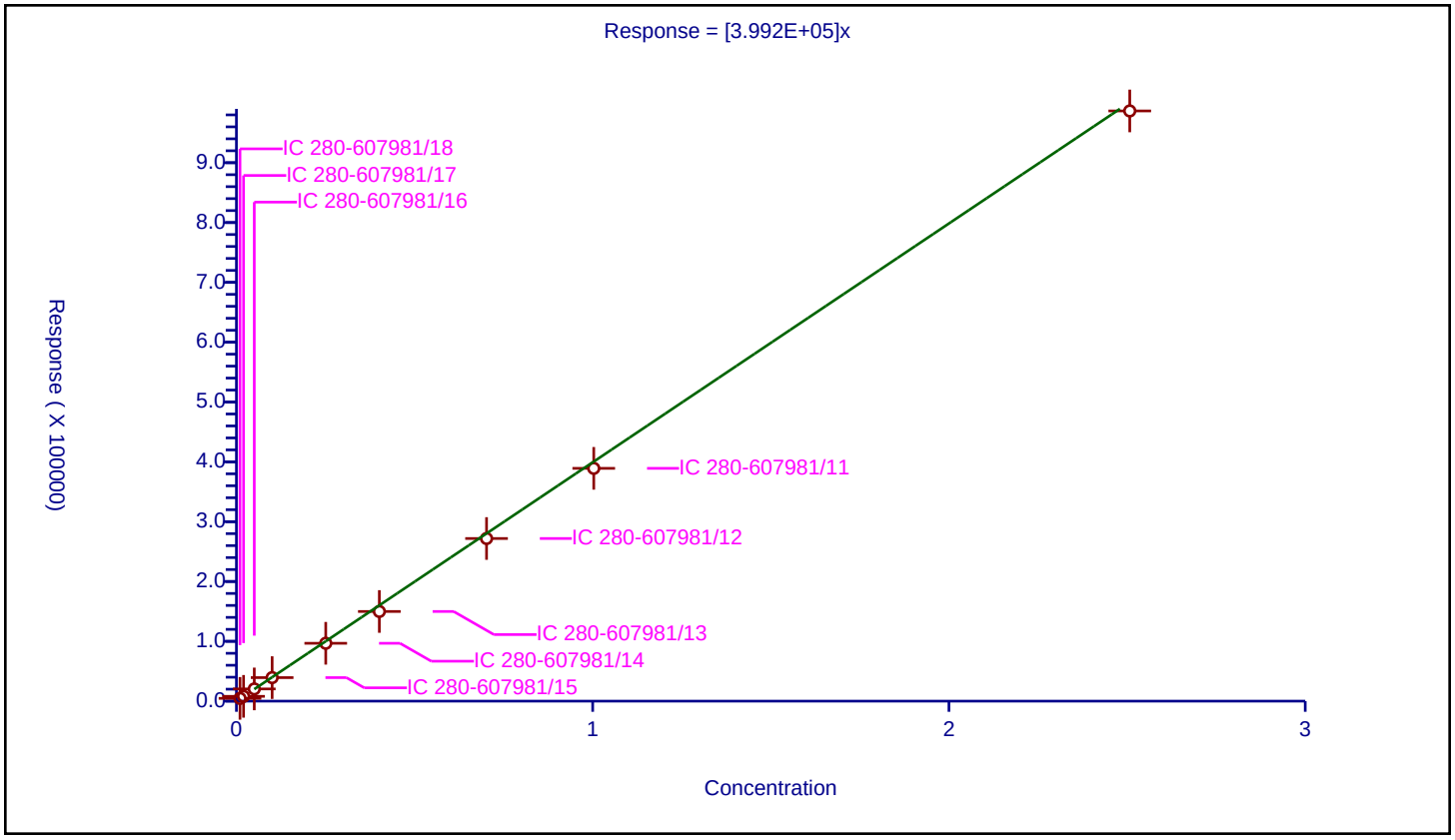
Curve Coefficients

Intercept:	0
Slope:	3.992E+05

Error Coefficients

Standard Error:	8100
Relative Standard Error:	6.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-607981/18	0.01003	4669.0			465503.489531	Y
2	IC 280-607981/17	0.02006	8035.0			400548.354935	Y
3	IC 280-607981/16	0.05015	20397.0			406719.840479	Y
4	IC 280-607981/15	0.1003	39339.0			392213.35992	Y
5	IC 280-607981/14	0.25075	96722.0			385730.807577	Y
6	IC 280-607981/13	0.4012	149885.0			373591.724826	Y
7	IC 280-607981/12	0.7021	271856.0			387204.10198	Y
8	IC 280-607981/11	1.003	389131.0			387967.098704	Y
9	IC 280-607981/10	2.5075	986578.0			393450.847458	Y



Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

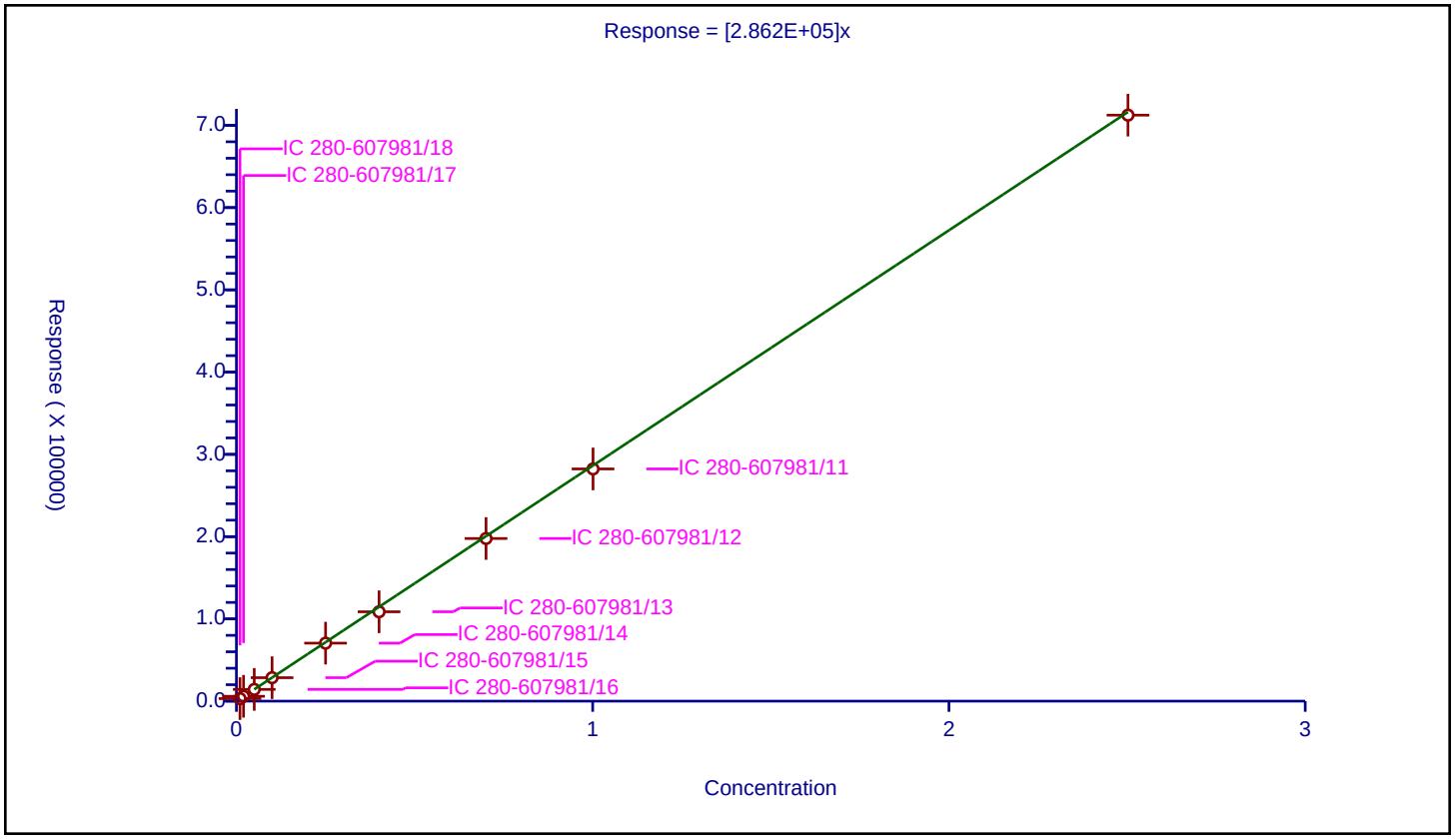
Curve Coefficients

Intercept:	0
Slope:	2.862E+05

Error Coefficients

Standard Error:	3100
Relative Standard Error:	3.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-607981/18	0.01001	3097.0			309390.609391	Y
2	IC 280-607981/17	0.02002	5896.0			294505.494505	Y
3	IC 280-607981/16	0.05005	14268.0			285074.925075	Y
4	IC 280-607981/15	0.1001	28516.0			284875.124875	Y
5	IC 280-607981/14	0.25025	70501.0			281722.277722	Y
6	IC 280-607981/13	0.4004	108664.0			271388.611389	Y
7	IC 280-607981/12	0.7007	197714.0			282166.405024	Y
8	IC 280-607981/11	1.001	282296.0			282013.986014	Y
9	IC 280-607981/10	2.5025	712375.0			284665.334665	Y



Calibration / HMX

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

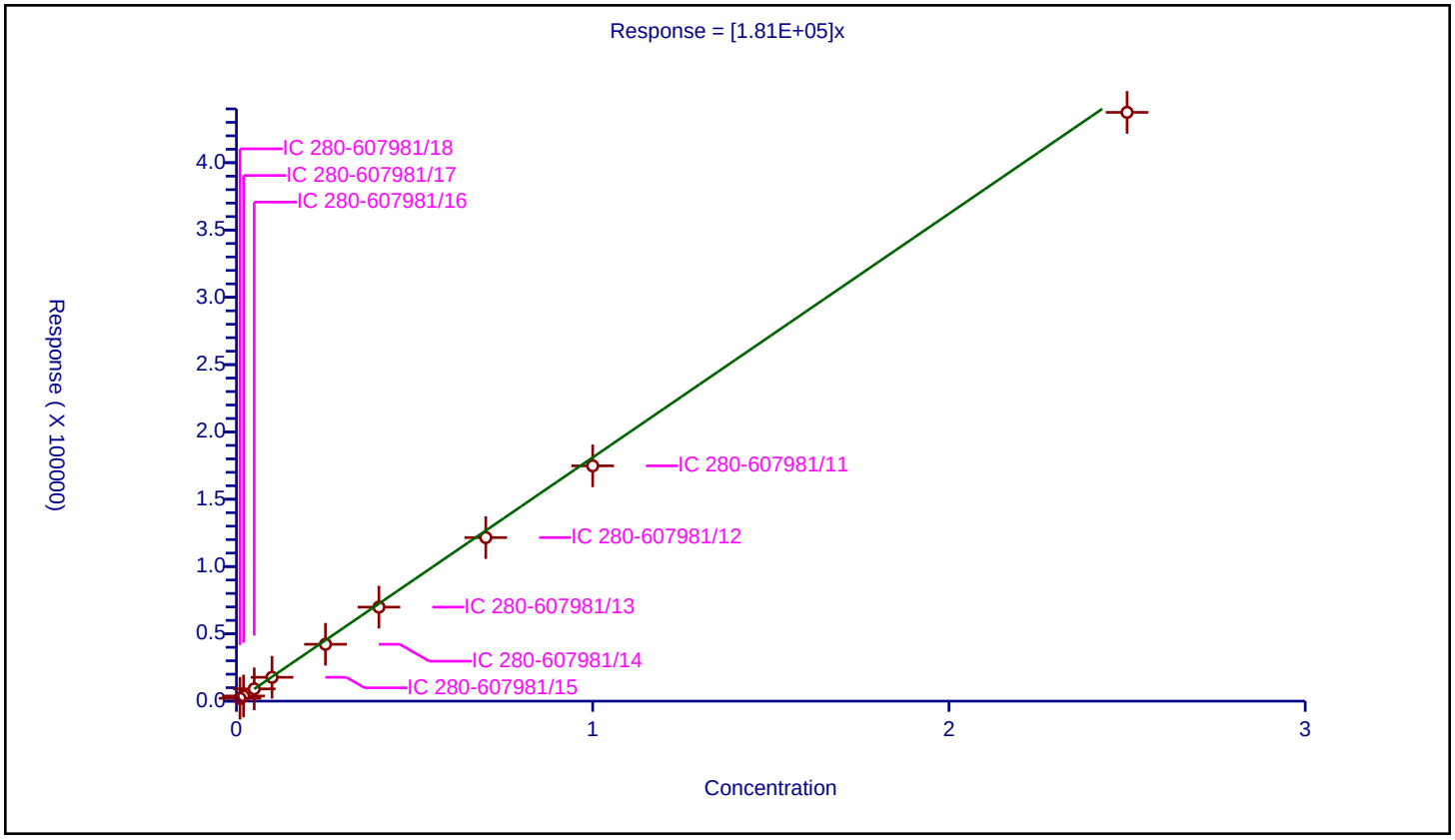
Curve Coefficients

Intercept:	0
Slope:	1.81E+05

Error Coefficients

Standard Error:	6250
Relative Standard Error:	7.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-607981/18	0.01	2116.0			211600.0	Y
2	IC 280-607981/17	0.02	3831.0			191550.0	Y
3	IC 280-607981/16	0.05	9104.0			182080.0	Y
4	IC 280-607981/15	0.1	17711.0			177110.0	Y
5	IC 280-607981/14	0.25	42259.0			169036.0	Y
6	IC 280-607981/13	0.4	69854.0			174635.0	Y
7	IC 280-607981/12	0.7	121533.0			173618.571429	Y
8	IC 280-607981/11	1.0	174813.0			174813.0	Y
9	IC 280-607981/10	2.5	437409.0			174963.6	Y



Calibration / MNX

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

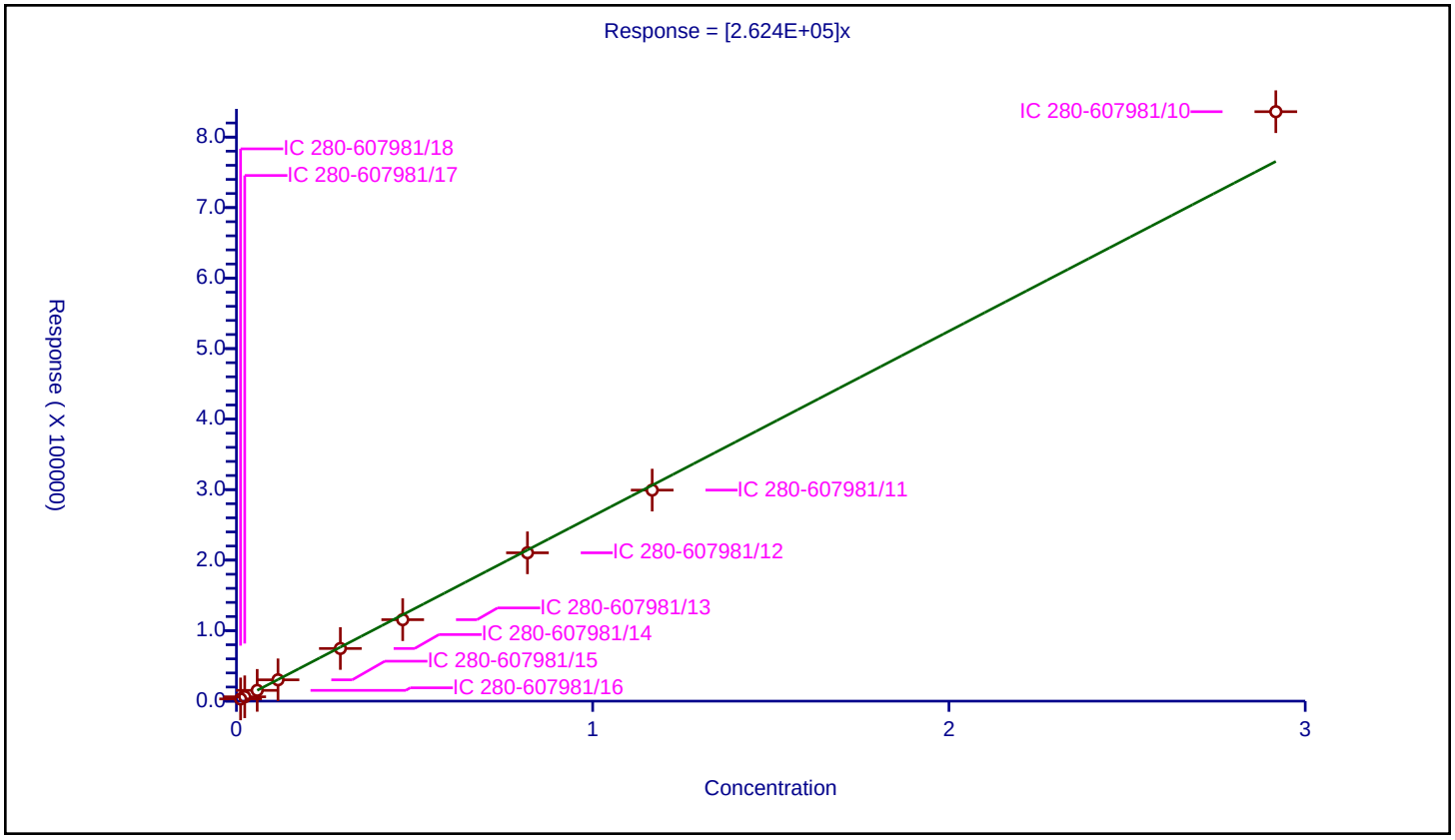
Curve Coefficients

Intercept:	0
Slope:	2.624E+05

Error Coefficients

Standard Error:	25200
Relative Standard Error:	4.3
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-607981/18	0.01167	3165.0			271208.226221	Y
2	IC 280-607981/17	0.02334	6187.0			265081.405313	Y
3	IC 280-607981/16	0.05835	15283.0			261919.451585	Y
4	IC 280-607981/15	0.1167	30241.0			259134.532991	Y
5	IC 280-607981/14	0.29175	74679.0			255969.151671	Y
6	IC 280-607981/13	0.4668	115542.0			247519.280206	Y
7	IC 280-607981/12	0.8169	210405.0			257565.185457	Y
8	IC 280-607981/11	1.167	299304.0			256473.007712	Y
9	IC 280-607981/10	2.9175	836019.0			286553.213368	Y



Calibration / 2,4,6-Trinitrophenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

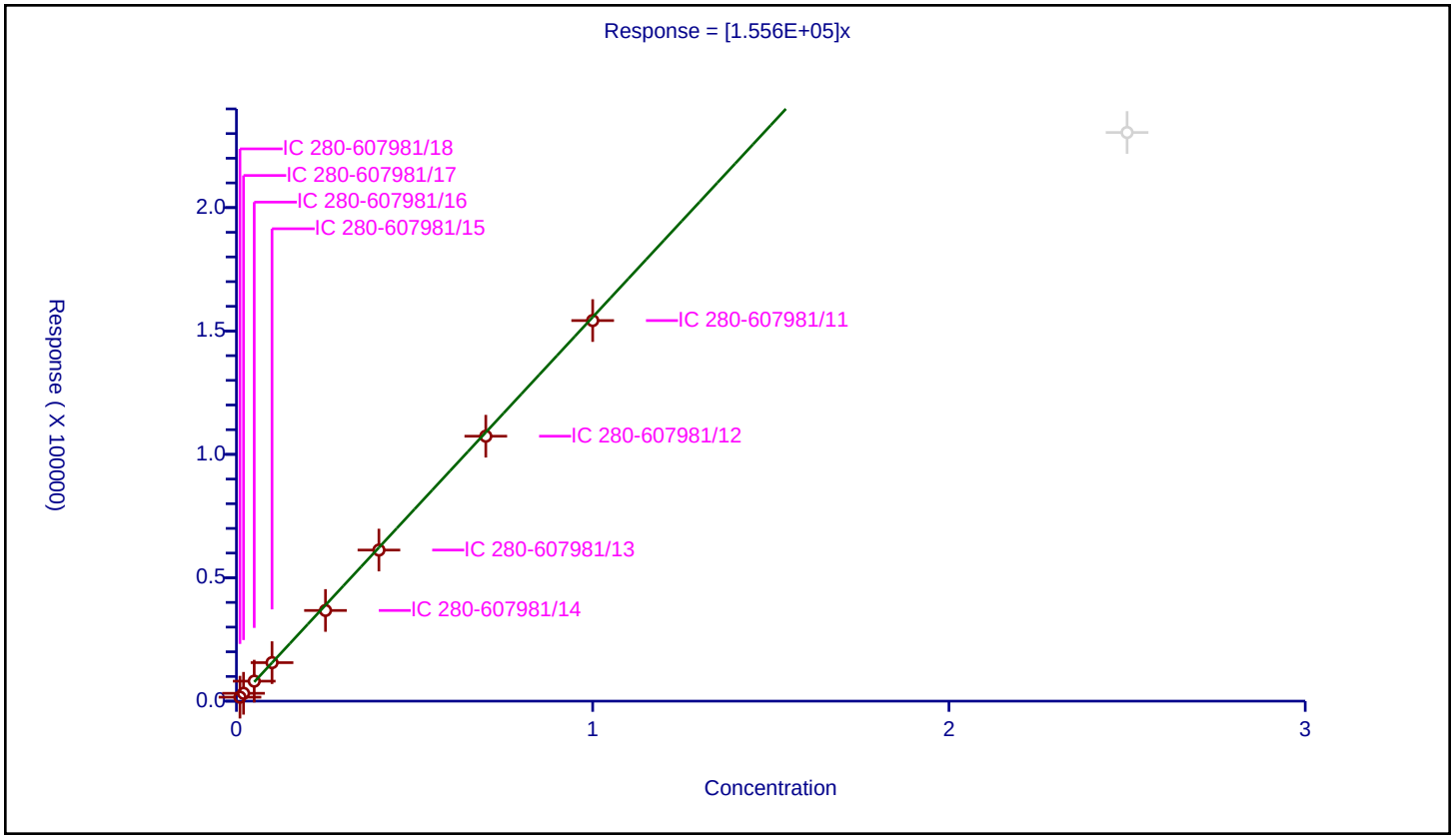
Curve Coefficients

Intercept:	0
Slope:	1.556E+05

Error Coefficients

Standard Error:	1210
Relative Standard Error:	3.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-607981/18	0.01	1601.0			160100.0	Y
2	IC 280-607981/17	0.02	3181.0			159050.0	Y
3	IC 280-607981/16	0.05	8104.0			162080.0	Y
4	IC 280-607981/15	0.1	15604.0			156040.0	Y
5	IC 280-607981/14	0.25	36740.0			146960.0	Y
6	IC 280-607981/13	0.4	61220.0			153050.0	Y
7	IC 280-607981/12	0.7	107366.0			153380.0	Y
8	IC 280-607981/11	1.0	154224.0			154224.0	Y
9	IC 280-607981/10	2.5	230437.0			92174.8	N



Calibration / RDX

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

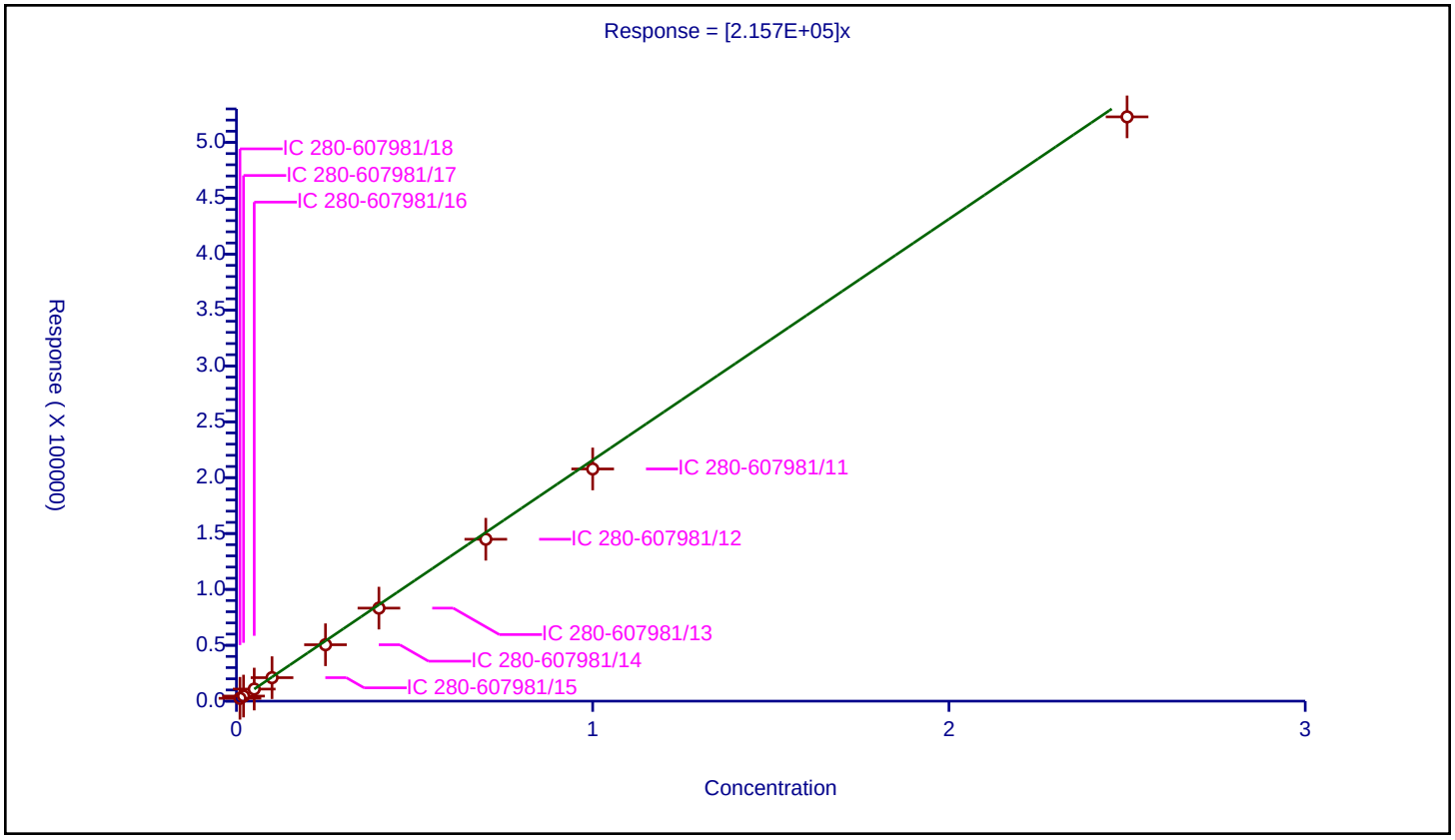
Curve Coefficients

Intercept:	0
Slope:	2.157E+05

Error Coefficients

Standard Error:	6990
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-607981/18	0.01	2543.0			254300.0	Y
2	IC 280-607981/17	0.02	4542.0			227100.0	Y
3	IC 280-607981/16	0.05	10799.0			215980.0	Y
4	IC 280-607981/15	0.1	21015.0			210150.0	Y
5	IC 280-607981/14	0.25	50479.0			201916.0	Y
6	IC 280-607981/13	0.4	83231.0			208077.5	Y
7	IC 280-607981/12	0.7	144880.0			206971.428571	Y
8	IC 280-607981/11	1.0	207770.0			207770.0	Y
9	IC 280-607981/10	2.5	522882.0			209152.8	Y



Calibration / Nitrobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

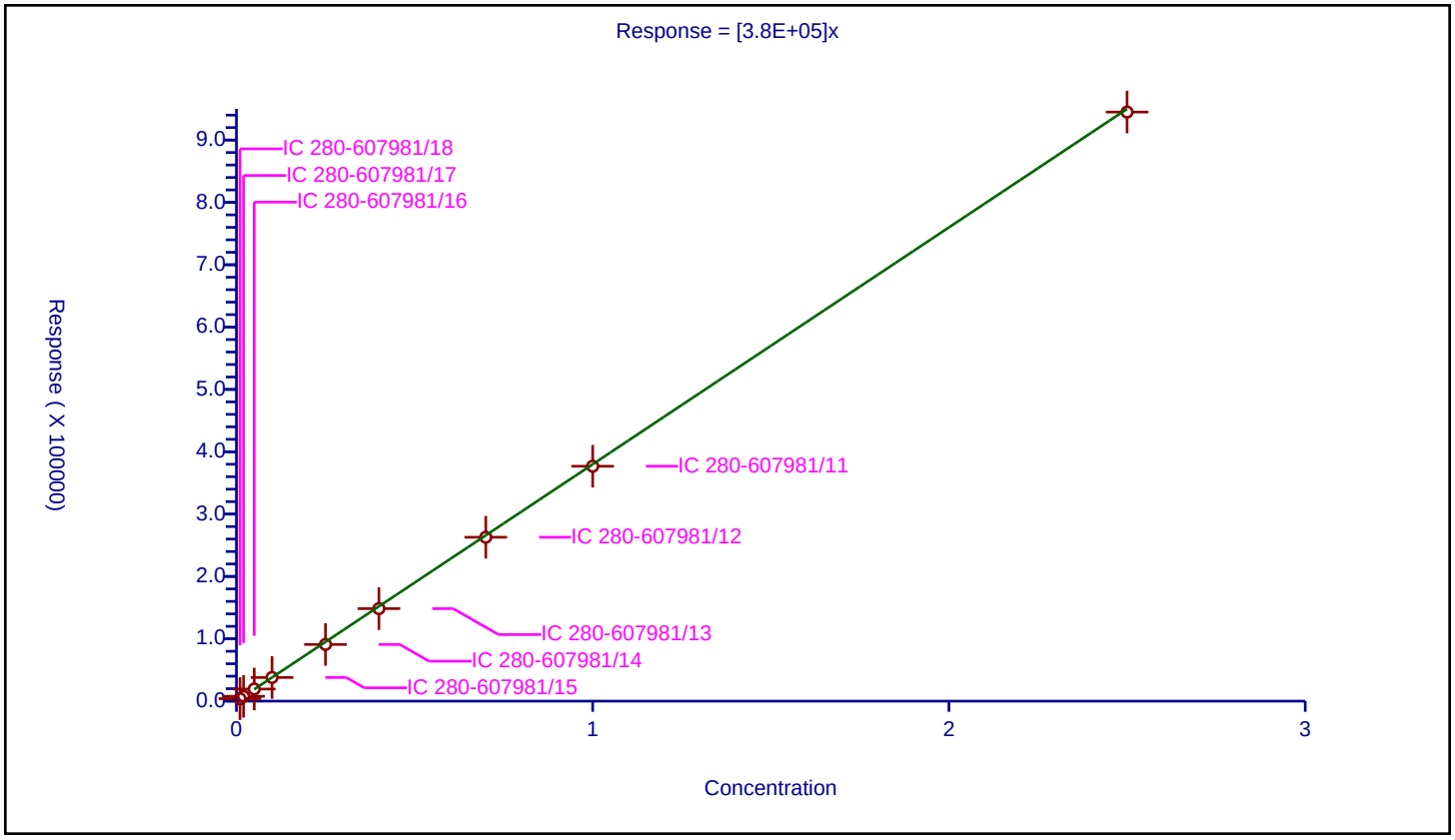
Curve Coefficients

Intercept:	0
Slope:	3.8E+05

Error Coefficients

Standard Error:	3030
Relative Standard Error:	2.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-607981/18	0.01	4002.0			400200.0	Y
2	IC 280-607981/17	0.02	7744.0			387200.0	Y
3	IC 280-607981/16	0.05	19405.0			388100.0	Y
4	IC 280-607981/15	0.1	37900.0			379000.0	Y
5	IC 280-607981/14	0.25	90950.0			363800.0	Y
6	IC 280-607981/13	0.4	148398.0			370995.0	Y
7	IC 280-607981/12	0.7	262906.0			375580.0	Y
8	IC 280-607981/11	1.0	376803.0			376803.0	Y
9	IC 280-607981/10	2.5	944914.0			377965.6	Y



Calibration / 1,2-Dinitrobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

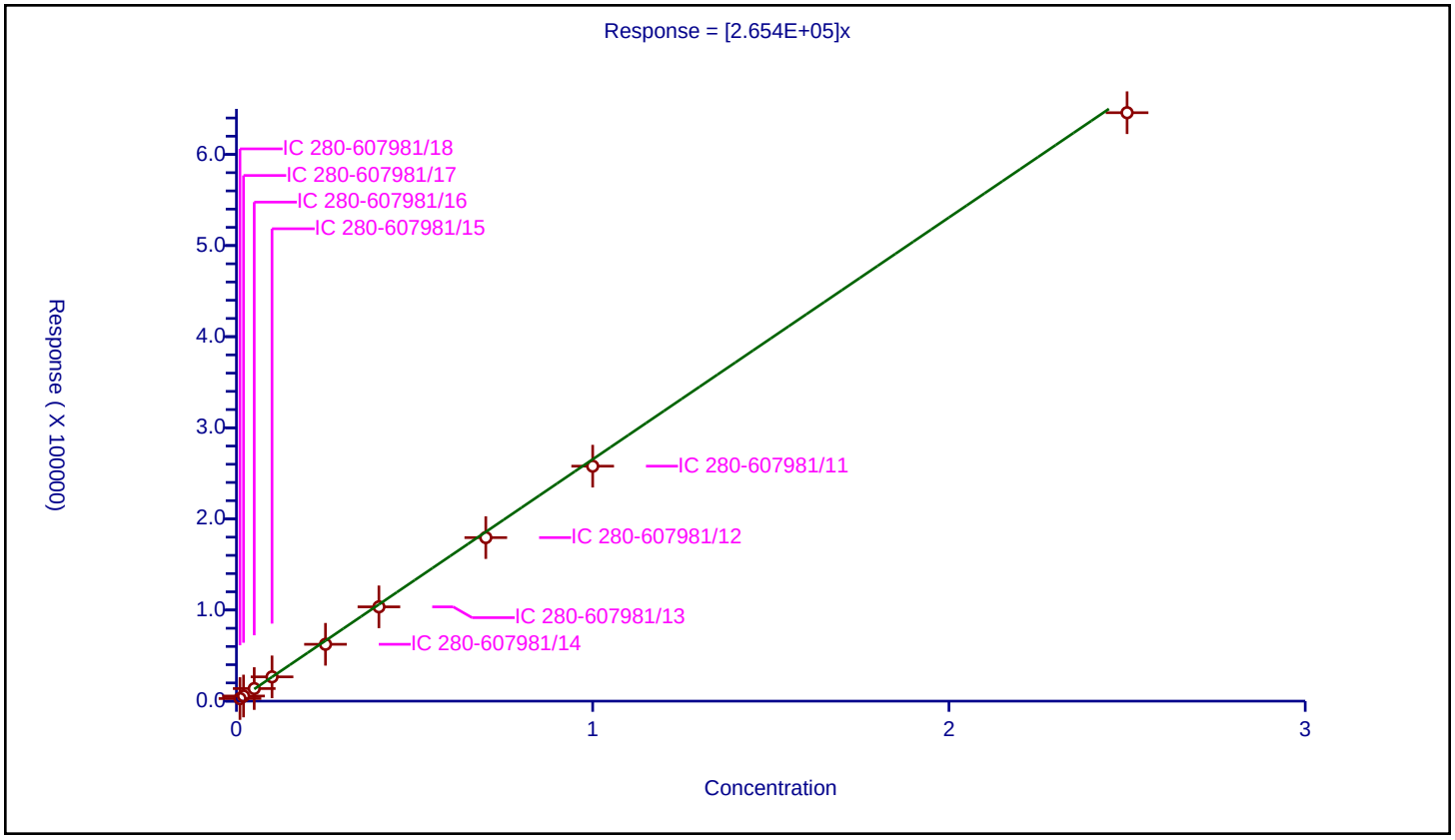
Curve Coefficients

Intercept:	0
Slope:	2.654E+05

Error Coefficients

Standard Error:	7350
Relative Standard Error:	4.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-607981/18	0.01	2840.0			284000.0	Y
2	IC 280-607981/17	0.02	5627.0			281350.0	Y
3	IC 280-607981/16	0.05	13806.0			276120.0	Y
4	IC 280-607981/15	0.1	26630.0			266300.0	Y
5	IC 280-607981/14	0.25	62380.0			249520.0	Y
6	IC 280-607981/13	0.4	103481.0			258702.5	Y
7	IC 280-607981/12	0.7	179492.0			256417.142857	Y
8	IC 280-607981/11	1.0	257906.0			257906.0	Y
9	IC 280-607981/10	2.5	645821.0			258328.4	Y



Calibration / 3,5-Dinitroaniline

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

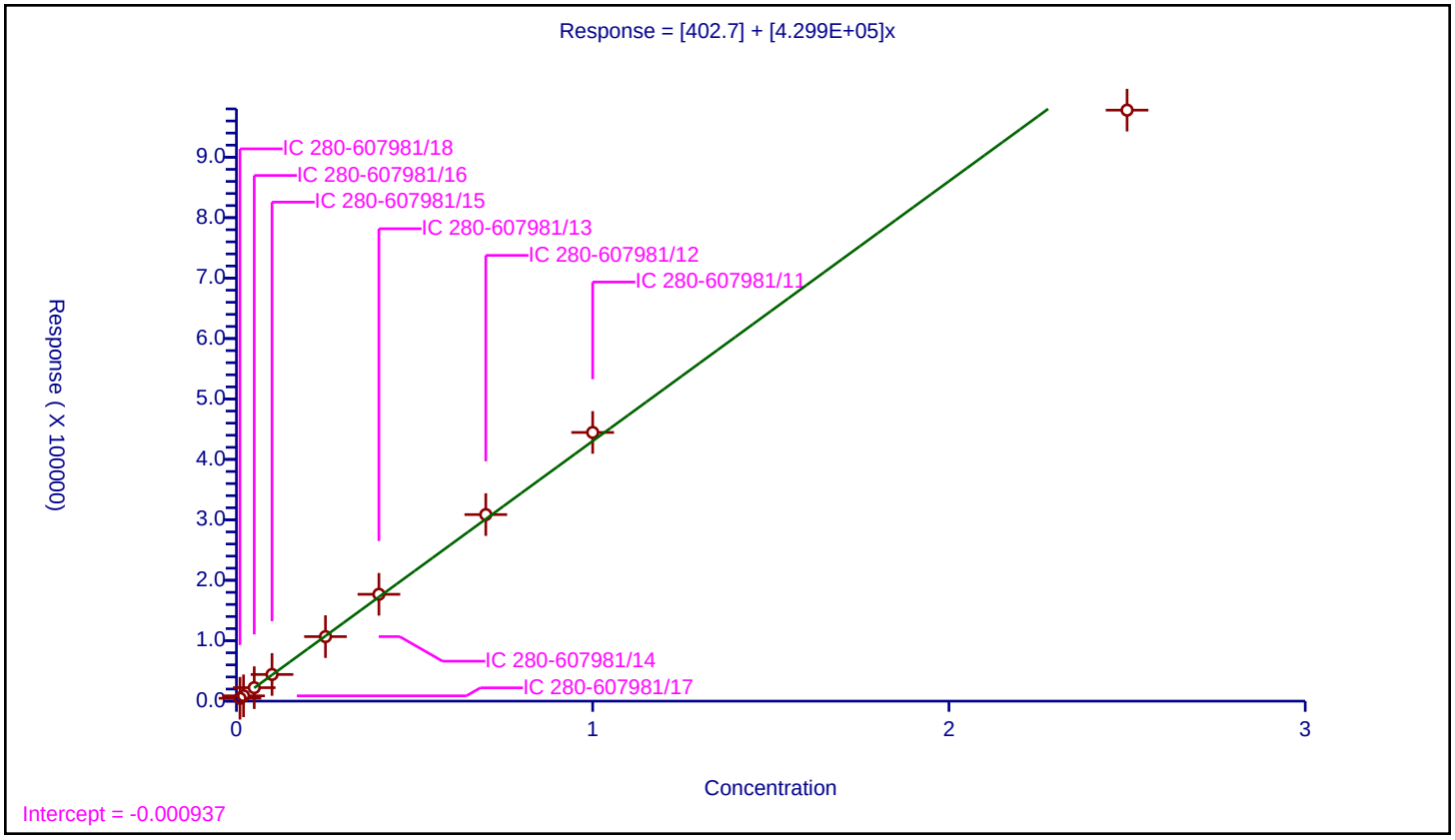
Curve Coefficients

Intercept:	402.7
Slope:	4.299E+05

Error Coefficients

Standard Error:	37300
Relative Standard Error:	4.1
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-607981/18	0.01	4725.0			472500.0	Y
2	IC 280-607981/17	0.02	8811.0			440550.0	Y
3	IC 280-607981/16	0.05	22268.0			445360.0	Y
4	IC 280-607981/15	0.1	44146.0			441460.0	Y
5	IC 280-607981/14	0.25	106753.0			427012.0	Y
6	IC 280-607981/13	0.4	176804.0			442010.0	Y
7	IC 280-607981/12	0.7	308678.0			440968.571429	Y
8	IC 280-607981/11	1.0	444605.0			444605.0	Y
9	IC 280-607981/10	2.5	977923.0			391169.2	Y



Calibration / 1,3-Dinitrobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

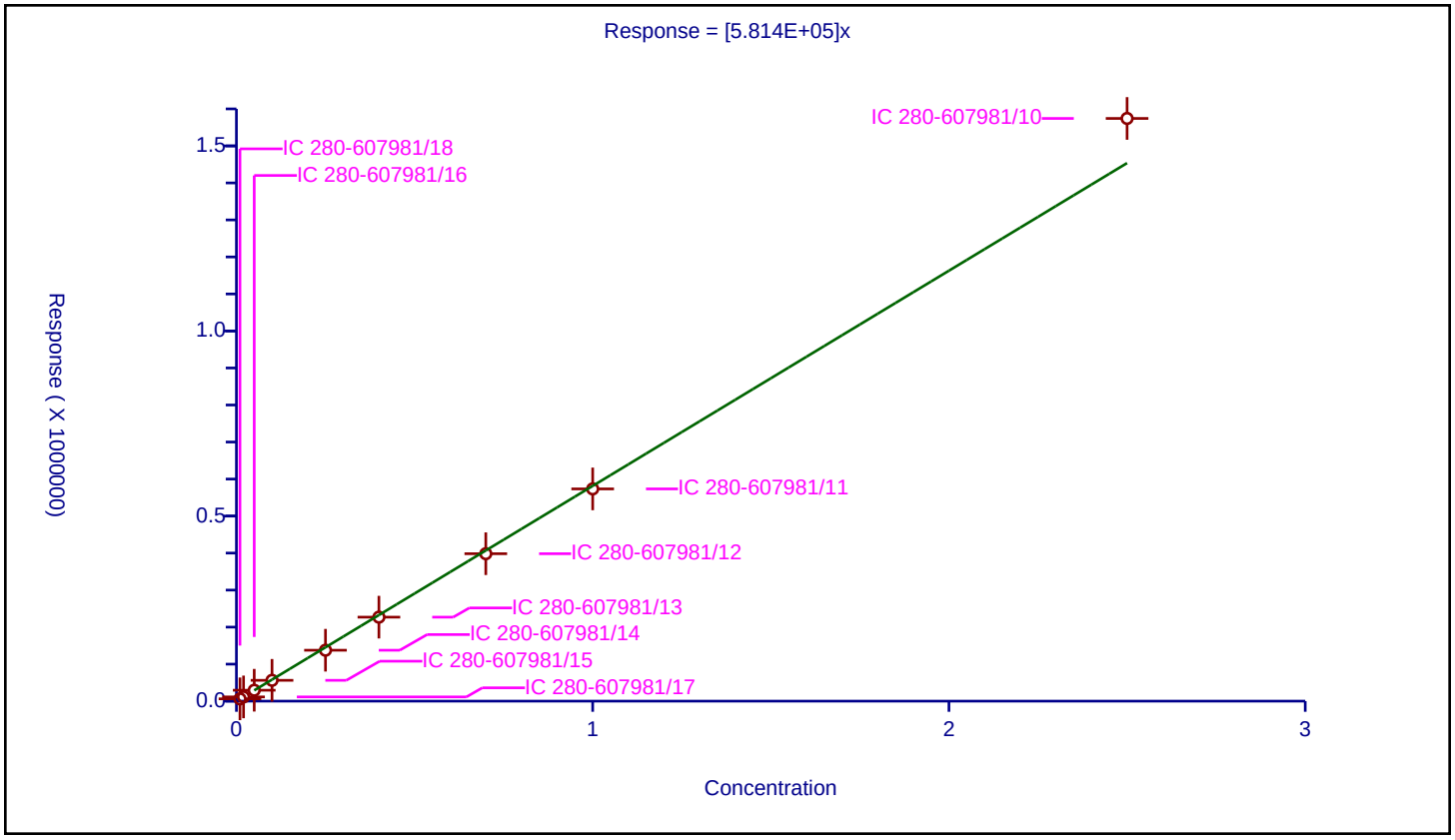
Curve Coefficients

Intercept:	0
Slope:	5.814E+05

Error Coefficients

Standard Error:	43000
Relative Standard Error:	4.6
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-607981/18	0.01	6202.0			620200.0	Y
2	IC 280-607981/17	0.02	11425.0			571250.0	Y
3	IC 280-607981/16	0.05	29472.0			589440.0	Y
4	IC 280-607981/15	0.1	56261.0			562610.0	Y
5	IC 280-607981/14	0.25	137559.0			550236.0	Y
6	IC 280-607981/13	0.4	226896.0			567240.0	Y
7	IC 280-607981/12	0.7	398326.0			569037.142857	Y
8	IC 280-607981/11	1.0	573365.0			573365.0	Y
9	IC 280-607981/10	2.5	1574162.0			629664.8	Y



Calibration / Nitroglycerin

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

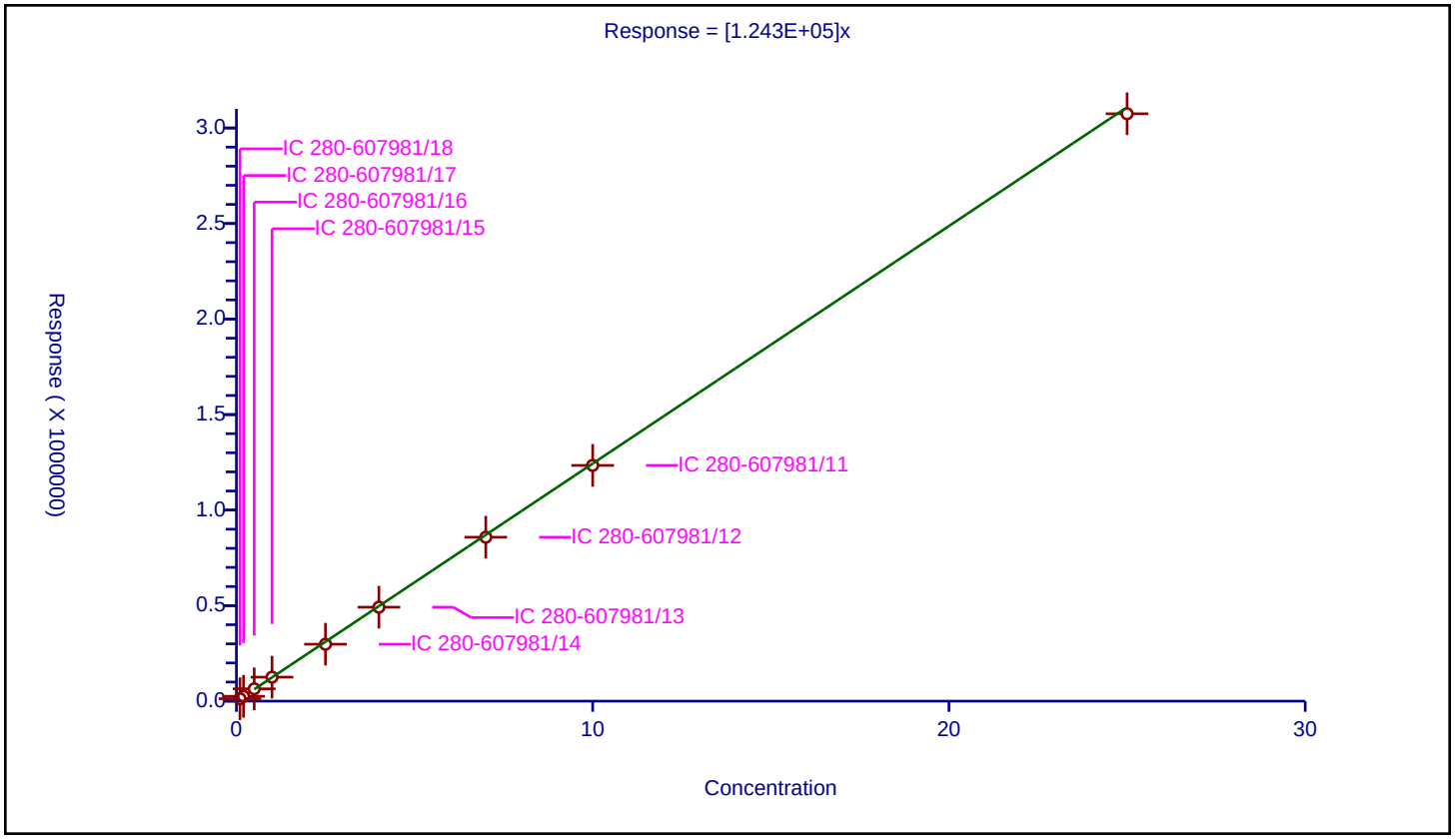
Curve Coefficients

Intercept:	0
Slope:	1.243E+05

Error Coefficients

Standard Error:	14200
Relative Standard Error:	2.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-607981/18	0.1	12725.0			127250.0	Y
2	IC 280-607981/17	0.2	25265.0			126325.0	Y
3	IC 280-607981/16	0.5	64483.0			128966.0	Y
4	IC 280-607981/15	1.0	125509.0			125509.0	Y
5	IC 280-607981/14	2.5	297926.0			119170.4	Y
6	IC 280-607981/13	4.0	491776.0			122944.0	Y
7	IC 280-607981/12	7.0	858025.0			122575.0	Y
8	IC 280-607981/11	10.0	1233892.0			123389.2	Y
9	IC 280-607981/10	25.0	3074483.0			122979.32	Y



Calibration / o-Nitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

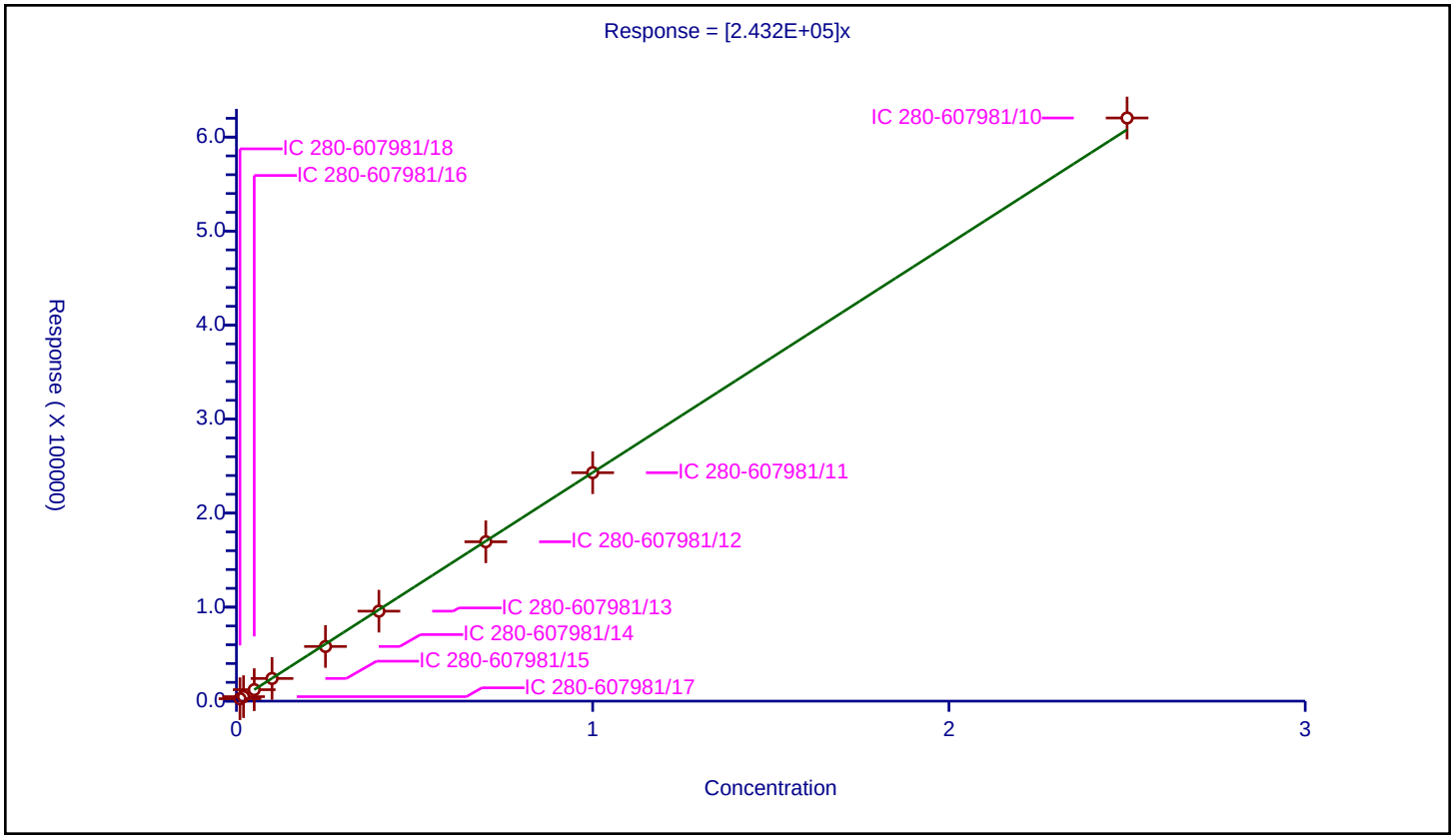
Curve Coefficients

Intercept:	0
Slope:	2.432E+05

Error Coefficients

Standard Error:	4510
Relative Standard Error:	3.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-607981/18	0.01	2596.0			259600.0	Y
2	IC 280-607981/17	0.02	4779.0			238950.0	Y
3	IC 280-607981/16	0.05	12185.0			243700.0	Y
4	IC 280-607981/15	0.1	24115.0			241150.0	Y
5	IC 280-607981/14	0.25	58154.0			232616.0	Y
6	IC 280-607981/13	0.4	95732.0			239330.0	Y
7	IC 280-607981/12	0.7	169534.0			242191.428571	Y
8	IC 280-607981/11	1.0	243027.0			243027.0	Y
9	IC 280-607981/10	2.5	620325.0			248130.0	Y



Calibration / p-Nitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

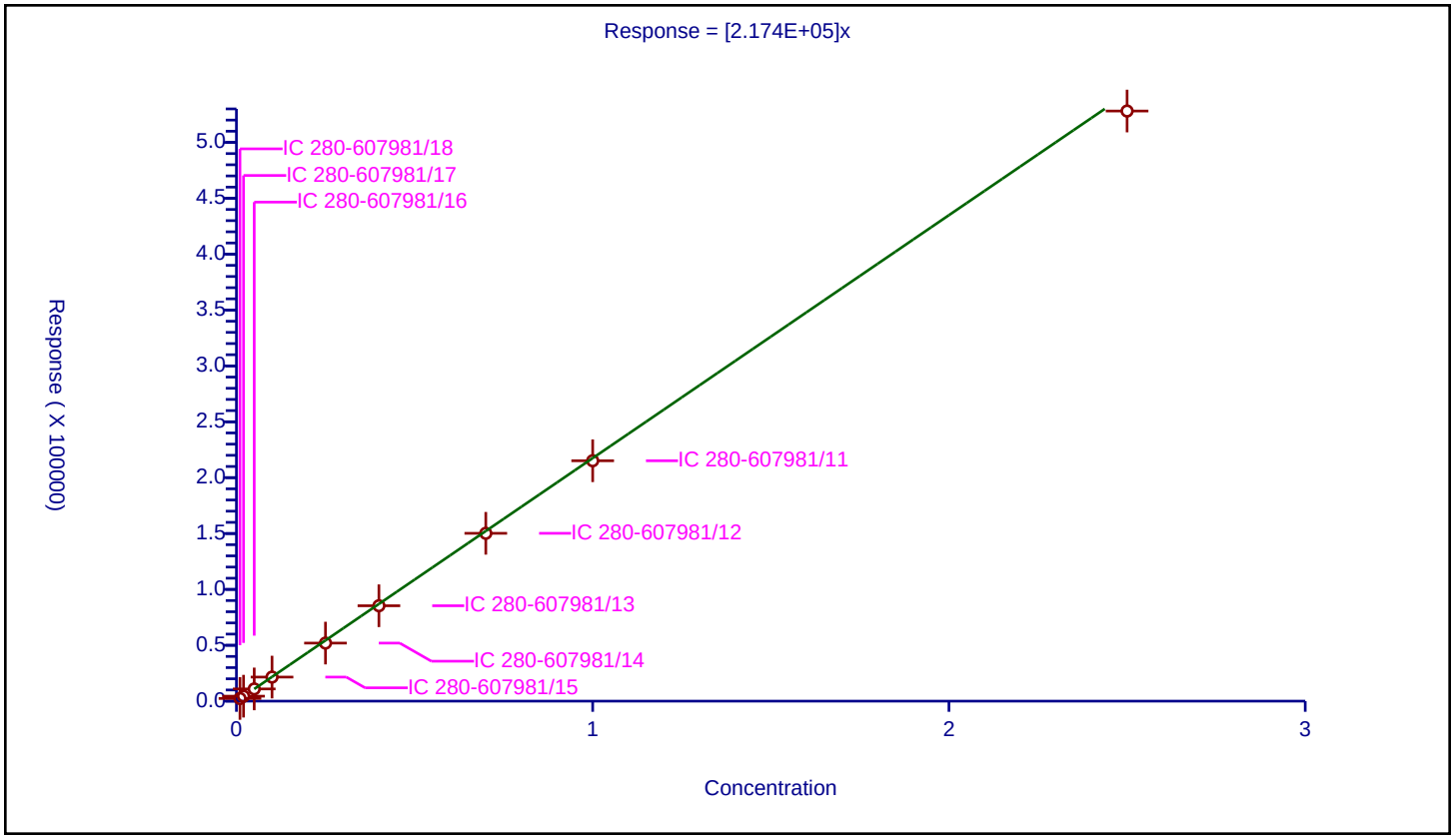
Curve Coefficients

Intercept:	0
Slope:	2.174E+05

Error Coefficients

Standard Error:	5690
Relative Standard Error:	4.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-607981/18	0.01	2388.0			238800.0	Y
2	IC 280-607981/17	0.02	4444.0			222200.0	Y
3	IC 280-607981/16	0.05	10927.0			218540.0	Y
4	IC 280-607981/15	0.1	21537.0			215370.0	Y
5	IC 280-607981/14	0.25	51955.0			207820.0	Y
6	IC 280-607981/13	0.4	85363.0			213407.5	Y
7	IC 280-607981/12	0.7	150188.0			214554.285714	Y
8	IC 280-607981/11	1.0	215111.0			215111.0	Y
9	IC 280-607981/10	2.5	528095.0			211238.0	Y



Calibration / 4-Amino-2,6-dinitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

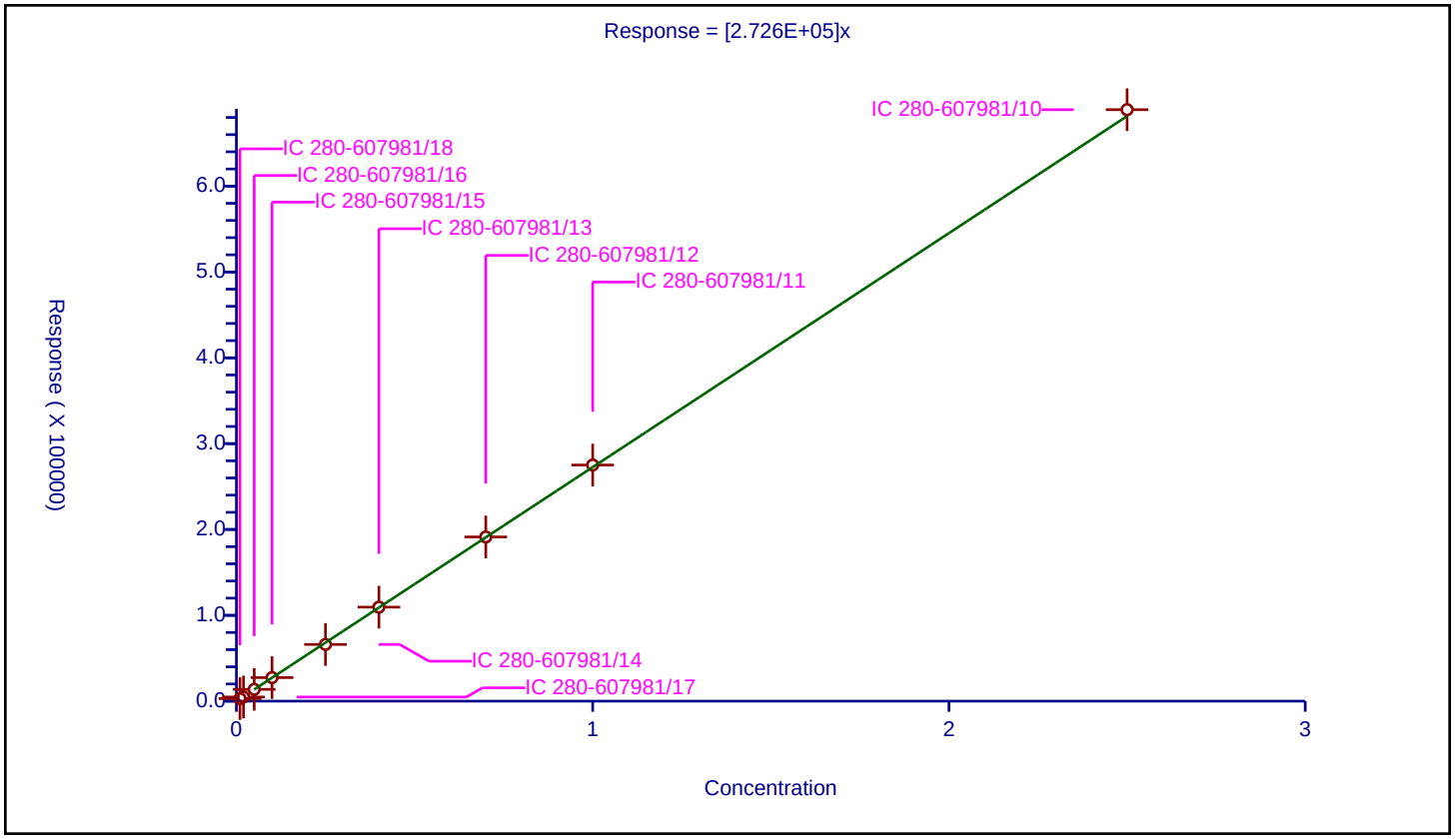
Curve Coefficients

Intercept:	0
Slope:	2.726E+05

Error Coefficients

Standard Error:	2930
Relative Standard Error:	5.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-607981/18	0.01	3004.0			300400.0	Y
2	IC 280-607981/17	0.02	4840.0			242000.0	Y
3	IC 280-607981/16	0.05	13722.0			274440.0	Y
4	IC 280-607981/15	0.1	27461.0			274610.0	Y
5	IC 280-607981/14	0.25	66062.0			264248.0	Y
6	IC 280-607981/13	0.4	109516.0			273790.0	Y
7	IC 280-607981/12	0.7	191293.0			273275.714286	Y
8	IC 280-607981/11	1.0	275101.0			275101.0	Y
9	IC 280-607981/10	2.5	689078.0			275631.2	Y



Calibration / m-Nitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

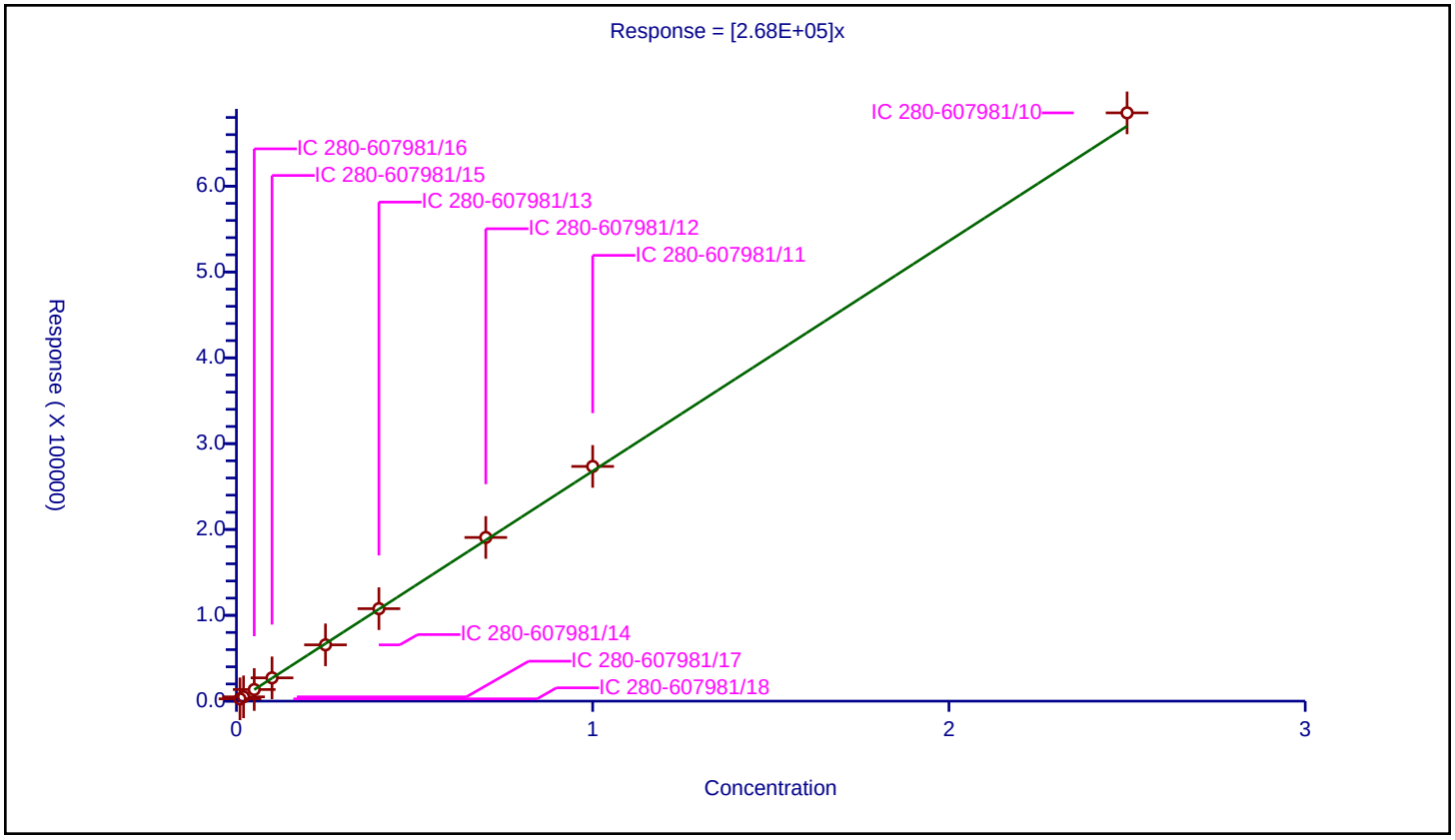
Curve Coefficients

Intercept:	0
Slope:	2.68E+05

Error Coefficients

Standard Error:	5890
Relative Standard Error:	2.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-607981/18	0.01	2673.0			267300.0	Y
2	IC 280-607981/17	0.02	5021.0			251050.0	Y
3	IC 280-607981/16	0.05	13529.0			270580.0	Y
4	IC 280-607981/15	0.1	27150.0			271500.0	Y
5	IC 280-607981/14	0.25	65576.0			262304.0	Y
6	IC 280-607981/13	0.4	107736.0			269340.0	Y
7	IC 280-607981/12	0.7	190691.0			272415.714286	Y
8	IC 280-607981/11	1.0	273461.0			273461.0	Y
9	IC 280-607981/10	2.5	685382.0			274152.8	Y



Calibration / 2-Amino-4,6-dinitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

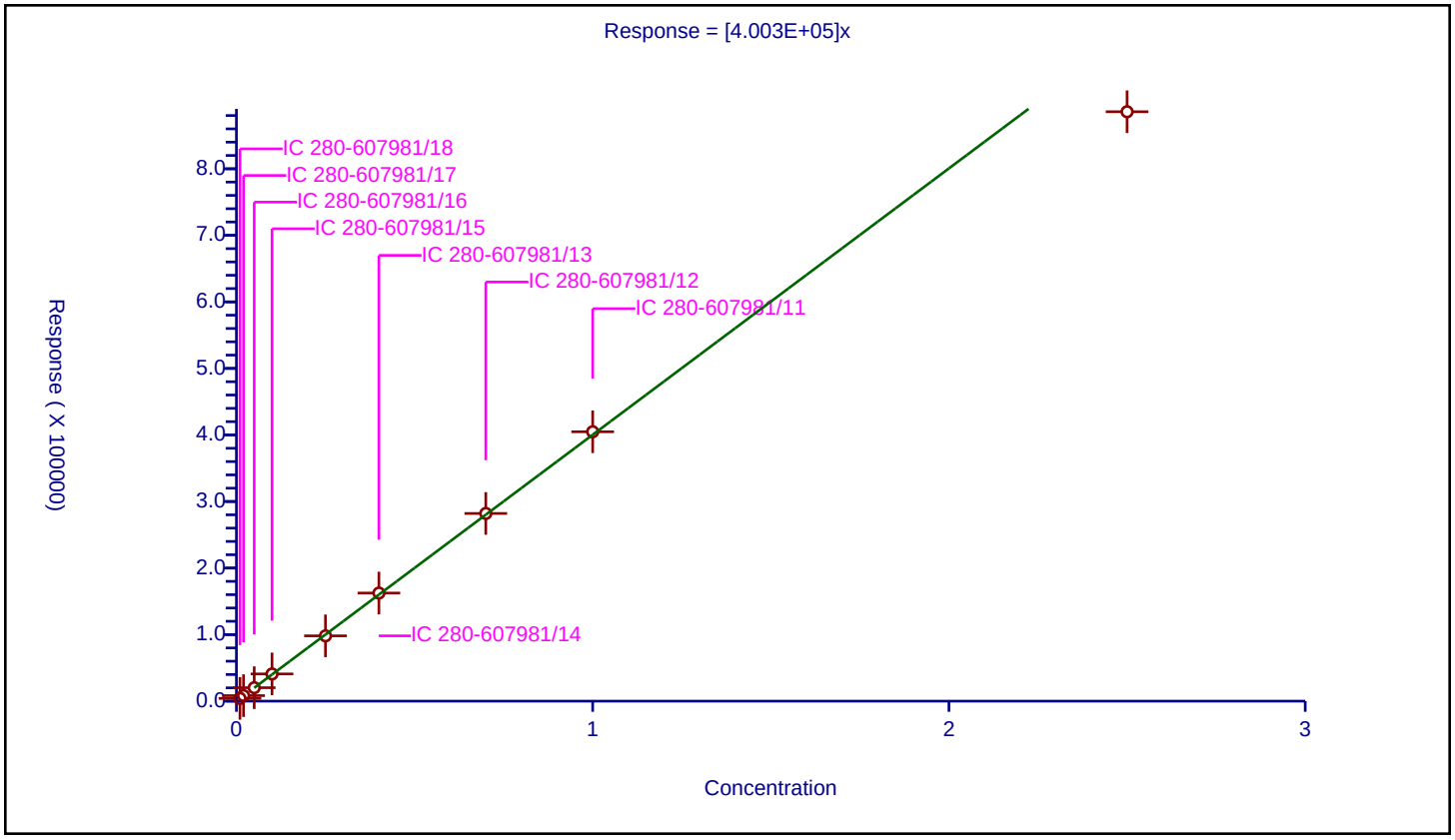
Curve Coefficients

Intercept:	0
Slope:	4.003E+05

Error Coefficients

Standard Error:	40700
Relative Standard Error:	4.6
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-607981/18	0.01	4148.0			414800.0	Y
2	IC 280-607981/17	0.02	8295.0			414750.0	Y
3	IC 280-607981/16	0.05	20191.0			403820.0	Y
4	IC 280-607981/15	0.1	40866.0			408660.0	Y
5	IC 280-607981/14	0.25	98103.0			392412.0	Y
6	IC 280-607981/13	0.4	162441.0			406102.5	Y
7	IC 280-607981/12	0.7	282018.0			402882.857143	Y
8	IC 280-607981/11	1.0	404845.0			404845.0	Y
9	IC 280-607981/10	2.5	885701.0			354280.4	Y



Calibration / 1,3,5-Trinitrobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

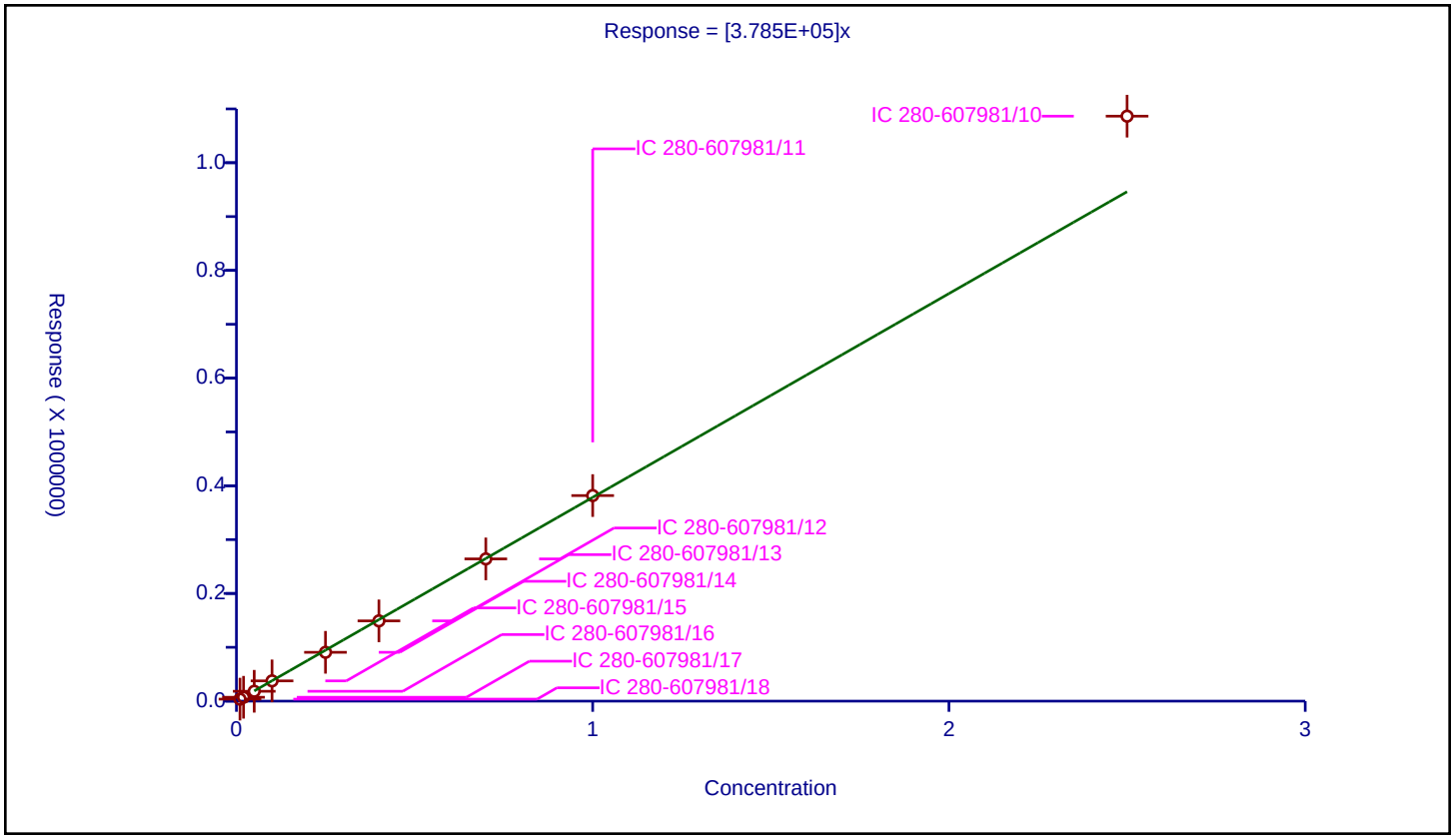
Curve Coefficients

Intercept:	0
Slope:	3.785E+05

Error Coefficients

Standard Error:	49600
Relative Standard Error:	5.9
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-607981/18	0.01	3748.0			374800.0	Y
2	IC 280-607981/17	0.02	7178.0			358900.0	Y
3	IC 280-607981/16	0.05	18350.0			367000.0	Y
4	IC 280-607981/15	0.1	37635.0			376350.0	Y
5	IC 280-607981/14	0.25	90714.0			362856.0	Y
6	IC 280-607981/13	0.4	149070.0			372675.0	Y
7	IC 280-607981/12	0.7	264170.0			377385.714286	Y
8	IC 280-607981/11	1.0	381831.0			381831.0	Y
9	IC 280-607981/10	2.5	1086488.0			434595.2	Y



Calibration / 2,6-Dinitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

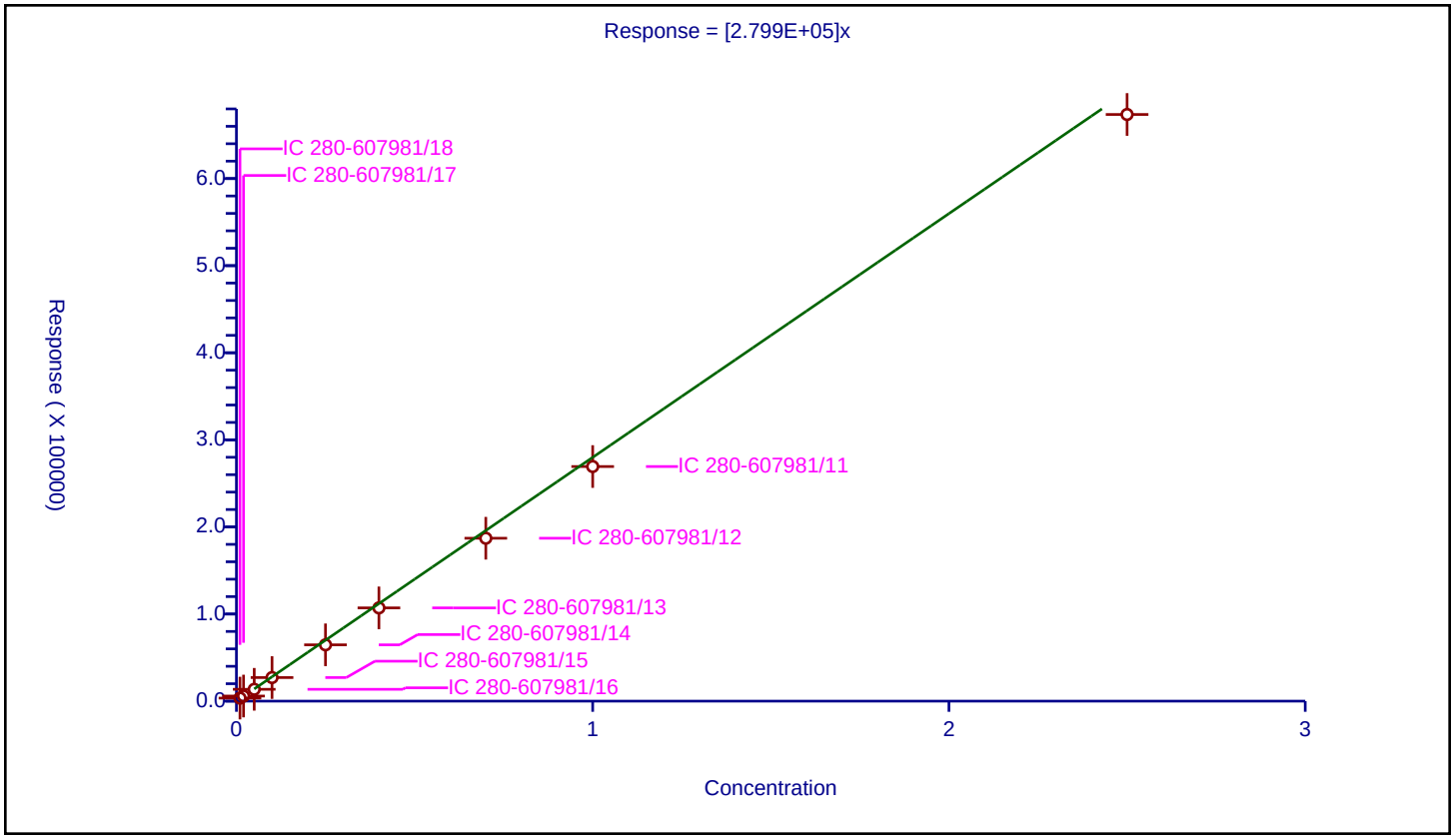
Curve Coefficients

Intercept:	0
Slope:	2.799E+05

Error Coefficients

Standard Error:	10800
Relative Standard Error:	10.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-607981/18	0.01	3509.0			350900.0	Y
2	IC 280-607981/17	0.02	5869.0			293450.0	Y
3	IC 280-607981/16	0.05	13580.0			271600.0	Y
4	IC 280-607981/15	0.1	27076.0			270760.0	Y
5	IC 280-607981/14	0.25	64666.0			258664.0	Y
6	IC 280-607981/13	0.4	107072.0			267680.0	Y
7	IC 280-607981/12	0.7	187051.0			267215.714286	Y
8	IC 280-607981/11	1.0	269366.0			269366.0	Y
9	IC 280-607981/10	2.5	673578.0			269431.2	Y



Calibration / 2,4-Dinitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

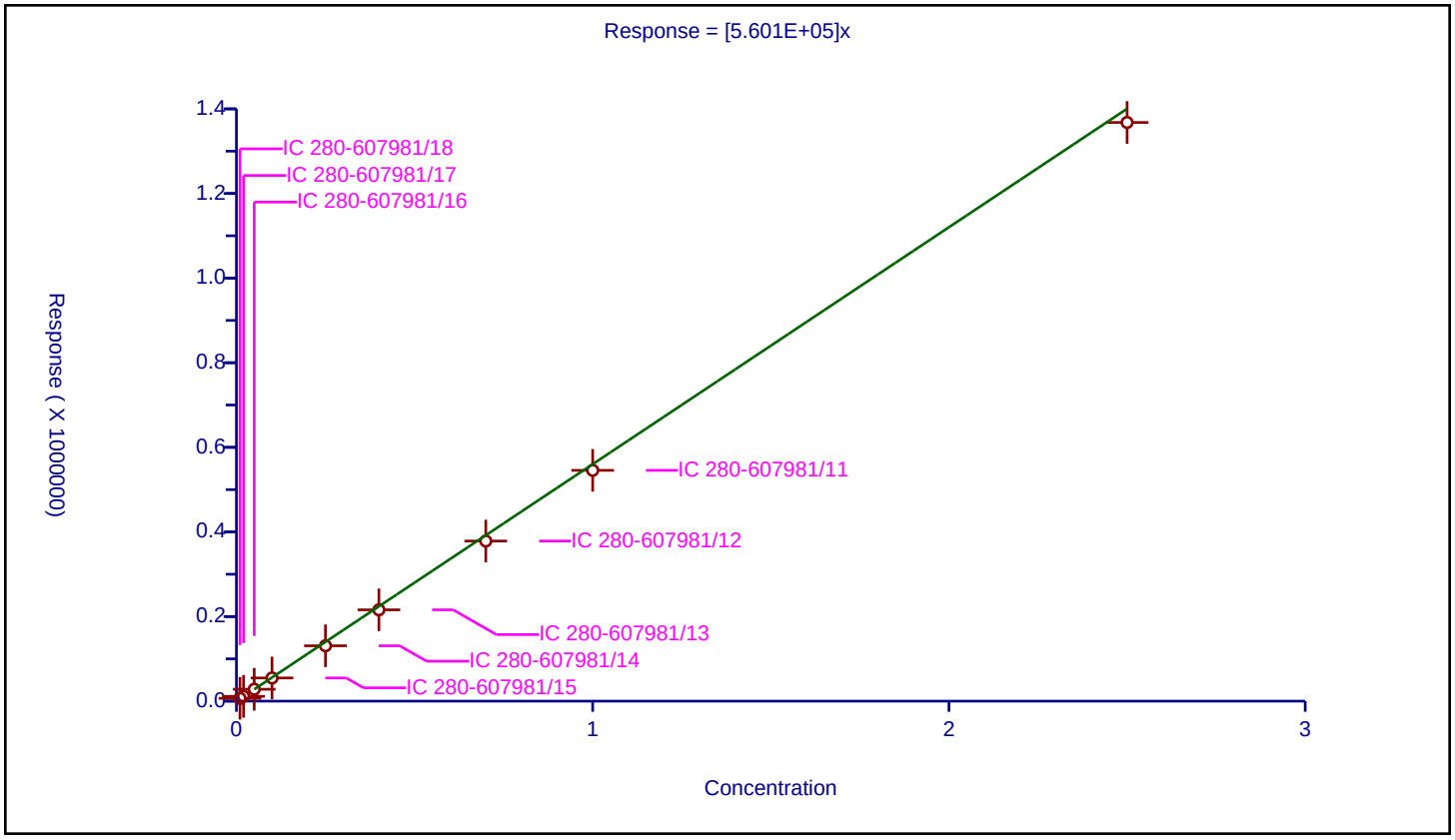
Curve Coefficients

Intercept:	0
Slope:	5.601E+05

Error Coefficients

Standard Error:	14100
Relative Standard Error:	7.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-607981/18	0.01	6650.0			665000.0	Y
2	IC 280-607981/17	0.02	11382.0			569100.0	Y
3	IC 280-607981/16	0.05	28133.0			562660.0	Y
4	IC 280-607981/15	0.1	54791.0			547910.0	Y
5	IC 280-607981/14	0.25	130856.0			523424.0	Y
6	IC 280-607981/13	0.4	215854.0			539635.0	Y
7	IC 280-607981/12	0.7	378459.0			540655.714286	Y
8	IC 280-607981/11	1.0	545578.0			545578.0	Y
9	IC 280-607981/10	2.5	1367914.0			547165.6	Y



Calibration / Tetryl

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

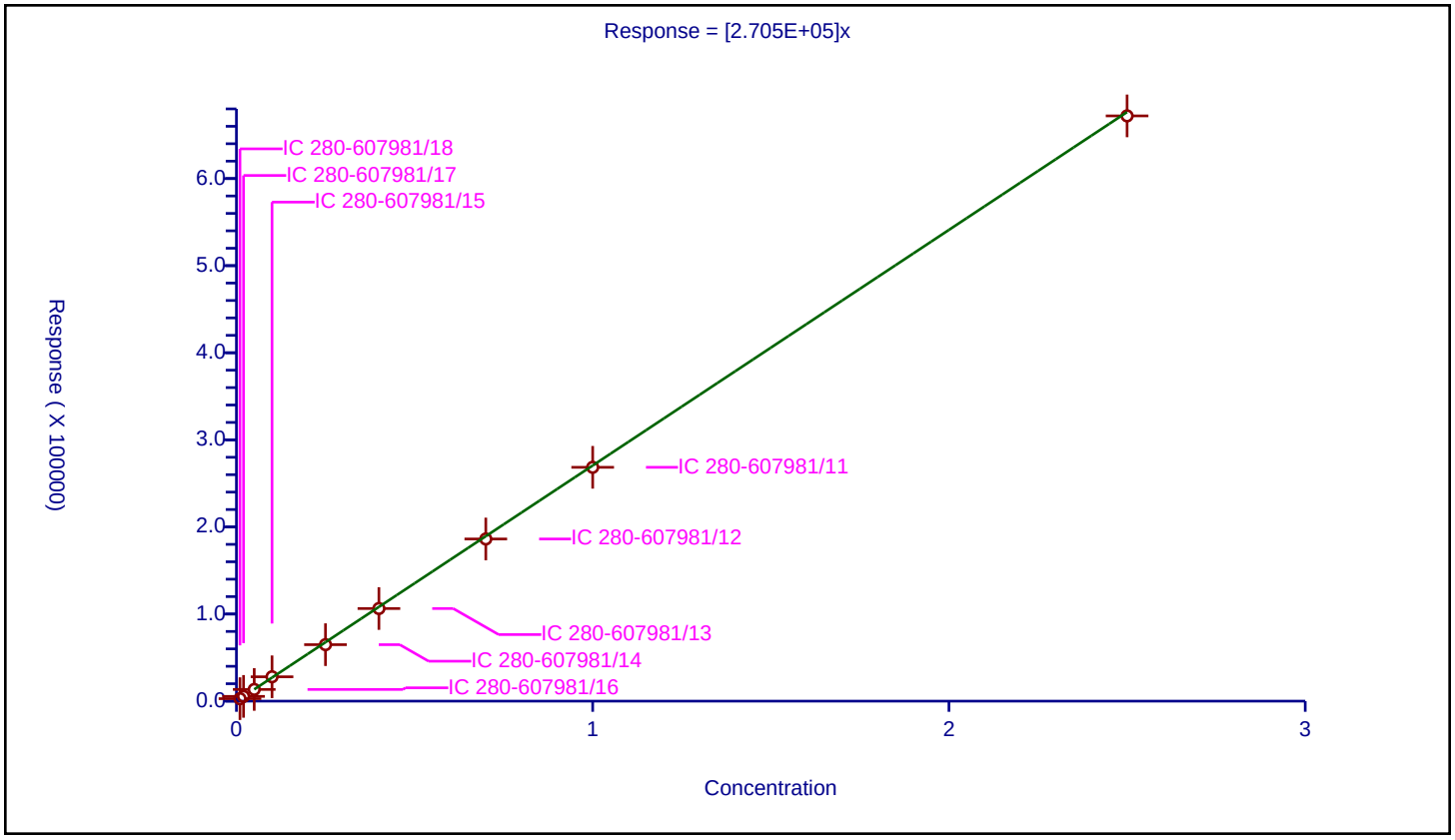
Curve Coefficients

Intercept:	0
Slope:	2.705E+05

Error Coefficients

Standard Error:	2390
Relative Standard Error:	2.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-607981/18	0.01	2847.0			284700.0	Y
2	IC 280-607981/17	0.02	5460.0			273000.0	Y
3	IC 280-607981/16	0.05	13447.0			268940.0	Y
4	IC 280-607981/15	0.1	27969.0			279690.0	Y
5	IC 280-607981/14	0.25	64854.0			259416.0	Y
6	IC 280-607981/13	0.4	106353.0			265882.5	Y
7	IC 280-607981/12	0.7	186180.0			265971.428571	Y
8	IC 280-607981/11	1.0	268469.0			268469.0	Y
9	IC 280-607981/10	2.5	671961.0			268784.4	Y



Calibration / 2,4,6-Trinitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

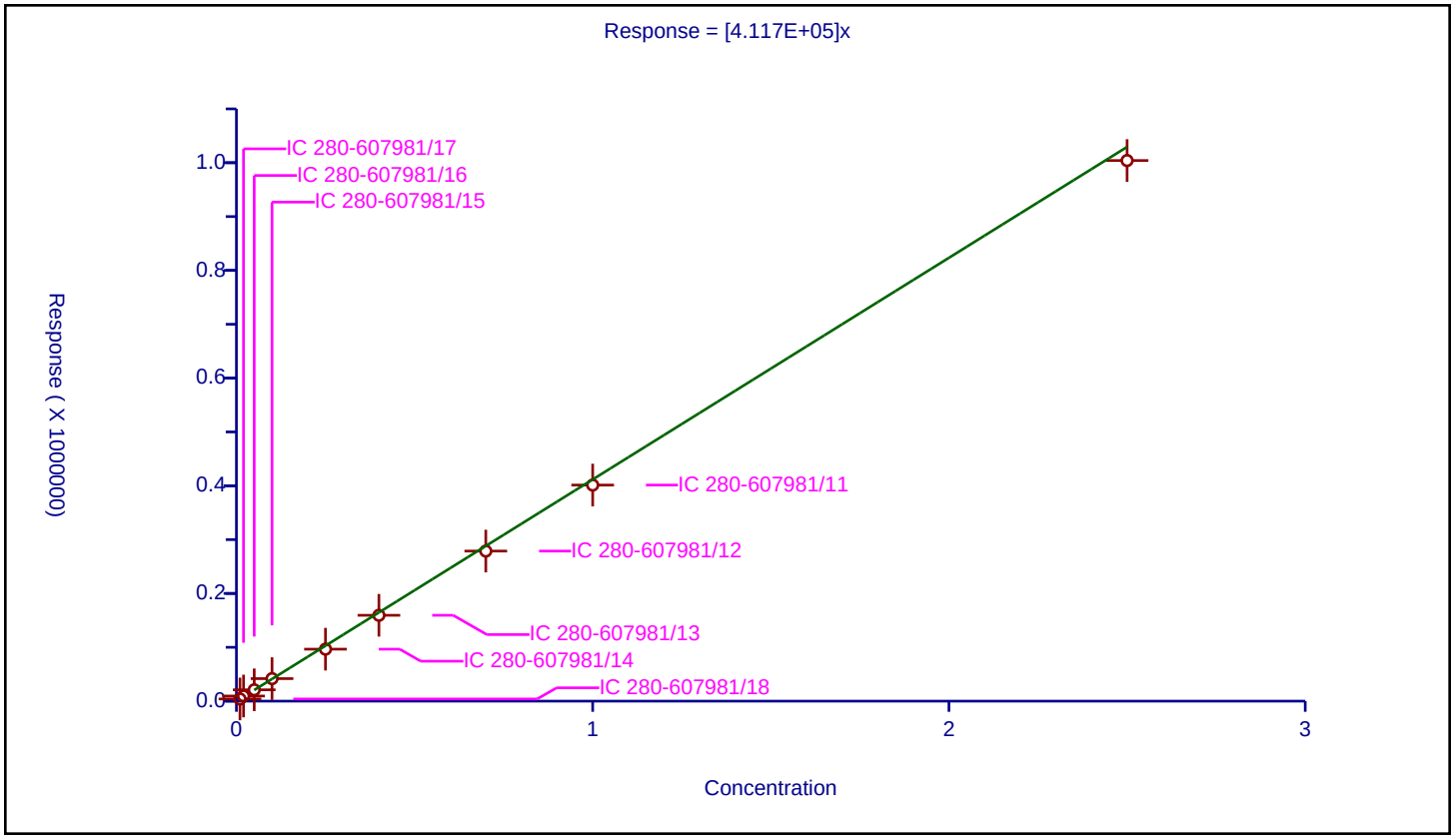
Curve Coefficients

Intercept:	0
Slope:	4.117E+05

Error Coefficients

Standard Error:	10600
Relative Standard Error:	6.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-607981/18	0.01	4042.0			404200.0	Y
2	IC 280-607981/17	0.02	9530.0			476500.0	Y
3	IC 280-607981/16	0.05	21038.0			420760.0	Y
4	IC 280-607981/15	0.1	41817.0			418170.0	Y
5	IC 280-607981/14	0.25	96518.0			386072.0	Y
6	IC 280-607981/13	0.4	159461.0			398652.5	Y
7	IC 280-607981/12	0.7	278721.0			398172.857143	Y
8	IC 280-607981/11	1.0	401312.0			401312.0	Y
9	IC 280-607981/10	2.5	1004078.0			401631.2	Y



Calibration / PETN

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

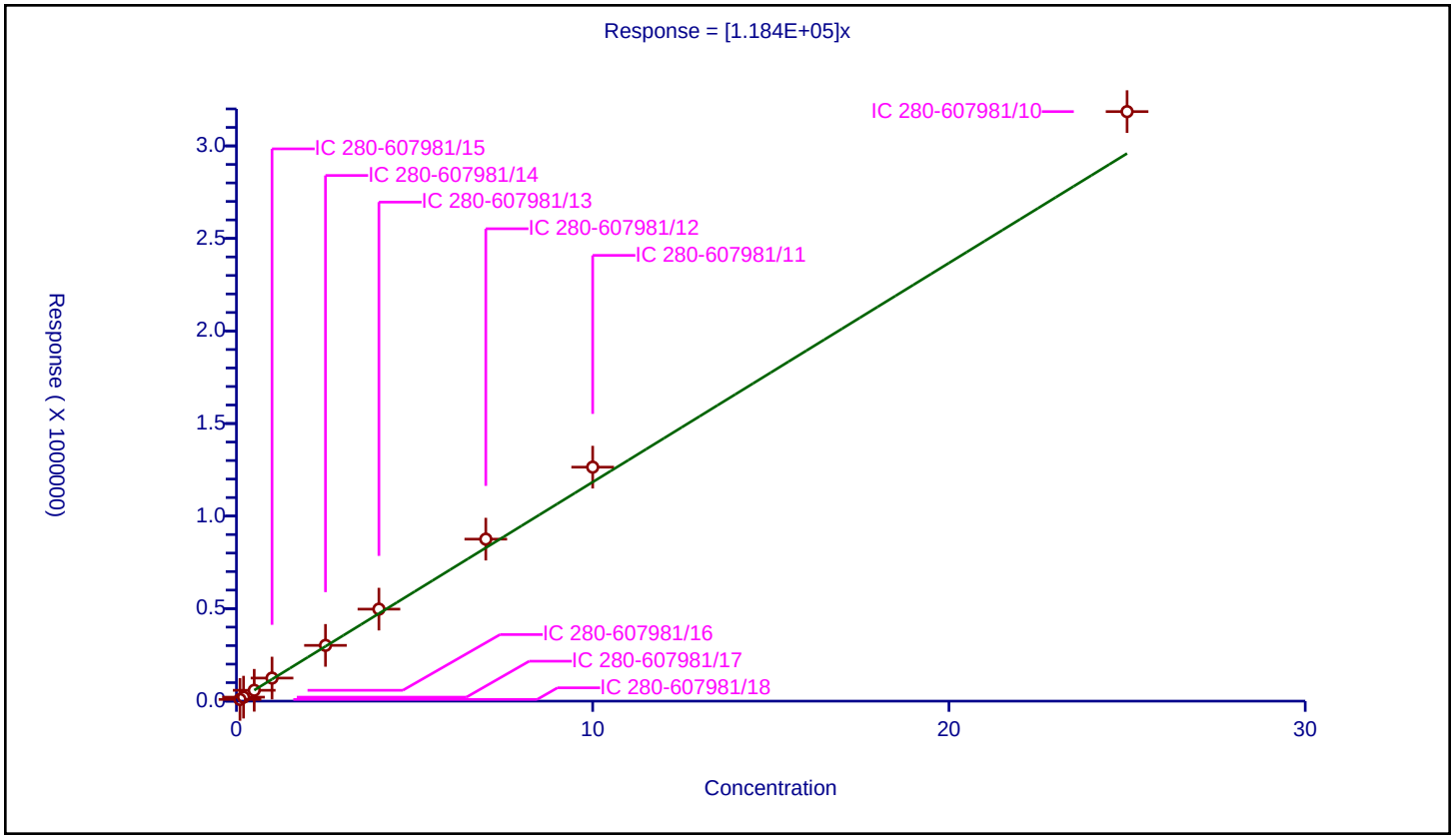
Curve Coefficients

Intercept:	0
Slope:	1.184E+05

Error Coefficients

Standard Error:	86900
Relative Standard Error:	9.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-607981/18	0.1	9214.0			92140.0	Y
2	IC 280-607981/17	0.2	21527.0			107635.0	Y
3	IC 280-607981/16	0.5	58615.0			117230.0	Y
4	IC 280-607981/15	1.0	124639.0			124639.0	Y
5	IC 280-607981/14	2.5	301212.0			120484.8	Y
6	IC 280-607981/13	4.0	497183.0			124295.75	Y
7	IC 280-607981/12	7.0	875273.0			125039.0	Y
8	IC 280-607981/11	10.0	1264310.0			126431.0	Y
9	IC 280-607981/10	25.0	3185284.0			127411.36	Y



FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1 Analy Batch No.: 601664

SDG No.:

Instrument ID: CHHPLC_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/08/2023 15:38 Calibration End Date: 02/08/2023 18:42 Calibration ID: 76877

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-601664/19	02080019.D
Level 2	IC 280-601664/18	02080018.D
Level 3	IC 280-601664/17	02080017.D
Level 4	IC 280-601664/16	02080016.D
Level 5	IC 280-601664/15	02080015.D
Level 6	IC 280-601664/14	02080014.D
Level 7	IC 280-601664/13	02080013.D
Level 8	IC 280-601664/12	02080012.D
Level 9	IC 280-601664/11	02080011.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8	LVL 9		RT WINDOW	AVG RT
HMX	6.550	6.549	6.547	6.544	6.548	6.548	6.544	6.547	6.546		6.394 - 6.694	6.547
RDX	7.563	7.563	7.567	7.564	7.568	7.562	7.564	7.567	7.559		7.414 - 7.714	7.564
Picric acid	8.050	8.049	8.047	8.044	8.041	8.028	8.018	8.014	7.966		7.894 - 8.194	8.029
1,3,5-Trinitrobenzene	8.643	8.643	8.647	8.644	8.641	8.642	8.638	8.647	8.639		8.494 - 8.794	8.643
1,3-Dinitrobenzene	9.263	9.256	9.260	9.257	9.255	9.255	9.251	9.260	9.246		9.107 - 9.407	9.256
Nitrobenzene	9.636	9.636	9.633	9.631	9.628	9.628	9.624	9.634	9.619		9.481 - 9.781	9.630
3,5-Dinitroaniline	9.836	9.836	9.840	9.831	9.828	9.828	9.824	9.840	9.819		9.681 - 9.981	9.831
Tetryl	9.983	9.982	9.987	9.977	9.975	9.968	9.971	9.987	9.966		9.827 - 10.127	9.977
Nitroglycerin	10.450	10.449	10.453	10.437	10.441	10.435	10.437	10.454	10.426		10.287 - 10.587	10.442
2,4,6-Trinitrotoluene	10.876	10.876	10.880	10.864	10.868	10.868	10.864	10.880	10.859		10.764 - 10.964	10.871
4-Amino-2,6-dinitrotoluene	11.043	11.042	11.040	11.031	11.028	11.022	11.024	11.040	11.013		10.931 - 11.131	11.031
2-Amino-4,6-dinitrotoluene	11.296	11.289	11.293	11.277	11.275	11.275	11.271	11.287	11.259		11.177 - 11.377	11.280
2,6-Dinitrotoluene	11.470	11.469	11.467	11.451	11.455	11.448	11.451	11.467	11.439		11.351 - 11.551	11.457
2,4-Dinitrotoluene	11.636	11.636	11.633	11.617	11.621	11.615	11.617	11.634	11.606		11.517 - 11.717	11.624
2-Nitrotoluene	12.456	12.456	12.453	12.437	12.441	12.435	12.431	12.447	12.426		12.287 - 12.587	12.442
4-Nitrotoluene	12.863	12.869	12.867	12.844	12.848	12.842	12.844	12.860	12.833		12.694 - 12.994	12.852
3-Nitrotoluene	13.430	13.442	13.433	13.411	13.415	13.408	13.404	13.420	13.399		13.261 - 13.561	13.418
PETN	14.583	14.589	14.580	14.551	14.555	14.548	14.544	14.567	14.539		14.401 - 14.701	14.562
1,2-Dinitrobenzene	8.517	8.516	8.520	8.517	8.515	8.515	8.511	8.521	8.506		8.367 - 8.667	8.515

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-176268-1 Analy Batch No.: 601664

SDG No.:

Instrument ID: CHHPLC_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/08/2023 15:38 Calibration End Date: 02/08/2023 18:42 Calibration ID: 76877

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-601664/19	02080019.D
Level 2	IC 280-601664/18	02080018.D
Level 3	IC 280-601664/17	02080017.D
Level 4	IC 280-601664/16	02080016.D
Level 5	IC 280-601664/15	02080015.D
Level 6	IC 280-601664/14	02080014.D
Level 7	IC 280-601664/13	02080013.D
Level 8	IC 280-601664/12	02080012.D
Level 9	IC 280-601664/11	02080011.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD /RSE	#	MAX %RSD /RSE	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								
HMX	96200 93960 91737	98050 92130	92960 91317	93870 91529	Ave		93528.1492				2.5		20.0			
RDX	120300 102168 106491	109800 103248	104720 102589	101120 106983	Ave		106379.808				5.5		20.0			
Picric acid	67300 77436 78734	74600 77483	75360 77481	76400 77676	Ave		75829.9476				4.5		20.0			
1,3,5-Trinitrobenzene	219600 217528 217838	215650 218445	213580 218654	213990 219038	Ave		217147.032				1.0		20.0			
1,3-Dinitrobenzene	290200 296196 297242	292450 296278	293280 294821	292490 296615	Ave		294396.925				0.8		20.0			
Nitrobenzene	190500 190360 192956	190800 192660	192100 189984	190190 191651	Ave		191244.543				0.6		20.0			
3,5-Dinitroaniline	214700 228212 230510	218850 227498	228520 228160	227230 229927	Lin2	-154.28261	229201.890							1.0000		0.9900
Tetryl	161100 165680 166480	153650 171658	163060 165663	164380 165416	Ave		164120.706				3.0		20.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-176268-1 Analy Batch No.: 601664

SDG No.:

Instrument ID: CHHPLC_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/08/2023 15:38 Calibration End Date: 02/08/2023 18:42 Calibration ID: 76877

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD /RSE	#	MAX %RSD /RSE	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								
Nitroglycerin	61590 64985 65842	59395 66398	63298 66047	63170 65903	Ave		64069.924 3				3.7		20.0			
2,4,6-Trinitrotoluene	216700 210476 209648	213100 208335	214160 208960	207870 210110	Ave		211039.88 9				1.4		20.0			
4-Amino-2,6-dinitrotoluene	167000 152884 152878	155300 152868	157500 150916	154070 150980	Ave		154932.80 2				3.2		20.0			
2-Amino-4,6-dinitrotoluene	221400 198056 200205	201050 198963	201440 196574	197650 197356	Ave		201410.39 8				3.8		20.0			
2,6-Dinitrotoluene	148600 143452 140114	145550 140035	142180 142239	139670 142869	Ave		142745.39 7				2.0		20.0			
2,4-Dinitrotoluene	314100 293052 294340	299250 294023	297440 290757	295390 291656	Ave		296667.47 1				2.4		20.0			
2-Nitrotoluene	137700 124752 126235	130550 125108	132460 124116	125480 124668	Ave		127896.49 0				3.7		20.0			
4-Nitrotoluene	126300 108612 108849	119650 108228	111680 107359	108570 107671	Ave		111879.80 8				5.9		20.0			
3-Nitrotoluene	147300 137292 138526	153100 136790	141920 136640	136660 136203	Ave		140492.28 9				4.2		20.0			
PETN	72730 68498 68809	67310 68653	68114 68586	68161 68748	Ave		68845.425 1				2.2		20.0			
1,2-Dinitrobenzene	118800 127432 129675	124550 128775	125560 126837	127270 127879	Ave		126308.70 5				2.5		20.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver Job No.: 280-176268-1 Analy Batch No.: 601664

SDG No.:

Instrument ID: CHHPLC_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/08/2023 15:38 Calibration End Date: 02/08/2023 18:42 Calibration ID: 76877

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-601664/19	02080019.D
Level 2	IC 280-601664/18	02080018.D
Level 3	IC 280-601664/17	02080017.D
Level 4	IC 280-601664/16	02080016.D
Level 5	IC 280-601664/15	02080015.D
Level 6	IC 280-601664/14	02080014.D
Level 7	IC 280-601664/13	02080013.D
Level 8	IC 280-601664/12	02080012.D
Level 9	IC 280-601664/11	02080011.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		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
HMX	Ave	962	1961	4648	9387	23490	0.0100	0.0200	0.0500	0.100	0.250
		36852	63922	91529	229343		0.400	0.700	1.00	2.50	
RDX	Ave	1203	2196	5236	10112	25542	0.0100	0.0200	0.0500	0.100	0.250
		41299	71812	106983	266228		0.400	0.700	1.00	2.50	
Picric acid	Ave	673	1492	3768	7640	19359	0.0100	0.0200	0.0500	0.100	0.250
		30993	54237	77676	196834		0.400	0.700	1.00	2.50	
1,3,5-Trinitrobenzene	Ave	2196	4313	10679	21399	54382	0.0100	0.0200	0.0500	0.100	0.250
		87378	153058	219038	544595		0.400	0.700	1.00	2.50	
1,3-Dinitrobenzene	Ave	2902	5849	14664	29249	74049	0.0100	0.0200	0.0500	0.100	0.250
		118511	206375	296615	743106		0.400	0.700	1.00	2.50	
Nitrobenzene	Ave	1905	3816	9605	19019	47590	0.0100	0.0200	0.0500	0.100	0.250
		77064	132989	191651	482389		0.400	0.700	1.00	2.50	
3,5-Dinitroaniline	Lin2	2147	4377	11426	22723	57053	0.0100	0.0200	0.0500	0.100	0.250
		90999	159712	229927	576276		0.400	0.700	1.00	2.50	
Tetryl	Ave	1611	3073	8153	16438	41420	0.0100	0.0200	0.0500	0.100	0.250
		68663	115964	165416	416200		0.400	0.700	1.00	2.50	
Nitroglycerin	Ave	6159	11879	31649	63170	162463	0.100	0.200	0.500	1.00	2.50
		265593	462332	659032	1646056		4.00	7.00	10.0	25.0	
2,4,6-Trinitrotoluene	Ave	2167	4262	10708	20787	52619	0.0100	0.0200	0.0500	0.100	0.250
		83334	146272	210110	524120		0.400	0.700	1.00	2.50	
4-Amino-2,6-dinitrotoluene	Ave	1670	3106	7875	15407	38221	0.0100	0.0200	0.0500	0.100	0.250
		61147	105641	150980	382195		0.400	0.700	1.00	2.50	
2-Amino-4,6-dinitrotoluene	Ave	2214	4021	10072	19765	49514	0.0100	0.0200	0.0500	0.100	0.250
		79585	137602	197356	500512		0.400	0.700	1.00	2.50	
2,6-Dinitrotoluene	Ave	1486	2911	7109	13967	35863	0.0100	0.0200	0.0500	0.100	0.250

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver Job No.: 280-176268-1 Analy Batch No.: 601664

SDG No.:

Instrument ID: CHHPLC_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/08/2023 15:38 Calibration End Date: 02/08/2023 18:42 Calibration ID: 76877

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		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
		56014	99567	142869	350285		0.400	0.700	1.00	2.50	
2,4-Dinitrotoluene	Ave	3141	5985	14872	29539	73263	0.0100	0.0200	0.0500	0.100	0.250
		117609	203530	291656	735849		0.400	0.700	1.00	2.50	
2-Nitrotoluene	Ave	1377	2611	6623	12548	31188	0.0100	0.0200	0.0500	0.100	0.250
		50043	86881	124668	315588		0.400	0.700	1.00	2.50	
4-Nitrotoluene	Ave	1263	2393	5584	10857	27153	0.0100	0.0200	0.0500	0.100	0.250
		43291	75151	107671	272123		0.400	0.700	1.00	2.50	
3-Nitrotoluene	Ave	1473	3062	7096	13666	34323	0.0100	0.0200	0.0500	0.100	0.250
		54716	95648	136203	346314		0.400	0.700	1.00	2.50	
PETN	Ave	7273	13462	34057	68161	171245	0.100	0.200	0.500	1.00	2.50
		274612	480104	687477	1720221		4.00	7.00	10.0	25.0	
1,2-Dinitrobenzene	Ave	1188	2491	6278	12727	31858	0.0100	0.0200	0.0500	0.100	0.250
		51510	88786	127879	324188		0.400	0.700	1.00	2.50	

Curve Type Legend
Ave = Average
Lin2 = Linear 1/conc^2

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20230208-118465.b\02080011.D
Lims ID: IC INT 9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 08-Feb-2023 15:38:53 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC INT 9
Operator ID: JZ/MAR Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub26

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20230208-118465.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 09-Feb-2023 12:48:02 Calib Date: 08-Feb-2023 18:42:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X\20230208-118465.b\02080019.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX1604

First Level Reviewer: LV5D Date: 08-Feb-2023 16:28:55

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
4 HMX	1	6.546	6.544	0.002	229343	2.50	2.45	M
8 RDX	1	7.559	7.564	-0.005	266228	2.50	2.50	
9 2,4,6-Trinitrophenol	1	7.966	8.044	-0.078	196834	2.50	2.60	
$ 10 1,2-Dinitrobenzene	1	8.506	8.517	-0.011	324188	2.50	2.57	
11 1,3,5-Trinitrobenzene	1	8.639	8.644	-0.005	544595	2.50	2.51	
12 1,3-Dinitrobenzene	1	9.246	9.257	-0.011	743106	2.50	2.52	
13 Nitrobenzene	1	9.619	9.631	-0.012	482389	2.50	2.52	
14 3,5-Dinitroaniline	1	9.819	9.831	-0.012	576276	2.50	2.51	
15 Tetryl	1	9.966	9.977	-0.011	416200	2.50	2.54	
16 Nitroglycerin	2	10.426	10.437	-0.011	1646056	25.0	25.7	
17 2,4,6-Trinitrotoluene	1	10.859	10.864	-0.005	524120	2.50	2.48	
18 4-Amino-2,6-dinitrotoluene	1	11.013	11.031	-0.018	382195	2.50	2.47	
19 2-Amino-4,6-dinitrotoluene	1	11.259	11.277	-0.018	500512	2.50	2.49	
20 2,6-Dinitrotoluene	1	11.439	11.451	-0.012	350285	2.50	2.45	
21 2,4-Dinitrotoluene	1	11.606	11.617	-0.011	735849	2.50	2.48	
22 o-Nitrotoluene	1	12.426	12.437	-0.011	315588	2.50	2.47	
23 p-Nitrotoluene	1	12.833	12.844	-0.011	272123	2.50	2.43	
24 m-Nitrotoluene	1	13.399	13.411	-0.012	346314	2.50	2.47	
25 PETN	2	14.539	14.551	-0.012	1720221	25.0	25.0	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00075 Amount Added: 250.00 Units: uL

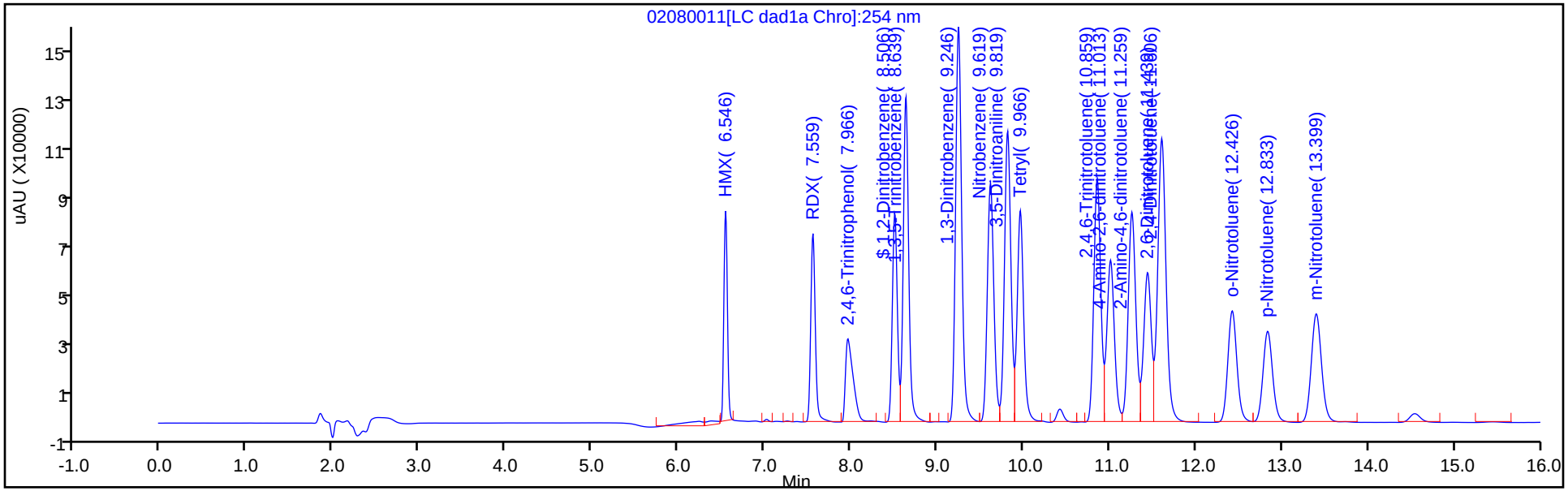
Report Date: 09-Feb-2023 12:48:02 Chrom Revision: 2.3 01-Feb-2023 13:23:06

Eurofins Denver

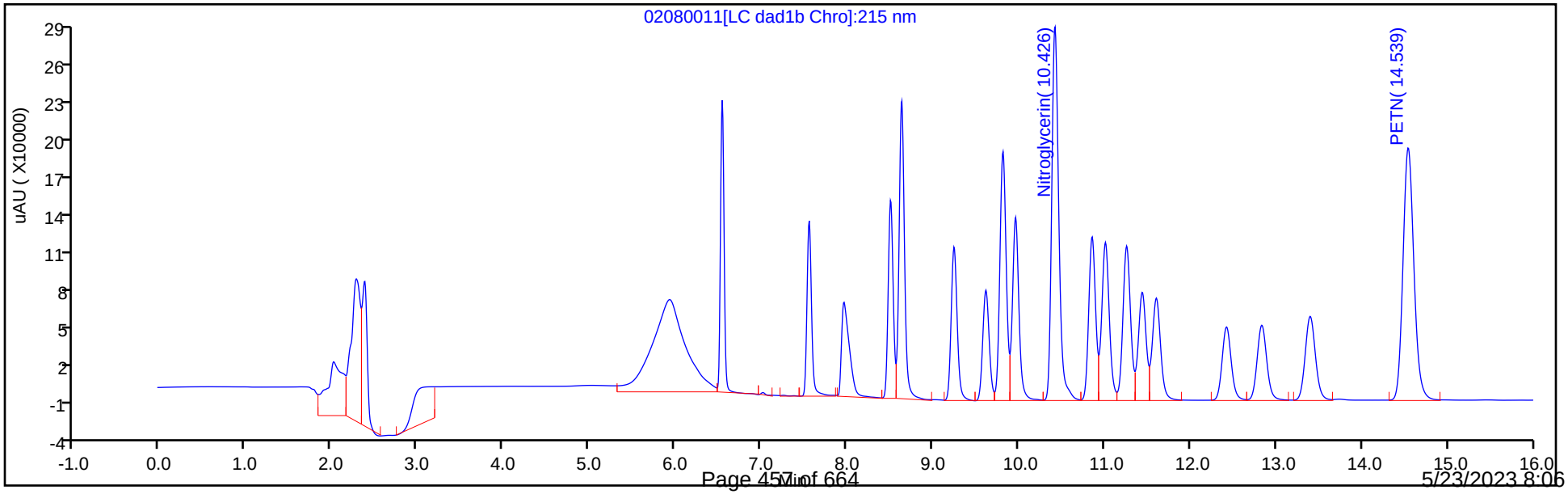
Data File: \\chromfs\denver\chromdata\chhplc_x\20230208-118465.b\02080011.d

Injection Date:	08-Feb-2023 15:38:53	Instrument ID:	CHHPLC_X3	Operator ID:	JZ/MAR
Lims ID:	IC INT 9			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



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



5/23/2023 8:06 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

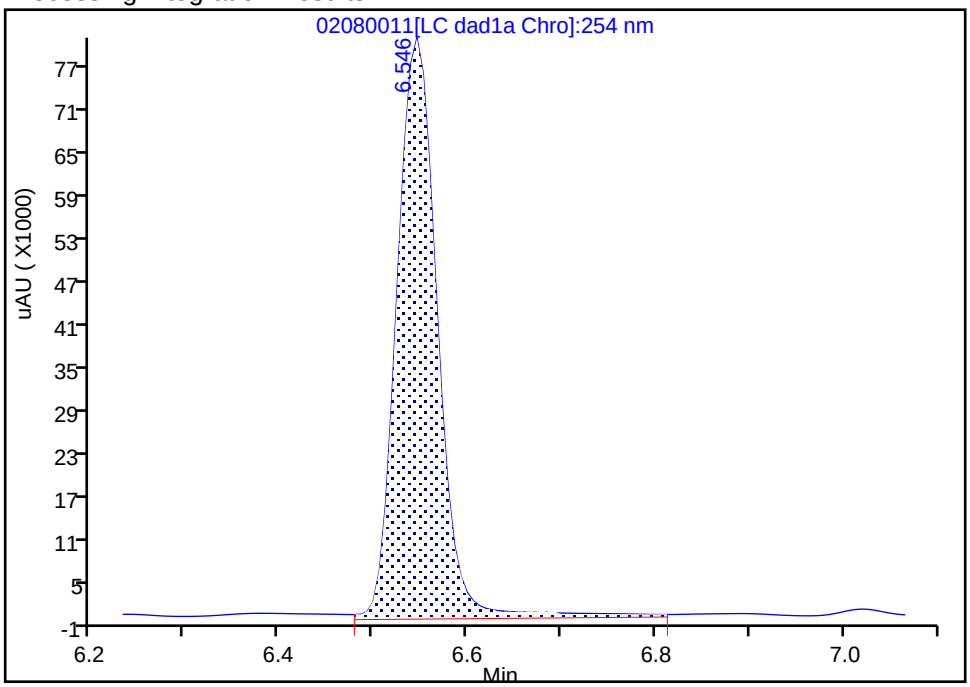
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230208-118465.b\02080011.d				
Injection Date:	08-Feb-2023 15:38:53	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT 9				
Client ID:					
Operator ID:	JZ/MAR	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

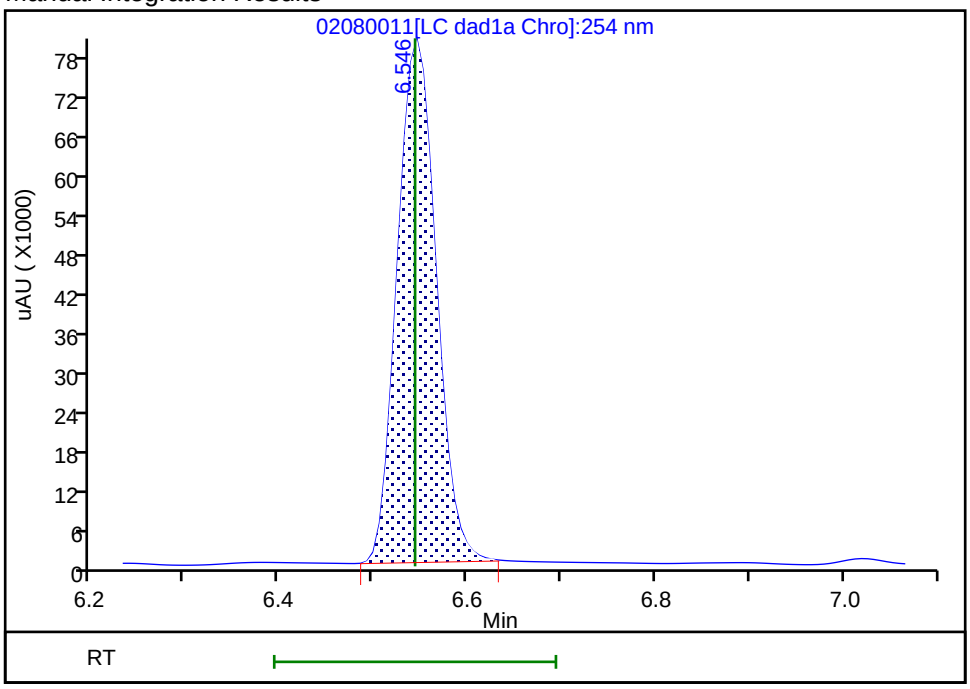
Processing Integration Results

RT: 6.55
Area: 245170
Amount: 2.586222
Amount Units: ug/mL



Manual Integration Results

RT: 6.55
Area: 229343
Amount: 2.452128
Amount Units: ug/mL



Reviewer: LV5D, 08-Feb-2023 16:28:37
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20230208-118465.b\02080012.D
Lims ID: IC INT 8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 08-Feb-2023 16:01:51 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC INT 8
Operator ID: JZ/MAR Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub26

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20230208-118465.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 09-Feb-2023 12:48:03 Calib Date: 08-Feb-2023 18:42:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X\20230208-118465.b\02080019.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX1604

First Level Reviewer: LV5D Date: 08-Feb-2023 16:28:33

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
4 HMX	1	6.547	6.544	0.003	91529	1.00	0.9786	M
8 RDX	1	7.567	7.564	0.003	106983	1.00	1.01	
9 2,4,6-Trinitrophenol	1	8.014	8.044	-0.030	77676	1.00	1.02	
$ 10 1,2-Dinitrobenzene	1	8.521	8.517	0.004	127879	1.00	1.01	
11 1,3,5-Trinitrobenzene	1	8.647	8.644	0.003	219038	1.00	1.01	
12 1,3-Dinitrobenzene	1	9.260	9.257	0.003	296615	1.00	1.01	
13 Nitrobenzene	1	9.634	9.631	0.003	191651	1.00	1.00	
14 3,5-Dinitroaniline	1	9.840	9.831	0.009	229927	1.00	1.00	
15 Tetryl	1	9.987	9.977	0.010	165416	1.00	1.01	
16 Nitroglycerin	2	10.454	10.437	0.017	659032	10.0	10.3	
17 2,4,6-Trinitrotoluene	1	10.880	10.864	0.016	210110	1.00	1.00	
18 4-Amino-2,6-dinitrotoluene	1	11.040	11.031	0.009	150980	1.00	0.9745	
19 2-Amino-4,6-dinitrotoluene	1	11.287	11.277	0.010	197356	1.00	0.9799	
20 2,6-Dinitrotoluene	1	11.467	11.451	0.016	142869	1.00	1.00	
21 2,4-Dinitrotoluene	1	11.634	11.617	0.017	291656	1.00	0.9831	
22 o-Nitrotoluene	1	12.447	12.437	0.010	124668	1.00	0.9748	
23 p-Nitrotoluene	1	12.860	12.844	0.016	107671	1.00	0.9624	
24 m-Nitrotoluene	1	13.420	13.411	0.009	136203	1.00	0.9695	
25 PETN	2	14.567	14.551	0.016	687477	10.0	9.99	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00075 Amount Added: 100.00 Units: uL

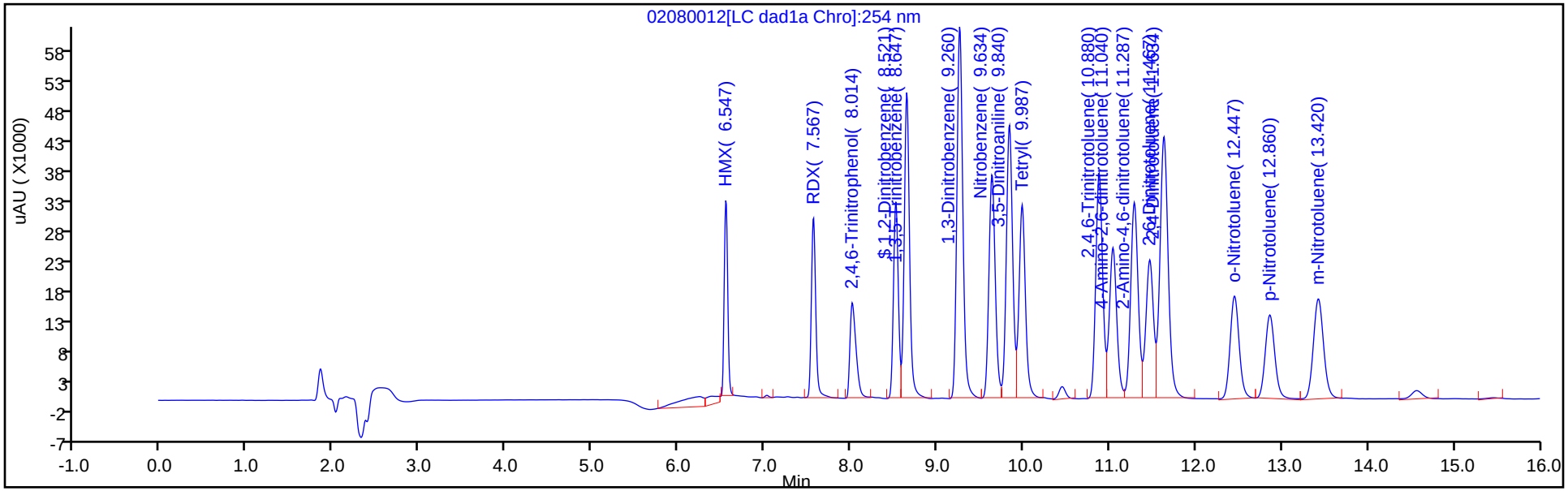
Report Date: 09-Feb-2023 12:48:03 Chrom Revision: 2.3 01-Feb-2023 13:23:06

Eurofins Denver

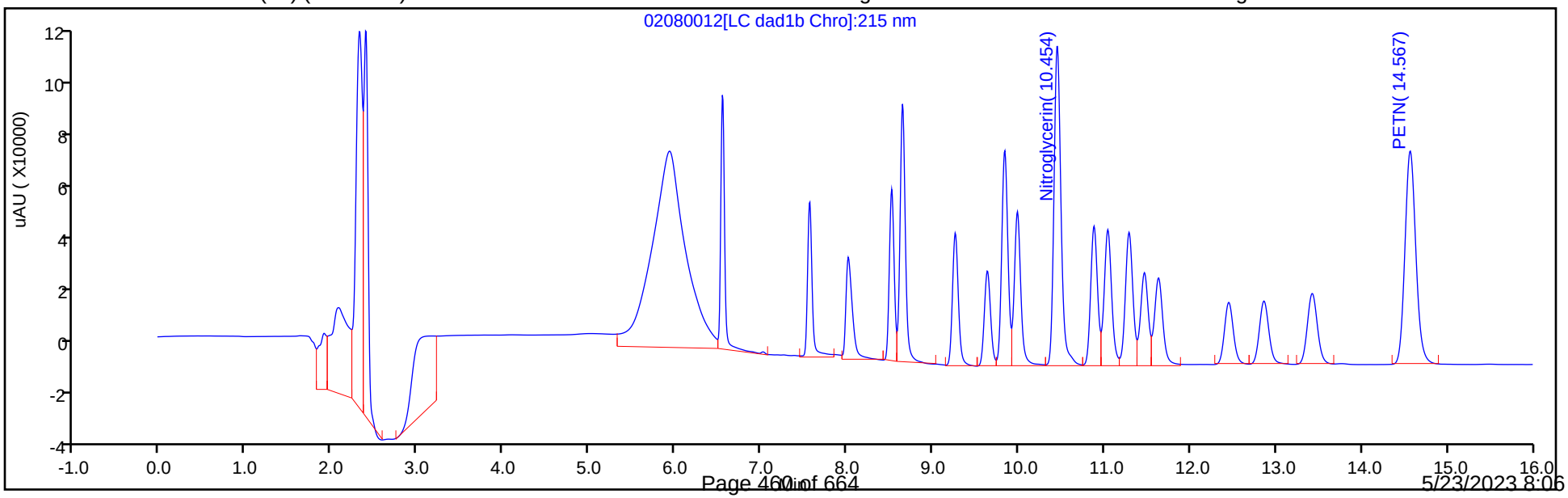
Data File: \\chromfs\denver\chromdata\chhplc_x\20230208-118465.b\02080012.d

Injection Date:	08-Feb-2023 16:01:51	Instrument ID:	CHHPLC_X3	Operator ID:	JZ/MAR
Lims ID:	IC INT 8			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



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

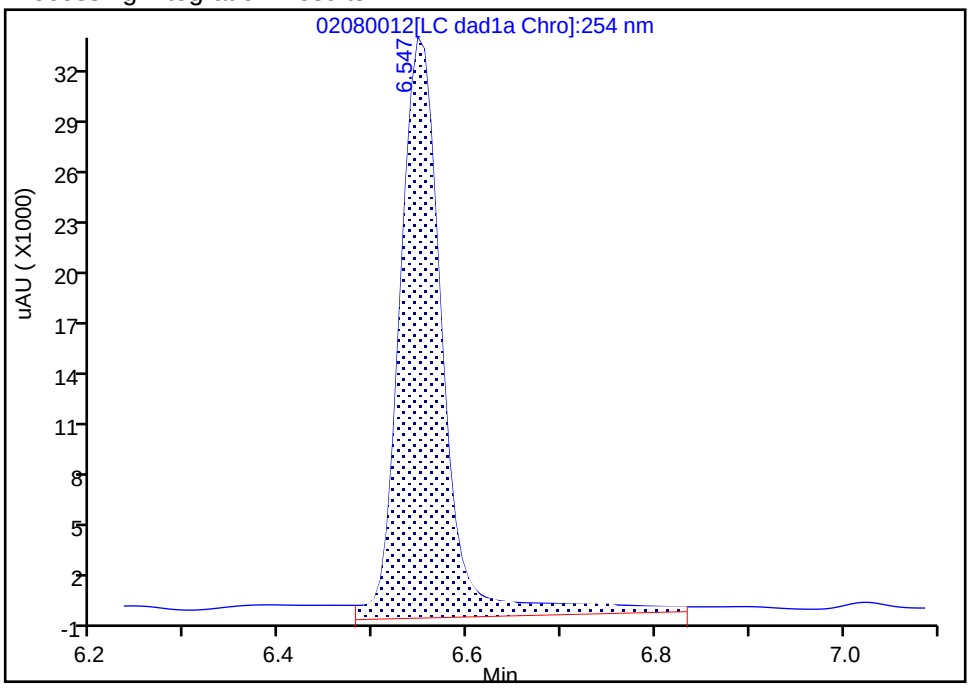
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230208-118465.b\02080012.d				
Injection Date:	08-Feb-2023 16:01:51	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT 8				
Client ID:					
Operator ID:	JZ/MAR	ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

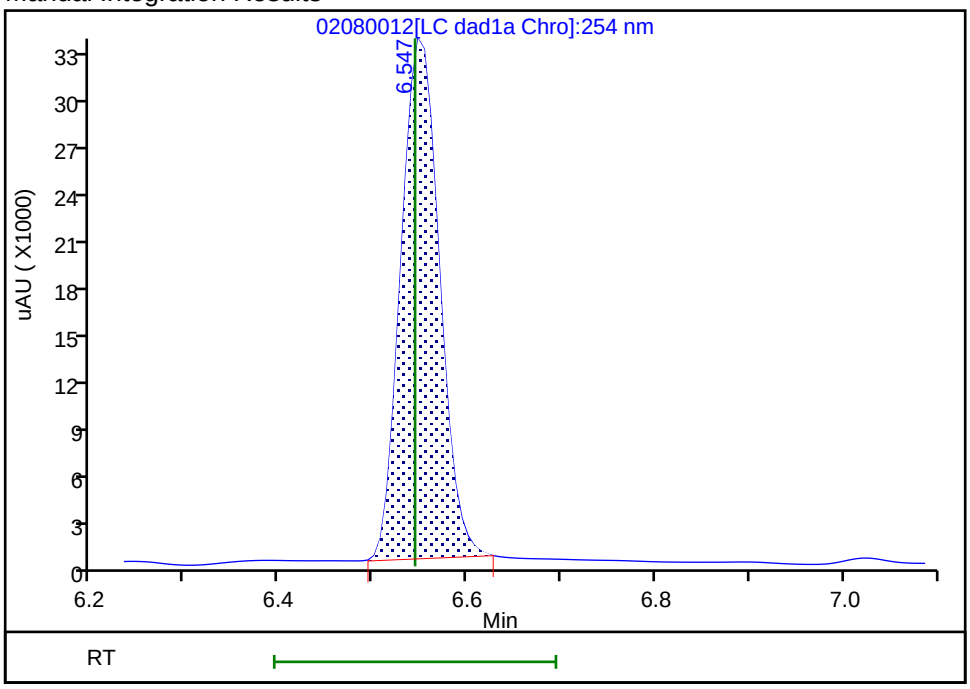
Processing Integration Results

RT: 6.55
Area: 107005
Amount: 1.043580
Amount Units: ug/mL



Manual Integration Results

RT: 6.55
Area: 91529
Amount: 0.978625
Amount Units: ug/mL



Reviewer: LV5D, 08-Feb-2023 16:28:16

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20230208-118465.b\02080013.D
Lims ID: IC INT 7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 08-Feb-2023 16:24:45 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC INT 7
Operator ID: JZ/MAR Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub26

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20230208-118465.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 09-Feb-2023 12:48:04 Calib Date: 08-Feb-2023 18:42:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X\20230208-118465.b\02080019.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX1604

First Level Reviewer: LV5D Date: 08-Feb-2023 16:55:38

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
4 HMX	1	6.544	6.544	0.000	63922	0.7000	0.6835	M
8 RDX	1	7.564	7.564	0.000	71812	0.7000	0.6751	M
9 2,4,6-Trinitrophenol	1	8.018	8.044	-0.026	54237	0.7000	0.7152	
$ 10 1,2-Dinitrobenzene	1	8.511	8.517	-0.006	88786	0.7000	0.7029	
11 1,3,5-Trinitrobenzene	1	8.638	8.644	-0.006	153058	0.7000	0.7049	
12 1,3-Dinitrobenzene	1	9.251	9.257	-0.006	206375	0.7000	0.7010	
13 Nitrobenzene	1	9.624	9.631	-0.007	132989	0.7000	0.6954	
14 3,5-Dinitroaniline	1	9.824	9.831	-0.007	159712	0.7000	0.6975	
15 Tetryl	1	9.971	9.977	-0.006	115964	0.7000	0.7066	
16 Nitroglycerin	2	10.437	10.437	0.000	462332	7.00	7.22	
17 2,4,6-Trinitrotoluene	1	10.864	10.864	0.000	146272	0.7000	0.6931	
18 4-Amino-2,6-dinitrotoluene	1	11.024	11.031	-0.007	105641	0.7000	0.6819	
19 2-Amino-4,6-dinitrotoluene	1	11.271	11.277	-0.006	137602	0.7000	0.6832	
20 2,6-Dinitrotoluene	1	11.451	11.451	0.000	99567	0.7000	0.6975	
21 2,4-Dinitrotoluene	1	11.617	11.617	0.000	203530	0.7000	0.6861	
22 o-Nitrotoluene	1	12.431	12.437	-0.006	86881	0.7000	0.6793	
23 p-Nitrotoluene	1	12.844	12.844	0.000	75151	0.7000	0.6717	
24 m-Nitrotoluene	1	13.404	13.411	-0.007	95648	0.7000	0.6808	
25 PETN	2	14.544	14.551	-0.007	480104	7.00	6.97	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00075 Amount Added: 70.00 Units: uL

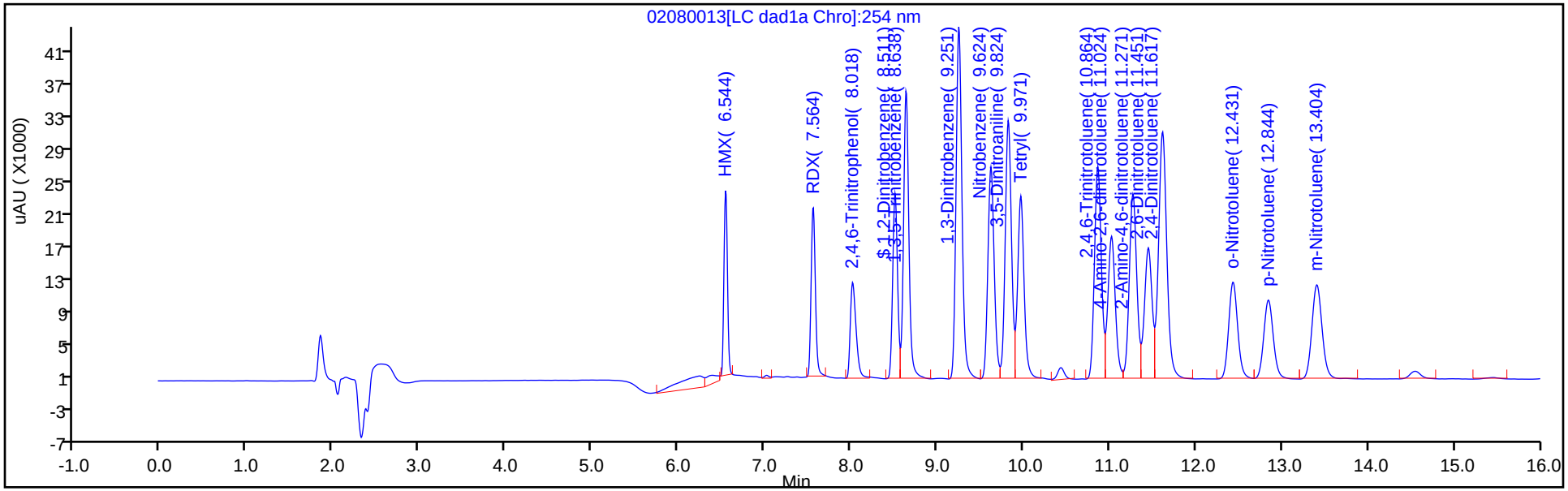
Report Date: 09-Feb-2023 12:48:04 Chrom Revision: 2.3 01-Feb-2023 13:23:06

Eurofins Denver

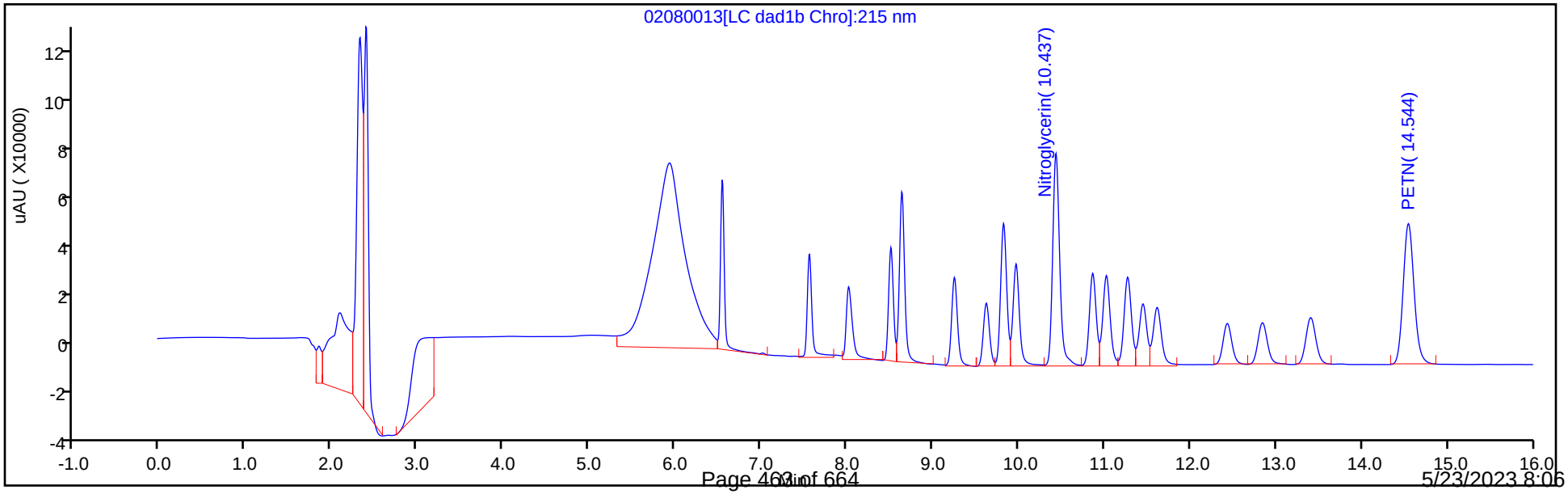
Data File: \\chromfs\denver\chromdata\chhplc_x\20230208-118465.b\02080013.d

Injection Date:	08-Feb-2023 16:24:45	Instrument ID:	CHHPLC_X3	Operator ID:	JZ/MAR
Lims ID:	IC INT 7			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



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

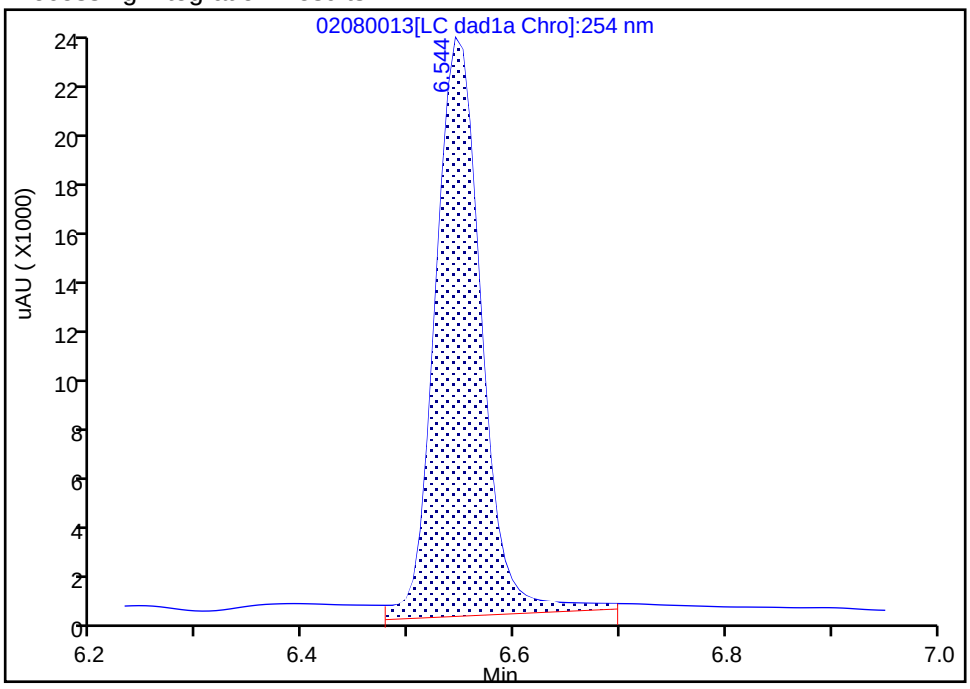
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230208-118465.b\02080013.d				
Injection Date:	08-Feb-2023 16:24:45	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT 7				
Client ID:					
Operator ID:	JZ/MAR	ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

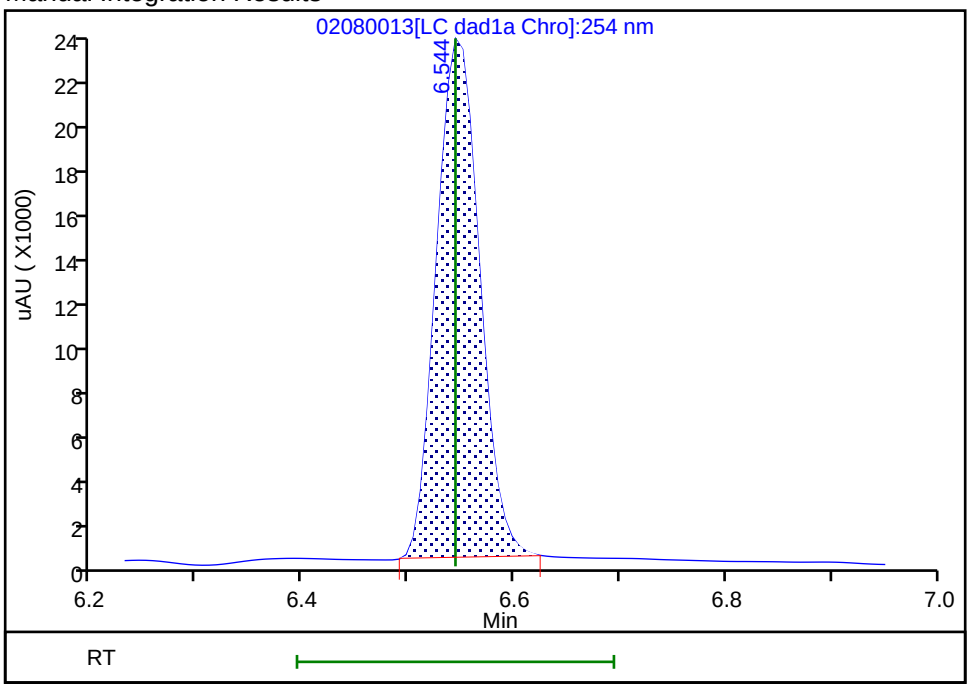
Processing Integration Results

RT: 6.54
Area: 70424
Amount: 0.744251
Amount Units: ug/mL



Manual Integration Results

RT: 6.54
Area: 63922
Amount: 0.683452
Amount Units: ug/mL



Reviewer: LV5D, 08-Feb-2023 16:55:19

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

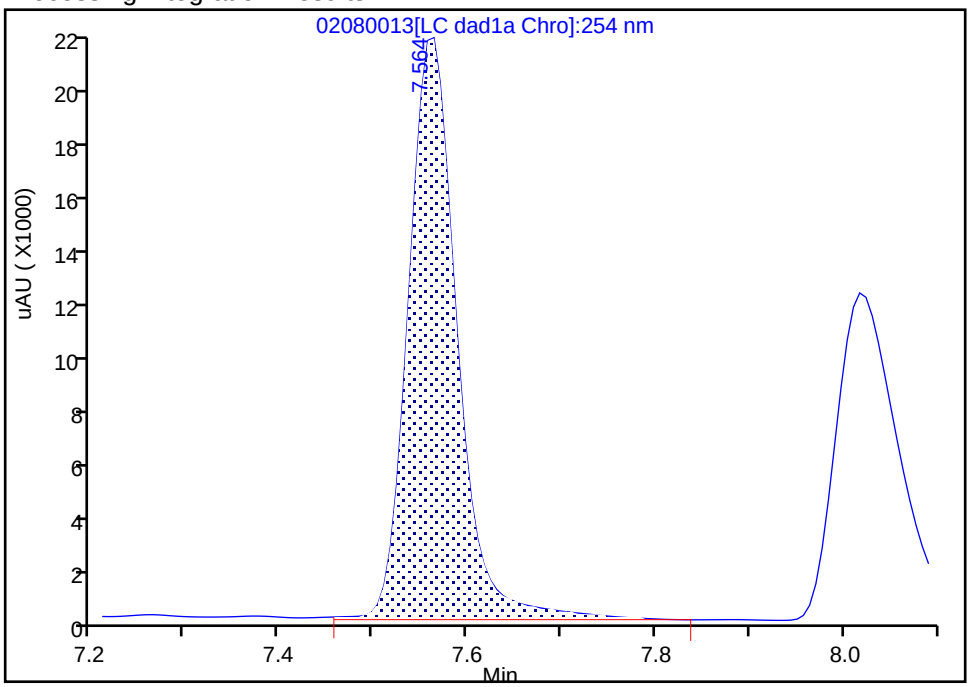
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230208-118465.b\02080013.d				
Injection Date:	08-Feb-2023 16:24:45	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT 7				
Client ID:					
Operator ID:	JZ/MAR	ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

8 RDX, CAS: 121-82-4

Signal: 1

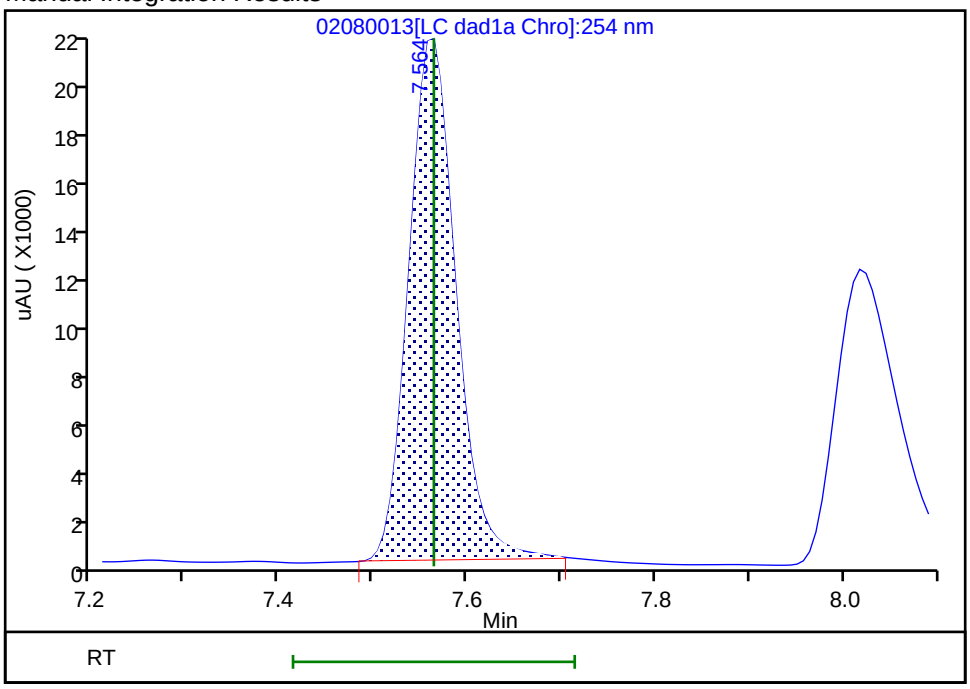
Processing Integration Results

RT: 7.56
Area: 75013
Amount: 0.701791
Amount Units: ug/mL



Manual Integration Results

RT: 7.56
Area: 71812
Amount: 0.675053
Amount Units: ug/mL



Reviewer: LV5D, 08-Feb-2023 19:09:56
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20230208-118465.b\02080014.D
Lims ID: IC INT 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 08-Feb-2023 16:47:39 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC INT 6
Operator ID: JZ/MAR Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub26

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20230208-118465.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 09-Feb-2023 12:48:05 Calib Date: 08-Feb-2023 18:42:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X\20230208-118465.b\02080019.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX1604

First Level Reviewer: LV5D Date: 08-Feb-2023 17:11:22

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
4 HMX	1	6.548	6.544	0.004	36852	0.4000	0.3940	M
8 RDX	1	7.562	7.564	-0.002	41299	0.4000	0.3882	M
9 2,4,6-Trinitrophenol	1	8.028	8.044	-0.016	30993	0.4000	0.4087	
$ 10 1,2-Dinitrobenzene	1	8.515	8.517	-0.002	51510	0.4000	0.4078	
11 1,3,5-Trinitrobenzene	1	8.642	8.644	-0.002	87378	0.4000	0.4024	
12 1,3-Dinitrobenzene	1	9.255	9.257	-0.002	118511	0.4000	0.4026	
13 Nitrobenzene	1	9.628	9.631	-0.003	77064	0.4000	0.4030	
14 3,5-Dinitroaniline	1	9.828	9.831	-0.003	90999	0.4000	0.3977	
15 Tetryl	1	9.968	9.977	-0.009	68663	0.4000	0.4184	
16 Nitroglycerin	2	10.435	10.437	-0.002	265593	4.00	4.15	
17 2,4,6-Trinitrotoluene	1	10.868	10.864	0.004	83334	0.4000	0.3949	
18 4-Amino-2,6-dinitrotoluene	1	11.022	11.031	-0.009	61147	0.4000	0.3947	
19 2-Amino-4,6-dinitrotoluene	1	11.275	11.277	-0.002	79585	0.4000	0.3951	
20 2,6-Dinitrotoluene	1	11.448	11.451	-0.003	56014	0.4000	0.3924	
21 2,4-Dinitrotoluene	1	11.615	11.617	-0.002	117609	0.4000	0.3964	
22 o-Nitrotoluene	1	12.435	12.437	-0.002	50043	0.4000	0.3913	
23 p-Nitrotoluene	1	12.842	12.844	-0.002	43291	0.4000	0.3869	
24 m-Nitrotoluene	1	13.408	13.411	-0.003	54716	0.4000	0.3895	
25 PETN	2	14.548	14.551	-0.003	274612	4.00	3.99	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00075 Amount Added: 40.00 Units: uL

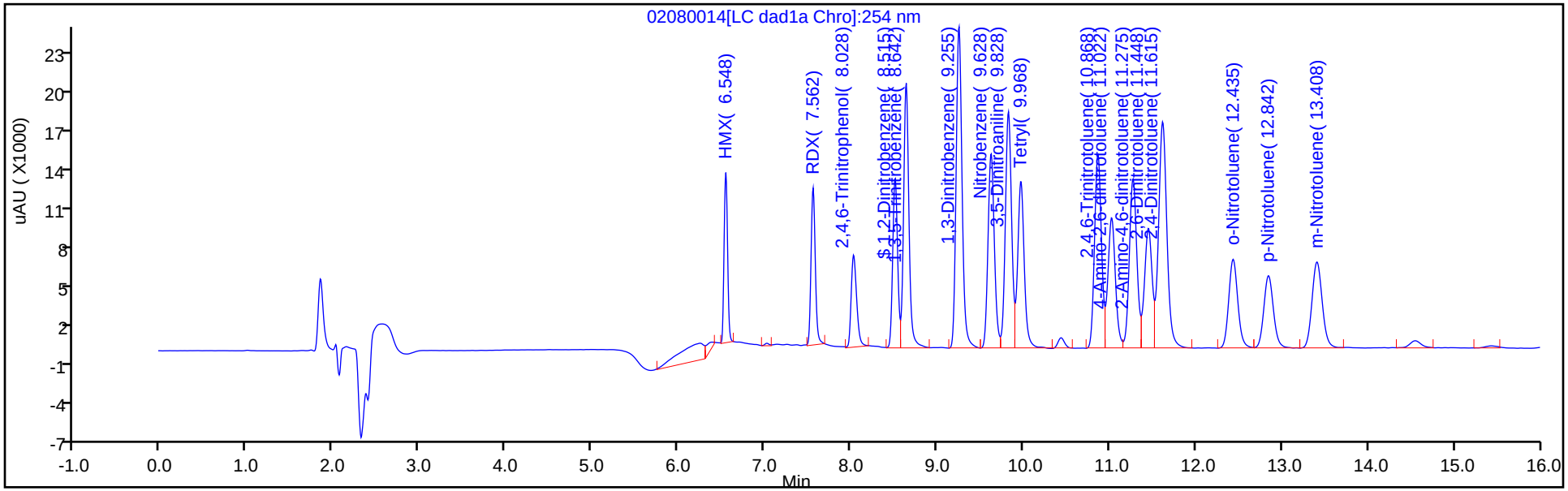
Report Date: 09-Feb-2023 12:48:05 Chrom Revision: 2.3 01-Feb-2023 13:23:06

Eurofins Denver

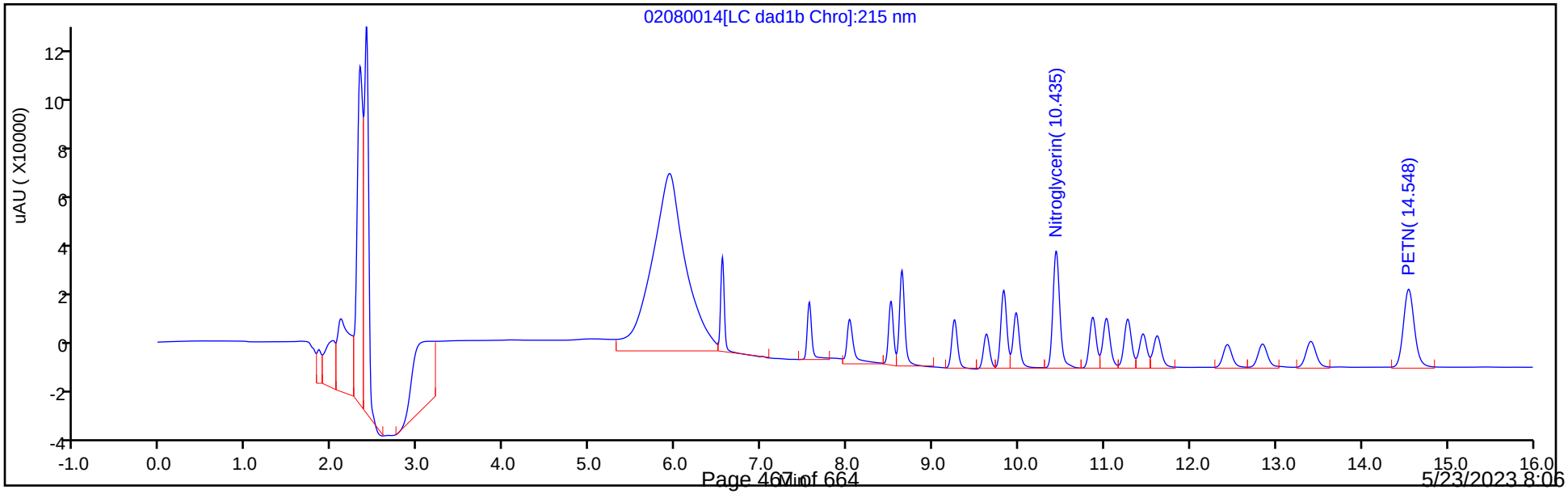
Data File: \\chromfs\denver\chromdata\chhplc_x\20230208-118465.b\02080014.d

Injection Date:	08-Feb-2023 16:47:39	Instrument ID:	CHHPLC_X3	Operator ID:	JZ/MAR
Lims ID:	IC INT 6			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



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

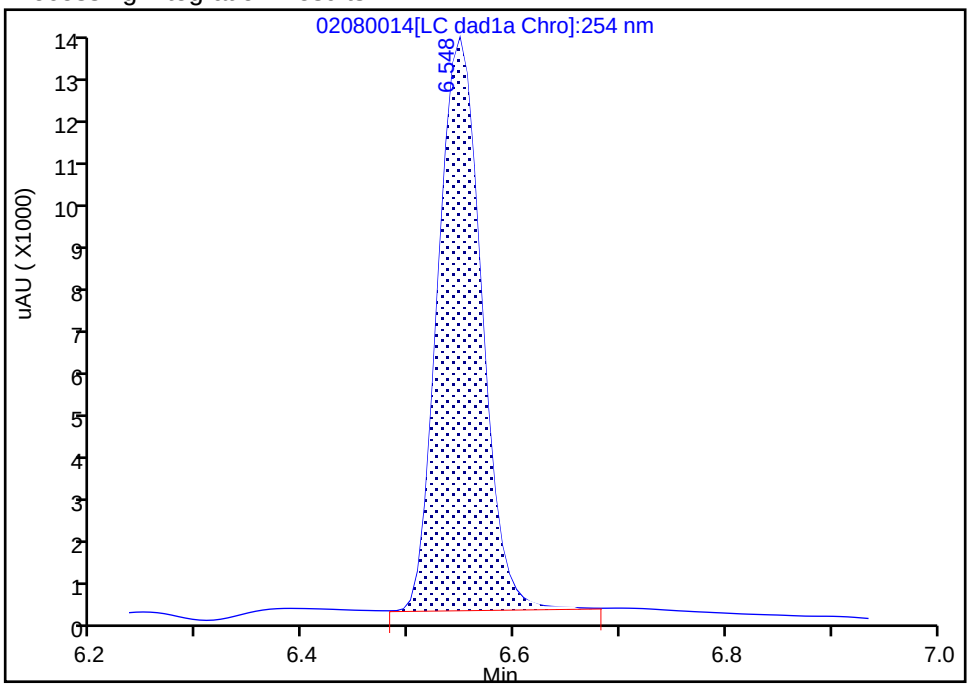
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230208-118465.b\02080014.d				
Injection Date:	08-Feb-2023 16:47:39	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT 6				
Client ID:					
Operator ID:	JZ/MAR	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

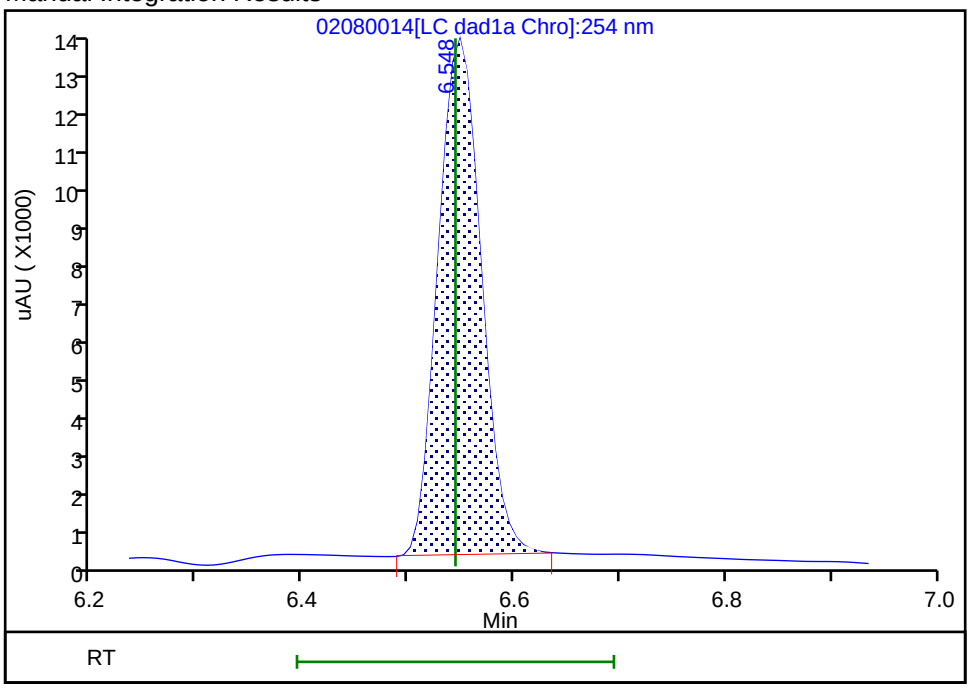
Processing Integration Results

RT: 6.55
Area: 37332
Amount: 0.405878
Amount Units: ug/mL



Manual Integration Results

RT: 6.55
Area: 36852
Amount: 0.394020
Amount Units: ug/mL



Reviewer: LV5D, 08-Feb-2023 17:11:10
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

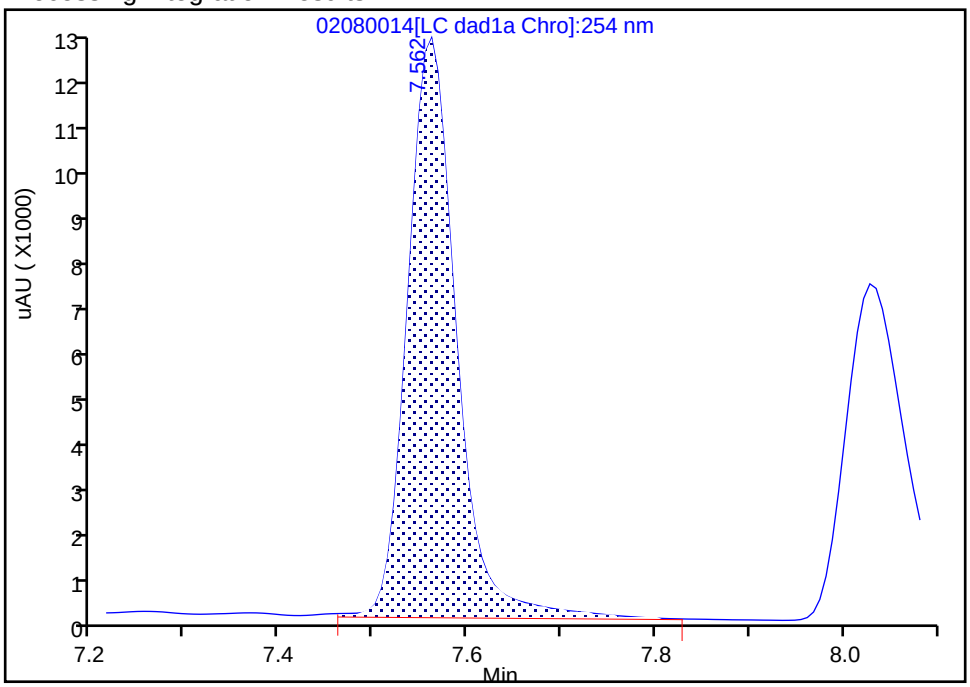
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230208-118465.b\02080014.d				
Injection Date:	08-Feb-2023 16:47:39	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT 6				
Client ID:					
Operator ID:	JZ/MAR	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

8 RDX, CAS: 121-82-4

Signal: 1

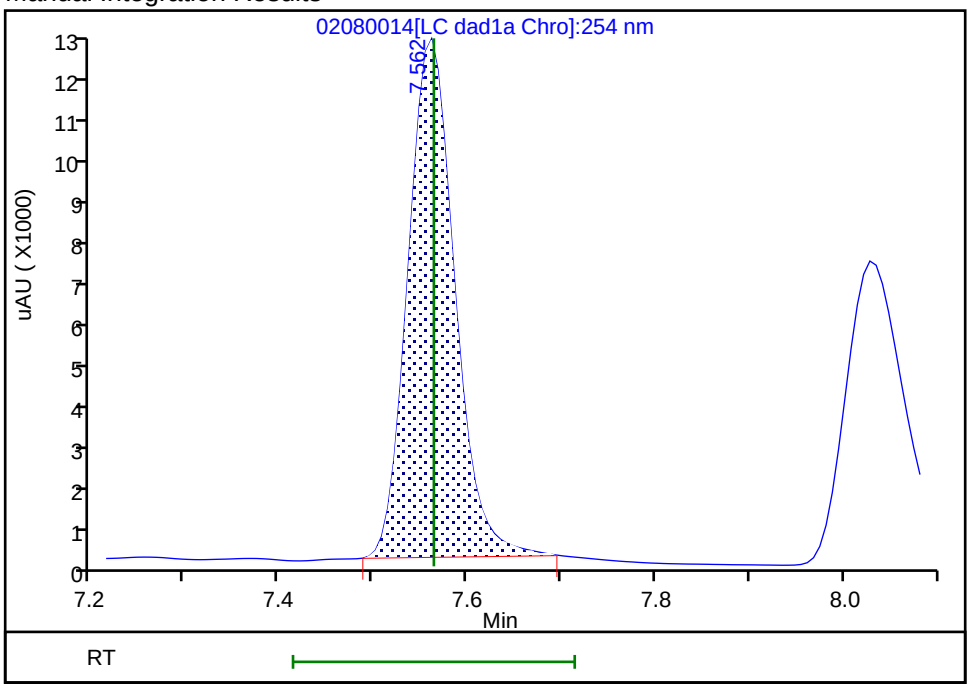
Processing Integration Results

RT: 7.56
Area: 43581
Amount: 0.405322
Amount Units: ug/mL



Manual Integration Results

RT: 7.56
Area: 41299
Amount: 0.388222
Amount Units: ug/mL



Reviewer: LV5D, 08-Feb-2023 19:09:51
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20230208-118465.b\02080015.D
Lims ID: IC INT 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 08-Feb-2023 17:10:30 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC INT 5
Operator ID: JZ/MAR Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub26

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20230208-118465.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 09-Feb-2023 12:48:05 Calib Date: 08-Feb-2023 18:42:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X\20230208-118465.b\02080019.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX1604

First Level Reviewer: LV5D Date: 08-Feb-2023 17:44:54

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
4 HMX	1	6.548	6.544	0.004	23490	0.2500	0.2512	
8 RDX	1	7.568	7.564	0.004	25542	0.2500	0.2401	M
9 2,4,6-Trinitrophenol	1	8.041	8.044	-0.003	19359	0.2500	0.2553	
$ 10 1,2-Dinitrobenzene	1	8.515	8.517	-0.002	31858	0.2500	0.2522	
11 1,3,5-Trinitrobenzene	1	8.641	8.644	-0.003	54382	0.2500	0.2504	
12 1,3-Dinitrobenzene	1	9.255	9.257	-0.002	74049	0.2500	0.2515	
13 Nitrobenzene	1	9.628	9.631	-0.003	47590	0.2500	0.2488	
14 3,5-Dinitroaniline	1	9.828	9.831	-0.003	57053	0.2500	0.2496	
15 Tetryl	1	9.975	9.977	-0.002	41420	0.2500	0.2524	
16 Nitroglycerin	2	10.441	10.437	0.004	162463	2.50	2.54	
17 2,4,6-Trinitrotoluene	1	10.868	10.864	0.004	52619	0.2500	0.2493	
18 4-Amino-2,6-dinitrotoluene	1	11.028	11.031	-0.003	38221	0.2500	0.2467	
19 2-Amino-4,6-dinitrotoluene	1	11.275	11.277	-0.002	49514	0.2500	0.2458	
20 2,6-Dinitrotoluene	1	11.455	11.451	0.004	35863	0.2500	0.2512	
21 2,4-Dinitrotoluene	1	11.621	11.617	0.004	73263	0.2500	0.2470	
22 o-Nitrotoluene	1	12.441	12.437	0.004	31188	0.2500	0.2439	
23 p-Nitrotoluene	1	12.848	12.844	0.004	27153	0.2500	0.2427	
24 m-Nitrotoluene	1	13.415	13.411	0.004	34323	0.2500	0.2443	
25 PETN	2	14.555	14.551	0.004	171245	2.50	2.49	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00075 Amount Added: 25.00 Units: uL

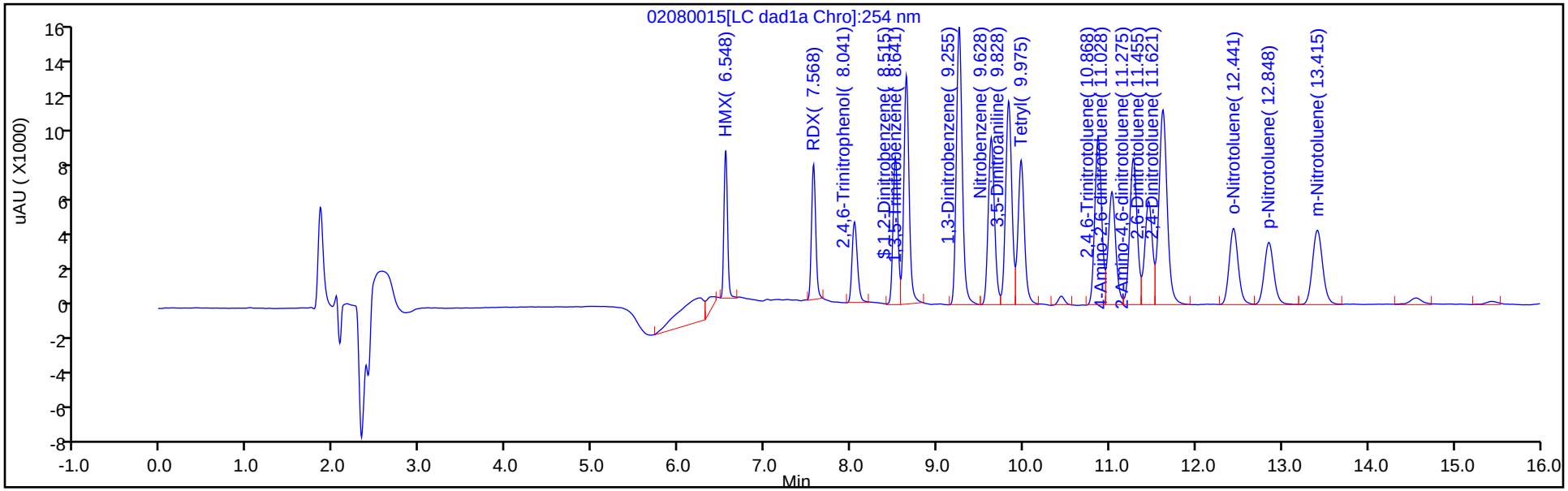
Report Date: 09-Feb-2023 12:48:06 Chrom Revision: 2.3 01-Feb-2023 13:23:06

Eurofins Denver

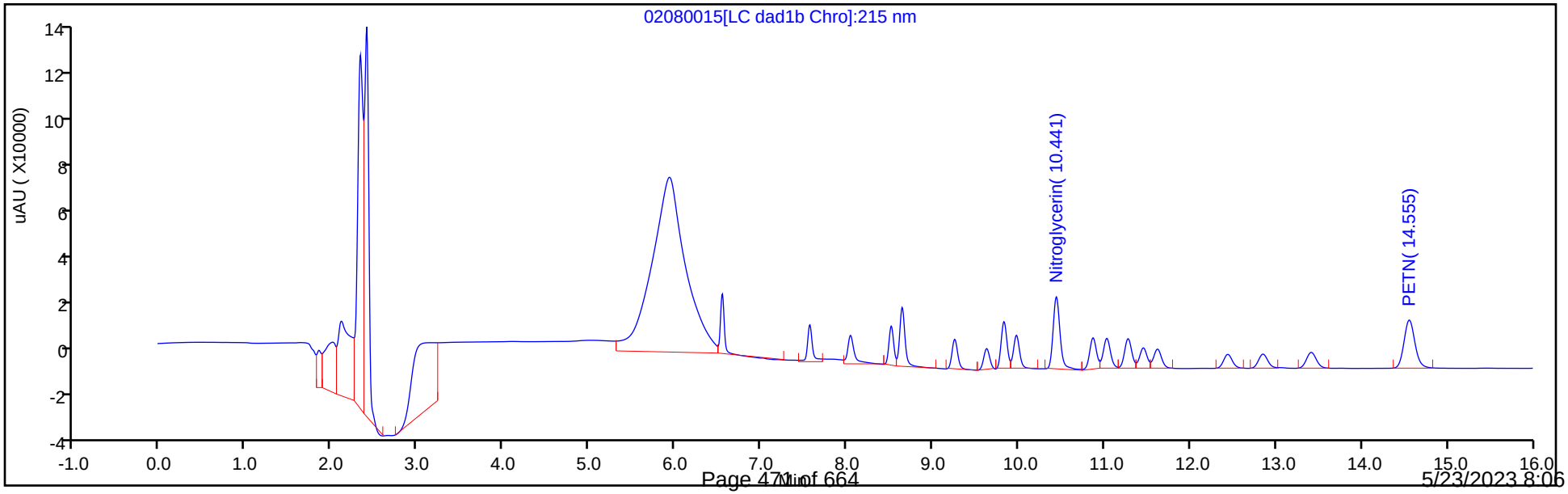
Data File: \\chromfs\denver\chromdata\chhplc_x\20230208-118465.b\02080015.d

Injection Date:	08-Feb-2023 17:10:30	Instrument ID:	CHHPLC_X3	Operator ID:	JZ/MAR
Lims ID:	IC INT 5			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



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

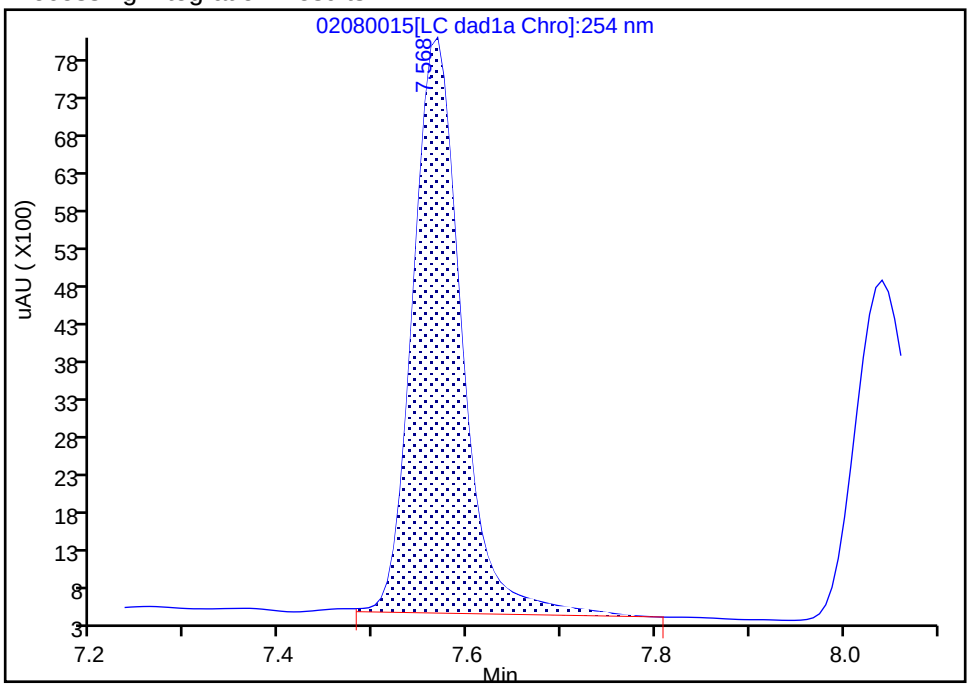
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230208-118465.b\02080015.d				
Injection Date:	08-Feb-2023 17:10:30	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT 5				
Client ID:					
Operator ID:	JZ/MAR	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

8 RDX, CAS: 121-82-4

Signal: 1

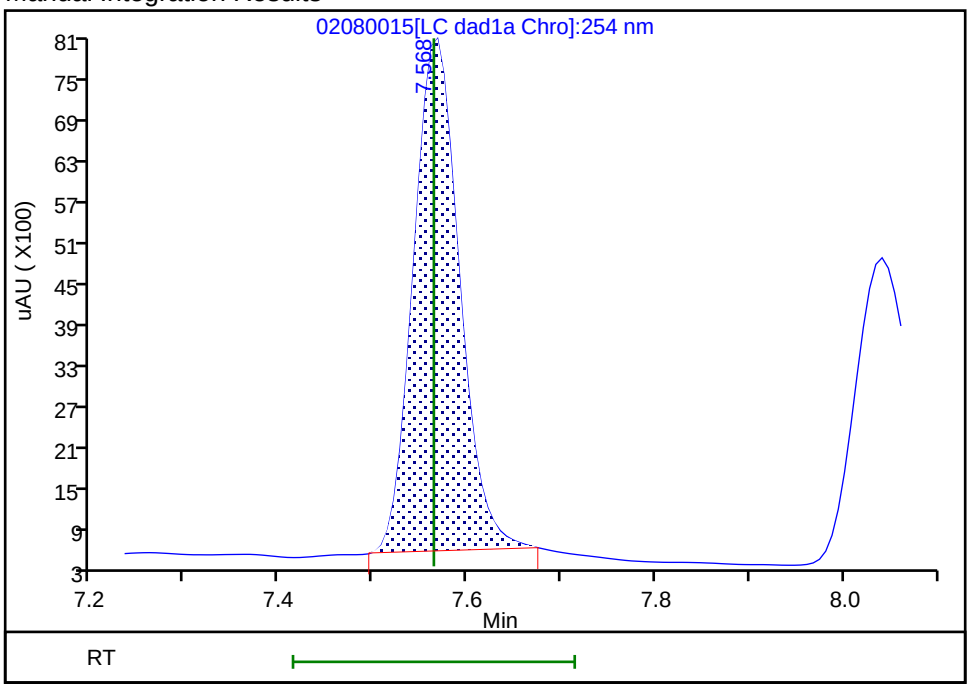
Processing Integration Results

RT: 7.57
Area: 27559
Amount: 0.254192
Amount Units: ug/mL



Manual Integration Results

RT: 7.57
Area: 25542
Amount: 0.240102
Amount Units: ug/mL



Reviewer: LV5D, 08-Feb-2023 19:09:46
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20230208-118465.b\02080016.D
Lims ID: IC INT 4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 08-Feb-2023 17:33:25 ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC INT 4
Operator ID: JZ/MAR Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub26

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20230208-118465.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 09-Feb-2023 12:48:06 Calib Date: 08-Feb-2023 18:42:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X\20230208-118465.b\02080019.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX1604

First Level Reviewer: LV5D Date: 08-Feb-2023 18:05:31

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
4 HMX	1	6.544	6.544	0.000	9387	0.1000	0.1004	
8 RDX	1	7.564	7.564	0.000	10112	0.1000	0.0951	M
9 2,4,6-Trinitrophenol	1	8.044	8.044	0.000	7640	0.1000	0.1008	
$ 10 1,2-Dinitrobenzene	1	8.517	8.517	0.000	12727	0.1000	0.1008	
11 1,3,5-Trinitrobenzene	1	8.644	8.644	0.000	21399	0.1000	0.0985	
12 1,3-Dinitrobenzene	1	9.257	9.257	0.000	29249	0.1000	0.0994	
13 Nitrobenzene	1	9.631	9.631	0.000	19019	0.1000	0.0994	
14 3,5-Dinitroaniline	1	9.831	9.831	0.000	22723	0.1000	0.0998	
15 Tetryl	1	9.977	9.977	0.000	16438	0.1000	0.1002	
16 Nitroglycerin	2	10.437	10.437	0.000	63170	1.00	0.9860	
17 2,4,6-Trinitrotoluene	1	10.864	10.864	0.000	20787	0.1000	0.0985	
18 4-Amino-2,6-dinitrotoluene	1	11.031	11.031	0.000	15407	0.1000	0.0994	
19 2-Amino-4,6-dinitrotoluene	1	11.277	11.277	0.000	19765	0.1000	0.0981	
20 2,6-Dinitrotoluene	1	11.451	11.451	0.000	13967	0.1000	0.0978	
21 2,4-Dinitrotoluene	1	11.617	11.617	0.000	29539	0.1000	0.0996	
22 o-Nitrotoluene	1	12.437	12.437	0.000	12548	0.1000	0.0981	
23 p-Nitrotoluene	1	12.844	12.844	0.000	10857	0.1000	0.0970	
24 m-Nitrotoluene	1	13.411	13.411	0.000	13666	0.1000	0.0973	
25 PETN	2	14.551	14.551	0.000	68161	1.00	0.99	M

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00075 Amount Added: 10.00 Units: uL

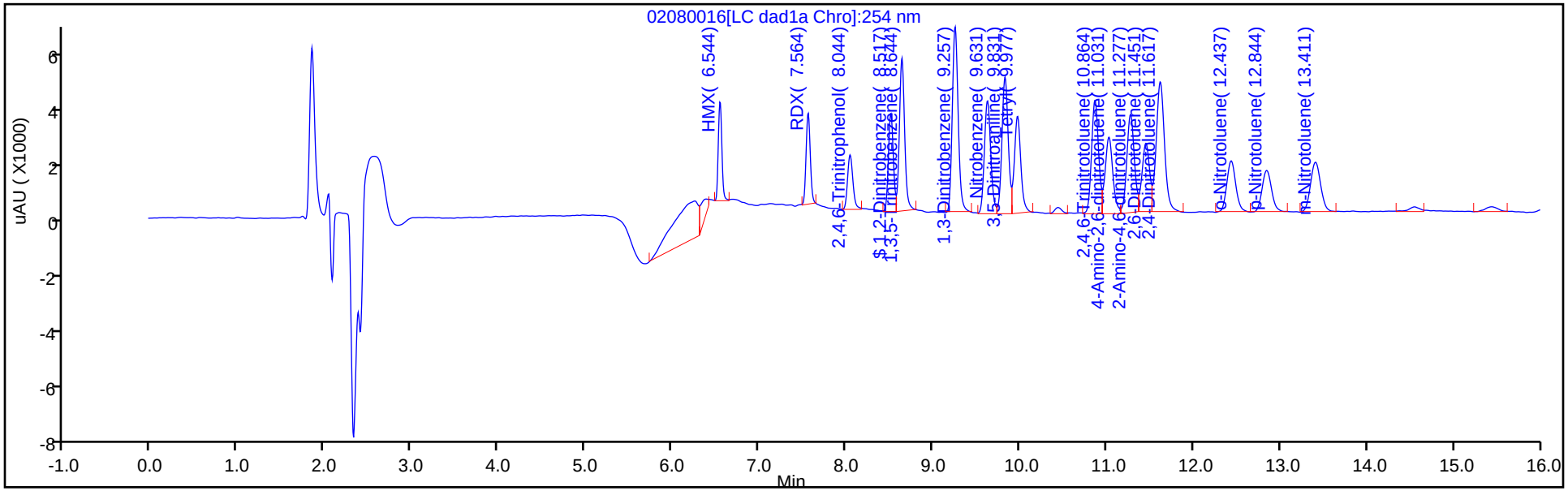
Report Date: 09-Feb-2023 12:48:06 Chrom Revision: 2.3 01-Feb-2023 13:23:06

Eurofins Denver

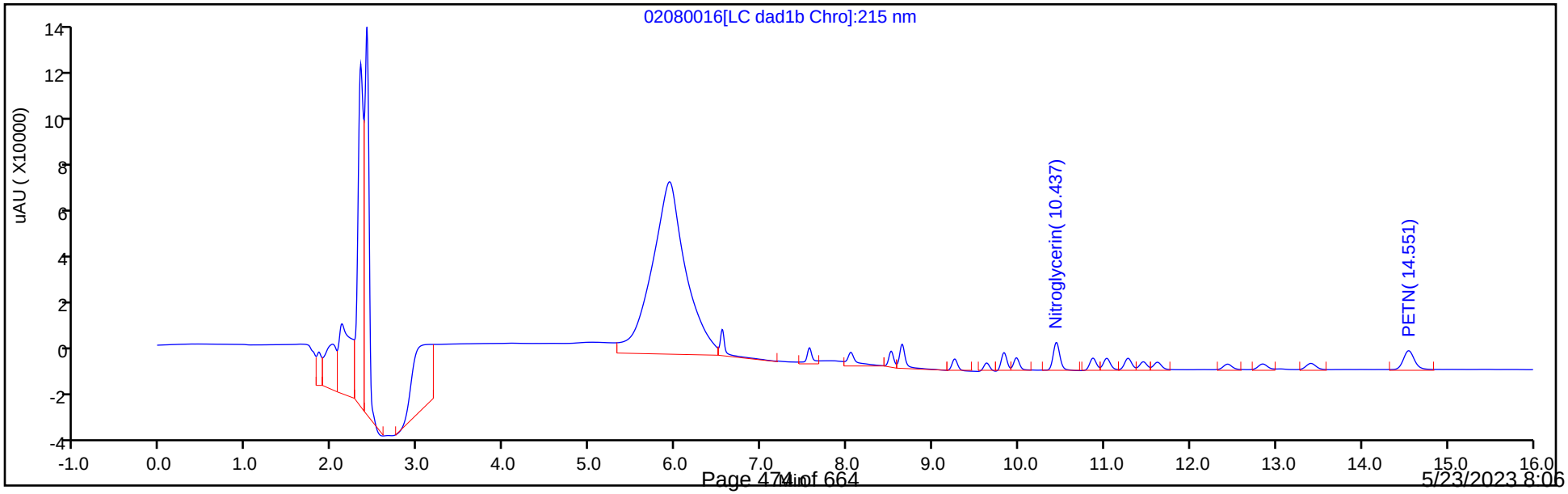
Data File: \\chromfs\denver\chromdata\chhplc_x\20230208-118465.b\02080016.d

Injection Date:	08-Feb-2023 17:33:25	Instrument ID:	CHHPLC_X3	Operator ID:	JZ/MAR
Lims ID:	IC INT 4			Worklist Smp#:	16
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



5/23/2023 8:06 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

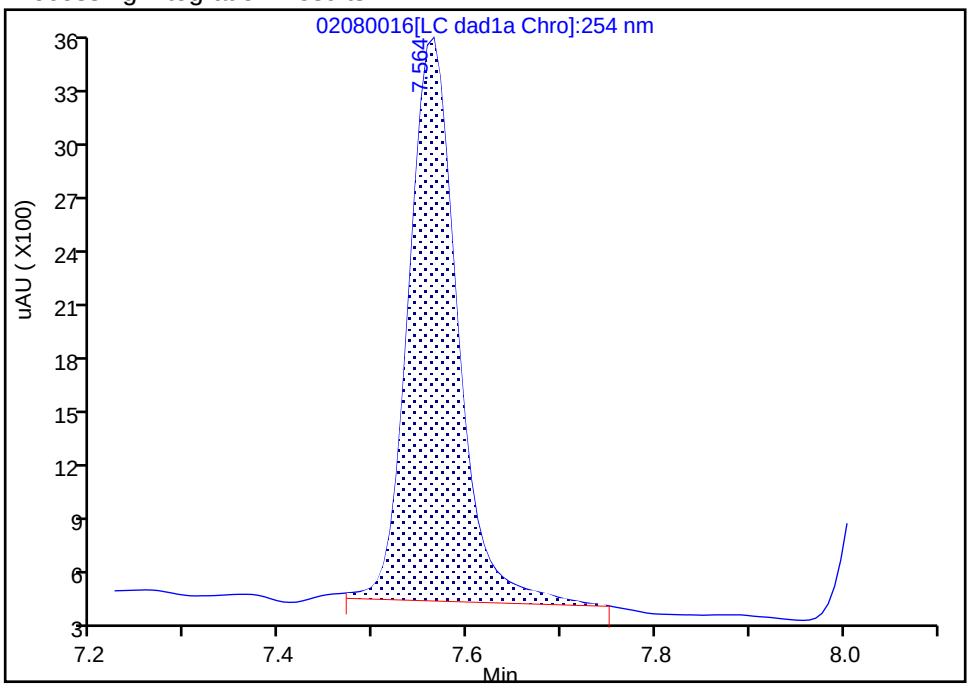
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230208-118465.b\02080016.d				
Injection Date:	08-Feb-2023 17:33:25	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT 4				
Client ID:					
Operator ID:	JZ/MAR	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

8 RDX, CAS: 121-82-4

Signal: 1

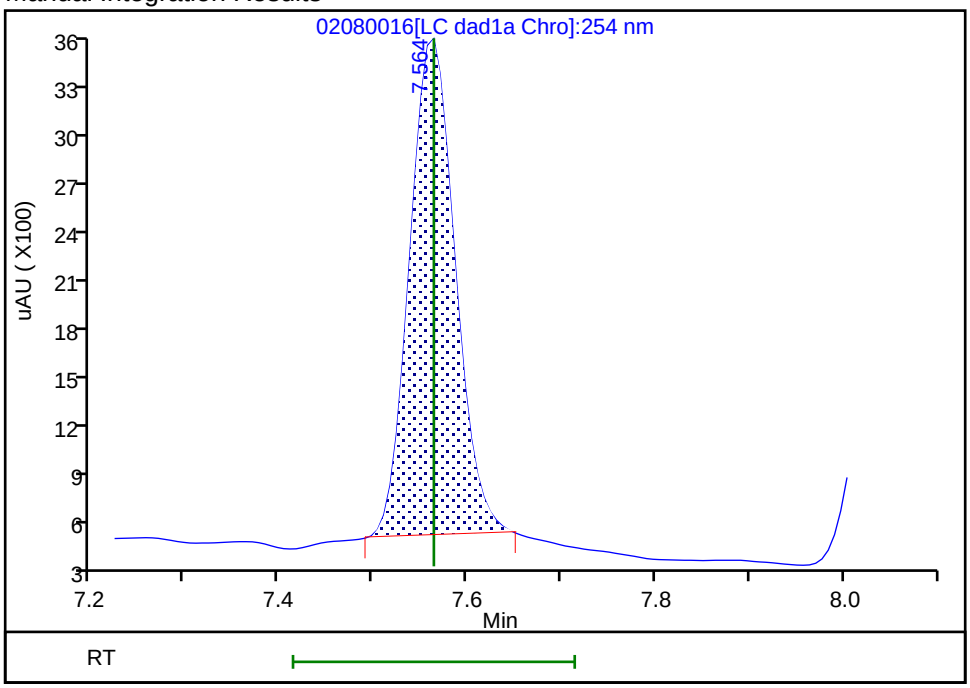
Processing Integration Results

RT: 7.56
Area: 11152
Amount: 0.101776
Amount Units: ug/mL



Manual Integration Results

RT: 7.56
Area: 10112
Amount: 0.095056
Amount Units: ug/mL



Reviewer: LV5D, 08-Feb-2023 19:09:38
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

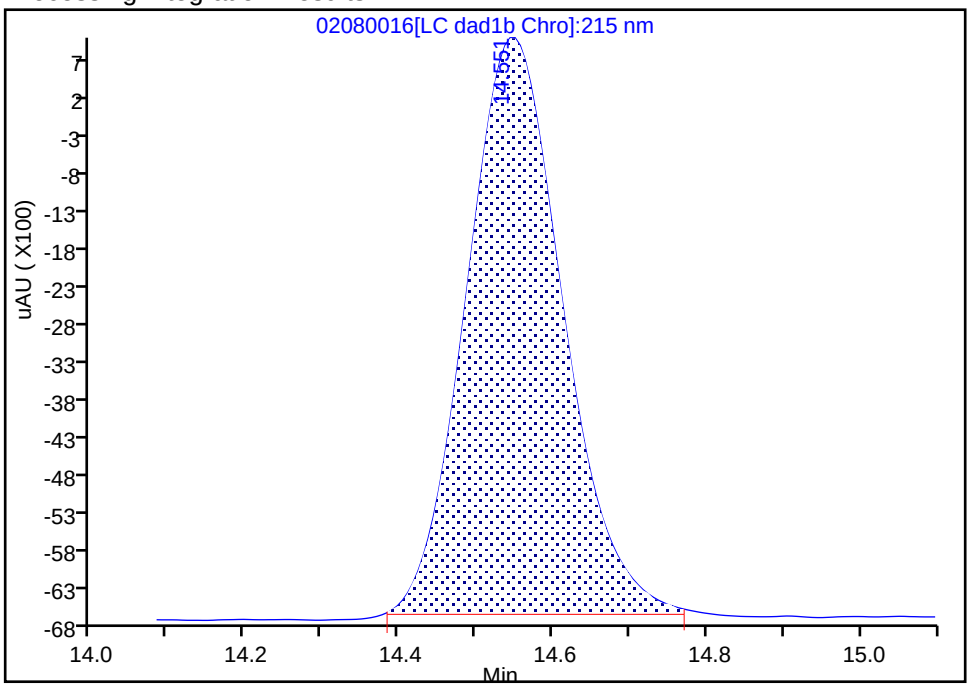
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230208-118465.b\02080016.d				
Injection Date:	08-Feb-2023 17:33:25	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT 4				
Client ID:					
Operator ID:	JZ/MAR	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1C, 215 nm		

25 PETN, CAS: 78-11-5

Signal: 1

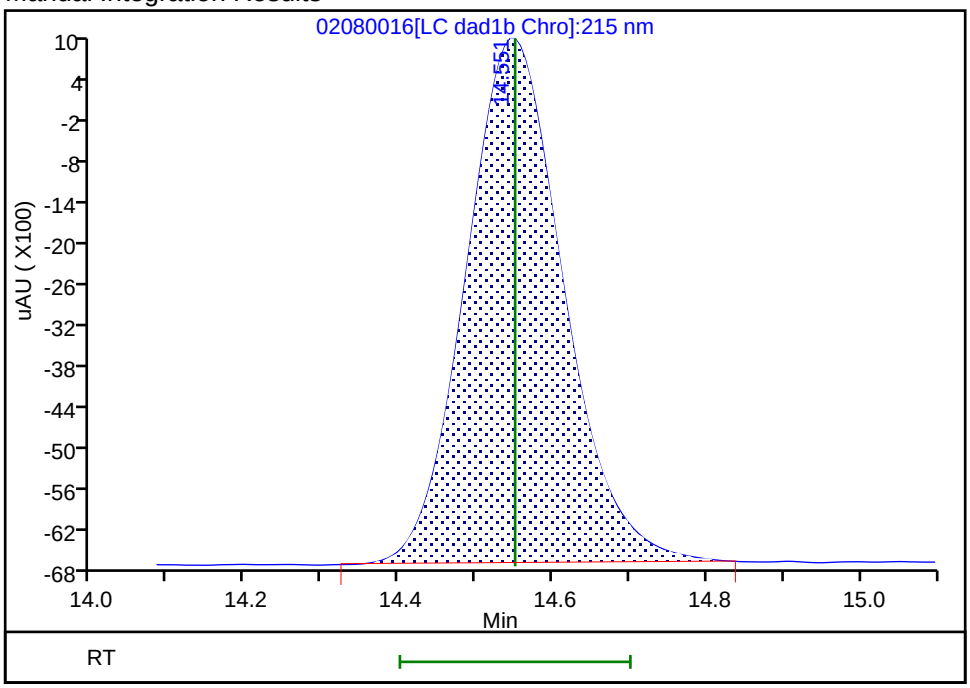
Processing Integration Results

RT: 14.55
Area: 66752
Amount: 0.971802
Amount Units: ug/mL



Manual Integration Results

RT: 14.55
Area: 68161
Amount: 0.990059
Amount Units: ug/mL



Reviewer: LV5D, 08-Feb-2023 19:08:31
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20230208-118465.b\02080017.D
Lims ID: IC INT 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 08-Feb-2023 17:56:21 ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC INT 3
Operator ID: JZ/MAR Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub26

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20230208-118465.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 09-Feb-2023 12:48:07 Calib Date: 08-Feb-2023 18:42:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X\20230208-118465.b\02080019.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX1604

First Level Reviewer: LV5D Date: 08-Feb-2023 19:07:50

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
4 HMX	1	6.547	6.544	0.003	4648	0.0500	0.0497	M
8 RDX	1	7.567	7.564	0.003	5236	0.0500	0.0492	M
9 2,4,6-Trinitrophenol	1	8.047	8.044	0.003	3768	0.0500	0.0497	
$ 10 1,2-Dinitrobenzene	1	8.520	8.517	0.003	6278	0.0500	0.0497	
11 1,3,5-Trinitrobenzene	1	8.647	8.644	0.003	10679	0.0500	0.0492	
12 1,3-Dinitrobenzene	1	9.260	9.257	0.003	14664	0.0500	0.0498	
13 Nitrobenzene	1	9.633	9.631	0.002	9605	0.0500	0.0502	
14 3,5-Dinitroaniline	1	9.840	9.831	0.009	11426	0.0500	0.0505	
15 Tetryl	1	9.987	9.977	0.010	8153	0.0500	0.0497	
16 Nitroglycerin	2	10.453	10.437	0.016	31649	0.5000	0.4940	
17 2,4,6-Trinitrotoluene	1	10.880	10.864	0.016	10708	0.0500	0.0507	
18 4-Amino-2,6-dinitrotoluene	1	11.040	11.031	0.009	7875	0.0500	0.0508	
19 2-Amino-4,6-dinitrotoluene	1	11.293	11.277	0.016	10072	0.0500	0.0500	
20 2,6-Dinitrotoluene	1	11.467	11.451	0.016	7109	0.0500	0.0498	
21 2,4-Dinitrotoluene	1	11.633	11.617	0.016	14872	0.0500	0.0501	
22 o-Nitrotoluene	1	12.453	12.437	0.016	6623	0.0500	0.0518	
23 p-Nitrotoluene	1	12.867	12.844	0.023	5584	0.0500	0.0499	
24 m-Nitrotoluene	1	13.433	13.411	0.022	7096	0.0500	0.0505	
25 PETN	2	14.580	14.551	0.029	34057	0.5000	0.4947	M

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00075 Amount Added: 5.00 Units: uL

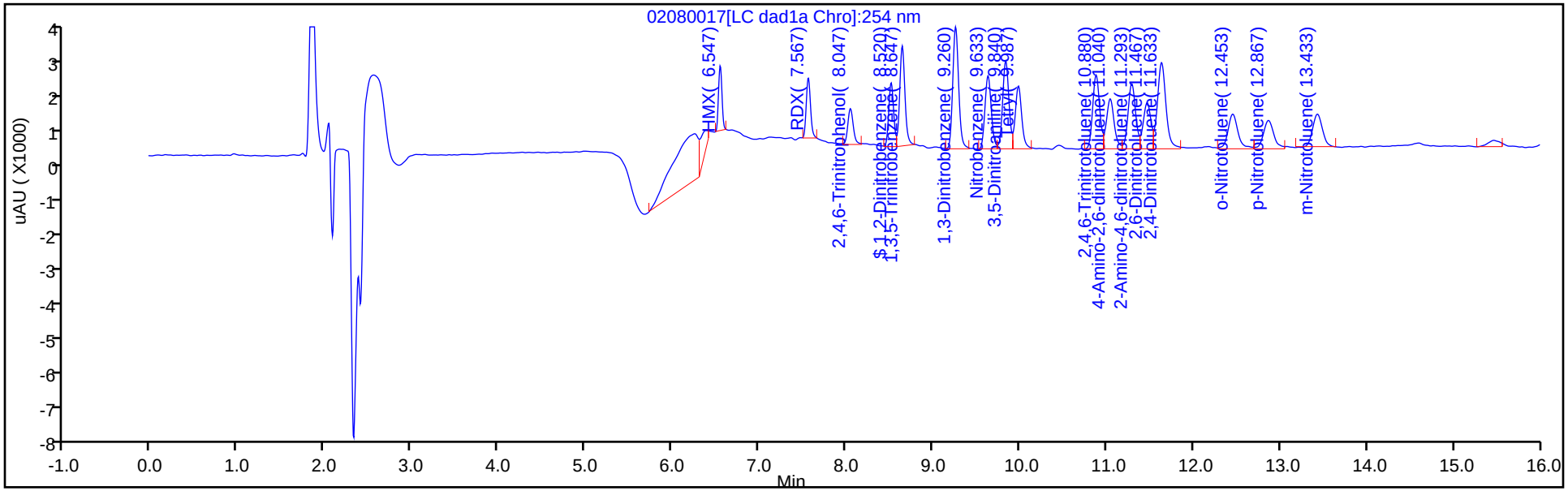
Report Date: 09-Feb-2023 12:48:07 Chrom Revision: 2.3 01-Feb-2023 13:23:06

Eurofins Denver

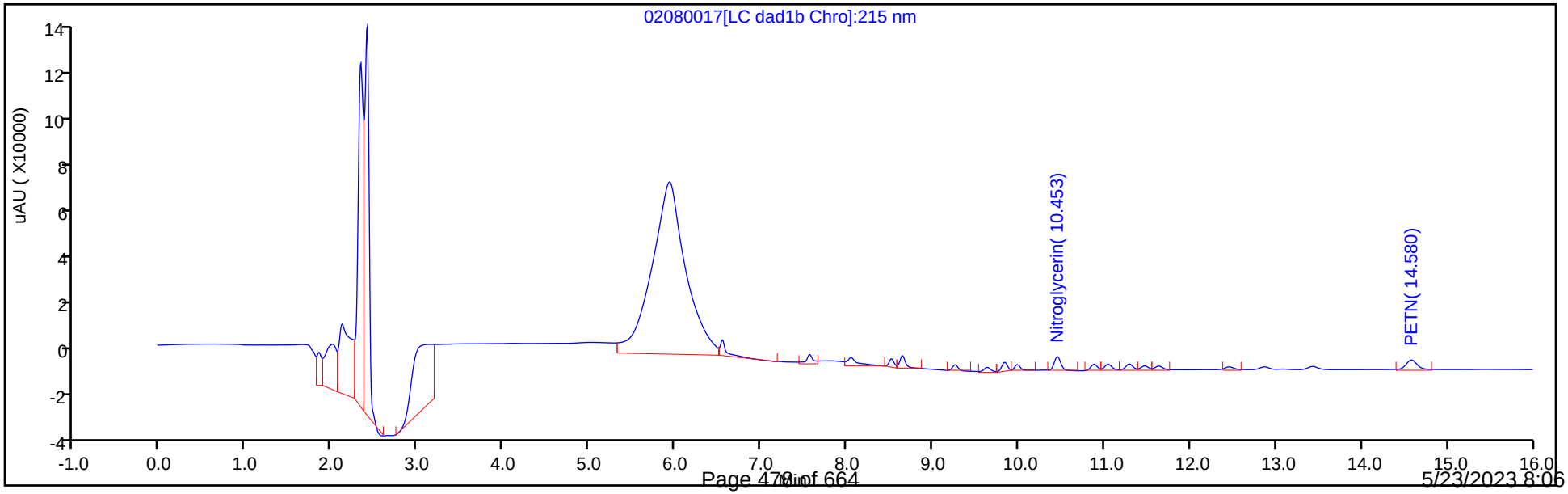
Data File: \\chromfs\denver\chromdata\chhplc_x\20230208-118465.b\02080017.d

Injection Date:	08-Feb-2023 17:56:21	Instrument ID:	CHHPLC_X3	Operator ID:	JZ/MAR
Lims ID:	IC INT 3			Worklist Smp#:	17
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

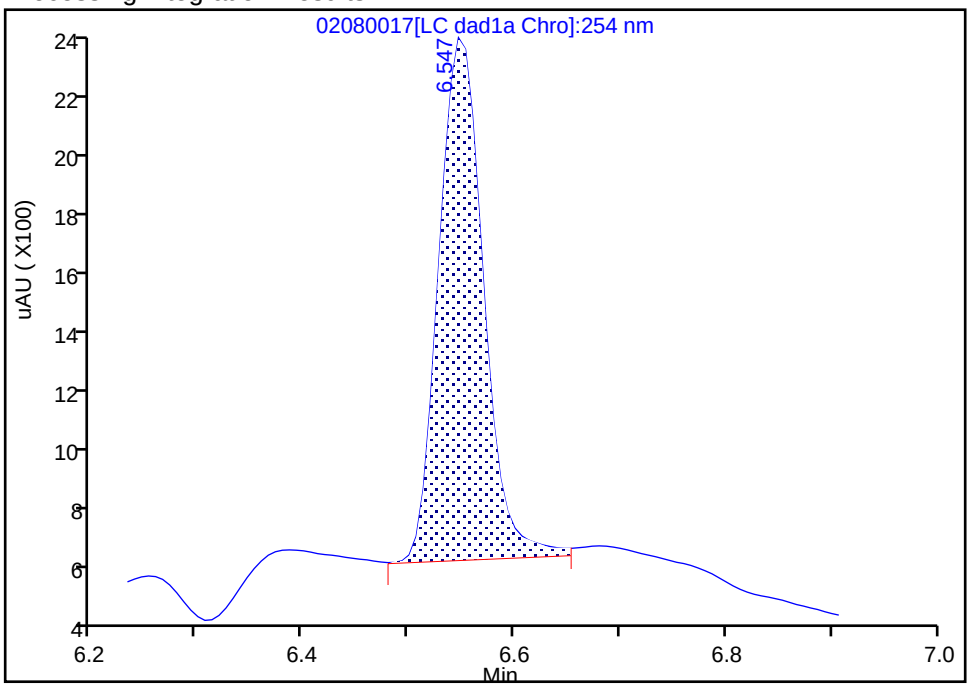
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230208-118465.b\02080017.d				
Injection Date:	08-Feb-2023 17:56:21	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT 3				
Client ID:					
Operator ID:	JZ/MAR	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

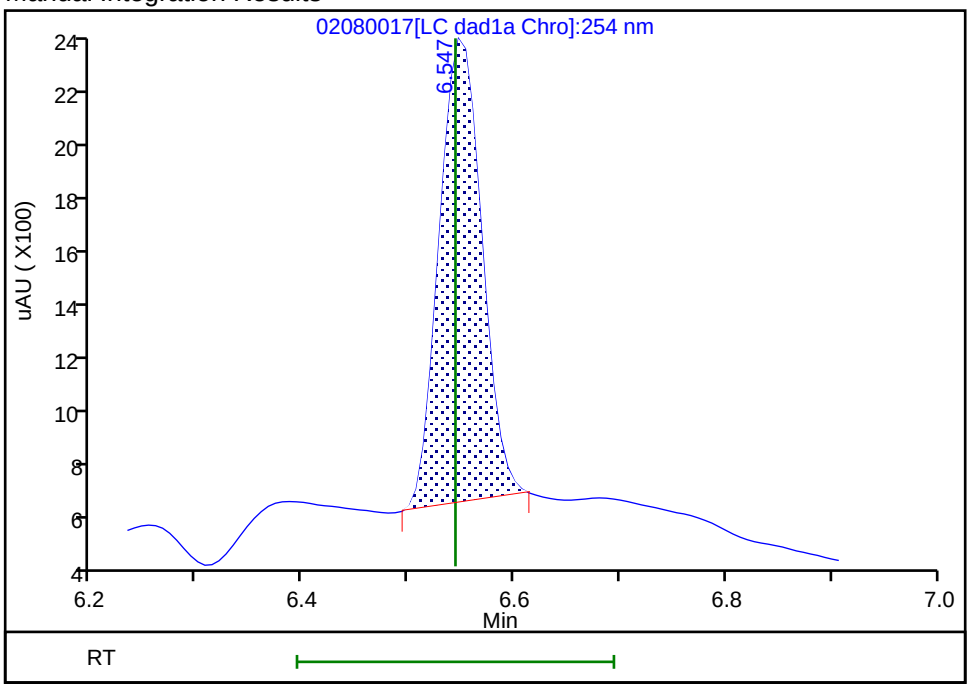
Processing Integration Results

RT: 6.55
Area: 4942
Amount: 0.050700
Amount Units: ug/mL



Manual Integration Results

RT: 6.55
Area: 4648
Amount: 0.049696
Amount Units: ug/mL



Reviewer: LV5D, 08-Feb-2023 19:07:46
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

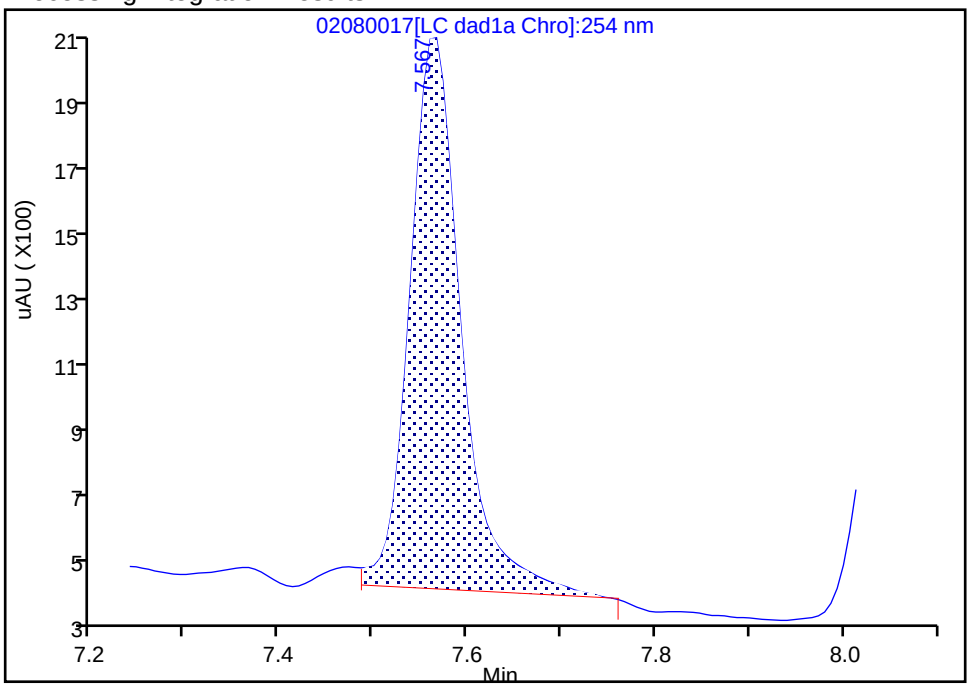
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230208-118465.b\02080017.d				
Injection Date:	08-Feb-2023 17:56:21	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT 3				
Client ID:					
Operator ID:	JZ/MAR	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

8 RDX, CAS: 121-82-4

Signal: 1

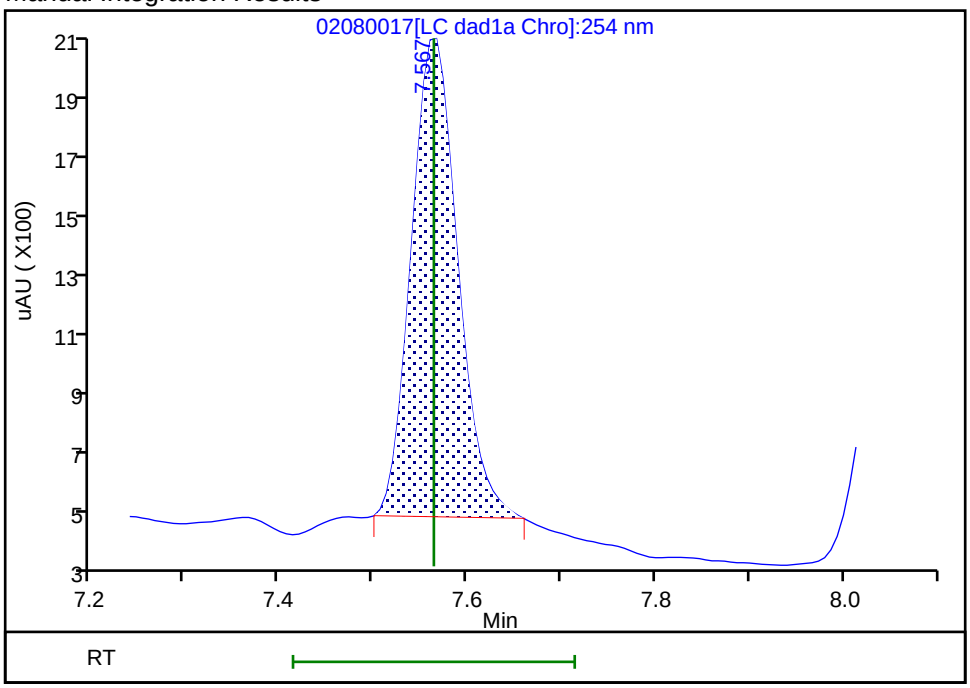
Processing Integration Results

RT: 7.57
Area: 6041
Amount: 0.054246
Amount Units: ug/mL



Manual Integration Results

RT: 7.57
Area: 5236
Amount: 0.049220
Amount Units: ug/mL



Reviewer: LV5D, 08-Feb-2023 19:09:26
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

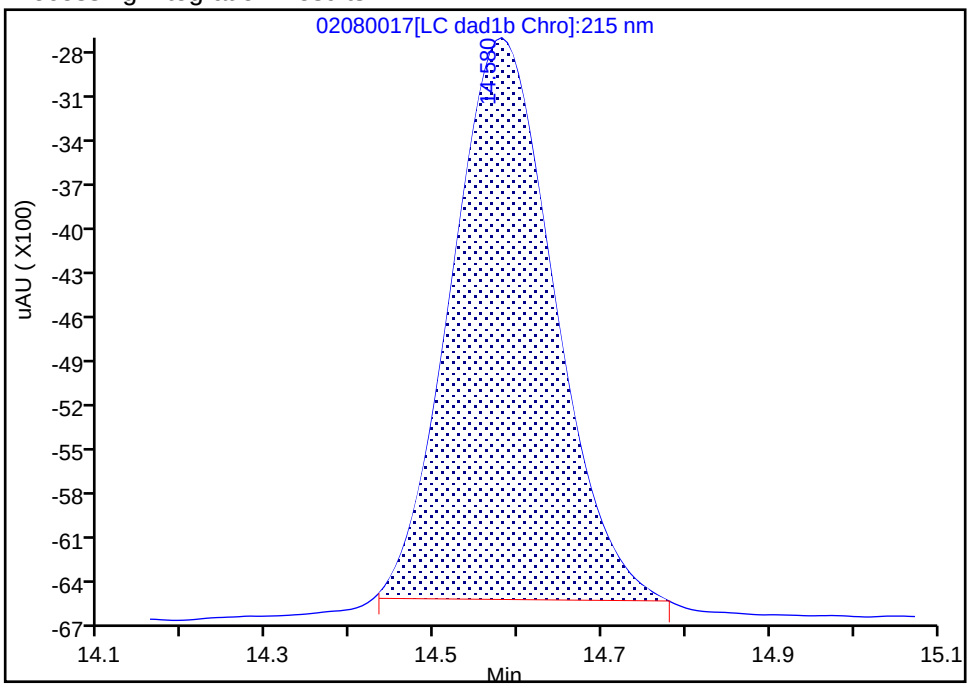
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230208-118465.b\02080017.d				
Injection Date:	08-Feb-2023 17:56:21	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT 3				
Client ID:					
Operator ID:	JZ/MAR	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1C, 215 nm		

25 PETN, CAS: 78-11-5

Signal: 1

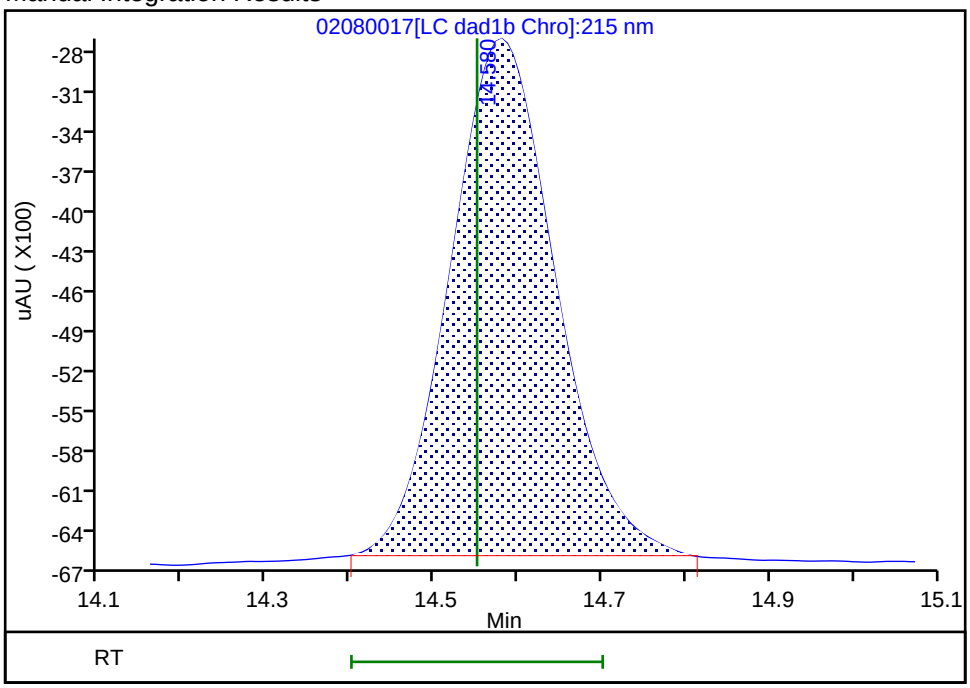
Processing Integration Results

RT: 14.58
Area: 32403
Amount: 0.474274
Amount Units: ug/mL



Manual Integration Results

RT: 14.58
Area: 34057
Amount: 0.494688
Amount Units: ug/mL



Reviewer: LV5D, 08-Feb-2023 19:08:23

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20230208-118465.b\02080018.D
Lims ID: IC INT 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 08-Feb-2023 18:19:14 ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC INT 2
Operator ID: JZ/MAR Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub26

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20230208-118465.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 09-Feb-2023 12:48:08 Calib Date: 08-Feb-2023 18:42:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X\20230208-118465.b\02080019.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX1604

First Level Reviewer: LV5D Date: 08-Feb-2023 19:08:08

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
4 HMX	1	6.549	6.544	0.005	1961	0.0200	0.0210	M
8 RDX	1	7.563	7.564	-0.001	2196	0.0200	0.0206	M
9 2,4,6-Trinitrophenol	1	8.049	8.044	0.005	1492	0.0200	0.0197	
$ 10 1,2-Dinitrobenzene	1	8.516	8.517	-0.001	2491	0.0200	0.0197	
11 1,3,5-Trinitrobenzene	1	8.643	8.644	-0.001	4313	0.0200	0.0199	
12 1,3-Dinitrobenzene	1	9.256	9.257	-0.001	5849	0.0200	0.0199	
13 Nitrobenzene	1	9.636	9.631	0.005	3816	0.0200	0.0200	
14 3,5-Dinitroaniline	1	9.836	9.831	0.005	4377	0.0200	0.0198	
15 Tetryl	1	9.982	9.977	0.005	3073	0.0200	0.0187	
16 Nitroglycerin	2	10.449	10.437	0.012	11879	0.2000	0.1854	
17 2,4,6-Trinitrotoluene	1	10.876	10.864	0.012	4262	0.0200	0.0202	
18 4-Amino-2,6-dinitrotoluene	1	11.042	11.031	0.011	3106	0.0200	0.0200	
19 2-Amino-4,6-dinitrotoluene	1	11.289	11.277	0.012	4021	0.0200	0.0200	
20 2,6-Dinitrotoluene	1	11.469	11.451	0.018	2911	0.0200	0.0204	
21 2,4-Dinitrotoluene	1	11.636	11.617	0.019	5985	0.0200	0.0202	
22 o-Nitrotoluene	1	12.456	12.437	0.019	2611	0.0200	0.0204	
23 p-Nitrotoluene	1	12.869	12.844	0.025	2393	0.0200	0.0214	
24 m-Nitrotoluene	1	13.442	13.411	0.031	3062	0.0200	0.0218	
25 PETN	2	14.589	14.551	0.038	13462	0.2000	0.1955	M

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00075 Amount Added: 2.00 Units: uL

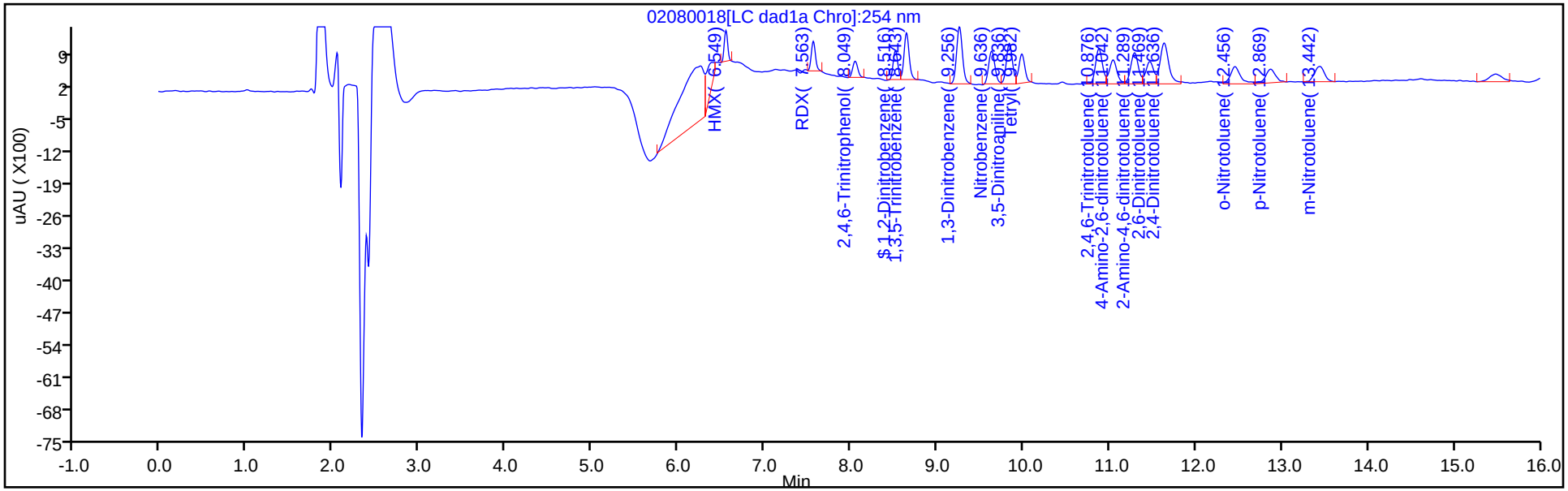
Report Date: 09-Feb-2023 12:48:08 Chrom Revision: 2.3 01-Feb-2023 13:23:06

Eurofins Denver

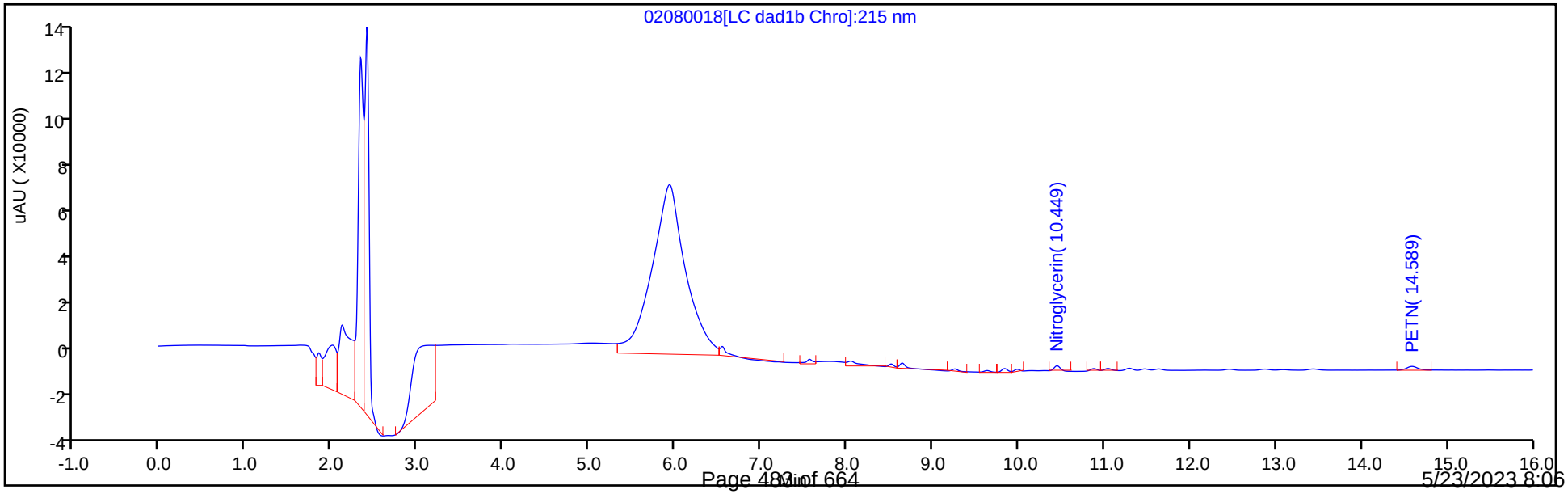
Data File: \\chromfs\denver\chromdata\chhplc_x\20230208-118465.b\02080018.d

Injection Date:	08-Feb-2023 18:19:14	Instrument ID:	CHHPLC_X3	Operator ID:	JZ/MAR
Lims ID:	IC INT 2			Worklist Smp#:	18
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

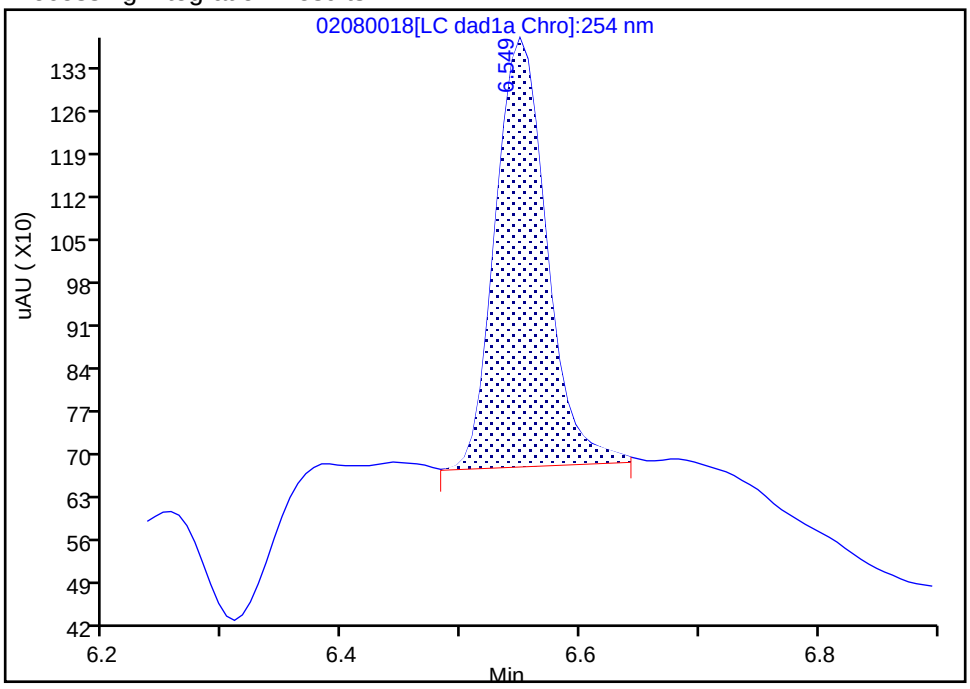
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230208-118465.b\02080018.d				
Injection Date:	08-Feb-2023 18:19:14	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT 2				
Client ID:					
Operator ID:	JZ/MAR	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

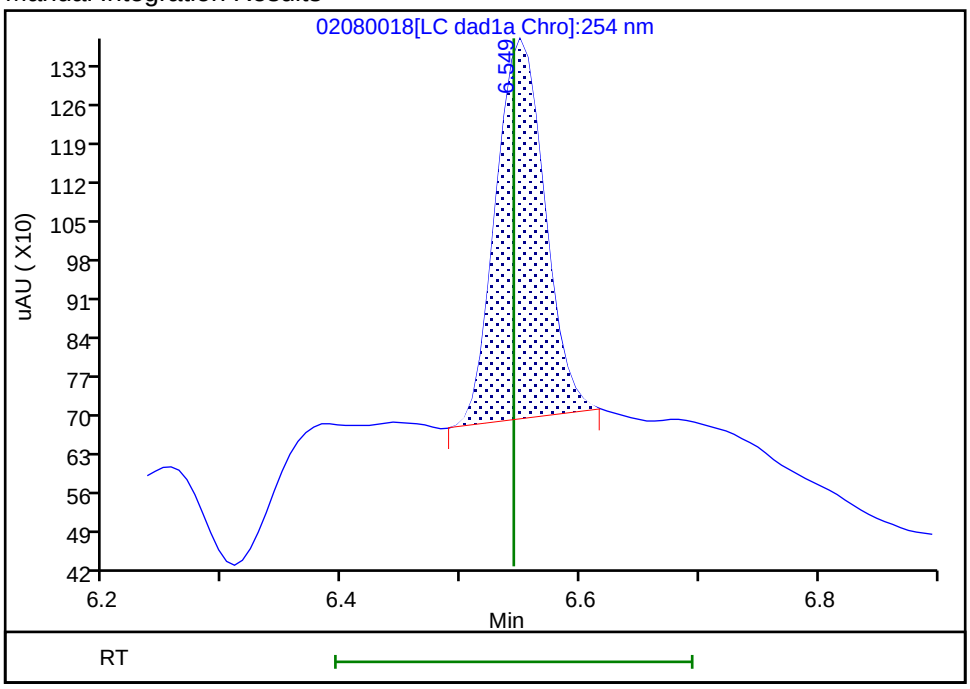
Processing Integration Results

RT: 6.55
Area: 2102
Amount: 0.022288
Amount Units: ug/mL



Manual Integration Results

RT: 6.55
Area: 1961
Amount: 0.020967
Amount Units: ug/mL



Reviewer: LV5D, 08-Feb-2023 19:09:07
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

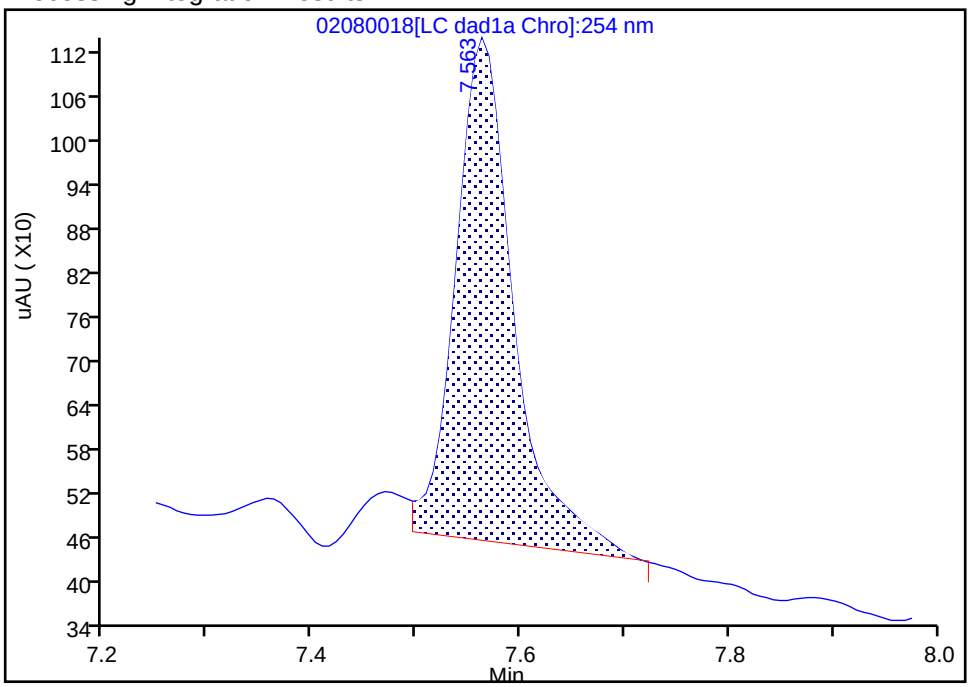
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230208-118465.b\02080018.d				
Injection Date:	08-Feb-2023 18:19:14	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT 2				
Client ID:					
Operator ID:	JZ/MAR	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

8 RDX, CAS: 121-82-4

Signal: 1

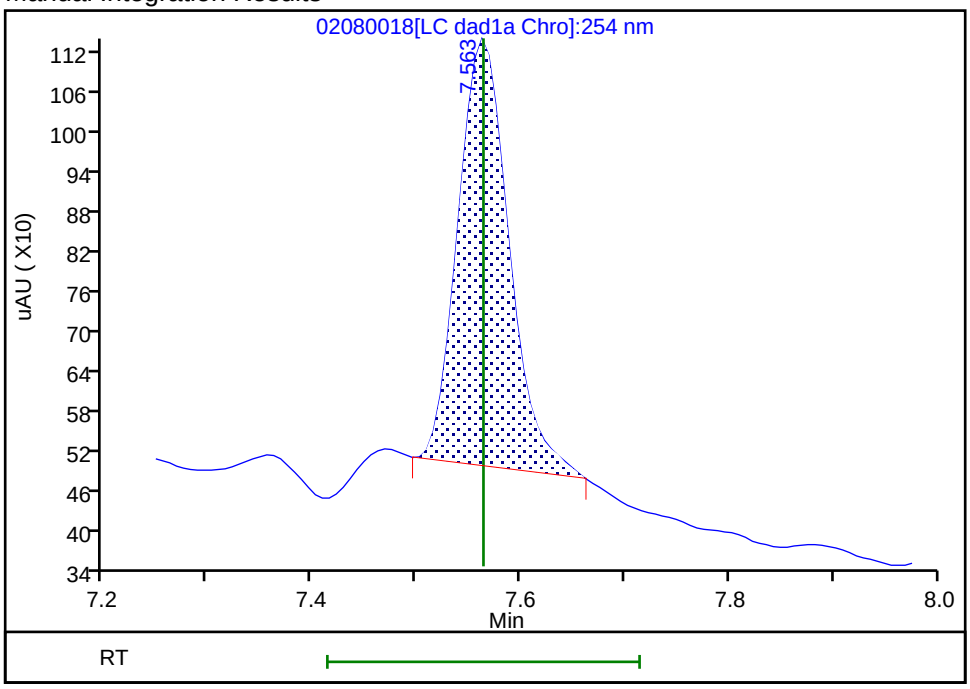
Processing Integration Results

RT: 7.56
Area: 2668
Amount: 0.023407
Amount Units: ug/mL



Manual Integration Results

RT: 7.56
Area: 2196
Amount: 0.020643
Amount Units: ug/mL



Reviewer: LV5D, 08-Feb-2023 19:09:19
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

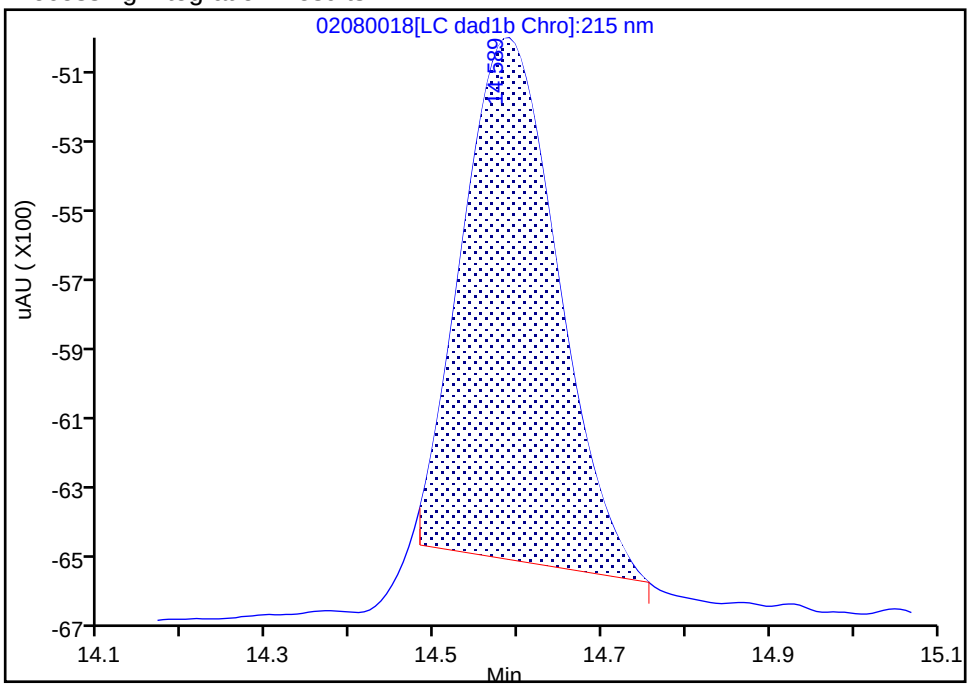
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230208-118465.b\02080018.d				
Injection Date:	08-Feb-2023 18:19:14	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT 2				
Client ID:					
Operator ID:	JZ/MAR	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1C, 215 nm		

25 PETN, CAS: 78-11-5

Signal: 1

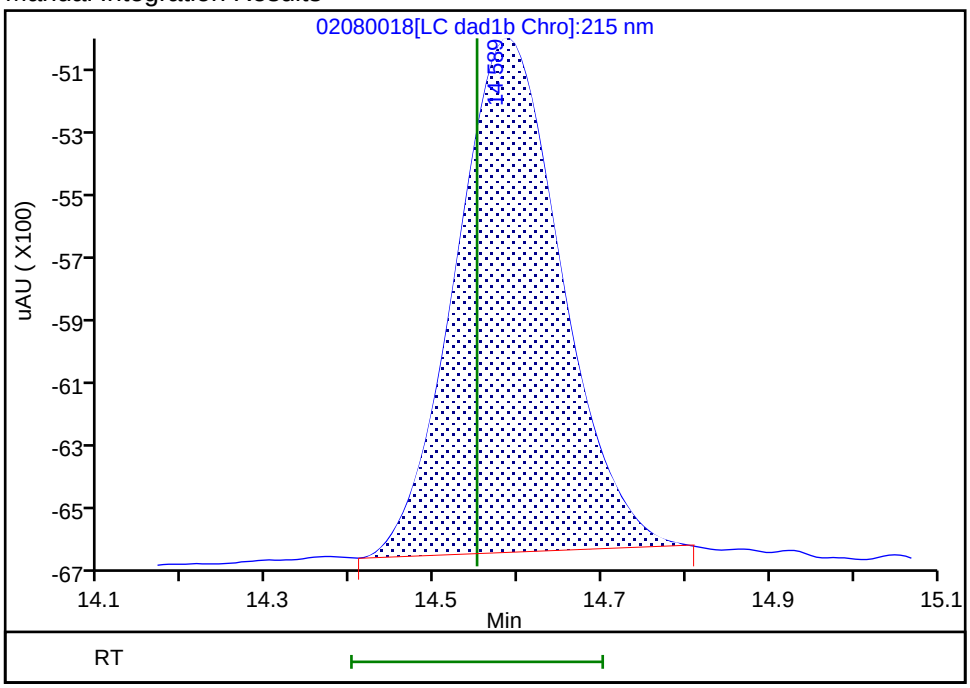
Processing Integration Results

RT: 14.59
Area: 11186
Amount: 0.166814
Amount Units: ug/mL



Manual Integration Results

RT: 14.59
Area: 13462
Amount: 0.195540
Amount Units: ug/mL



Reviewer: LV5D, 08-Feb-2023 19:08:19
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20230208-118465.b\02080019.D
Lims ID: IC INT 1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 08-Feb-2023 18:42:13 ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC INT 1
Operator ID: JZ/MAR Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub26

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20230208-118465.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 09-Feb-2023 12:48:08 Calib Date: 08-Feb-2023 18:42:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X\20230208-118465.b\02080019.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX1604

First Level Reviewer: LV5D Date: 08-Feb-2023 19:08:17

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
	4 HMX	1	6.550	6.544	0.006	962	0.0100	0.0103	M
	8 RDX	1	7.563	7.564	-0.001	1203	0.0100	0.0113	M
	9 2,4,6-Trinitrophenol	1	8.050	8.044	0.006	673	0.0100	0.008875	
$	10 1,2-Dinitrobenzene	1	8.517	8.517	0.000	1188	0.0100	0.009406	
	11 1,3,5-Trinitrobenzene	1	8.643	8.644	-0.001	2196	0.0100	0.0101	
	12 1,3-Dinitrobenzene	1	9.263	9.257	0.006	2902	0.0100	0.009857	
	13 Nitrobenzene	1	9.636	9.631	0.005	1905	0.0100	0.0100	
	14 3,5-Dinitroaniline	1	9.836	9.831	0.005	2147	0.0100	0.0100	
	15 Tetryl	1	9.983	9.977	0.006	1611	0.0100	0.009816	
	16 Nitroglycerin	2	10.450	10.437	0.013	6159	0.1000	0.0961	
	17 2,4,6-Trinitrotoluene	1	10.876	10.864	0.012	2167	0.0100	0.0103	
	18 4-Amino-2,6-dinitrotoluene	1	11.043	11.031	0.012	1670	0.0100	0.0108	
	19 2-Amino-4,6-dinitrotoluene	1	11.296	11.277	0.019	2214	0.0100	0.0110	
	20 2,6-Dinitrotoluene	1	11.470	11.451	0.019	1486	0.0100	0.0104	
	21 2,4-Dinitrotoluene	1	11.636	11.617	0.019	3141	0.0100	0.0106	
	22 o-Nitrotoluene	1	12.456	12.437	0.019	1377	0.0100	0.0108	
	23 p-Nitrotoluene	1	12.863	12.844	0.019	1263	0.0100	0.0113	
	24 m-Nitrotoluene	1	13.430	13.411	0.019	1473	0.0100	0.0105	
	25 PETN	2	14.583	14.551	0.032	7273	0.1000	0.1056	M

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00075 Amount Added: 1.00 Units: uL

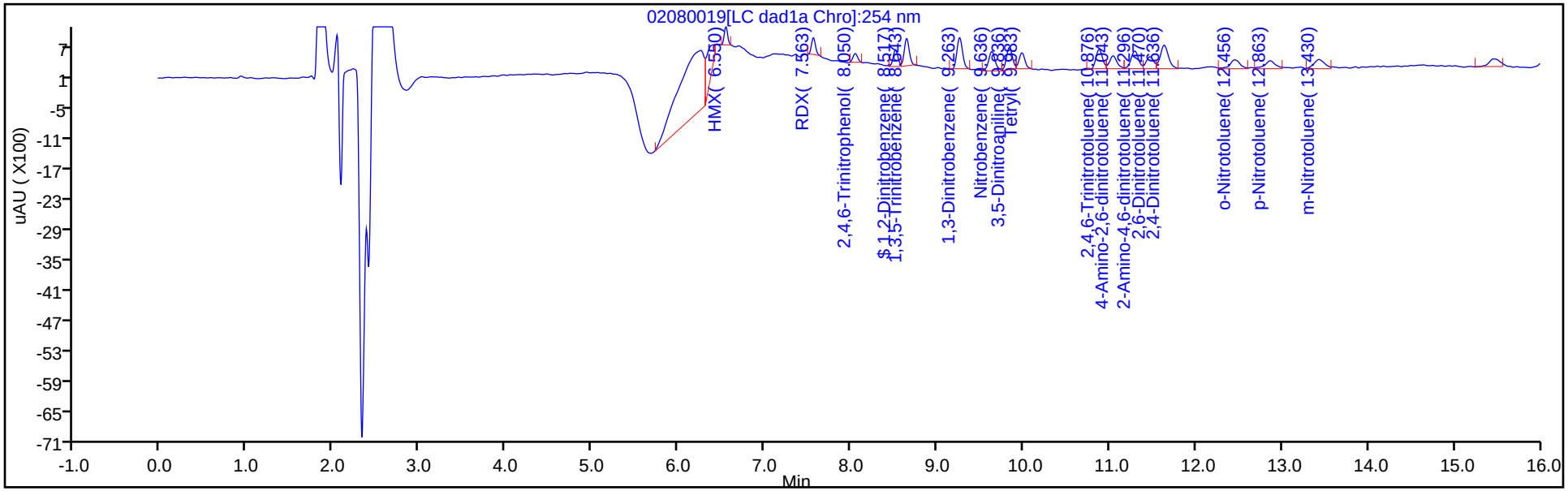
Report Date: 09-Feb-2023 12:48:08 Chrom Revision: 2.3 01-Feb-2023 13:23:06

Eurofins Denver

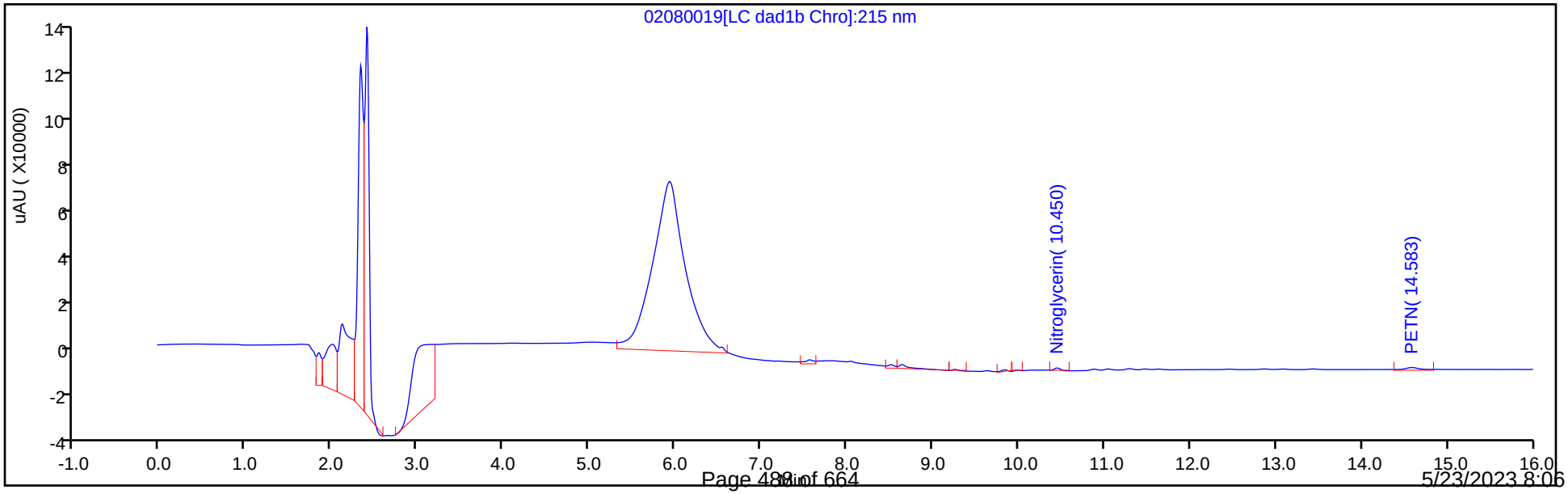
Data File: \\chromfs\denver\chromdata\chhplc_x\20230208-118465.b\02080019.d

Injection Date:	08-Feb-2023 18:42:13	Instrument ID:	CHHPLC_X3	Operator ID:	JZ/MAR
Lims ID:	IC INT 1			Worklist Smp#:	19
Client ID:					
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



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

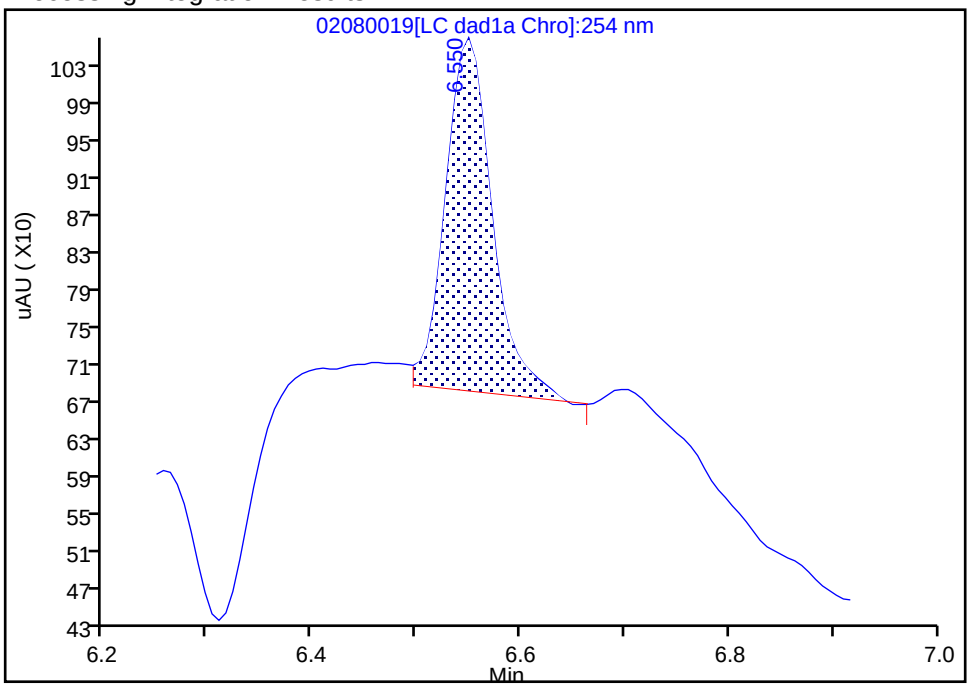
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230208-118465.b\02080019.d				
Injection Date:	08-Feb-2023 18:42:13	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT 1				
Client ID:					
Operator ID:	JZ/MAR	ALS Bottle#:	19	Worklist Smp#:	19
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

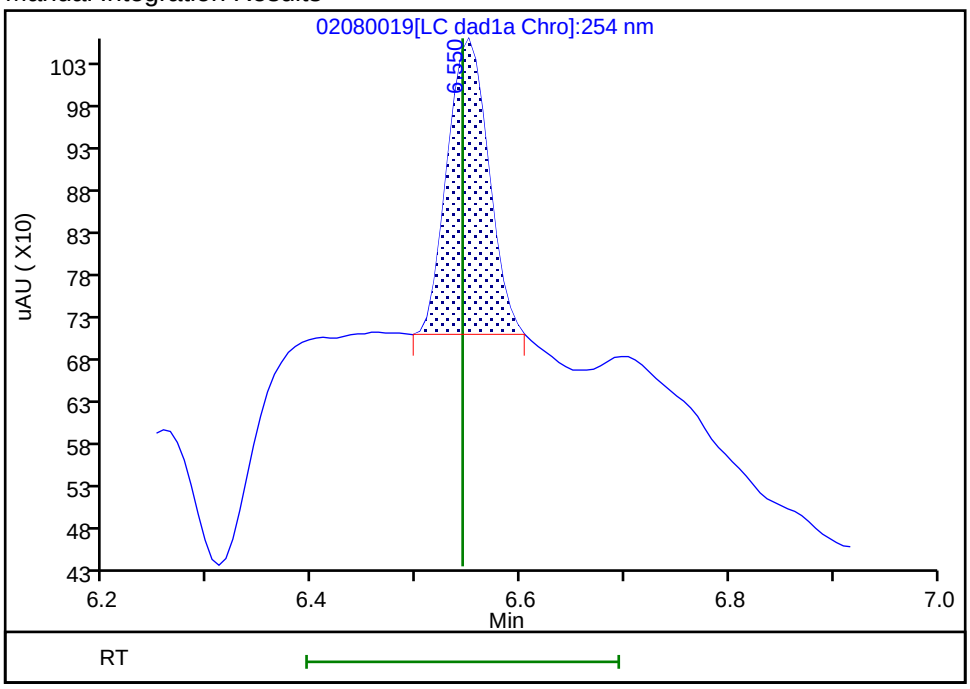
Processing Integration Results

RT: 6.55
Area: 1188
Amount: 0.012270
Amount Units: ug/mL



Manual Integration Results

RT: 6.55
Area: 962
Amount: 0.010286
Amount Units: ug/mL



Reviewer: LV5D, 08-Feb-2023 19:09:00
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

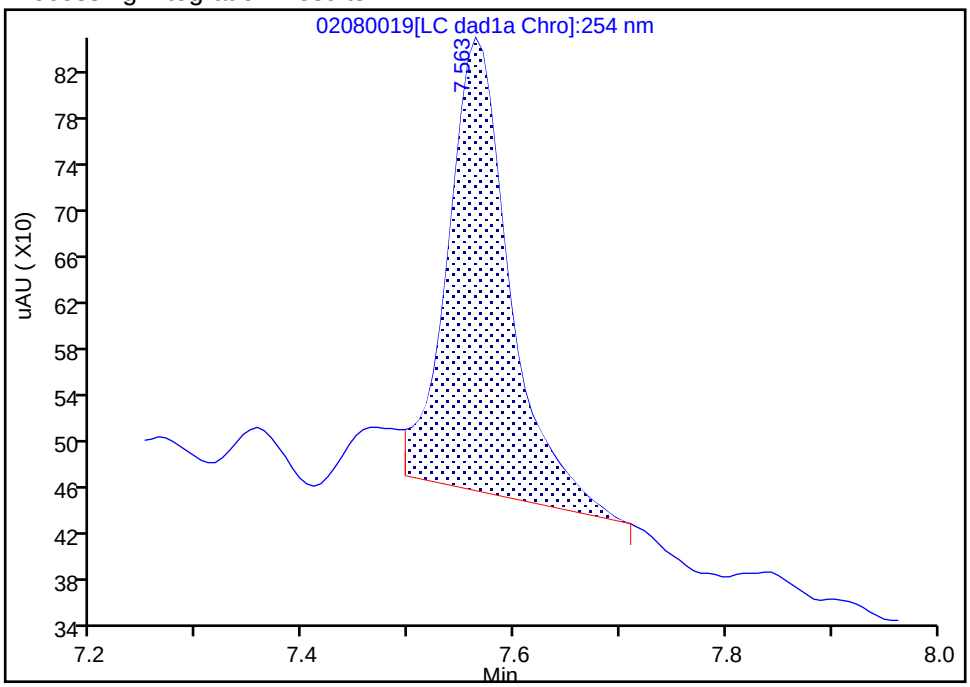
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230208-118465.b\02080019.d				
Injection Date:	08-Feb-2023 18:42:13	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT 1				
Client ID:					
Operator ID:	JZ/MAR	ALS Bottle#:	19	Worklist Smp#:	19
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

8 RDX, CAS: 121-82-4

Signal: 1

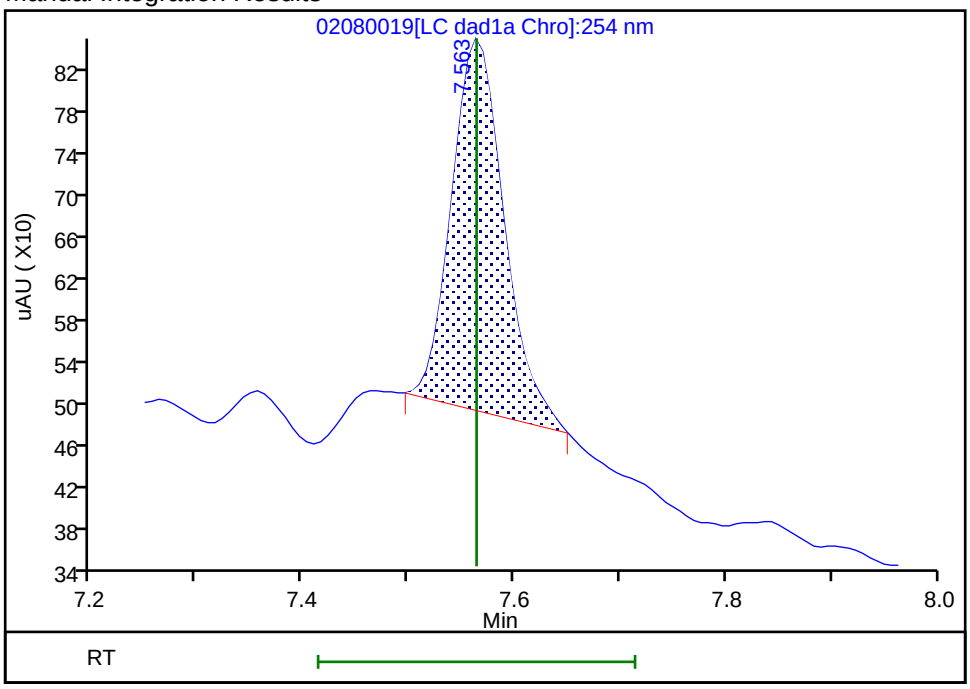
Processing Integration Results

RT: 7.56
Area: 1576
Amount: 0.013341
Amount Units: ug/mL



Manual Integration Results

RT: 7.56
Area: 1203
Amount: 0.011309
Amount Units: ug/mL



Reviewer: LV5D, 08-Feb-2023 19:08:52
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-176268-1

SDG No.:

Lab Sample ID: ICV 280-607981/19 | Calibration Date: 04/08/2023 00:26

Instrument ID: CHHPLC_G2_LUNA | Calib Start Date: 04/07/2023 19:03

GC Column: Luna-phenylhex ID: 4.60(mm) | Calib End Date: 04/07/2023 23:50

Lab File ID: 04070019.D | Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
TNX	Ave	399214	395611		497	502	-0.9	20.0
DNX	Ave	286200	292252		511	501	2.1	20.0
HMX	Ave	181045	154926		428	500	-14.4	20.0
MNX	Ave	262380	264929		589	584	1.0	20.0
Picric acid	Ave	155611	159032		511	500	2.2	20.0
RDX	Ave	215713	192400		446	500	-10.8	20.0
Nitrobenzene	Ave	379960	370424		487	500	-2.5	20.0
3,5-Dinitroaniline	Lin2		432678		502	500	0.5	20.0
1,3-Dinitrobenzene	Ave	581449	566740		487	500	-2.5	20.0
Nitroglycerin	Ave	124345	123410		4960	5000	-0.8	20.0
2-Nitrotoluene	Ave	243188	233752		481	500	-3.9	20.0
4-Nitrotoluene	Ave	217449	211762		487	500	-2.6	20.0
4-Amino-2,6-dinitrotoluene	Ave	272611	275652		506	500	1.1	20.0
3-Nitrotoluene	Ave	268012	262928		491	500	-1.9	20.0
2-Amino-4,6-dinitrotoluene	Ave	400284	386562		483	500	-3.4	20.0
1,3,5-Trinitrobenzene	Ave	378488	411990		544	500	8.9	20.0
2,6-Dinitrotoluene	Ave	279896	260986		466	500	-6.8	20.0
2,4-Dinitrotoluene	Ave	560125	522904		467	500	-6.6	20.0
Tetryl	Ave	270539	317230		586	500	17.3	20.0
2,4,6-Trinitrotoluene	Ave	411719	385322		468	500	-6.4	20.0
PETN	Ave	118367	131706		5560	5000	11.3	20.0
1,2-Dinitrobenzene	Ave	265405	273592		515	500	3.1	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Lab Sample ID: ICV 280-607981/19 Calibration Date: 04/08/2023 00:26

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 04/07/2023 19:03

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 04/07/2023 23:50

Lab File ID: 04070019.D

Analyte	RT	RT WINDOW	
		FROM	TO
TNX	5.30	5.17	5.47
DNX	6.17	6.04	6.34
HMX	6.84	6.70	7.00
MNX	7.69	7.56	7.86
Picric acid	8.11	8.04	8.34
RDX	9.11	8.98	9.28
Nitrobenzene	11.63	11.50	11.80
3,5-Dinitroaniline	14.45	14.33	14.63
1,3-Dinitrobenzene	14.73	14.60	14.90
Nitroglycerin	15.25	15.12	15.42
2-Nitrotoluene	15.80	15.68	15.98
4-Nitrotoluene	16.03	15.90	16.20
4-Amino-2,6-dinitrotoluene	16.57	16.44	16.74
3-Nitrotoluene	16.88	16.75	17.05
2-Amino-4,6-dinitrotoluene	17.40	17.26	17.56
1,3,5-Trinitrobenzene	17.56	17.42	17.72
2,6-Dinitrotoluene	18.71	18.56	18.86
2,4-Dinitrotoluene	19.16	19.02	19.32
Tetryl	22.47	22.33	22.63
2,4,6-Trinitrotoluene	23.29	23.15	23.45
PETN	24.53	24.40	24.70
1,2-Dinitrobenzene	12.60	12.48	12.78

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\04070019.D
Lims ID: ICV INT DMT
Client ID:
Sample Type: ICV
Inject. Date: 08-Apr-2023 00:26:27 ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: ICV INT DMT
Operator ID: JZ Instrument ID: CHHPLC_G2_LUNA
Sublist:

Method: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 12-Apr-2023 15:59:25 Calib Date: 07-Apr-2023 23:50:31
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\04070018.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX1657

First Level Reviewer: LV5D Date: 08-Apr-2023 10:41:39

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 TNX	1	5.299	5.321	-0.022	198399	0.5015	0.4970	
4 DNX	1	6.166	6.194	-0.028	146272	0.5005	0.5111	
6 HMX	1	6.839	6.847	-0.008	77463	0.5000	0.4279	
7 MNX	1	7.686	7.714	-0.028	154586	0.5835	0.5892	
5 2,4,6-Trinitrophenol	1	8.113	8.187	-0.074	79516	0.5000	0.5110	
8 RDX	1	9.106	9.127	-0.021	96200	0.5000	0.4460	
9 Nitrobenzene	1	11.626	11.654	-0.028	185212	0.5000	0.4875	
$ 10 1,2-Dinitrobenzene	1	12.599	12.627	-0.028	136796	0.5000	0.5154	
11 3,5-Dinitroaniline	1	14.453	14.480	-0.027	216339	0.5000	0.5023	
12 1,3-Dinitrobenzene	1	14.726	14.754	-0.028	283370	0.5000	0.4874	
13 Nitroglycerin	2	15.253	15.274	-0.021	617048	5.00	4.96	
14 o-Nitrotoluene	1	15.799	15.827	-0.028	116876	0.5000	0.4806	
15 p-Nitrotoluene	1	16.026	16.054	-0.028	105881	0.5000	0.4869	
16 4-Amino-2,6-dinitrotoluene	1	16.573	16.594	-0.021	137826	0.5000	0.5056	
17 m-Nitrotoluene	1	16.879	16.900	-0.021	131464	0.5000	0.4905	
18 2-Amino-4,6-dinitrotoluene	1	17.399	17.414	-0.015	193281	0.5000	0.4829	
19 1,3,5-Trinitrobenzene	1	17.559	17.574	-0.015	205995	0.5000	0.5443	
20 2,6-Dinitrotoluene	1	18.706	18.714	-0.008	130493	0.5000	0.4662	
21 2,4-Dinitrotoluene	1	19.159	19.174	-0.015	261452	0.5000	0.4668	
22 Tetryl	1	22.466	22.481	-0.015	158615	0.5000	0.5863	
23 2,4,6-Trinitrotoluene	1	23.286	23.301	-0.015	192661	0.5000	0.4679	
24 PETN	2	24.533	24.547	-0.014	658530	5.00	5.56	M

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

8330Surrogate_00141	Amount Added:	50.00	Units: uL
8330 LCS_00125	Amount Added:	50.00	Units: uL
8330_OP_DMT_00017	Amount Added:	50.00	Units: uL

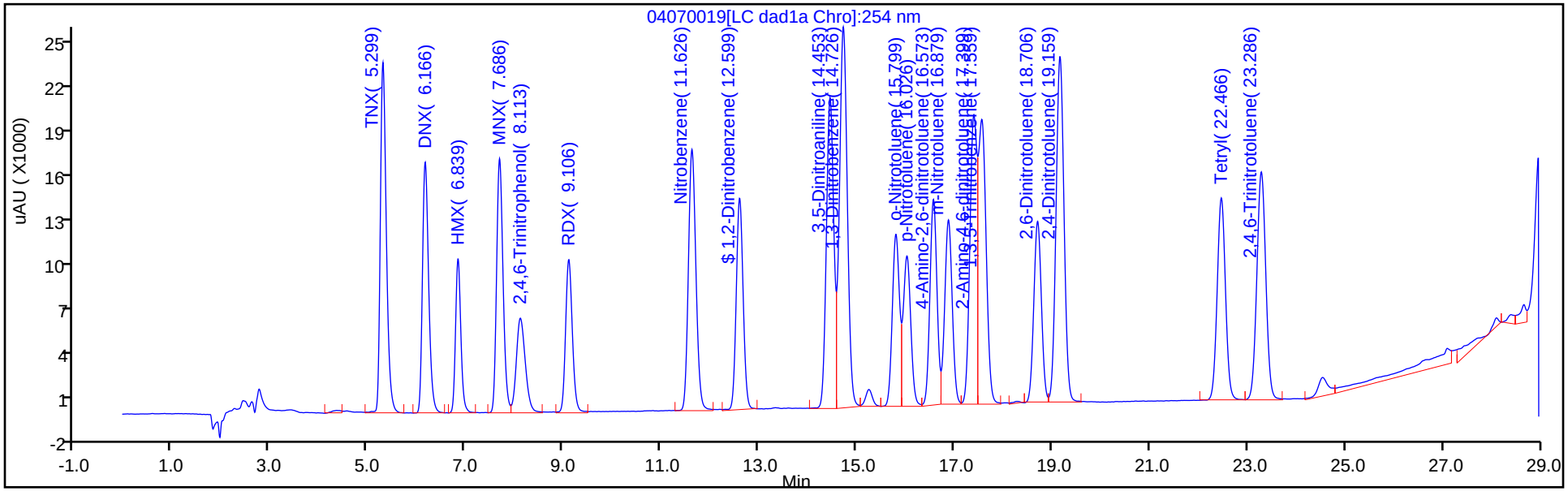
Report Date: 12-Apr-2023 15:59:45 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

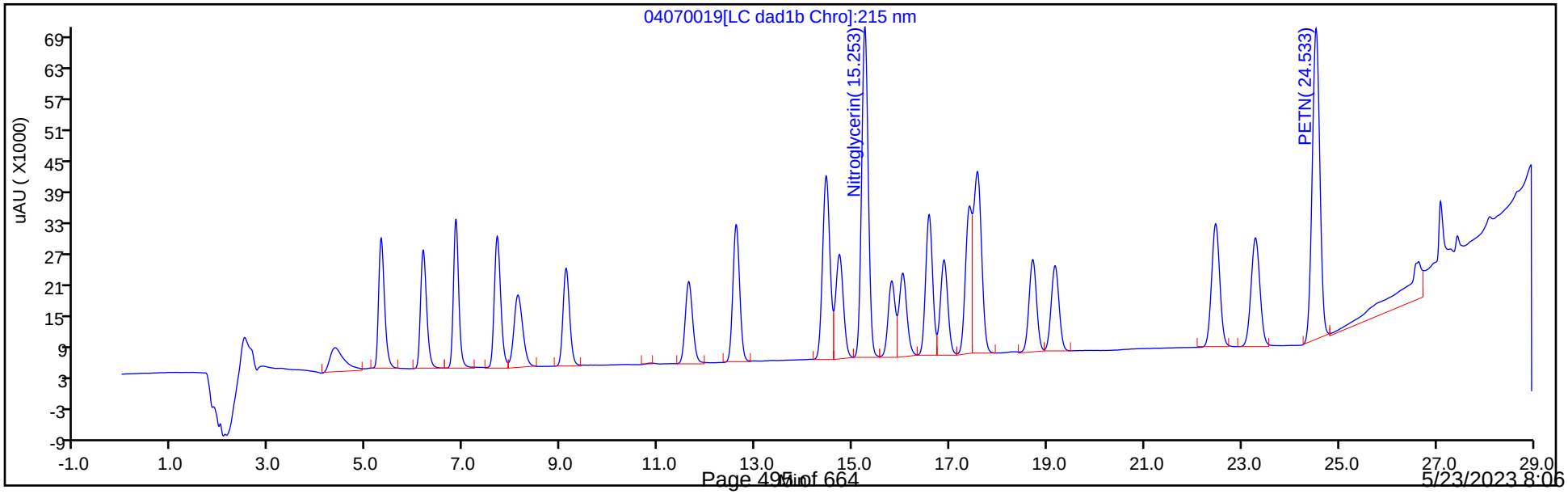
Data File: \\chromfs\denver\chromdata\g2_luna\20230407-120232.b\04070019.d

Injection Date:	08-Apr-2023 00:26:27	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	JZ
Lims ID:	ICV INT DMT			Worklist Smp#:	19
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	19
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



Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



5/23/2023 8:06 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

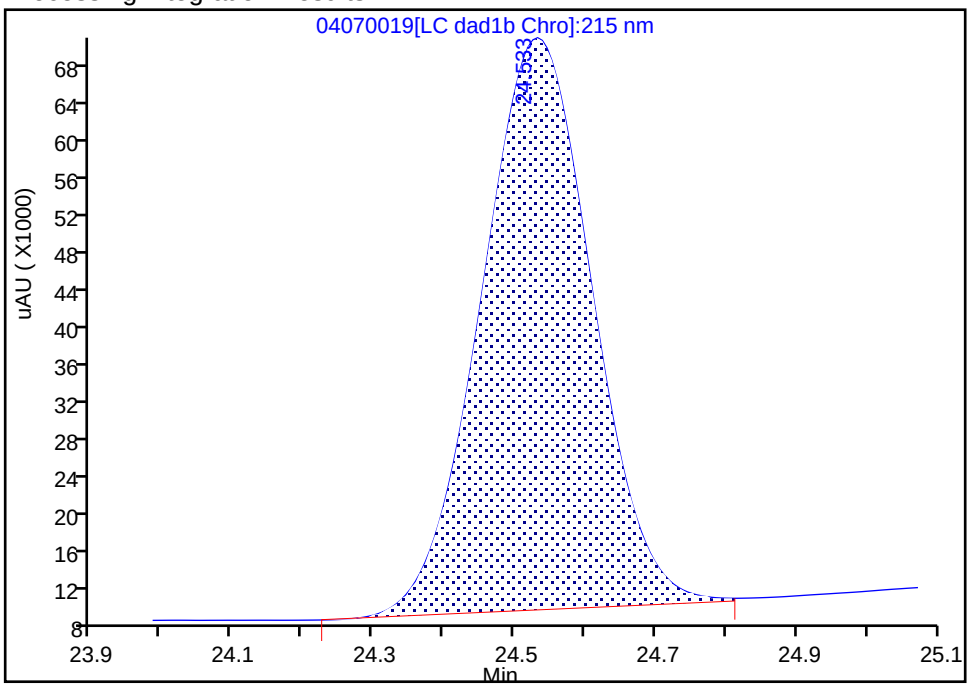
Data File:	\\chromfs\denver\chromdata\g2_luna\20230407-120232.b\04070019.d				
Injection Date:	08-Apr-2023 00:26:27	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	ICV INT DMT				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	19	Worklist Smp#:	19
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1B, 215 nm		

24 PETN, CAS: 78-11-5

Signal: 1

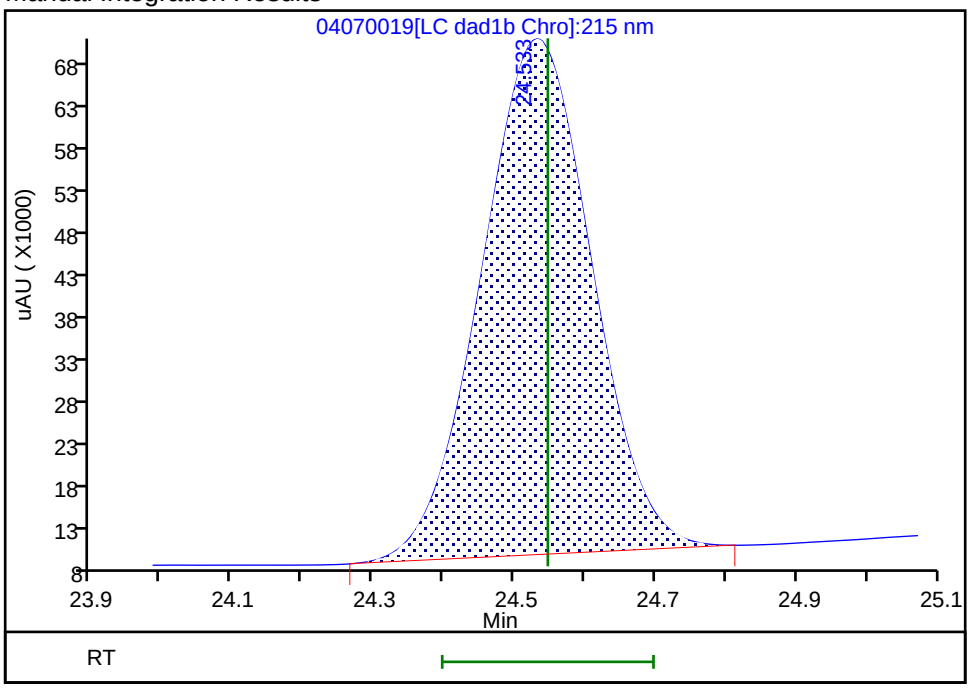
Processing Integration Results

RT: 24.53
Area: 665106
Amount: 5.619000
Amount Units: ug/ml



Manual Integration Results

RT: 24.53
Area: 658530
Amount: 5.563444
Amount Units: ug/ml



Reviewer: LV5D, 08-Apr-2023 10:42:14
Audit Action: Manually Integrated Audit Reason: Baseline

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-176268-1

SDG No.:

Lab Sample ID: CCV 280-612694/11 | Calibration Date: 05/16/2023 19:34

Instrument ID: CHHPLC_G2_LUNA | Calib Start Date: 04/07/2023 19:03

GC Column: Luna-phenylhex ID: 4.60(mm) | Calib End Date: 04/07/2023 23:50

Lab File ID: 05160011.D | Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
TNX	Ave	399214	372179		234	251	-6.8	20.0
DNX	Ave	286200	275864		241	250	-3.6	20.0
HMX	Ave	181045	184368		255	250	1.8	20.0
MNX	Ave	262380	253039		281	292	-3.6	20.0
Picric acid	Ave	155611	162012		260	250	4.1	20.0
RDX	Ave	215713	219432		254	250	1.7	20.0
Nitrobenzene	Ave	379960	392144		258	250	3.2	20.0
3,5-Dinitroaniline	Lin2		464852		269	250	7.7	20.0
1,3-Dinitrobenzene	Ave	581449	605132		260	250	4.1	20.0
Nitroglycerin	Ave	124345	131206		2640	2500	5.5	20.0
2-Nitrotoluene	Ave	243188	249876		257	250	2.8	20.0
4-Nitrotoluene	Ave	217449	225228		259	250	3.6	20.0
4-Amino-2,6-dinitrotoluene	Ave	272611	289164		265	250	6.1	20.0
3-Nitrotoluene	Ave	268012	288152		269	250	7.5	20.0
2-Amino-4,6-dinitrotoluene	Ave	400284	437608		273	250	9.3	20.0
1,3,5-Trinitrobenzene	Ave	378488	392644		259	250	3.7	20.0
2,6-Dinitrotoluene	Ave	279896	283048		253	250	1.1	20.0
2,4-Dinitrotoluene	Ave	560125	570880		255	250	1.9	20.0
Tetryl	Ave	270539	273592		253	250	1.1	20.0
2,4,6-Trinitrotoluene	Ave	411719	415412		252	250	0.9	20.0
PETN	Ave	118367	137026		2890	2500	15.8	20.0
1,2-Dinitrobenzene	Ave	265405	271072		255	250	2.1	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Lab Sample ID: CCV 280-612694/11 Calibration Date: 05/16/2023 19:34

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 04/07/2023 19:03

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 04/07/2023 23:50

Lab File ID: 05160011.D

Analyte	RT	RT WINDOW	
		FROM	TO
TNX	5.34	5.19	5.49
DNX	6.21	6.07	6.37
HMX	6.87	6.74	7.04
MNX	7.73	7.60	7.90
Picric acid	8.74	8.62	8.92
RDX	9.15	9.02	9.32
Nitrobenzene	11.67	11.54	11.84
3,5-Dinitroaniline	14.52	14.41	14.71
1,3-Dinitrobenzene	14.78	14.66	14.96
Nitroglycerin	15.27	15.17	15.47
2-Nitrotoluene	15.85	15.75	16.05
4-Nitrotoluene	16.08	15.98	16.28
4-Amino-2,6-dinitrotoluene	16.64	16.54	16.84
3-Nitrotoluene	16.94	16.83	17.13
2-Amino-4,6-dinitrotoluene	17.49	17.39	17.69
1,3,5-Trinitrobenzene	17.56	17.46	17.76
2,6-Dinitrotoluene	18.77	18.66	18.96
2,4-Dinitrotoluene	19.23	19.12	19.42
Tetryl	22.56	22.47	22.77
2,4,6-Trinitrotoluene	23.37	23.28	23.58
PETN	24.60	24.51	24.81
1,2-Dinitrobenzene	12.65	12.53	12.83

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\G2_LUNA\20230516-121515.b\05160011.D
Lims ID: CCV DMT
Client ID:
Sample Type: CCV
Inject. Date: 16-May-2023 19:34:39 ALS Bottle#: 7 Worklist Smp#: 11
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV DMT
Operator ID: JZ/JG Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub18

Method: \\chromfs\Denver\ChromData\G2_LUNA\20230516-121515.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 16-May-2023 20:12:10 Calib Date: 07-Apr-2023 23:50:31
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\04070018.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX1672

First Level Reviewer: LV5D Date: 16-May-2023 20:12:07

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 TNX	1	5.336	5.341	-0.005	93324	0.2508	0.2338	
4 DNX	1	6.209	6.221	-0.012	69035	0.2503	0.2412	
6 HMX	1	6.869	6.888	-0.019	46092	0.2500	0.2546	
7 MNX	1	7.729	7.748	-0.019	73824	0.2918	0.2814	
5 2,4,6-Trinitrophenol	1	8.742	8.774	-0.032	40503	0.2500	0.2603	
8 RDX	1	9.149	9.168	-0.019	54858	0.2500	0.2543	
9 Nitrobenzene	1	11.669	11.688	-0.019	98036	0.2500	0.2580	
$ 10 1,2-Dinitrobenzene	1	12.649	12.681	-0.032	67768	0.2500	0.2553	
11 3,5-Dinitroaniline	1	14.522	14.561	-0.039	116213	0.2500	0.2694	
12 1,3-Dinitrobenzene	1	14.775	14.814	-0.039	151283	0.2500	0.2602	
13 Nitroglycerin	2	15.269	15.321	-0.052	328014	2.50	2.64	
14 o-Nitrotoluene	1	15.849	15.901	-0.052	62469	0.2500	0.2569	
15 p-Nitrotoluene	1	16.082	16.128	-0.046	56307	0.2500	0.2589	
16 4-Amino-2,6-dinitrotoluene	1	16.642	16.694	-0.052	72291	0.2500	0.2652	
17 m-Nitrotoluene	1	16.935	16.981	-0.046	72038	0.2500	0.2688	
18 2-Amino-4,6-dinitrotoluene	1	17.489	17.541	-0.052	109402	0.2500	0.2733	M
19 1,3,5-Trinitrobenzene	1	17.555	17.608	-0.053	98161	0.2500	0.2594	M
20 2,6-Dinitrotoluene	1	18.769	18.814	-0.045	70762	0.2500	0.2528	
21 2,4-Dinitrotoluene	1	19.229	19.274	-0.045	142720	0.2500	0.2548	
22 Tetryl	1	22.562	22.621	-0.059	68398	0.2500	0.2528	
23 2,4,6-Trinitrotoluene	1	23.369	23.428	-0.059	103853	0.2500	0.2522	
24 PETN	2	24.596	24.661	-0.065	342564	2.50	2.89	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00076	Amount Added:	25.00	Units: uL
8330 DMT_00013	Amount Added:	12.50	Units: uL

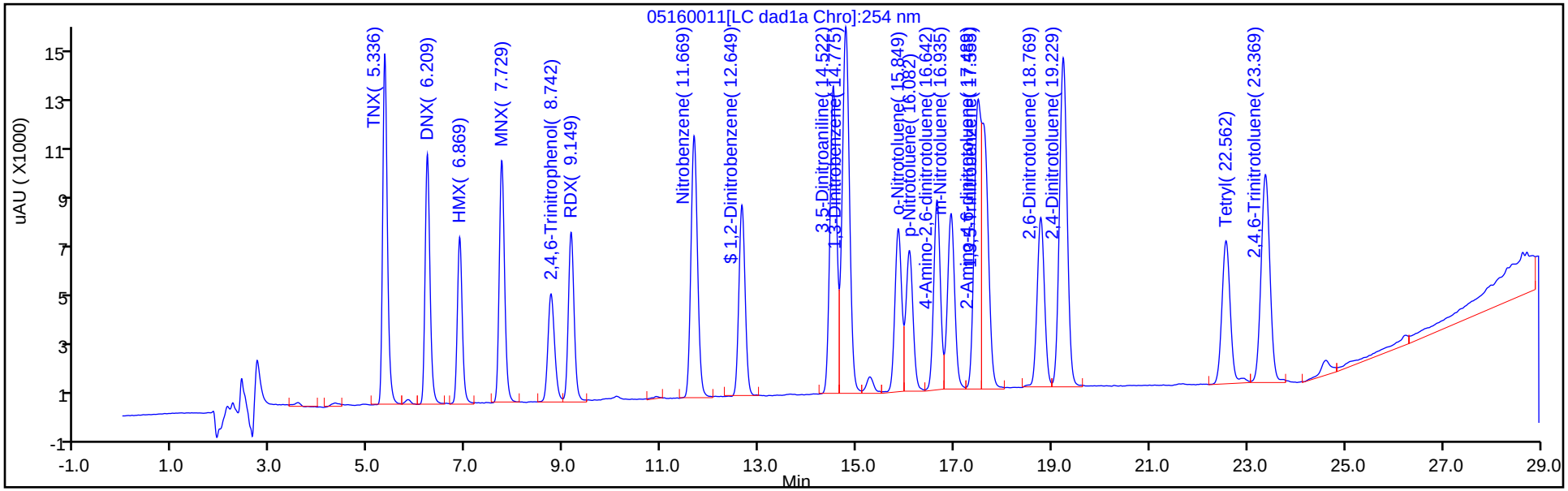
Report Date: 16-May-2023 20:12:10 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

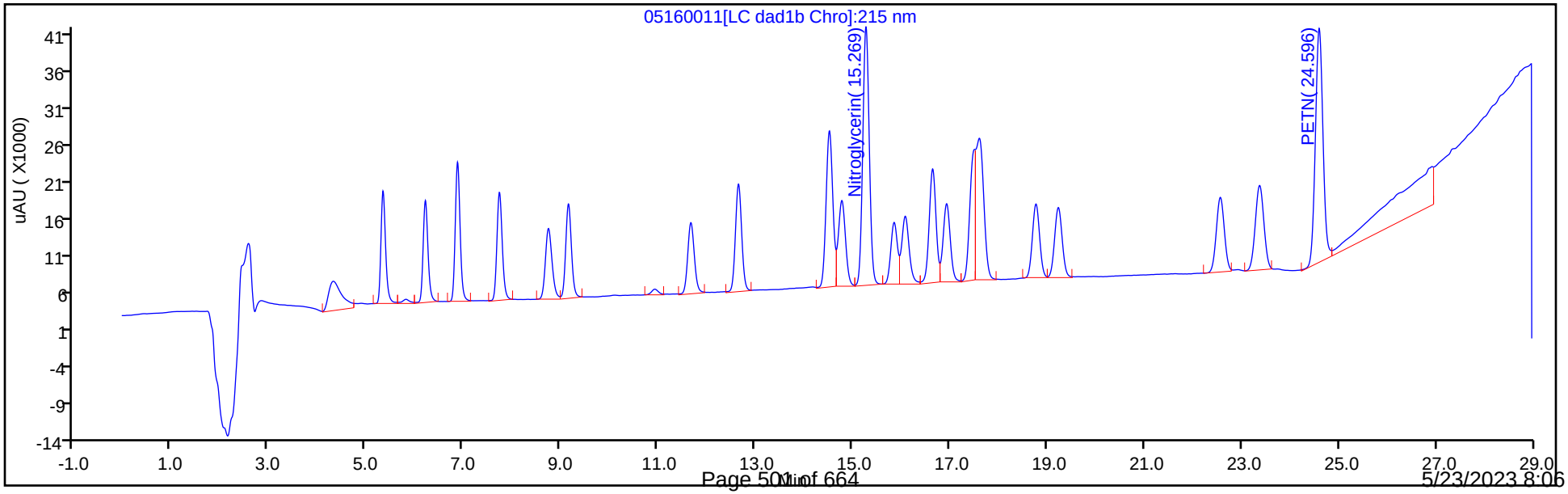
Data File: \\chromfs\denver\chromdata\g2_luna\20230516-121515.b\05160011.d

Injection Date:	16-May-2023 19:34:39	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	JZ/JG
Lims ID:	CCV DMT			Worklist Smp#:	11
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 Target: 1



Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

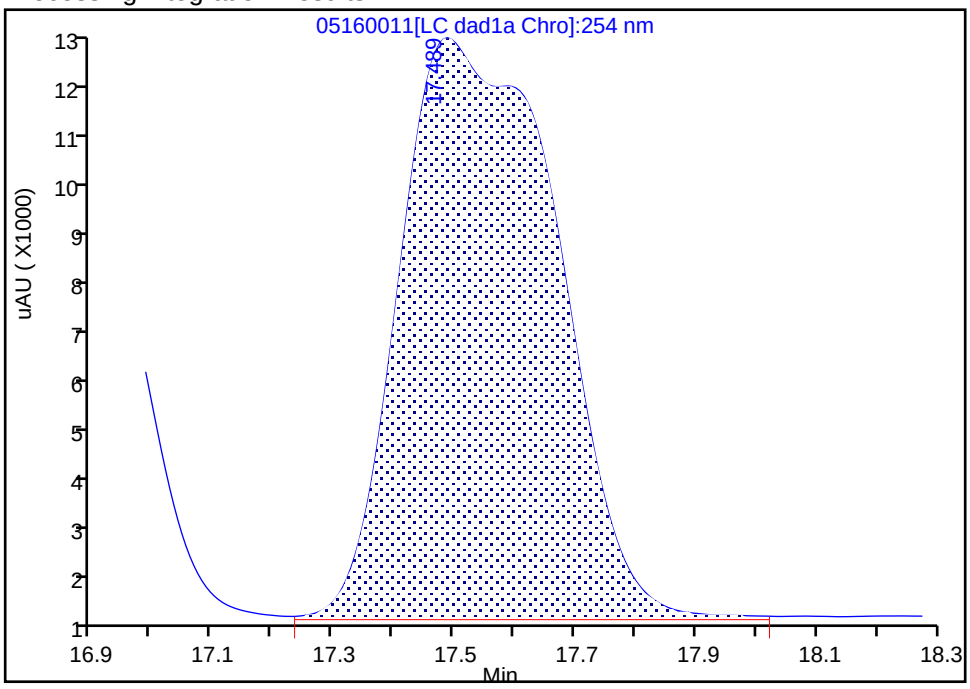
Data File:	\\chromfs\denver\chromdata\g2_luna\20230516-121515.b\05160011.d				
Injection Date:	16-May-2023 19:34:39	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	CCV DMT				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	7	Worklist Smp#:	11
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

18 2-Amino-4,6-dinitrotoluene, CAS: 35572-78-2

Signal: 1

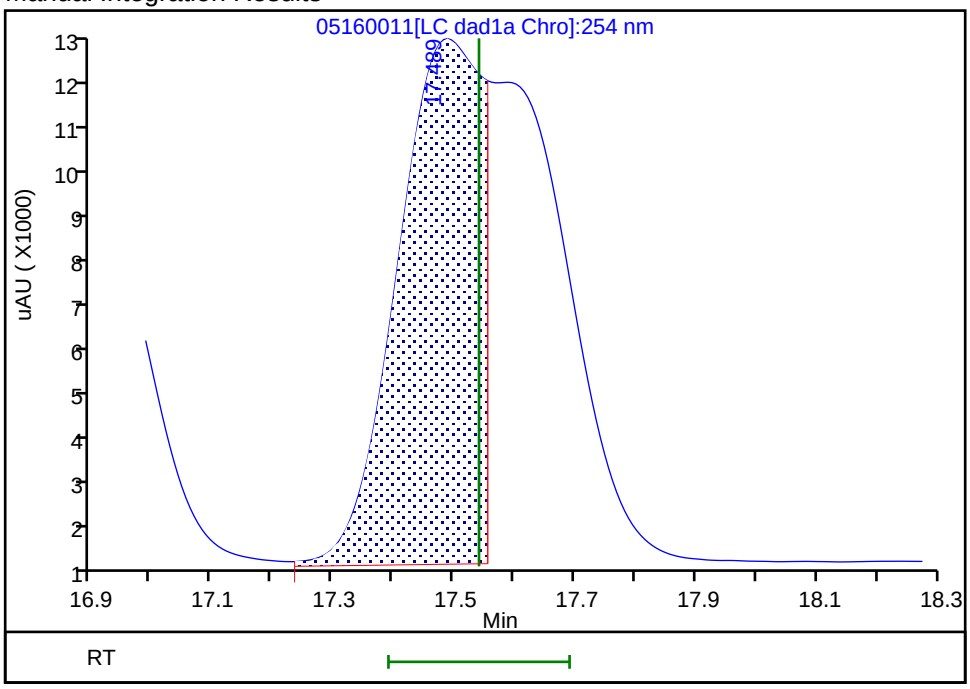
Processing Integration Results

RT: 17.49
Area: 207554
Amount: 0.518517
Amount Units: ug/ml



Manual Integration Results

RT: 17.49
Area: 109402
Amount: 0.273311
Amount Units: ug/ml



Reviewer: LV5D, 16-May-2023 20:12:02

Audit Action: Split an Integrated Peak Audit Reason: Baseline

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-176268-1

SDG No.:

Lab Sample ID: CCV 280-612694/22 | Calibration Date: 05/17/2023 02:10

Instrument ID: CHHPLC_G2_LUNA | Calib Start Date: 04/07/2023 19:03

GC Column: Luna-phenylhex ID: 4.60(mm) | Calib End Date: 04/07/2023 23:50

Lab File ID: 05160022.D | Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
TNX	Ave	399214	374493		235	251	-6.2	20.0
DNX	Ave	286200	277083		242	250	-3.2	20.0
HMX	Ave	181045	186040		257	250	2.8	20.0
MNX	Ave	262380	256161		285	292	-2.4	20.0
Picric acid	Ave	155611	162264		261	250	4.3	20.0
RDX	Ave	215713	222044		257	250	2.9	20.0
Nitrobenzene	Ave	379960	386592		254	250	1.7	20.0
3,5-Dinitroaniline	Lin2		472480		274	250	9.5	20.0
1,3-Dinitrobenzene	Ave	581449	609708		262	250	4.9	20.0
Nitroglycerin	Ave	124345	132712		2670	2500	6.7	20.0
2-Nitrotoluene	Ave	243188	245272		252	250	0.9	20.0
4-Nitrotoluene	Ave	217449	225136		259	250	3.5	20.0
4-Amino-2,6-dinitrotoluene	Ave	272611	288908		265	250	6.0	20.0
3-Nitrotoluene	Ave	268012	284844		266	250	6.3	20.0
2-Amino-4,6-dinitrotoluene	Ave	400284	434752		272	250	8.6	20.0
1,3,5-Trinitrobenzene	Ave	378488	394616		261	250	4.3	20.0
2,6-Dinitrotoluene	Ave	279896	282700		253	250	1.0	20.0
2,4-Dinitrotoluene	Ave	560125	576976		258	250	3.0	20.0
Tetryl	Ave	270539	272720		252	250	0.8	20.0
2,4,6-Trinitrotoluene	Ave	411719	416308		253	250	1.1	20.0
PETN	Ave	118367	138385		2920	2500	16.9	20.0
1,2-Dinitrobenzene	Ave	265405	273996		258	250	3.2	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Lab Sample ID: CCV 280-612694/22 Calibration Date: 05/17/2023 02:10

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 04/07/2023 19:03

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 04/07/2023 23:50

Lab File ID: 05160022.D

Analyte	RT	RT WINDOW	
		FROM	TO
TNX	5.34	5.19	5.49
DNX	6.21	6.07	6.37
HMX	6.88	6.74	7.04
MNX	7.75	7.60	7.90
Picric acid	8.74	8.62	8.92
RDX	9.16	9.02	9.32
Nitrobenzene	11.68	11.54	11.84
3,5-Dinitroaniline	14.52	14.41	14.71
1,3-Dinitrobenzene	14.78	14.66	14.96
Nitroglycerin	15.25	15.17	15.47
2-Nitrotoluene	15.83	15.75	16.05
4-Nitrotoluene	16.06	15.98	16.28
4-Amino-2,6-dinitrotoluene	16.61	16.54	16.84
3-Nitrotoluene	16.90	16.83	17.13
2-Amino-4,6-dinitrotoluene	17.44	17.39	17.69
1,3,5-Trinitrobenzene	17.58	17.46	17.76
2,6-Dinitrotoluene	18.72	18.66	18.96
2,4-Dinitrotoluene	19.19	19.12	19.42
Tetryl	22.51	22.47	22.77
2,4,6-Trinitrotoluene	23.33	23.28	23.58
PETN	24.54	24.51	24.81
1,2-Dinitrobenzene	12.66	12.53	12.83

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\G2_LUNA\20230516-121515.b\05160022.D
Lims ID: CCV DMT
Client ID:
Sample Type: CCV
Inject. Date: 17-May-2023 02:10:19 ALS Bottle#: 7 Worklist Smp#: 22
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV DMT
Operator ID: JZ/JG Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub18

Method: \\chromfs\Denver\ChromData\G2_LUNA\20230516-121515.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 17-May-2023 13:46:16 Calib Date: 07-Apr-2023 23:50:31
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\04070018.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX1653

First Level Reviewer: K8YG Date: 17-May-2023 12:48:01

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 TNX	1	5.337	5.341	-0.004	93904	0.2508	0.2352	
4 DNX	1	6.210	6.221	-0.011	69340	0.2503	0.2423	
6 HMX	1	6.884	6.888	-0.004	46510	0.2500	0.2569	
7 MNX	1	7.750	7.748	0.002	74735	0.2918	0.2848	
5 2,4,6-Trinitrophenol	1	8.737	8.774	-0.037	40566	0.2500	0.2607	
8 RDX	1	9.164	9.168	-0.004	55511	0.2500	0.2573	
9 Nitrobenzene	1	11.677	11.688	-0.011	96648	0.2500	0.2544	
$ 10 1,2-Dinitrobenzene	1	12.657	12.681	-0.024	68499	0.2500	0.2581	
11 3,5-Dinitroaniline	1	14.517	14.561	-0.044	118120	0.2500	0.2738	M
12 1,3-Dinitrobenzene	1	14.777	14.814	-0.037	152427	0.2500	0.2622	M
13 Nitroglycerin	2	15.250	15.321	-0.071	331780	2.50	2.67	
14 o-Nitrotoluene	1	15.830	15.901	-0.071	61318	0.2500	0.2521	M
15 p-Nitrotoluene	1	16.057	16.128	-0.071	56284	0.2500	0.2588	M
16 4-Amino-2,6-dinitrotoluene	1	16.610	16.694	-0.084	72227	0.2500	0.2649	M
17 m-Nitrotoluene	1	16.897	16.981	-0.084	71211	0.2500	0.2657	M
18 2-Amino-4,6-dinitrotoluene	1	17.443	17.541	-0.098	108688	0.2500	0.2715	M
19 1,3,5-Trinitrobenzene	1	17.583	17.608	-0.025	98654	0.2500	0.2607	Ma
20 2,6-Dinitrotoluene	1	18.723	18.814	-0.091	70675	0.2500	0.2525	
21 2,4-Dinitrotoluene	1	19.190	19.274	-0.084	144244	0.2500	0.2575	
22 Tetryl	1	22.510	22.621	-0.111	68180	0.2500	0.2520	
23 2,4,6-Trinitrotoluene	1	23.330	23.428	-0.098	104077	0.2500	0.2528	
24 PETN	2	24.537	24.661	-0.124	345962	2.50	2.92	

QC Flag Legend
Processing Flags

Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

8330IntermStk_00076	Amount Added:	25.00	Units: uL
8330 DMT_00013	Amount Added:	12.50	Units: uL

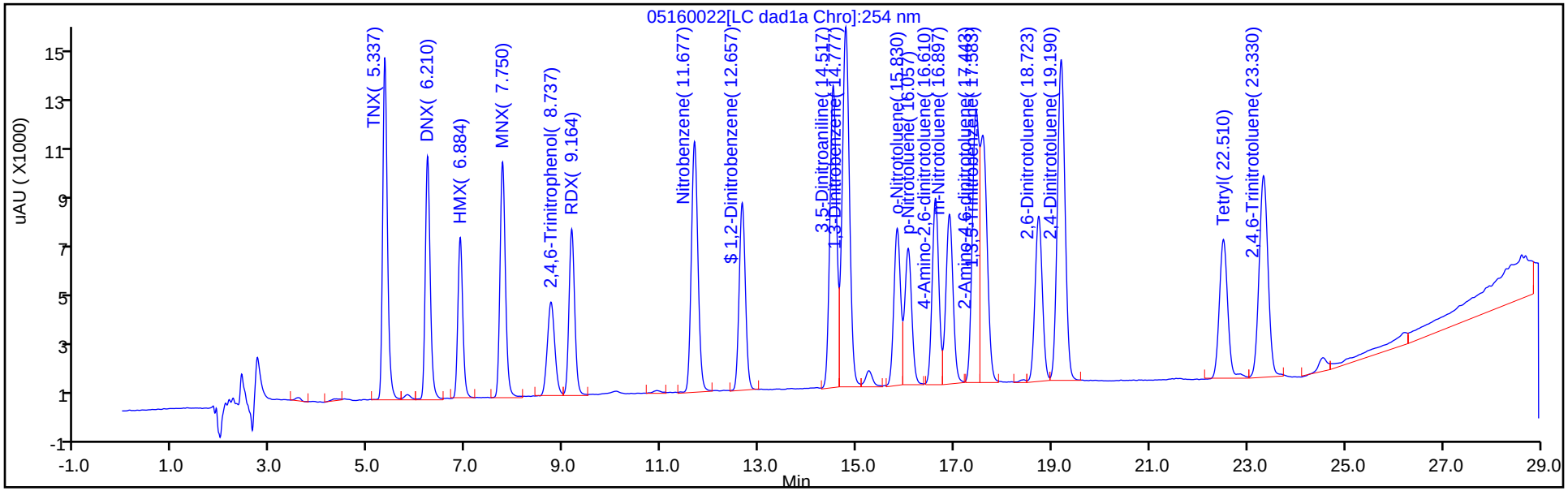
Report Date: 17-May-2023 13:46:16 Chrom Revision: 2.3 16-May-2023 16:37:30

Eurofins Denver

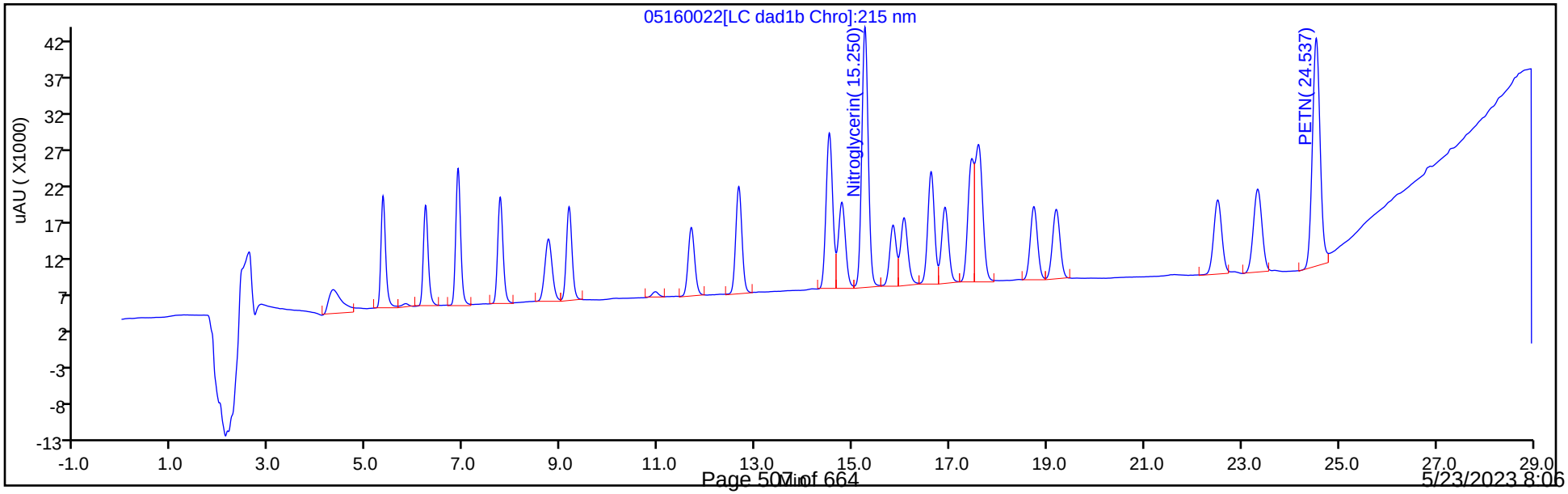
Data File: \\chromfs\denver\chromdata\g2_luna\20230516-121515.b\05160022.d

Injection Date:	17-May-2023 02:10:19	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	JZ/JG
Lims ID:	CCV DMT			Worklist Smp#:	22
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 Target: 1



Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

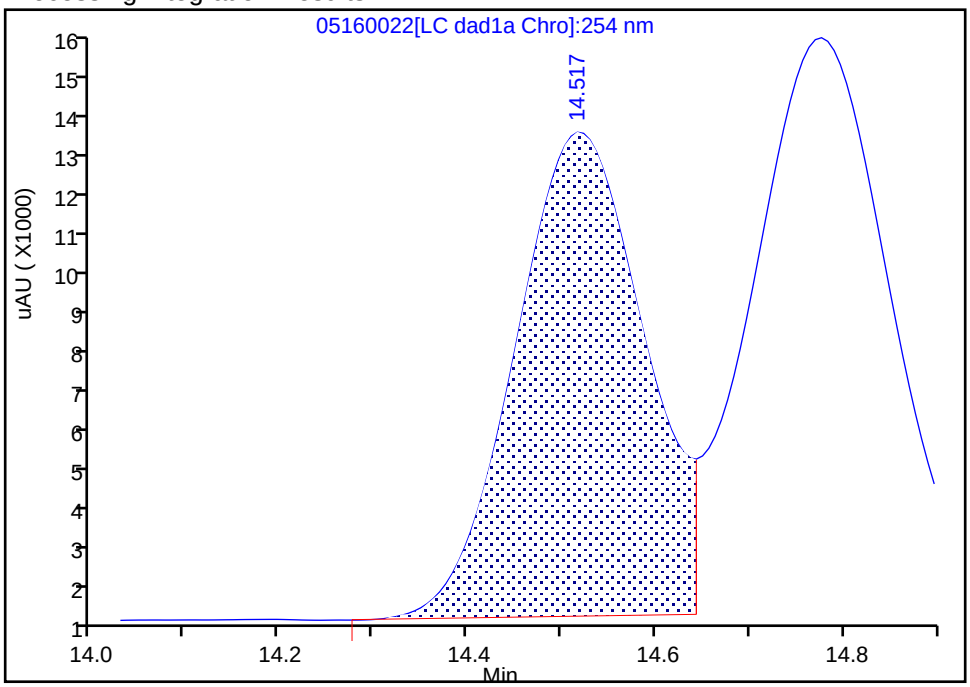
Data File:	\\chromfs\denver\chromdata\g2_luna\20230516-121515.b\05160022.d				
Injection Date:	17-May-2023 02:10:19	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	CCV DMT				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	7	Worklist Smp#:	22
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

11 3,5-Dinitroaniline, CAS: 618-87-1

Signal: 1

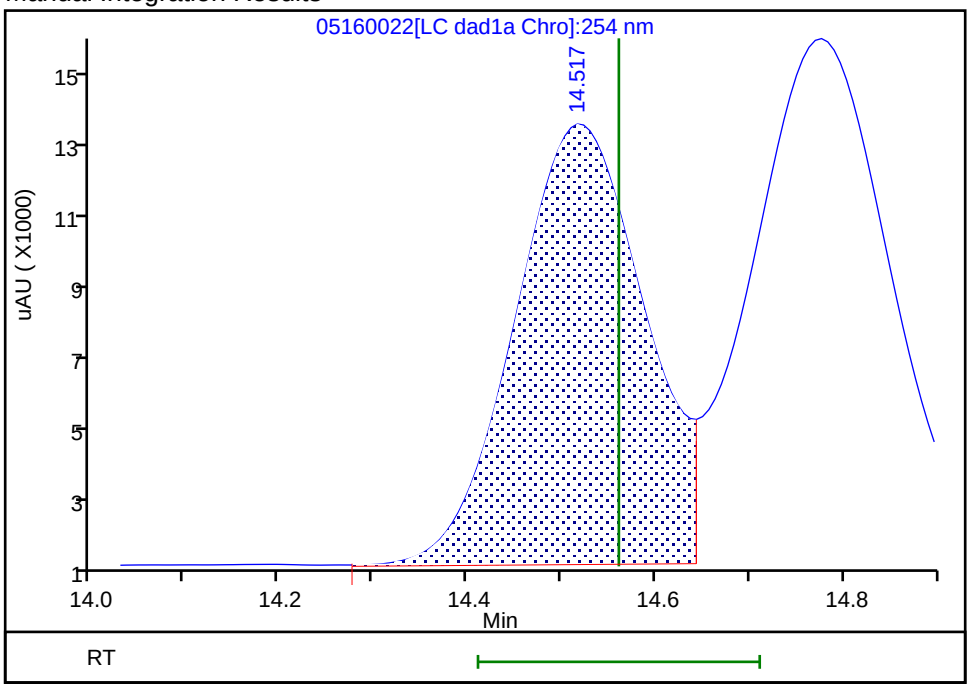
Processing Integration Results

RT: 14.52
Area: 116459
Amount: 0.269940
Amount Units: ug/ml



Manual Integration Results

RT: 14.52
Area: 118120
Amount: 0.273804
Amount Units: ug/ml



Reviewer: LV5D, 17-May-2023 13:39:07 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

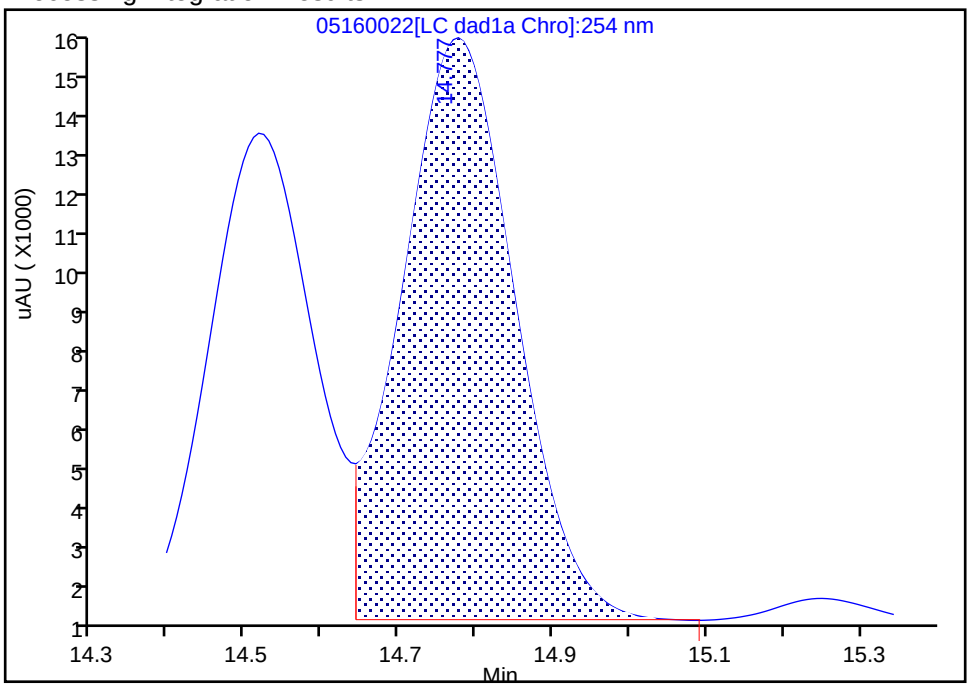
Data File: \\chromfs\denver\chromdata\g2_luna\20230516-121515.b\05160022.d
Injection Date: 17-May-2023 02:10:19 Instrument ID: CHHPLC_G2_LUNA
Lims ID: CCV DMT
Client ID:
Operator ID: JZ/JG ALS Bottle#: 7 Worklist Smp#: 22
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

12 1,3-Dinitrobenzene, CAS: 99-65-0

Signal: 1

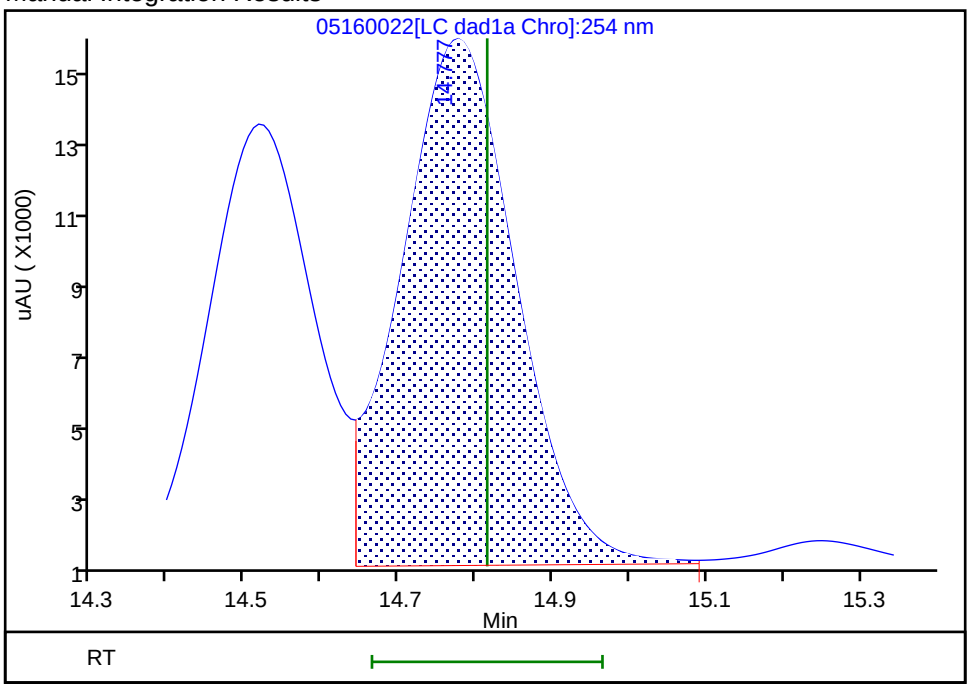
Processing Integration Results

RT: 14.78
Area: 148956
Amount: 0.256181
Amount Units: ug/ml



Manual Integration Results

RT: 14.78
Area: 152427
Amount: 0.262150
Amount Units: ug/ml



Reviewer: LV5D, 17-May-2023 13:39:07 -06:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

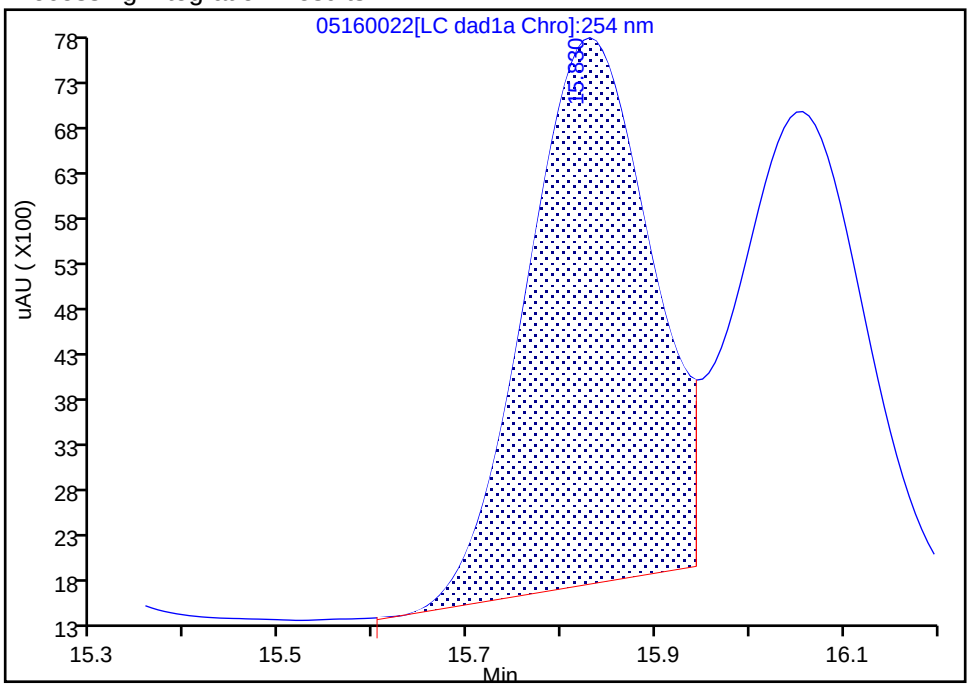
Data File:	\\chromfs\denver\chromdata\g2_luna\20230516-121515.b\05160022.d				
Injection Date:	17-May-2023 02:10:19	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	CCV DMT				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	7	Worklist Smp#:	22
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	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

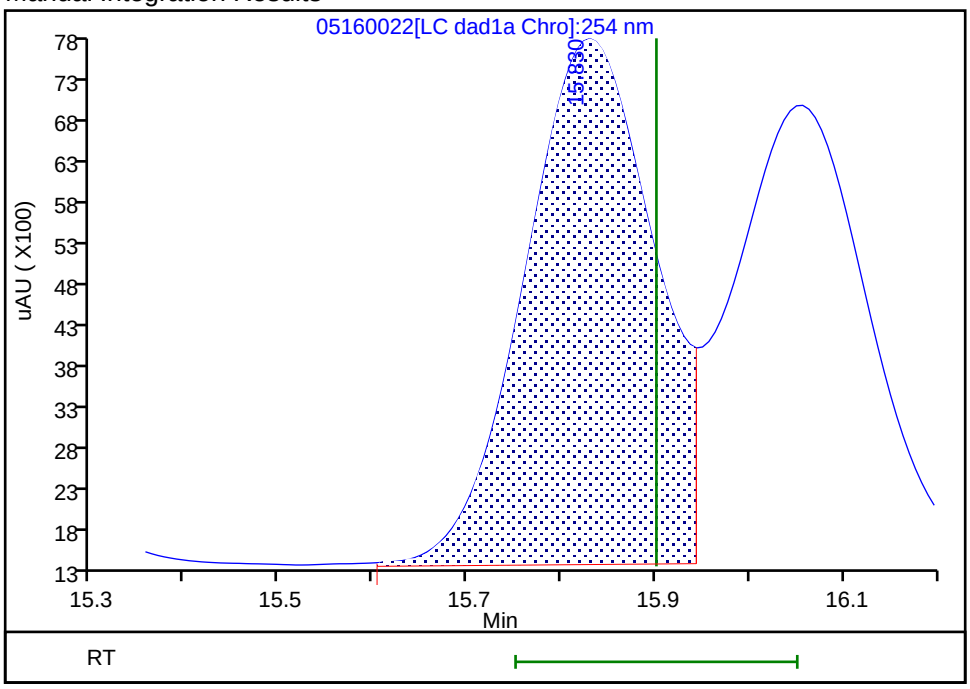
Processing Integration Results

RT: 15.83
Area: 55381
Amount: 0.227729
Amount Units: ug/ml



Manual Integration Results

RT: 15.83
Area: 61318
Amount: 0.252142
Amount Units: ug/ml



Reviewer: LV5D, 17-May-2023 13:39:07 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

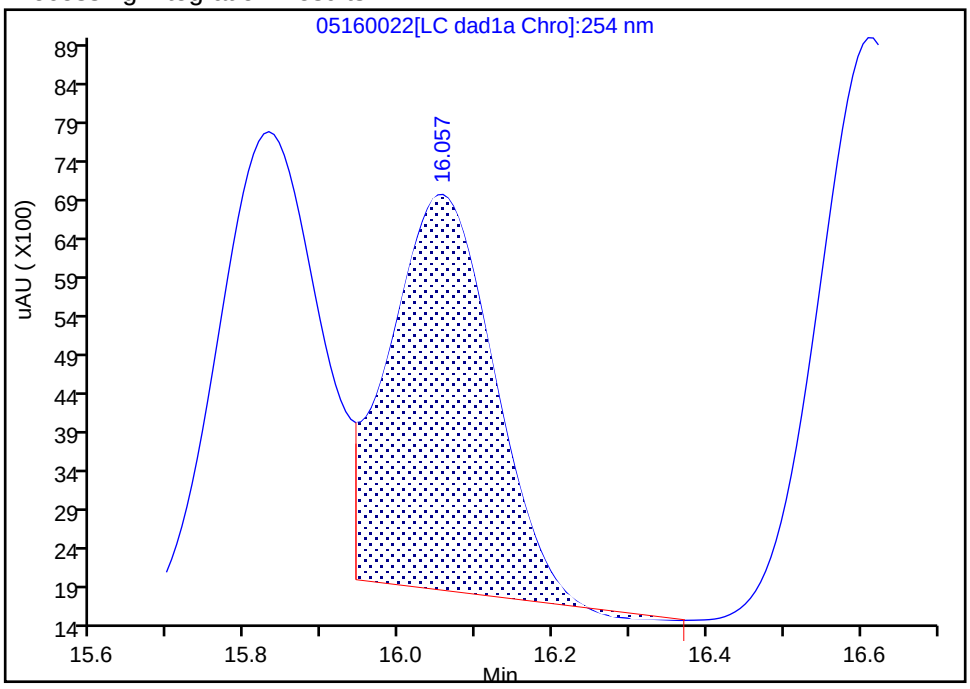
Data File:	\\chromfs\denver\chromdata\g2_luna\20230516-121515.b\05160022.d				
Injection Date:	17-May-2023 02:10:19	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	CCV DMT				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	7	Worklist Smp#:	22
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	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

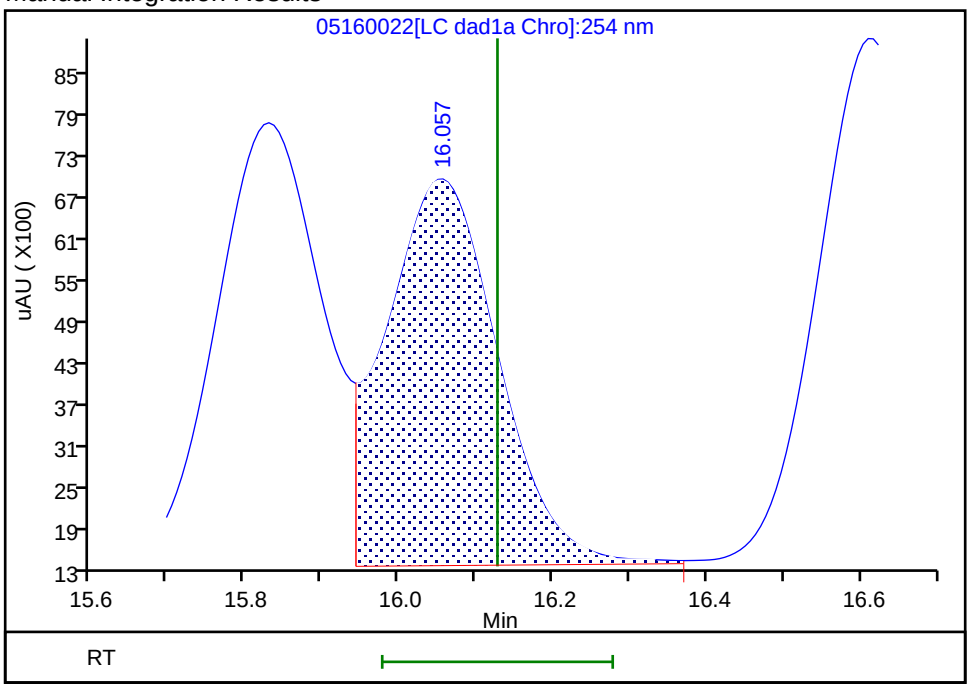
Processing Integration Results

RT: 16.06
Area: 49248
Amount: 0.226481
Amount Units: ug/ml



Manual Integration Results

RT: 16.06
Area: 56284
Amount: 0.258838
Amount Units: ug/ml



Reviewer: LV5D, 17-May-2023 13:39:07 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

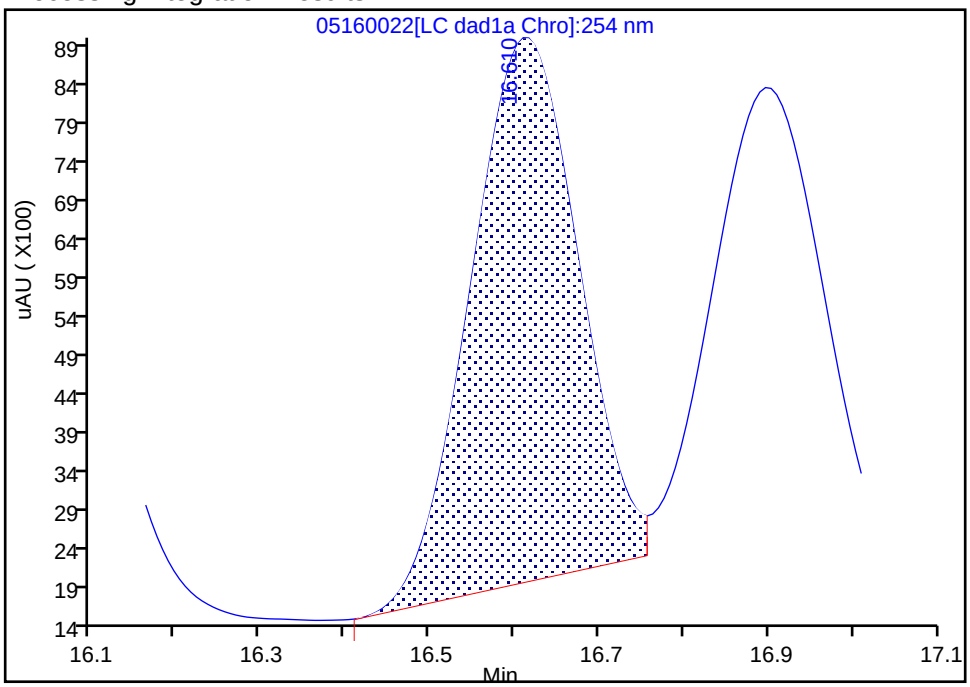
Data File:	\\chromfs\denver\chromdata\g2_luna\20230516-121515.b\05160022.d				
Injection Date:	17-May-2023 02:10:19	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	CCV DMT				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	7	Worklist Smp#:	22
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	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

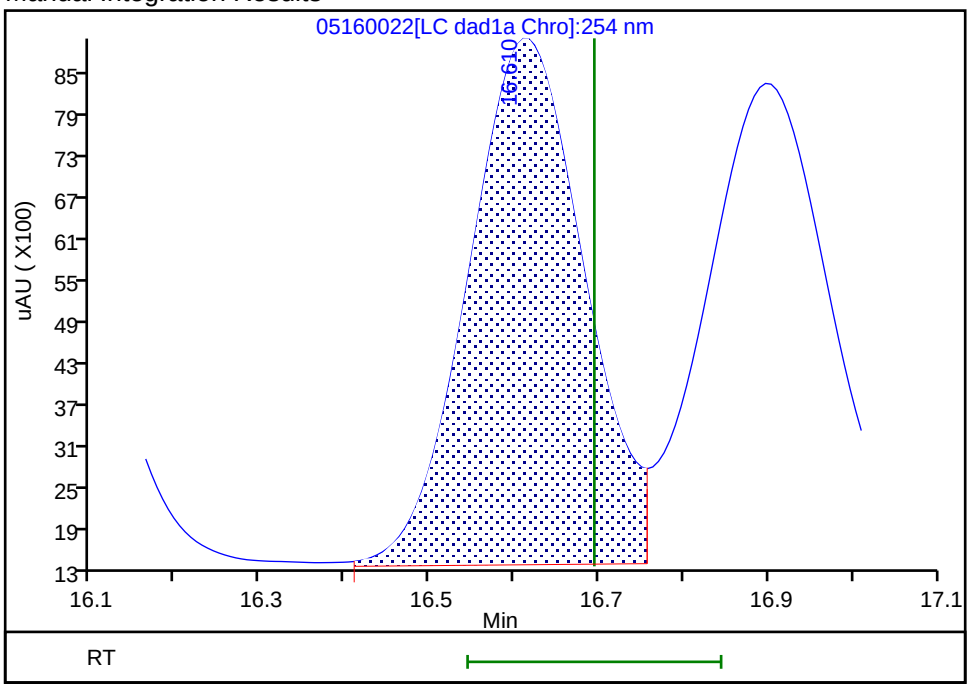
Processing Integration Results

RT: 16.61
Area: 63138
Amount: 0.231605
Amount Units: ug/ml



Manual Integration Results

RT: 16.61
Area: 72227
Amount: 0.264946
Amount Units: ug/ml



Reviewer: LV5D, 17-May-2023 13:39:07 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

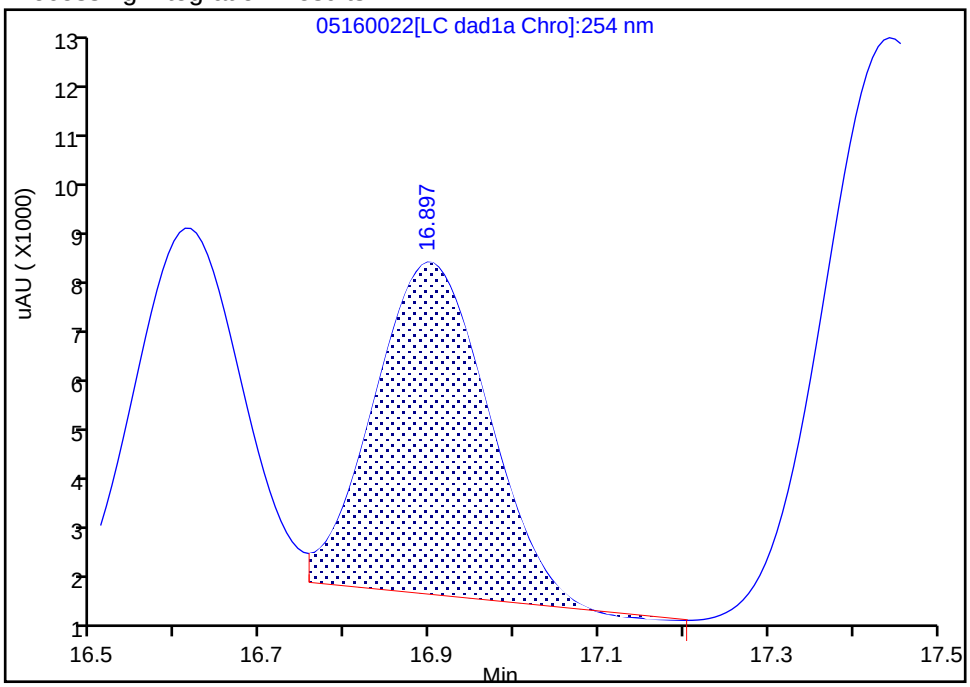
Data File:	\\chromfs\denver\chromdata\g2_luna\20230516-121515.b\05160022.d				
Injection Date:	17-May-2023 02:10:19	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	CCV DMT				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	7	Worklist Smp#:	22
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	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

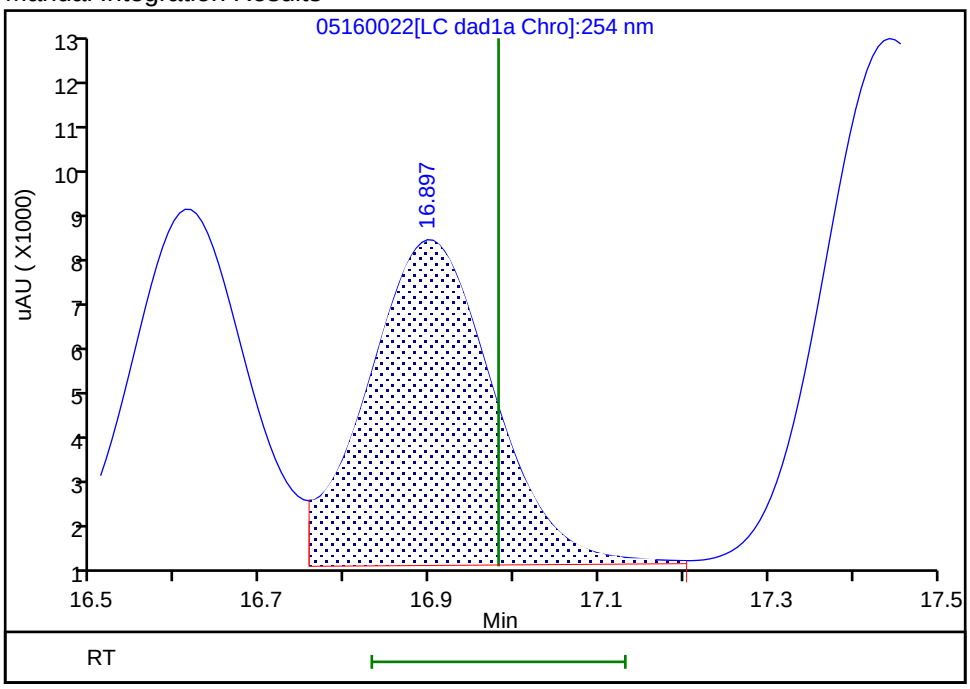
Processing Integration Results

RT: 16.90
Area: 59796
Amount: 0.223110
Amount Units: ug/ml



Manual Integration Results

RT: 16.90
Area: 71211
Amount: 0.265701
Amount Units: ug/ml



Reviewer: LV5D, 17-May-2023 13:39:07 -06:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

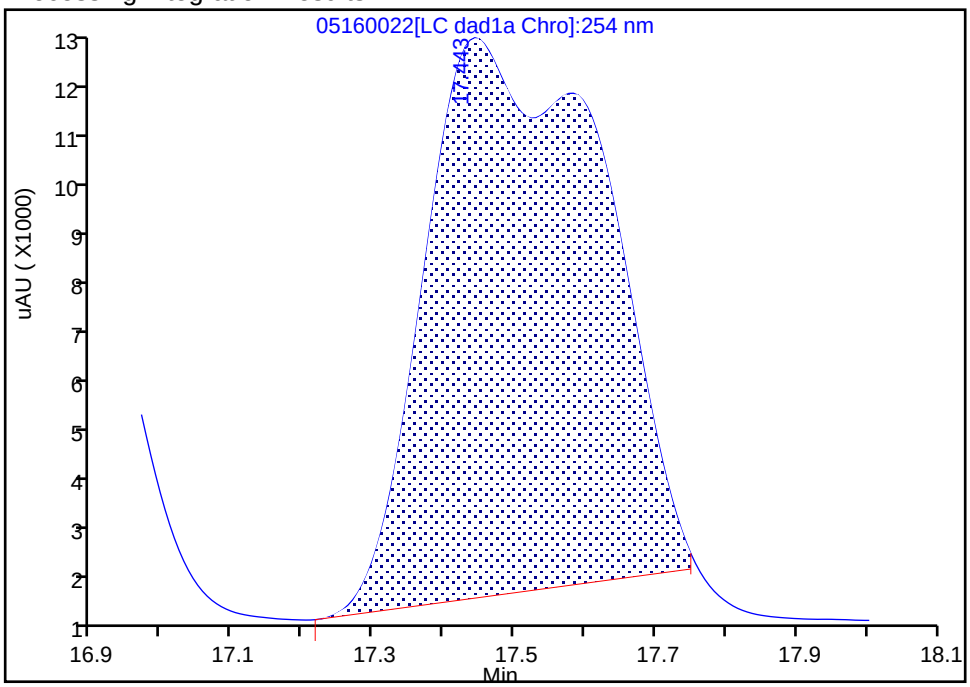
Data File: \\chromfs\denver\chromdata\g2_luna\20230516-121515.b\05160022.d
Injection Date: 17-May-2023 02:10:19 Instrument ID: CHHPLC_G2_LUNA
Lims ID: CCV DMT
Client ID:
Operator ID: JZ/JG ALS Bottle#: 7 Worklist Smp#: 22
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 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

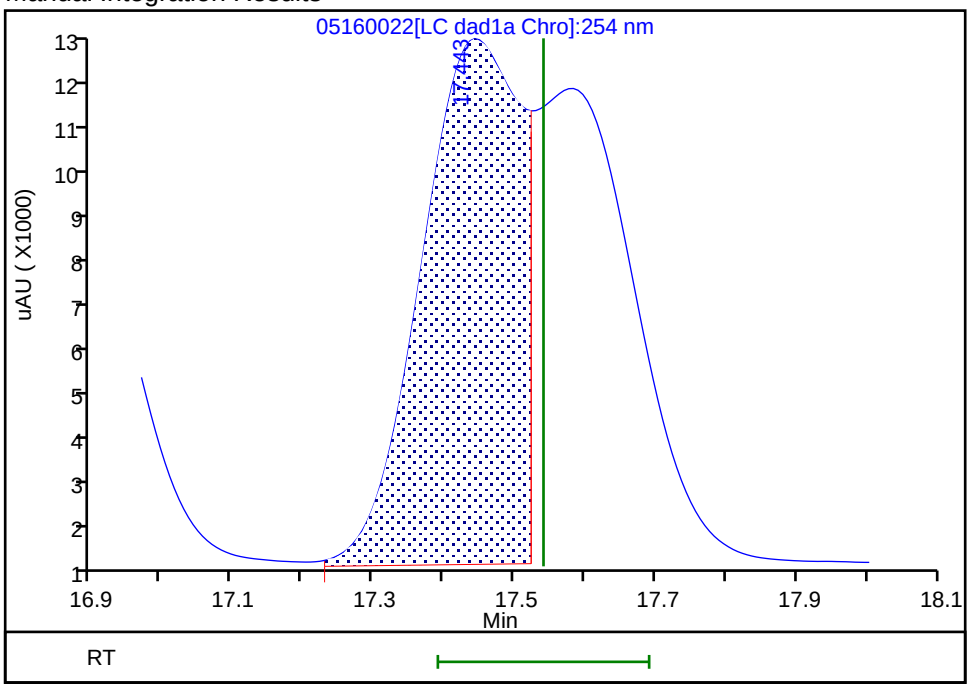
Processing Integration Results

RT: 17.44
Area: 186862
Amount: 0.466824
Amount Units: ug/ml



Manual Integration Results

RT: 17.44
Area: 108688
Amount: 0.271527
Amount Units: ug/ml



Reviewer: LV5D, 17-May-2023 13:39:07 -06:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

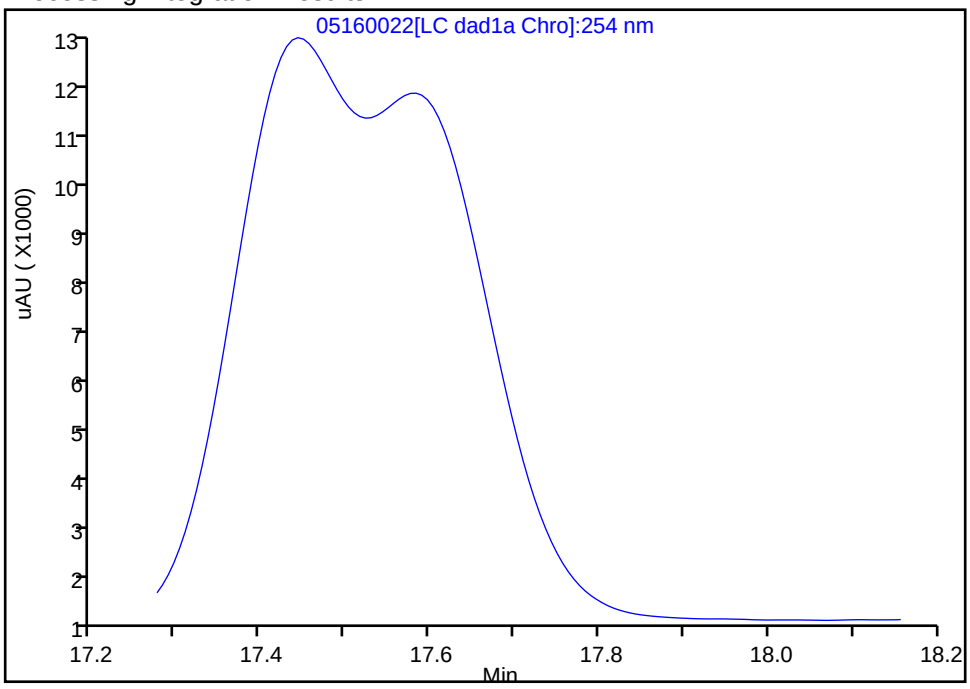
Data File:	\\chromfs\denver\chromdata\g2_luna\20230516-121515.b\05160022.d				
Injection Date:	17-May-2023 02:10:19	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	CCV DMT				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	7	Worklist Smp#:	22
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	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

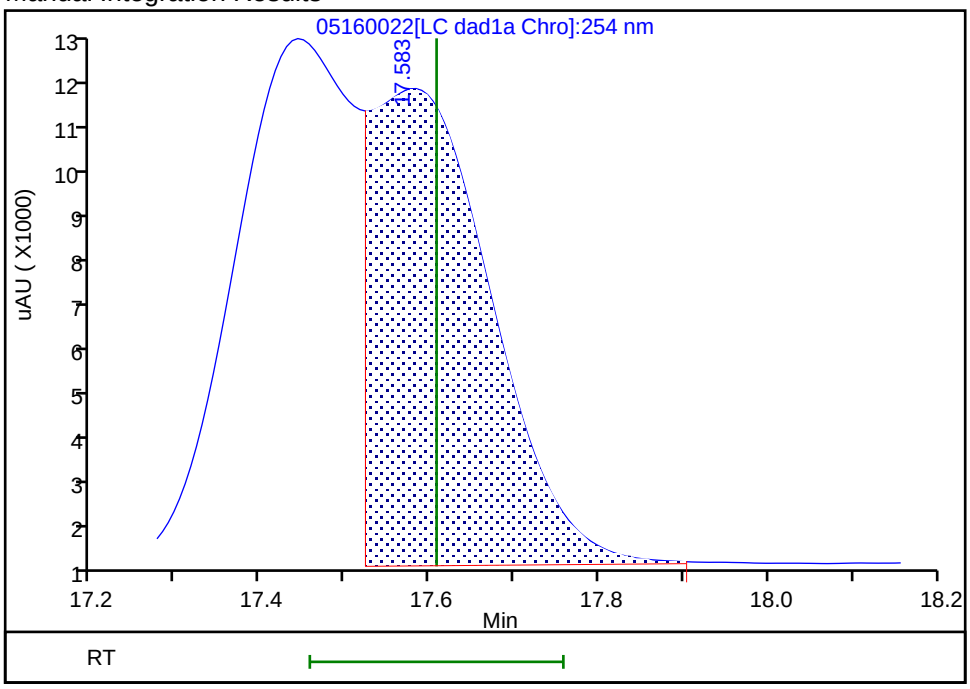
Not Detected
Expected RT: 17.61

Processing Integration Results



Manual Integration Results

RT: 17.58
Area: 98654
Amount: 0.260653
Amount Units: ug/ml



Reviewer: LV5D, 17-May-2023 13:39:07 -06:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-176268-1

SDG No.:

Lab Sample ID: CCV 280-613169/8 | Calibration Date: 05/19/2023 15:31

Instrument ID: CHHPLC_G2_LUNA | Calib Start Date: 04/07/2023 19:03

GC Column: Luna-phenylhex ID: 4.60(mm) | Calib End Date: 04/07/2023 23:50

Lab File ID: 05190008.D | Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
TNX	Ave	399214	396471		249	251	-0.7	20.0
DNX	Ave	286200	287840		252	250	0.6	20.0
HMX	Ave	181045	186332		257	250	2.9	20.0
MNX	Ave	262380	263767		293	292	0.5	20.0
Picric acid	Ave	155611	164784		265	250	5.9	20.0
RDX	Ave	215713	223304		259	250	3.5	20.0
Nitrobenzene	Ave	379960	397636		262	250	4.7	20.0
3,5-Dinitroaniline	Lin2		473172		274	250	9.7	20.0
1,3-Dinitrobenzene	Ave	581449	612620		263	250	5.4	20.0
Nitroglycerin	Ave	124345	133054		2680	2500	7.0	20.0
2-Nitrotoluene	Ave	243188	256416		264	250	5.4	20.0
4-Nitrotoluene	Ave	217449	230276		265	250	5.9	20.0
4-Amino-2,6-dinitrotoluene	Ave	272611	295488		271	250	8.4	20.0
3-Nitrotoluene	Ave	268012	295988		276	250	10.4	20.0
2-Amino-4,6-dinitrotoluene	Ave	400284	431432		269	250	7.8	20.0
1,3,5-Trinitrobenzene	Ave	378488	411548		272	250	8.7	20.0
2,6-Dinitrotoluene	Ave	279896	288876		258	250	3.2	20.0
2,4-Dinitrotoluene	Ave	560125	582288		260	250	4.0	20.0
Tetryl	Ave	270539	273576		253	250	1.1	20.0
2,4,6-Trinitrotoluene	Ave	411719	417672		254	250	1.4	20.0
PETN	Ave	118367	130764		2760	2500	10.5	20.0
1,2-Dinitrobenzene	Ave	265405	279232		263	250	5.2	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Lab Sample ID: CCV 280-613169/8 Calibration Date: 05/19/2023 15:31

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 04/07/2023 19:03

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 04/07/2023 23:50

Lab File ID: 05190008.D

Analyte	RT	RT WINDOW	
		FROM	TO
TNX	5.32	5.17	5.47
DNX	6.18	6.03	6.33
HMX	6.84	6.69	6.99
MNX	7.70	7.55	7.85
Picric acid	8.56	8.41	8.71
RDX	9.10	8.95	9.25
Nitrobenzene	11.62	11.47	11.77
3,5-Dinitroaniline	14.43	14.28	14.58
1,3-Dinitrobenzene	14.70	14.55	14.85
Nitroglycerin	15.17	15.02	15.32
2-Nitrotoluene	15.75	15.60	15.90
4-Nitrotoluene	15.97	15.82	16.12
4-Amino-2,6-dinitrotoluene	16.51	16.36	16.66
3-Nitrotoluene	16.81	16.66	16.96
2-Amino-4,6-dinitrotoluene	17.33	17.18	17.48
1,3,5-Trinitrobenzene	17.50	17.35	17.65
2,6-Dinitrotoluene	18.62	18.47	18.77
2,4-Dinitrotoluene	19.08	18.93	19.23
Tetryl	22.36	22.21	22.51
2,4,6-Trinitrotoluene	23.18	23.03	23.33
PETN	24.38	24.23	24.53
1,2-Dinitrobenzene	12.58	12.43	12.73

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\G2_LUNA\20230519-121648.b\05190008.D
Lims ID: CCV DMT
Client ID:
Sample Type: CCV
Inject. Date: 19-May-2023 15:31:16 ALS Bottle#: 7 Worklist Smp#: 8
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV DMT
Operator ID: JZ/JG Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub18

Method: \\chromfs\Denver\ChromData\G2_LUNA\20230519-121648.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 20-May-2023 11:50:48 Calib Date: 07-Apr-2023 23:50:31
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\04070018.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX1663

First Level Reviewer: LV5D Date: 19-May-2023 16:07:32

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 TNX	1	5.315	5.315	0.000	99415	0.2508	0.2490	
4 DNX	1	6.175	6.175	0.000	72032	0.2503	0.2517	
6 HMX	1	6.835	6.835	0.000	46583	0.2500	0.2573	
7 MNX	1	7.695	7.695	0.000	76954	0.2918	0.2933	
5 2,4,6-Trinitrophenol	1	8.562	8.562	0.000	41196	0.2500	0.2647	
8 RDX	1	9.102	9.102	0.000	55826	0.2500	0.2588	
9 Nitrobenzene	1	11.622	11.622	0.000	99409	0.2500	0.2616	
$ 10 1,2-Dinitrobenzene	1	12.582	12.582	0.000	69808	0.2500	0.2630	
11 3,5-Dinitroaniline	1	14.429	14.429	0.000	118293	0.2500	0.2742	
12 1,3-Dinitrobenzene	1	14.695	14.695	0.000	153155	0.2500	0.2634	
13 Nitroglycerin	2	15.169	15.169	0.000	332636	2.50	2.68	
14 o-Nitrotoluene	1	15.749	15.749	0.000	64104	0.2500	0.2636	
15 p-Nitrotoluene	1	15.969	15.969	0.000	57569	0.2500	0.2647	
16 4-Amino-2,6-dinitrotoluene	1	16.509	16.509	0.000	73872	0.2500	0.2710	
17 m-Nitrotoluene	1	16.809	16.809	0.000	73997	0.2500	0.2761	
18 2-Amino-4,6-dinitrotoluene	1	17.329	17.329	0.000	107858	0.2500	0.2695	
19 1,3,5-Trinitrobenzene	1	17.502	17.502	0.000	102887	0.2500	0.2718	
20 2,6-Dinitrotoluene	1	18.622	18.622	0.000	72219	0.2500	0.2580	
21 2,4-Dinitrotoluene	1	19.082	19.082	0.000	145572	0.2500	0.2599	
22 Tetryl	1	22.355	22.355	0.000	68394	0.2500	0.2528	
23 2,4,6-Trinitrotoluene	1	23.182	23.182	0.000	104418	0.2500	0.2536	
24 PETN	2	24.382	24.382	0.000	326909	2.50	2.76	M

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00076	Amount Added:	25.00	Units: uL
8330 DMT_00013	Amount Added:	12.50	Units: uL

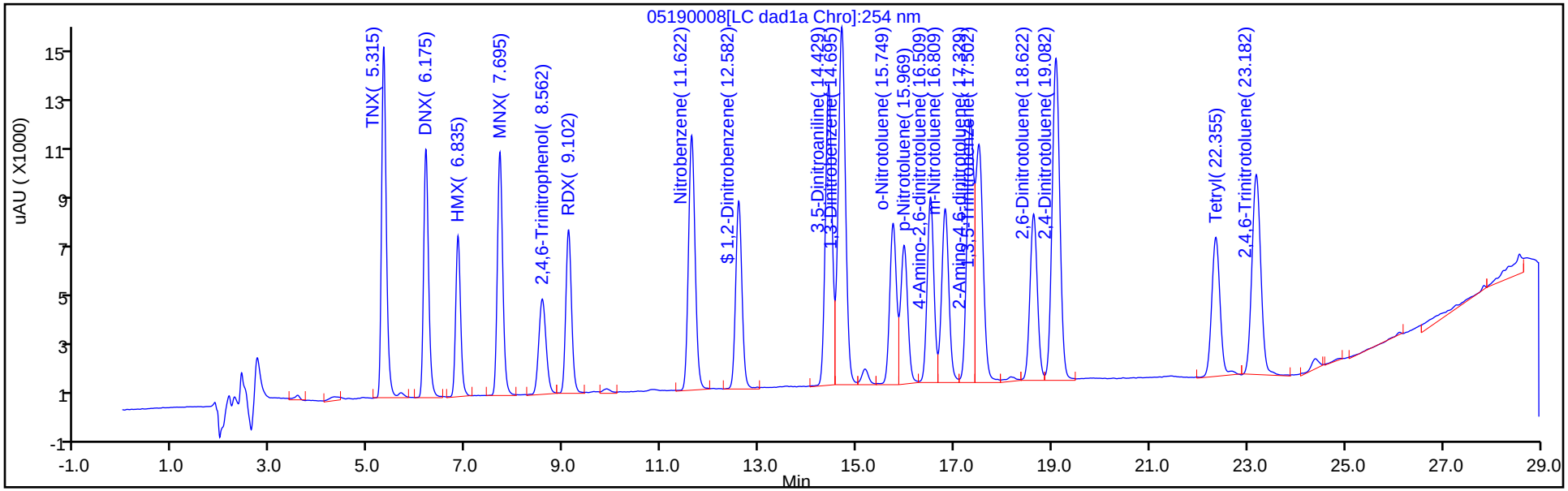
Report Date: 20-May-2023 11:50:48 Chrom Revision: 2.3 16-May-2023 16:37:30

Eurofins Denver

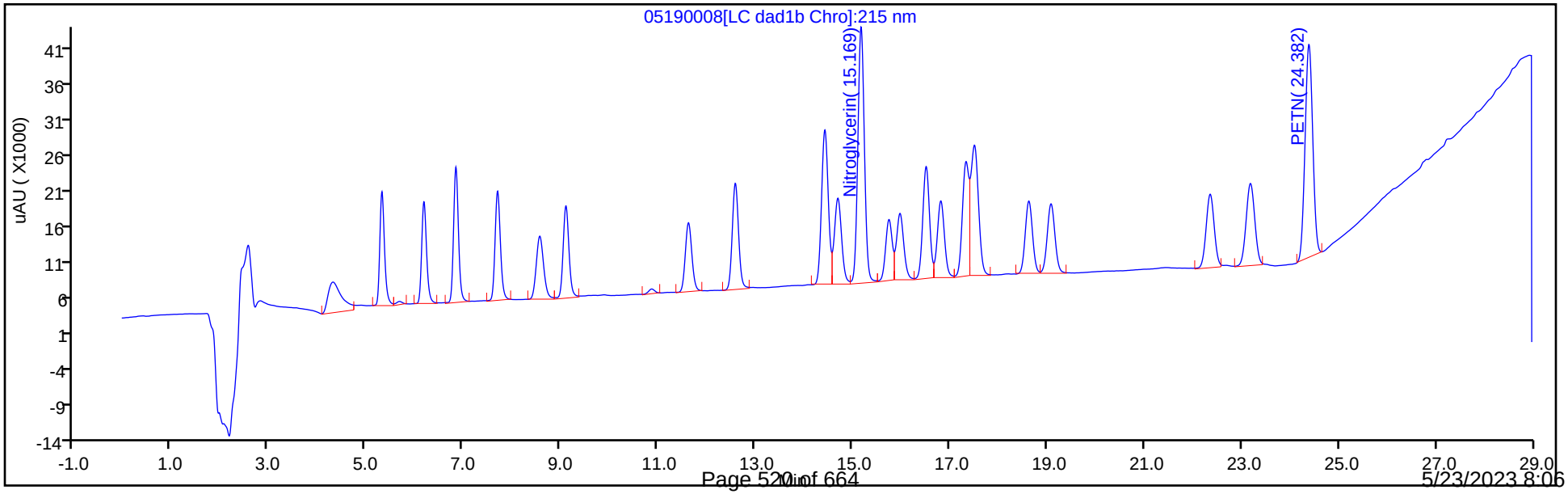
Data File: \\chromfs\denver\chromdata\g2_luna\20230519-121648.b\05190008.d

Injection Date:	19-May-2023 15:31:16	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	JZ/JG
Lims ID:	CCV DMT			Worklist Smp#:	8
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 Target: 1



Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



5/23/2023 8:06 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

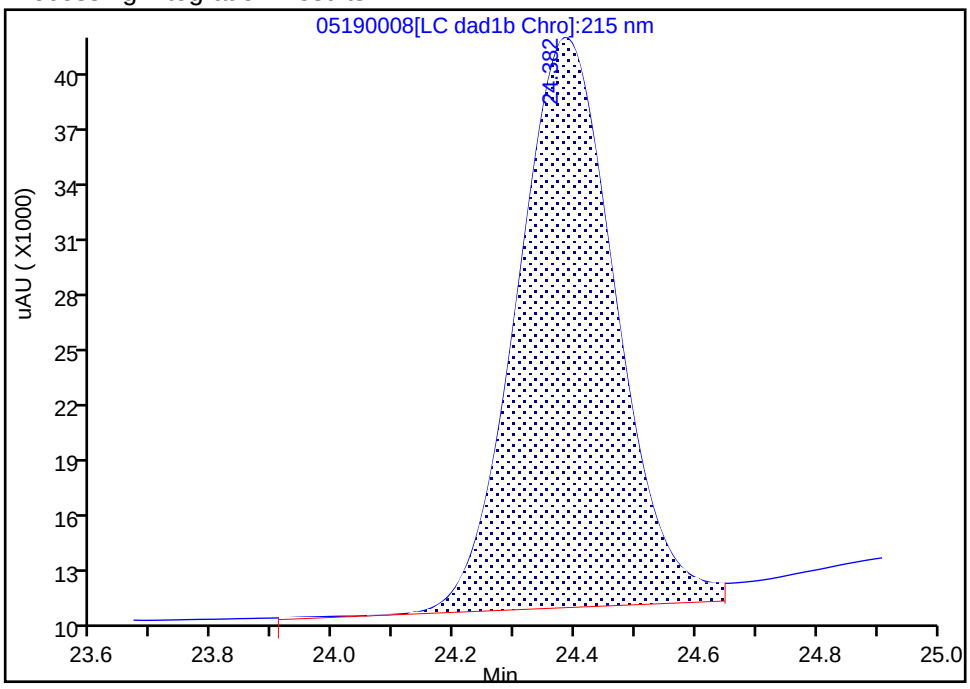
Data File:	\\chromfs\denver\chromdata\g2_luna\20230519-121648.b\05190008.d				
Injection Date:	19-May-2023 15:31:16	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	CCV DMT				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	7	Worklist Smp#:	8
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1B, 215 nm		

24 PETN, CAS: 78-11-5

Signal: 1

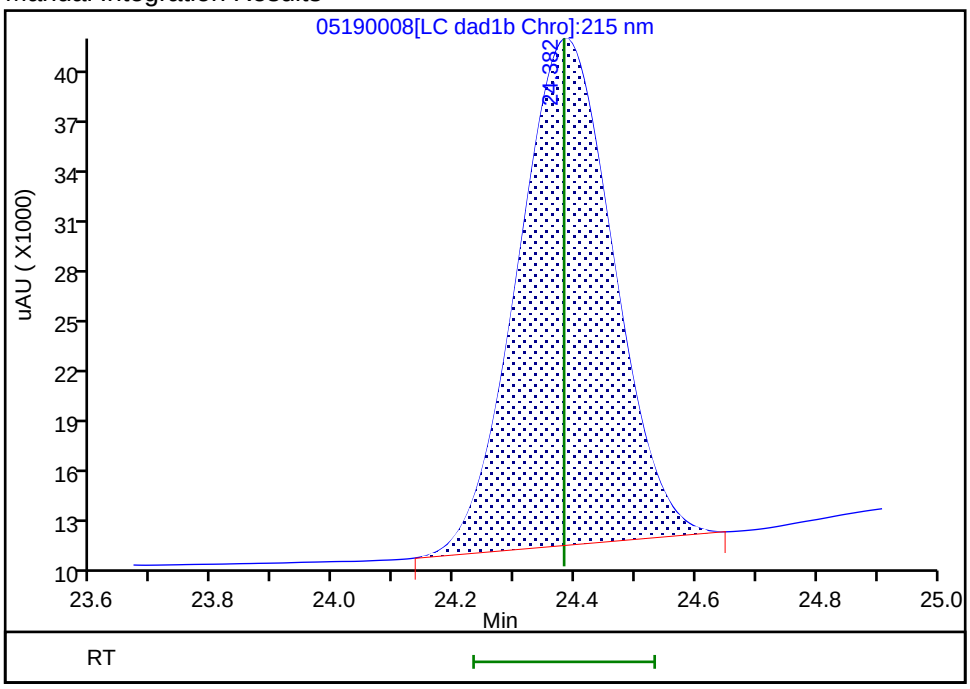
Processing Integration Results

RT: 24.38
Area: 343122
Amount: 2.898790
Amount Units: ug/ml



Manual Integration Results

RT: 24.38
Area: 326909
Amount: 2.761818
Amount Units: ug/ml



Reviewer: LV5D, 19-May-2023 16:07:28 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-176268-1

SDG No.:

Lab Sample ID: CCV 280-613169/18 | Calibration Date: 05/19/2023 20:54

Instrument ID: CHHPLC_G2_LUNA | Calib Start Date: 04/07/2023 19:03

GC Column: Luna-phenylhex ID: 4.60(mm) | Calib End Date: 04/07/2023 23:50

Lab File ID: 05190018.D | Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
TNX	Ave	399214	399418		251	251	0.0	20.0
DNX	Ave	286200	288543		252	250	0.8	20.0
HMX	Ave	181045	187540		259	250	3.6	20.0
MNX	Ave	262380	265121		295	292	1.0	20.0
Picric acid	Ave	155611	168136		270	250	8.0	20.0
RDX	Ave	215713	224300		260	250	4.0	20.0
Nitrobenzene	Ave	379960	391728		258	250	3.1	20.0
3,5-Dinitroaniline	Lin2		470748		273	250	9.1	20.0
1,3-Dinitrobenzene	Ave	581449	612060		263	250	5.3	20.0
Nitroglycerin	Ave	124345	132941		2670	2500	6.9	20.0
2-Nitrotoluene	Ave	243188	250152		257	250	2.9	20.0
4-Nitrotoluene	Ave	217449	223744		257	250	2.9	20.0
4-Amino-2,6-dinitrotoluene	Ave	272611	291236		267	250	6.8	20.0
3-Nitrotoluene	Ave	268012	286432		267	250	6.9	20.0
2-Amino-4,6-dinitrotoluene	Ave	400284	438692		274	250	9.6	20.0
1,3,5-Trinitrobenzene	Ave	378488	390640		258	250	3.2	20.0
2,6-Dinitrotoluene	Ave	279896	283268		253	250	1.2	20.0
2,4-Dinitrotoluene	Ave	560125	579808		259	250	3.5	20.0
Tetryl	Ave	270539	273064		252	250	0.9	20.0
2,4,6-Trinitrotoluene	Ave	411719	424592		258	250	3.1	20.0
PETN	Ave	118367	132174		2790	2500	11.7	20.0
1,2-Dinitrobenzene	Ave	265405	276192		260	250	4.1	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Lab Sample ID: CCV 280-613169/18 Calibration Date: 05/19/2023 20:54

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 04/07/2023 19:03

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 04/07/2023 23:50

Lab File ID: 05190018.D

Analyte	RT	RT WINDOW	
		FROM	TO
TNX	5.32	5.17	5.47
DNX	6.18	6.03	6.33
HMX	6.83	6.69	6.99
MNX	7.68	7.55	7.85
Picric acid	8.55	8.41	8.71
RDX	9.08	8.95	9.25
Nitrobenzene	11.61	11.47	11.77
3,5-Dinitroaniline	14.44	14.28	14.58
1,3-Dinitrobenzene	14.70	14.55	14.85
Nitroglycerin	15.20	15.02	15.32
2-Nitrotoluene	15.77	15.60	15.90
4-Nitrotoluene	16.00	15.82	16.12
4-Amino-2,6-dinitrotoluene	16.54	16.36	16.66
3-Nitrotoluene	16.84	16.66	16.96
2-Amino-4,6-dinitrotoluene	17.36	17.18	17.48
1,3,5-Trinitrobenzene	17.52	17.35	17.65
2,6-Dinitrotoluene	18.65	18.47	18.77
2,4-Dinitrotoluene	19.10	18.93	19.23
Tetryl	22.39	22.21	22.51
2,4,6-Trinitrotoluene	23.21	23.03	23.33
PETN	24.41	24.23	24.53
1,2-Dinitrobenzene	12.58	12.43	12.73

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\G2_LUNA\20230519-121648.b\05190018.D
Lims ID: CCV DMT
Client ID:
Sample Type: CCV
Inject. Date: 19-May-2023 20:54:44 ALS Bottle#: 7 Worklist Smp#: 18
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV DMT
Operator ID: JZ/JG Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub18

Method: \\chromfs\Denver\ChromData\G2_LUNA\20230519-121648.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 20-May-2023 11:50:53 Calib Date: 07-Apr-2023 23:50:31
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\G2_LUNA\20230407-120232.b\04070018.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX1663

First Level Reviewer: LV5D Date: 20-May-2023 11:48:46

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 TNX	1	5.317	5.315	0.002	100154	0.2508	0.2509	
4 DNX	1	6.177	6.175	0.002	72208	0.2503	0.2523	
6 HMX	1	6.830	6.835	-0.005	46885	0.2500	0.2590	
7 MNX	1	7.683	7.695	-0.012	77349	0.2918	0.2948	
5 2,4,6-Trinitrophenol	1	8.550	8.562	-0.012	42034	0.2500	0.2701	
8 RDX	1	9.083	9.102	-0.019	56075	0.2500	0.2600	
9 Nitrobenzene	1	11.610	11.622	-0.012	97932	0.2500	0.2577	
$ 10 1,2-Dinitrobenzene	1	12.577	12.582	-0.005	69048	0.2500	0.2602	
11 3,5-Dinitroaniline	1	14.437	14.429	0.008	117687	0.2500	0.2728	M
12 1,3-Dinitrobenzene	1	14.703	14.695	0.008	153015	0.2500	0.2632	M
13 Nitroglycerin	2	15.197	15.169	0.028	332353	2.50	2.67	
14 o-Nitrotoluene	1	15.770	15.749	0.021	62538	0.2500	0.2572	M
15 p-Nitrotoluene	1	15.997	15.969	0.028	55936	0.2500	0.2572	M
16 4-Amino-2,6-dinitrotoluene	1	16.537	16.509	0.028	72809	0.2500	0.2671	M
17 m-Nitrotoluene	1	16.837	16.809	0.028	71608	0.2500	0.2672	M
18 2-Amino-4,6-dinitrotoluene	1	17.357	17.329	0.028	109673	0.2500	0.2740	M
19 1,3,5-Trinitrobenzene	1	17.517	17.502	0.015	97660	0.2500	0.2580	M
20 2,6-Dinitrotoluene	1	18.650	18.622	0.028	70817	0.2500	0.2530	
21 2,4-Dinitrotoluene	1	19.103	19.082	0.021	144952	0.2500	0.2588	
22 Tetryl	1	22.390	22.355	0.035	68266	0.2500	0.2523	
23 2,4,6-Trinitrotoluene	1	23.210	23.182	0.028	106148	0.2500	0.2578	
24 PETN	2	24.410	24.382	0.028	330436	2.50	2.79	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00076	Amount Added:	25.00	Units: uL
8330 DMT_00013	Amount Added:	12.50	Units: uL

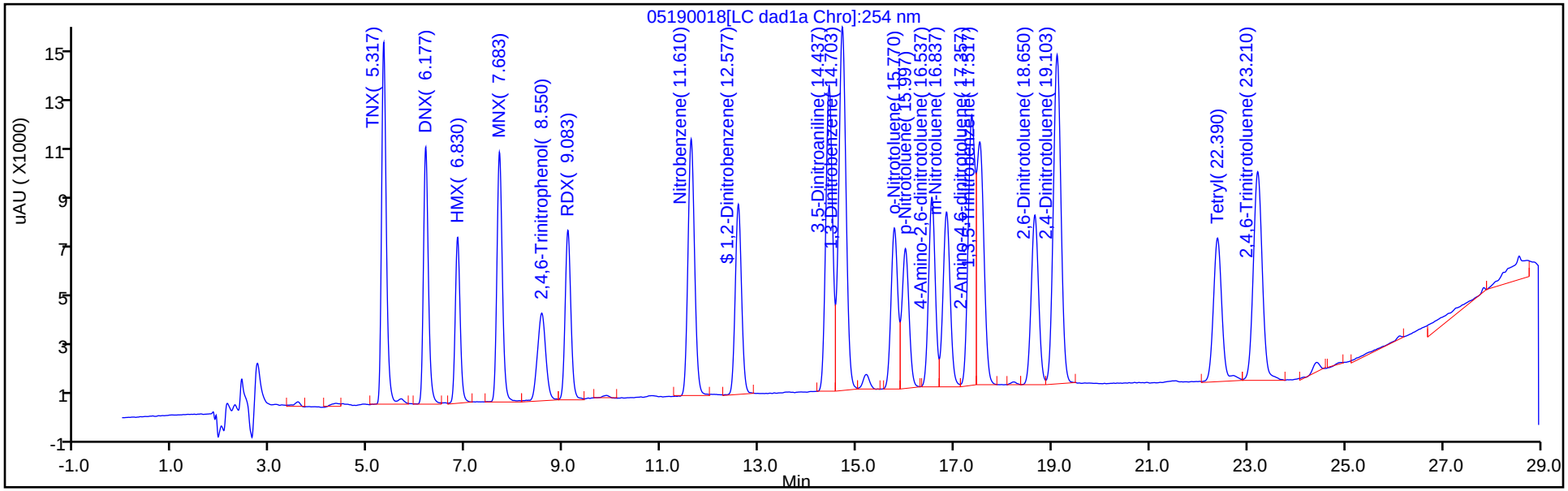
Report Date: 20-May-2023 11:50:53 Chrom Revision: 2.3 16-May-2023 16:37:30

Eurofins Denver

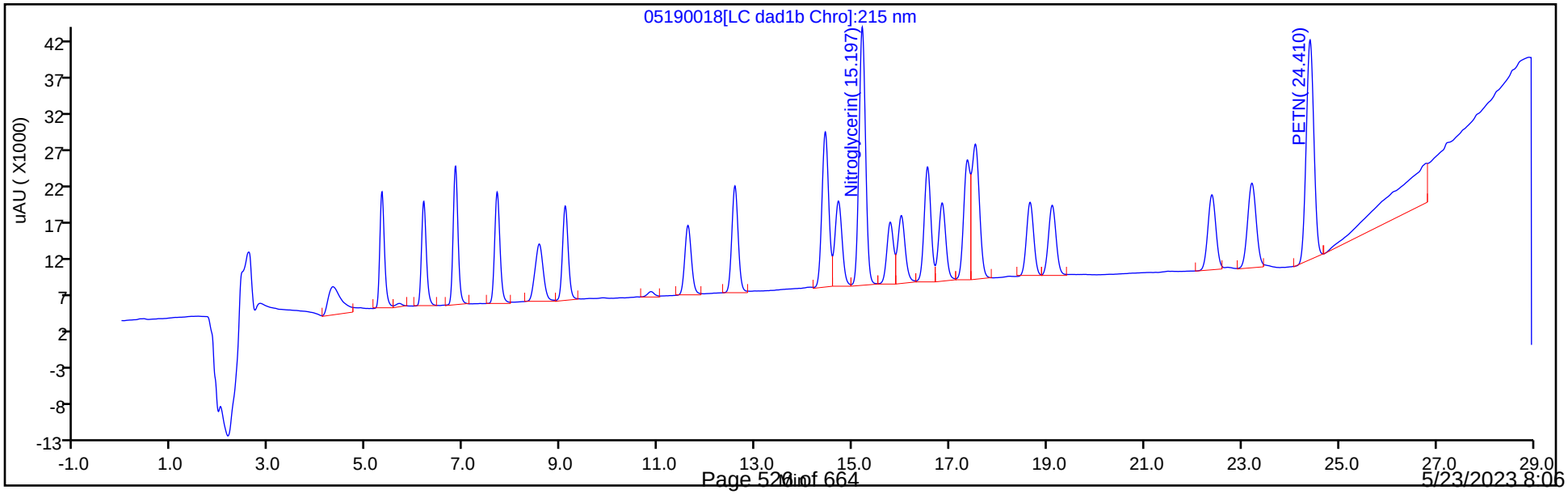
Data File: \\chromfs\denver\chromdata\g2_luna\20230519-121648.b\05190018.d

Injection Date:	19-May-2023 20:54:44	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	JZ/JG
Lims ID:	CCV DMT			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 Target: 1



Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



5/23/2023 8:06 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

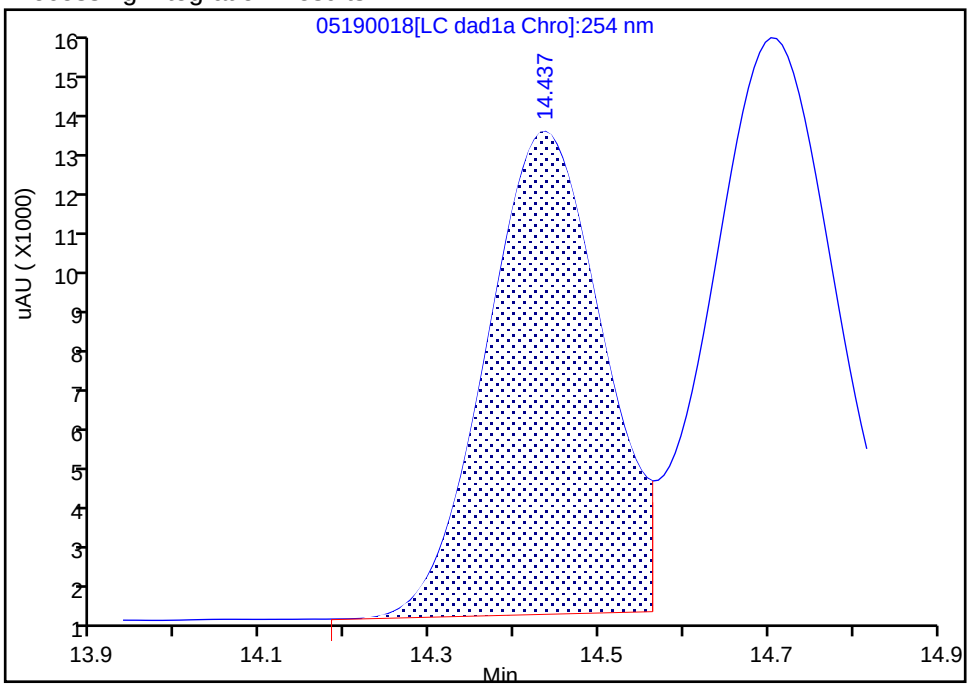
Data File:	\\chromfs\denver\chromdata\g2_luna\20230519-121648.b\05190018.d				
Injection Date:	19-May-2023 20:54:44	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	CCV DMT				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	7	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

11 3,5-Dinitroaniline, CAS: 618-87-1

Signal: 1

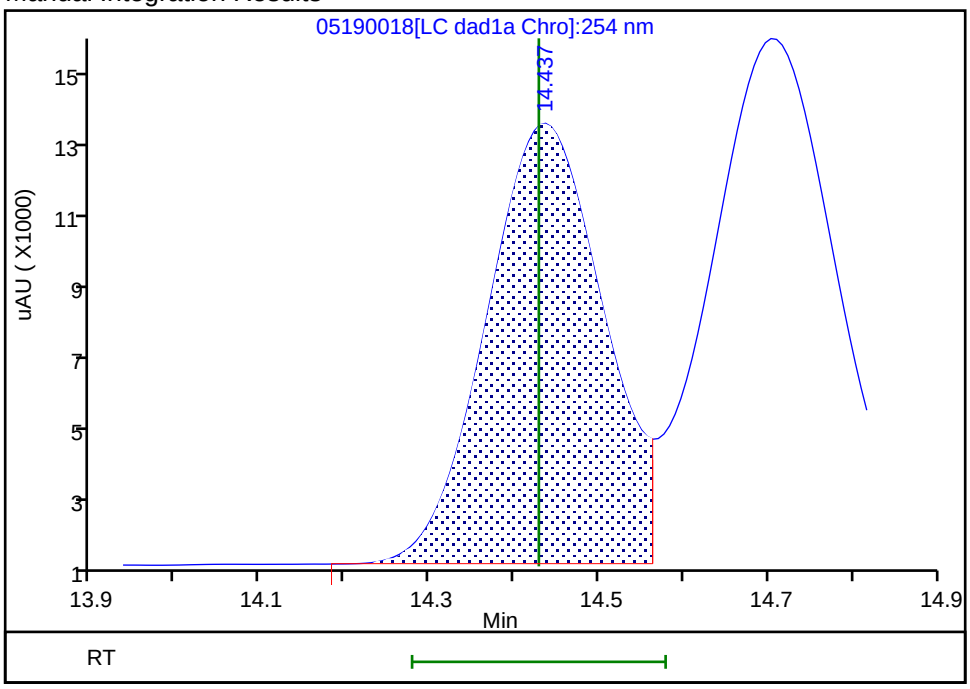
Processing Integration Results

RT: 14.44
Area: 115681
Amount: 0.268131
Amount Units: ug/ml



Manual Integration Results

RT: 14.44
Area: 117687
Amount: 0.272796
Amount Units: ug/ml



Reviewer: LV5D, 20-May-2023 11:48:45 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

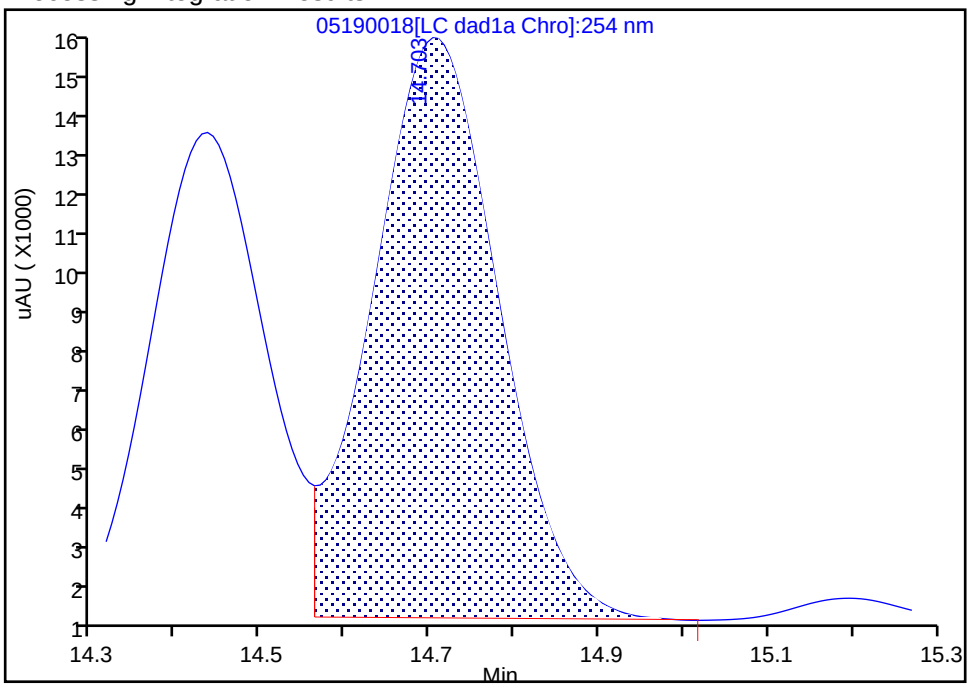
Data File: \\chromfs\denver\chromdata\g2_luna\20230519-121648.b\05190018.d
Injection Date: 19-May-2023 20:54:44 Instrument ID: CHHPLC_G2_LUNA
Lims ID: CCV DMT
Client ID:
Operator ID: JZ/JG ALS Bottle#: 7 Worklist Smp#: 18
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

12 1,3-Dinitrobenzene, CAS: 99-65-0

Signal: 1

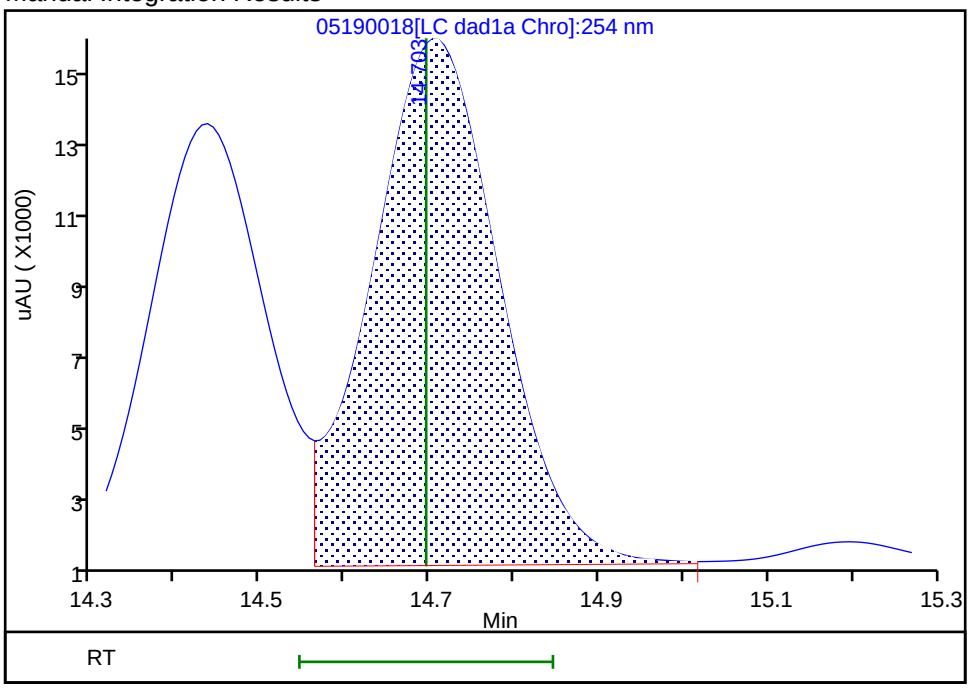
Processing Integration Results

RT: 14.70
Area: 149642
Amount: 0.257360
Amount Units: ug/ml



Manual Integration Results

RT: 14.70
Area: 153015
Amount: 0.263161
Amount Units: ug/ml



Reviewer: LV5D, 20-May-2023 11:48:45 -06:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

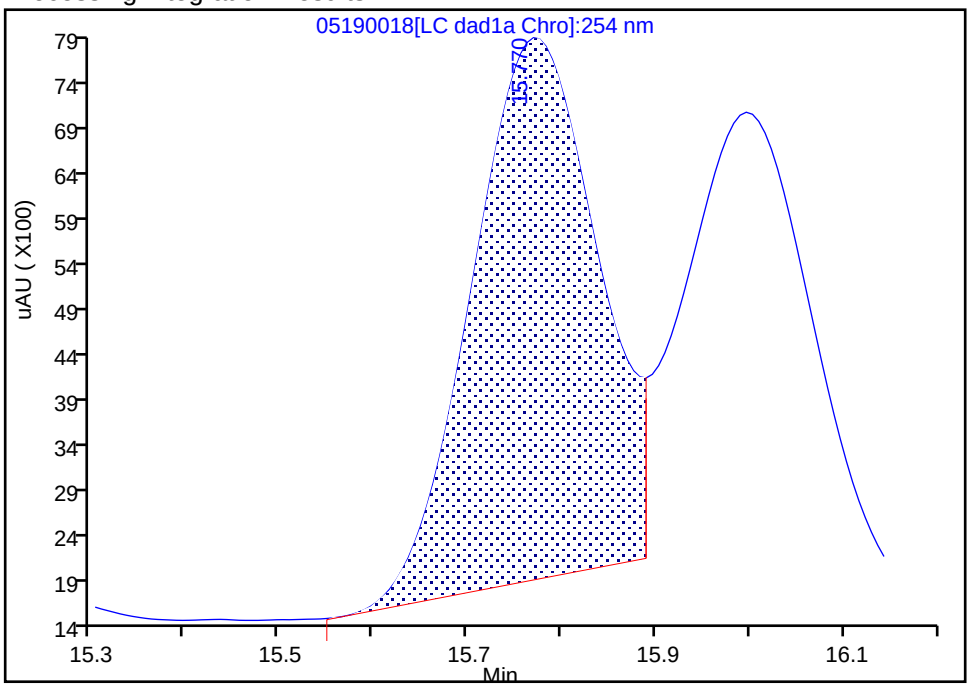
Data File:	\\chromfs\denver\chromdata\g2_luna\20230519-121648.b\05190018.d				
Injection Date:	19-May-2023 20:54:44	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	CCV DMT				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	7	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	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

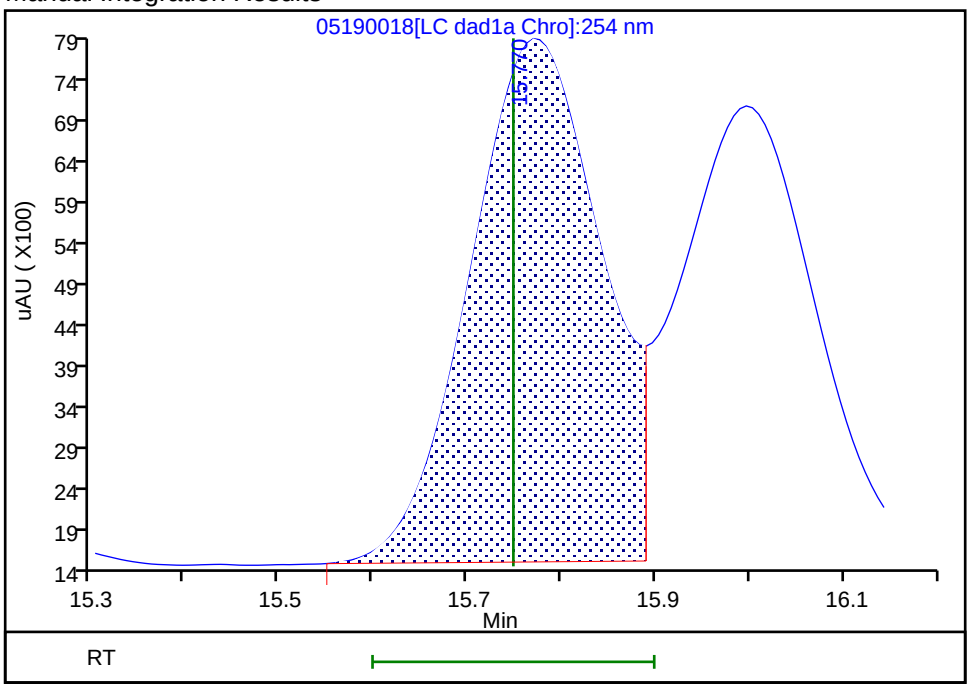
Processing Integration Results

RT: 15.77
Area: 56041
Amount: 0.230443
Amount Units: ug/ml



Manual Integration Results

RT: 15.77
Area: 62538
Amount: 0.257159
Amount Units: ug/ml



Reviewer: LV5D, 20-May-2023 11:48:45 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

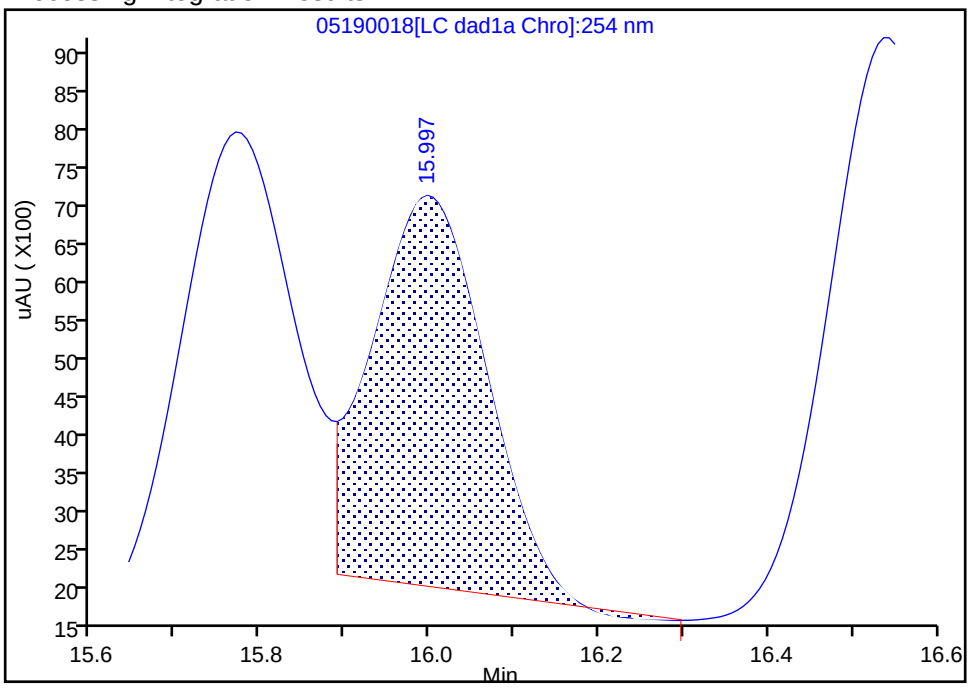
Data File:	\\chromfs\denver\chromdata\g2_luna\20230519-121648.b\05190018.d				
Injection Date:	19-May-2023 20:54:44	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	CCV DMT				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	7	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	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

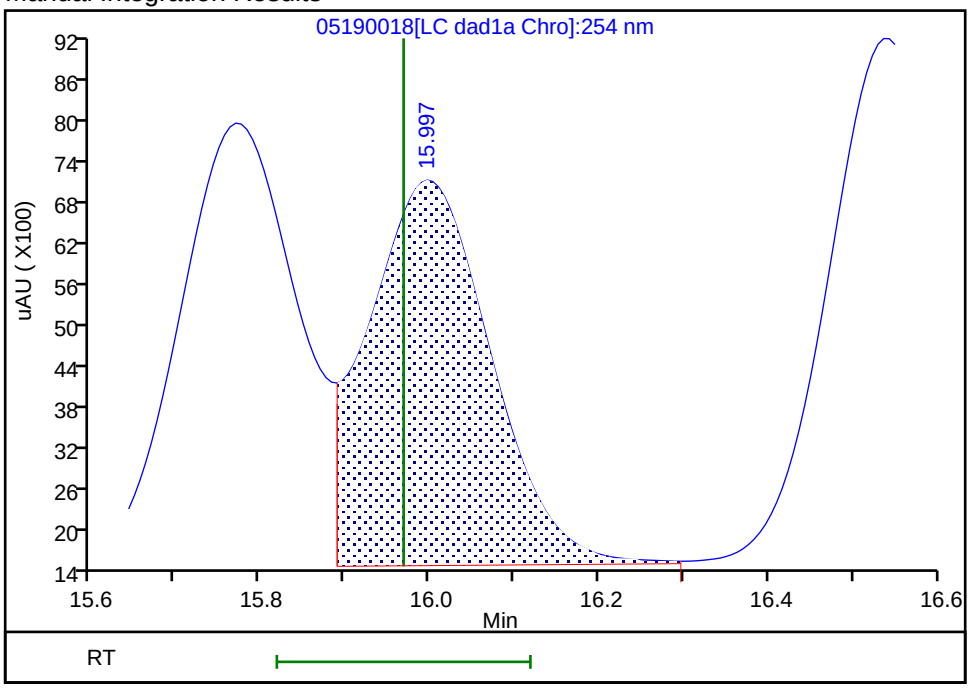
Processing Integration Results

RT: 16.00
Area: 48436
Amount: 0.222747
Amount Units: ug/ml



Manual Integration Results

RT: 16.00
Area: 55936
Amount: 0.257237
Amount Units: ug/ml



Reviewer: LV5D, 20-May-2023 11:48:45 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

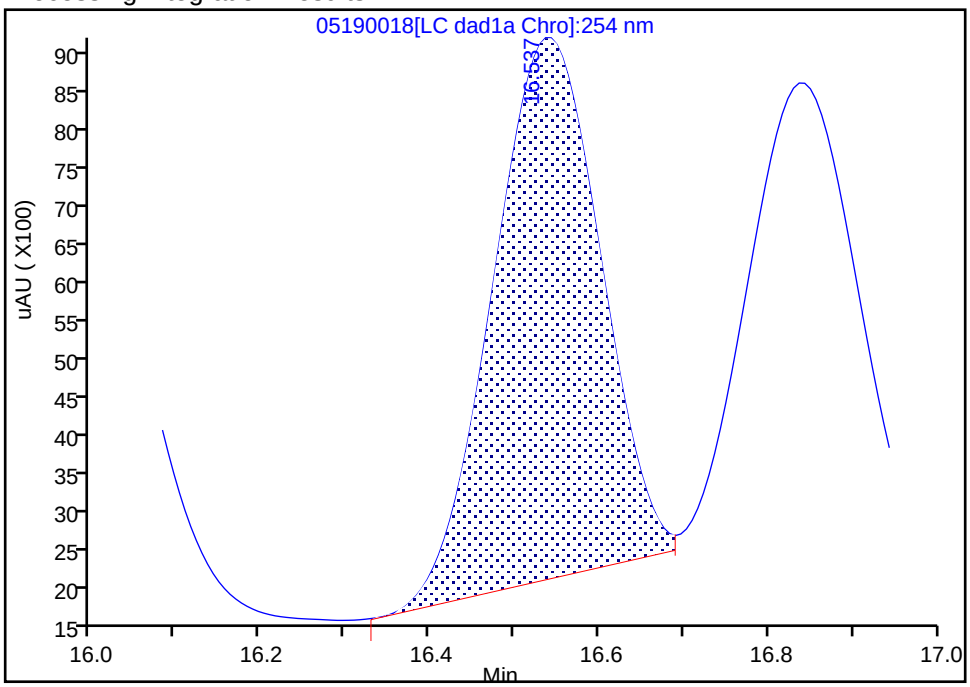
Data File:	\\chromfs\denver\chromdata\g2_luna\20230519-121648.b\05190018.d				
Injection Date:	19-May-2023 20:54:44	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	CCV DMT				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	7	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	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

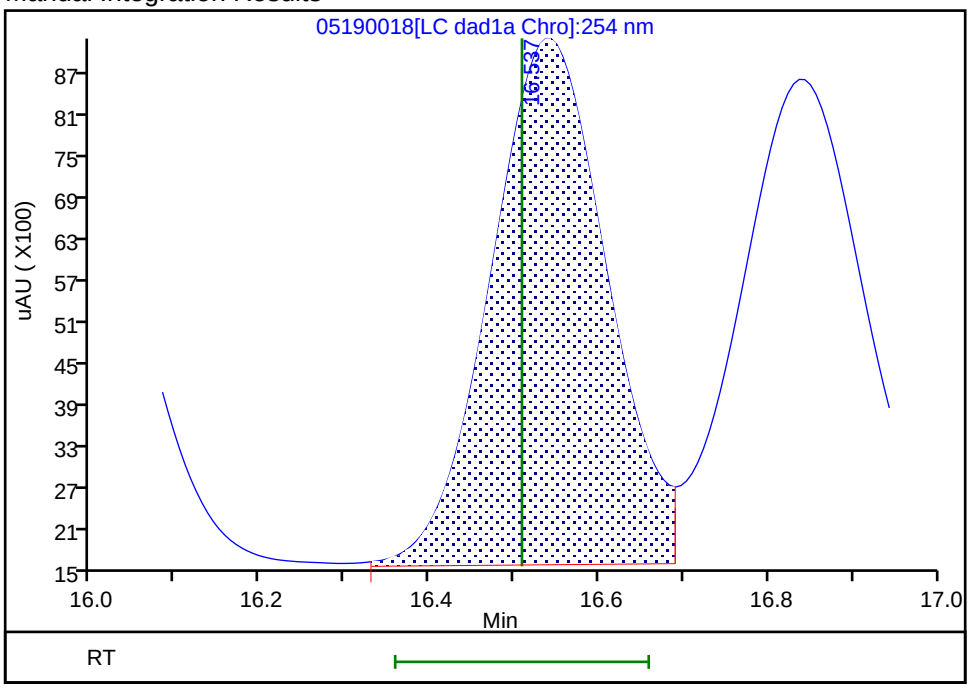
Processing Integration Results

RT: 16.54
Area: 62539
Amount: 0.229408
Amount Units: ug/ml



Manual Integration Results

RT: 16.54
Area: 72809
Amount: 0.267081
Amount Units: ug/ml



Reviewer: LV5D, 20-May-2023 11:48:45 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

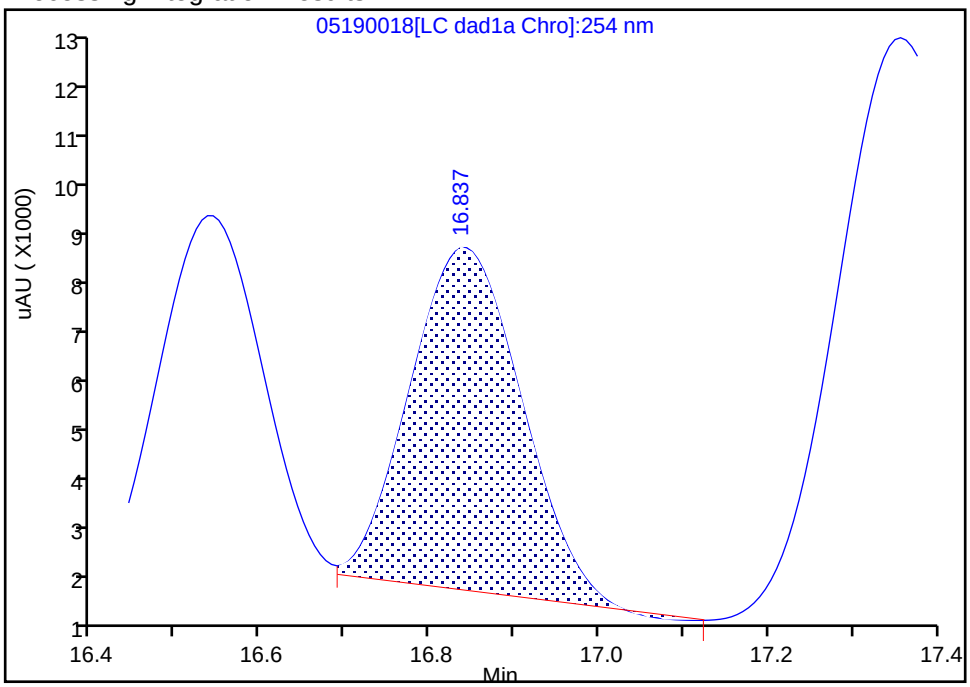
Data File:	\\chromfs\denver\chromdata\g2_luna\20230519-121648.b\05190018.d				
Injection Date:	19-May-2023 20:54:44	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	CCV DMT				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	7	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	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

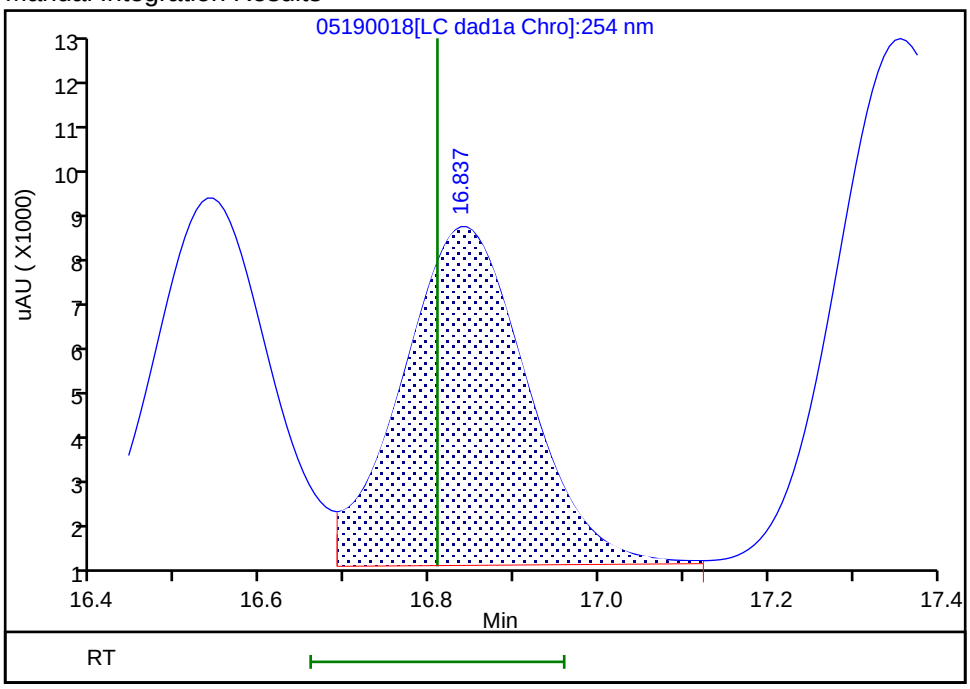
Processing Integration Results

RT: 16.84
Area: 59600
Amount: 0.222379
Amount Units: ug/ml



Manual Integration Results

RT: 16.84
Area: 71608
Amount: 0.267183
Amount Units: ug/ml



Reviewer: LV5D, 20-May-2023 11:48:45 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

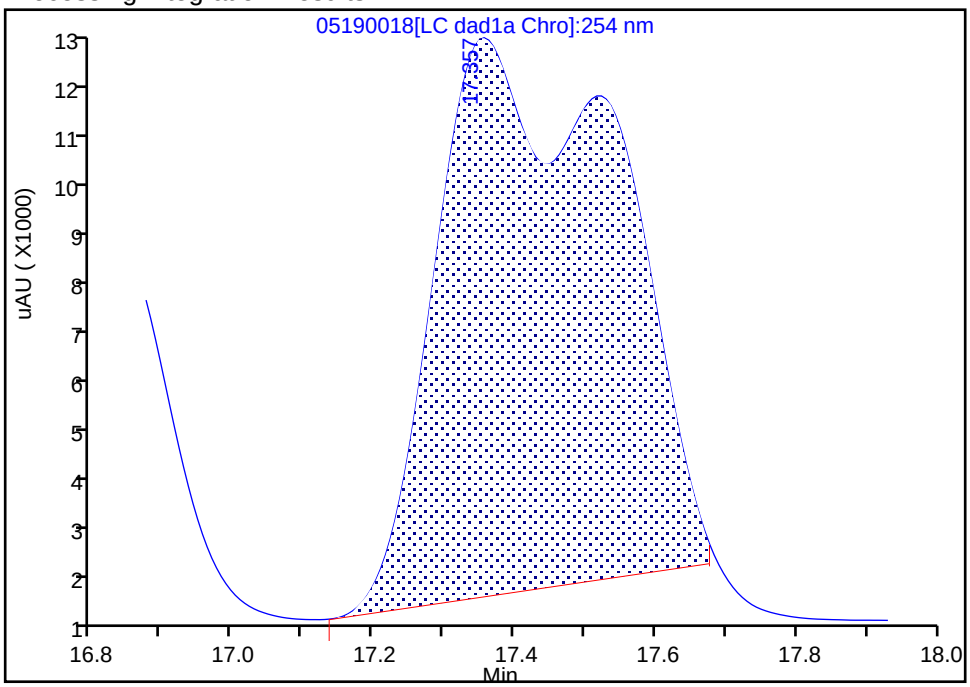
Data File:	\\chromfs\denver\chromdata\g2_luna\20230519-121648.b\05190018.d				
Injection Date:	19-May-2023 20:54:44	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	CCV DMT				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	7	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	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

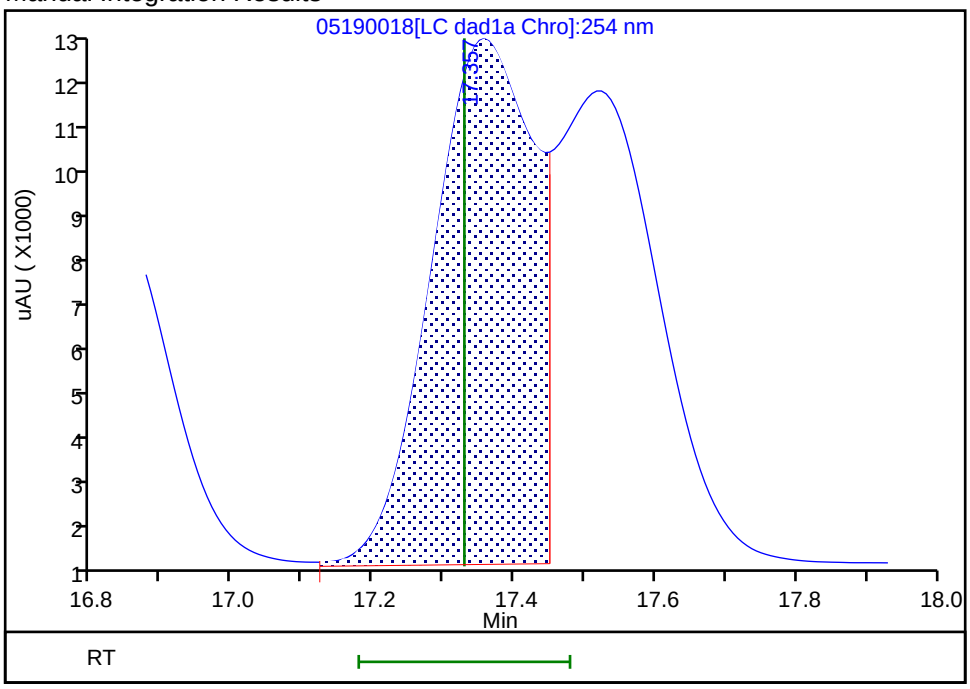
Processing Integration Results

RT: 17.36
Area: 186193
Amount: 0.465153
Amount Units: ug/ml



Manual Integration Results

RT: 17.36
Area: 109673
Amount: 0.273988
Amount Units: ug/ml



Reviewer: LV5D, 20-May-2023 11:48:45 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

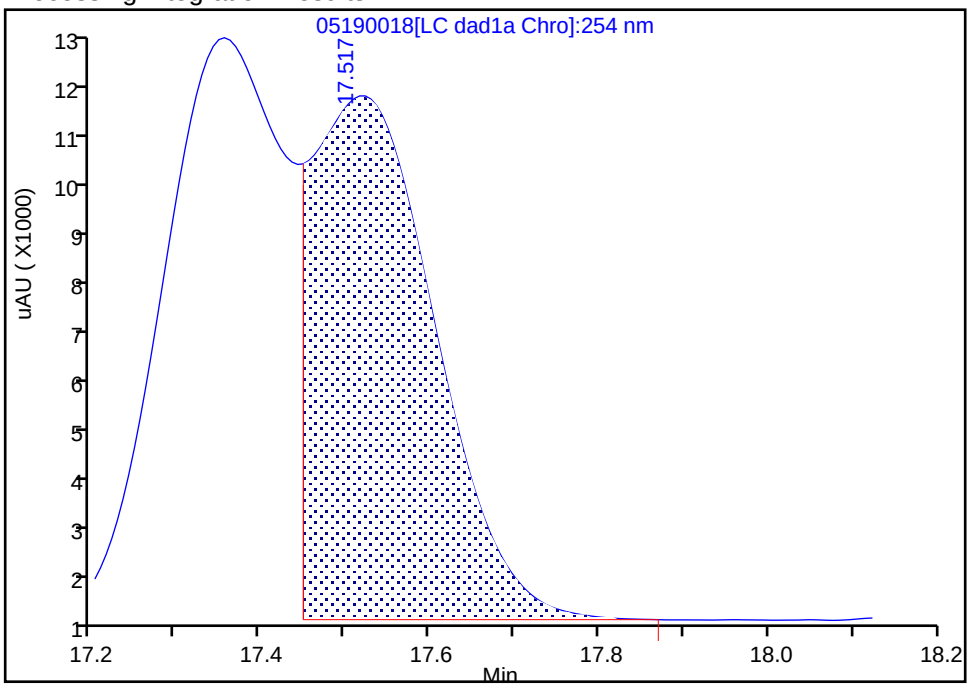
Data File:	\\chromfs\denver\chromdata\g2_luna\20230519-121648.b\05190018.d				
Injection Date:	19-May-2023 20:54:44	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	CCV DMT				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	7	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	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

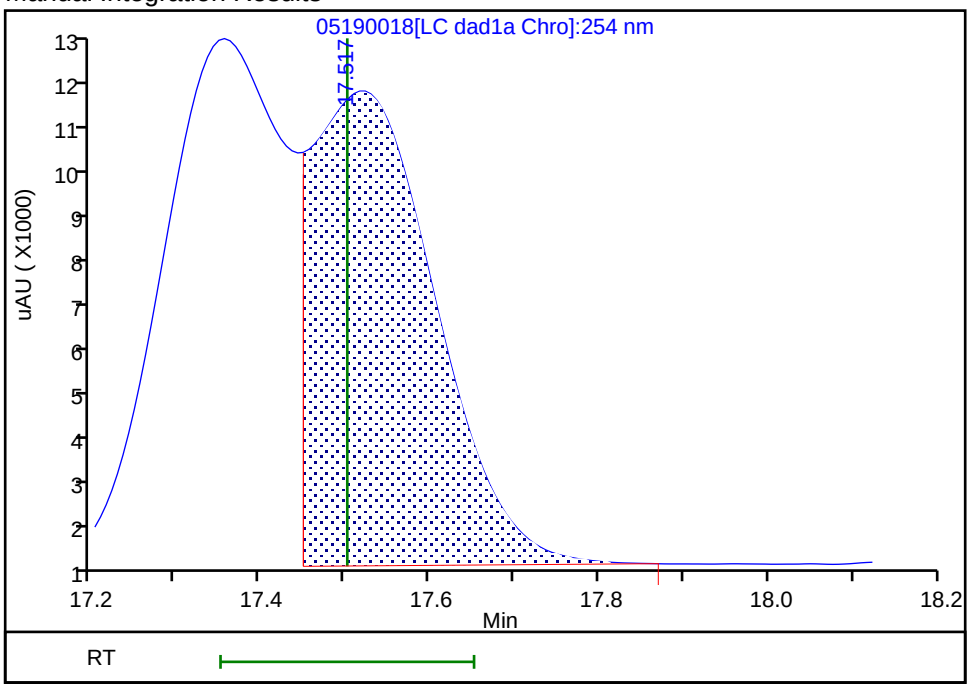
Processing Integration Results

RT: 17.52
Area: 97219
Amount: 0.256861
Amount Units: ug/ml



Manual Integration Results

RT: 17.52
Area: 97660
Amount: 0.258027
Amount Units: ug/ml



Reviewer: LV5D, 20-May-2023 11:48:45 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Lab Sample ID: ICV 280-601664/20 Calibration Date: 02/08/2023 19:05

Instrument ID: CHHPLC_X3 Calib Start Date: 02/08/2023 15:38

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 02/08/2023 18:42

Lab File ID: 02080020.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	93528	88148		471	500	-5.8	20.0
RDX	Ave	106380	105642		497	500	-0.7	20.0
Picric acid	Ave	75830	83408		550	500	10.0	20.0
1,3,5-Trinitrobenzene	Ave	217147	243558		561	500	12.2	20.0
1,3-Dinitrobenzene	Ave	294397	317476		539	500	7.8	20.0
Nitrobenzene	Ave	191245	205682		538	500	7.5	20.0
3,5-Dinitroaniline	Lin2		223846		489	500	-2.2	20.0
Tetryl	Ave	164121	182414		556	500	11.1	20.0
Nitroglycerin	Ave	64070	67923		5300	5000	6.0	20.0
2,4,6-Trinitrotoluene	Ave	211040	213428		506	500	1.1	20.0
4-Amino-2,6-dinitrotoluene	Ave	154933	158824		513	500	2.5	20.0
2-Amino-4,6-dinitrotoluene	Ave	201410	204888		509	500	1.7	20.0
2,6-Dinitrotoluene	Ave	142745	147024		515	500	3.0	20.0
2,4-Dinitrotoluene	Ave	296667	301684		508	500	1.7	20.0
2-Nitrotoluene	Ave	127896	128960		504	500	0.8	20.0
4-Nitrotoluene	Ave	111880	111646		499	500	-0.2	20.0
3-Nitrotoluene	Ave	140492	138998		495	500	-1.1	20.0
PETN	Ave	68845	76520		5560	5000	11.1	20.0
1,2-Dinitrobenzene	Ave	126309	125412		496	500	-0.7	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Lab Sample ID: ICV 280-601664/20 Calibration Date: 02/08/2023 19:05

Instrument ID: CHHPLC_X3 Calib Start Date: 02/08/2023 15:38

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 02/08/2023 18:42

Lab File ID: 02080020.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.55	6.39	6.69
RDX	7.56	7.41	7.71
Picric acid	8.02	7.89	8.19
1,3,5-Trinitrobenzene	8.65	8.49	8.79
1,3-Dinitrobenzene	9.26	9.11	9.41
Nitrobenzene	9.64	9.48	9.78
3,5-Dinitroaniline	9.84	9.68	9.98
Tetryl	9.99	9.83	10.13
Nitroglycerin	10.46	10.29	10.59
2,4,6-Trinitrotoluene	10.88	10.76	10.96
4-Amino-2,6-dinitrotoluene	11.05	10.93	11.13
2-Amino-4,6-dinitrotoluene	11.30	11.18	11.38
2,6-Dinitrotoluene	11.48	11.35	11.55
2,4-Dinitrotoluene	11.64	11.52	11.72
2-Nitrotoluene	12.46	12.29	12.59
4-Nitrotoluene	12.88	12.69	12.99
3-Nitrotoluene	13.44	13.26	13.56
PETN	14.60	14.40	14.70
1,2-Dinitrobenzene	8.52	8.37	8.67

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20230208-118465.b\02080020.D
Lims ID: ICV INT
Client ID:
Sample Type: ICV
Inject. Date: 08-Feb-2023 19:05:10 ALS Bottle#: 20 Worklist Smp#: 20
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: ICV INT
Operator ID: JZ/MAR Instrument ID: CHHPLC_X3
Sublist:

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20230208-118465.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 09-Feb-2023 13:03:49 Calib Date: 08-Feb-2023 18:42:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X\20230208-118465.b\02080019.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX1604

First Level Reviewer: LV5D Date: 08-Feb-2023 19:31:36

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
4 HMX	1	6.549	6.544	0.005	44074	0.5000	0.4712	M
8 RDX	1	7.563	7.564	-0.001	52821	0.5000	0.4965	M
9 2,4,6-Trinitrophenol	1	8.023	8.044	-0.021	41704	0.5000	0.5500	
$ 10 1,2-Dinitrobenzene	1	8.523	8.517	0.006	62706	0.5000	0.4965	
11 1,3,5-Trinitrobenzene	1	8.649	8.644	0.005	121779	0.5000	0.5608	
12 1,3-Dinitrobenzene	1	9.263	9.257	0.006	158738	0.5000	0.5392	
13 Nitrobenzene	1	9.636	9.631	0.005	102841	0.5000	0.5377	
14 3,5-Dinitroaniline	1	9.843	9.831	0.012	111923	0.5000	0.4890	
15 Tetryl	1	9.989	9.977	0.012	91207	0.5000	0.5557	
16 Nitroglycerin	2	10.456	10.437	0.019	339614	5.00	5.30	
17 2,4,6-Trinitrotoluene	1	10.883	10.864	0.019	106714	0.5000	0.5057	
18 4-Amino-2,6-dinitrotoluene	1	11.049	11.031	0.018	79412	0.5000	0.5126	
19 2-Amino-4,6-dinitrotoluene	1	11.296	11.277	0.019	102444	0.5000	0.5086	
20 2,6-Dinitrotoluene	1	11.476	11.451	0.025	73512	0.5000	0.5150	
21 2,4-Dinitrotoluene	1	11.643	11.617	0.026	150842	0.5000	0.5085	
22 o-Nitrotoluene	1	12.463	12.437	0.026	64480	0.5000	0.5042	
23 p-Nitrotoluene	1	12.876	12.844	0.032	55823	0.5000	0.4990	
24 m-Nitrotoluene	1	13.443	13.411	0.032	69499	0.5000	0.4947	
25 PETN	2	14.596	14.551	0.045	382602	5.00	5.56	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

8330Surrogate_00138	Amount Added:	50.00	Units: uL
8330 LCS_00121	Amount Added:	50.00	Units: uL
3,5-DNA LCS_00043	Amount Added:	50.00	Units: uL

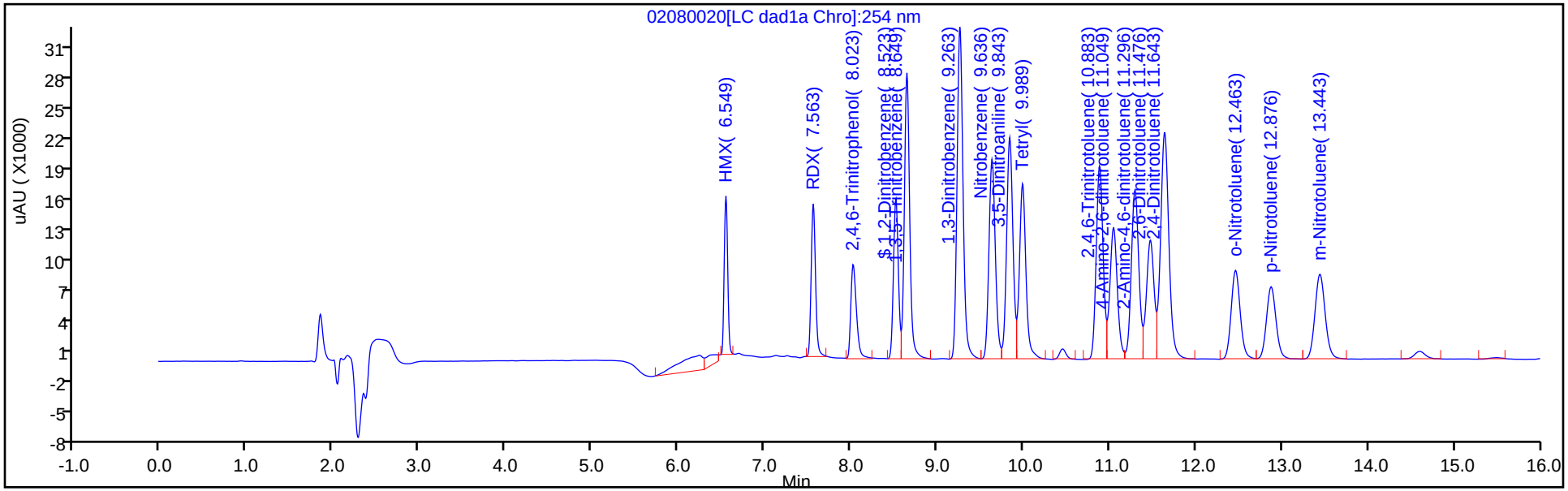
Report Date: 09-Feb-2023 13:04:01 Chrom Revision: 2.3 01-Feb-2023 13:23:06

Eurofins Denver

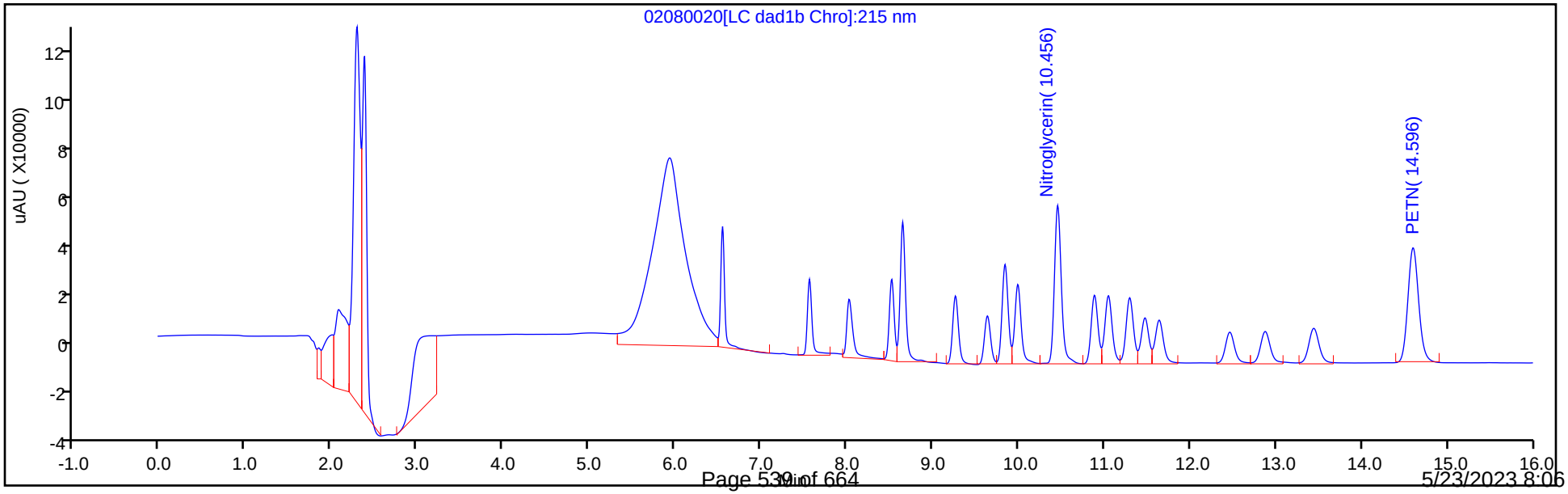
Data File: \\chromfs\denver\chromdata\chhplc_x\20230208-118465.b\02080020.d

Injection Date:	08-Feb-2023 19:05:10	Instrument ID:	CHHPLC_X3	Operator ID:	JZ/MAR
Lims ID:	ICV INT			Worklist Smp#:	20
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

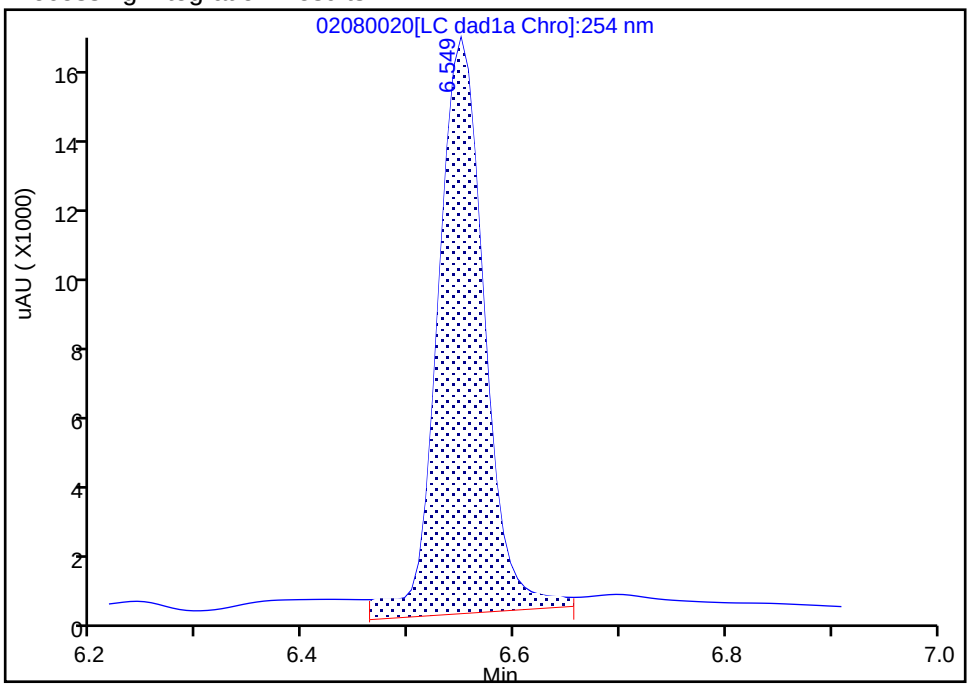
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230208-118465.b\02080020.d				
Injection Date:	08-Feb-2023 19:05:10	Instrument ID:	CHHPLC_X3		
Lims ID:	ICV INT				
Client ID:					
Operator ID:	JZ/MAR	ALS Bottle#:	20	Worklist Smp#:	20
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

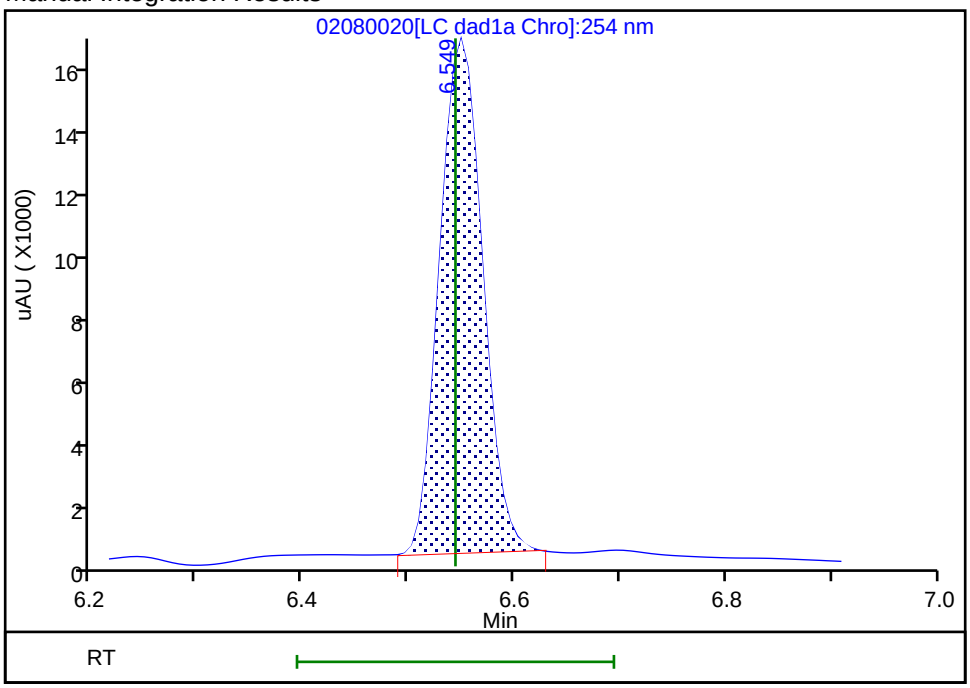
Processing Integration Results

RT: 6.55
Area: 49010
Amount: 0.524013
Amount Units: ug/mL



Manual Integration Results

RT: 6.55
Area: 44074
Amount: 0.471238
Amount Units: ug/mL



Reviewer: LV5D, 08-Feb-2023 19:31:27
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

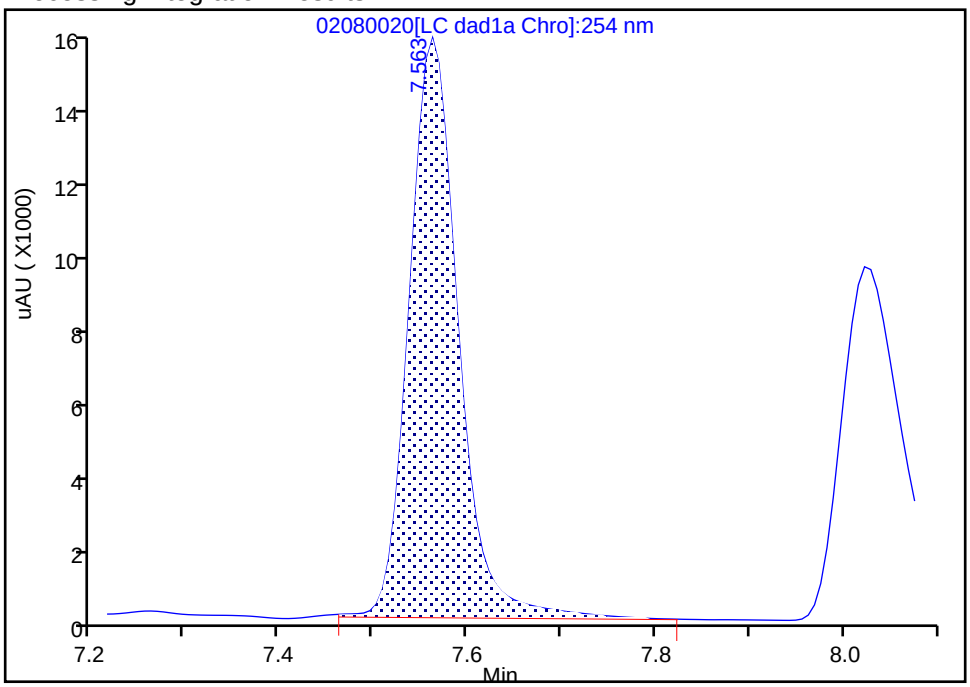
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230208-118465.b\02080020.d				
Injection Date:	08-Feb-2023 19:05:10	Instrument ID:	CHHPLC_X3		
Lims ID:	ICV INT				
Client ID:					
Operator ID:	JZ/MAR	ALS Bottle#:	20	Worklist Smp#:	20
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

8 RDX, CAS: 121-82-4

Signal: 1

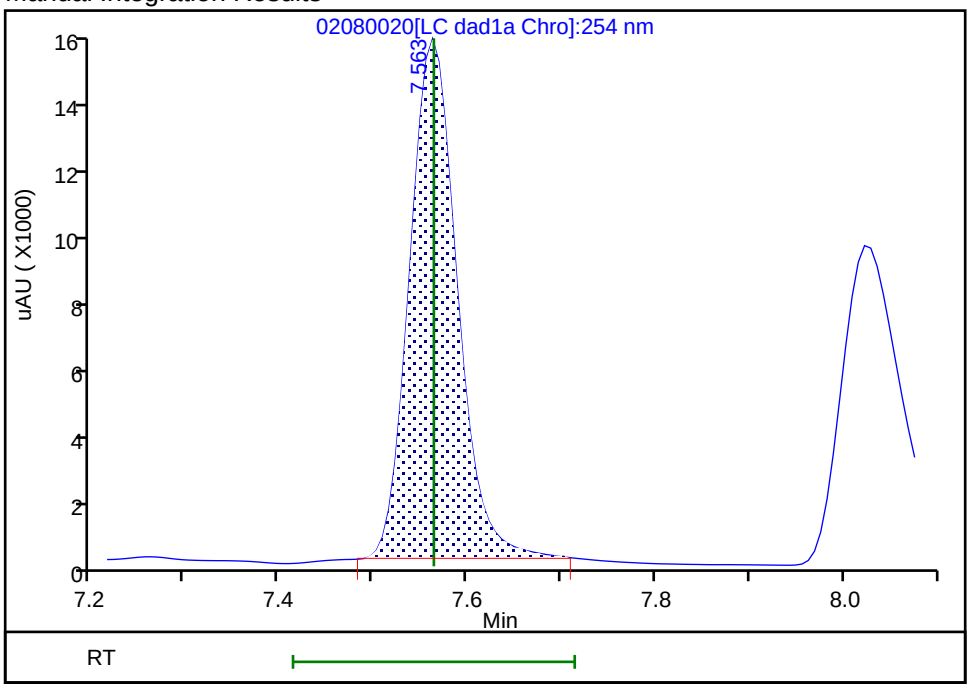
Processing Integration Results

RT: 7.56
Area: 54996
Amount: 0.516978
Amount Units: ug/mL



Manual Integration Results

RT: 7.56
Area: 52821
Amount: 0.496532
Amount Units: ug/mL



Reviewer: LV5D, 08-Feb-2023 19:32:23
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Lab Sample ID: CCV 280-612440/8 Calibration Date: 05/15/2023 15:34

Instrument ID: CHHPLC_X3 Calib Start Date: 02/08/2023 15:38

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 02/08/2023 18:42

Lab File ID: 05152308.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	93528	96708		258	250	3.4	20.0
RDX	Ave	106380	113144		266	250	6.4	20.0
Picric acid	Ave	75830	82272		271	250	8.5	20.0
1,3,5-Trinitrobenzene	Ave	217147	223740		258	250	3.0	20.0
1,3-Dinitrobenzene	Ave	294397	310408		264	250	5.4	20.0
Nitrobenzene	Ave	191245	199056		260	250	4.1	20.0
3,5-Dinitroaniline	Lin2		236636		259	250	3.5	20.0
Tetryl	Ave	164121	146908		224	250	-10.5	20.0
Nitroglycerin	Ave	64070	67772		2640	2500	5.8	20.0
2,4,6-Trinitrotoluene	Ave	211040	214936		255	250	1.8	20.0
4-Amino-2,6-dinitrotoluene	Ave	154933	159628		258	250	3.0	20.0
2-Amino-4,6-dinitrotoluene	Ave	201410	205368		255	250	2.0	20.0
2,6-Dinitrotoluene	Ave	142745	150140		263	250	5.2	20.0
2,4-Dinitrotoluene	Ave	296667	310852		262	250	4.8	20.0
2-Nitrotoluene	Ave	127896	130576		255	250	2.1	20.0
4-Nitrotoluene	Ave	111880	109948		246	250	-1.7	20.0
3-Nitrotoluene	Ave	140492	143184		255	250	1.9	20.0
PETN	Ave	68845	72966		2650	2500	6.0	20.0
1,2-Dinitrobenzene	Ave	126309	138708		275	250	9.8	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Lab Sample ID: CCV 280-612440/8 Calibration Date: 05/15/2023 15:34

Instrument ID: CHHPLC_X3 Calib Start Date: 02/08/2023 15:38

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 02/08/2023 18:42

Lab File ID: 05152308.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.56	6.41	6.71
RDX	7.58	7.43	7.73
Picric acid	7.99	7.84	8.14
1,3,5-Trinitrobenzene	8.66	8.51	8.81
1,3-Dinitrobenzene	9.29	9.14	9.44
Nitrobenzene	9.66	9.51	9.81
3,5-Dinitroaniline	9.91	9.76	10.06
Tetryl	10.04	9.89	10.19
Nitroglycerin	10.50	10.35	10.65
2,4,6-Trinitrotoluene	10.94	10.84	11.04
4-Amino-2,6-dinitrotoluene	11.14	11.04	11.24
2-Amino-4,6-dinitrotoluene	11.40	11.30	11.50
2,6-Dinitrotoluene	11.54	11.44	11.64
2,4-Dinitrotoluene	11.71	11.61	11.81
2-Nitrotoluene	12.54	12.39	12.69
4-Nitrotoluene	12.96	12.81	13.11
3-Nitrotoluene	13.54	13.39	13.69
PETN	14.72	14.57	14.87
1,2-Dinitrobenzene	8.54	8.39	8.69

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20230515-121447.b\05152308.D
Lims ID: CCV DMT
Client ID:
Sample Type: CCV
Inject. Date: 15-May-2023 15:34:34 ALS Bottle#: 7 Worklist Smp#: 8
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV DMT
Operator ID: JZ/JG Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub27

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20230515-121447.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 16-May-2023 13:24:37 Calib Date: 24-Feb-2023 17:41:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X\20230224-118952.b\02240018.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX1672

First Level Reviewer: K8YG Date: 16-May-2023 07:39:52

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
3 TNX	1	6.437	6.437	0.000	46995	0.2508	0.2377	M
4 HMX	1	6.557	6.557	0.000	24177	0.2500	0.2585	M
6 DNX	1	6.763	6.763	0.000	34449	0.2503	0.2385	M
7 MNX	1	7.190	7.190	0.000	37696	0.2918	0.2874	
8 RDX	1	7.583	7.583	0.000	28286	0.2500	0.2659	
9 2,4,6-Trinitrophenol	1	7.990	7.990	0.000	20568	0.2500	0.2712	
$ 10 1,2-Dinitrobenzene	1	8.543	8.543	0.000	34677	0.2500	0.2745	
11 1,3,5-Trinitrobenzene	1	8.663	8.663	0.000	55935	0.2500	0.2576	
12 1,3-Dinitrobenzene	1	9.290	9.290	0.000	77602	0.2500	0.2636	
13 Nitrobenzene	1	9.663	9.663	0.000	49764	0.2500	0.2602	
14 3,5-Dinitroaniline	1	9.910	9.910	0.000	59159	0.2500	0.2588	
15 Tetryl	1	10.043	10.043	0.000	36727	0.2500	0.2238	
16 Nitroglycerin	2	10.496	10.496	0.000	169429	2.50	2.64	
17 2,4,6-Trinitrotoluene	1	10.936	10.936	0.000	53734	0.2500	0.2546	
18 4-Amino-2,6-dinitrotoluene	1	11.136	11.136	0.000	39907	0.2500	0.2576	
19 2-Amino-4,6-dinitrotoluene	1	11.396	11.396	0.000	51342	0.2500	0.2549	
20 2,6-Dinitrotoluene	1	11.543	11.543	0.000	37535	0.2500	0.2630	
21 2,4-Dinitrotoluene	1	11.710	11.710	0.000	77713	0.2500	0.2620	
22 o-Nitrotoluene	1	12.536	12.536	0.000	32644	0.2500	0.2552	
23 p-Nitrotoluene	1	12.956	12.956	0.000	27487	0.2500	0.2457	
24 m-Nitrotoluene	1	13.536	13.536	0.000	35796	0.2500	0.2548	
25 PETN	2	14.716	14.716	0.000	182415	2.50	2.65	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

8330 DMT_00013	Amount Added:	12.50	Units: uL
8330IntermStk_00075	Amount Added:	25.00	Units: uL

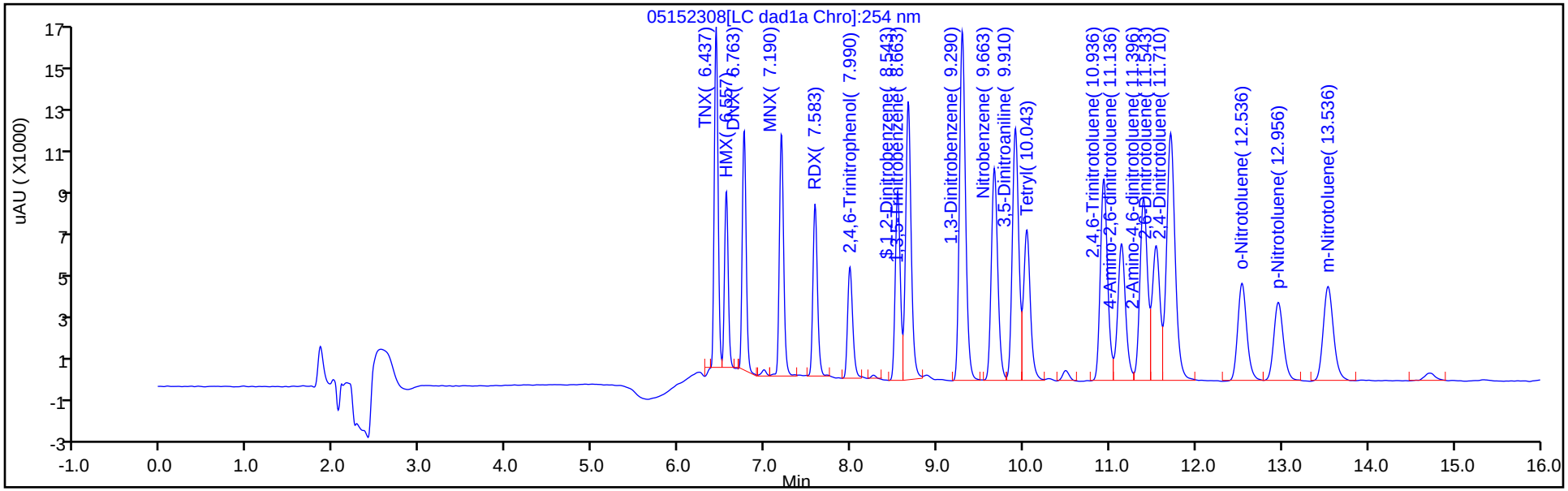
Report Date: 16-May-2023 13:24:37 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

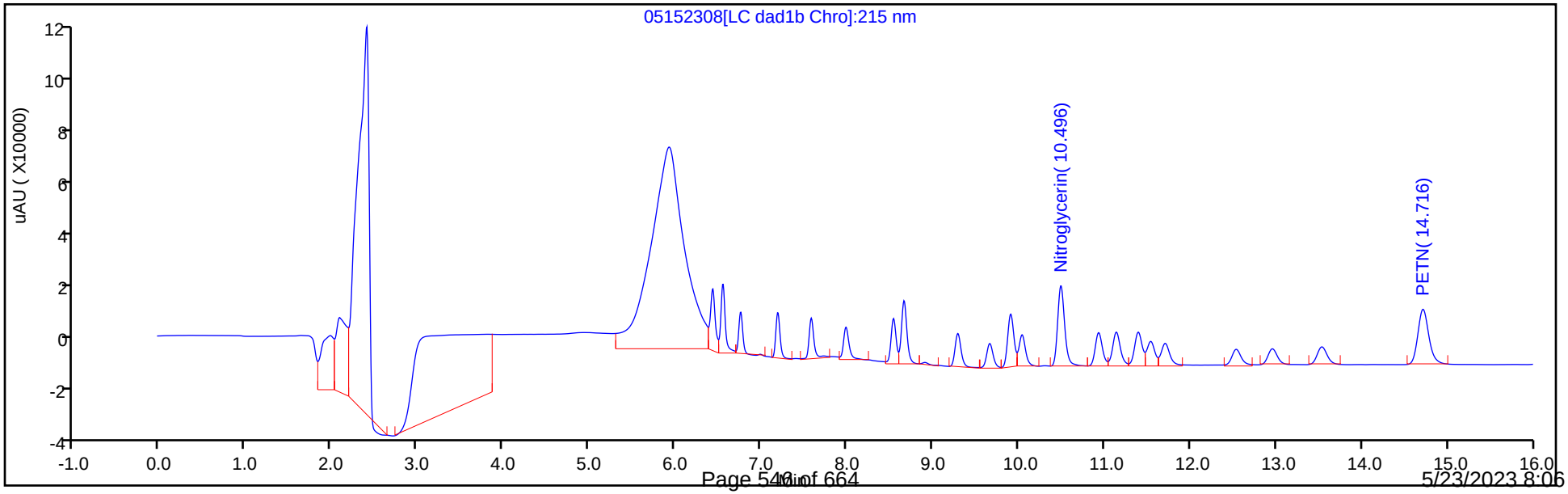
Data File: \\chromfs\denver\chromdata\chhplc_x\20230515-121447.b\05152308.d

Injection Date:	15-May-2023 15:34:34	Instrument ID:	CHHPLC_X3	Operator ID:	JZ/JG
Lims ID:	CCV DMT			Worklist Smp#:	8
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



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

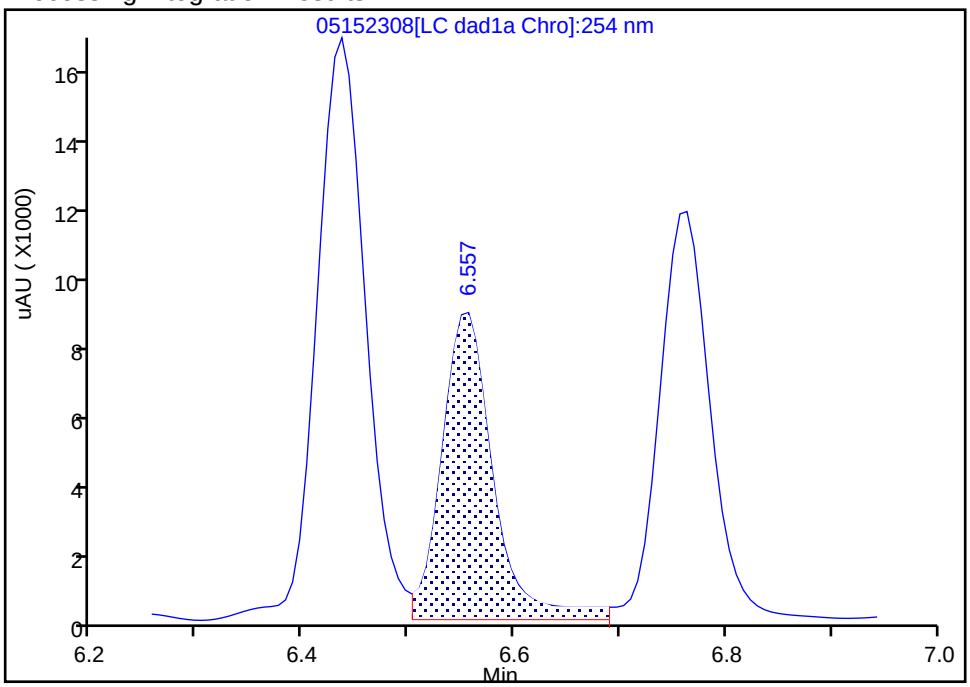
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230515-121447.b\05152308.d				
Injection Date:	15-May-2023 15:34:34	Instrument ID:	CHHPLC_X3		
Lims ID:	CCV DMT				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	7	Worklist Smp#:	8
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

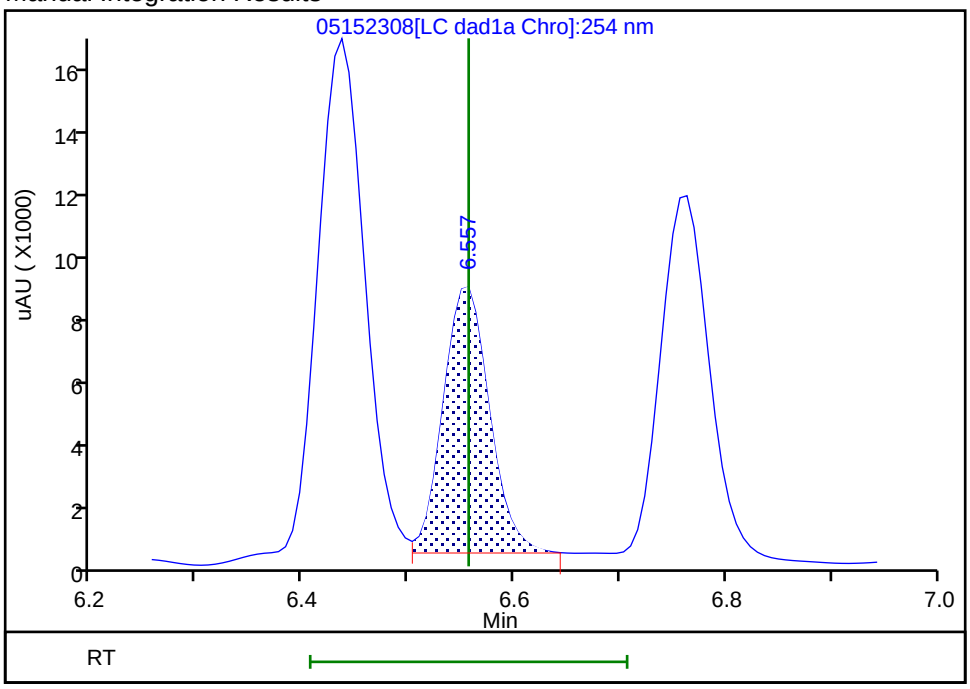
Processing Integration Results

RT: 6.56
Area: 28220
Amount: 0.301727
Amount Units: ug/mL



Manual Integration Results

RT: 6.56
Area: 24177
Amount: 0.258500
Amount Units: ug/mL



Reviewer: K8YG, 16-May-2023 07:39:00
Audit Action: Split an Integrated Peak Audit Reason: Baseline

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Lab Sample ID: CCV 280-612440/8 Calibration Date: 05/15/2023 15:34

Instrument ID: CHHPLC_X3 Calib Start Date: 02/24/2023 15:00

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 02/24/2023 17:41

Lab File ID: 05152308.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
TNX	Ave	197687	187418		238	251	-5.2	20.0
DNX	Ave	144462	137658		238	250	-4.7	20.0
MNX	Ave	131172	129207		287	292	-1.5	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Lab Sample ID: CCV 280-612440/8 Calibration Date: 05/15/2023 15:34

Instrument ID: CHHPLC_X3 Calib Start Date: 02/24/2023 15:00

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 02/24/2023 17:41

Lab File ID: 05152308.D

Analyte	RT	RT WINDOW	
		FROM	TO
TNX	6.44	6.34	6.54
DNX	6.76	6.66	6.86
MNX	7.19	7.04	7.34

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20230515-121447.b\05152308.D
Lims ID: CCV DMT
Client ID:
Sample Type: CCV
Inject. Date: 15-May-2023 15:34:34 ALS Bottle#: 7 Worklist Smp#: 8
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV DMT
Operator ID: JZ/JG Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub27

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20230515-121447.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 16-May-2023 13:24:37 Calib Date: 24-Feb-2023 17:41:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X\20230224-118952.b\02240018.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX1672

First Level Reviewer: K8YG Date: 16-May-2023 07:39:52

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
3 TNX	1	6.437	6.437	0.000	46995	0.2508	0.2377	M
4 HMX	1	6.557	6.557	0.000	24177	0.2500	0.2585	M
6 DNX	1	6.763	6.763	0.000	34449	0.2503	0.2385	M
7 MNX	1	7.190	7.190	0.000	37696	0.2918	0.2874	
8 RDX	1	7.583	7.583	0.000	28286	0.2500	0.2659	
9 2,4,6-Trinitrophenol	1	7.990	7.990	0.000	20568	0.2500	0.2712	
$ 10 1,2-Dinitrobenzene	1	8.543	8.543	0.000	34677	0.2500	0.2745	
11 1,3,5-Trinitrobenzene	1	8.663	8.663	0.000	55935	0.2500	0.2576	
12 1,3-Dinitrobenzene	1	9.290	9.290	0.000	77602	0.2500	0.2636	
13 Nitrobenzene	1	9.663	9.663	0.000	49764	0.2500	0.2602	
14 3,5-Dinitroaniline	1	9.910	9.910	0.000	59159	0.2500	0.2588	
15 Tetryl	1	10.043	10.043	0.000	36727	0.2500	0.2238	
16 Nitroglycerin	2	10.496	10.496	0.000	169429	2.50	2.64	
17 2,4,6-Trinitrotoluene	1	10.936	10.936	0.000	53734	0.2500	0.2546	
18 4-Amino-2,6-dinitrotoluene	1	11.136	11.136	0.000	39907	0.2500	0.2576	
19 2-Amino-4,6-dinitrotoluene	1	11.396	11.396	0.000	51342	0.2500	0.2549	
20 2,6-Dinitrotoluene	1	11.543	11.543	0.000	37535	0.2500	0.2630	
21 2,4-Dinitrotoluene	1	11.710	11.710	0.000	77713	0.2500	0.2620	
22 o-Nitrotoluene	1	12.536	12.536	0.000	32644	0.2500	0.2552	
23 p-Nitrotoluene	1	12.956	12.956	0.000	27487	0.2500	0.2457	
24 m-Nitrotoluene	1	13.536	13.536	0.000	35796	0.2500	0.2548	
25 PETN	2	14.716	14.716	0.000	182415	2.50	2.65	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

8330 DMT_00013	Amount Added:	12.50	Units: uL
8330IntermStk_00075	Amount Added:	25.00	Units: uL

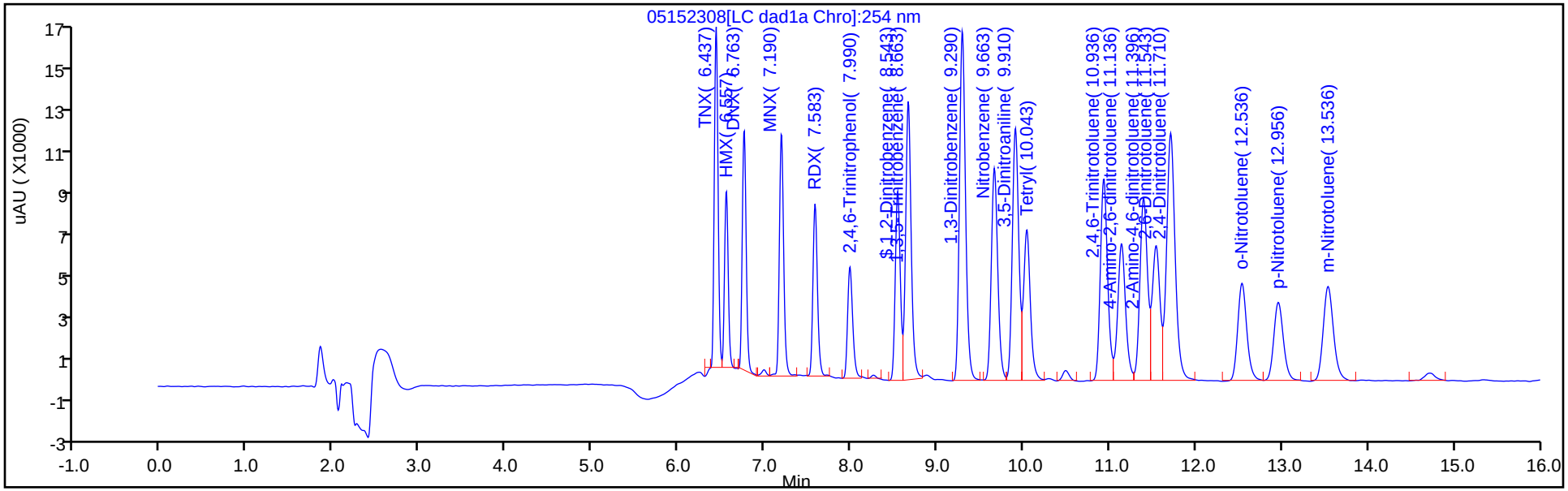
Report Date: 16-May-2023 13:24:37 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

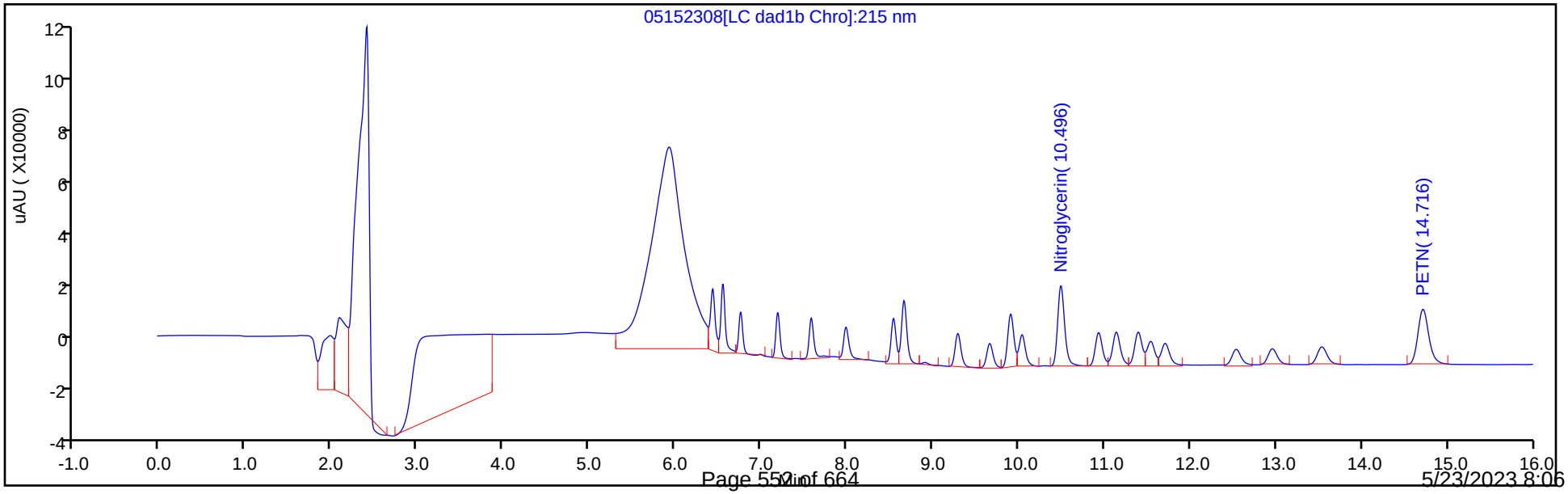
Data File: \\chromfs\denver\chromdata\chhplc_x\20230515-121447.b\05152308.d

Injection Date:	15-May-2023 15:34:34	Instrument ID:	CHHPLC_X3	Operator ID:	JZ/JG
Lims ID:	CCV DMT			Worklist Smp#:	8
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



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

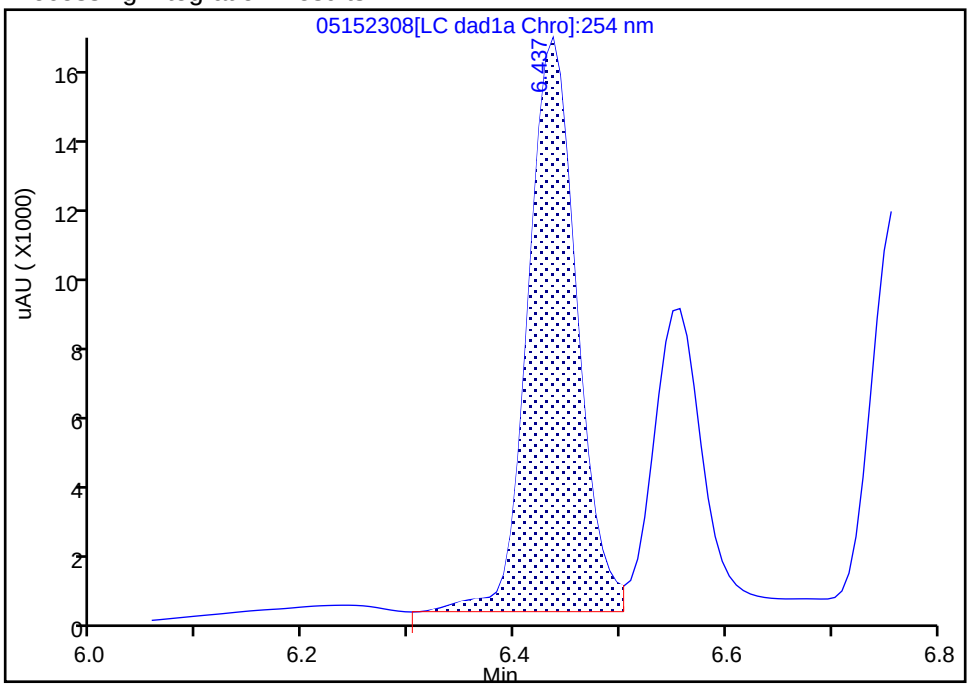
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230515-121447.b\05152308.d				
Injection Date:	15-May-2023 15:34:34	Instrument ID:	CHHPLC_X3		
Lims ID:	CCV DMT				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	7	Worklist Smp#:	8
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

3 TNX, CAS: 13980-04-6

Signal: 1

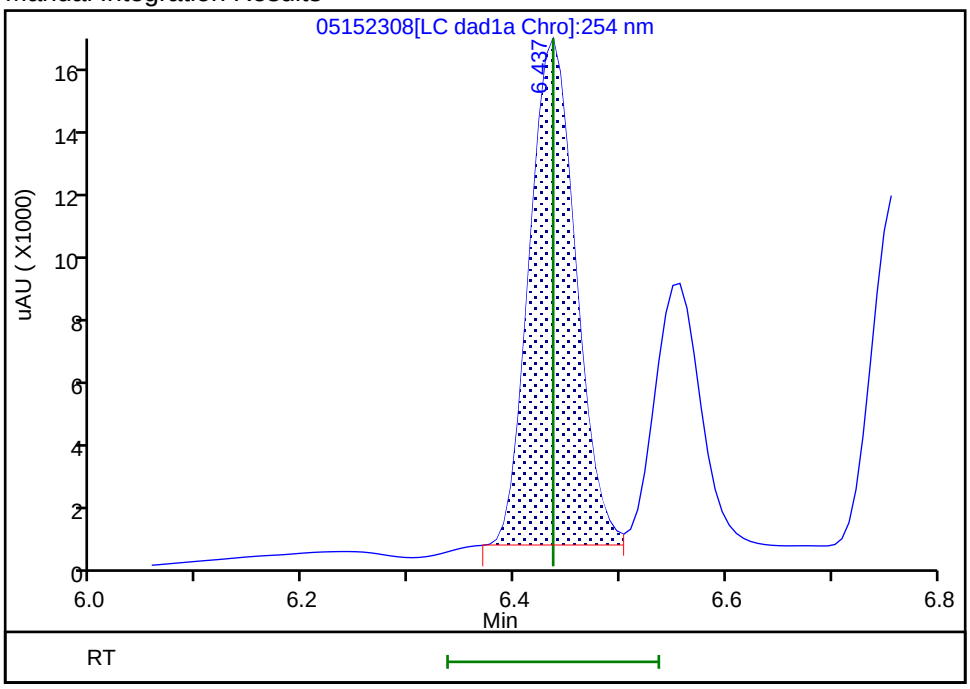
Processing Integration Results

RT: 6.44
Area: 50678
Amount: 0.256354
Amount Units: ug/mL



Manual Integration Results

RT: 6.44
Area: 46995
Amount: 0.237724
Amount Units: ug/mL



Reviewer: K8YG, 16-May-2023 07:39:04
Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

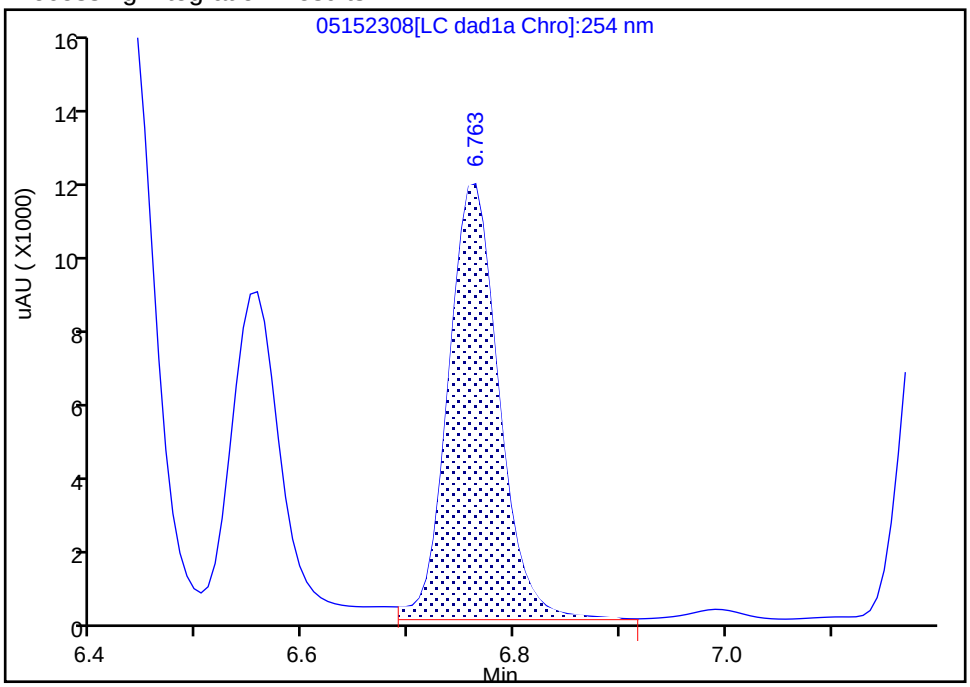
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230515-121447.b\05152308.d				
Injection Date:	15-May-2023 15:34:34	Instrument ID:	CHHPLC_X3		
Lims ID:	CCV DMT				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	7	Worklist Smp#:	8
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

6 DNX, CAS: 80251-29-2

Signal: 1

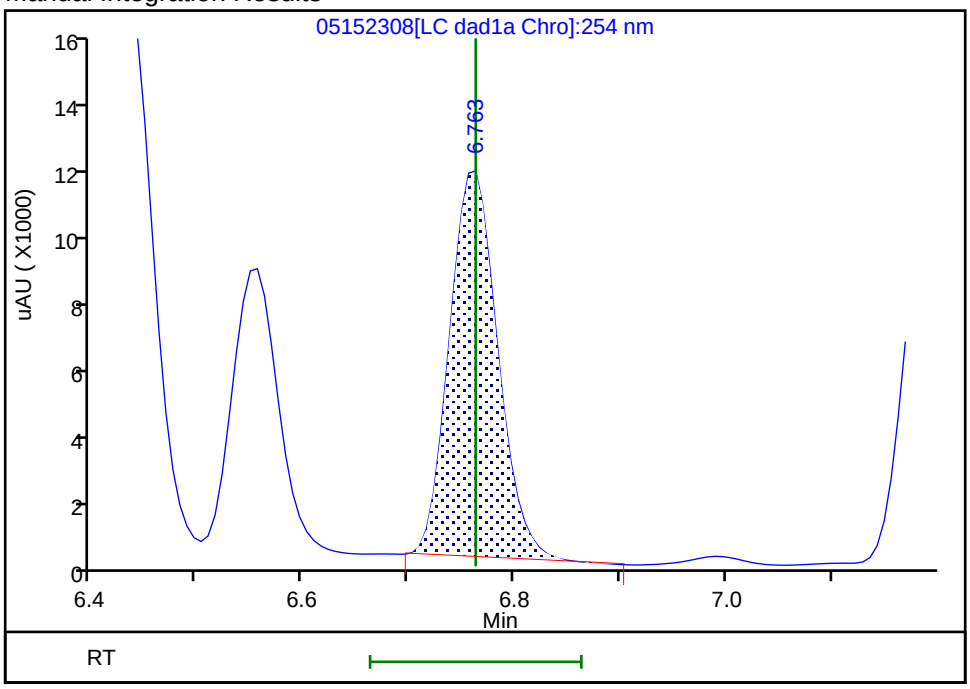
Processing Integration Results

RT: 6.76
Area: 36949
Amount: 0.255769
Amount Units: ug/mL



Manual Integration Results

RT: 6.76
Area: 34449
Amount: 0.238463
Amount Units: ug/mL



Reviewer: K8YG, 16-May-2023 07:38:34
Audit Action: Manually Integrated Audit Reason: Baseline

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Lab Sample ID: CCV 280-612440/21 Calibration Date: 05/15/2023 20:09

Instrument ID: CHHPLC_X3 Calib Start Date: 02/08/2023 15:38

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 02/08/2023 18:42

Lab File ID: 05152321.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	93528	94956		254	250	1.5	20.0
RDX	Ave	106380	113556		267	250	6.7	20.0
Picric acid	Ave	75830	82704		273	250	9.1	20.0
1,3,5-Trinitrobenzene	Ave	217147	231620		267	250	6.7	20.0
1,3-Dinitrobenzene	Ave	294397	313388		266	250	6.5	20.0
Nitrobenzene	Ave	191245	197832		259	250	3.4	20.0
3,5-Dinitroaniline	Lin2		236996		259	250	3.7	20.0
Tetryl	Ave	164121	151148		230	250	-7.9	20.0
Nitroglycerin	Ave	64070	68132		2660	2500	6.3	20.0
2,4,6-Trinitrotoluene	Ave	211040	217476		258	250	3.0	20.0
4-Amino-2,6-dinitrotoluene	Ave	154933	160076		258	250	3.3	20.0
2-Amino-4,6-dinitrotoluene	Ave	201410	205716		255	250	2.1	20.0
2,6-Dinitrotoluene	Ave	142745	155476		272	250	8.9	20.0
2,4-Dinitrotoluene	Ave	296667	311528		263	250	5.0	20.0
2-Nitrotoluene	Ave	127896	128692		252	250	0.6	20.0
4-Nitrotoluene	Ave	111880	109492		245	250	-2.1	20.0
3-Nitrotoluene	Ave	140492	141312		251	250	0.6	20.0
PETN	Ave	68845	73634		2670	2500	7.0	20.0
1,2-Dinitrobenzene	Ave	126309	138320		274	250	9.5	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Lab Sample ID: CCV 280-612440/21 Calibration Date: 05/15/2023 20:09

Instrument ID: CHHPLC_X3 Calib Start Date: 02/08/2023 15:38

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 02/08/2023 18:42

Lab File ID: 05152321.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.55	6.41	6.71
RDX	7.58	7.43	7.73
Picric acid	7.98	7.84	8.14
1,3,5-Trinitrobenzene	8.66	8.51	8.81
1,3-Dinitrobenzene	9.29	9.14	9.44
Nitrobenzene	9.66	9.51	9.81
3,5-Dinitroaniline	9.90	9.76	10.06
Tetryl	10.03	9.89	10.19
Nitroglycerin	10.49	10.35	10.65
2,4,6-Trinitrotoluene	10.93	10.84	11.04
4-Amino-2,6-dinitrotoluene	11.13	11.04	11.24
2-Amino-4,6-dinitrotoluene	11.39	11.30	11.50
2,6-Dinitrotoluene	11.53	11.44	11.64
2,4-Dinitrotoluene	11.70	11.61	11.81
2-Nitrotoluene	12.53	12.39	12.69
4-Nitrotoluene	12.95	12.81	13.11
3-Nitrotoluene	13.53	13.39	13.69
PETN	14.71	14.57	14.87
1,2-Dinitrobenzene	8.53	8.39	8.69

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20230515-121447.b\05152321.D
Lims ID: CCV DMT
Client ID:
Sample Type: CCV
Inject. Date: 15-May-2023 20:09:45 ALS Bottle#: 7 Worklist Smp#: 21
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV DMT
Operator ID: JZ/JG Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub27

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20230515-121447.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 16-May-2023 13:24:44 Calib Date: 24-Feb-2023 17:41:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X\20230224-118952.b\02240018.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX1672

First Level Reviewer: K8YG Date: 16-May-2023 08:07:57

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
3 TNX	1	6.428	6.437	-0.009	46330	0.2508	0.2344	M
4 HMX	1	6.548	6.557	-0.009	23739	0.2500	0.2538	M
6 DNX	1	6.754	6.763	-0.009	34498	0.2503	0.2388	M
7 MNX	1	7.188	7.190	-0.002	37727	0.2918	0.2876	
8 RDX	1	7.581	7.583	-0.002	28389	0.2500	0.2669	
9 2,4,6-Trinitrophenol	1	7.981	7.990	-0.009	20676	0.2500	0.2727	
$ 10 1,2-Dinitrobenzene	1	8.534	8.543	-0.009	34580	0.2500	0.2738	
11 1,3,5-Trinitrobenzene	1	8.661	8.663	-0.002	57905	0.2500	0.2667	
12 1,3-Dinitrobenzene	1	9.287	9.290	-0.003	78347	0.2500	0.2661	
13 Nitrobenzene	1	9.661	9.663	-0.002	49458	0.2500	0.2586	
14 3,5-Dinitroaniline	1	9.901	9.910	-0.009	59249	0.2500	0.2592	
15 Tetryl	1	10.034	10.043	-0.009	37787	0.2500	0.2302	
16 Nitroglycerin	2	10.487	10.496	-0.009	170331	2.50	2.66	
17 2,4,6-Trinitrotoluene	1	10.927	10.936	-0.009	54369	0.2500	0.2576	
18 4-Amino-2,6-dinitrotoluene	1	11.134	11.136	-0.002	40019	0.2500	0.2583	
19 2-Amino-4,6-dinitrotoluene	1	11.387	11.396	-0.009	51429	0.2500	0.2553	
20 2,6-Dinitrotoluene	1	11.534	11.543	-0.009	38869	0.2500	0.2723	
21 2,4-Dinitrotoluene	1	11.701	11.710	-0.009	77882	0.2500	0.2625	
22 o-Nitrotoluene	1	12.534	12.536	-0.002	32173	0.2500	0.2516	
23 p-Nitrotoluene	1	12.954	12.956	-0.002	27373	0.2500	0.2447	
24 m-Nitrotoluene	1	13.534	13.536	-0.002	35328	0.2500	0.2515	
25 PETN	2	14.714	14.716	-0.002	184084	2.50	2.67	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

8330 DMT_00013	Amount Added:	12.50	Units: uL
8330IntermStk_00075	Amount Added:	25.00	Units: uL

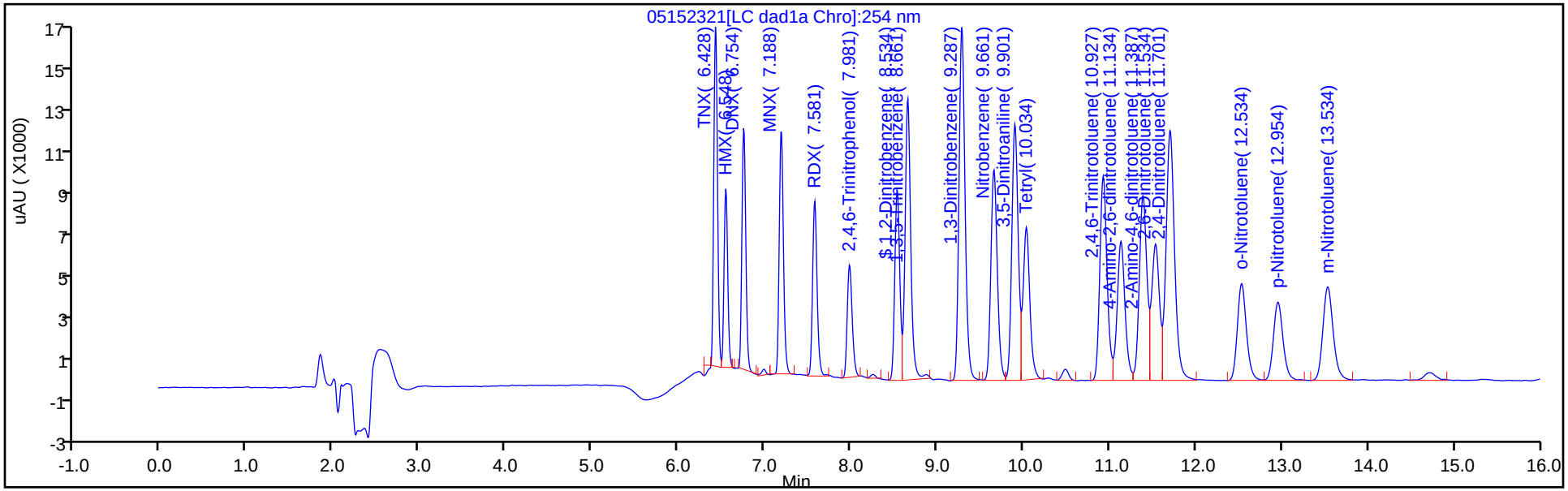
Report Date: 16-May-2023 13:24:45 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

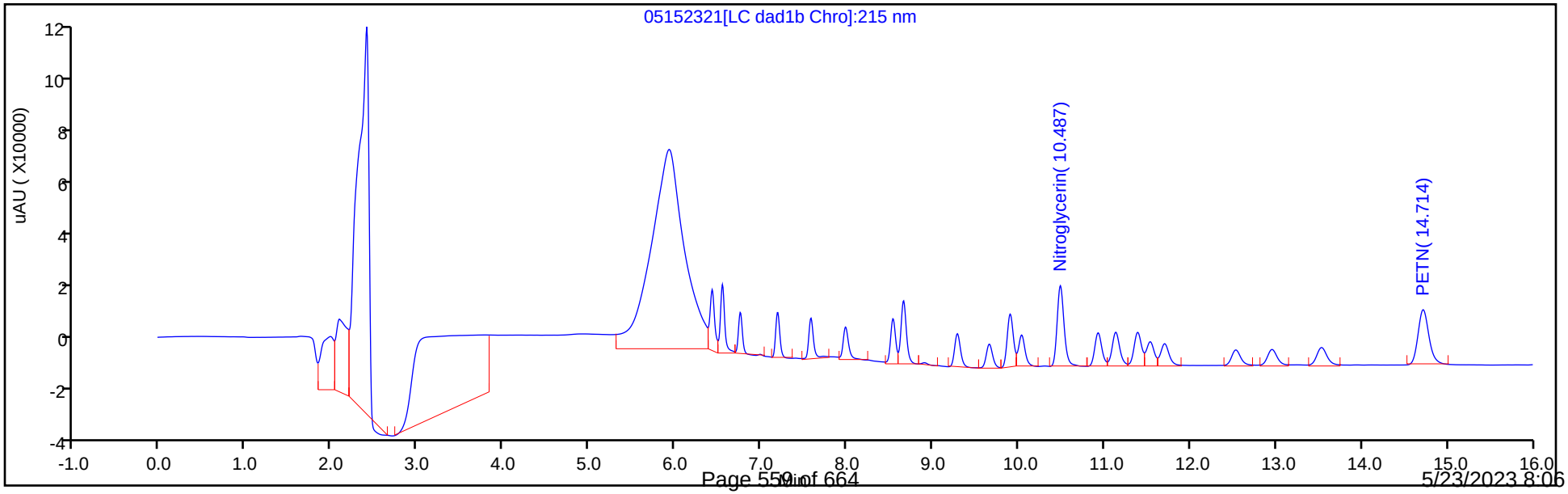
Data File: \\chromfs\denver\chromdata\chhplc_x\20230515-121447.b\05152321.d

Injection Date:	15-May-2023 20:09:45	Instrument ID:	CHHPLC_X3	Operator ID:	JZ/JG
Lims ID:	CCV DMT			Worklist Smp#:	21
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



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

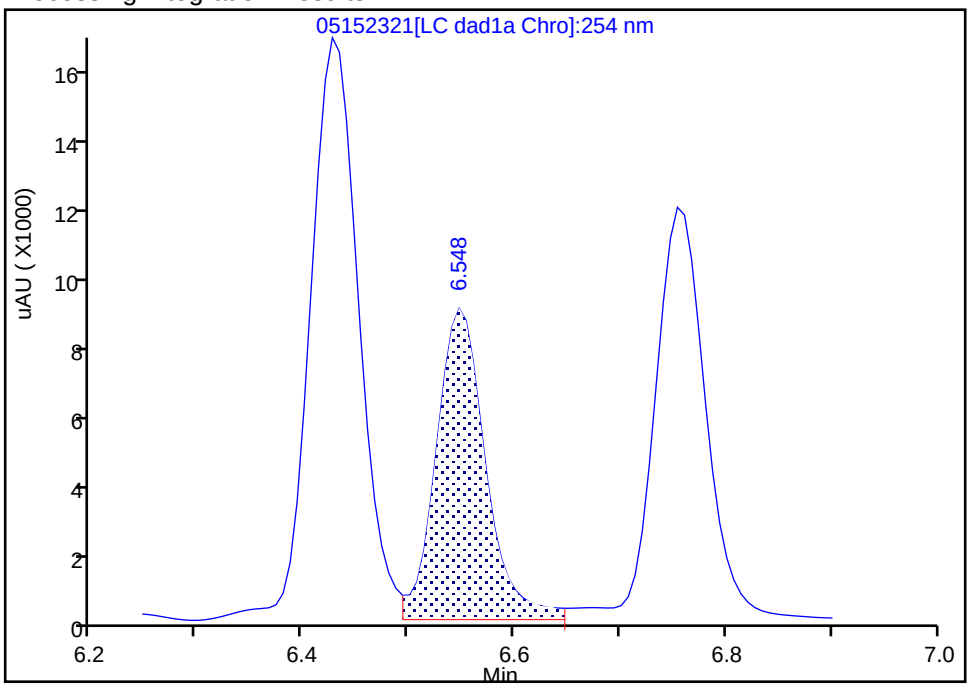
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230515-121447.b\05152321.d				
Injection Date:	15-May-2023 20:09:45	Instrument ID:	CHHPLC_X3		
Lims ID:	CCV DMT				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	7	Worklist Smp#:	21
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

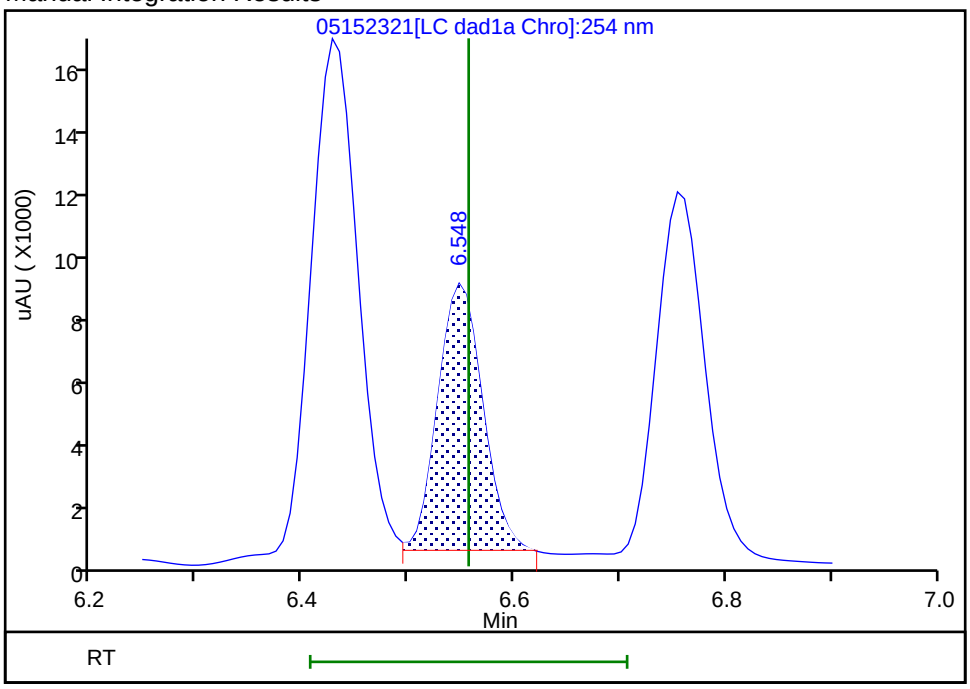
Processing Integration Results

RT: 6.55
Area: 27405
Amount: 0.293013
Amount Units: ug/mL



Manual Integration Results

RT: 6.55
Area: 23739
Amount: 0.253817
Amount Units: ug/mL



Reviewer: K8YG, 16-May-2023 08:07:43
Audit Action: Split an Integrated Peak Audit Reason: Baseline

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Lab Sample ID: CCV 280-612440/21 Calibration Date: 05/15/2023 20:09

Instrument ID: CHHPLC_X3 Calib Start Date: 02/24/2023 15:00

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 02/24/2023 17:41

Lab File ID: 05152321.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
TNX	Ave	197687	184766		234	251	-6.5	20.0
DNX	Ave	144462	137854		239	250	-4.6	20.0
MNX	Ave	131172	129313		288	292	-1.4	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Lab Sample ID: CCV 280-612440/21 Calibration Date: 05/15/2023 20:09

Instrument ID: CHHPLC_X3 Calib Start Date: 02/24/2023 15:00

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 02/24/2023 17:41

Lab File ID: 05152321.D

Analyte	RT	RT WINDOW	
		FROM	TO
TNX	6.43	6.34	6.54
DNX	6.75	6.66	6.86
MNX	7.19	7.04	7.34

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20230515-121447.b\05152321.D
Lims ID: CCV DMT
Client ID:
Sample Type: CCV
Inject. Date: 15-May-2023 20:09:45 ALS Bottle#: 7 Worklist Smp#: 21
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV DMT
Operator ID: JZ/JG Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub27

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20230515-121447.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 16-May-2023 13:24:44 Calib Date: 24-Feb-2023 17:41:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X\20230224-118952.b\02240018.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX1672

First Level Reviewer: K8YG Date: 16-May-2023 08:07:57

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
3 TNX	1	6.428	6.437	-0.009	46330	0.2508	0.2344	M
4 HMX	1	6.548	6.557	-0.009	23739	0.2500	0.2538	M
6 DNX	1	6.754	6.763	-0.009	34498	0.2503	0.2388	M
7 MNX	1	7.188	7.190	-0.002	37727	0.2918	0.2876	
8 RDX	1	7.581	7.583	-0.002	28389	0.2500	0.2669	
9 2,4,6-Trinitrophenol	1	7.981	7.990	-0.009	20676	0.2500	0.2727	
$ 10 1,2-Dinitrobenzene	1	8.534	8.543	-0.009	34580	0.2500	0.2738	
11 1,3,5-Trinitrobenzene	1	8.661	8.663	-0.002	57905	0.2500	0.2667	
12 1,3-Dinitrobenzene	1	9.287	9.290	-0.003	78347	0.2500	0.2661	
13 Nitrobenzene	1	9.661	9.663	-0.002	49458	0.2500	0.2586	
14 3,5-Dinitroaniline	1	9.901	9.910	-0.009	59249	0.2500	0.2592	
15 Tetryl	1	10.034	10.043	-0.009	37787	0.2500	0.2302	
16 Nitroglycerin	2	10.487	10.496	-0.009	170331	2.50	2.66	
17 2,4,6-Trinitrotoluene	1	10.927	10.936	-0.009	54369	0.2500	0.2576	
18 4-Amino-2,6-dinitrotoluene	1	11.134	11.136	-0.002	40019	0.2500	0.2583	
19 2-Amino-4,6-dinitrotoluene	1	11.387	11.396	-0.009	51429	0.2500	0.2553	
20 2,6-Dinitrotoluene	1	11.534	11.543	-0.009	38869	0.2500	0.2723	
21 2,4-Dinitrotoluene	1	11.701	11.710	-0.009	77882	0.2500	0.2625	
22 o-Nitrotoluene	1	12.534	12.536	-0.002	32173	0.2500	0.2516	
23 p-Nitrotoluene	1	12.954	12.956	-0.002	27373	0.2500	0.2447	
24 m-Nitrotoluene	1	13.534	13.536	-0.002	35328	0.2500	0.2515	
25 PETN	2	14.714	14.716	-0.002	184084	2.50	2.67	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

8330 DMT_00013	Amount Added:	12.50	Units: uL
8330IntermStk_00075	Amount Added:	25.00	Units: uL

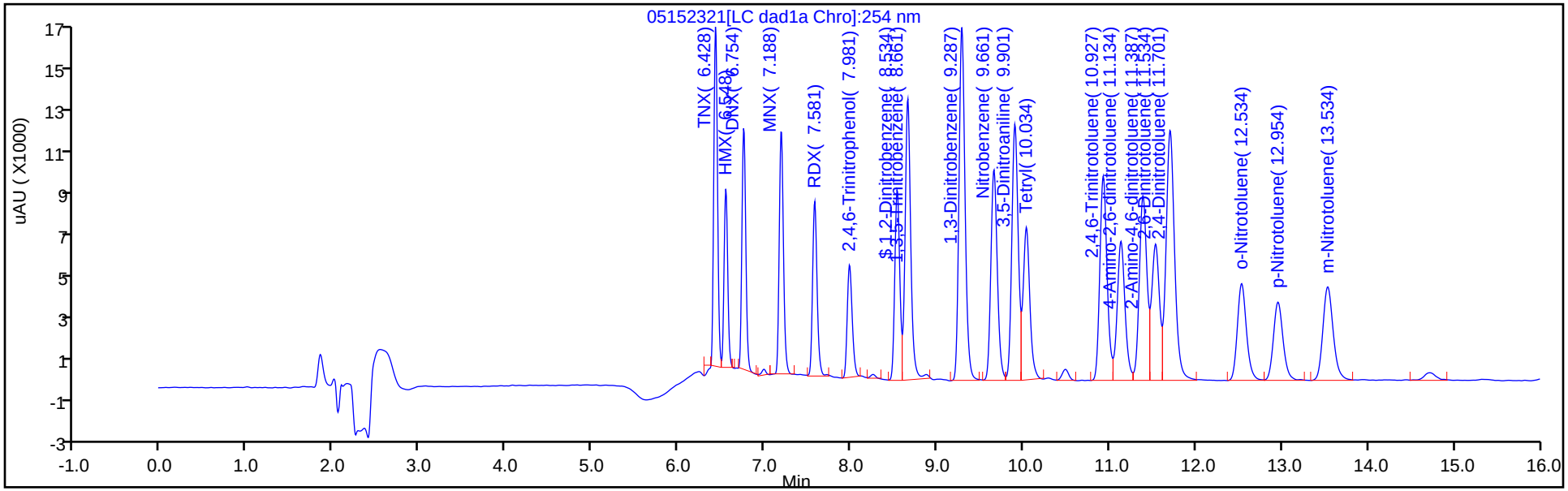
Report Date: 16-May-2023 13:24:45 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

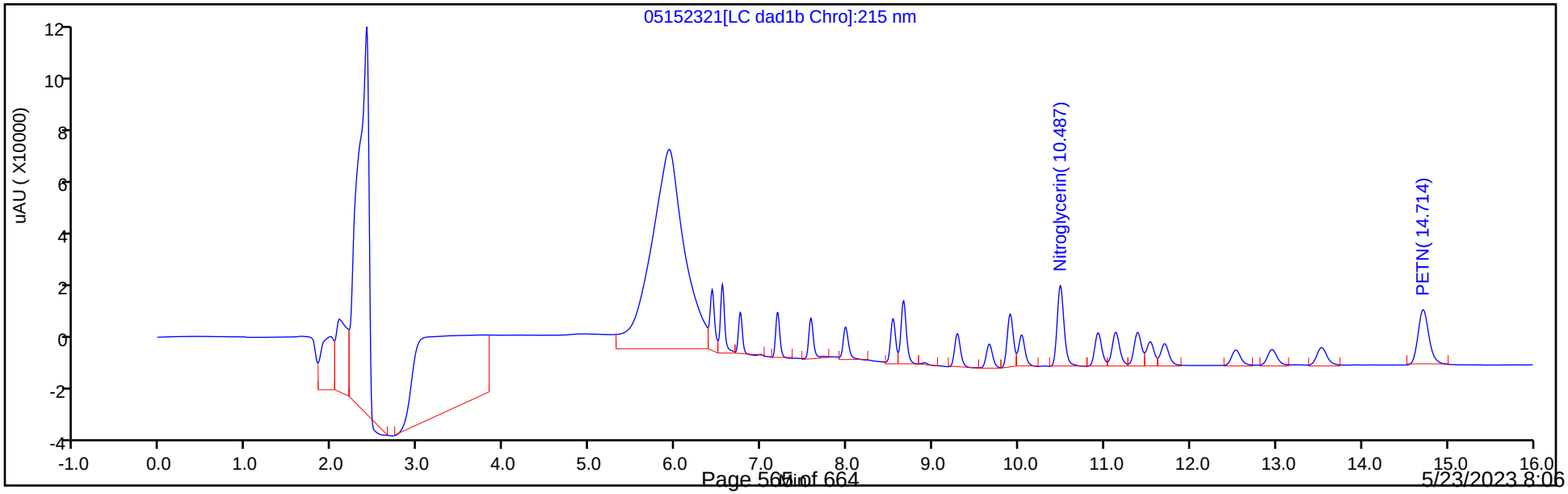
Data File: \\chromfs\denver\chromdata\chhplc_x\20230515-121447.b\05152321.d

Injection Date:	15-May-2023 20:09:45	Instrument ID:	CHHPLC_X3	Operator ID:	JZ/JG
Lims ID:	CCV DMT			Worklist Smp#:	21
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



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



5/23/2023 8:06 PM

Manual Integration/User Assign Peak Report

Eurofins Denver

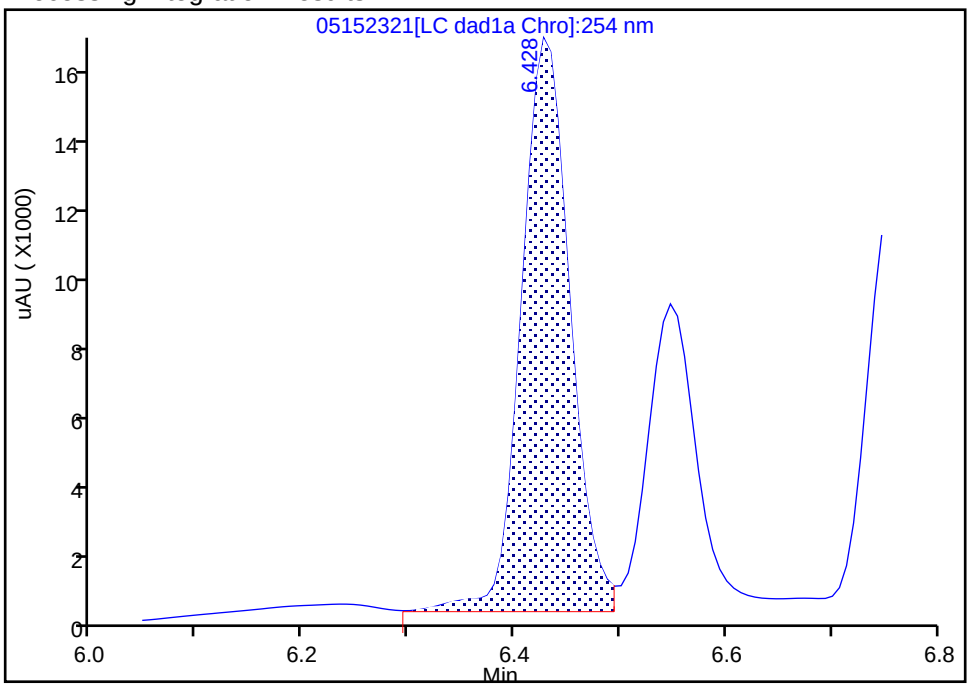
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230515-121447.b\05152321.d				
Injection Date:	15-May-2023 20:09:45	Instrument ID:	CHHPLC_X3		
Lims ID:	CCV DMT				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	7	Worklist Smp#:	21
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

3 TNX, CAS: 13980-04-6

Signal: 1

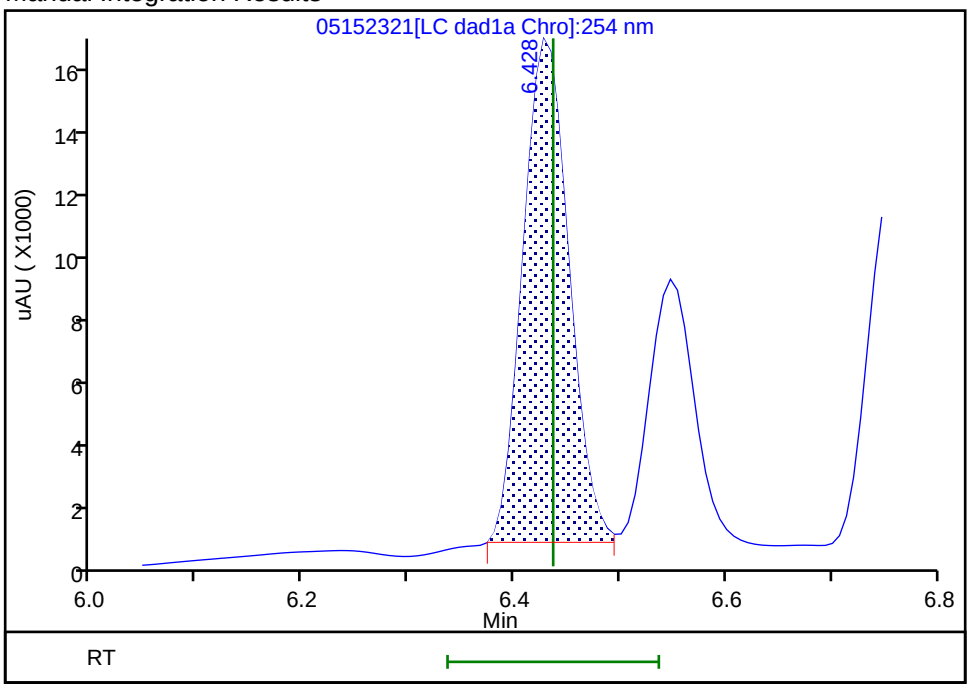
Processing Integration Results

RT: 6.43
Area: 50227
Amount: 0.254073
Amount Units: ug/mL



Manual Integration Results

RT: 6.43
Area: 46330
Amount: 0.234360
Amount Units: ug/mL



Reviewer: K8YG, 16-May-2023 08:07:36

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

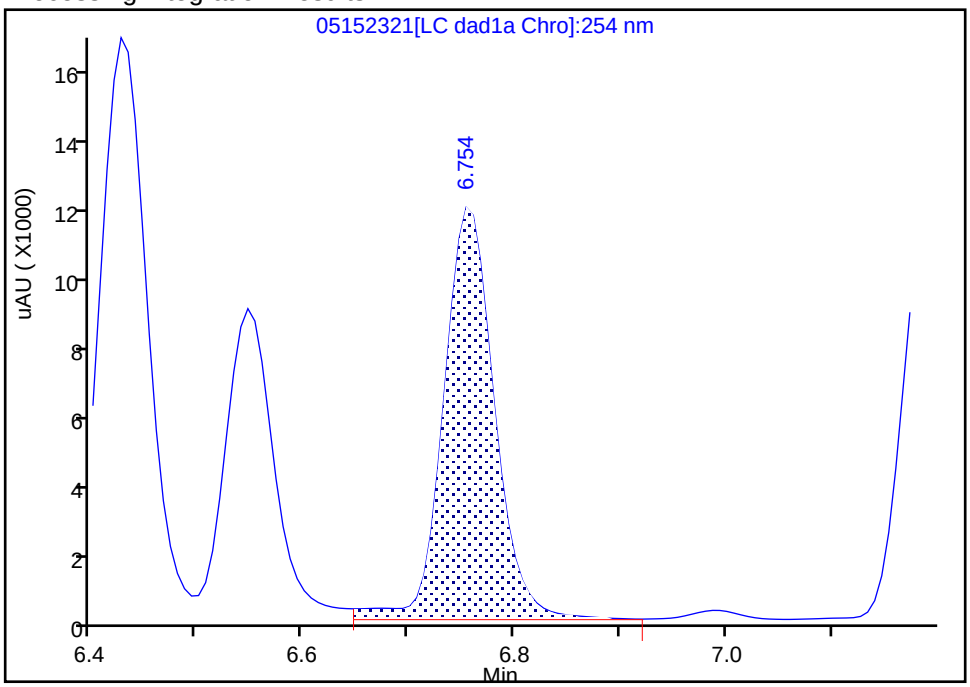
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230515-121447.b\05152321.d				
Injection Date:	15-May-2023 20:09:45	Instrument ID:	CHHPLC_X3		
Lims ID:	CCV DMT				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	7	Worklist Smp#:	21
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

6 DNX, CAS: 80251-29-2

Signal: 1

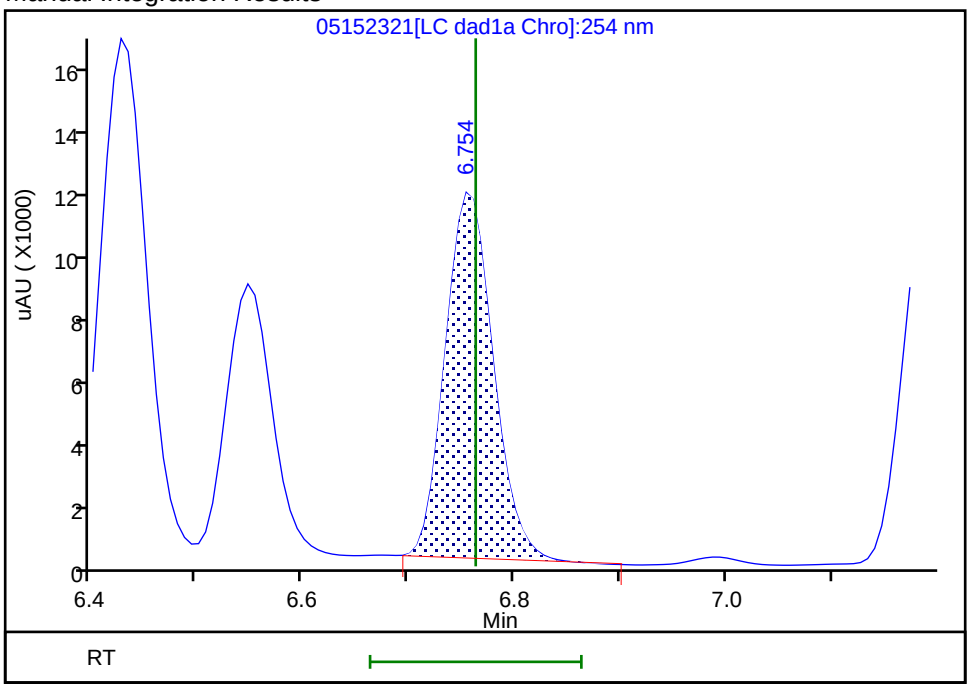
Processing Integration Results

RT: 6.75
Area: 37631
Amount: 0.260490
Amount Units: ug/mL



Manual Integration Results

RT: 6.75
Area: 34498
Amount: 0.238802
Amount Units: ug/mL



Reviewer: K8YG, 16-May-2023 08:07:29
Audit Action: Manually Integrated Audit Reason: Baseline

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Lab Sample ID: CCV 280-613045/8 Calibration Date: 05/18/2023 21:23

Instrument ID: CHHPLC_X3 Calib Start Date: 02/08/2023 15:38

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 02/08/2023 18:42

Lab File ID: 05180008.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	93528	104296		279	250	11.5	20.0
RDX	Ave	106380	108908		256	250	2.4	20.0
Picric acid	Ave	75830	79732		263	250	5.1	20.0
1,3,5-Trinitrobenzene	Ave	217147	218532		252	250	0.6	20.0
1,3-Dinitrobenzene	Ave	294397	296852		252	250	0.8	20.0
Nitrobenzene	Ave	191245	189840		248	250	-0.7	20.0
3,5-Dinitroaniline	Lin2		224776		246	250	-1.7	20.0
Tetryl	Ave	164121	144508		220	250	-12.0	20.0
Nitroglycerin	Ave	64070	64633		2520	2500	0.9	20.0
2,4,6-Trinitrotoluene	Ave	211040	205464		243	250	-2.6	20.0
4-Amino-2,6-dinitrotoluene	Ave	154933	152228		246	250	-1.7	20.0
2-Amino-4,6-dinitrotoluene	Ave	201410	194704		242	250	-3.3	20.0
2,6-Dinitrotoluene	Ave	142745	146700		257	250	2.8	20.0
2,4-Dinitrotoluene	Ave	296667	298040		251	250	0.5	20.0
2-Nitrotoluene	Ave	127896	124004		242	250	-3.0	20.0
4-Nitrotoluene	Ave	111880	104848		234	250	-6.3	20.0
3-Nitrotoluene	Ave	140492	134644		240	250	-4.2	20.0
PETN	Ave	68845	70588		2560	2500	2.5	20.0
1,2-Dinitrobenzene	Ave	126309	133520		264	250	5.7	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Lab Sample ID: CCV 280-613045/8 Calibration Date: 05/18/2023 21:23

Instrument ID: CHHPLC_X3 Calib Start Date: 02/08/2023 15:38

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 02/08/2023 18:42

Lab File ID: 05180008.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.55	6.40	6.70
RDX	7.56	7.41	7.71
Picric acid	7.96	7.81	8.11
1,3,5-Trinitrobenzene	8.64	8.49	8.79
1,3-Dinitrobenzene	9.25	9.10	9.40
Nitrobenzene	9.63	9.48	9.78
3,5-Dinitroaniline	9.86	9.71	10.01
Tetryl	9.99	9.84	10.14
Nitroglycerin	10.44	10.29	10.59
2,4,6-Trinitrotoluene	10.87	10.77	10.97
4-Amino-2,6-dinitrotoluene	11.07	10.97	11.17
2-Amino-4,6-dinitrotoluene	11.32	11.22	11.42
2,6-Dinitrotoluene	11.47	11.37	11.57
2,4-Dinitrotoluene	11.64	11.54	11.74
2-Nitrotoluene	12.46	12.31	12.61
4-Nitrotoluene	12.87	12.72	13.02
3-Nitrotoluene	13.45	13.30	13.60
PETN	14.60	14.45	14.75
1,2-Dinitrobenzene	8.51	8.36	8.66

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\05180008.D
Lims ID: CCV DMT
Client ID:
Sample Type: CCV
Inject. Date: 18-May-2023 21:23:23 ALS Bottle#: 7 Worklist Smp#: 8
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV DMT
Operator ID: JZ/JG Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub27

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 19-May-2023 12:21:49 Calib Date: 24-Feb-2023 17:41:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X\20230224-118952.b\02240018.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX1654

First Level Reviewer: LV5D Date: 19-May-2023 11:37:16

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
3 TNX	1	6.426	6.426	0.000	47634	0.2508	0.2410	
4 HMX	1	6.546	6.546	0.000	26074	0.2500	0.2788	
6 DNX	1	6.753	6.753	0.000	35401	0.2503	0.2451	
7 MNX	1	7.180	7.180	0.000	35470	0.2918	0.2704	
8 RDX	1	7.560	7.560	0.000	27227	0.2500	0.2559	
9 2,4,6-Trinitrophenol	1	7.960	7.960	0.000	19933	0.2500	0.2629	
$ 10 1,2-Dinitrobenzene	1	8.513	8.513	0.000	33380	0.2500	0.2643	
11 1,3,5-Trinitrobenzene	1	8.640	8.640	0.000	54633	0.2500	0.2516	
12 1,3-Dinitrobenzene	1	9.253	9.253	0.000	74213	0.2500	0.2521	
13 Nitrobenzene	1	9.626	9.626	0.000	47460	0.2500	0.2482	
14 3,5-Dinitroaniline	1	9.859	9.859	0.000	56194	0.2500	0.2458	
15 Tetryl	1	9.986	9.986	0.000	36127	0.2500	0.2201	
16 Nitroglycerin	2	10.439	10.439	0.000	161583	2.50	2.52	
17 2,4,6-Trinitrotoluene	1	10.873	10.873	0.000	51366	0.2500	0.2434	
18 4-Amino-2,6-dinitrotoluene	1	11.066	11.066	0.000	38057	0.2500	0.2456	
19 2-Amino-4,6-dinitrotoluene	1	11.319	11.319	0.000	48676	0.2500	0.2417	
20 2,6-Dinitrotoluene	1	11.473	11.473	0.000	36675	0.2500	0.2569	
21 2,4-Dinitrotoluene	1	11.639	11.639	0.000	74510	0.2500	0.2512	
22 o-Nitrotoluene	1	12.459	12.459	0.000	31001	0.2500	0.2424	
23 p-Nitrotoluene	1	12.873	12.873	0.000	26212	0.2500	0.2343	
24 m-Nitrotoluene	1	13.446	13.446	0.000	33661	0.2500	0.2396	
25 PETN	2	14.599	14.599	0.000	176471	2.50	2.56	

QC Flag Legend
Processing Flags

Reagents:

8330 DMT_00013	Amount Added:	12.50	Units: uL
8330IntermStk_00075	Amount Added:	25.00	Units: uL

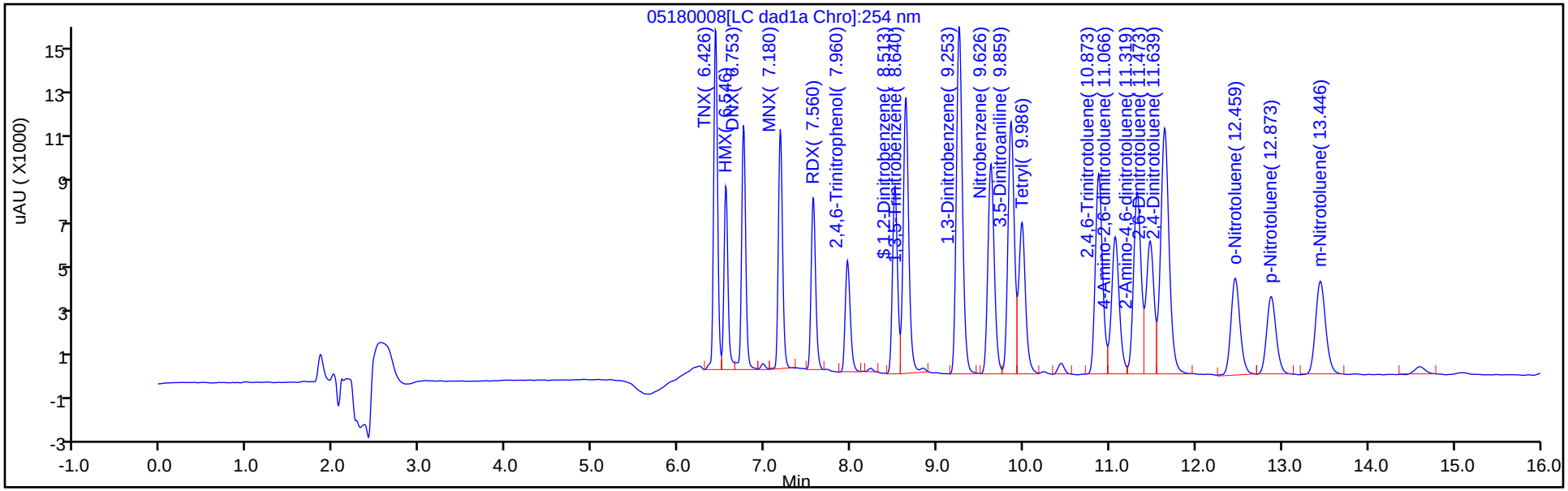
Report Date: 19-May-2023 12:21:49 Chrom Revision: 2.3 16-May-2023 16:37:30

Eurofins Denver

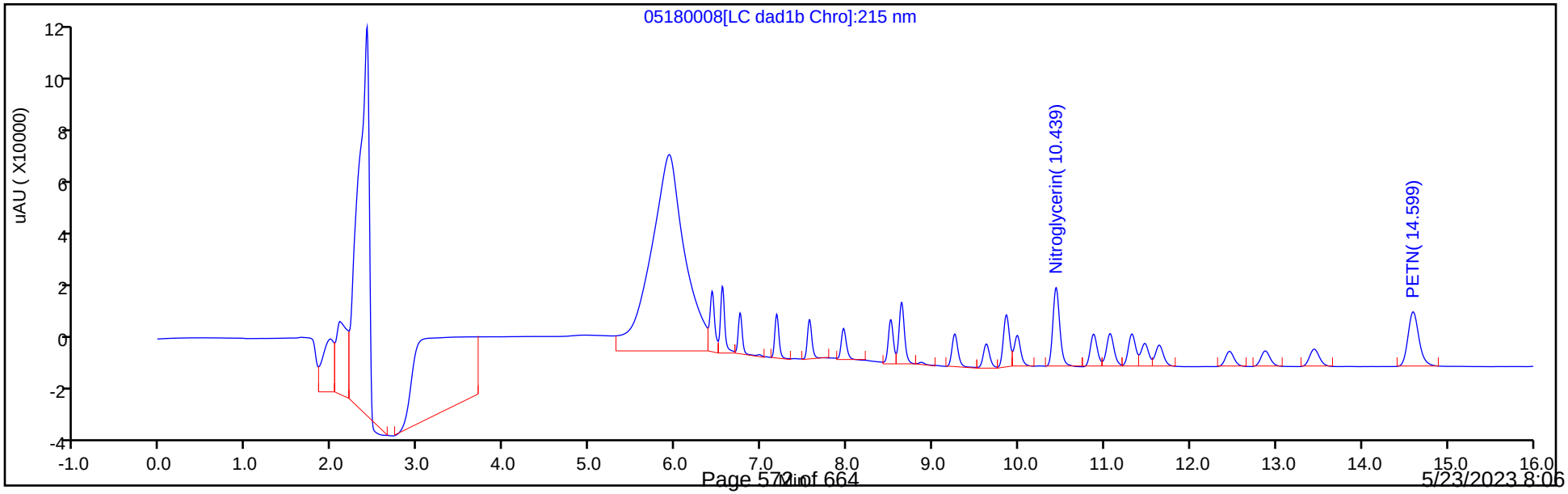
Data File: \\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180008.d

Injection Date:	18-May-2023 21:23:23	Instrument ID:	CHHPLC_X3	Operator ID:	JZ/JG
Lims ID:	CCV DMT			Worklist Smp#:	8
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



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Lab Sample ID: CCV 280-613045/8 Calibration Date: 05/18/2023 21:23

Instrument ID: CHHPLC_X3 Calib Start Date: 02/24/2023 15:00

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 02/24/2023 17:41

Lab File ID: 05180008.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
TNX	Ave	197687	189966		241	251	-3.9	20.0
DNX	Ave	144462	141463		245	250	-2.1	20.0
MNX	Ave	131172	121577		270	292	-7.3	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Lab Sample ID: CCV 280-613045/8 Calibration Date: 05/18/2023 21:23

Instrument ID: CHHPLC_X3 Calib Start Date: 02/24/2023 15:00

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 02/24/2023 17:41

Lab File ID: 05180008.D

Analyte	RT	RT WINDOW	
		FROM	TO
TNX	6.43	6.33	6.53
DNX	6.75	6.65	6.85
MNX	7.18	7.03	7.33

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\05180008.D
Lims ID: CCV DMT
Client ID:
Sample Type: CCV
Inject. Date: 18-May-2023 21:23:23 ALS Bottle#: 7 Worklist Smp#: 8
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV DMT
Operator ID: JZ/JG Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub27

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 19-May-2023 12:21:49 Calib Date: 24-Feb-2023 17:41:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X\20230224-118952.b\02240018.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX1654

First Level Reviewer: LV5D Date: 19-May-2023 11:37:16

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
3 TNX	1	6.426	6.426	0.000	47634	0.2508	0.2410	
4 HMX	1	6.546	6.546	0.000	26074	0.2500	0.2788	
6 DNX	1	6.753	6.753	0.000	35401	0.2503	0.2451	
7 MNX	1	7.180	7.180	0.000	35470	0.2918	0.2704	
8 RDX	1	7.560	7.560	0.000	27227	0.2500	0.2559	
9 2,4,6-Trinitrophenol	1	7.960	7.960	0.000	19933	0.2500	0.2629	
$ 10 1,2-Dinitrobenzene	1	8.513	8.513	0.000	33380	0.2500	0.2643	
11 1,3,5-Trinitrobenzene	1	8.640	8.640	0.000	54633	0.2500	0.2516	
12 1,3-Dinitrobenzene	1	9.253	9.253	0.000	74213	0.2500	0.2521	
13 Nitrobenzene	1	9.626	9.626	0.000	47460	0.2500	0.2482	
14 3,5-Dinitroaniline	1	9.859	9.859	0.000	56194	0.2500	0.2458	
15 Tetryl	1	9.986	9.986	0.000	36127	0.2500	0.2201	
16 Nitroglycerin	2	10.439	10.439	0.000	161583	2.50	2.52	
17 2,4,6-Trinitrotoluene	1	10.873	10.873	0.000	51366	0.2500	0.2434	
18 4-Amino-2,6-dinitrotoluene	1	11.066	11.066	0.000	38057	0.2500	0.2456	
19 2-Amino-4,6-dinitrotoluene	1	11.319	11.319	0.000	48676	0.2500	0.2417	
20 2,6-Dinitrotoluene	1	11.473	11.473	0.000	36675	0.2500	0.2569	
21 2,4-Dinitrotoluene	1	11.639	11.639	0.000	74510	0.2500	0.2512	
22 o-Nitrotoluene	1	12.459	12.459	0.000	31001	0.2500	0.2424	
23 p-Nitrotoluene	1	12.873	12.873	0.000	26212	0.2500	0.2343	
24 m-Nitrotoluene	1	13.446	13.446	0.000	33661	0.2500	0.2396	
25 PETN	2	14.599	14.599	0.000	176471	2.50	2.56	

QC Flag Legend
Processing Flags

Reagents:

8330 DMT_00013	Amount Added:	12.50	Units: uL
8330IntermStk_00075	Amount Added:	25.00	Units: uL

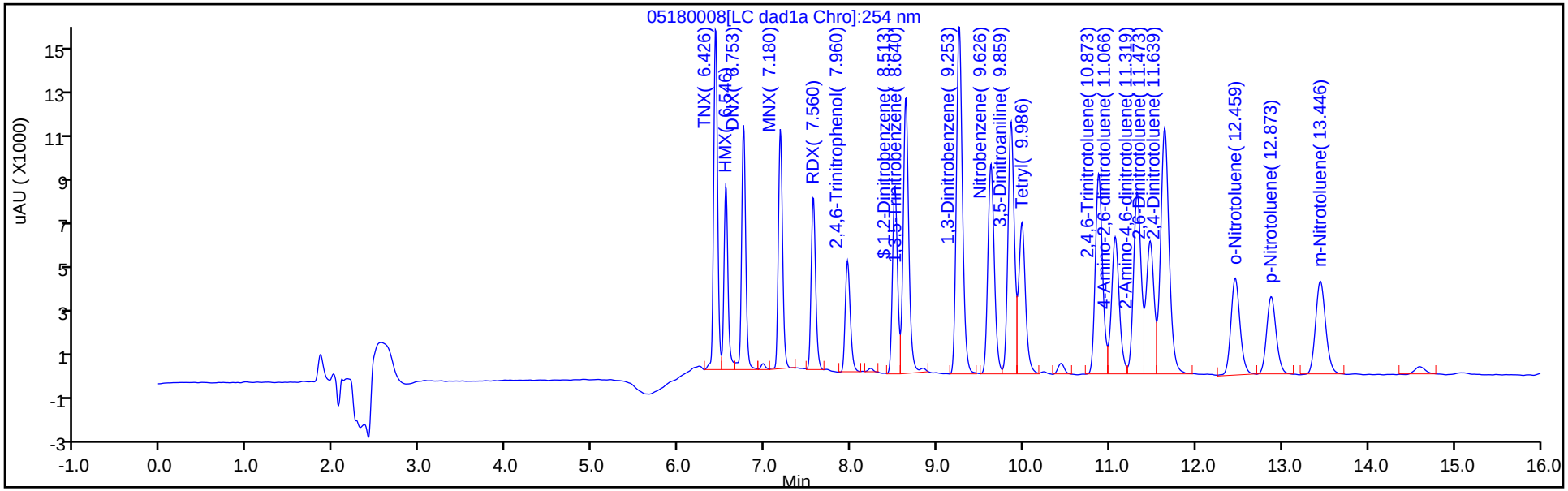
Report Date: 19-May-2023 12:21:49 Chrom Revision: 2.3 16-May-2023 16:37:30

Eurofins Denver

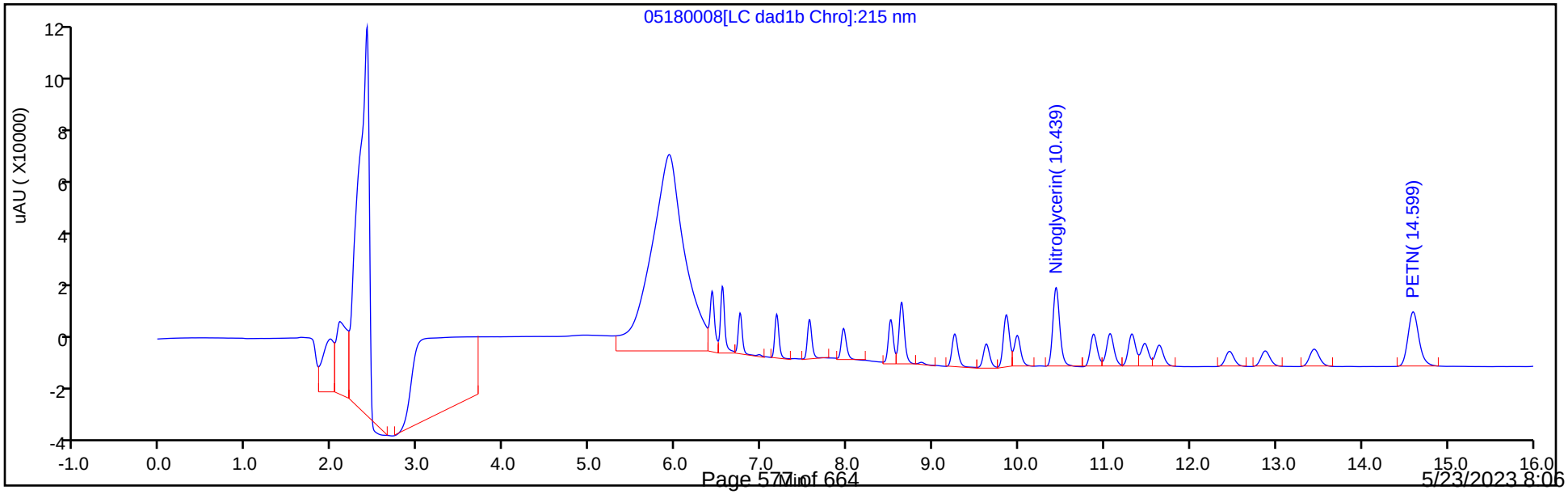
Data File: \\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180008.d

Injection Date:	18-May-2023 21:23:23	Instrument ID:	CHHPLC_X3	Operator ID:	JZ/JG
Lims ID:	CCV DMT			Worklist Smp#:	8
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



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Lab Sample ID: CCV 280-613045/21 Calibration Date: 05/19/2023 01:58

Instrument ID: CHHPLC_X3 Calib Start Date: 02/08/2023 15:38

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 02/08/2023 18:42

Lab File ID: 05180021.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	93528	92860		248	250	-0.7	20.0
RDX	Ave	106380	109604		258	250	3.0	20.0
Picric acid	Ave	75830	80856		267	250	6.6	20.0
1,3,5-Trinitrobenzene	Ave	217147	220432		254	250	1.5	20.0
1,3-Dinitrobenzene	Ave	294397	299652		254	250	1.8	20.0
Nitrobenzene	Ave	191245	188016		246	250	-1.7	20.0
3,5-Dinitroaniline	Lin2		225852		247	250	-1.2	20.0
Tetryl	Ave	164121	145120		221	250	-11.6	20.0
Nitroglycerin	Ave	64070	65152		2540	2500	1.7	20.0
2,4,6-Trinitrotoluene	Ave	211040	206512		245	250	-2.1	20.0
4-Amino-2,6-dinitrotoluene	Ave	154933	153404		248	250	-1.0	20.0
2-Amino-4,6-dinitrotoluene	Ave	201410	194876		242	250	-3.2	20.0
2,6-Dinitrotoluene	Ave	142745	147520		258	250	3.3	20.0
2,4-Dinitrotoluene	Ave	296667	299320		252	250	0.9	20.0
2-Nitrotoluene	Ave	127896	122224		239	250	-4.4	20.0
4-Nitrotoluene	Ave	111880	104200		233	250	-6.9	20.0
3-Nitrotoluene	Ave	140492	132824		236	250	-5.5	20.0
PETN	Ave	68845	70660		2570	2500	2.6	20.0
1,2-Dinitrobenzene	Ave	126309	132704		263	250	5.1	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Lab Sample ID: CCV 280-613045/21 Calibration Date: 05/19/2023 01:58

Instrument ID: CHHPLC_X3 Calib Start Date: 02/08/2023 15:38

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 02/08/2023 18:42

Lab File ID: 05180021.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.55	6.40	6.70
RDX	7.57	7.41	7.71
Picric acid	7.97	7.81	8.11
1,3,5-Trinitrobenzene	8.64	8.49	8.79
1,3-Dinitrobenzene	9.26	9.10	9.40
Nitrobenzene	9.63	9.48	9.78
3,5-Dinitroaniline	9.87	9.71	10.01
Tetryl	10.00	9.84	10.14
Nitroglycerin	10.45	10.29	10.59
2,4,6-Trinitrotoluene	10.88	10.77	10.97
4-Amino-2,6-dinitrotoluene	11.08	10.97	11.17
2-Amino-4,6-dinitrotoluene	11.33	11.22	11.42
2,6-Dinitrotoluene	11.48	11.37	11.57
2,4-Dinitrotoluene	11.65	11.54	11.74
2-Nitrotoluene	12.47	12.31	12.61
4-Nitrotoluene	12.89	12.72	13.02
3-Nitrotoluene	13.46	13.30	13.60
PETN	14.62	14.45	14.75
1,2-Dinitrobenzene	8.52	8.36	8.66

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\05180021.D
Lims ID: CCV DMT
Client ID:
Sample Type: CCV
Inject. Date: 19-May-2023 01:58:46 ALS Bottle#: 7 Worklist Smp#: 21
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV DMT
Operator ID: JZ/JG Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub27

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 19-May-2023 12:21:57 Calib Date: 24-Feb-2023 17:41:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X\20230224-118952.b\02240018.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX1654

First Level Reviewer: LV5D Date: 19-May-2023 11:36:59

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
3 TNX	1	6.429	6.426	0.003	44280	0.2508	0.2240	M
4 HMX	1	6.549	6.546	0.003	23215	0.2500	0.2482	M
6 DNX	1	6.756	6.753	0.003	32391	0.2503	0.2242	M
7 MNX	1	7.183	7.180	0.003	35336	0.2918	0.2694	
8 RDX	1	7.569	7.560	0.009	27401	0.2500	0.2576	
9 2,4,6-Trinitrophenol	1	7.969	7.960	0.009	20214	0.2500	0.2666	
$ 10 1,2-Dinitrobenzene	1	8.516	8.513	0.003	33176	0.2500	0.2627	
11 1,3,5-Trinitrobenzene	1	8.643	8.640	0.003	55108	0.2500	0.2538	
12 1,3-Dinitrobenzene	1	9.262	9.253	0.009	74913	0.2500	0.2545	
13 Nitrobenzene	1	9.629	9.626	0.003	47004	0.2500	0.2458	
14 3,5-Dinitroaniline	1	9.869	9.859	0.010	56463	0.2500	0.2470	
15 Tetryl	1	9.996	9.986	0.010	36280	0.2500	0.2211	
16 Nitroglycerin	2	10.449	10.439	0.010	162879	2.50	2.54	
17 2,4,6-Trinitrotoluene	1	10.882	10.873	0.009	51628	0.2500	0.2446	
18 4-Amino-2,6-dinitrotoluene	1	11.076	11.066	0.010	38351	0.2500	0.2475	
19 2-Amino-4,6-dinitrotoluene	1	11.329	11.319	0.010	48719	0.2500	0.2419	
20 2,6-Dinitrotoluene	1	11.482	11.473	0.009	36880	0.2500	0.2584	
21 2,4-Dinitrotoluene	1	11.649	11.639	0.010	74830	0.2500	0.2522	
22 o-Nitrotoluene	1	12.469	12.459	0.010	30556	0.2500	0.2389	
23 p-Nitrotoluene	1	12.889	12.873	0.016	26050	0.2500	0.2328	
24 m-Nitrotoluene	1	13.456	13.446	0.010	33206	0.2500	0.2364	
25 PETN	2	14.616	14.599	0.017	176650	2.50	2.57	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

8330 DMT_00013	Amount Added:	12.50	Units: uL
8330IntermStk_00075	Amount Added:	25.00	Units: uL

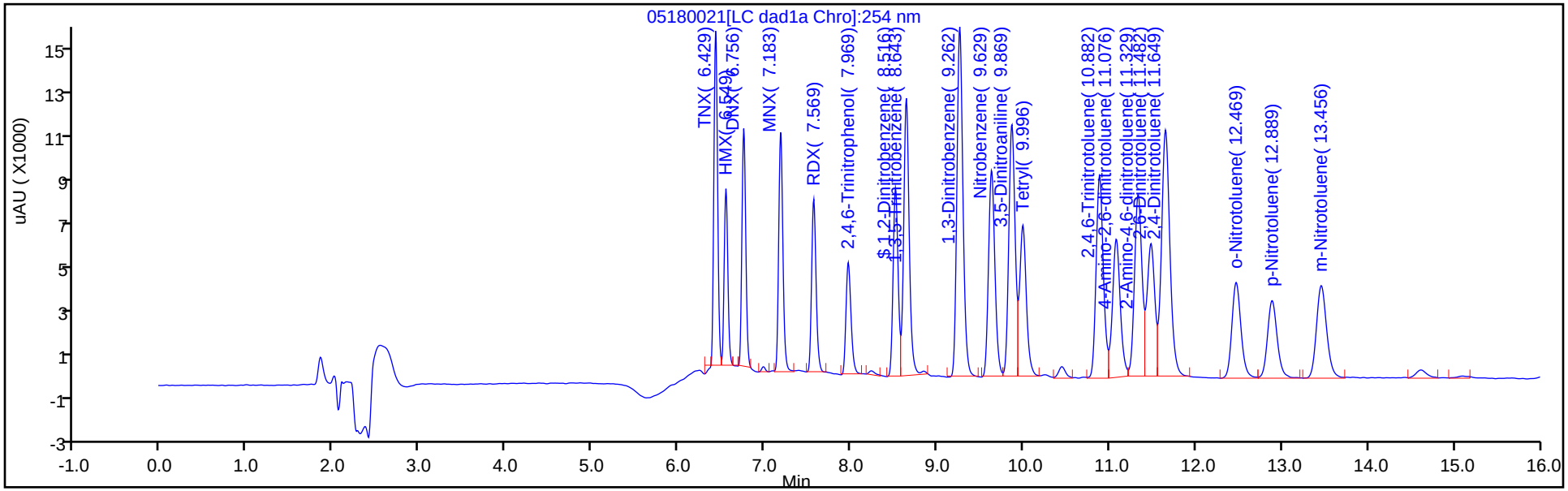
Report Date: 19-May-2023 12:21:57 Chrom Revision: 2.3 16-May-2023 16:37:30

Eurofins Denver

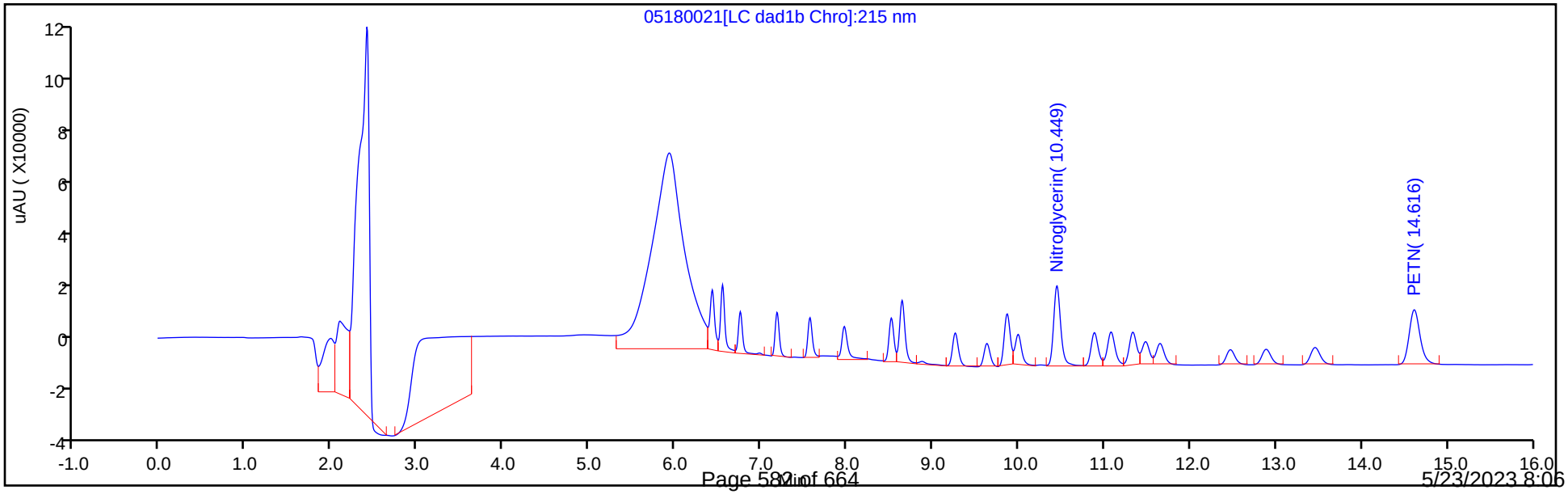
Data File: \\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180021.d

Injection Date:	19-May-2023 01:58:46	Instrument ID:	CHHPLC_X3	Operator ID:	JZ/JG
Lims ID:	CCV DMT			Worklist Smp#:	21
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



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

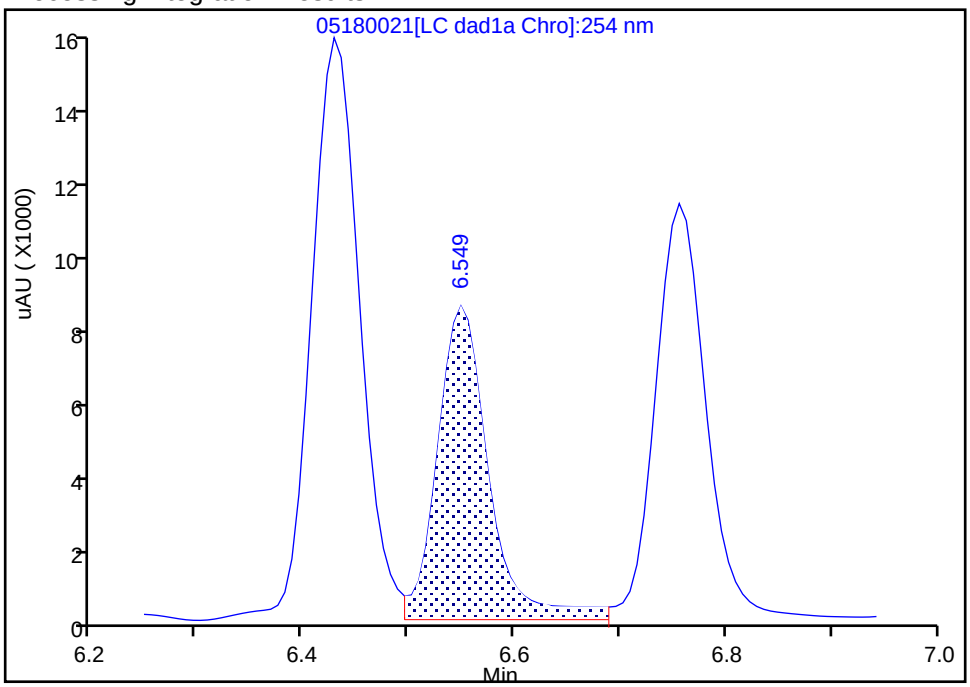
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180021.d				
Injection Date:	19-May-2023 01:58:46	Instrument ID:	CHHPLC_X3		
Lims ID:	CCV DMT				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	7	Worklist Smp#:	21
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

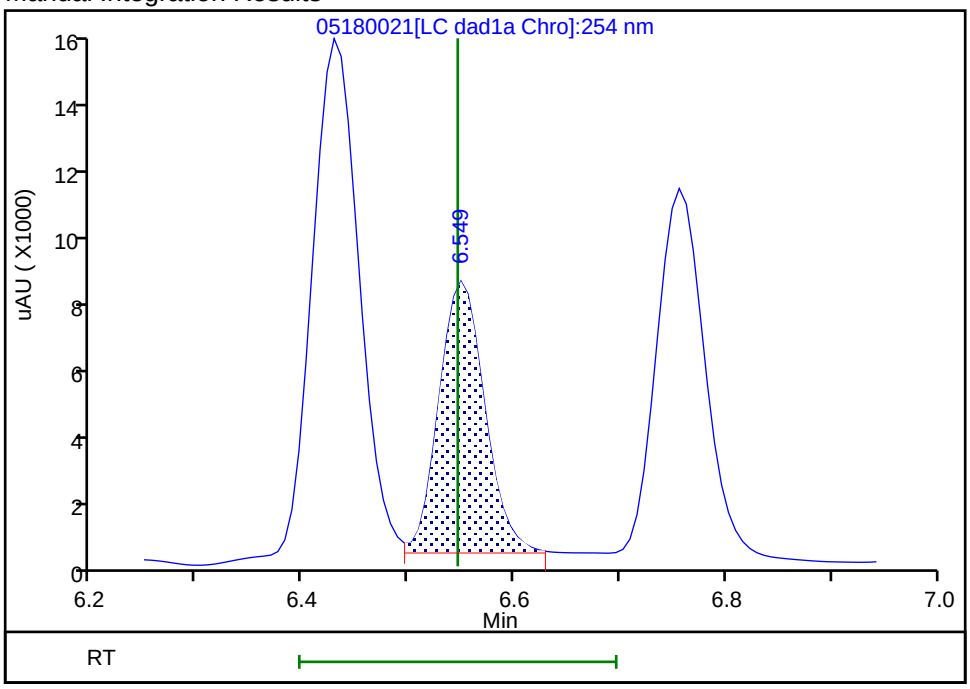
Processing Integration Results

RT: 6.55
Area: 27136
Amount: 0.290137
Amount Units: ug/mL



Manual Integration Results

RT: 6.55
Area: 23215
Amount: 0.248214
Amount Units: ug/mL



Reviewer: LV5D, 19-May-2023 11:36:53 -06:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Baseline

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Lab Sample ID: CCV 280-613045/21 Calibration Date: 05/19/2023 01:58

Instrument ID: CHHPLC_X3 Calib Start Date: 02/24/2023 15:00

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 02/24/2023 17:41

Lab File ID: 05180021.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
TNX	Ave	197687	176590		224	251	-10.7	20.0
DNX	Ave	144462	129435		224	250	-10.4	20.0
MNX	Ave	131172	121117		269	292	-7.7	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Lab Sample ID: CCV 280-613045/21 Calibration Date: 05/19/2023 01:58

Instrument ID: CHHPLC_X3 Calib Start Date: 02/24/2023 15:00

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 02/24/2023 17:41

Lab File ID: 05180021.D

Analyte	RT	RT WINDOW	
		FROM	TO
TNX	6.43	6.33	6.53
DNX	6.76	6.65	6.85
MNX	7.18	7.03	7.33

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\05180021.D
Lims ID: CCV DMT
Client ID:
Sample Type: CCV
Inject. Date: 19-May-2023 01:58:46 ALS Bottle#: 7 Worklist Smp#: 21
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV DMT
Operator ID: JZ/JG Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub27

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 19-May-2023 12:21:57 Calib Date: 24-Feb-2023 17:41:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X\20230224-118952.b\02240018.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX1654

First Level Reviewer: LV5D Date: 19-May-2023 11:36:59

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
3 TNX	1	6.429	6.426	0.003	44280	0.2508	0.2240	M
4 HMX	1	6.549	6.546	0.003	23215	0.2500	0.2482	M
6 DNX	1	6.756	6.753	0.003	32391	0.2503	0.2242	M
7 MNX	1	7.183	7.180	0.003	35336	0.2918	0.2694	
8 RDX	1	7.569	7.560	0.009	27401	0.2500	0.2576	
9 2,4,6-Trinitrophenol	1	7.969	7.960	0.009	20214	0.2500	0.2666	
$ 10 1,2-Dinitrobenzene	1	8.516	8.513	0.003	33176	0.2500	0.2627	
11 1,3,5-Trinitrobenzene	1	8.643	8.640	0.003	55108	0.2500	0.2538	
12 1,3-Dinitrobenzene	1	9.262	9.253	0.009	74913	0.2500	0.2545	
13 Nitrobenzene	1	9.629	9.626	0.003	47004	0.2500	0.2458	
14 3,5-Dinitroaniline	1	9.869	9.859	0.010	56463	0.2500	0.2470	
15 Tetryl	1	9.996	9.986	0.010	36280	0.2500	0.2211	
16 Nitroglycerin	2	10.449	10.439	0.010	162879	2.50	2.54	
17 2,4,6-Trinitrotoluene	1	10.882	10.873	0.009	51628	0.2500	0.2446	
18 4-Amino-2,6-dinitrotoluene	1	11.076	11.066	0.010	38351	0.2500	0.2475	
19 2-Amino-4,6-dinitrotoluene	1	11.329	11.319	0.010	48719	0.2500	0.2419	
20 2,6-Dinitrotoluene	1	11.482	11.473	0.009	36880	0.2500	0.2584	
21 2,4-Dinitrotoluene	1	11.649	11.639	0.010	74830	0.2500	0.2522	
22 o-Nitrotoluene	1	12.469	12.459	0.010	30556	0.2500	0.2389	
23 p-Nitrotoluene	1	12.889	12.873	0.016	26050	0.2500	0.2328	
24 m-Nitrotoluene	1	13.456	13.446	0.010	33206	0.2500	0.2364	
25 PETN	2	14.616	14.599	0.017	176650	2.50	2.57	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

8330 DMT_00013	Amount Added:	12.50	Units: uL
8330IntermStk_00075	Amount Added:	25.00	Units: uL

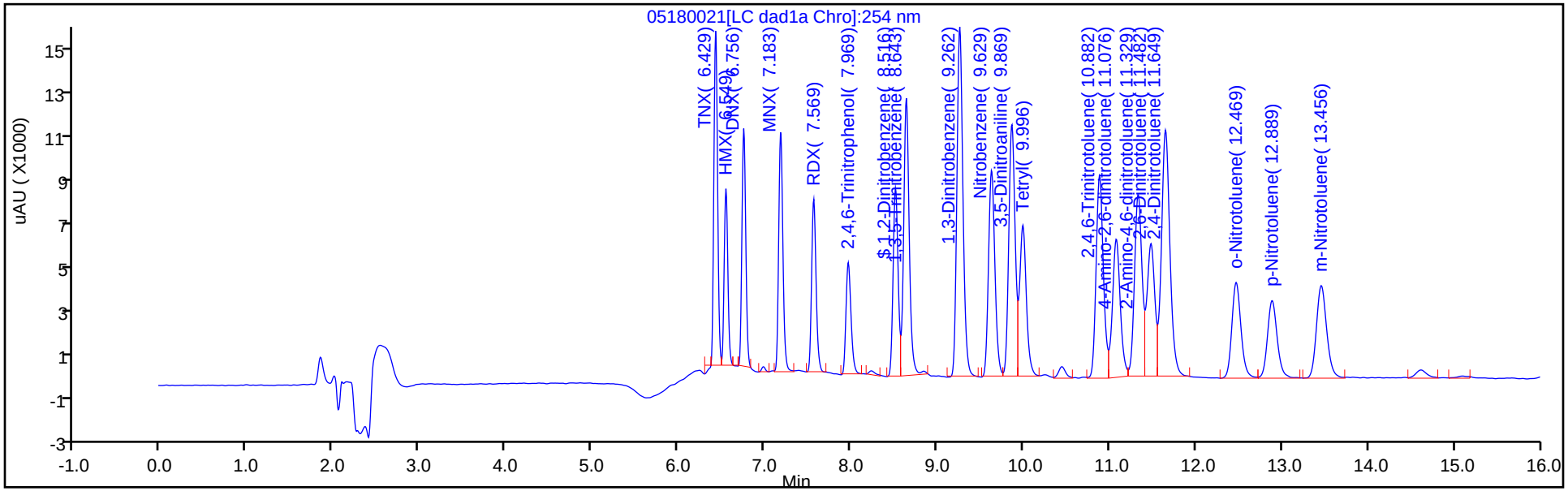
Report Date: 19-May-2023 12:21:57 Chrom Revision: 2.3 16-May-2023 16:37:30

Eurofins Denver

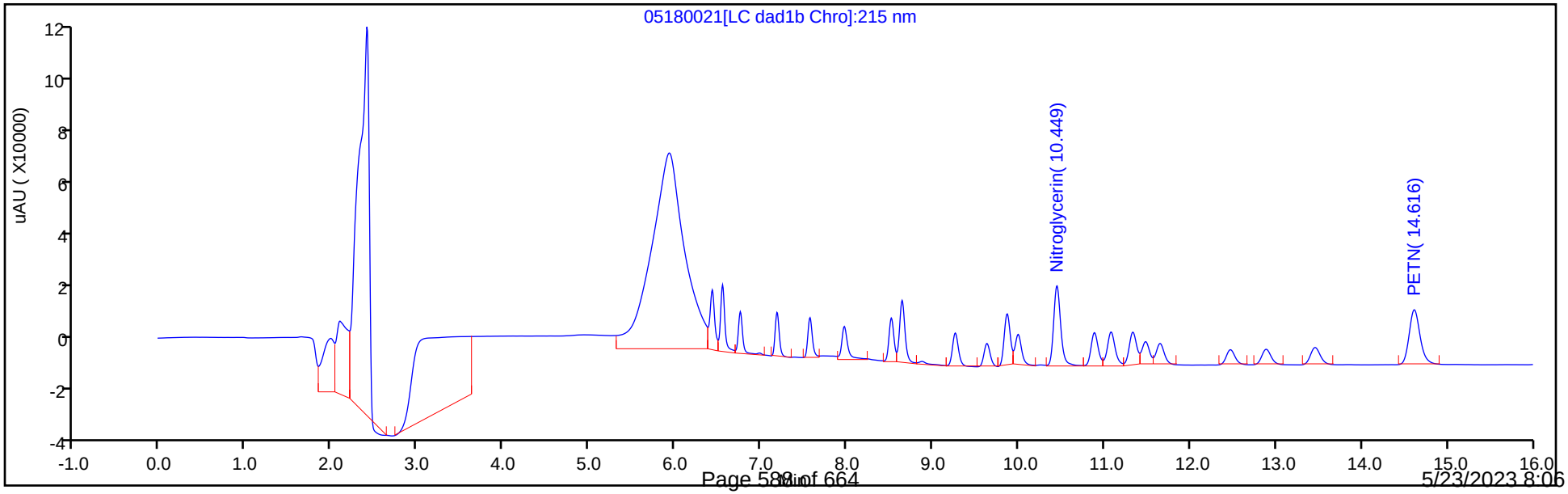
Data File: \\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180021.d

Injection Date:	19-May-2023 01:58:46	Instrument ID:	CHHPLC_X3	Operator ID:	JZ/JG
Lims ID:	CCV DMT			Worklist Smp#:	21
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



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

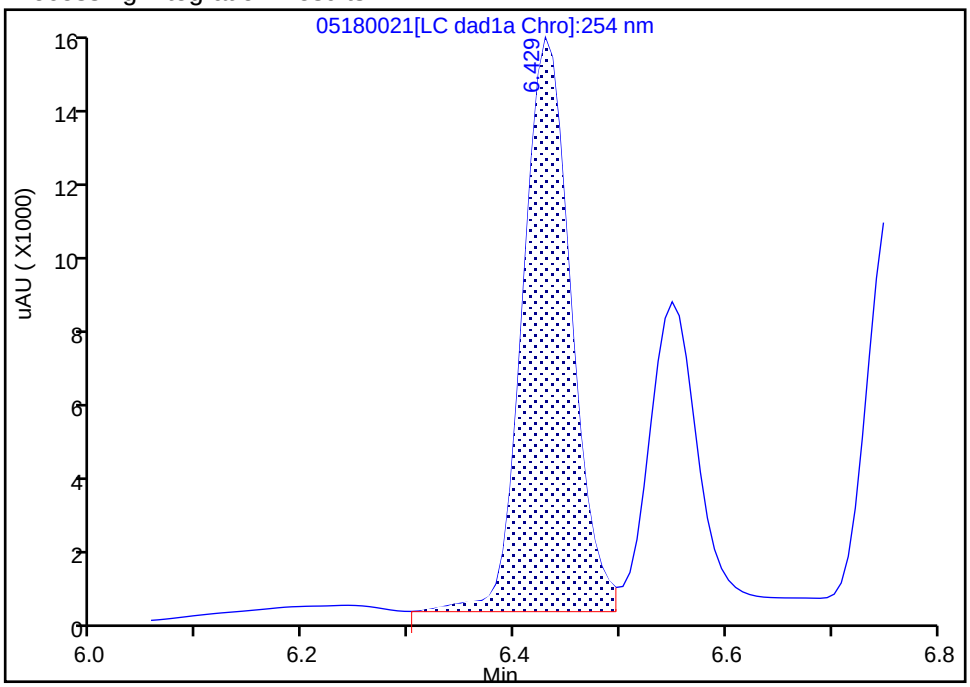
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180021.d				
Injection Date:	19-May-2023 01:58:46	Instrument ID:	CHHPLC_X3		
Lims ID:	CCV DMT				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	7	Worklist Smp#:	21
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

3 TNX, CAS: 13980-04-6

Signal: 1

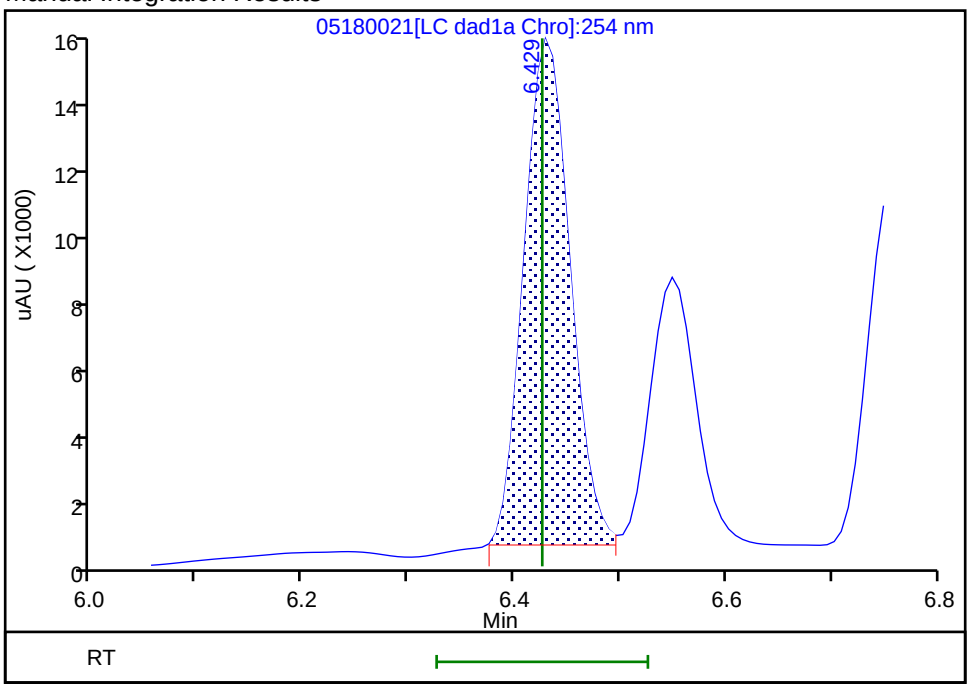
Processing Integration Results

RT: 6.43
Area: 47526
Amount: 0.240410
Amount Units: ug/mL



Manual Integration Results

RT: 6.43
Area: 44280
Amount: 0.223990
Amount Units: ug/mL



Reviewer: LV5D, 19-May-2023 11:36:51 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

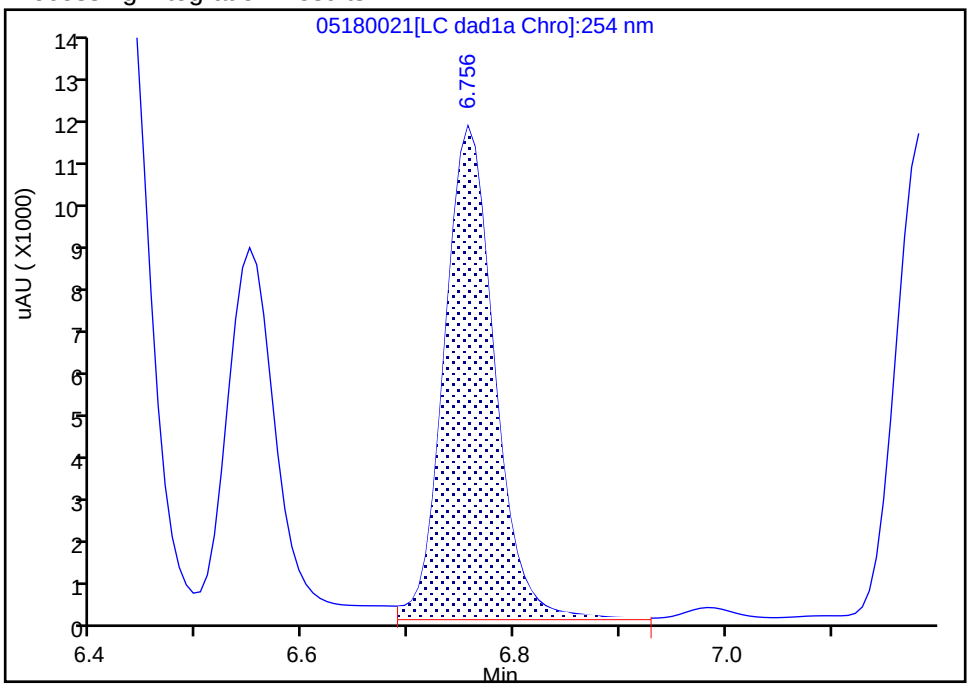
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180021.d				
Injection Date:	19-May-2023 01:58:46	Instrument ID:	CHHPLC_X3		
Lims ID:	CCV DMT				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	7	Worklist Smp#:	21
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

6 DNX, CAS: 80251-29-2

Signal: 1

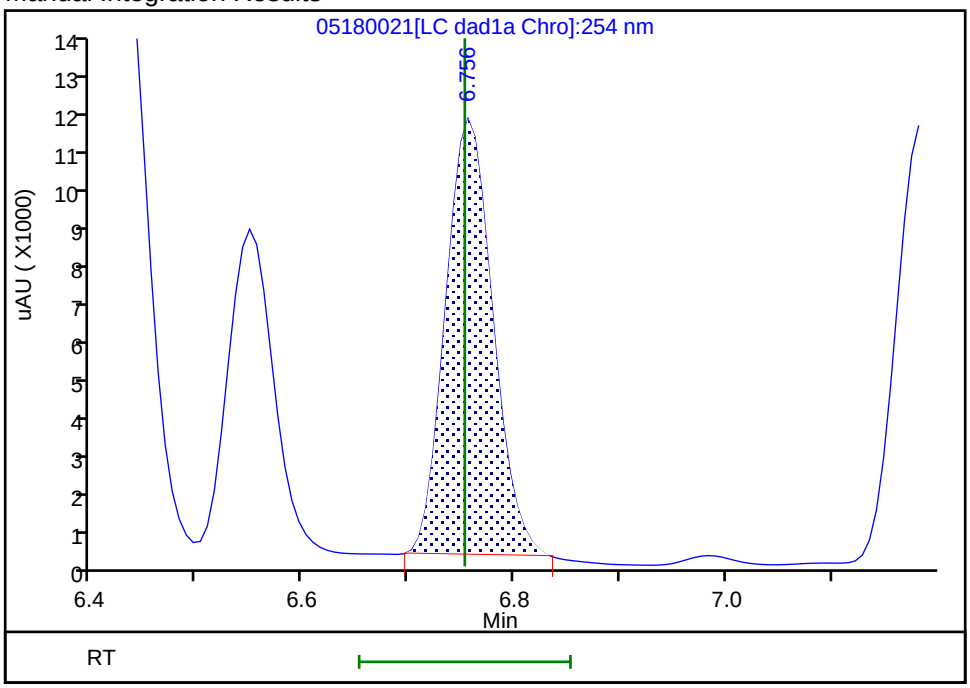
Processing Integration Results

RT: 6.76
Area: 35313
Amount: 0.244444
Amount Units: ug/mL



Manual Integration Results

RT: 6.76
Area: 32391
Amount: 0.224217
Amount Units: ug/mL



Reviewer: LV5D, 19-May-2023 11:36:56 -06:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Lab Sample ID: CCV 280-613045/33 Calibration Date: 05/19/2023 06:34

Instrument ID: CHHPLC_X3 Calib Start Date: 02/08/2023 15:38

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 02/08/2023 18:42

Lab File ID: 05180033.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	93528	93068		249	250	-0.5	20.0
RDX	Ave	106380	110104		259	250	3.5	20.0
Picric acid	Ave	75830	79812		263	250	5.3	20.0
1,3,5-Trinitrobenzene	Ave	217147	219072		252	250	0.9	20.0
1,3-Dinitrobenzene	Ave	294397	298916		254	250	1.5	20.0
Nitrobenzene	Ave	191245	184160		241	250	-3.7	20.0
3,5-Dinitroaniline	Lin2		226064		247	250	-1.1	20.0
Tetryl	Ave	164121	140144		213	250	-14.6	20.0
Nitroglycerin	Ave	64070	65049		2540	2500	1.5	20.0
2,4,6-Trinitrotoluene	Ave	211040	207484		246	250	-1.7	20.0
4-Amino-2,6-dinitrotoluene	Ave	154933	153456		248	250	-1.0	20.0
2-Amino-4,6-dinitrotoluene	Ave	201410	198656		247	250	-1.4	20.0
2,6-Dinitrotoluene	Ave	142745	143420		251	250	0.5	20.0
2,4-Dinitrotoluene	Ave	296667	301392		254	250	1.6	20.0
2-Nitrotoluene	Ave	127896	119520		234	250	-6.5	20.0
4-Nitrotoluene	Ave	111880	102288		229	250	-8.6	20.0
3-Nitrotoluene	Ave	140492	131248		234	250	-6.6	20.0
PETN	Ave	68845	70852		2570	2500	2.9	20.0
1,2-Dinitrobenzene	Ave	126309	133804		265	250	5.9	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Lab Sample ID: CCV 280-613045/33 Calibration Date: 05/19/2023 06:34

Instrument ID: CHHPLC_X3 Calib Start Date: 02/08/2023 15:38

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 02/08/2023 18:42

Lab File ID: 05180033.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.55	6.40	6.70
RDX	7.58	7.41	7.71
Picric acid	7.98	7.81	8.11
1,3,5-Trinitrobenzene	8.65	8.49	8.79
1,3-Dinitrobenzene	9.28	9.10	9.40
Nitrobenzene	9.65	9.48	9.78
3,5-Dinitroaniline	9.89	9.71	10.01
Tetryl	10.03	9.84	10.14
Nitroglycerin	10.48	10.29	10.59
2,4,6-Trinitrotoluene	10.92	10.77	10.97
4-Amino-2,6-dinitrotoluene	11.12	10.97	11.17
2-Amino-4,6-dinitrotoluene	11.37	11.22	11.42
2,6-Dinitrotoluene	11.52	11.37	11.57
2,4-Dinitrotoluene	11.69	11.54	11.74
2-Nitrotoluene	12.51	12.31	12.61
4-Nitrotoluene	12.93	12.72	13.02
3-Nitrotoluene	13.51	13.30	13.60
PETN	14.69	14.45	14.75
1,2-Dinitrobenzene	8.53	8.36	8.66

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\05180033.D
Lims ID: CCV DMT
Client ID:
Sample Type: CCV
Inject. Date: 19-May-2023 06:34:09 ALS Bottle#: 7 Worklist Smp#: 33
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV DMT
Operator ID: JZ/JG Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub27

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 19-May-2023 12:22:05 Calib Date: 24-Feb-2023 17:41:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X\20230224-118952.b\02240018.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX1654

First Level Reviewer: LV5D Date: 19-May-2023 12:10:23

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
3	TNX	1	6.433	6.426	0.007	44476	0.2508	0.2250	M
4	HMX	1	6.553	6.546	0.007	23267	0.2500	0.2488	M
6	DNX	1	6.760	6.753	0.007	32684	0.2503	0.2262	M
7	MNX	1	7.193	7.180	0.013	35734	0.2918	0.2724	
8	RDX	1	7.580	7.560	0.020	27526	0.2500	0.2588	
9	2,4,6-Trinitrophenol	1	7.980	7.960	0.020	19953	0.2500	0.2631	
$ 10	1,2-Dinitrobenzene	1	8.533	8.513	0.020	33451	0.2500	0.2648	
11	1,3,5-Trinitrobenzene	1	8.653	8.640	0.013	54768	0.2500	0.2522	
12	1,3-Dinitrobenzene	1	9.280	9.253	0.027	74729	0.2500	0.2538	
13	Nitrobenzene	1	9.653	9.626	0.027	46040	0.2500	0.2407	
14	3,5-Dinitroaniline	1	9.893	9.859	0.034	56516	0.2500	0.2473	
15	Tetryl	1	10.026	9.986	0.040	35036	0.2500	0.2135	
16	Nitroglycerin	2	10.480	10.439	0.041	162622	2.50	2.54	
17	2,4,6-Trinitrotoluene	1	10.920	10.873	0.047	51871	0.2500	0.2458	
18	4-Amino-2,6-dinitrotoluene	1	11.120	11.066	0.054	38364	0.2500	0.2476	
19	2-Amino-4,6-dinitrotoluene	1	11.373	11.319	0.054	49664	0.2500	0.2466	
20	2,6-Dinitrotoluene	1	11.520	11.473	0.047	35855	0.2500	0.2512	
21	2,4-Dinitrotoluene	1	11.686	11.639	0.047	75348	0.2500	0.2540	
22	o-Nitrotoluene	1	12.513	12.459	0.054	29880	0.2500	0.2336	
23	p-Nitrotoluene	1	12.933	12.873	0.060	25572	0.2500	0.2286	
24	m-Nitrotoluene	1	13.513	13.446	0.067	32812	0.2500	0.2336	
25	PETN	2	14.686	14.599	0.087	177130	2.50	2.57	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

8330 DMT_00013	Amount Added:	12.50	Units: uL
8330IntermStk_00075	Amount Added:	25.00	Units: uL

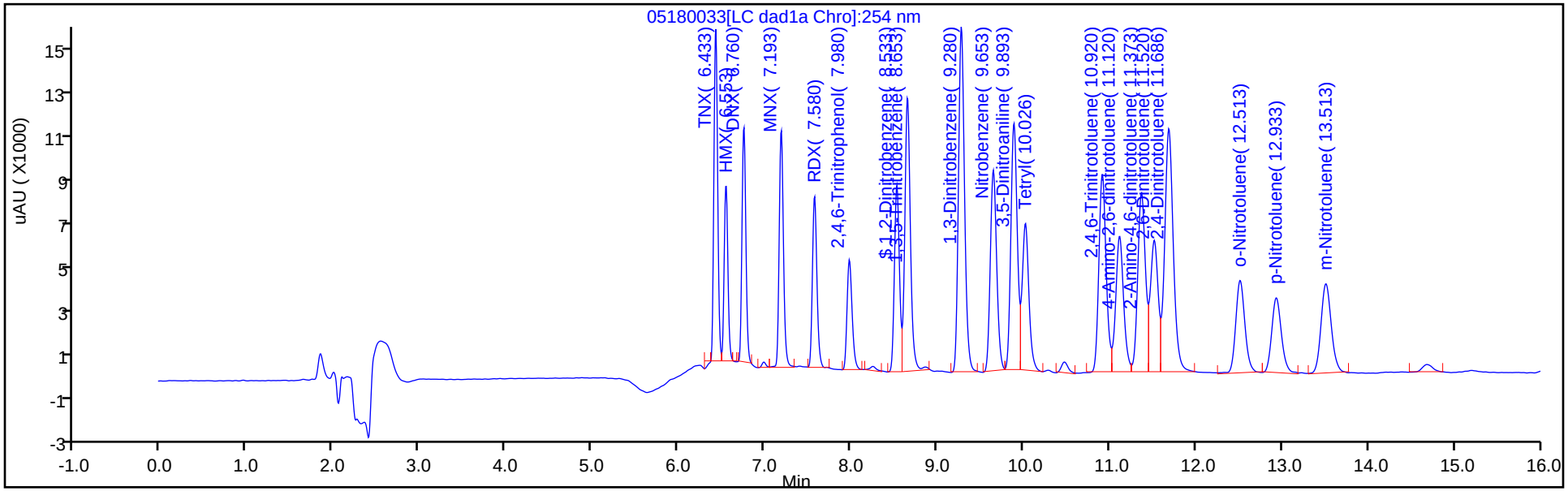
Report Date: 19-May-2023 12:22:05 Chrom Revision: 2.3 16-May-2023 16:37:30

Eurofins Denver

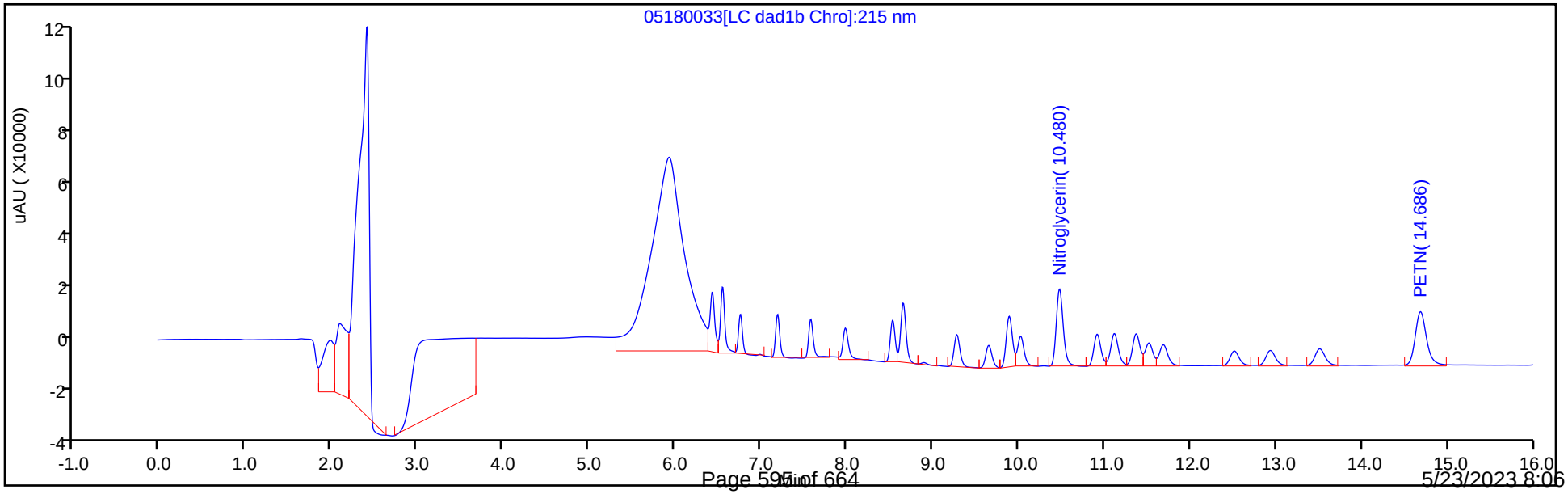
Data File: \\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180033.d

Injection Date:	19-May-2023 06:34:09	Instrument ID:	CHHPLC_X3	Operator ID:	JZ/JG
Lims ID:	CCV DMT			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



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

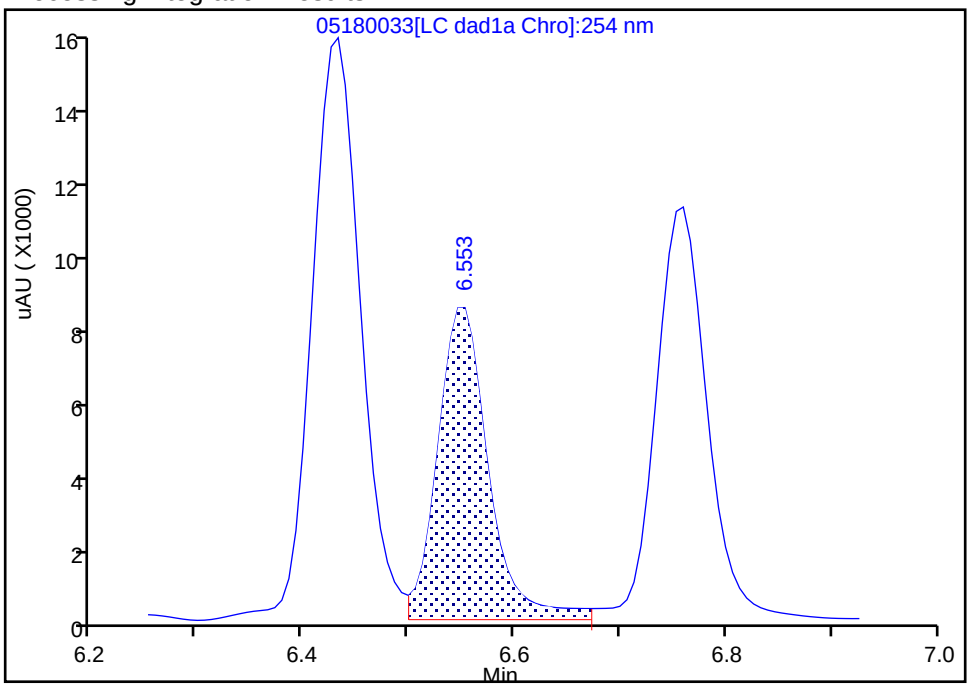
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180033.d				
Injection Date:	19-May-2023 06:34:09	Instrument ID:	CHHPLC_X3		
Lims ID:	CCV DMT				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	7	Worklist Smp#:	33
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

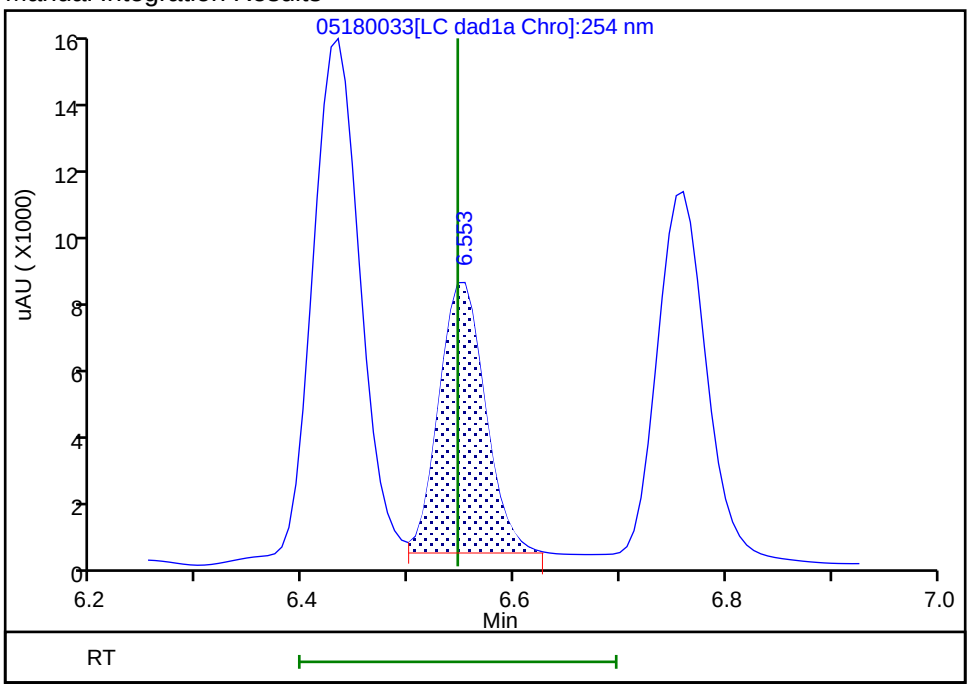
Processing Integration Results

RT: 6.55
Area: 26723
Amount: 0.285721
Amount Units: ug/mL



Manual Integration Results

RT: 6.55
Area: 23267
Amount: 0.248770
Amount Units: ug/mL



Reviewer: LV5D, 19-May-2023 12:10:14 -06:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Baseline

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-176268-1

SDG No.:

Lab Sample ID: CCV 280-613045/33 | Calibration Date: 05/19/2023 06:34

Instrument ID: CHHPLC_X3 | Calib Start Date: 02/24/2023 15:00

GC Column: UltraCarb5uODS ID: 4.60(mm) | Calib End Date: 02/24/2023 17:41

Lab File ID: 05180033.D | Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
TNX	Ave	197687	177372		225	251	-10.3	20.0
DNX	Ave	144462	130605		226	250	-9.6	20.0
MNX	Ave	131172	122482		272	292	-6.6	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Lab Sample ID: CCV 280-613045/33 Calibration Date: 05/19/2023 06:34

Instrument ID: CHHPLC_X3 Calib Start Date: 02/24/2023 15:00

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 02/24/2023 17:41

Lab File ID: 05180033.D

Analyte	RT	RT WINDOW	
		FROM	TO
TNX	6.43	6.33	6.53
DNX	6.76	6.65	6.85
MNX	7.19	7.03	7.33

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\05180033.D
Lims ID: CCV DMT
Client ID:
Sample Type: CCV
Inject. Date: 19-May-2023 06:34:09 ALS Bottle#: 7 Worklist Smp#: 33
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV DMT
Operator ID: JZ/JG Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub27

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 19-May-2023 12:22:05 Calib Date: 24-Feb-2023 17:41:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X\20230224-118952.b\02240018.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX1654

First Level Reviewer: LV5D Date: 19-May-2023 12:10:23

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
3 TNX	1	6.433	6.426	0.007	44476	0.2508	0.2250	M
4 HMX	1	6.553	6.546	0.007	23267	0.2500	0.2488	M
6 DNX	1	6.760	6.753	0.007	32684	0.2503	0.2262	M
7 MNX	1	7.193	7.180	0.013	35734	0.2918	0.2724	
8 RDX	1	7.580	7.560	0.020	27526	0.2500	0.2588	
9 2,4,6-Trinitrophenol	1	7.980	7.960	0.020	19953	0.2500	0.2631	
$ 10 1,2-Dinitrobenzene	1	8.533	8.513	0.020	33451	0.2500	0.2648	
11 1,3,5-Trinitrobenzene	1	8.653	8.640	0.013	54768	0.2500	0.2522	
12 1,3-Dinitrobenzene	1	9.280	9.253	0.027	74729	0.2500	0.2538	
13 Nitrobenzene	1	9.653	9.626	0.027	46040	0.2500	0.2407	
14 3,5-Dinitroaniline	1	9.893	9.859	0.034	56516	0.2500	0.2473	
15 Tetryl	1	10.026	9.986	0.040	35036	0.2500	0.2135	
16 Nitroglycerin	2	10.480	10.439	0.041	162622	2.50	2.54	
17 2,4,6-Trinitrotoluene	1	10.920	10.873	0.047	51871	0.2500	0.2458	
18 4-Amino-2,6-dinitrotoluene	1	11.120	11.066	0.054	38364	0.2500	0.2476	
19 2-Amino-4,6-dinitrotoluene	1	11.373	11.319	0.054	49664	0.2500	0.2466	
20 2,6-Dinitrotoluene	1	11.520	11.473	0.047	35855	0.2500	0.2512	
21 2,4-Dinitrotoluene	1	11.686	11.639	0.047	75348	0.2500	0.2540	
22 o-Nitrotoluene	1	12.513	12.459	0.054	29880	0.2500	0.2336	
23 p-Nitrotoluene	1	12.933	12.873	0.060	25572	0.2500	0.2286	
24 m-Nitrotoluene	1	13.513	13.446	0.067	32812	0.2500	0.2336	
25 PETN	2	14.686	14.599	0.087	177130	2.50	2.57	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

8330 DMT_00013	Amount Added:	12.50	Units: uL
8330IntermStk_00075	Amount Added:	25.00	Units: uL

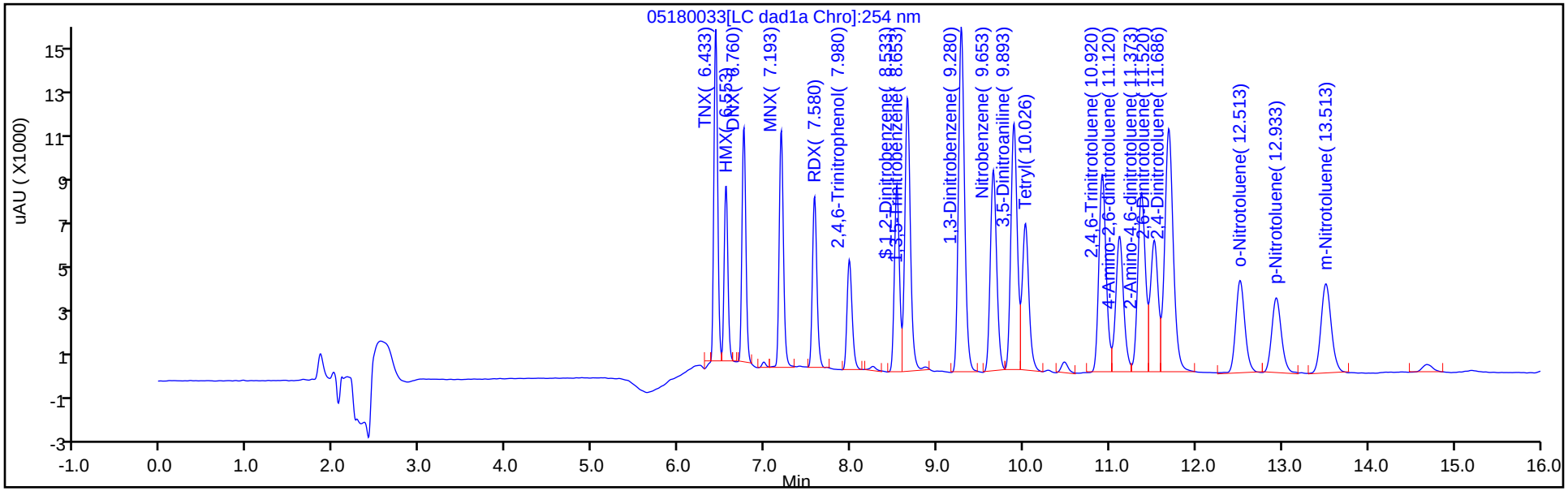
Report Date: 19-May-2023 12:22:05 Chrom Revision: 2.3 16-May-2023 16:37:30

Eurofins Denver

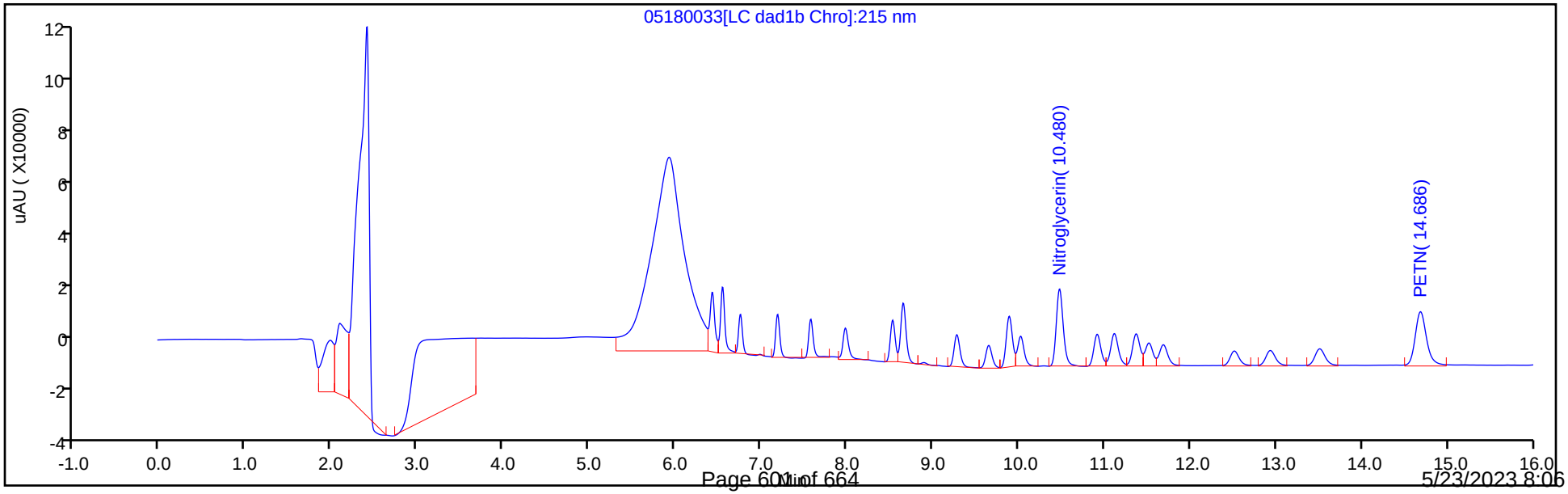
Data File: \\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180033.d

Injection Date:	19-May-2023 06:34:09	Instrument ID:	CHHPLC_X3	Operator ID:	JZ/JG
Lims ID:	CCV DMT			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



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

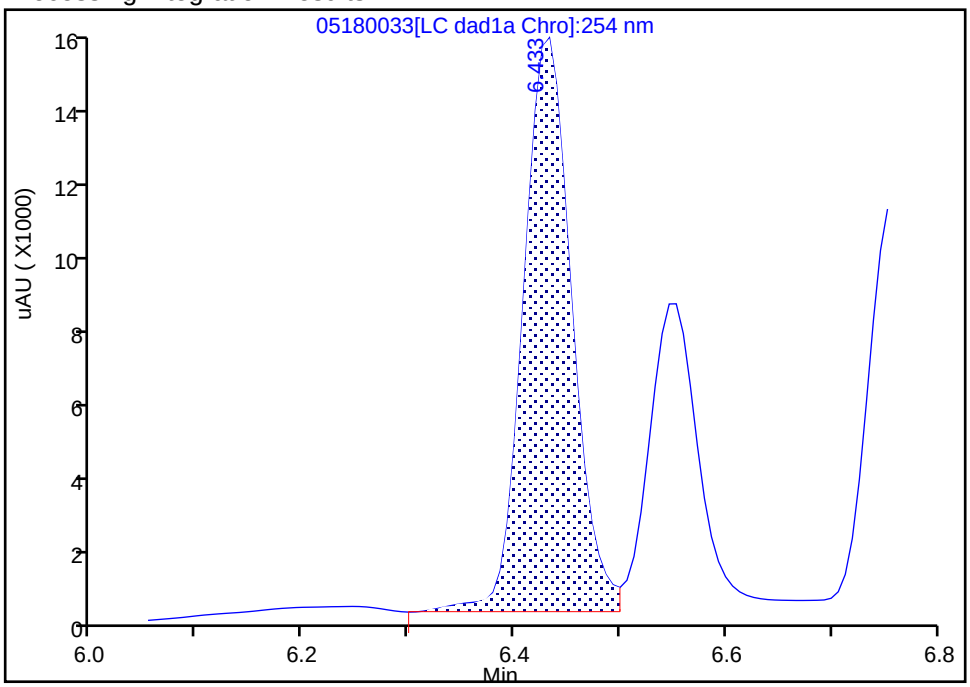
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180033.d				
Injection Date:	19-May-2023 06:34:09	Instrument ID:	CHHPLC_X3		
Lims ID:	CCV DMT				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	7	Worklist Smp#:	33
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

3 TNX, CAS: 13980-04-6

Signal: 1

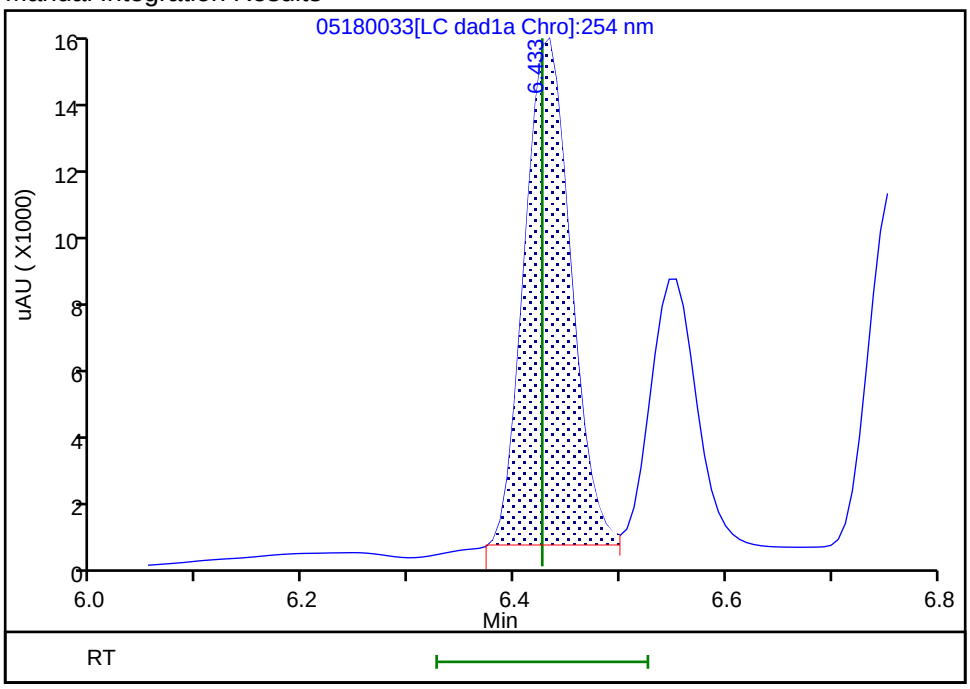
Processing Integration Results

RT: 6.43
Area: 47804
Amount: 0.241816
Amount Units: ug/mL



Manual Integration Results

RT: 6.43
Area: 44476
Amount: 0.224982
Amount Units: ug/mL



Reviewer: LV5D, 19-May-2023 12:10:13 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

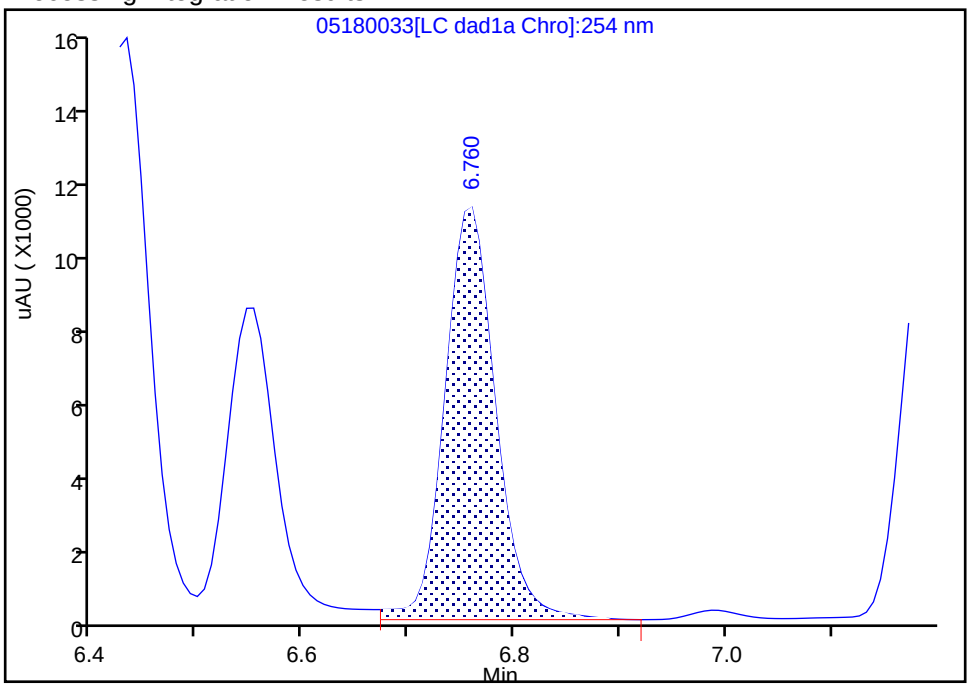
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180033.d				
Injection Date:	19-May-2023 06:34:09	Instrument ID:	CHHPLC_X3		
Lims ID:	CCV DMT				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	7	Worklist Smp#:	33
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

6 DNX, CAS: 80251-29-2

Signal: 1

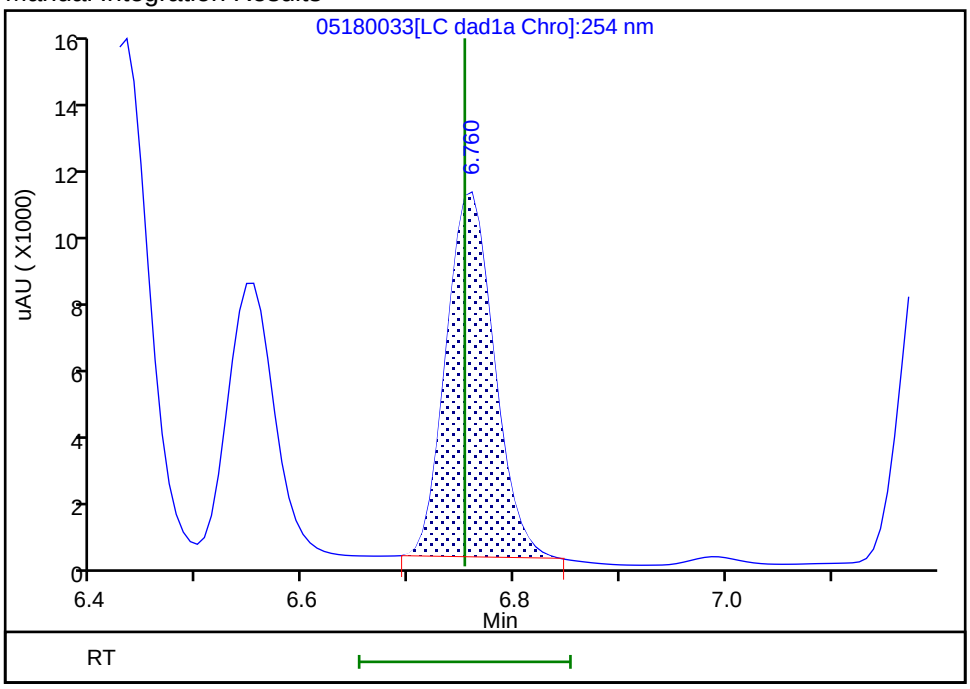
Processing Integration Results

RT: 6.76
Area: 35438
Amount: 0.245309
Amount Units: ug/mL



Manual Integration Results

RT: 6.76
Area: 32684
Amount: 0.226246
Amount Units: ug/mL



Reviewer: LV5D, 19-May-2023 12:10:19 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-176268-1

SDG No.:

Lab Sample ID: CCV 280-613045/41 | Calibration Date: 05/19/2023 09:37

Instrument ID: CHHPLC_X3 | Calib Start Date: 02/08/2023 15:38

GC Column: UltraCarb5uODS ID: 4.60(mm) | Calib End Date: 02/08/2023 18:42

Lab File ID: 05180041.D | Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	93528	91156		244	250	-2.5	20.0
RDX	Ave	106380	110052		259	250	3.5	20.0
Picric acid	Ave	75830	80580		266	250	6.3	20.0
1,3,5-Trinitrobenzene	Ave	217147	218648		252	250	0.7	20.0
1,3-Dinitrobenzene	Ave	294397	298484		253	250	1.4	20.0
Nitrobenzene	Ave	191245	184896		242	250	-3.3	20.0
3,5-Dinitroaniline	Lin2		226312		248	250	-1.0	20.0
Tetryl	Ave	164121	144832		221	250	-11.8	20.0
Nitroglycerin	Ave	64070	65008		2540	2500	1.5	20.0
2,4,6-Trinitrotoluene	Ave	211040	206120		244	250	-2.3	20.0
4-Amino-2,6-dinitrotoluene	Ave	154933	152740		246	250	-1.4	20.0
2-Amino-4,6-dinitrotoluene	Ave	201410	197552		245	250	-1.9	20.0
2,6-Dinitrotoluene	Ave	142745	142432		249	250	-0.2	20.0
2,4-Dinitrotoluene	Ave	296667	298396		251	250	0.6	20.0
2-Nitrotoluene	Ave	127896	120736		236	250	-5.6	20.0
4-Nitrotoluene	Ave	111880	104376		233	250	-6.7	20.0
3-Nitrotoluene	Ave	140492	131652		234	250	-6.3	20.0
PETN	Ave	68845	70936		2580	2500	3.0	20.0
1,2-Dinitrobenzene	Ave	126309	131592		260	250	4.2	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Lab Sample ID: CCV 280-613045/41 Calibration Date: 05/19/2023 09:37

Instrument ID: CHHPLC_X3 Calib Start Date: 02/08/2023 15:38

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 02/08/2023 18:42

Lab File ID: 05180041.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.55	6.40	6.70
RDX	7.57	7.41	7.71
Picric acid	7.98	7.81	8.11
1,3,5-Trinitrobenzene	8.65	8.49	8.79
1,3-Dinitrobenzene	9.27	9.10	9.40
Nitrobenzene	9.64	9.48	9.78
3,5-Dinitroaniline	9.87	9.71	10.01
Tetryl	10.01	9.84	10.14
Nitroglycerin	10.46	10.29	10.59
2,4,6-Trinitrotoluene	10.89	10.77	10.97
4-Amino-2,6-dinitrotoluene	11.09	10.97	11.17
2-Amino-4,6-dinitrotoluene	11.35	11.22	11.42
2,6-Dinitrotoluene	11.49	11.37	11.57
2,4-Dinitrotoluene	11.66	11.54	11.74
2-Nitrotoluene	12.48	12.31	12.61
4-Nitrotoluene	12.90	12.72	13.02
3-Nitrotoluene	13.47	13.30	13.60
PETN	14.63	14.45	14.75
1,2-Dinitrobenzene	8.52	8.36	8.66

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\05180041.D
Lims ID: CCV DMT
Client ID:
Sample Type: CCV
Inject. Date: 19-May-2023 09:37:42 ALS Bottle#: 7 Worklist Smp#: 41
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV DMT
Operator ID: JZ/JG Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub27

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 19-May-2023 12:22:11 Calib Date: 24-Feb-2023 17:41:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X\20230224-118952.b\02240018.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX1654

First Level Reviewer: LV5D Date: 19-May-2023 12:21:31

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
3 TNX	1	6.428	6.426	0.002	43604	0.2508	0.2206	M
4 HMX	1	6.548	6.546	0.002	22789	0.2500	0.2437	M
6 DNX	1	6.755	6.753	0.002	32558	0.2503	0.2254	M
7 MNX	1	7.188	7.180	0.008	35467	0.2918	0.2704	
8 RDX	1	7.568	7.560	0.008	27513	0.2500	0.2586	
9 2,4,6-Trinitrophenol	1	7.975	7.960	0.015	20145	0.2500	0.2657	
$ 10 1,2-Dinitrobenzene	1	8.521	8.513	0.008	32898	0.2500	0.2605	
11 1,3,5-Trinitrobenzene	1	8.648	8.640	0.008	54662	0.2500	0.2517	
12 1,3-Dinitrobenzene	1	9.268	9.253	0.015	74621	0.2500	0.2535	
13 Nitrobenzene	1	9.641	9.626	0.015	46224	0.2500	0.2417	
14 3,5-Dinitroaniline	1	9.874	9.859	0.015	56578	0.2500	0.2475	
15 Tetryl	1	10.008	9.986	0.022	36208	0.2500	0.2206	
16 Nitroglycerin	2	10.461	10.439	0.022	162520	2.50	2.54	
17 2,4,6-Trinitrotoluene	1	10.894	10.873	0.021	51530	0.2500	0.2442	
18 4-Amino-2,6-dinitrotoluene	1	11.094	11.066	0.028	38185	0.2500	0.2465	
19 2-Amino-4,6-dinitrotoluene	1	11.348	11.319	0.029	49388	0.2500	0.2452	
20 2,6-Dinitrotoluene	1	11.494	11.473	0.021	35608	0.2500	0.2495	
21 2,4-Dinitrotoluene	1	11.661	11.639	0.022	74599	0.2500	0.2515	
22 o-Nitrotoluene	1	12.481	12.459	0.022	30184	0.2500	0.2360	
23 p-Nitrotoluene	1	12.901	12.873	0.028	26094	0.2500	0.2332	
24 m-Nitrotoluene	1	13.468	13.446	0.022	32913	0.2500	0.2343	
25 PETN	2	14.628	14.599	0.029	177341	2.50	2.58	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

8330 DMT_00013	Amount Added:	12.50	Units: uL
8330IntermStk_00075	Amount Added:	25.00	Units: uL

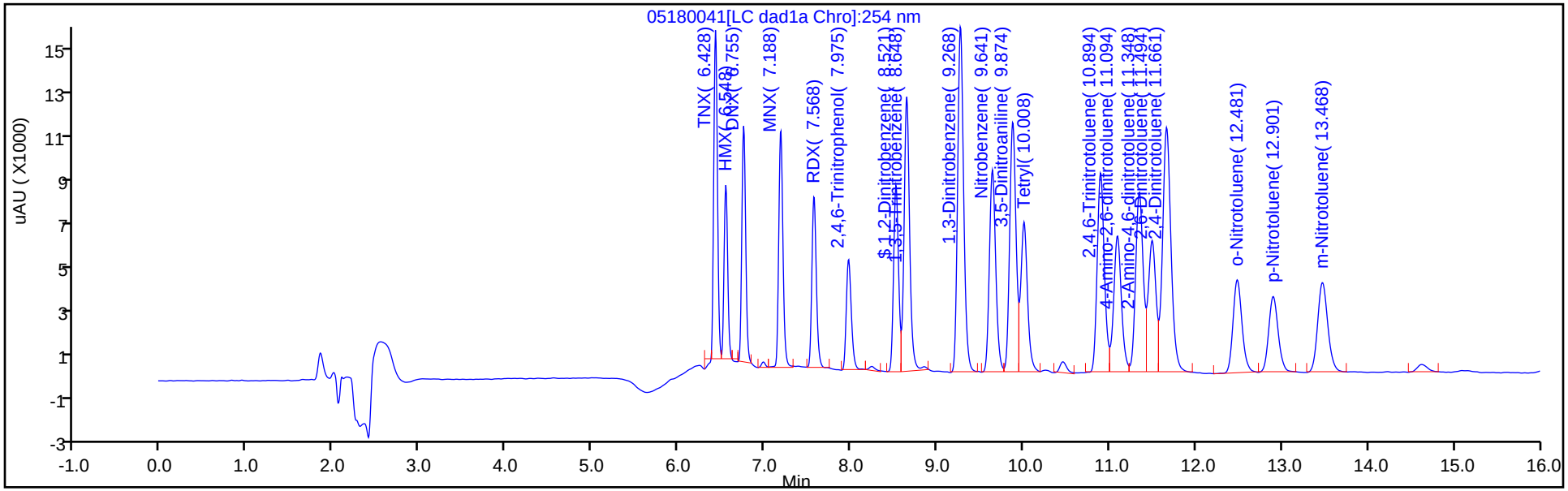
Report Date: 19-May-2023 12:22:11 Chrom Revision: 2.3 16-May-2023 16:37:30

Eurofins Denver

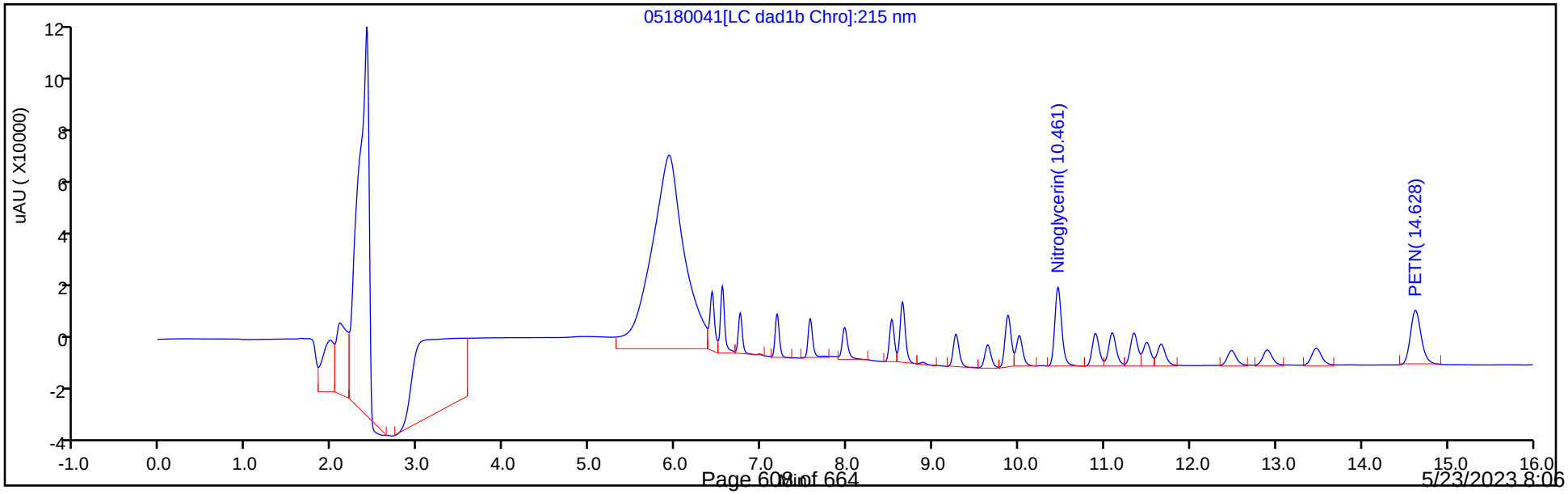
Data File: \\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180041.d

Injection Date:	19-May-2023 09:37:42	Instrument ID:	CHHPLC_X3	Operator ID:	JZ/JG
Lims ID:	CCV DMT			Worklist Smp#:	41
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



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

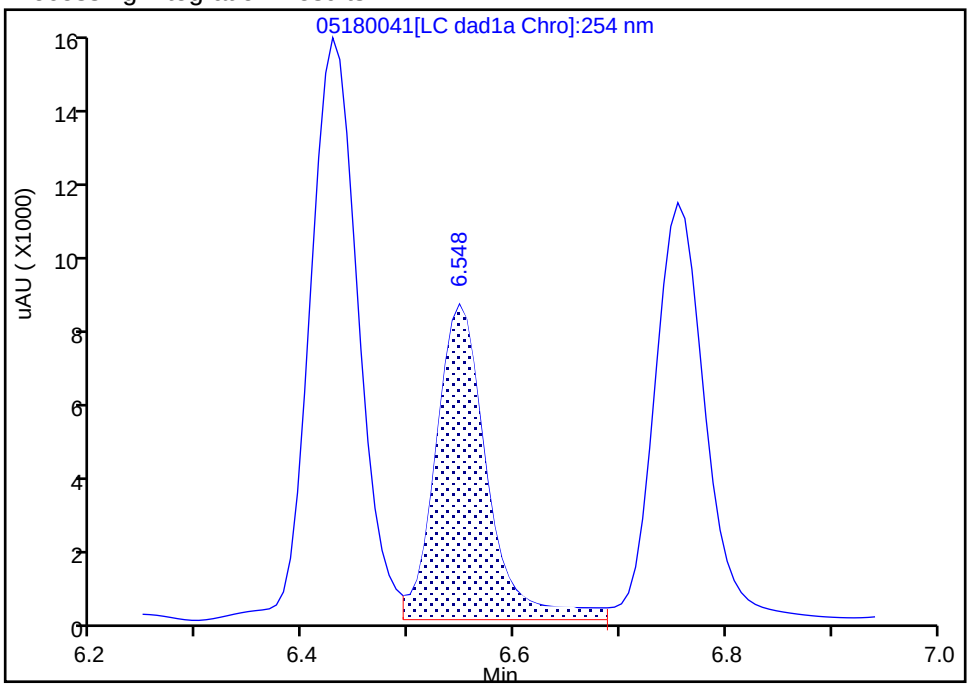
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180041.d				
Injection Date:	19-May-2023 09:37:42	Instrument ID:	CHHPLC_X3		
Lims ID:	CCV DMT				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	7	Worklist Smp#:	41
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

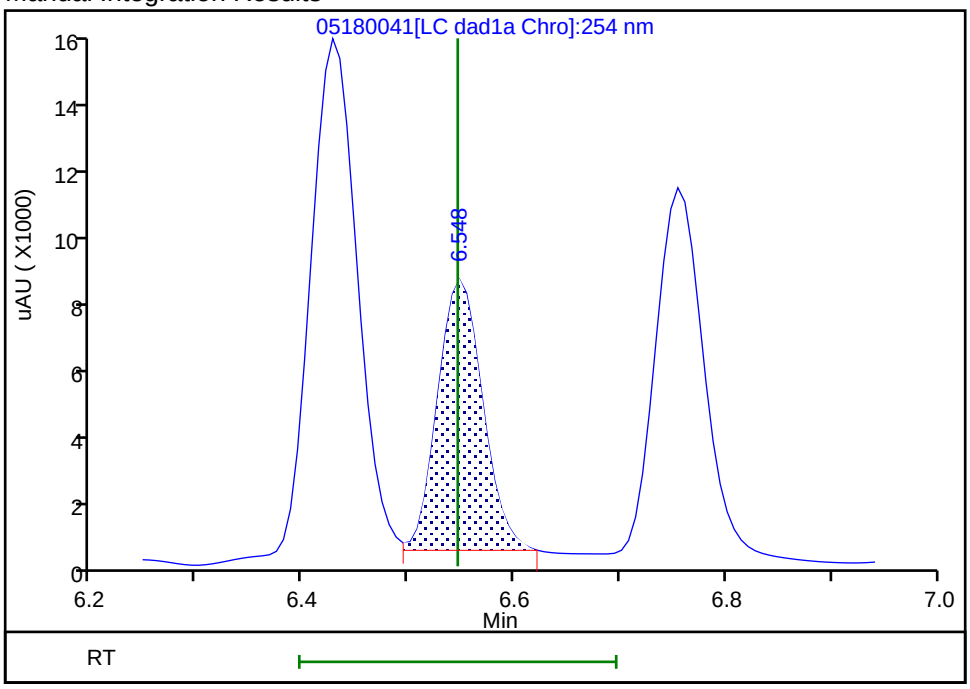
Processing Integration Results

RT: 6.55
Area: 27128
Amount: 0.290052
Amount Units: ug/mL



Manual Integration Results

RT: 6.55
Area: 22789
Amount: 0.243659
Amount Units: ug/mL



Reviewer: LV5D, 19-May-2023 12:21:25 -06:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Baseline

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-176268-1

SDG No.:

Lab Sample ID: CCV 280-613045/41 | Calibration Date: 05/19/2023 09:37

Instrument ID: CHHPLC_X3 | Calib Start Date: 02/24/2023 15:00

GC Column: UltraCarb5uODS ID: 4.60(mm) | Calib End Date: 02/24/2023 17:41

Lab File ID: 05180041.D | Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
TNX	Ave	197687	173894		221	251	-12.0	20.0
DNX	Ave	144462	130102		225	250	-9.9	20.0
MNX	Ave	131172	121566		270	292	-7.3	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Lab Sample ID: CCV 280-613045/41 Calibration Date: 05/19/2023 09:37

Instrument ID: CHHPLC_X3 Calib Start Date: 02/24/2023 15:00

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 02/24/2023 17:41

Lab File ID: 05180041.D

Analyte	RT	RT WINDOW	
		FROM	TO
TNX	6.43	6.33	6.53
DNX	6.76	6.65	6.85
MNX	7.19	7.03	7.33

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\05180041.D
Lims ID: CCV DMT
Client ID:
Sample Type: CCV
Inject. Date: 19-May-2023 09:37:42 ALS Bottle#: 7 Worklist Smp#: 41
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV DMT
Operator ID: JZ/JG Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub27

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 19-May-2023 12:22:11 Calib Date: 24-Feb-2023 17:41:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X\20230224-118952.b\02240018.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX1654

First Level Reviewer: LV5D Date: 19-May-2023 12:21:31

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
3 TNX	1	6.428	6.426	0.002	43604	0.2508	0.2206	M
4 HMX	1	6.548	6.546	0.002	22789	0.2500	0.2437	M
6 DNX	1	6.755	6.753	0.002	32558	0.2503	0.2254	M
7 MNX	1	7.188	7.180	0.008	35467	0.2918	0.2704	
8 RDX	1	7.568	7.560	0.008	27513	0.2500	0.2586	
9 2,4,6-Trinitrophenol	1	7.975	7.960	0.015	20145	0.2500	0.2657	
$ 10 1,2-Dinitrobenzene	1	8.521	8.513	0.008	32898	0.2500	0.2605	
11 1,3,5-Trinitrobenzene	1	8.648	8.640	0.008	54662	0.2500	0.2517	
12 1,3-Dinitrobenzene	1	9.268	9.253	0.015	74621	0.2500	0.2535	
13 Nitrobenzene	1	9.641	9.626	0.015	46224	0.2500	0.2417	
14 3,5-Dinitroaniline	1	9.874	9.859	0.015	56578	0.2500	0.2475	
15 Tetryl	1	10.008	9.986	0.022	36208	0.2500	0.2206	
16 Nitroglycerin	2	10.461	10.439	0.022	162520	2.50	2.54	
17 2,4,6-Trinitrotoluene	1	10.894	10.873	0.021	51530	0.2500	0.2442	
18 4-Amino-2,6-dinitrotoluene	1	11.094	11.066	0.028	38185	0.2500	0.2465	
19 2-Amino-4,6-dinitrotoluene	1	11.348	11.319	0.029	49388	0.2500	0.2452	
20 2,6-Dinitrotoluene	1	11.494	11.473	0.021	35608	0.2500	0.2495	
21 2,4-Dinitrotoluene	1	11.661	11.639	0.022	74599	0.2500	0.2515	
22 o-Nitrotoluene	1	12.481	12.459	0.022	30184	0.2500	0.2360	
23 p-Nitrotoluene	1	12.901	12.873	0.028	26094	0.2500	0.2332	
24 m-Nitrotoluene	1	13.468	13.446	0.022	32913	0.2500	0.2343	
25 PETN	2	14.628	14.599	0.029	177341	2.50	2.58	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

8330 DMT_00013	Amount Added:	12.50	Units: uL
8330IntermStk_00075	Amount Added:	25.00	Units: uL

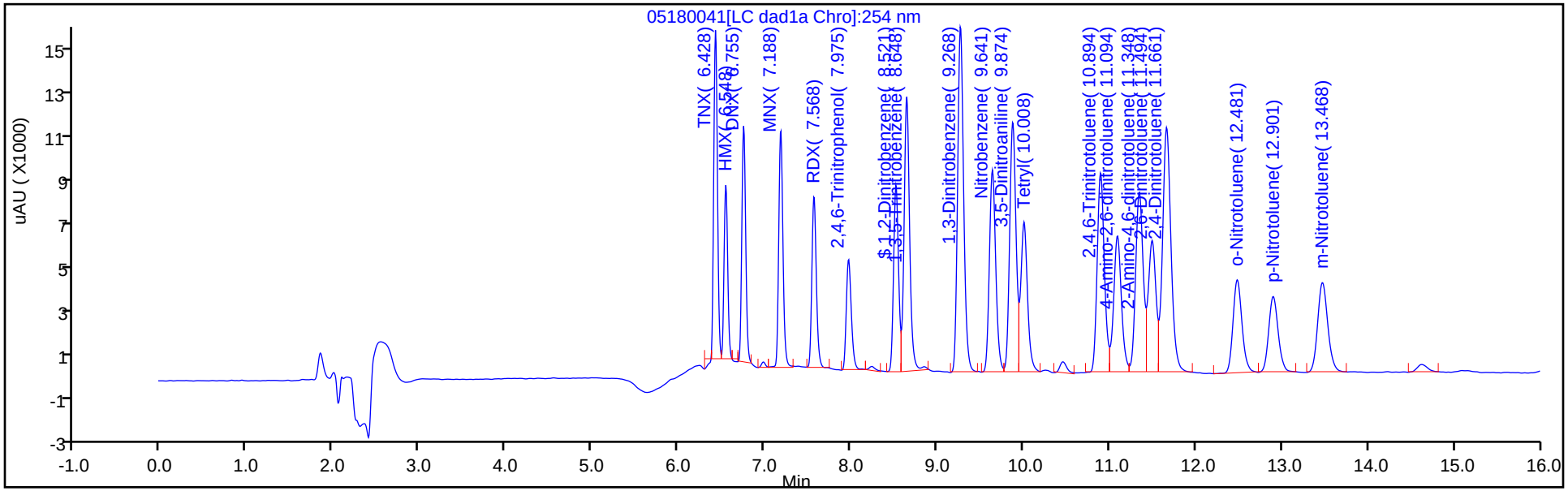
Report Date: 19-May-2023 12:22:11 Chrom Revision: 2.3 16-May-2023 16:37:30

Eurofins Denver

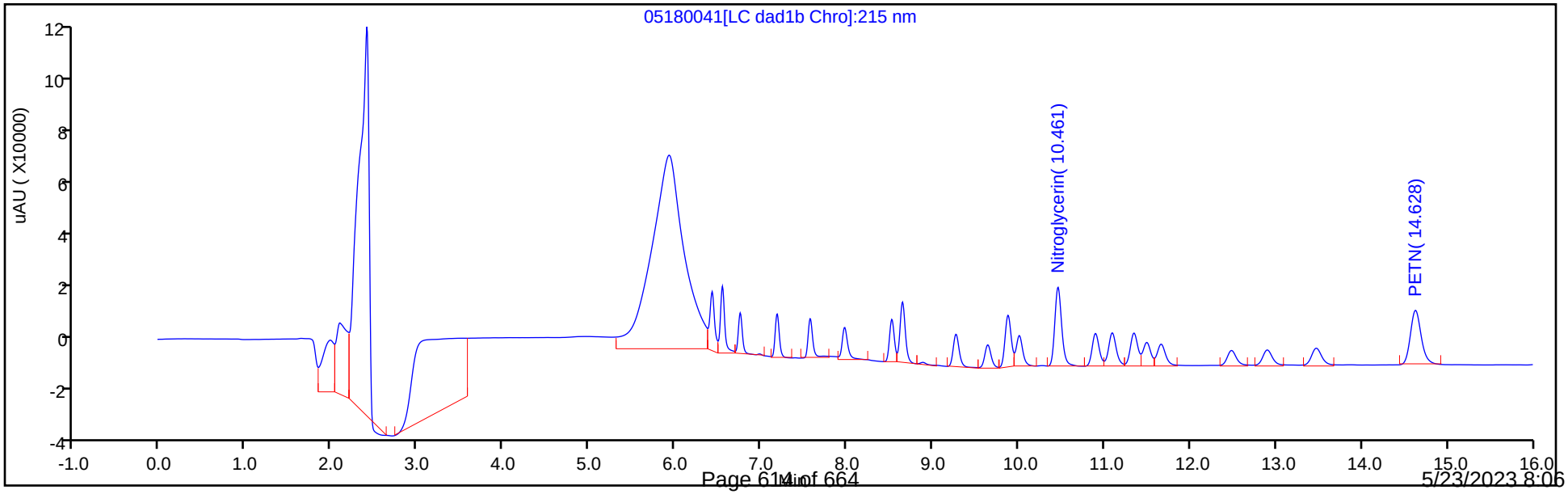
Data File: \\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180041.d

Injection Date:	19-May-2023 09:37:42	Instrument ID:	CHHPLC_X3	Operator ID:	JZ/JG
Lims ID:	CCV DMT			Worklist Smp#:	41
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



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

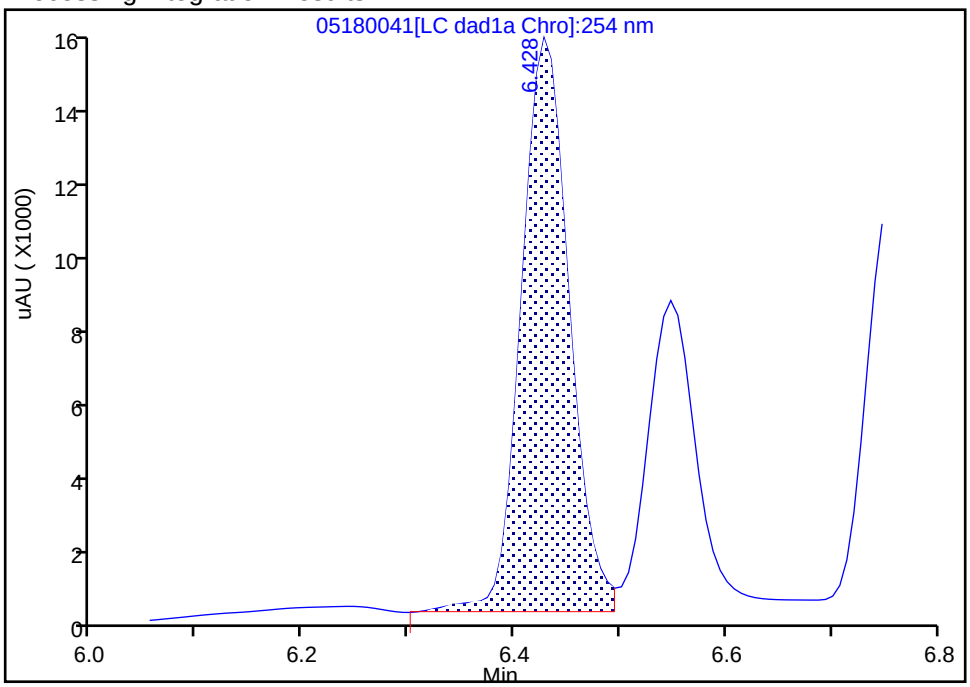
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180041.d				
Injection Date:	19-May-2023 09:37:42	Instrument ID:	CHHPLC_X3		
Lims ID:	CCV DMT				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	7	Worklist Smp#:	41
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

3 TNX, CAS: 13980-04-6

Signal: 1

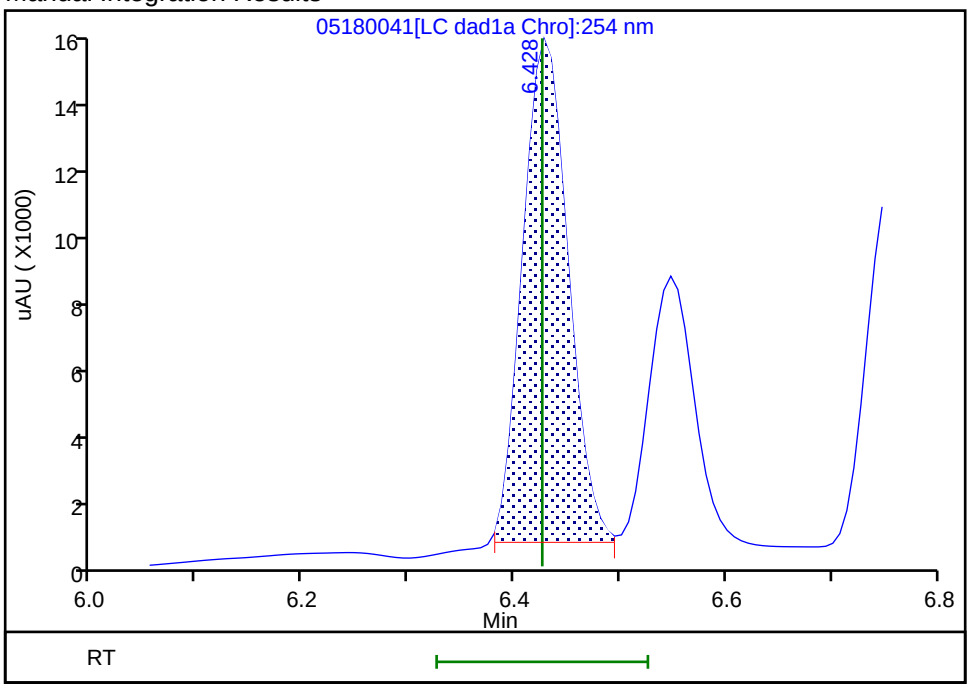
Processing Integration Results

RT: 6.43
Area: 47401
Amount: 0.239778
Amount Units: ug/mL



Manual Integration Results

RT: 6.43
Area: 43604
Amount: 0.220571
Amount Units: ug/mL



Reviewer: LV5D, 19-May-2023 12:21:24 -06:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

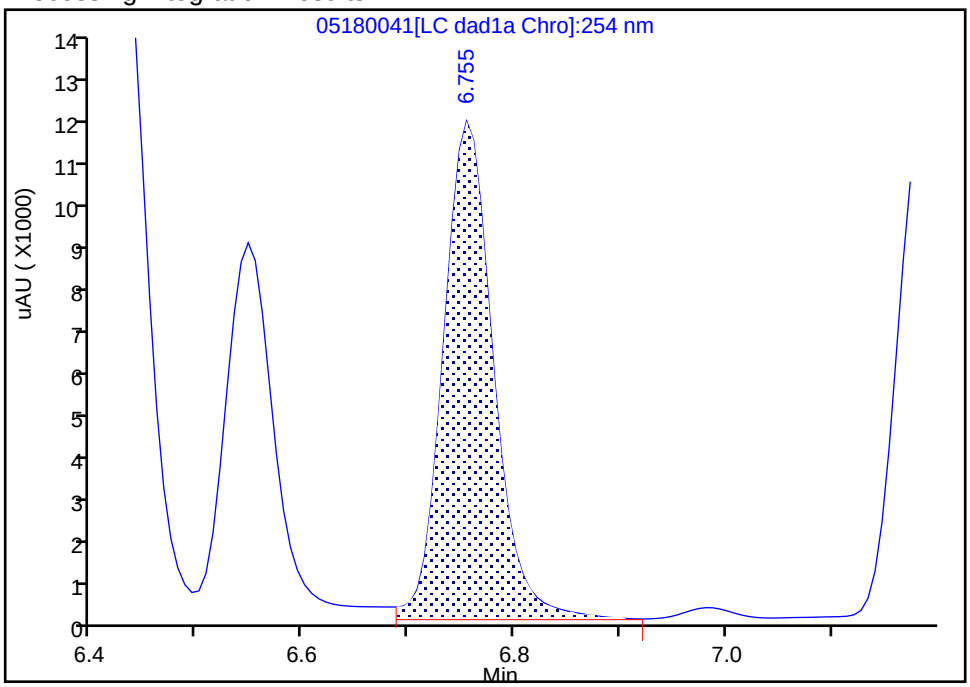
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180041.d				
Injection Date:	19-May-2023 09:37:42	Instrument ID:	CHHPLC_X3		
Lims ID:	CCV DMT				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	7	Worklist Smp#:	41
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

6 DNX, CAS: 80251-29-2

Signal: 1

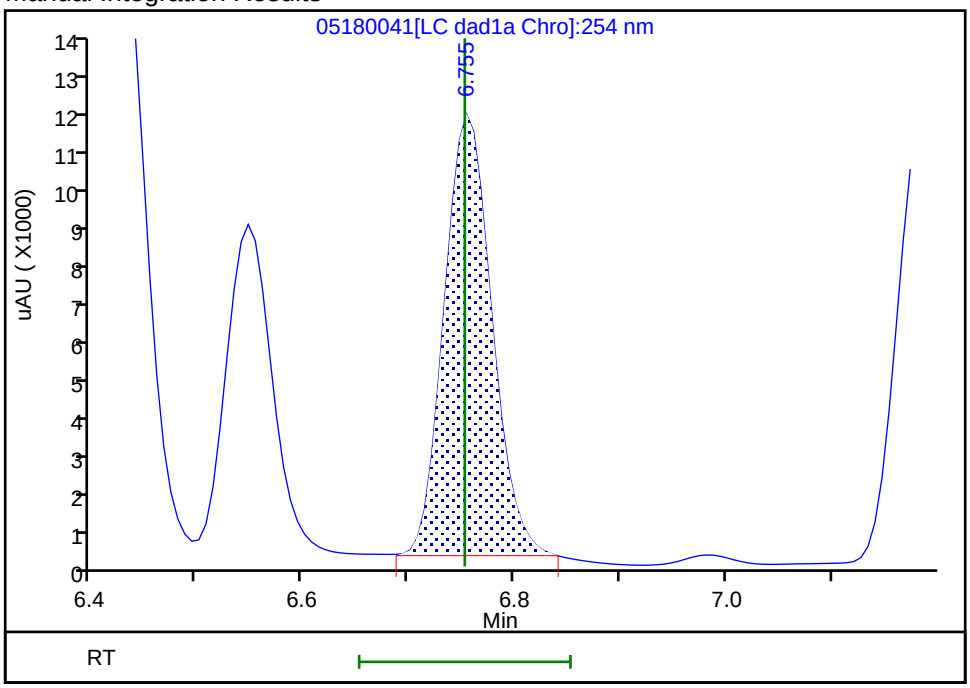
Processing Integration Results

RT: 6.75
Area: 35344
Amount: 0.244659
Amount Units: ug/mL



Manual Integration Results

RT: 6.75
Area: 32558
Amount: 0.225373
Amount Units: ug/mL



Reviewer: LV5D, 19-May-2023 12:21:29 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-176268-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-612275/1-A

Matrix: Water | Lab File ID: 05152311.D

Analysis Method: 8330B | Date Collected:

Extraction Method: 3535 | Date Extracted: 05/12/2023 15:04

Sample wt/vol: 500(mL) | Date Analyzed: 05/15/2023 16:20

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: % Solids: | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 612440 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	0.20	U	0.21	0.20	0.084
99-65-0	1,3-Dinitrobenzene	0.10	U	0.11	0.10	0.037
118-96-7	2,4,6-Trinitrotoluene	0.10	U	0.11	0.10	0.045
121-14-2	2,4-Dinitrotoluene	0.080	U	0.10	0.080	0.027
606-20-2	2,6-Dinitrotoluene	0.080	U	0.10	0.080	0.040
35572-78-2	2-Amino-4,6-dinitrotoluene	0.10	U	0.11	0.10	0.051
88-72-2	2-Nitrotoluene	0.20	U	0.21	0.20	0.086
99-08-1	3-Nitrotoluene	0.35	U	0.40	0.35	0.20
19406-51-0	4-Amino-2,6-dinitrotoluene	0.12	U	0.15	0.12	0.058
99-99-0	4-Nitrotoluene	0.40	U	0.41	0.40	0.10
2691-41-0	HMX	0.20	U	0.21	0.20	0.088
98-95-3	Nitrobenzene	0.20	U	0.21	0.20	0.091
55-63-0	Nitroglycerin	2.0	U	2.1	2.0	0.92
78-11-5	PETN	1.0	U	1.1	1.0	0.45
121-82-4	RDX	0.20	U	0.21	0.20	0.052
479-45-8	Tetryl	0.10	U	0.11	0.10	0.032

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	105		83-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20230515-121447.b\05152311.D
Lims ID: MB 280-612275/1-A
Client ID:
Sample Type: MB
Inject. Date: 15-May-2023 16:20:28 ALS Bottle#: 9 Worklist Smp#: 11
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: MB 280-612275/1-A
Operator ID: JZ/JG Instrument ID: CHHPLC_X3

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20230515-121447.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 16-May-2023 13:24:37 Calib Date: 24-Feb-2023 17:41:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X\20230224-118952.b\02240018.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX1672

First Level Reviewer: K8YG Date: 16-May-2023 07:41:01

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
	1 Triamine Trinitrobenzene	1		2.444				ND	
	2 2,6-diamino-4-nitrotoluene	1		6.426				ND	7
	3 TNX	1		6.437				ND	
	4 HMX	1		6.557				ND	
	5 2,4-diamino-6-nitrotoluene	1		6.620				ND	
	6 DNX	1		6.763				ND	
	7 MNX	1	7.207	7.190	0.017	3057		0.0233	
	8 RDX	1		7.583				ND	
	9 2,4,6-Trinitrophenol	1		7.990				ND	
$	10 1,2-Dinitrobenzene	1	8.540	8.543	-0.003	26410	0.2000	0.2091	
	11 1,3,5-Trinitrobenzene	1		8.663				ND	
	12 1,3-Dinitrobenzene	1		9.290				ND	
	13 Nitrobenzene	1		9.663				ND	
	14 3,5-Dinitroaniline	1		9.910				ND	
	15 Tetryl	1		10.043				ND	7
	16 Nitroglycerin	2		10.496				ND	
	17 2,4,6-Trinitrotoluene	1		10.936				ND	
	18 4-Amino-2,6-dinitrotoluene	1		11.136				ND	
	19 2-Amino-4,6-dinitrotoluene	1		11.396				ND	
	20 2,6-Dinitrotoluene	1		11.543				ND	
	21 2,4-Dinitrotoluene	1		11.710				ND	
	22 o-Nitrotoluene	1		12.536				ND	7
	23 p-Nitrotoluene	1		12.956				ND	
	24 m-Nitrotoluene	1		13.536				ND	
	25 PETN	2		14.716				ND	
	26 Ammonium Picrate	1		0.000				ND	

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection

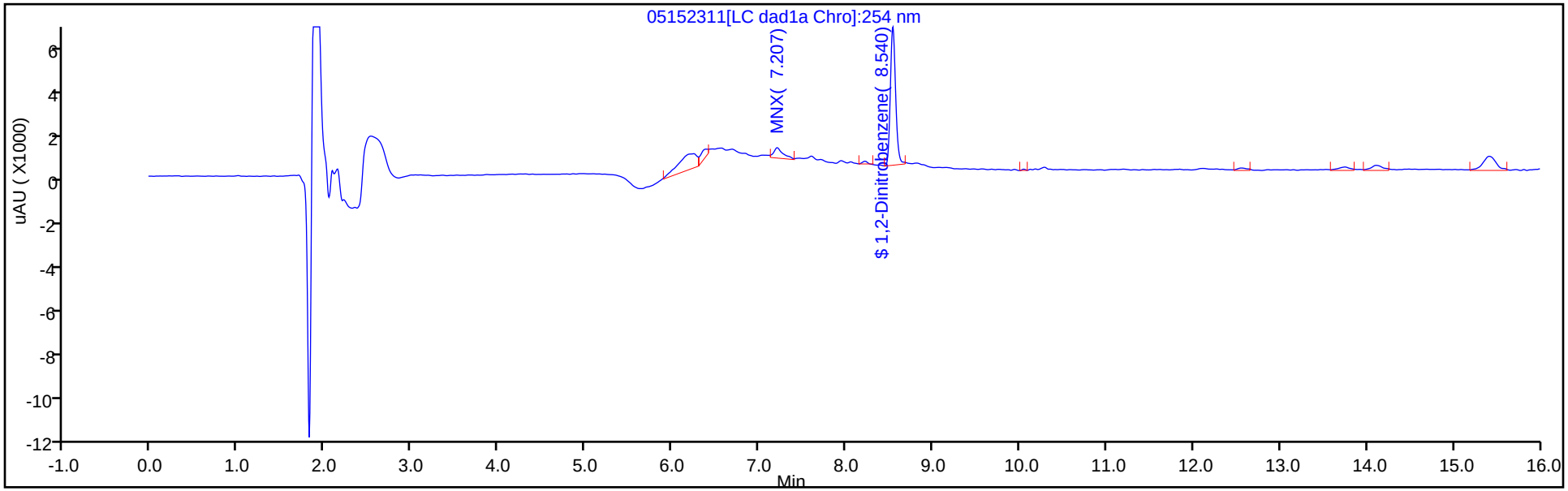
Report Date: 16-May-2023 13:24:38 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

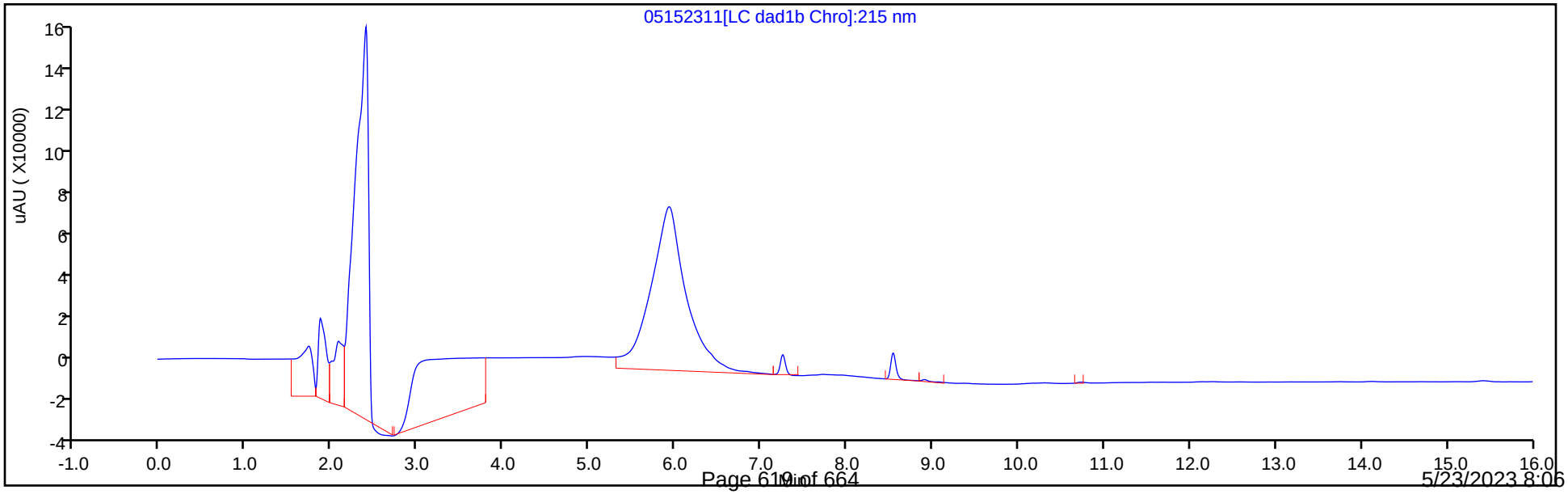
Data File: \\chromfs\denver\chromdata\chhplc_x\20230515-121447.b\05152311.d

Injection Date:	15-May-2023 16:20:28	Instrument ID:	CHHPLC_X3	Operator ID:	JZ/JG
Lims ID:	MB 280-612275/1-A			Worklist Smp#:	11
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



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\CHHPLC_X\20230515-121447.b\05152311.D				
Lims ID:	MB 280-612275/1-A				
Client ID:					
Sample Type:	MB				
Inject. Date:	15-May-2023 16:20:28	ALS Bottle#:	9	Worklist Smp#:	11
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	MB 280-612275/1-A				
Operator ID:	JZ/JG	Instrument ID:	CHHPLC_X3		
Method:	\\chromfs\Denver\ChromData\CHHPLC_X\20230515-121447.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	16-May-2023 13:24:37	Calib Date:	24-Feb-2023 17:41:20		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\CHHPLC_X\20230224-118952.b\02240018.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX1672				

First Level Reviewer: K8YG Date: 16-May-2023 07:41:01

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2000	0.2091	104.55

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-176268-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-612937/1-A

Matrix: Water | Lab File ID: 05180011.D

Analysis Method: 8330B | Date Collected:

Extraction Method: 3535 | Date Extracted: 05/18/2023 13:20

Sample wt/vol: 500(mL) | Date Analyzed: 05/18/2023 22:09

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: % Solids: | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 613045 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	0.20	U	0.21	0.20	0.084
99-65-0	1,3-Dinitrobenzene	0.10	U	0.11	0.10	0.037
118-96-7	2,4,6-Trinitrotoluene	0.10	U	0.11	0.10	0.045
121-14-2	2,4-Dinitrotoluene	0.080	U	0.10	0.080	0.027
606-20-2	2,6-Dinitrotoluene	0.080	U	0.10	0.080	0.040
35572-78-2	2-Amino-4,6-dinitrotoluene	0.10	U	0.11	0.10	0.051
88-72-2	2-Nitrotoluene	0.20	U	0.21	0.20	0.086
99-08-1	3-Nitrotoluene	0.35	U	0.40	0.35	0.20
19406-51-0	4-Amino-2,6-dinitrotoluene	0.12	U	0.15	0.12	0.058
99-99-0	4-Nitrotoluene	0.40	U	0.41	0.40	0.10
2691-41-0	HMX	0.20	U	0.21	0.20	0.088
98-95-3	Nitrobenzene	0.20	U	0.21	0.20	0.091
55-63-0	Nitroglycerin	2.0	U	2.1	2.0	0.92
78-11-5	PETN	1.0	U	1.1	1.0	0.45
121-82-4	RDX	0.20	U	0.21	0.20	0.052
479-45-8	Tetryl	0.10	U	0.11	0.10	0.032

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	106	M	83-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\05180011.D
Lims ID: MB 280-612937/1-A
Client ID:
Sample Type: MB
Inject. Date: 18-May-2023 22:09:15 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: MB 280-612937/1-A
Operator ID: JZ/JG Instrument ID: CHHPLC_X3

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 19-May-2023 12:21:50 Calib Date: 24-Feb-2023 17:41:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X\20230224-118952.b\02240018.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX1654

First Level Reviewer: LV5D Date: 19-May-2023 11:37:38

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
	1 Triamine Trinitrobenzene	1		2.444				ND	
	3 TNX	1		6.426				ND	
	2 2,6-diamino-4-nitrotoluene	1		6.431				ND	7
	4 HMX	1		6.546				ND	
	5 2,4-diamino-6-nitrotoluene	1		6.618				ND	
	6 DNX	1		6.753				ND	
	7 MNX	1		7.180				ND	
	8 RDX	1		7.560				ND	
	9 2,4,6-Trinitrophenol	1		7.960				ND	
$	10 1,2-Dinitrobenzene	1	8.520	8.513	0.007	26819	0.2000	0.2123	M
	11 1,3,5-Trinitrobenzene	1		8.640				ND	M
	12 1,3-Dinitrobenzene	1		9.253				ND	
	13 Nitrobenzene	1		9.626				ND	
	14 3,5-Dinitroaniline	1		9.859				ND	
	15 Tetryl	1		9.986				ND	
	16 Nitroglycerin	2		10.439				ND	
	17 2,4,6-Trinitrotoluene	1		10.873				ND	
	18 4-Amino-2,6-dinitrotoluene	1		11.066				ND	
	19 2-Amino-4,6-dinitrotoluene	1		11.319				ND	
	20 2,6-Dinitrotoluene	1		11.473				ND	
	21 2,4-Dinitrotoluene	1		11.639				ND	
	22 o-Nitrotoluene	1		12.459				ND	
	23 p-Nitrotoluene	1		12.873				ND	
	24 m-Nitrotoluene	1		13.446				ND	
	25 PETN	2		14.599				ND	
	26 Ammonium Picrate	1		0.000				ND	

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection

Review Flags
M - Manually Integrated

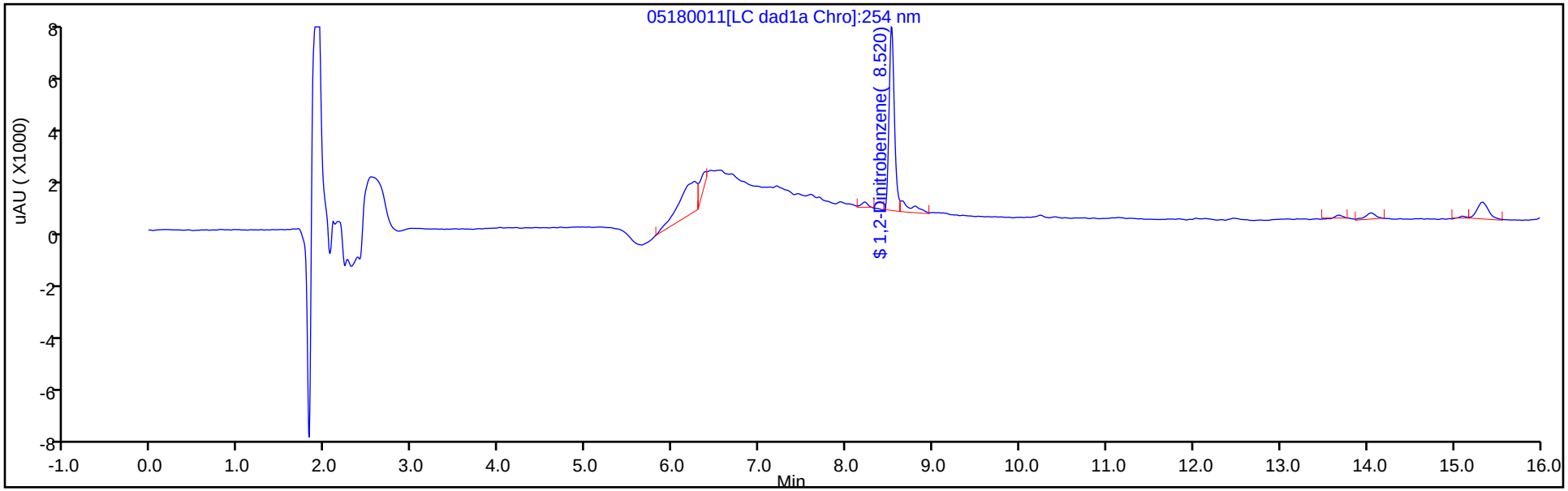
Report Date: 19-May-2023 12:21:51 Chrom Revision: 2.3 16-May-2023 16:37:30

Eurofins Denver

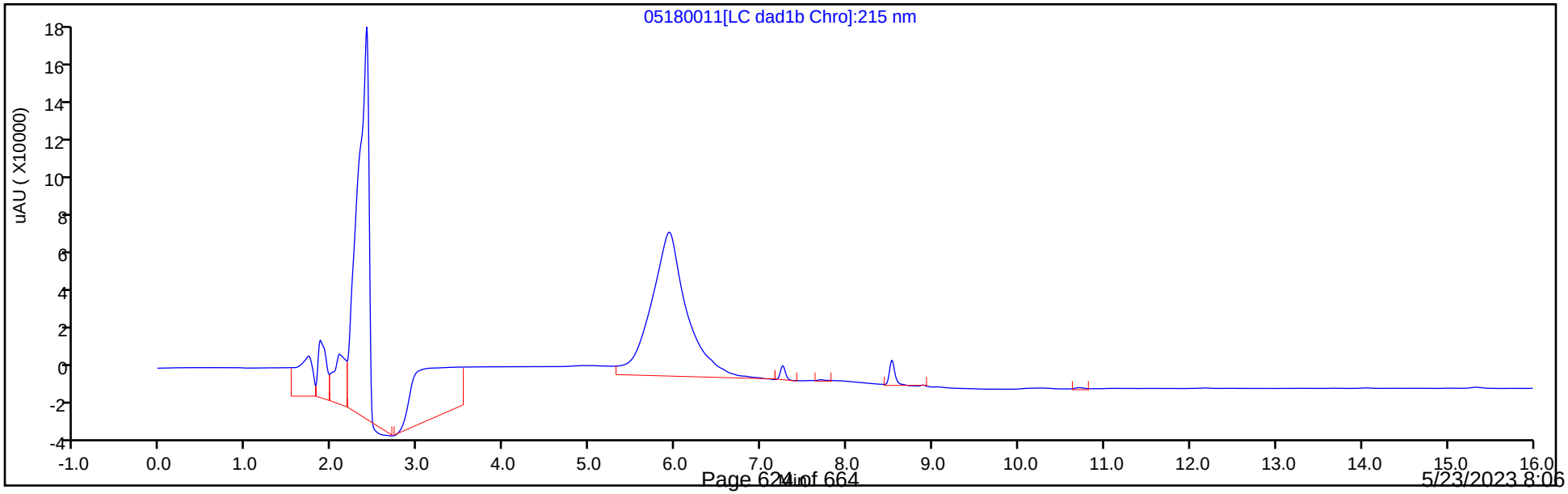
Data File: \\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180011.d

Injection Date:	18-May-2023 22:09:15	Instrument ID:	CHHPLC_X3	Operator ID:	JZ/JG
Lims ID:	MB 280-612937/1-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



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\05180011.D				
Lims ID:	MB 280-612937/1-A				
Client ID:					
Sample Type:	MB				
Inject. Date:	18-May-2023 22:09:15	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	MB 280-612937/1-A				
Operator ID:	JZ/JG	Instrument ID:	CHHPLC_X3		
Method:	\\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	19-May-2023 12:21:50	Calib Date:	24-Feb-2023 17:41:20		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\CHHPLC_X\20230224-118952.b\02240018.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX1654				

First Level Reviewer: LV5D Date: 19-May-2023 11:37:38

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2000	0.2123	106.16

Manual Integration/User Assign Peak Report

Eurofins Denver

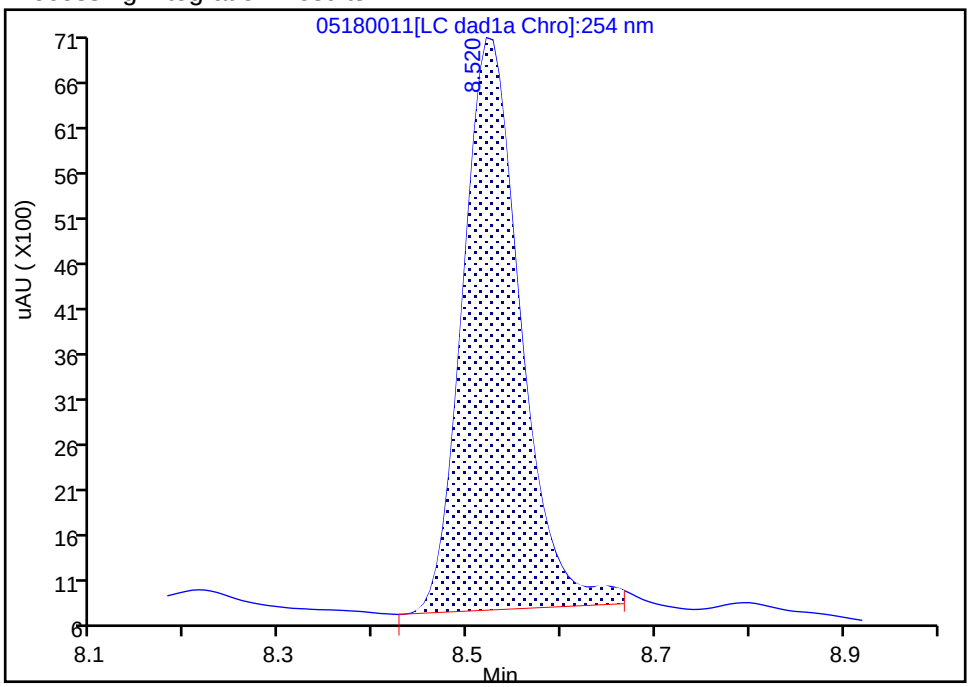
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180011.d				
Injection Date:	18-May-2023 22:09:15	Instrument ID:	CHHPLC_X3		
Lims ID:	MB 280-612937/1-A				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

$ 10 1,2-Dinitrobenzene, CAS: 528-29-0

Signal: 1

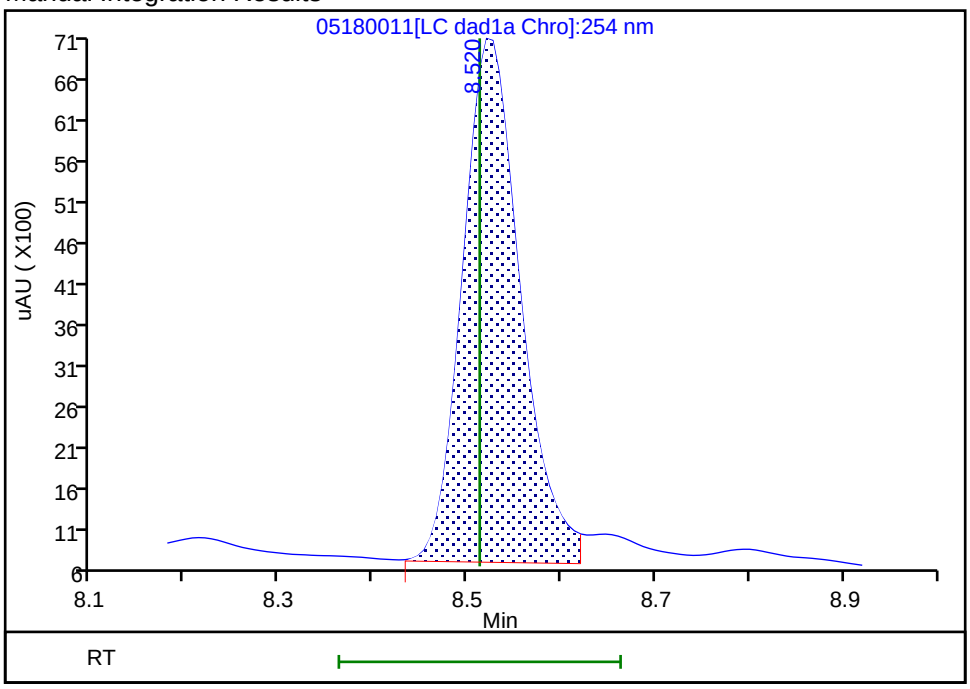
Processing Integration Results

RT: 8.52
Area: 26557
Amount: 0.210255
Amount Units: ug/mL



Manual Integration Results

RT: 8.52
Area: 26819
Amount: 0.212329
Amount Units: ug/mL



Reviewer: LV5D, 19-May-2023 11:37:36 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Baseline

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-176268-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-612275/2-A

Matrix: Water | Lab File ID: 05152312.D

Analysis Method: 8330B | Date Collected:

Extraction Method: 3535 | Date Extracted: 05/12/2023 15:04

Sample wt/vol: 500(mL) | Date Analyzed: 05/15/2023 16:43

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: % Solids: | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 612440 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	1.92		0.21	0.20	0.084
99-65-0	1,3-Dinitrobenzene	1.79		0.11	0.10	0.037
118-96-7	2,4,6-Trinitrotoluene	1.71		0.11	0.10	0.045
121-14-2	2,4-Dinitrotoluene	1.68		0.10	0.080	0.027
606-20-2	2,6-Dinitrotoluene	1.75		0.10	0.080	0.040
35572-78-2	2-Amino-4,6-dinitrotoluene	1.63		0.11	0.10	0.051
88-72-2	2-Nitrotoluene	1.41		0.21	0.20	0.086
99-08-1	3-Nitrotoluene	1.37	Q	0.40	0.35	0.20
19406-51-0	4-Amino-2,6-dinitrotoluene	1.60		0.15	0.12	0.058
99-99-0	4-Nitrotoluene	1.39	Q	0.41	0.40	0.10
2691-41-0	HMX	1.65	M	0.21	0.20	0.088
98-95-3	Nitrobenzene	1.61		0.21	0.20	0.091
55-63-0	Nitroglycerin	18.1		2.1	2.0	0.92
78-11-5	PETN	19.6		1.1	1.0	0.45
121-82-4	RDX	1.86		0.21	0.20	0.052
479-45-8	Tetryl	1.96		0.11	0.10	0.032

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	94		83-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20230515-121447.b\05152312.D
Lims ID: LCS 280-612275/2-A
Client ID:
Sample Type: LCS
Inject. Date: 15-May-2023 16:43:24 ALS Bottle#: 10 Worklist Smp#: 12
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: LCS 280-612275/2-A
Operator ID: JZ/JG Instrument ID: CHHPLC_X3

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20230515-121447.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 16-May-2023 13:24:37 Calib Date: 24-Feb-2023 17:41:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X\20230224-118952.b\02240018.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX1672

First Level Reviewer: K8YG Date: 16-May-2023 07:41:55

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
3 TNX	1	6.437	6.437	0.000	36171	0.2006	0.1830	M
4 HMX	1	6.550	6.557	-0.007	15415	0.2000	0.1648	M
6 DNX	1	6.757	6.763	-0.006	27292	0.2002	0.1889	M
7 MNX	1	7.190	7.190	0.000	31384	0.2334	0.2393	
8 RDX	1	7.577	7.583	-0.006	19793	0.2000	0.1861	
9 2,4,6-Trinitrophenol	1	7.977	7.990	-0.013	16110	0.2000	0.2124	
$ 10 1,2-Dinitrobenzene	1	8.537	8.543	-0.006	23648	0.2000	0.1872	
11 1,3,5-Trinitrobenzene	1	8.663	8.663	0.000	41709	0.2000	0.1921	
12 1,3-Dinitrobenzene	1	9.290	9.290	0.000	52723	0.2000	0.1791	
13 Nitrobenzene	1	9.663	9.663	0.000	30834	0.2000	0.1612	
14 3,5-Dinitroaniline	1	9.910	9.910	0.000	37077	0.2000	0.1624	
15 Tetryl	1	10.043	10.043	0.000	32210	0.2000	0.1963	
16 Nitroglycerin	2	10.497	10.496	0.001	115920	2.00	1.81	
17 2,4,6-Trinitrotoluene	1	10.937	10.936	0.001	36135	0.2000	0.1712	
18 4-Amino-2,6-dinitrotoluene	1	11.143	11.136	0.007	24733	0.2000	0.1596	
19 2-Amino-4,6-dinitrotoluene	1	11.397	11.396	0.001	32922	0.2000	0.1635	
20 2,6-Dinitrotoluene	1	11.543	11.543	0.000	25020	0.2000	0.1753	
21 2,4-Dinitrotoluene	1	11.717	11.710	0.007	49857	0.2000	0.1681	
22 o-Nitrotoluene	1	12.543	12.536	0.007	18042	0.2000	0.1411	
23 p-Nitrotoluene	1	12.963	12.956	0.007	15564	0.2000	0.1391	
24 m-Nitrotoluene	1	13.543	13.536	0.007	19275	0.2000	0.1372	
25 PETN	2	14.723	14.716	0.007	134888	2.00	1.96	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

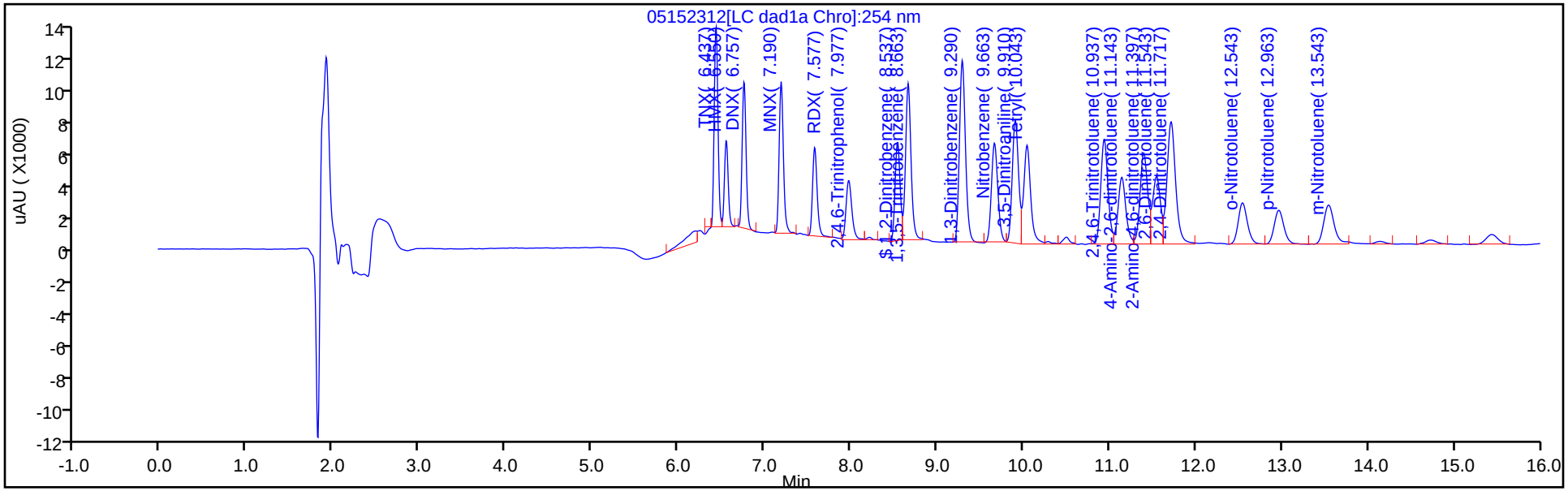
Report Date: 16-May-2023 13:24:39 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

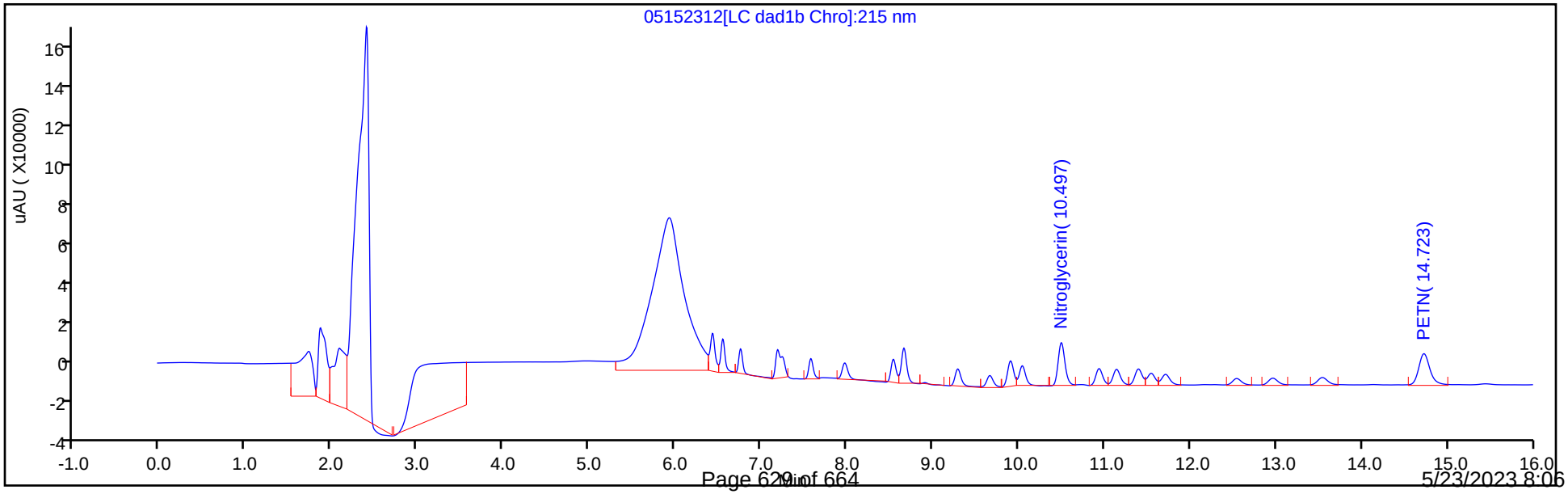
Data File: \\chromfs\denver\chromdata\chhplc_x\20230515-121447.b\05152312.d

Injection Date:	15-May-2023 16:43:24	Instrument ID:	CHHPLC_X3	Operator ID:	JZ/JG
Lims ID:	LCS 280-612275/2-A			Worklist Smp#:	12
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



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



5/23/2023 8:06 PM

Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\CHHPLC_X\20230515-121447.b\05152312.D				
Lims ID:	LCS 280-612275/2-A				
Client ID:					
Sample Type:	LCS				
Inject. Date:	15-May-2023 16:43:24	ALS Bottle#:	10	Worklist Smp#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCS 280-612275/2-A				
Operator ID:	JZ/JG	Instrument ID:	CHHPLC_X3		
Method:	\\chromfs\Denver\ChromData\CHHPLC_X\20230515-121447.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	16-May-2023 13:24:37	Calib Date:	24-Feb-2023 17:41:20		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\CHHPLC_X\20230224-118952.b\02240018.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX1672				

First Level Reviewer: K8YG Date: 16-May-2023 07:41:55

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2000	0.1872	93.61

Manual Integration/User Assign Peak Report

Eurofins Denver

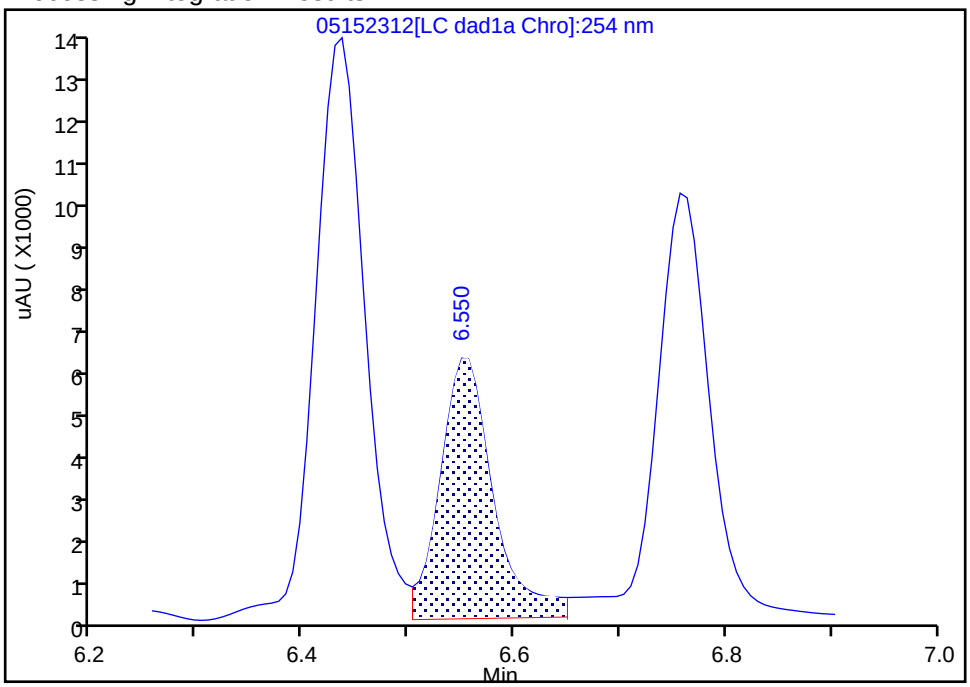
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230515-121447.b\05152312.d				
Injection Date:	15-May-2023 16:43:24	Instrument ID:	CHHPLC_X3		
Lims ID:	LCS 280-612275/2-A				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	10	Worklist Smp#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

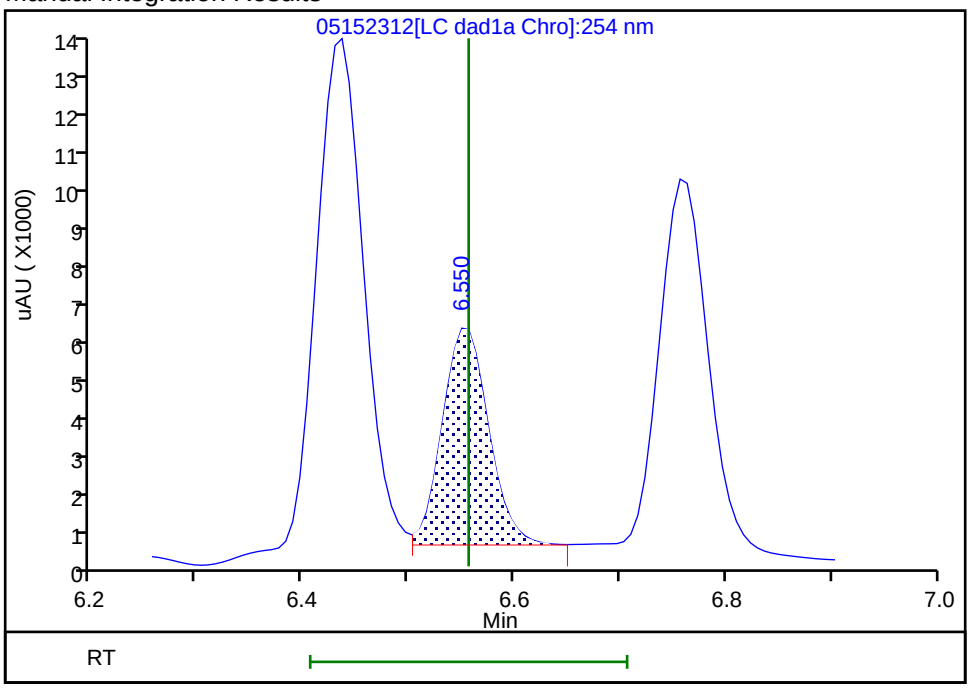
Processing Integration Results

RT: 6.55
Area: 19164
Amount: 0.204901
Amount Units: ug/mL



Manual Integration Results

RT: 6.55
Area: 15415
Amount: 0.164817
Amount Units: ug/mL



Reviewer: K8YG, 16-May-2023 07:41:21
Audit Action: Assigned New Baseline Audit Reason: Baseline

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-176268-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-612937/2-A

Matrix: Water | Lab File ID: 05180012.D

Analysis Method: 8330B | Date Collected:

Extraction Method: 3535 | Date Extracted: 05/18/2023 13:20

Sample wt/vol: 500(mL) | Date Analyzed: 05/18/2023 22:32

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: % Solids: | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 613045 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	2.05		0.21	0.20	0.084
99-65-0	1,3-Dinitrobenzene	1.94		0.11	0.10	0.037
118-96-7	2,4,6-Trinitrotoluene	1.86		0.11	0.10	0.045
121-14-2	2,4-Dinitrotoluene	1.84		0.10	0.080	0.027
606-20-2	2,6-Dinitrotoluene	1.85		0.10	0.080	0.040
35572-78-2	2-Amino-4,6-dinitrotoluene	1.82		0.11	0.10	0.051
88-72-2	2-Nitrotoluene	1.51		0.21	0.20	0.086
99-08-1	3-Nitrotoluene	1.45	Q	0.40	0.35	0.20
19406-51-0	4-Amino-2,6-dinitrotoluene	1.76		0.15	0.12	0.058
99-99-0	4-Nitrotoluene	1.50		0.41	0.40	0.10
2691-41-0	HMX	1.81	M	0.21	0.20	0.088
98-95-3	Nitrobenzene	1.71		0.21	0.20	0.091
55-63-0	Nitroglycerin	19.9		2.1	2.0	0.92
78-11-5	PETN	21.0		1.1	1.0	0.45
121-82-4	RDX	1.92	M	0.21	0.20	0.052
479-45-8	Tetryl	2.04		0.11	0.10	0.032

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	104		83-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\05180012.D
Lims ID: LCS 280-612937/2-A
Client ID:
Sample Type: LCS
Inject. Date: 18-May-2023 22:32:09 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: LCS 280-612937/2-A
Operator ID: JZ/JG Instrument ID: CHHPLC_X3

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 19-May-2023 12:21:50 Calib Date: 24-Feb-2023 17:41:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X\20230224-118952.b\02240018.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX1654

First Level Reviewer: LV5D Date: 19-May-2023 11:29:34

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
3 TNX	1	6.433	6.426	0.007	39902	0.2006	0.2018	M
4 HMX	1	6.553	6.546	0.007	16895	0.2000	0.1806	M
6 DNX	1	6.760	6.753	0.007	28839	0.2002	0.1996	M
7 MNX	1	7.187	7.180	0.007	31641	0.2334	0.2412	M
8 RDX	1	7.573	7.560	0.013	20415	0.2000	0.1919	M
9 2,4,6-Trinitrophenol	1	7.967	7.960	0.007	16615	0.2000	0.2191	
$ 10 1,2-Dinitrobenzene	1	8.527	8.513	0.014	26235	0.2000	0.2077	
11 1,3,5-Trinitrobenzene	1	8.647	8.640	0.007	44544	0.2000	0.2051	
12 1,3-Dinitrobenzene	1	9.273	9.253	0.020	57195	0.2000	0.1943	
13 Nitrobenzene	1	9.640	9.626	0.014	32789	0.2000	0.1715	
14 3,5-Dinitroaniline	1	9.873	9.859	0.014	40375	0.2000	0.1768	
15 Tetryl	1	10.007	9.986	0.021	33422	0.2000	0.2036	
16 Nitroglycerin	2	10.460	10.439	0.021	127457	2.00	1.99	
17 2,4,6-Trinitrotoluene	1	10.893	10.873	0.020	39234	0.2000	0.1859	
18 4-Amino-2,6-dinitrotoluene	1	11.087	11.066	0.021	27331	0.2000	0.1764	
19 2-Amino-4,6-dinitrotoluene	1	11.340	11.319	0.021	36570	0.2000	0.1816	
20 2,6-Dinitrotoluene	1	11.493	11.473	0.020	26381	0.2000	0.1848	
21 2,4-Dinitrotoluene	1	11.660	11.639	0.021	54544	0.2000	0.1839	
22 o-Nitrotoluene	1	12.480	12.459	0.021	19353	0.2000	0.1513	
23 p-Nitrotoluene	1	12.900	12.873	0.027	16751	0.2000	0.1497	
24 m-Nitrotoluene	1	13.473	13.446	0.027	20325	0.2000	0.1447	
25 PETN	2	14.627	14.599	0.028	144482	2.00	2.10	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

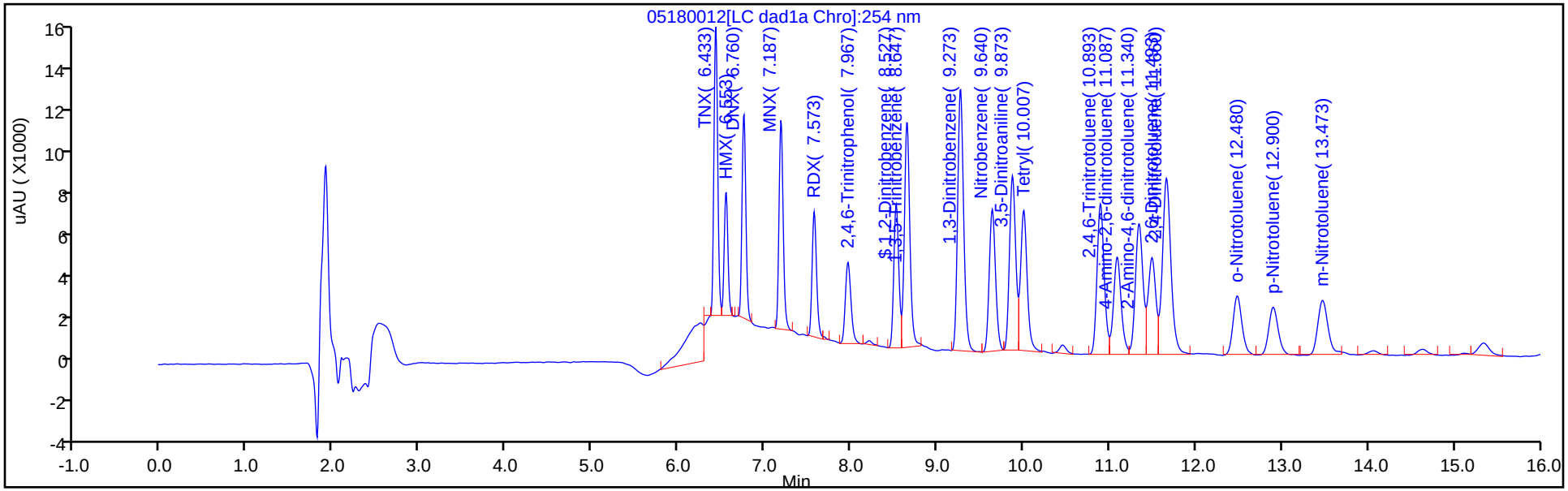
Report Date: 19-May-2023 12:21:51 Chrom Revision: 2.3 16-May-2023 16:37:30

Eurofins Denver

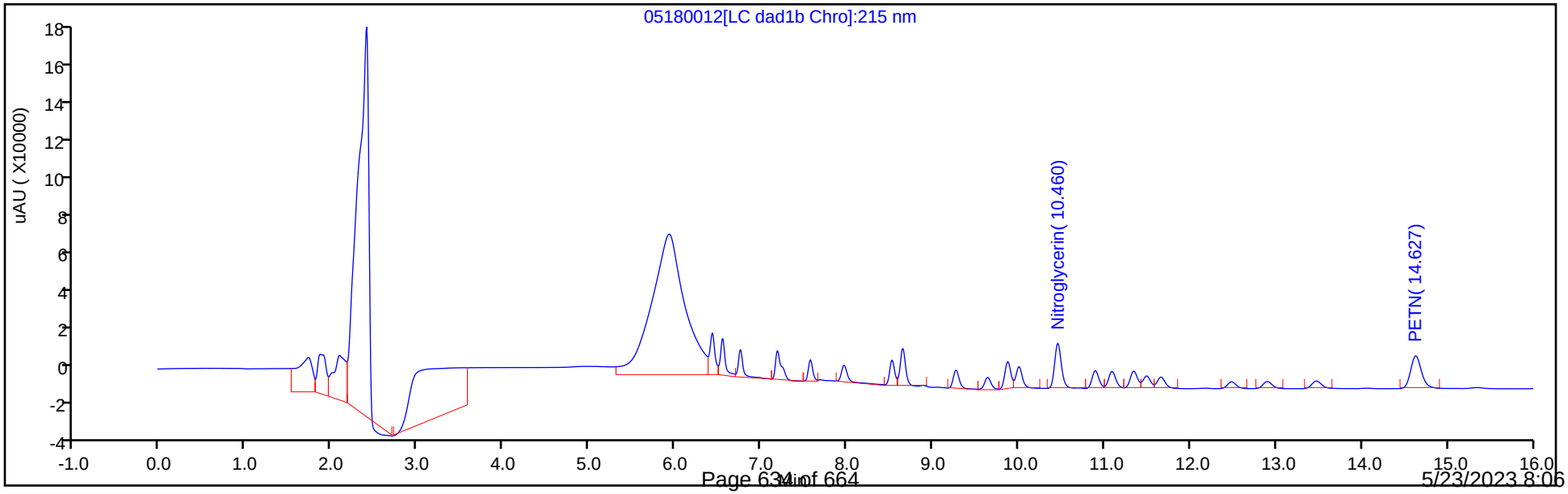
Data File: \\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180012.d

Injection Date:	18-May-2023 22:32:09	Instrument ID:	CHHPLC_X3	Operator ID:	JZ/JG
Lims ID:	LCS 280-612937/2-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



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\05180012.D
Lims ID: LCS 280-612937/2-A
Client ID:
Sample Type: LCS
Inject. Date: 18-May-2023 22:32:09 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: LCS 280-612937/2-A
Operator ID: JZ/JG Instrument ID: CHHPLC_X3

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 19-May-2023 12:21:50 Calib Date: 24-Feb-2023 17:41:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X\20230224-118952.b\02240018.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX1654

First Level Reviewer: LV5D Date: 19-May-2023 11:29:34

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2000	0.2077	103.85

Manual Integration/User Assign Peak Report

Eurofins Denver

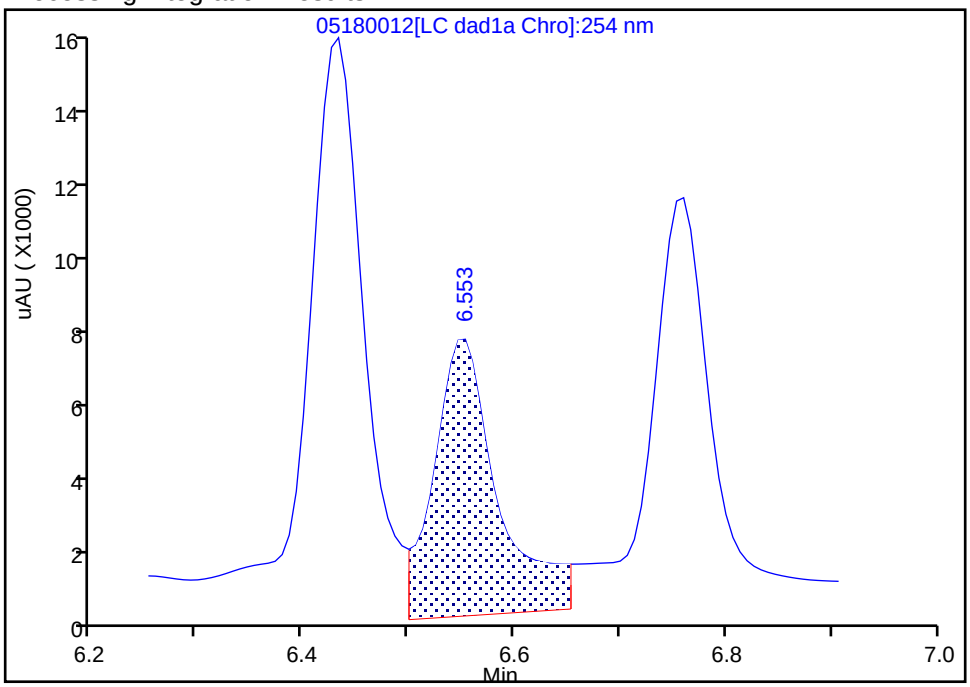
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180012.d				
Injection Date:	18-May-2023 22:32:09	Instrument ID:	CHHPLC_X3		
Lims ID:	LCS 280-612937/2-A				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

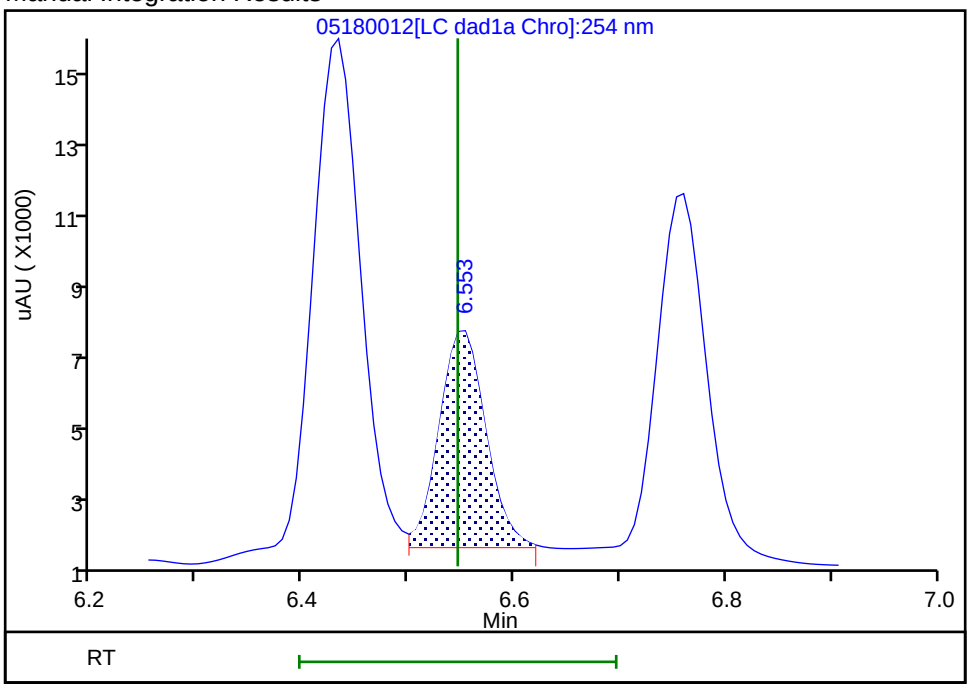
Processing Integration Results

RT: 6.55
Area: 28657
Amount: 0.306400
Amount Units: ug/mL



Manual Integration Results

RT: 6.55
Area: 16895
Amount: 0.180641
Amount Units: ug/mL



Reviewer: LV5D, 19-May-2023 11:28:34 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

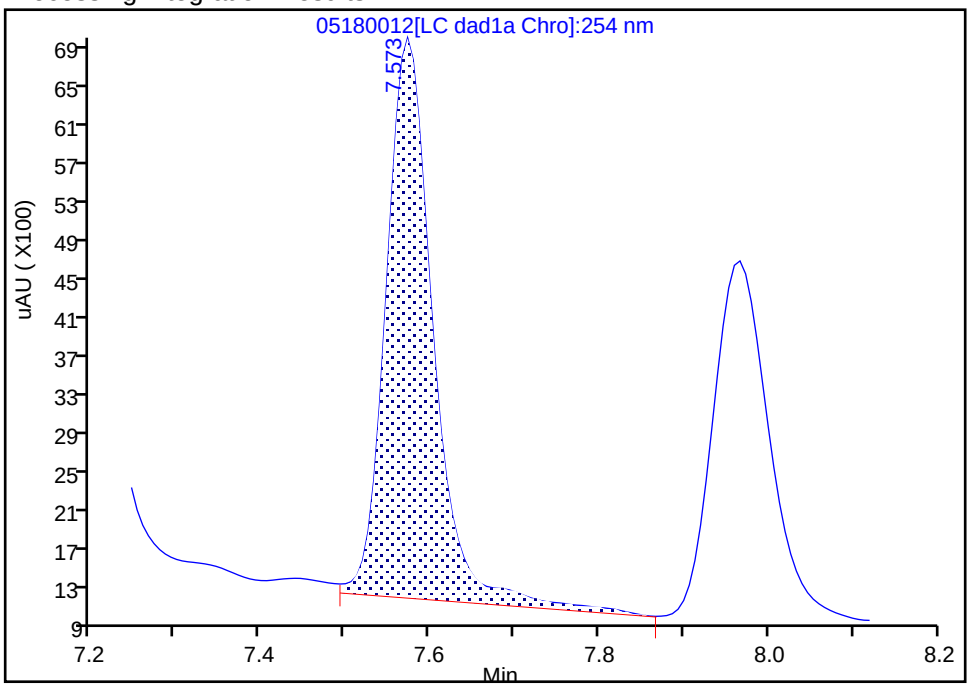
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180012.d				
Injection Date:	18-May-2023 22:32:09	Instrument ID:	CHHPLC_X3		
Lims ID:	LCS 280-612937/2-A				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

8 RDX, CAS: 121-82-4

Signal: 1

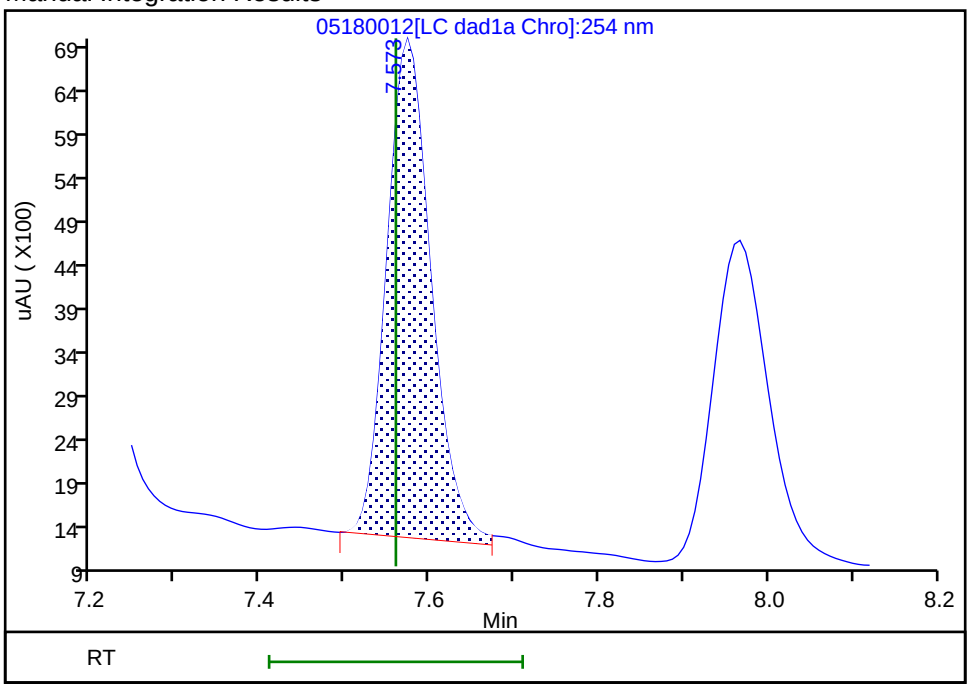
Processing Integration Results

RT: 7.57
Area: 22252
Amount: 0.209175
Amount Units: ug/mL



Manual Integration Results

RT: 7.57
Area: 20415
Amount: 0.191907
Amount Units: ug/mL



Reviewer: LV5D, 19-May-2023 11:28:52 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Baseline

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-176268-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-612275/3-A

Matrix: Water | Lab File ID: 05152313.D

Analysis Method: 8330B | Date Collected:

Extraction Method: 3535 | Date Extracted: 05/12/2023 15:04

Sample wt/vol: 500(mL) | Date Analyzed: 05/15/2023 17:06

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: % Solids: | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 612440 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	2.04		0.21	0.20	0.084
99-65-0	1,3-Dinitrobenzene	1.90		0.11	0.10	0.037
118-96-7	2,4,6-Trinitrotoluene	1.83		0.11	0.10	0.045
121-14-2	2,4-Dinitrotoluene	1.81		0.10	0.080	0.027
606-20-2	2,6-Dinitrotoluene	1.84		0.10	0.080	0.040
35572-78-2	2-Amino-4,6-dinitrotoluene	1.77		0.11	0.10	0.051
88-72-2	2-Nitrotoluene	1.50		0.21	0.20	0.086
99-08-1	3-Nitrotoluene	1.48		0.40	0.35	0.20
19406-51-0	4-Amino-2,6-dinitrotoluene	1.76		0.15	0.12	0.058
99-99-0	4-Nitrotoluene	1.48		0.41	0.40	0.10
2691-41-0	HMX	1.70	M	0.21	0.20	0.088
98-95-3	Nitrobenzene	1.71		0.21	0.20	0.091
55-63-0	Nitroglycerin	18.8		2.1	2.0	0.92
78-11-5	PETN	20.5		1.1	1.0	0.45
121-82-4	RDX	1.89		0.21	0.20	0.052
479-45-8	Tetryl	2.01		0.11	0.10	0.032

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	98		83-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20230515-121447.b\05152313.D
Lims ID: LCSD 280-612275/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 15-May-2023 17:06:21 ALS Bottle#: 11 Worklist Smp#: 13
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: LCSD 280-612275/3-A
Operator ID: JZ/JG Instrument ID: CHHPLC_X3

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20230515-121447.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 16-May-2023 13:24:37 Calib Date: 24-Feb-2023 17:41:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X\20230224-118952.b\02240018.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX1672

First Level Reviewer: K8YG Date: 16-May-2023 07:46:31

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
3 TNX	1	6.430	6.437	-0.007	37436	0.2006	0.1894	M
4 HMX	1	6.550	6.557	-0.007	15854	0.2000	0.1695	M
6 DNX	1	6.757	6.763	-0.006	28992	0.2002	0.2007	M
7 MNX	1	7.190	7.190	0.000	33126	0.2334	0.2525	
8 RDX	1	7.577	7.583	-0.006	20058	0.2000	0.1886	
9 2,4,6-Trinitrophenol	1	7.970	7.990	-0.020	16982	0.2000	0.2239	
$ 10 1,2-Dinitrobenzene	1	8.537	8.543	-0.006	24855	0.2000	0.1968	
11 1,3,5-Trinitrobenzene	1	8.663	8.663	0.000	44202	0.2000	0.2036	
12 1,3-Dinitrobenzene	1	9.290	9.290	0.000	56046	0.2000	0.1904	
13 Nitrobenzene	1	9.663	9.663	0.000	32778	0.2000	0.1714	
14 3,5-Dinitroaniline	1	9.903	9.910	-0.007	39440	0.2000	0.1727	
15 Tetryl	1	10.043	10.043	0.000	33016	0.2000	0.2012	
16 Nitroglycerin	2	10.497	10.496	0.001	120398	2.00	1.88	
17 2,4,6-Trinitrotoluene	1	10.930	10.936	-0.006	38660	0.2000	0.1832	
18 4-Amino-2,6-dinitrotoluene	1	11.137	11.136	0.001	27226	0.2000	0.1757	
19 2-Amino-4,6-dinitrotoluene	1	11.390	11.396	-0.006	35714	0.2000	0.1773	
20 2,6-Dinitrotoluene	1	11.537	11.543	-0.006	26258	0.2000	0.1839	
21 2,4-Dinitrotoluene	1	11.703	11.710	-0.007	53776	0.2000	0.1813	
22 o-Nitrotoluene	1	12.530	12.536	-0.006	19123	0.2000	0.1495	
23 p-Nitrotoluene	1	12.957	12.956	0.001	16611	0.2000	0.1485	
24 m-Nitrotoluene	1	13.530	13.536	-0.006	20816	0.2000	0.1482	
25 PETN	2	14.717	14.716	0.001	141459	2.00	2.05	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

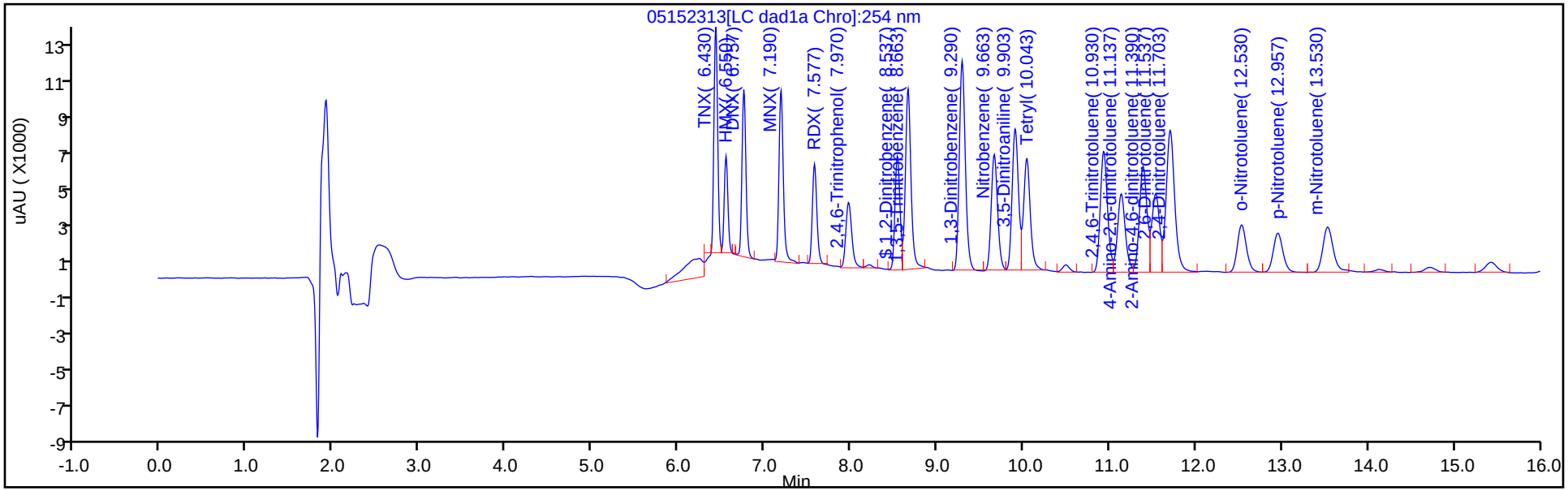
Report Date: 16-May-2023 13:24:39 Chrom Revision: 2.3 29-Mar-2023 18:39:10

Eurofins Denver

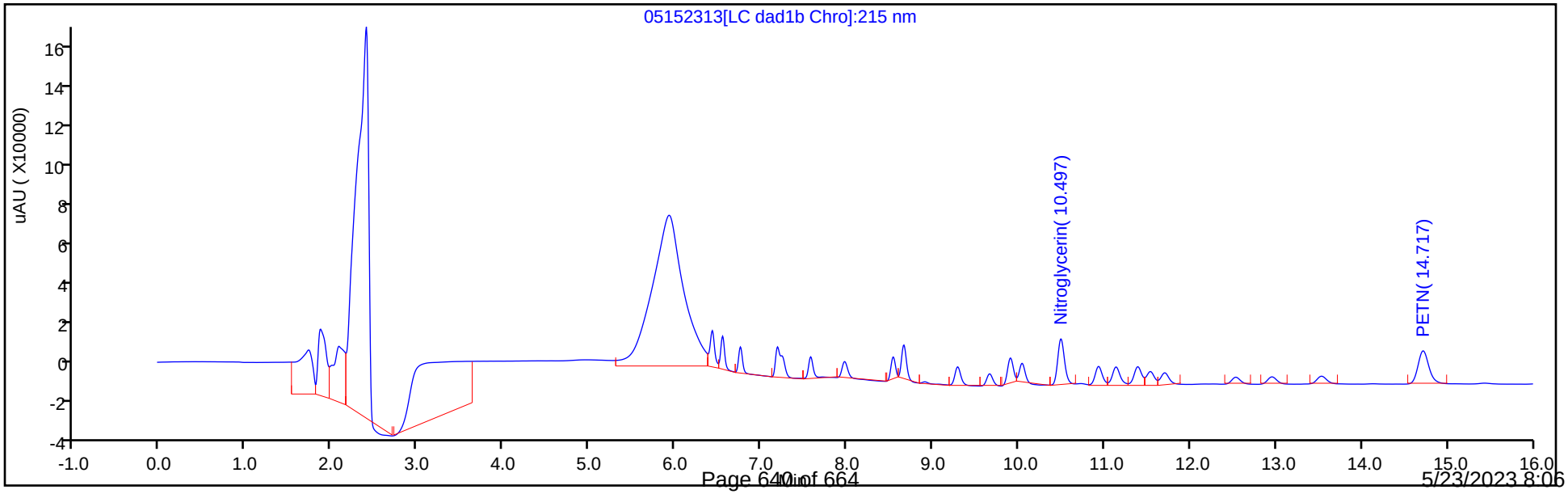
Data File: \\chromfs\denver\chromdata\chhplc_x\20230515-121447.b\05152313.d

Injection Date:	15-May-2023 17:06:21	Instrument ID:	CHHPLC_X3	Operator ID:	JZ/JG
Lims ID:	LCSD 280-612275/3-A			Worklist Smp#:	13
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



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\CHHPLC_X\20230515-121447.b\05152313.D				
Lims ID:	LCSD 280-612275/3-A				
Client ID:					
Sample Type:	LCSD				
Inject. Date:	15-May-2023 17:06:21	ALS Bottle#:	11	Worklist Smp#:	13
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCSD 280-612275/3-A				
Operator ID:	JZ/JG	Instrument ID:	CHHPLC_X3		
Method:	\\chromfs\Denver\ChromData\CHHPLC_X\20230515-121447.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	16-May-2023 13:24:37	Calib Date:	24-Feb-2023 17:41:20		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\CHHPLC_X\20230224-118952.b\02240018.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX1672				

First Level Reviewer: K8YG Date: 16-May-2023 07:46:31

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2000	0.1968	98.39

Manual Integration/User Assign Peak Report

Eurofins Denver

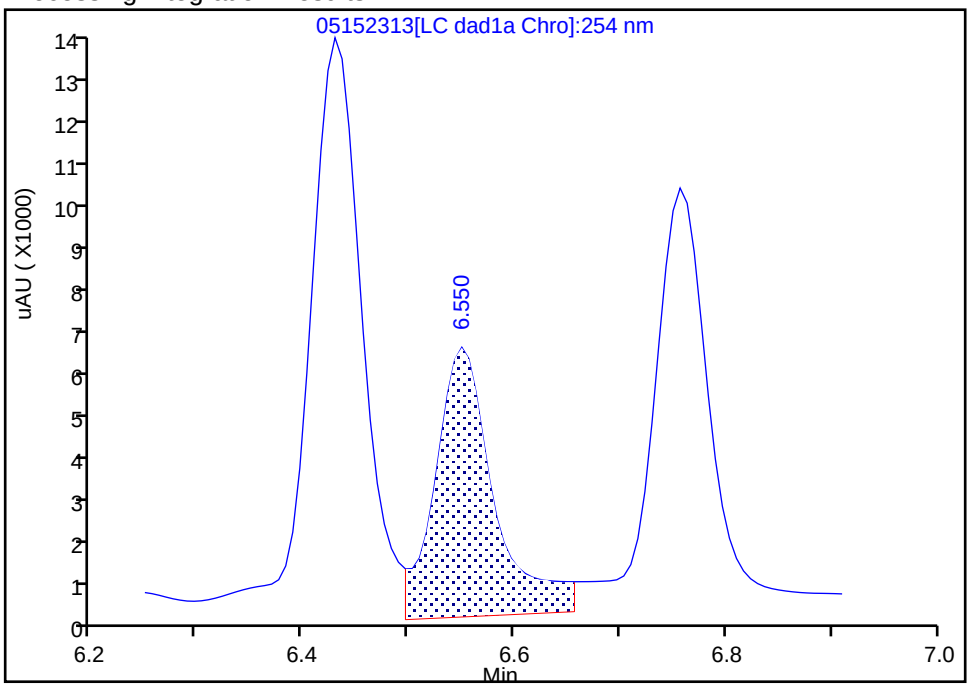
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230515-121447.b\05152313.d				
Injection Date:	15-May-2023 17:06:21	Instrument ID:	CHHPLC_X3		
Lims ID:	LCSD 280-612275/3-A				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	11	Worklist Smp#:	13
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

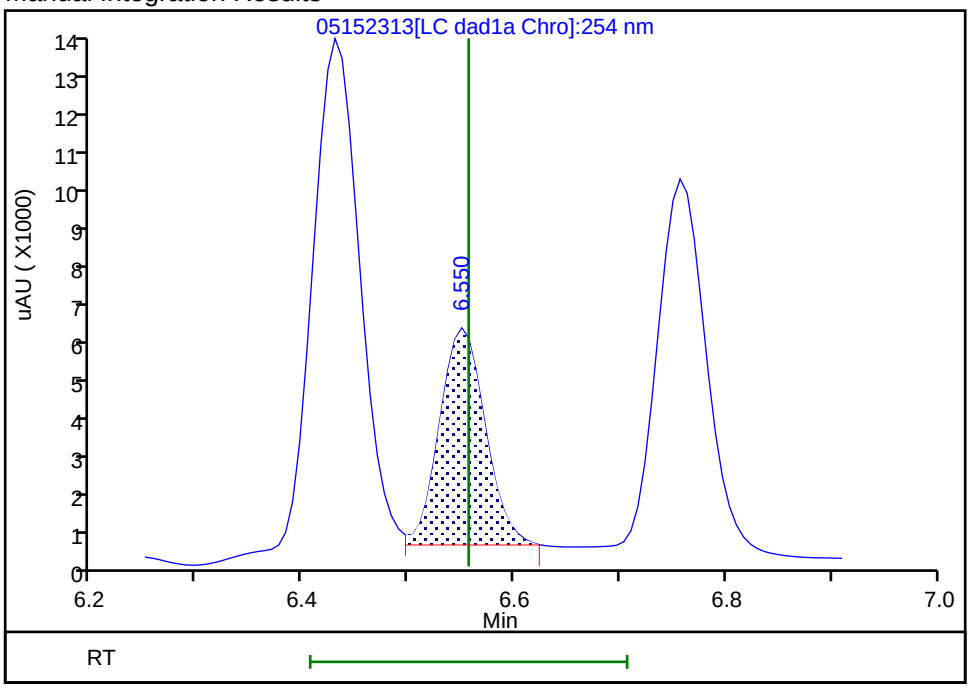
Processing Integration Results

RT: 6.55
Area: 23630
Amount: 0.252651
Amount Units: ug/mL



Manual Integration Results

RT: 6.55
Area: 15854
Amount: 0.169510
Amount Units: ug/mL



Reviewer: K8YG, 16-May-2023 07:44:50
Audit Action: Split an Integrated Peak Audit Reason: Baseline

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-176268-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-612937/3-A

Matrix: Water | Lab File ID: 05180013.D

Analysis Method: 8330B | Date Collected:

Extraction Method: 3535 | Date Extracted: 05/18/2023 13:20

Sample wt/vol: 500(mL) | Date Analyzed: 05/18/2023 22:55

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: % Solids: | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 613045 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	2.05		0.21	0.20	0.084
99-65-0	1,3-Dinitrobenzene	1.94		0.11	0.10	0.037
118-96-7	2,4,6-Trinitrotoluene	1.87		0.11	0.10	0.045
121-14-2	2,4-Dinitrotoluene	1.83		0.10	0.080	0.027
606-20-2	2,6-Dinitrotoluene	1.91		0.10	0.080	0.040
35572-78-2	2-Amino-4,6-dinitrotoluene	1.79		0.11	0.10	0.051
88-72-2	2-Nitrotoluene	1.54		0.21	0.20	0.086
99-08-1	3-Nitrotoluene	1.46		0.40	0.35	0.20
19406-51-0	4-Amino-2,6-dinitrotoluene	1.81		0.15	0.12	0.058
99-99-0	4-Nitrotoluene	1.50		0.41	0.40	0.10
2691-41-0	HMX	1.88	M	0.21	0.20	0.088
98-95-3	Nitrobenzene	1.72		0.21	0.20	0.091
55-63-0	Nitroglycerin	19.9		2.1	2.0	0.92
78-11-5	PETN	20.9		1.1	1.0	0.45
121-82-4	RDX	1.88	M	0.21	0.20	0.052
479-45-8	Tetryl	2.07		0.11	0.10	0.032

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	102		83-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\05180013.D
Lims ID: LCSD 280-612937/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 18-May-2023 22:55:11 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: LCSD 280-612937/3-A
Operator ID: JZ/JG Instrument ID: CHHPLC_X3

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 19-May-2023 12:21:50 Calib Date: 24-Feb-2023 17:41:20
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X\20230224-118952.b\02240018.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX1654

First Level Reviewer: LV5D Date: 19-May-2023 11:30:00

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
3 TNX	1	6.432	6.426	0.006	40691	0.2006	0.2058	M
4 HMX	1	6.552	6.546	0.006	17549	0.2000	0.1876	M
6 DNX	1	6.759	6.753	0.006	28636	0.2002	0.1982	M
7 MNX	1	7.186	7.180	0.006	31679	0.2334	0.2415	M
8 RDX	1	7.572	7.560	0.012	20052	0.2000	0.1885	M
9 2,4,6-Trinitrophenol	1	7.959	7.960	-0.001	16679	0.2000	0.2200	
$ 10 1,2-Dinitrobenzene	1	8.519	8.513	0.006	25843	0.2000	0.2046	
11 1,3,5-Trinitrobenzene	1	8.646	8.640	0.006	44476	0.2000	0.2048	
12 1,3-Dinitrobenzene	1	9.266	9.253	0.013	57044	0.2000	0.1938	
13 Nitrobenzene	1	9.632	9.626	0.006	32957	0.2000	0.1723	
14 3,5-Dinitroaniline	1	9.872	9.859	0.013	39782	0.2000	0.1742	
15 Tetryl	1	9.999	9.986	0.013	34037	0.2000	0.2074	
16 Nitroglycerin	2	10.452	10.439	0.013	127804	2.00	1.99	
17 2,4,6-Trinitrotoluene	1	10.892	10.873	0.019	39424	0.2000	0.1868	
18 4-Amino-2,6-dinitrotoluene	1	11.086	11.066	0.020	28007	0.2000	0.1808	
19 2-Amino-4,6-dinitrotoluene	1	11.339	11.319	0.020	36120	0.2000	0.1793	
20 2,6-Dinitrotoluene	1	11.492	11.473	0.019	27212	0.2000	0.1906	
21 2,4-Dinitrotoluene	1	11.659	11.639	0.020	54308	0.2000	0.1831	
22 o-Nitrotoluene	1	12.479	12.459	0.020	19710	0.2000	0.1541	
23 p-Nitrotoluene	1	12.899	12.873	0.026	16804	0.2000	0.1502	
24 m-Nitrotoluene	1	13.472	13.446	0.026	20537	0.2000	0.1462	
25 PETN	2	14.632	14.599	0.033	143716	2.00	2.09	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

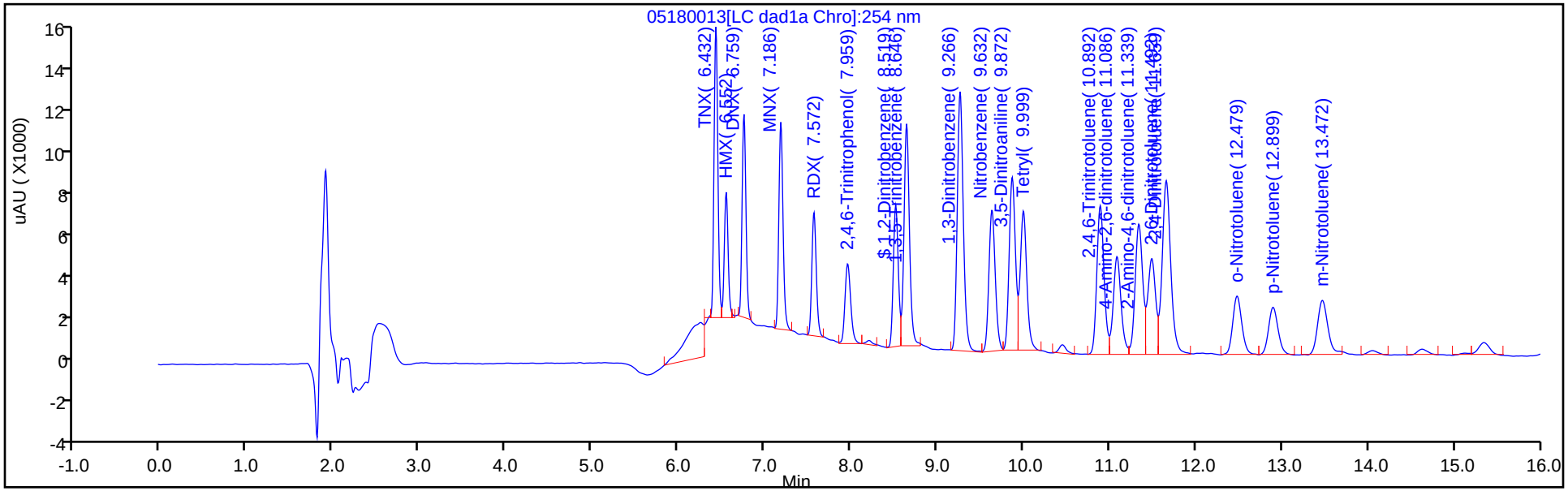
Report Date: 19-May-2023 12:21:52 Chrom Revision: 2.3 16-May-2023 16:37:30

Eurofins Denver

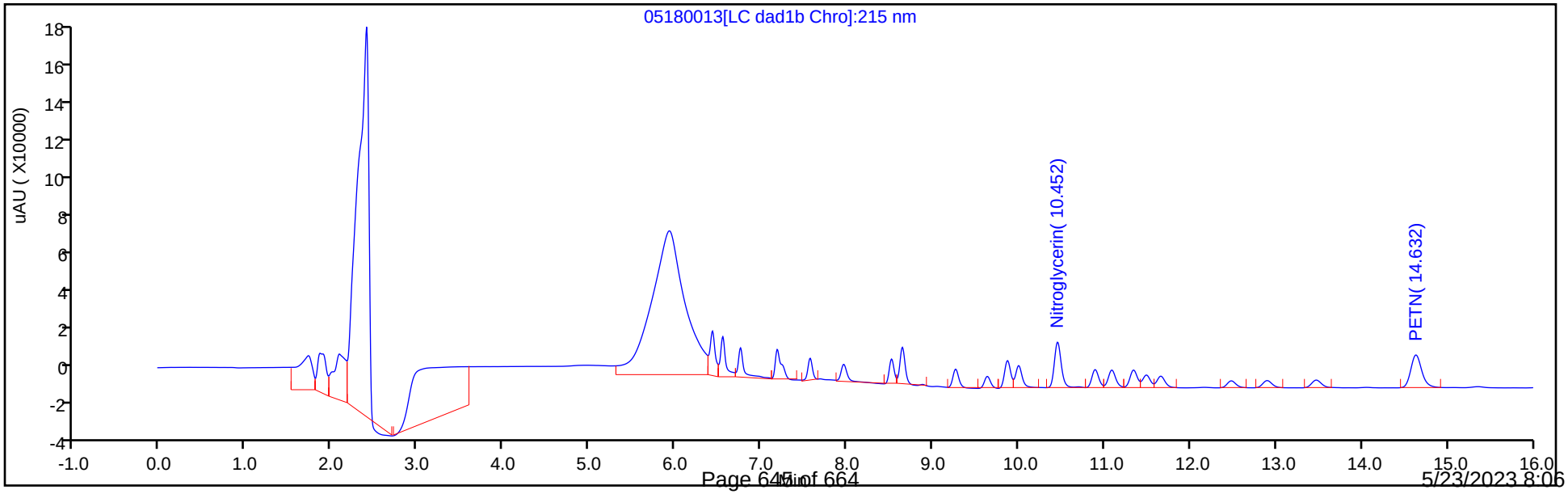
Data File: \\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180013.d

Injection Date:	18-May-2023 22:55:11	Instrument ID:	CHHPLC_X3	Operator ID:	JZ/JG
Lims ID:	LCSD 280-612937/3-A			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



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



5/23/2023 8:06 PM

Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\05180013.D				
Lims ID:	LCSD 280-612937/3-A				
Client ID:					
Sample Type:	LCSD				
Inject. Date:	18-May-2023 22:55:11	ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCSD 280-612937/3-A				
Operator ID:	JZ/JG	Instrument ID:	CHHPLC_X3		
Method:	\\chromfs\Denver\ChromData\CHHPLC_X\20230518-121611.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	19-May-2023 12:21:50	Calib Date:	24-Feb-2023 17:41:20		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\CHHPLC_X\20230224-118952.b\02240018.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX1654				

First Level Reviewer: LV5D Date: 19-May-2023 11:30:00

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2000	0.2046	102.30

Manual Integration/User Assign Peak Report

Eurofins Denver

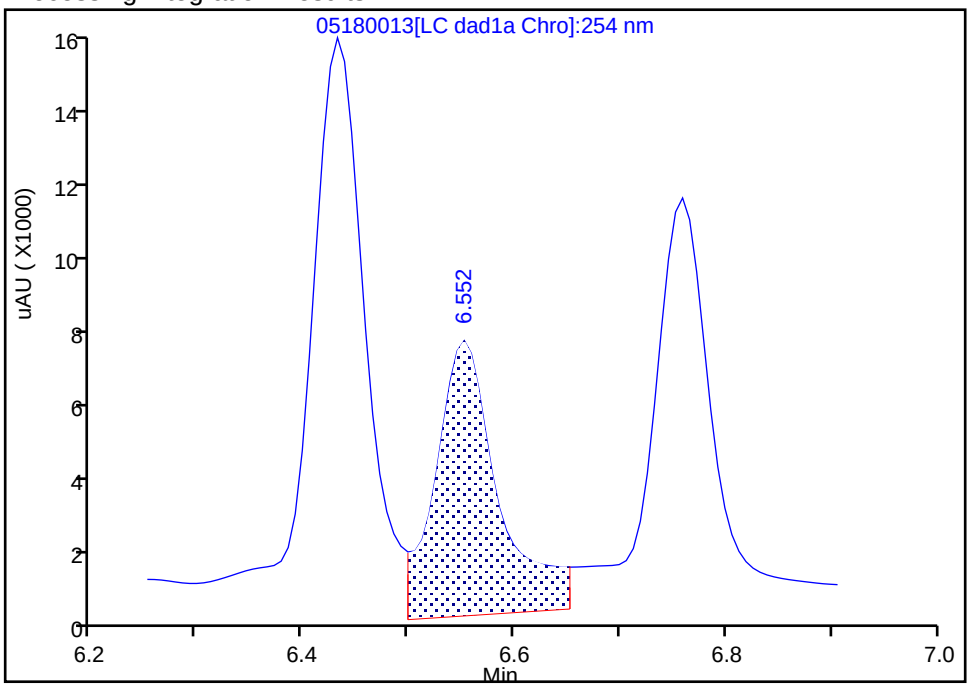
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180013.d				
Injection Date:	18-May-2023 22:55:11	Instrument ID:	CHHPLC_X3		
Lims ID:	LCSD 280-612937/3-A				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

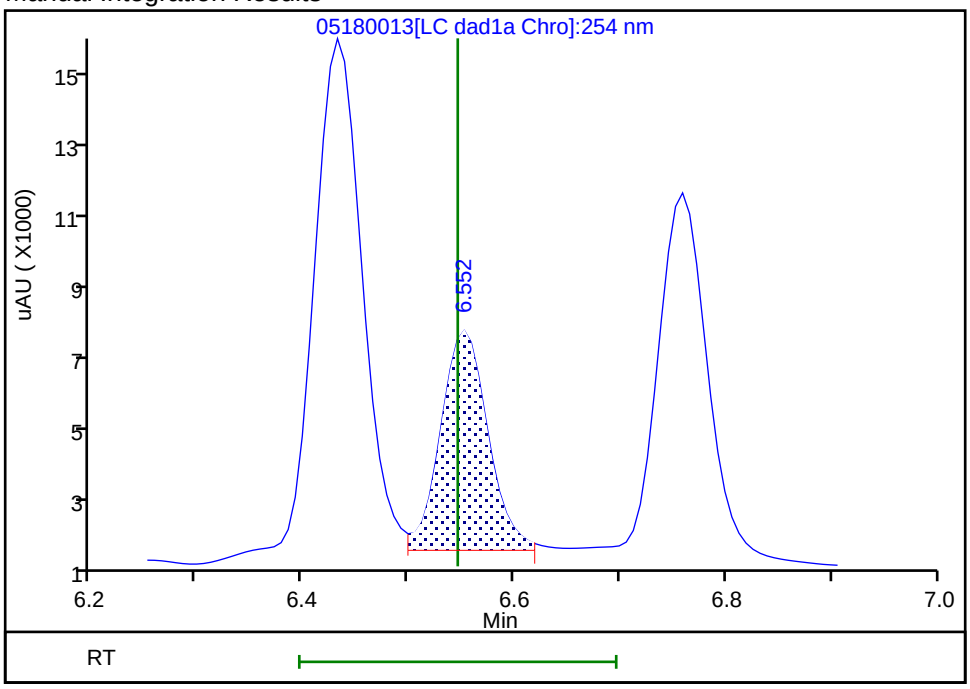
Processing Integration Results

RT: 6.55
Area: 27985
Amount: 0.299215
Amount Units: ug/mL



Manual Integration Results

RT: 6.55
Area: 17549
Amount: 0.187633
Amount Units: ug/mL



Reviewer: LV5D, 19-May-2023 11:29:47 -06:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

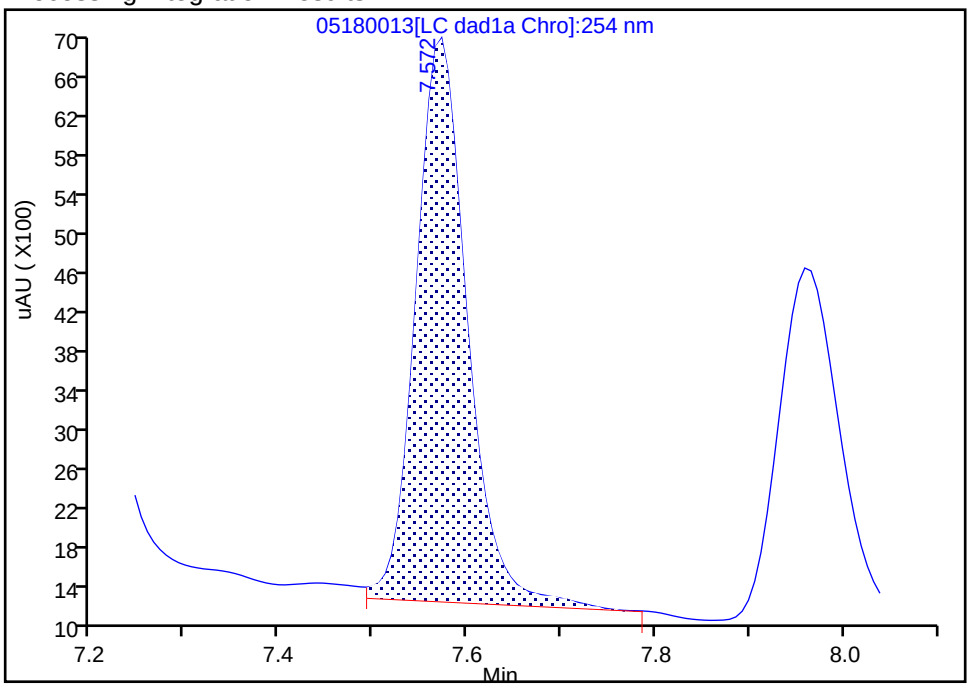
Data File:	\\chromfs\denver\chromdata\chhplc_x\20230518-121611.b\05180013.d				
Injection Date:	18-May-2023 22:55:11	Instrument ID:	CHHPLC_X3		
Lims ID:	LCSD 280-612937/3-A				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

8 RDX, CAS: 121-82-4

Signal: 1

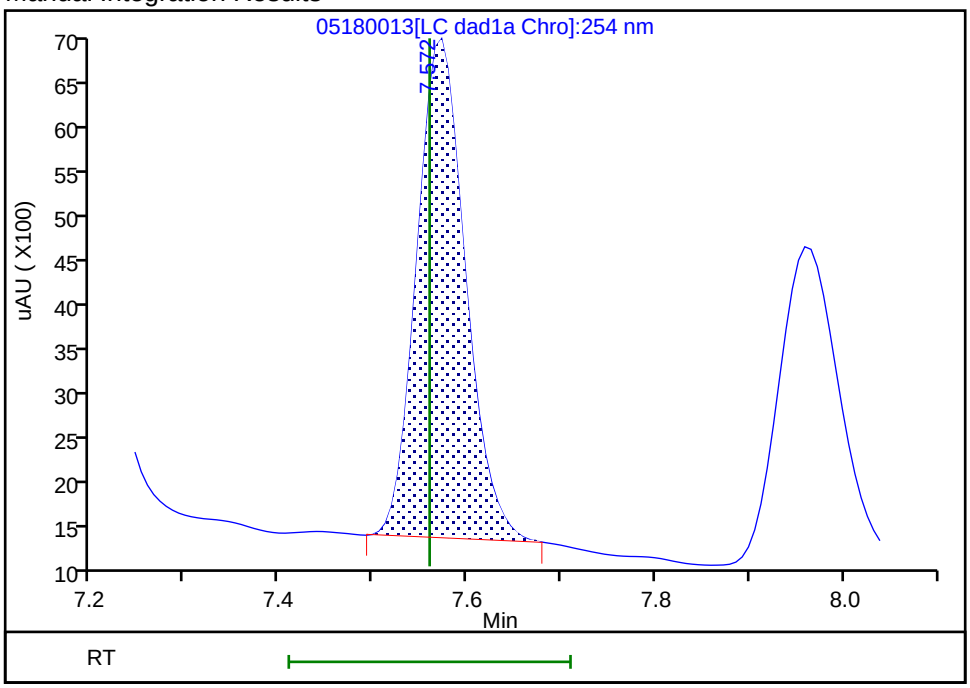
Processing Integration Results

RT: 7.57
Area: 21692
Amount: 0.203911
Amount Units: ug/mL



Manual Integration Results

RT: 7.57
Area: 20052
Amount: 0.188494
Amount Units: ug/mL



Reviewer: LV5D, 19-May-2023 11:29:58 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Instrument ID: CHHPLC_X3 Start Date: 02/08/2023 15:38

Analysis Batch Number: 601664 End Date: 02/08/2023 19:05

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 280-601664/11		02/08/2023 15:38	1	02080011.D	UltraCarb5uODS 4.6(mm)
IC 280-601664/12		02/08/2023 16:01	1	02080012.D	UltraCarb5uODS 4.6(mm)
IC 280-601664/13		02/08/2023 16:24	1	02080013.D	UltraCarb5uODS 4.6(mm)
IC 280-601664/14		02/08/2023 16:47	1	02080014.D	UltraCarb5uODS 4.6(mm)
IC 280-601664/15		02/08/2023 17:10	1	02080015.D	UltraCarb5uODS 4.6(mm)
IC 280-601664/16		02/08/2023 17:33	1	02080016.D	UltraCarb5uODS 4.6(mm)
IC 280-601664/17		02/08/2023 17:56	1	02080017.D	UltraCarb5uODS 4.6(mm)
IC 280-601664/18		02/08/2023 18:19	1	02080018.D	UltraCarb5uODS 4.6(mm)
IC 280-601664/19		02/08/2023 18:42	1	02080019.D	UltraCarb5uODS 4.6(mm)
ICV 280-601664/20		02/08/2023 19:05	1	02080020.D	UltraCarb5uODS 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Start Date: 04/07/2023 19:03

Analysis Batch Number: 607981 End Date: 04/08/2023 00:26

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 280-607981/10		04/07/2023 19:03	1	04070010.D	Luna-phenylhex 4.6(mm)
IC 280-607981/11		04/07/2023 19:39	1	04070011.D	Luna-phenylhex 4.6(mm)
IC 280-607981/12		04/07/2023 20:14	1	04070012.D	Luna-phenylhex 4.6(mm)
IC 280-607981/13		04/07/2023 20:50	1	04070013.D	Luna-phenylhex 4.6(mm)
IC 280-607981/14		04/07/2023 21:26	1	04070014.D	Luna-phenylhex 4.6(mm)
IC 280-607981/15		04/07/2023 22:02	1	04070015.D	Luna-phenylhex 4.6(mm)
IC 280-607981/16		04/07/2023 22:38	1	04070016.D	Luna-phenylhex 4.6(mm)
IC 280-607981/17		04/07/2023 23:14	1	04070017.D	Luna-phenylhex 4.6(mm)
IC 280-607981/18		04/07/2023 23:50	1	04070018.D	Luna-phenylhex 4.6(mm)
ICV 280-607981/19		04/08/2023 00:26	1	04070019.D	Luna-phenylhex 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Instrument ID: CHHPLC_X3 Start Date: 05/15/2023 15:34

Analysis Batch Number: 612440 End Date: 05/15/2023 22:50

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 280-612440/8		05/15/2023 15:34	1	05152308.D	UltraCarb5uODS 4.6(mm)
CCV 280-612440/9		05/15/2023 15:57	1		UltraCarb5uODS 4.6(mm)
MB 280-612275/1-A		05/15/2023 16:20	1	05152311.D	UltraCarb5uODS 4.6(mm)
LCS 280-612275/2-A		05/15/2023 16:43	1	05152312.D	UltraCarb5uODS 4.6(mm)
LCSD 280-612275/3-A		05/15/2023 17:06	1	05152313.D	UltraCarb5uODS 4.6(mm)
ZZZZZ		05/15/2023 17:29	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/15/2023 17:52	1		UltraCarb5uODS 4.6(mm)
280-176268-1	LL1mw-090-230301-GW	05/15/2023 18:15	1	05152316.D	UltraCarb5uODS 4.6(mm)
280-176268-2	LL1mw-091-230301-GW	05/15/2023 18:38	1	05152317.D	UltraCarb5uODS 4.6(mm)
280-176268-3	FWG-003-230301-ER	05/15/2023 19:01	1	05152318.D	UltraCarb5uODS 4.6(mm)
280-176268-4	FWG-003-230301-FB	05/15/2023 19:23	1	05152319.D	UltraCarb5uODS 4.6(mm)
ZZZZZ		05/15/2023 19:46	1		UltraCarb5uODS 4.6(mm)
CCV 280-612440/21		05/15/2023 20:09	1	05152321.D	UltraCarb5uODS 4.6(mm)
CCV 280-612440/22		05/15/2023 20:32	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/15/2023 20:55	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/15/2023 21:18	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/15/2023 21:41	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/15/2023 22:04	1		UltraCarb5uODS 4.6(mm)
CCV 280-612440/27		05/15/2023 22:27	1		UltraCarb5uODS 4.6(mm)
CCV 280-612440/28		05/15/2023 22:50	1		UltraCarb5uODS 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Start Date: 05/16/2023 19:34

Analysis Batch Number: 612694 End Date: 05/17/2023 03:58

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 280-612694/11		05/16/2023 19:34	1	05160011.D	Luna-phenylhex 4.6(mm)
ZZZZZ		05/16/2023 20:10	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/16/2023 20:46	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/16/2023 21:22	1		Luna-phenylhex 4.6(mm)
280-176268-1	LL1mw-090-230301-GW	05/16/2023 21:58	1	05160015.D	Luna-phenylhex 4.6(mm)
280-176268-2	LL1mw-091-230301-GW	05/16/2023 22:34	1	05160016.D	Luna-phenylhex 4.6(mm)
280-176268-3	FWG-003-230301-ER	05/16/2023 23:10	1	05160017.D	Luna-phenylhex 4.6(mm)
280-176268-4	FWG-003-230301-FB	05/16/2023 23:46	1	05160018.D	Luna-phenylhex 4.6(mm)
ZZZZZ		05/17/2023 00:22	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/17/2023 00:58	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/17/2023 01:34	1		Luna-phenylhex 4.6(mm)
CCV 280-612694/22		05/17/2023 02:10	1	05160022.D	Luna-phenylhex 4.6(mm)
ZZZZZ		05/17/2023 02:46	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/17/2023 03:22	1		Luna-phenylhex 4.6(mm)
CCV 280-612694/25		05/17/2023 03:58	1		Luna-phenylhex 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Instrument ID: CHHPLC_X3 Start Date: 05/18/2023 21:23

Analysis Batch Number: 613045 End Date: 05/19/2023 10:00

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 280-613045/8		05/18/2023 21:23	1	05180008.D	UltraCarb5uODS 4.6(mm)
CCV 280-613045/9		05/18/2023 21:46	1		UltraCarb5uODS 4.6(mm)
MB 280-612937/1-A		05/18/2023 22:09	1	05180011.D	UltraCarb5uODS 4.6(mm)
LCS 280-612937/2-A		05/18/2023 22:32	1	05180012.D	UltraCarb5uODS 4.6(mm)
LCSD 280-612937/3-A		05/18/2023 22:55	1	05180013.D	UltraCarb5uODS 4.6(mm)
ZZZZZ		05/18/2023 23:18	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/18/2023 23:41	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/19/2023 00:04	1		UltraCarb5uODS 4.6(mm)
280-176268-1 RE	LL1mw-090-230301-GW RE	05/19/2023 00:27	1	05180017.D	UltraCarb5uODS 4.6(mm)
280-176268-2 RE	LL1mw-091-230301-GW RE	05/19/2023 00:49	1	05180018.D	UltraCarb5uODS 4.6(mm)
280-176268-3 RE	FWG-003-230301-ER RE	05/19/2023 01:12	1	05180019.D	UltraCarb5uODS 4.6(mm)
280-176268-4 RE	FWG-003-230301-FB RE	05/19/2023 01:35	1	05180020.D	UltraCarb5uODS 4.6(mm)
CCV 280-613045/21		05/19/2023 01:58	1	05180021.D	UltraCarb5uODS 4.6(mm)
CCV 280-613045/22		05/19/2023 02:21	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/19/2023 02:44	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/19/2023 03:07	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/19/2023 03:30	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/19/2023 03:53	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/19/2023 04:16	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/19/2023 04:39	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/19/2023 05:02	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/19/2023 05:25	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/19/2023 05:48	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/19/2023 06:11	1		UltraCarb5uODS 4.6(mm)
CCV 280-613045/33		05/19/2023 06:34	1	05180033.D	UltraCarb5uODS 4.6(mm)
CCV 280-613045/34		05/19/2023 06:57	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/19/2023 07:19	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/19/2023 07:42	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/19/2023 08:05	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/19/2023 08:28	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/19/2023 08:51	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/19/2023 09:14	1		UltraCarb5uODS 4.6(mm)
CCV 280-613045/41		05/19/2023 09:37	1	05180041.D	UltraCarb5uODS 4.6(mm)
CCV 280-613045/42		05/19/2023 10:00	1		UltraCarb5uODS 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Start Date: 05/19/2023 15:31

Analysis Batch Number: 613169 End Date: 05/20/2023 01:06

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 280-613169/8		05/19/2023 15:31	1	05190008.D	Luna-phenylhex 4.6(mm)
ZZZZZ		05/19/2023 16:07	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/19/2023 16:43	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/19/2023 17:19	1		Luna-phenylhex 4.6(mm)
280-176268-1 RE	LL1mw-090-230301-GW RE	05/19/2023 17:55	1	05190013.D	Luna-phenylhex 4.6(mm)
280-176268-2 RE	LL1mw-091-230301-GW RE	05/19/2023 18:31	1	05190014.D	Luna-phenylhex 4.6(mm)
280-176268-3 RE	FWG-003-230301-ER RE	05/19/2023 19:06	1	05190015.D	Luna-phenylhex 4.6(mm)
280-176268-4 RE	FWG-003-230301-FB RE	05/19/2023 19:42	1	05190016.D	Luna-phenylhex 4.6(mm)
ZZZZZ		05/19/2023 20:18	1		Luna-phenylhex 4.6(mm)
CCV 280-613169/18		05/19/2023 20:54	1	05190018.D	Luna-phenylhex 4.6(mm)
ZZZZZ		05/19/2023 21:30	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/19/2023 22:06	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/19/2023 22:42	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/19/2023 23:18	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/19/2023 23:54	1		Luna-phenylhex 4.6(mm)
ZZZZZ		05/20/2023 00:30	1		Luna-phenylhex 4.6(mm)
CCV 280-613169/25		05/20/2023 01:06	1		Luna-phenylhex 4.6(mm)

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Batch Number: 601664 Batch Start Date: 02/08/23 15:38 Batch Analyst: Zhang, Jian

Batch Method: 8330B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	3,5-DNA LCS 00043	8330 LCS 00121	8330IntermStk 00075	8330Surrogate 00138	
IC 280-601664/11		8330B		1 mL			250 uL		
IC 280-601664/12		8330B		1 mL			100 uL		
IC 280-601664/13		8330B		1 mL			70 uL		
IC 280-601664/14		8330B		1 mL			40 uL		
IC 280-601664/15		8330B		1 mL			25 uL		
IC 280-601664/16		8330B		1 mL			10 uL		
IC 280-601664/17		8330B		1 mL			5 uL		
IC 280-601664/18		8330B		1 mL			2 uL		
IC 280-601664/19		8330B		1 mL			1 uL		
ICV 280-601664/20		8330B		1 mL	50 uL	50 uL		50 uL	

Batch Notes	
Methanol ID	221054

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.

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Batch Number: 607981 Batch Start Date: 04/07/23 19:03 Batch Analyst: Zhang, Jian

Batch Method: 8330B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	8330 DMT 00013	8330 LCS 00125	8330_OP_DMT 00017	8330IntermStk 00076	8330Surrogate 00141
IC 280-607981/10		8330B		1 mL	125 uL			250 uL	
IC 280-607981/11		8330B		1 mL	50 uL			100 uL	
IC 280-607981/12		8330B		1 mL	35 uL			70 uL	
IC 280-607981/13		8330B		1 mL	20 uL			40 uL	
IC 280-607981/14		8330B		1 mL	12.5 uL			25 uL	
IC 280-607981/15		8330B		1 mL	5 uL			10 uL	
IC 280-607981/16		8330B		1 mL	2.5 uL			5 uL	
IC 280-607981/17		8330B		1 mL	1 uL			2 uL	
IC 280-607981/18		8330B		1 mL	0.5 uL			1 uL	
ICV 280-607981/19		8330B		1 mL		50 uL	50 uL		50 uL

Batch Notes	
Methanol ID	221056

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.

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Batch Number: 612275 Batch Start Date: 05/12/23 15:04 Batch Analyst: Lee, David C

Batch Method: 3535 Batch End Date: 05/12/23 18:28

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	8330 LCS 00125	8330_OP_DMT 00017
MB 280-612275/1		3535, 8330B				500 mL	5 mL		
LCS 280-612275/2		3535, 8330B				500 mL	5 mL	0.1 mL	0.1 mL
LCSD 280-612275/3		3535, 8330B				500 mL	5 mL	0.1 mL	0.1 mL
280-176268-B-1	LL1mw-090-230301-GW	3535, 8330B	T	789.4 g	286.8 g	502.6 mL	5 mL		
280-176268-A-2	LL1mw-091-230301-GW	3535, 8330B	T	780.4 g	289.5 g	490.9 mL	5 mL		
280-176268-A-3	FWG-003-230301-ER	3535, 8330B	T	773.4 g	286.8 g	486.6 mL	5 mL		
280-176268-A-4	FWG-003-230301-FB	3535, 8330B	T	783.3 g	289.0 g	494.3 mL	5 mL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	8330Surrogate 00143	AnalysisComment				
MB 280-612275/1		3535, 8330B		0.1 mL					
LCS 280-612275/2		3535, 8330B		0.1 mL	8330, DMT				
LCSD 280-612275/3		3535, 8330B		0.1 mL	8330, DMT				
280-176268-B-1	LL1mw-090-230301-GW	3535, 8330B	T	0.1 mL					
280-176268-A-2	LL1mw-091-230301-GW	3535, 8330B	T	0.1 mL					
280-176268-A-3	FWG-003-230301-ER	3535, 8330B	T	0.1 mL					
280-176268-A-4	FWG-003-230301-FB	3535, 8330B	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 Denver Job No.: 280-176268-1

SDG No.:

Batch Number: 612275 Batch Start Date: 05/12/23 15:04 Batch Analyst: Lee, David C

Batch Method: 3535 Batch End Date: 05/12/23 18:28

Batch Notes	
First Start time	05/12/2023 15:29
First End time	05/12/2023 18:03
SPE Cartridge Type	Sep-Pak Porapak Rdx
SPE Cartridge Lot ID	005332286A
Balance ID	24350888
Manifold ID	Manifold: C
QC Bottle Lot ID	02024011
Pipette/Syringe/Dispenser ID	Dobby/DOD/Pugsley
Solvent Name	CaCl2
Solvent Lot #	CaCl2_Sol_00085
Rinse Solvent Name	Acetonotrile
Rinse Solvent Lot	Acetonitrile_00078
Acid Name	0.1% AAinACN
Acid ID	0.1% AAinACN_00207
Analyst ID - Spike Analyst	DL
Analyst ID - Spike Witness Analyst	Reviewer: NC
Batch Comment	DV-OP-0017

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.

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-176268-1

SDG No.:

Batch Number: 612937 Batch Start Date: 05/18/23 13:20 Batch Analyst: Hermanova, Eva

Batch Method: 3535 Batch End Date: 05/18/23 16:53

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	8330 LCS 00126	8330_OP_DMT 00020
MB 280-612937/1		3535, 8330B				500 mL	5 mL		
LCS 280-612937/2		3535, 8330B				500 mL	5 mL	0.1 mL	0.1 mL
LCSD 280-612937/3		3535, 8330B				500 mL	5 mL	0.1 mL	0.1 mL
280-176268-A-1	LL1mw-090-230301-GW	3535, 8330B	T	790.9 g	287.3 g	503.6 mL	5 mL		
280-176268-B-2	LL1mw-091-230301-GW	3535, 8330B	T	783.3 g	288.9 g	494.4 mL	5 mL		
280-176268-B-3	FWG-003-230301-ER	3535, 8330B	T	774.0 g	286.9 g	487.1 mL	5 mL		
280-176268-B-4	FWG-003-230301-FB	3535, 8330B	T	786.7 g	289.1 g	497.6 mL	5 mL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	8330Surrogate 00143					
MB 280-612937/1		3535, 8330B		0.1 mL					
LCS 280-612937/2		3535, 8330B		0.1 mL					
LCSD 280-612937/3		3535, 8330B		0.1 mL					
280-176268-A-1	LL1mw-090-230301-GW	3535, 8330B	T	0.1 mL					
280-176268-B-2	LL1mw-091-230301-GW	3535, 8330B	T	0.1 mL					
280-176268-B-3	FWG-003-230301-ER	3535, 8330B	T	0.1 mL					
280-176268-B-4	FWG-003-230301-FB	3535, 8330B	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 Denver Job No.: 280-176268-1

SDG No.:

Batch Number: 612937 Batch Start Date: 05/18/23 13:20 Batch Analyst: Hermanova, Eva

Batch Method: 3535 Batch End Date: 05/18/23 16:53

Batch Notes	
First Start time	05/18/2023 13:36
First End time	05/18/2023 16:07
SPE Cartridge Type	Sep-Pak Porapak Rdx
SPE Cartridge Lot ID	005332286A
Balance ID	24350888
Manifold ID	Manifold: A, B
QC Bottle Lot ID	02024011
Pipette/Syringe/Dispenser ID	Dobby/DOD/Pugsley
Solvent Name	CaCl2
Solvent Lot #	CaCl2_Sol_00085
Rinse Solvent Name	Acetonotrile
Rinse Solvent Lot	Acetonitrile_00078
Acid Name	0.1% AAinACN
Acid ID	0.1% AAinACN_00207
Analyst ID - Spike Analyst	EH (Trainee); Trainer: DL
Analyst ID - Spike Witness Analyst	Reviewer: NC
Batch Comment	DV-OP-0017

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.

Shipping and Receiving Documents

Chain of Custody Record

leidos

COC No.: RVAAP-313-TA

Page 1 of 1 Date: 5/9/2023

Name Leidos
Address: 8866 Commons Blvd. Suite 201, Twinsburg, OH 44087
Phone Number: (330) 405-5802
Project Manager: Jed Thomas
Project: RVAAP FWGW Sampling Event Spring 2023
Job/P.O. No.: P010216426

Laboratory Name: Test America - Canton
Address: 4955 Yarrow St
Arvada , CO 80002
Phone: (303) 736-0100
Fax:

Laboratory No.	Sample ID		Depth	Date	Time	Matrix	VOCs (1)(B)	SVOCs (2)(A)	LL PAHs (3)(A)	TPH GRO (4)(B)	TPH DRO (5)(A)	Explosives (6)(A)	Nitrate (7)(A)	Ammonia (8)(D)	Metals - LEAD (9)(C)	Temperature Blank	Total Number of Contai	OBSERVATIONS COMMENTS
	LL1mw-090-230301-GW		N/A	5/9/2023	1503	W						2					2	5 DAY TAT RUSH ON ALL SAMPLES
	LL1mw-091-230301-GW		N/A	5/9/2023	1136	W						2					2	
	FWG-003-230301-ER		N/A	5/9/2023	1442	W						2					2	Tied to LL1mw-091-230301-GW
	FWG-003-230301-FB		N/A	5/9/2023	0815	W						2					2	

280-176268 Chain of Custody

Relinquished by	Date	Received by	Date	Notes: Total Number of Containers: 8	Shipment Method:
Signature	5/9/2023	Signature	5-10-23	A. Cool, 4C B. HCl, pH<2, Cool, 4C C. HNO3, pH<2, Cool, 4C D. H2SO4, pH<2, Cool 4C	**Tracking Numbers:** 8178 1968 1567
Printed Name: Leidos	Time: 1700	Printed Name: Anthony	Time: 0950	1. SW 8260C 3 x 40 ml-VOA 2. SW 8270E 2 x 125 ml-amber 3. SW 8270E SIM 2 x 250 ml-amber 4. Modified 8015 (GRO) 3 x 40 ml-VOA 5. Modified 8015 (DRO) 2 x 1-L amber 6. SW 8330 2 x 500-ml amber 7. SW 9056 1 x 250-ml plastic 8. EPA 350.1 1 x 250-ml amber 8. SW 6020 1 x 500 ml plastic	
Company		Company ETADEW			
Relinquished by	Date	Received by	Date		**Temperature upon receipt**
Signature		Signature			
Printed Name	Time	Printed Name	Time		**Leidos** 8866 Commons Drive Twinsburg, OH 44087 (330) 405-5802
Company		Company			

0.6 of 0.1 IR14

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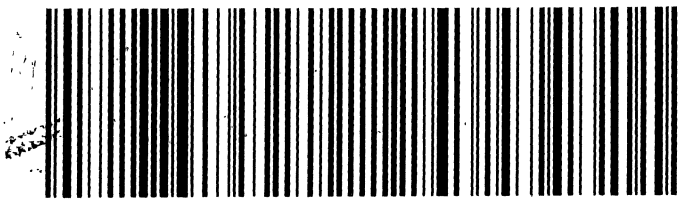

280-176268 Waybill

Login Sample Receipt Checklist

Client: Leidos, Inc.

Job Number: 280-176268-1
SDG Number:

Login Number: 176268
List Number: 1
Creator: Held, Wesley

List Source: Eurofins 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?	N/A	
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").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	