

 **ANALYTICAL REPORT****PREPARED FOR**

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Generated 10/18/2024 4:32 AM

**JOB DESCRIPTION**

RVAAP FWGW

**JOB NUMBER**

280-197532-2

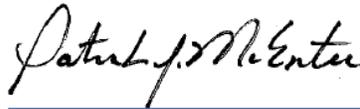
# Eurofins Denver

## Job Notes

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

## Authorization



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# Definitions/Glossary

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

Job ID: 280-197532-2

## Qualifiers

### HPLC/IC

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
B	Analyte was found in the blank.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
P	The %RPD between the primary and confirmation column/detector is >40%. The higher value has been reported
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
S1-	Surrogate recovery exceeds control limits, low biased.

## 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

**Job Narrative  
280-197532-2**

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

**Receipt**

The samples were received on 10/3/2024 9:10 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 time was 1.9°C.

**Method 8330B - Nitroaromatics and Nitramines (HPLC)**

Samples LL1mw-090-240901-GW (280-197532-1), LL1mw-080-240901-GW (280-197532-2), LL2mw-059-240901-GW (280-197532-3), LL1mw-081-240901-GW (280-197532-4), FWGmw-010-240901-GW (280-197532-5) and FWGmw-011-240901-GW (280-197532-6) were analyzed for Nitroaromatics and Nitramines (HPLC). The samples were prepared on 10/8/2024 and analyzed on 10/9/2024 and 10/10/2024.

In preparation batch 280-670048, the following samples required filtration to reduce matrix interferences: LL1mw-090-240901-GW (280-197532-1), LL1mw-080-240901-GW (280-197532-2), LL1mw-081-240901-GW (280-197532-4) and FWGmw-011-240901-GW (280-197532-6).

In preparation batch 280-670048, the following samples: LL1mw-090-240901-GW (280-197532-1), LL1mw-080-240901-GW (280-197532-2), LL1mw-081-240901-GW (280-197532-4) and FWGmw-011-240901-GW (280-197532-6) were decanted prior to preparation as sample bottles contained insufficient headspace for the addition of sodium chloride.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 280-670048. An LCS/LCSD was prepared instead. LL1mw-090-240901-GW (280-197532-1), LL1mw-080-240901-GW (280-197532-2), LL2mw-059-240901-GW (280-197532-3), LL1mw-081-240901-GW (280-197532-4), FWGmw-010-240901-GW (280-197532-5) and FWGmw-011-240901-GW (280-197532-6)

The %RPD between the primary and confirmation column exceeded 40% for 4-Amino-2,6-dinitrotoluene and RDX for the following samples: LL1mw-080-240901-GW (280-197532-2) and LL2mw-059-240901-GW (280-197532-3) in preparation batch 280-670048 and analytical batch 280-670390. The lower results have been quantified and reported.

Surrogate recovery for the following sample in preparation batch 280-670048 and analytical batch 280-670390 was outside the lower control limit on the primary instrument: LL1mw-080-240901-GW (280-197532-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed. Surrogate recovered within control limit on the confirmation instrument.

The laboratory control sample and laboratory control sample duplicate (LCS/LCSD) for preparation batch 280-670048 and analytical batch 280-670390 recovered outside control limits for the following analytes: m-Nitrotoluene(73-125%R) at 68%R/72%R, o-Nitrotoluene(70-127%R) at 69%R(LCS), and surrogate 1,2-Dinitrobenzene(83-119%R) at 82%R(LCSD). Not enough 2x holding time remains. Results have been reported.

# Detection Summary

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

Job ID: 280-197532-2

**Client Sample ID: LL1mw-090-240901-GW**

**Lab Sample ID: 280-197532-1**

No Detections.

**Client Sample ID: LL1mw-080-240901-GW**

**Lab Sample ID: 280-197532-2**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Amino-4,6-dinitrotoluene	0.137		0.122	0.0561	ug/L	1		8330B	Total/NA
HMX	0.120	J	0.232	0.0970	ug/L	1		8330B	Total/NA
RDX	0.137	J p P	0.232	0.0570	ug/L	1		8330B	Total/NA

**Client Sample ID: LL2mw-059-240901-GW**

**Lab Sample ID: 280-197532-3**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,3,5-Trinitrobenzene	1.39		0.227	0.0909	ug/L	1		8330B	Total/NA
2,4-Dinitrotoluene	0.311		0.108	0.0296	ug/L	1		8330B	Total/NA
2-Amino-4,6-dinitrotoluene	0.644		0.119	0.0548	ug/L	1		8330B	Total/NA
4-Amino-2,6-dinitrotoluene	0.645	p P	0.162	0.0624	ug/L	1		8330B	Total/NA

**Client Sample ID: LL1mw-081-240901-GW**

**Lab Sample ID: 280-197532-4**

No Detections.

**Client Sample ID: FWGmw-010-240901-GW**

**Lab Sample ID: 280-197532-5**

No Detections.

**Client Sample ID: FWGmw-011-240901-GW**

**Lab Sample ID: 280-197532-6**

No Detections.

This Detection Summary does not include radiochemical test results.

# Client Sample Results

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

Job ID: 280-197532-2

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

**Client Sample ID: LL1mw-090-240901-GW**

**Date Collected: 10/02/24 08:55**

**Date Received: 10/03/24 09:10**

**Lab Sample ID: 280-197532-1**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.229	0.0917	ug/L		10/09/24 20:55	1
1,3-Dinitrobenzene	ND		0.120	0.0402	ug/L		10/09/24 20:55	1
2,4,6-Trinitrotoluene	ND		0.120	0.0491	ug/L		10/09/24 20:55	1
2,4-Dinitrotoluene	ND		0.109	0.0299	ug/L		10/09/24 20:55	1
2,6-Dinitrotoluene	ND		0.109	0.0437	ug/L		10/09/24 20:55	1
2-Amino-4,6-dinitrotoluene	ND		0.120	0.0553	ug/L		10/09/24 20:55	1
2-Nitrotoluene	ND	*	0.229	0.0932	ug/L		10/09/24 20:55	1
3-Nitrotoluene	ND	*	0.436	0.213	ug/L		10/09/24 20:55	1
4-Amino-2,6-dinitrotoluene	ND		0.164	0.0629	ug/L		10/09/24 20:55	1
4-Nitrotoluene	ND		0.447	0.109	ug/L		10/09/24 20:55	1
HMX	ND		0.229	0.0955	ug/L		10/09/24 20:55	1
Nitrobenzene	ND		0.229	0.0992	ug/L		10/09/24 20:55	1
Nitroglycerin	ND		2.29	1.00	ug/L		10/09/24 20:55	1
PETN	ND		1.20	0.487	ug/L		10/09/24 20:55	1
RDX	ND		0.229	0.0562	ug/L		10/09/24 20:55	1
Tetryl	ND		0.120	0.0347	ug/L		10/09/24 20:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dinitrobenzene	86		83 - 119	10/08/24 13:10	10/09/24 20:55	1

**Client Sample ID: LL1mw-080-240901-GW**

**Date Collected: 10/02/24 10:08**

**Date Received: 10/03/24 09:10**

**Lab Sample ID: 280-197532-2**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.232	0.0931	ug/L		10/09/24 21:17	1
1,3-Dinitrobenzene	ND		0.122	0.0408	ug/L		10/10/24 20:13	1
2,4,6-Trinitrotoluene	ND		0.122	0.0498	ug/L		10/09/24 21:17	1
2,4-Dinitrotoluene	ND		0.111	0.0303	ug/L		10/09/24 21:17	1
2,6-Dinitrotoluene	ND		0.111	0.0444	ug/L		10/09/24 21:17	1
<b>2-Amino-4,6-dinitrotoluene</b>	<b>0.137</b>		0.122	0.0561	ug/L		10/09/24 21:17	1
2-Nitrotoluene	ND	*	0.232	0.0946	ug/L		10/09/24 21:17	1
3-Nitrotoluene	ND	*	0.443	0.216	ug/L		10/09/24 21:17	1
4-Amino-2,6-dinitrotoluene	ND	B	0.166	0.0639	ug/L		10/10/24 20:13	1
4-Nitrotoluene	ND		0.454	0.111	ug/L		10/09/24 21:17	1
<b>HMX</b>	<b>0.120</b>	<b>J</b>	0.232	0.0970	ug/L		10/09/24 21:17	1
Nitrobenzene	ND		0.232	0.101	ug/L		10/09/24 21:17	1
Nitroglycerin	ND		2.32	1.02	ug/L		10/09/24 21:17	1
PETN	ND		1.22	0.495	ug/L		10/09/24 21:17	1
<b>RDX</b>	<b>0.137</b>	<b>J p P</b>	0.232	0.0570	ug/L		10/10/24 20:13	1
Tetryl	ND		0.122	0.0352	ug/L		10/09/24 21:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dinitrobenzene	82	S1-	83 - 119	10/08/24 13:10	10/09/24 21:17	1
1,2-Dinitrobenzene	85		83 - 119	10/08/24 13:10	10/10/24 20:13	1

**Client Sample ID: LL2mw-059-240901-GW**

**Date Collected: 10/02/24 11:21**

**Date Received: 10/03/24 09:10**

**Lab Sample ID: 280-197532-3**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
<b>1,3,5-Trinitrobenzene</b>	<b>1.39</b>		0.227	0.0909	ug/L		10/09/24 21:38	1

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# Client Sample Results

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

Job ID: 280-197532-2

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

**Client Sample ID: LL2mw-059-240901-GW**  
**Date Collected: 10/02/24 11:21**  
**Date Received: 10/03/24 09:10**

**Lab Sample ID: 280-197532-3**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
1,3-Dinitrobenzene	ND		0.119	0.0399	ug/L		10/10/24 20:48	1
2,4,6-Trinitrotoluene	ND		0.119	0.0486	ug/L		10/09/24 21:38	1
<b>2,4-Dinitrotoluene</b>	<b>0.311</b>		0.108	0.0296	ug/L		10/09/24 21:38	1
2,6-Dinitrotoluene	ND		0.108	0.0433	ug/L		10/09/24 21:38	1
<b>2-Amino-4,6-dinitrotoluene</b>	<b>0.644</b>		0.119	0.0548	ug/L		10/09/24 21:38	1
2-Nitrotoluene	ND	*	0.227	0.0924	ug/L		10/09/24 21:38	1
3-Nitrotoluene	ND	*	0.432	0.211	ug/L		10/09/24 21:38	1
<b>4-Amino-2,6-dinitrotoluene</b>	<b>0.645</b>	<b>p P</b>	0.162	0.0624	ug/L		10/09/24 21:38	1
4-Nitrotoluene	ND		0.443	0.108	ug/L		10/09/24 21:38	1
HMX	ND		0.227	0.0947	ug/L		10/09/24 21:38	1
Nitrobenzene	ND		0.227	0.0984	ug/L		10/09/24 21:38	1
Nitroglycerin	ND		2.27	0.995	ug/L		10/09/24 21:38	1
PETN	ND		1.19	0.483	ug/L		10/09/24 21:38	1
RDX	ND		0.227	0.0557	ug/L		10/09/24 21:38	1
Tetryl	ND		0.119	0.0344	ug/L		10/09/24 21:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dinitrobenzene	90		83 - 119	10/08/24 13:10	10/09/24 21:38	1
1,2-Dinitrobenzene	94		83 - 119	10/08/24 13:10	10/10/24 20:48	1

**Client Sample ID: LL1mw-081-240901-GW**  
**Date Collected: 10/02/24 12:26**  
**Date Received: 10/03/24 09:10**

**Lab Sample ID: 280-197532-4**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.225	0.0902	ug/L		10/09/24 22:00	1
1,3-Dinitrobenzene	ND		0.118	0.0396	ug/L		10/09/24 22:00	1
2,4,6-Trinitrotoluene	ND		0.118	0.0483	ug/L		10/09/24 22:00	1
2,4-Dinitrotoluene	ND		0.107	0.0294	ug/L		10/09/24 22:00	1
2,6-Dinitrotoluene	ND		0.107	0.0430	ug/L		10/09/24 22:00	1
2-Amino-4,6-dinitrotoluene	ND		0.118	0.0544	ug/L		10/09/24 22:00	1
2-Nitrotoluene	ND	*	0.225	0.0917	ug/L		10/09/24 22:00	1
3-Nitrotoluene	ND	*	0.429	0.209	ug/L		10/09/24 22:00	1
4-Amino-2,6-dinitrotoluene	ND		0.161	0.0619	ug/L		10/09/24 22:00	1
4-Nitrotoluene	ND		0.440	0.107	ug/L		10/09/24 22:00	1
HMX	ND		0.225	0.0940	ug/L		10/09/24 22:00	1
Nitrobenzene	ND		0.225	0.0976	ug/L		10/09/24 22:00	1
Nitroglycerin	ND		2.25	0.988	ug/L		10/09/24 22:00	1
PETN	ND		1.18	0.480	ug/L		10/09/24 22:00	1
RDX	ND		0.225	0.0553	ug/L		10/09/24 22:00	1
Tetryl	ND		0.118	0.0341	ug/L		10/09/24 22:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dinitrobenzene	84		83 - 119	10/08/24 13:10	10/09/24 22:00	1

**Client Sample ID: FWGmw-010-240901-GW**  
**Date Collected: 10/02/24 12:34**  
**Date Received: 10/03/24 09:10**

**Lab Sample ID: 280-197532-5**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.242	0.0970	ug/L		10/09/24 22:22	1
1,3-Dinitrobenzene	ND		0.127	0.0426	ug/L		10/09/24 22:22	1

# Client Sample Results

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

Job ID: 280-197532-2

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

**Client Sample ID: FWGmw-010-240901-GW**  
**Date Collected: 10/02/24 12:34**  
**Date Received: 10/03/24 09:10**

**Lab Sample ID: 280-197532-5**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
2,4,6-Trinitrotoluene	ND		0.127	0.0519	ug/L		10/09/24 22:22	1
2,4-Dinitrotoluene	ND		0.115	0.0316	ug/L		10/09/24 22:22	1
2,6-Dinitrotoluene	ND		0.115	0.0463	ug/L		10/09/24 22:22	1
2-Amino-4,6-dinitrotoluene	ND		0.127	0.0585	ug/L		10/09/24 22:22	1
2-Nitrotoluene	ND	*-	0.242	0.0986	ug/L		10/09/24 22:22	1
3-Nitrotoluene	ND	*-	0.461	0.225	ug/L		10/09/24 22:22	1
4-Amino-2,6-dinitrotoluene	ND		0.173	0.0666	ug/L		10/09/24 22:22	1
4-Nitrotoluene	ND		0.473	0.115	ug/L		10/09/24 22:22	1
HMX	ND		0.242	0.101	ug/L		10/09/24 22:22	1
Nitrobenzene	ND		0.242	0.105	ug/L		10/09/24 22:22	1
Nitroglycerin	ND		2.42	1.06	ug/L		10/09/24 22:22	1
PETN	ND		1.27	0.516	ug/L		10/09/24 22:22	1
RDX	ND		0.242	0.0594	ug/L		10/09/24 22:22	1
Tetryl	ND		0.127	0.0367	ug/L		10/09/24 22:22	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,2-Dinitrobenzene	96		83 - 119			10/08/24 13:10	10/09/24 22:22	1

**Client Sample ID: FWGmw-011-240901-GW**  
**Date Collected: 10/02/24 16:05**  
**Date Received: 10/03/24 09:10**

**Lab Sample ID: 280-197532-6**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.225	0.0902	ug/L		10/09/24 22:44	1
1,3-Dinitrobenzene	ND		0.118	0.0396	ug/L		10/09/24 22:44	1
2,4,6-Trinitrotoluene	ND		0.118	0.0483	ug/L		10/09/24 22:44	1
2,4-Dinitrotoluene	ND		0.107	0.0294	ug/L		10/09/24 22:44	1
2,6-Dinitrotoluene	ND		0.107	0.0430	ug/L		10/09/24 22:44	1
2-Amino-4,6-dinitrotoluene	ND		0.118	0.0544	ug/L		10/09/24 22:44	1
2-Nitrotoluene	ND	*-	0.225	0.0917	ug/L		10/09/24 22:44	1
3-Nitrotoluene	ND	*-	0.429	0.209	ug/L		10/09/24 22:44	1
4-Amino-2,6-dinitrotoluene	ND		0.161	0.0619	ug/L		10/09/24 22:44	1
4-Nitrotoluene	ND		0.440	0.107	ug/L		10/09/24 22:44	1
HMX	ND		0.225	0.0940	ug/L		10/09/24 22:44	1
Nitrobenzene	ND		0.225	0.0976	ug/L		10/09/24 22:44	1
Nitroglycerin	ND		2.25	0.988	ug/L		10/09/24 22:44	1
PETN	ND		1.18	0.480	ug/L		10/09/24 22:44	1
RDX	ND		0.225	0.0552	ug/L		10/10/24 21:23	1
Tetryl	ND		0.118	0.0341	ug/L		10/09/24 22:44	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,2-Dinitrobenzene	90		83 - 119			10/08/24 13:10	10/09/24 22:44	1
1,2-Dinitrobenzene	93		83 - 119			10/08/24 13:10	10/10/24 21:23	1

# Default Detection Limits

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

Job ID: 280-197532-2

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

Prep: 3535

Analyte	RL	MDL	Units
1,3,5-Trinitrobenzene	0.210	0.0841	ug/L
1,3-Dinitrobenzene	0.110	0.0369	ug/L
2,4,6-Trinitrotoluene	0.110	0.0450	ug/L
2,4-Dinitrotoluene	0.100	0.0274	ug/L
2,6-Dinitrotoluene	0.100	0.0401	ug/L
2-Amino-4,6-dinitrotoluene	0.110	0.0507	ug/L
2-Nitrotoluene	0.210	0.0855	ug/L
3-Nitrotoluene	0.400	0.195	ug/L
4-Amino-2,6-dinitrotoluene	0.150	0.0577	ug/L
4-Nitrotoluene	0.410	0.100	ug/L
HMX	0.210	0.0876	ug/L
Nitrobenzene	0.210	0.0910	ug/L
Nitroglycerin	2.10	0.921	ug/L
PETN	1.10	0.447	ug/L
RDX	0.210	0.0515	ug/L
Tetryl	0.110	0.0318	ug/L

# Surrogate Summary

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

Job ID: 280-197532-2

## 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)
280-197532-1	LL1mw-090-240901-GW	86
280-197532-2	LL1mw-080-240901-GW	82 S1-
280-197532-3	LL2mw-059-240901-GW	90
280-197532-4	LL1mw-081-240901-GW	84
280-197532-5	FWGmw-010-240901-GW	96
280-197532-6	FWGmw-011-240901-GW	90
LCS 280-670048/2-A	Lab Control Sample	87
LCSD 280-670048/3-A	Lab Control Sample Dup	82 S1-
MB 280-670048/1-A	Method Blank	84

#### 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)
280-197532-2	LL1mw-080-240901-GW	85
280-197532-3	LL2mw-059-240901-GW	94
280-197532-6	FWGmw-011-240901-GW	93

#### Surrogate Legend

12DNB = 1,2-Dinitrobenzene

# QC Sample Results

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

Job ID: 280-197532-2

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

**Lab Sample ID: MB 280-670048/1-A**  
**Matrix: Water**  
**Analysis Batch: 670390**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 670048**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.210	0.0841	ug/L		10/09/24 19:49	1
1,3-Dinitrobenzene	ND		0.110	0.0369	ug/L		10/09/24 19:49	1
2,4,6-Trinitrotoluene	ND		0.110	0.0450	ug/L		10/09/24 19:49	1
2,4-Dinitrotoluene	ND		0.100	0.0274	ug/L		10/09/24 19:49	1
2,6-Dinitrotoluene	ND		0.100	0.0401	ug/L		10/09/24 19:49	1
2-Amino-4,6-dinitrotoluene	ND		0.110	0.0507	ug/L		10/09/24 19:49	1
2-Nitrotoluene	ND		0.210	0.0855	ug/L		10/09/24 19:49	1
3-Nitrotoluene	ND		0.400	0.195	ug/L		10/09/24 19:49	1
4-Amino-2,6-dinitrotoluene	ND		0.150	0.0577	ug/L		10/09/24 19:49	1
4-Nitrotoluene	ND		0.410	0.100	ug/L		10/09/24 19:49	1
HMX	ND		0.210	0.0876	ug/L		10/09/24 19:49	1
Nitrobenzene	ND		0.210	0.0910	ug/L		10/09/24 19:49	1
Nitroglycerin	ND		2.10	0.921	ug/L		10/09/24 19:49	1
PETN	ND		1.10	0.447	ug/L		10/09/24 19:49	1
RDX	ND		0.210	0.0515	ug/L		10/09/24 19:49	1
Tetryl	ND		0.110	0.0318	ug/L		10/09/24 19:49	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dinitrobenzene	84		83 - 119	10/08/24 13:10	10/09/24 19:49	1

**Lab Sample ID: LCS 280-670048/2-A**  
**Matrix: Water**  
**Analysis Batch: 670390**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 670048**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,3,5-Trinitrobenzene	2.00	1.988		ug/L		99	73 - 125
1,3-Dinitrobenzene	2.00	1.834		ug/L		92	78 - 120
2,4,6-Trinitrotoluene	2.00	1.745		ug/L		87	71 - 123
2,4-Dinitrotoluene	2.00	1.675		ug/L		84	78 - 120
2,6-Dinitrotoluene	2.00	1.760		ug/L		88	77 - 127
2-Amino-4,6-dinitrotoluene	2.00	1.711		ug/L		86	79 - 120
2-Nitrotoluene	2.00	1.372	*-	ug/L		69	70 - 127
3-Nitrotoluene	2.00	1.369	*-	ug/L		68	73 - 125
4-Amino-2,6-dinitrotoluene	2.00	1.716		ug/L		86	76 - 125
4-Nitrotoluene	2.00	1.412		ug/L		71	71 - 127
HMX	2.00	1.729		ug/L		86	65 - 135
Nitrobenzene	2.00	1.600		ug/L		80	65 - 134
Nitroglycerin	20.0	21.18		ug/L		106	74 - 127
PETN	20.0	19.92		ug/L		100	73 - 127
RDX	2.00	1.909		ug/L		95	68 - 130
Tetryl	2.00	1.862		ug/L		93	64 - 128

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dinitrobenzene	87		83 - 119

# QC Sample Results

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

Job ID: 280-197532-2

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

**Lab Sample ID: LCSD 280-670048/3-A**  
**Matrix: Water**  
**Analysis Batch: 670390**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 670048**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
1,3,5-Trinitrobenzene	2.00	2.005		ug/L		100	73 - 125	1	20	
1,3-Dinitrobenzene	2.00	1.864		ug/L		93	78 - 120	2	20	
2,4,6-Trinitrotoluene	2.00	1.786		ug/L		89	71 - 123	2	20	
2,4-Dinitrotoluene	2.00	1.713		ug/L		86	78 - 120	2	20	
2,6-Dinitrotoluene	2.00	1.734		ug/L		87	77 - 127	1	20	
2-Amino-4,6-dinitrotoluene	2.00	1.761		ug/L		88	79 - 120	3	20	
2-Nitrotoluene	2.00	1.427		ug/L		71	70 - 127	4	20	
3-Nitrotoluene	2.00	1.440	*-	ug/L		72	73 - 125	5	20	
4-Amino-2,6-dinitrotoluene	2.00	1.733		ug/L		87	76 - 125	1	20	
4-Nitrotoluene	2.00	1.462		ug/L		73	71 - 127	3	20	
HMX	2.00	1.746		ug/L		87	65 - 135	1	20	
Nitrobenzene	2.00	1.640		ug/L		82	65 - 134	2	20	
Nitroglycerin	20.0	21.18		ug/L		106	74 - 127	0	20	
PETN	20.0	20.23		ug/L		101	73 - 127	2	20	
RDX	2.00	1.911		ug/L		96	68 - 130	0	20	
Tetryl	2.00	1.861		ug/L		93	64 - 128	0	20	
<b>Surrogate</b>										
		<b>LCSD</b>	<b>LCSD</b>							
		<b>%Recovery</b>	<b>Qualifier</b>							
1,2-Dinitrobenzene		82	S1-							83 - 119

# QC Association Summary

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

Job ID: 280-197532-2

## HPLC/IC

### Prep Batch: 670048

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-197532-1	LL1mw-090-240901-GW	Total/NA	Water	3535	
280-197532-2	LL1mw-080-240901-GW	Total/NA	Water	3535	
280-197532-3	LL2mw-059-240901-GW	Total/NA	Water	3535	
280-197532-4	LL1mw-081-240901-GW	Total/NA	Water	3535	
280-197532-5	FWGmw-010-240901-GW	Total/NA	Water	3535	
280-197532-6	FWGmw-011-240901-GW	Total/NA	Water	3535	
MB 280-670048/1-A	Method Blank	Total/NA	Water	3535	
LCS 280-670048/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 280-670048/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

### Analysis Batch: 670390

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-197532-1	LL1mw-090-240901-GW	Total/NA	Water	8330B	670048
280-197532-2	LL1mw-080-240901-GW	Total/NA	Water	8330B	670048
280-197532-3	LL2mw-059-240901-GW	Total/NA	Water	8330B	670048
280-197532-4	LL1mw-081-240901-GW	Total/NA	Water	8330B	670048
280-197532-5	FWGmw-010-240901-GW	Total/NA	Water	8330B	670048
280-197532-6	FWGmw-011-240901-GW	Total/NA	Water	8330B	670048
MB 280-670048/1-A	Method Blank	Total/NA	Water	8330B	670048
LCS 280-670048/2-A	Lab Control Sample	Total/NA	Water	8330B	670048
LCSD 280-670048/3-A	Lab Control Sample Dup	Total/NA	Water	8330B	670048

### Analysis Batch: 670528

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-197532-2	LL1mw-080-240901-GW	Total/NA	Water	8330B	670048
280-197532-3	LL2mw-059-240901-GW	Total/NA	Water	8330B	670048
280-197532-6	FWGmw-011-240901-GW	Total/NA	Water	8330B	670048

# Lab Chronicle

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

Job ID: 280-197532-2

**Client Sample ID: LL1mw-090-240901-GW**

**Lab Sample ID: 280-197532-1**

**Date Collected: 10/02/24 08:55**

**Matrix: Water**

**Date Received: 10/03/24 09:10**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			458.5 mL	5 mL	670048	10/08/24 13:10	AAA	EET DEN
Total/NA	Analysis	8330B		1	1 mL	1 mL	670390	10/09/24 20:55	JZ	EET DEN

**Client Sample ID: LL1mw-080-240901-GW**

**Lab Sample ID: 280-197532-2**

**Date Collected: 10/02/24 10:08**

**Matrix: Water**

**Date Received: 10/03/24 09:10**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			451.7 mL	5 mL	670048	10/08/24 13:10	AAA	EET DEN
Total/NA	Analysis	8330B		1	1 mL	1 mL	670390	10/09/24 21:17	JZ	EET DEN
Total/NA	Prep	3535			451.7 mL	5 mL	670048	10/08/24 13:10	AAA	EET DEN
Total/NA	Analysis	8330B		1	1 mL	1 mL	670528	10/10/24 20:13	JZ	EET DEN

**Client Sample ID: LL2mw-059-240901-GW**

**Lab Sample ID: 280-197532-3**

**Date Collected: 10/02/24 11:21**

**Matrix: Water**

**Date Received: 10/03/24 09:10**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			462.6 mL	5 mL	670048	10/08/24 13:10	AAA	EET DEN
Total/NA	Analysis	8330B		1	1 mL	1 mL	670390	10/09/24 21:38	JZ	EET DEN
Total/NA	Prep	3535			462.6 mL	5 mL	670048	10/08/24 13:10	AAA	EET DEN
Total/NA	Analysis	8330B		1	1 mL	1 mL	670528	10/10/24 20:48	JZ	EET DEN

**Client Sample ID: LL1mw-081-240901-GW**

**Lab Sample ID: 280-197532-4**

**Date Collected: 10/02/24 12:26**

**Matrix: Water**

**Date Received: 10/03/24 09:10**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			466 mL	5 mL	670048	10/08/24 13:10	AAA	EET DEN
Total/NA	Analysis	8330B		1	1 mL	1 mL	670390	10/09/24 22:00	JZ	EET DEN

**Client Sample ID: FWGmw-010-240901-GW**

**Lab Sample ID: 280-197532-5**

**Date Collected: 10/02/24 12:34**

**Matrix: Water**

**Date Received: 10/03/24 09:10**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			433.4 mL	5 mL	670048	10/08/24 13:10	AAA	EET DEN
Total/NA	Analysis	8330B		1	1 mL	1 mL	670390	10/09/24 22:22	JZ	EET DEN

**Client Sample ID: FWGmw-011-240901-GW**

**Lab Sample ID: 280-197532-6**

**Date Collected: 10/02/24 16:05**

**Matrix: Water**

**Date Received: 10/03/24 09:10**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			466.1 mL	5 mL	670048	10/08/24 13:10	AAA	EET DEN
Total/NA	Analysis	8330B		1	1 mL	1 mL	670390	10/09/24 22:44	JZ	EET DEN

Eurofins Denver

# Lab Chronicle

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

Job ID: 280-197532-2

**Client Sample ID: FWGmw-011-240901-GW**

**Lab Sample ID: 280-197532-6**

**Date Collected: 10/02/24 16:05**

**Matrix: Water**

**Date Received: 10/03/24 09:10**

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dil Factor</u>	<u>Initial Amount</u>	<u>Final Amount</u>	<u>Batch Number</u>	<u>Prepared or Analyzed</u>	<u>Analyst</u>	<u>Lab</u>
Total/NA	Prep	3535			466.1 mL	5 mL	670048	10/08/24 13:10	AAA	EET DEN
Total/NA	Analysis	8330B		1	1 mL	1 mL	670528	10/10/24 21:23	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.  
Project/Site: RVAAP FWGW

Job ID: 280-197532-2

## 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	10-31-25

# Method Summary

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

Job ID: 280-197532-2

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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.  
Project/Site: RVAAP FWGW

Job ID: 280-197532-2

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-197532-1	LL1mw-090-240901-GW	Water	10/02/24 08:55	10/03/24 09:10
280-197532-2	LL1mw-080-240901-GW	Water	10/02/24 10:08	10/03/24 09:10
280-197532-3	LL2mw-059-240901-GW	Water	10/02/24 11:21	10/03/24 09:10
280-197532-4	LL1mw-081-240901-GW	Water	10/02/24 12:26	10/03/24 09:10
280-197532-5	FWGmw-010-240901-GW	Water	10/02/24 12:34	10/03/24 09:10
280-197532-6	FWGmw-011-240901-GW	Water	10/02/24 16:05	10/03/24 09:10

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-197532-2

SDG No.: \_\_\_\_\_

Instrument ID: CHHPLC\_X3 Analysis Batch Number: 669870

Lab Sample ID: IC 280-669870/11 Client Sample ID: \_\_\_\_\_

Date Analyzed: 10/04/24 16:59 Lab File ID: 10040011.D GC Column: UltraCarb5uO ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
TNX	6.43	Baseline	LV5D	10/04/24 17:24
HMX	6.57	Baseline	LV5D	10/04/24 17:24
DNX	6.74	Baseline	LV5D	10/04/24 17:24
MNX	7.14	Baseline	LV5D	10/04/24 17:24
Nitroglycerin	10.11	Baseline	LV5D	10/08/24 13:08

Lab Sample ID: IC 280-669870/12 Client Sample ID: \_\_\_\_\_

Date Analyzed: 10/04/24 17:21 Lab File ID: 10040012.D GC Column: UltraCarb5uO ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.57	Baseline	LV5D	10/08/24 12:59
DNX	6.75	Baseline	LV5D	10/08/24 12:59
Nitroglycerin	10.13	Baseline	LV5D	10/08/24 13:08

Lab Sample ID: IC 280-669870/13 Client Sample ID: \_\_\_\_\_

Date Analyzed: 10/04/24 17:43 Lab File ID: 10040013.D GC Column: UltraCarb5uO ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitroglycerin	10.13	Baseline	LV5D	10/08/24 13:09

Lab Sample ID: IC 280-669870/14 Client Sample ID: \_\_\_\_\_

Date Analyzed: 10/04/24 18:05 Lab File ID: 10040014.D GC Column: UltraCarb5uO ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitroglycerin	10.14	Baseline	LV5D	10/08/24 13:09

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-197532-2  
 SDG No.: \_\_\_\_\_  
 Instrument ID: CHHPLC\_X3 Analysis Batch Number: 669870  
 Lab Sample ID: IC 280-669870/15 Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 10/04/24 18:27 Lab File ID: 10040015.D GC Column: UltraCarb5uO ID: 4.6 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
TNX	6.44	Baseline	LV5D	10/08/24 13:01
HMX	6.58	Baseline	LV5D	10/08/24 13:01
DNX	6.75	Baseline	LV5D	10/08/24 13:01
Nitroglycerin	10.12	Baseline	LV5D	10/08/24 13:09

Lab Sample ID: IC 280-669870/16 Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 10/04/24 18:49 Lab File ID: 10040016.D GC Column: UltraCarb5uO ID: 4.6 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
TNX	6.44	Baseline	LV5D	10/08/24 13:02
HMX	6.58	Baseline	LV5D	10/08/24 13:02
DNX	6.75	Baseline	LV5D	10/08/24 13:02
RDX	7.51	Baseline	LV5D	10/08/24 13:02
Picric acid	7.94	Baseline	LV5D	10/08/24 13:02
Tetryl	9.68	Baseline	LV5D	10/08/24 13:03
Nitroglycerin	10.12	Baseline	LV5D	10/08/24 13:03
2-Nitrotoluene	11.85	Baseline	LV5D	10/08/24 13:03
4-Nitrotoluene	12.22	Baseline	LV5D	10/08/24 13:03
3-Nitrotoluene	12.72	Baseline	LV5D	10/08/24 13:03
PETN	13.80	Baseline	LV5D	10/08/24 13:04

## HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins DenverJob No.: 280-197532-2

SDG No.: \_\_\_\_\_

Instrument ID: CHHPLC\_X3Analysis Batch Number: 669870Lab Sample ID: IC 280-669870/17

Client Sample ID: \_\_\_\_\_

Date Analyzed: 10/04/24 19:11Lab File ID: 10040017.DGC Column: UltraCarb5uO ID: 4.6 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
TNX	6.43	Baseline	LV5D	10/08/24 13:05
HMX	6.57	Baseline	LV5D	10/08/24 13:05
DNX	6.75	Baseline	LV5D	10/08/24 13:04
MNX	7.15	Baseline	LV5D	10/08/24 13:04
RDX	7.51	Baseline	LV5D	10/08/24 13:04
Picric acid	7.94	Baseline	LV5D	10/08/24 13:04
1,2-Dinitrobenzene	8.37	Baseline	LV5D	10/08/24 13:04
1,3,5-Trinitrobenzene	8.47	Baseline	LV5D	10/08/24 13:04
Nitroglycerin	10.12	Baseline	LV5D	10/08/24 13:09
PETN	13.79	Baseline	LV5D	10/08/24 13:04

Lab Sample ID: IC 280-669870/18

Client Sample ID: \_\_\_\_\_

Date Analyzed: 10/04/24 19:33Lab File ID: 10040018.DGC Column: UltraCarb5uO ID: 4.6 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
TNX	6.43	Baseline	LV5D	10/08/24 13:05
HMX	6.57	Baseline	LV5D	10/08/24 13:05
DNX	6.75	Baseline	LV5D	10/08/24 13:05
MNX	7.15	Baseline	LV5D	10/08/24 13:05
RDX	7.51	Baseline	LV5D	10/08/24 13:05
Picric acid	7.94	Baseline	LV5D	10/08/24 13:05
Nitroglycerin	10.13	Baseline	LV5D	10/08/24 13:09
PETN	13.79	Baseline	LV5D	10/08/24 13:06

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-197532-2

SDG No.: \_\_\_\_\_

Instrument ID: CHHPLC\_X3 Analysis Batch Number: 669870

Lab Sample ID: IC 280-669870/19 Client Sample ID: \_\_\_\_\_

Date Analyzed: 10/04/24 19:55 Lab File ID: 10040019.D GC Column: UltraCarb5uO ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
TNX	6.44	Baseline	LV5D	10/08/24 13:07
HMX	6.57	Baseline	LV5D	10/08/24 13:07
DNX	6.75	Baseline	LV5D	10/08/24 13:07
Nitroglycerin	10.12	Baseline	LV5D	10/08/24 13:09
2-Nitrotoluene	11.84	Baseline	LV5D	10/08/24 13:06
3-Nitrotoluene	12.72	Baseline	LV5D	10/08/24 13:06
PETN	13.78	Baseline	LV5D	10/08/24 13:06

Lab Sample ID: ICV 280-669870/20 Client Sample ID: \_\_\_\_\_

Date Analyzed: 10/04/24 20:16 Lab File ID: 10040020.D GC Column: UltraCarb5uO ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Tetryl	9.67	Baseline	LV5D	10/08/24 13:11
Nitroglycerin	10.11	Baseline	LV5D	10/08/24 13:11

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-197532-2

SDG No.: \_\_\_\_\_

Instrument ID: CHHPLC\_X3 Analysis Batch Number: 670390

Lab Sample ID: CCV 280-670390/7 Client Sample ID: \_\_\_\_\_

Date Analyzed: 10/09/24 19:27 Lab File ID: 10090007.D GC Column: UltraCarb5uO ID: 4.6 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.58	Baseline	LV5D	10/09/24 19:50

Lab Sample ID: MB 280-670048/1-A Client Sample ID: \_\_\_\_\_

Date Analyzed: 10/09/24 19:49 Lab File ID: 10090011.D GC Column: UltraCarb5uO ID: 4.6 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dinitrobenzene	8.39	Baseline	LV5D	10/10/24 13:10
1,3,5-Trinitrobenzene		Baseline	LV5D	10/10/24 13:10

Lab Sample ID: 280-197532-1 Client Sample ID: LL1mw-090-240901-GW

Date Analyzed: 10/09/24 20:55 Lab File ID: 10090014.D GC Column: UltraCarb5uO ID: 4.6 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dinitrobenzene	8.38	Baseline	LV5D	10/10/24 11:03
1,3-Dinitrobenzene		Invalid Compound ID	LV5D	10/10/24 11:03
HMX		Invalid Compound ID	LV5D	10/10/24 11:03

Lab Sample ID: 280-197532-2 Client Sample ID: LL1mw-080-240901-GW

Date Analyzed: 10/09/24 21:17 Lab File ID: 10090015.D GC Column: UltraCarb5uO ID: 4.6 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.58	Baseline	LV5D	10/10/24 11:25
RDX	7.53	Baseline	LV5D	10/10/24 11:25
1,2-Dinitrobenzene	8.39	Baseline	LV5D	10/10/24 11:25
1,3-Dinitrobenzene	9.00	Baseline	LV5D	10/10/24 11:25
1,3,5-Trinitrobenzene		Invalid Compound ID	LV5D	10/10/24 11:25
Tetryl		Invalid Compound ID	LV5D	10/10/24 11:25

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-197532-2

SDG No.: \_\_\_\_\_

Instrument ID: CHHPLC\_X3 Analysis Batch Number: 670390

Lab Sample ID: 280-197532-3 Client Sample ID: LL2mw-059-240901-GW

Date Analyzed: 10/09/24 21:38 Lab File ID: 10090016.D GC Column: UltraCarb5uO ID: 4.6 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.58	Baseline	LV5D	10/10/24 11:32
1,3,5-Trinitrobenzene	8.49	Baseline	LV5D	10/10/24 11:32
2-Nitrotoluene		Invalid Compound ID	LV5D	10/10/24 11:32
Tetryl		Invalid Compound ID	LV5D	10/10/24 11:32

Lab Sample ID: 280-197532-4 Client Sample ID: LL1mw-081-240901-GW

Date Analyzed: 10/09/24 22:00 Lab File ID: 10090017.D GC Column: UltraCarb5uO ID: 4.6 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dinitrobenzene	8.38	Baseline	LV5D	10/10/24 11:32
1,3-Dinitrobenzene		Invalid Compound ID	LV5D	10/10/24 11:32
HMX		Invalid Compound ID	LV5D	10/10/24 11:32

Lab Sample ID: 280-197532-5 Client Sample ID: FWGmw-010-240901-GW

Date Analyzed: 10/09/24 22:22 Lab File ID: 10090018.D GC Column: UltraCarb5uO ID: 4.6 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dinitrobenzene	8.38	Baseline	LV5D	10/10/24 11:32
HMX		Invalid Compound ID	LV5D	10/10/24 11:32
RDX		Invalid Compound ID	LV5D	10/10/24 11:32

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-197532-2  
 SDG No.: \_\_\_\_\_  
 Instrument ID: CHHPLC\_X3 Analysis Batch Number: 670390  
 Lab Sample ID: 280-197532-6 Client Sample ID: FWGmw-011-240901-GW  
 Date Analyzed: 10/09/24 22:44 Lab File ID: 10090019.D GC Column: UltraCarb5uO ID: 4.6 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
RDX	7.53	Baseline	LV5D	10/10/24 12:10
1,2-Dinitrobenzene	8.38	Baseline	LV5D	10/10/24 12:10
1,3,5-Trinitrobenzene		Invalid Compound ID	LV5D	10/10/24 12:10
1,3-Dinitrobenzene		Invalid Compound ID	LV5D	10/10/24 12:10
HMX		Invalid Compound ID	LV5D	10/10/24 12:09

Lab Sample ID: CCV 280-670390/21 Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 10/09/24 23:28 Lab File ID: 10090021.D GC Column: UltraCarb5uO ID: 4.6 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.58	Baseline	LV5D	10/10/24 12:10

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-197532-2

SDG No.: \_\_\_\_\_

Instrument ID: CHHPLC\_X5 Analysis Batch Number: 663590

Lab Sample ID: IC 280-663590/10 Client Sample ID: \_\_\_\_\_

Date Analyzed: 08/10/24 20:22 Lab File ID: 08100010.D GC Column: Luna-phenylh ID: 4.6 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Picric acid	7.63	Peak assignment corrected	LV5D	08/13/24 13:45
Tetryl	21.11	Baseline Smoothing	LV5D	08/13/24 15:16
2,4,6-Trinitrotoluene	21.99	Baseline Smoothing	LV5D	08/13/24 15:11

Lab Sample ID: IC 280-663590/11 Client Sample ID: \_\_\_\_\_

Date Analyzed: 08/10/24 20:57 Lab File ID: 08100011.D GC Column: Luna-phenylh ID: 4.6 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Picric acid	7.76	Baseline Smoothing	LV5D	08/13/24 15:11
Tetryl	21.14	Baseline Smoothing	LV5D	08/13/24 15:16
2,4,6-Trinitrotoluene	22.01	Baseline Smoothing	LV5D	08/13/24 15:11

Lab Sample ID: IC 280-663590/12 Client Sample ID: \_\_\_\_\_

Date Analyzed: 08/10/24 21:31 Lab File ID: 08100012.D GC Column: Luna-phenylh ID: 4.6 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Picric acid	7.79	Baseline Smoothing	LV5D	08/13/24 15:11
Tetryl	21.13	Baseline Smoothing	LV5D	08/13/24 15:11
2,4,6-Trinitrotoluene	22.01	Baseline Smoothing	LV5D	08/13/24 15:11

Lab Sample ID: IC 280-663590/13 Client Sample ID: \_\_\_\_\_

Date Analyzed: 08/10/24 22:06 Lab File ID: 08100013.D GC Column: Luna-phenylh ID: 4.6 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Picric acid	7.83	Baseline Smoothing	LV5D	08/13/24 15:11
Tetryl	21.17	Baseline Smoothing	LV5D	08/13/24 15:12
2,4,6-Trinitrotoluene	22.05	Baseline Smoothing	LV5D	08/13/24 15:12

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-197532-2

SDG No.: \_\_\_\_\_

Instrument ID: CHHPLC\_X5 Analysis Batch Number: 663590

Lab Sample ID: IC 280-663590/14 Client Sample ID: \_\_\_\_\_

Date Analyzed: 08/10/24 22:41 Lab File ID: 08100014.D GC Column: Luna-phenylh ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Picric acid	7.81	Baseline Smoothing	LV5D	08/13/24 15:12
Tetryl	21.10	Baseline Smoothing	LV5D	08/13/24 15:12
2,4,6-Trinitrotoluene	21.98	Baseline Smoothing	LV5D	08/13/24 15:12

Lab Sample ID: IC 280-663590/15 Client Sample ID: \_\_\_\_\_

Date Analyzed: 08/10/24 23:16 Lab File ID: 08100015.D GC Column: Luna-phenylh ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Picric acid	7.86	Baseline Smoothing	LV5D	08/13/24 15:12
Tetryl	21.15	Baseline Smoothing	LV5D	08/13/24 15:12
2,4,6-Trinitrotoluene	22.03	Baseline Smoothing	LV5D	08/13/24 15:12

Lab Sample ID: IC 280-663590/16 Client Sample ID: \_\_\_\_\_

Date Analyzed: 08/10/24 23:51 Lab File ID: 08100016.D GC Column: Luna-phenylh ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Picric acid	7.87	Baseline Smoothing	LV5D	08/13/24 15:12
Tetryl	21.16	Baseline Smoothing	LV5D	08/13/24 15:12
2,4,6-Trinitrotoluene	22.03	Baseline Smoothing	LV5D	08/13/24 15:12

## HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins DenverJob No.: 280-197532-2

SDG No.: \_\_\_\_\_

Instrument ID: CHHPLC\_X5Analysis Batch Number: 663590Lab Sample ID: IC 280-663590/17

Client Sample ID: \_\_\_\_\_

Date Analyzed: 08/11/24 00:26Lab File ID: 08100017.DGC Column: Luna-phenylh ID: 4.6 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Picric acid	7.87	Baseline Smoothing	LV5D	08/13/24 15:12
Nitrobenzene	11.02	Baseline Smoothing	LV5D	08/13/24 15:13
1,2-Dinitrobenzene	11.84	Baseline Smoothing	LV5D	08/13/24 15:13
3,5-Dinitroaniline	13.52	Baseline Smoothing	LV5D	08/13/24 15:13
1,3-Dinitrobenzene	13.86	Baseline Smoothing	LV5D	08/13/24 15:13
Nitroglycerin	14.53	Baseline Smoothing	LV5D	08/13/24 15:13
2-Nitrotoluene	15.04	Baseline Smoothing	LV5D	08/13/24 15:13
4-Nitrotoluene	15.28	Baseline Smoothing	LV5D	08/13/24 15:13
4-Amino-2,6-dinitrotoluene	15.62	Baseline Smoothing	LV5D	08/13/24 15:13
3-Nitrotoluene	16.10	Baseline Smoothing	LV5D	08/13/24 15:13
2-Amino-4,6-dinitrotoluene	16.36	Baseline Smoothing	LV5D	08/13/24 15:13
1,3,5-Trinitrobenzene	16.58	Baseline Smoothing	LV5D	08/13/24 15:13
Tetryl	21.15	Baseline Smoothing	LV5D	08/13/24 15:14
2,4,6-Trinitrotoluene	22.02	Baseline Smoothing	LV5D	08/13/24 15:14

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-197532-2  
 SDG No.: \_\_\_\_\_  
 Instrument ID: CHHPLC\_X5 Analysis Batch Number: 663590  
 Lab Sample ID: IC 280-663590/18 Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 08/11/24 01:01 Lab File ID: 08100018.D GC Column: Luna-phenylh ID: 4.6 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.32	Baseline Smoothing	LV5D	08/13/24 15:15
Picric acid	7.86	Baseline Smoothing	LV5D	08/13/24 15:14
Nitrobenzene	11.00	Baseline Smoothing	LV5D	08/13/24 15:15
1,2-Dinitrobenzene	11.83	Baseline Smoothing	LV5D	08/13/24 15:15
3,5-Dinitroaniline	13.51	Baseline Smoothing	LV5D	08/13/24 15:15
1,3-Dinitrobenzene	13.85	Baseline Smoothing	LV5D	08/13/24 15:15
2-Nitrotoluene	15.03	Baseline Smoothing	LV5D	08/13/24 15:15
4-Nitrotoluene	15.28	Baseline Smoothing	LV5D	08/13/24 15:15
4-Amino-2,6-dinitrotoluene	15.61	Baseline Smoothing	LV5D	08/13/24 15:15
3-Nitrotoluene	16.09	Baseline Smoothing	LV5D	08/13/24 15:15
2-Amino-4,6-dinitrotoluene	16.36	Baseline Smoothing	LV5D	08/13/24 15:15
1,3,5-Trinitrobenzene	16.58	Baseline Smoothing	LV5D	08/13/24 15:15
2,6-Dinitrotoluene	17.69	Baseline Smoothing	LV5D	08/13/24 15:15
2,4-Dinitrotoluene	18.13	Baseline Smoothing	LV5D	08/13/24 15:15
Tetryl	21.15	Baseline Smoothing	LV5D	08/13/24 15:14
2,4,6-Trinitrotoluene	22.02	Baseline Smoothing	LV5D	08/13/24 15:14

Lab Sample ID: ICV 280-663590/19 Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 08/11/24 01:36 Lab File ID: 08100019.D GC Column: Luna-phenylh ID: 4.6 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Tetryl	21.14	Baseline Smoothing	LV5D	08/13/24 15:17
2,4,6-Trinitrotoluene	22.01	Baseline Smoothing	LV5D	08/13/24 15:17

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-197532-2

SDG No.: \_\_\_\_\_

Instrument ID: CHHPLC\_X5 Analysis Batch Number: 670528

Lab Sample ID: 280-197532-2 Client Sample ID: LL1mw-080-240901-GW

Date Analyzed: 10/10/24 20:13 Lab File ID: 10100014.D GC Column: Luna-phenylh ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.28	Baseline Smoothing	LV5D	10/11/24 15:48
4-Amino-2,6-dinitrotoluene		Invalid Compound ID	LV5D	10/11/24 15:48
4-Nitrotoluene		Invalid Compound ID	LV5D	10/11/24 15:48
2-Amino-4,6-dinitrotoluene	16.25	Baseline Smoothing	LV5D	10/11/24 15:48
1,3,5-Trinitrobenzene	16.50	Baseline Smoothing	LV5D	10/11/24 15:48

Lab Sample ID: 280-197532-3 Client Sample ID: LL2mw-059-240901-GW

Date Analyzed: 10/10/24 20:48 Lab File ID: 10100015.D GC Column: Luna-phenylh ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.27	Baseline Smoothing	LV5D	10/11/24 15:51
2,4-Dinitrotoluene	18.04	Baseline Smoothing	LV5D	10/11/24 15:51

Lab Sample ID: 280-197532-6 Client Sample ID: FWGmw-011-240901-GW

Date Analyzed: 10/10/24 21:23 Lab File ID: 10100018.D GC Column: Luna-phenylh ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Amino-2,6-dinitrotoluene		Invalid Compound ID	LV5D	10/11/24 15:51
1,3,5-Trinitrobenzene	16.50	Baseline Smoothing	LV5D	10/11/24 15:51

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver

Job No.: 280-197532-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
8330 DMT_00018	03/28/25	09/28/24	Acetonitrile, Lot ACN_00243	5 mL	MNX, TNX, DNX_00118	1 mL	DNX	20.02 ug/mL
							MNX	23.34 ug/mL
							TNX	20.06 ug/mL
.MNX, TNX, DNX_00118	07/31/25		Agilent, Lot 0006801476		(Purchased Reagent)		DNX	100.1 ug/mL
							MNX	116.7 ug/mL
							TNX	100.3 ug/mL
8330 LCS_00136	01/04/25	07/04/24	Acetonitrile, Lot Acetonitrile_00092	100 mL	8330 LCSMix2_00117	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
					8330 NG Stk_00149	1 mL	Nitroglycerin	100 ug/mL
					8330 NG Stk_00151	1 mL	Nitroglycerin	100 ug/mL
					8330 PETN Stk_00157	1 mL	PETN	100 ug/mL
					8330 PETN Stk_00158	1 mL	PETN	100 ug/mL
					8330LCSMix1_00153	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					
.8330 LCSMix2_00117	07/04/25		Restek, Lot A199657		(Purchased Reagent)		2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							Tetryl	1000 ug/mL
.8330 NG Stk_00149	07/04/25		Restek, Lot A0203257		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330 NG Stk_00151	07/04/25		Restek, Lot A0203257		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330 PETN Stk_00157	07/04/25		Restek, Lot A0205209		(Purchased Reagent)		PETN	5000 ug/mL
.8330 PETN Stk_00158	07/04/25		Restek, Lot A0205209		(Purchased Reagent)		PETN	5000 ug/mL
.8330LCSMix1_00153	07/04/25		Restek, Lot A196548		(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
8330 LCS_00137	02/14/25	08/14/24	Acetonitrile, Lot Acetonitrile_00092	100 mL	3,5-DNA Stock_00058	1 mL	3,5-Dinitroaniline	10 ug/mL
					8330 LCSMix2_00118	1 mL	2,6-Dinitrotoluene	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver

Job No.: 280-197532-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Amino-4,6-dinitrotoluene	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_00152	1 mL	Nitroglycerin	100 ug/mL
					8330_NG_Stk_00153	1 mL	Nitroglycerin	100 ug/mL
					8330_PETN_Stk_00159	1 mL	PETN	100 ug/mL
					8330_PETN_Stk_00160	1 mL	PETN	100 ug/mL
					8330LCSMix1_00154	1 mL	1,3,5-Trinitrobenzene	10 ug/mL
							1,3-Dinitrobenzene	10 ug/mL
							2,4,6-Trinitrotoluene	10 ug/mL
							2,4-Dinitrotoluene	10 ug/mL
							HMX	10 ug/mL
							Nitrobenzene	10 ug/mL
							RDX	10 ug/mL
					PicricARestek_00125	1 mL	2,4,6-Trinitrophenol	10 ug/mL
							Ammonium Picrate	10.74 ug/mL
.3,5-DNA Stock 00058	08/14/25		Restek, Lot A0202640		(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
.8330 LCSMix2_00118	08/14/25		Restek, Lot A199657		(Purchased Reagent)		2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							Tetryl	1000 ug/mL
.8330 NG Stk 00152	08/14/25		Restek, Lot A0211998		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330 NG Stk 00153	08/14/25		Restek, Lot A0211998		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330 PETN Stk 00159	08/14/25		Restek, Lot A0205209		(Purchased Reagent)		PETN	5000 ug/mL
.8330 PETN Stk 00160	08/14/25		Restek, Lot A0205209		(Purchased Reagent)		PETN	5000 ug/mL
.8330LCSMix1_00154	08/14/25		Restek, Lot A196548		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
.PicricARestek_00125	08/14/25		Restek, Lot A0195778		(Purchased Reagent)		2,4,6-Trinitrophenol	1000 ug/mL
							Ammonium Picrate	1074 ug/mL
<b>8330IntermStk_00082</b>	01/06/25	08/02/24	Acetonitrile, Lot ACN_242	10 mL	8330_NG1000_00015	1 mL	Nitroglycerin	100 ug/mL
					8330_PETN1000_00018	1 mL	PETN	100 ug/mL
					833035DNASTk_00062	1 mL	3,5-Dinitroaniline	10 ug/mL
					8330ICALStock_00035	1 mL	1,3,5-Trinitrobenzene	10 ug/mL
							1,3-Dinitrobenzene	10 ug/mL
							2,4,6-Trinitrotoluene	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver

Job No.: 280-197532-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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 00077	1 mL	2,4,6-Trinitrophenol	10 ug/mL
.8330 NG1000 00015	08/02/25		Restek, Lot A0208632		(Purchased Reagent)		Nitroglycerin	1000 ug/mL
.8330 PETN1000 00018	08/02/25		Restek, Lot A0207895		(Purchased Reagent)		PETN	1000 ug/mL
.833035DNASTk 00062	01/06/25		Accustandard, Lot 223041214-01		(Purchased Reagent)		3,5-Dinitroaniline	100 ug/mL
.8330ICALStock_00035	01/23/25	01/23/24	Acetonitrile, Lot 233799	10 mL	8330 Stock_TS_00024	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 00173	1 mL	1,2-Dinitrobenzene	100 ug/mL
..8330 Stock_TS_00024	01/23/25		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
							Tetryl	1000 ug/mL
..8330SurrStock 00173	01/23/25		AccuStandard, Lot 219051500		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330PASTkPS 00077	08/02/25		AccuStandard, Lot 223031306-01		(Purchased Reagent)		2,4,6-Trinitrophenol	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver

Job No.: 280-197532-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration	
					Reagent ID	Volume Added			
8330IntermStk_00083	04/04/25	10/04/24	Acetonitrile, Lot ACN_244	10 mL	8330_NG1000_00017	1 mL	Nitroglycerin	100 ug/mL	
					8330_PETN1000_00020	1 mL	PETN	100 ug/mL	
					833035DNASTk_00064	1 mL	3,5-Dinitroaniline	10 ug/mL	
					8330ICALStock_00036	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								
8330PASTkPS_00078	1 mL	2,4,6-Trinitrophenol	10 ug/mL						
.8330_NG1000_00017	10/04/25	Restek, Lot A0213231		(Purchased Reagent)	Nitroglycerin	1000 ug/mL			
.8330_PETN1000_00020	10/04/25	Restek, Lot A0211856		(Purchased Reagent)	PETN	1000 ug/mL			
.833035DNASTk_00064	10/04/25	Accustandard, Lot 223011692-04		(Purchased Reagent)	3,5-Dinitroaniline	100 ug/mL			
.8330ICALStock_00036	06/05/25	10/04/24	Acetonitrile, Lot ACN_244	10 mL	8330_Stock_TS_00025	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_00174	1 mL	1,2-Dinitrobenzene
..8330_Stock_TS_00025	06/05/25		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	

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver

Job No.: 280-197532-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
.8330SurrStock_00174	10/04/25		AccuStandard, Lot 219051500			(Purchased Reagent)	1,2-Dinitrobenzene	1000 ug/mL
.8330PASTkPS_00078	10/04/25		AccuStandard, Lot 223031306-01			(Purchased Reagent)	2,4,6-Trinitrophenol	100 ug/mL
<b>8330Surrogate_00158</b>	02/09/25	08/09/24	Acetonitrile, Lot Acetonitrile_00092	500 mL	8330SurrStkSS_00324	0.7 mL	1,2-Dinitrobenzene	10 ug/mL
					8330SurrStkSS_00325	1.1 mL	1,2-Dinitrobenzene	10 ug/mL
					8330SurrStkSS_00326	1.2 mL	1,2-Dinitrobenzene	10 ug/mL
					8330SurrStkSS_00327	1.2 mL	1,2-Dinitrobenzene	10 ug/mL
					8330SurrStkSS_00328	0.8 mL	1,2-Dinitrobenzene	10 ug/mL
.8330SurrStkSS_00324	07/15/25		Restek, Lot A0205460			(Purchased Reagent)	1,2-Dinitrobenzene	1000 ug/mL
.8330SurrStkSS_00325	08/09/25		Restek, Lot A0205460			(Purchased Reagent)	1,2-Dinitrobenzene	1000 ug/mL
.8330SurrStkSS_00326	08/09/25		Restek, Lot A0205460			(Purchased Reagent)	1,2-Dinitrobenzene	1000 ug/mL
.8330SurrStkSS_00327	08/09/25		Restek, Lot A0205460			(Purchased Reagent)	1,2-Dinitrobenzene	1000 ug/mL
.8330SurrStkSS_00328	08/09/25		Restek, Lot A0205460			(Purchased Reagent)	1,2-Dinitrobenzene	1000 ug/mL
<b>8330Surrogate_00159</b>	03/19/25	09/19/24	Acetonitrile, Lot Acetonitrile_00092	500 mL	8330SurrStkSS_00329	1 mL	1,2-Dinitrobenzene	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00336	1 mL	1,2-Dinitrobenzene	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00337	1 mL	1,2-Dinitrobenzene	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00339	1 mL	1,2-Dinitrobenzene	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00340	1 mL	1,2-Dinitrobenzene	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
.8330SurrStkSS_00329	09/19/25		Restek, Lot A0205460			(Purchased Reagent)	1,2-Dinitrobenzene	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00336	09/19/25		Restek, Lot A0211455			(Purchased Reagent)	1,2-Dinitrobenzene	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00337	09/19/25		Restek, Lot A0211455			(Purchased Reagent)	1,2-Dinitrobenzene	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00339	09/19/25		Restek, Lot A0211455			(Purchased Reagent)	1,2-Dinitrobenzene	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00340	09/19/25		Restek, Lot A0211455			(Purchased Reagent)	1,2-Dinitrobenzene	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL

Reagent

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**3,5-DNA Stock\_00058**



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*



10/18/2024  
 4:32:00 AM



**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.:** A0202640  
**Description :** 3,5-Dinitroaniline Standard  
3, 5-Dinitroaniline Std 1000µg/mL, Acetonitrile, 1mL/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** April 30, 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	3,5-Dinitroaniline	618-87-1	10311HS	99%	1,008.0 µg/mL	+/- 37.5994

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

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

Page 09 of 520

# Quality Confirmation Test

10/18/2024  
4:32:00 AM

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

**Flow Rate:**  
1.0 ml/min.

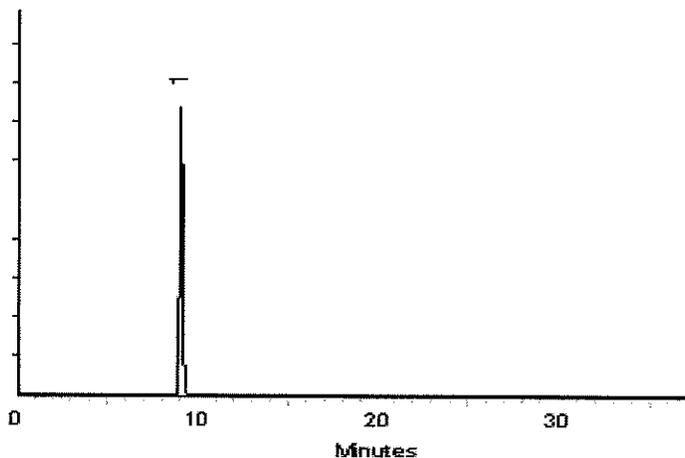
**Mobile Phase A:**  
water:methanol (44:56 V/V)

**Mobile Phase B:**

**Mobile Phase Composition:**  
100%A

**Det. Type:**  
Wavelength: 210nm & 254nm

**Inj. Vol**  
2.0µl



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.

*[Signature]*  
Dakota Parson - Operations Technician I

Date Mixed: 29-Sep-2023

Balance Serial # 1128342314

*[Signature]*  
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 09-Oct-2023

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

Page 40 of 520

## 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/ $\mu$ ECD, 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:

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

$k$  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

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**8330 LCS\_00136**

### Preliminary Report

Eurofins Denver  
LCS, Lab Control Sample Report

Sample Path: \\chromfs\Denver\ChromData\CHHPLC\_X\20240709-135286.b\07090012.D  
 Lims ID: 8330LCS136 Inj. Date: 09-Jul-2024 17:15:14  
 Worklist ID: 280-0135286-012 Instrument: CHHPLC\_X3  
 Method: 8330\_X3

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 3535	Limits 2 3535
4 HMX	0.5000	0.4360	87.2	65-135	66-115
8 RDX	0.5000	0.4659	93.2	68-130	69-122
9 2,4,6-Trinitrophenol	0.5000	0.5251	105.0	80-120	63-135
11 1,3,5-Trinitrobenzene	0.5000	0.5198	104.0	73-125	62-127
12 1,3-Dinitrobenzene	0.5000	0.5209	104.2	78-120	59-131
13 Nitrobenzene	0.5000	0.5223	104.5	65-134	46-144
14 3,5-Dinitroaniline	0.5000	0.5227	104.5	71-117	55-119
15 Tetryl	0.5000	0.5226	104.5	64-128	56-131
16 Nitroglycerin	5.00	5.08	101.7	74-127	70-125
17 2,4,6-Trinitrotoluene	0.5000	0.5032	100.6	71-123	46-139
18 4-Amino-2,6-dinitrotolu	0.5000	0.4896	97.9	76-125	43-120
19 2-Amino-4,6-dinitrotolu	0.5000	0.5095	101.9	79-120	46-124
20 2,6-Dinitrotoluene	0.5000	0.4875	97.5	77-127	51-130
21 2,4-Dinitrotoluene	0.5000	0.4975	99.5	78-120	53-127
22 o-Nitrotoluene	0.5000	0.5031	100.6	70-127	37-138
23 p-Nitrotoluene	0.5000	0.5028	100.6	71-127	41-137
24 m-Nitrotoluene	0.5000	0.5003	100.1	73-125	31-140
25 PETN	5.00	5.33	106.7	73-127	67-127

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

280-193262-A-1-A	280-193262-B-2-A	280-193262-B-3-A
280-193262-A-4-A	280-193262-B-5-A	280-193262-A-6-A
280-193578-G-1-A	280-193578-F-2-A	280-193578-F-3-A

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

280-193627-B-1-A

Reagent

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**8330 LCS\_00137**

## Preliminary Report

Eurofins Denver

LCS, Lab Control Sample Report

Sample Path: \\chromfs\Denver\ChromData\CHHPLC\_X\20240814-136489.b\08140011.D  
 Lims ID: 8330LCS137 Inj. Date: 14-Aug-2024 18:04:14  
 Worklist ID: 280-0136489-011 Instrument: CHHPLC\_X3  
 Method: 8330\_X3

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 3535
4 HMX	0.5000	0.4297	85.9	65-135
8 RDX	0.5000	0.4576	91.5	68-130
9 2,4,6-Trinitrophenol	0.5000	0.5132	102.6	80-120
11 1,3,5-Trinitrobenzene	0.5000	0.5094	101.9	73-125
12 1,3-Dinitrobenzene	0.5000	0.5076	101.5	78-120
13 Nitrobenzene	0.5000	0.5129	102.6	65-134
14 3,5-Dinitroaniline	0.5000	0.4881	97.6	71-117
15 Tetryl	0.5000	0.5447	108.9	64-128
16 Nitroglycerin	5.00	4.99	99.8	74-127
17 2,4,6-Trinitrotoluene	0.5000	0.4855	97.1	71-123
18 4-Amino-2,6-dinitrotolu	0.5000	0.4859	97.2	76-125
19 2-Amino-4,6-dinitrotolu	0.5000	0.4949	99.0	79-120
20 2,6-Dinitrotoluene	0.5000	0.4816	96.3	77-127
21 2,4-Dinitrotoluene	0.5000	0.4875	97.5	78-120
22 o-Nitrotoluene	0.5000	0.4945	98.9	70-127
23 p-Nitrotoluene	0.5000	0.4946	98.9	71-127
24 m-Nitrotoluene	0.5000	0.4967	99.3	73-125
25 PETN	5.00	5.25	105.1	73-127

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

280-195171-B-1-A

280-195171-B-2-A

280-195171-B-3-A

280-195171-B-4-A

280-195171-C-5-A

280-195171-C-6-A

280-195171-B-7-A

280-195171-C-8-A

# Reagent

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**8330 LCsMix2\_00117**



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*



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.:** A0199657  
**Description :** 8330 Calibration Mix #2  
8330 Calibration Std #2 1000µg/mL, Acetonitrile, 1mL/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** July 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	Tetryl	479-45-8	211028JLM	99%	1,010.0 µg/mL	+/- 47.1183
2	4-Amino-2,6-dinitrotoluene	19406-51-0	ER070908-01	99%	1,008.0 µg/mL	+/- 47.0250
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%	1,010.0 µg/mL	+/- 47.1183
5	2-Nitrotoluene	88-72-2	BCBZ7826	99%	1,000.0 µg/mL	+/- 46.6518
6	4-Nitrotoluene	99-99-0	BCCB0171	99%	1,006.0 µg/mL	+/- 46.9317
7	3-Nitrotoluene	99-08-1	07329LG	99%	1,006.0 µg/mL	+/- 46.9317

\* 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.

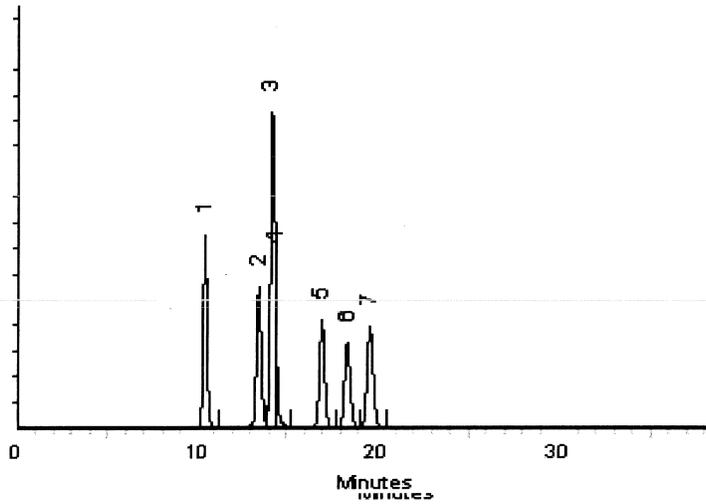
**Mobile Phase A:**  
water:methanol (44:56 V/V)

**Mobile Phase B:**

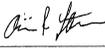
**Mobile Phase Composition:**  
100%A

**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.

  
Alicia Leathers - Operation Technician I

Date Mixed: 07-Jul-2023

Balance Serial # B251644995

  
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 20-Jul-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:

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

$k$  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

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**8330 LCsMix2\_00118**



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*



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.:** A0199657  
**Description :** 8330 Calibration Mix #2  
8330 Calibration Std #2 1000µg/mL, Acetonitrile, 1mL/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** July 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	Tetryl	479-45-8	211028JLM	99%	1,010.0 µg/mL	+/- 47.1183
2	4-Amino-2,6-dinitrotoluene	19406-51-0	ER070908-01	99%	1,008.0 µg/mL	+/- 47.0250
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%	1,010.0 µg/mL	+/- 47.1183
5	2-Nitrotoluene	88-72-2	BCBZ7826	99%	1,000.0 µg/mL	+/- 46.6518
6	4-Nitrotoluene	99-99-0	BCCB0171	99%	1,006.0 µg/mL	+/- 46.9317
7	3-Nitrotoluene	99-08-1	07329LG	99%	1,006.0 µg/mL	+/- 46.9317

\* 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.

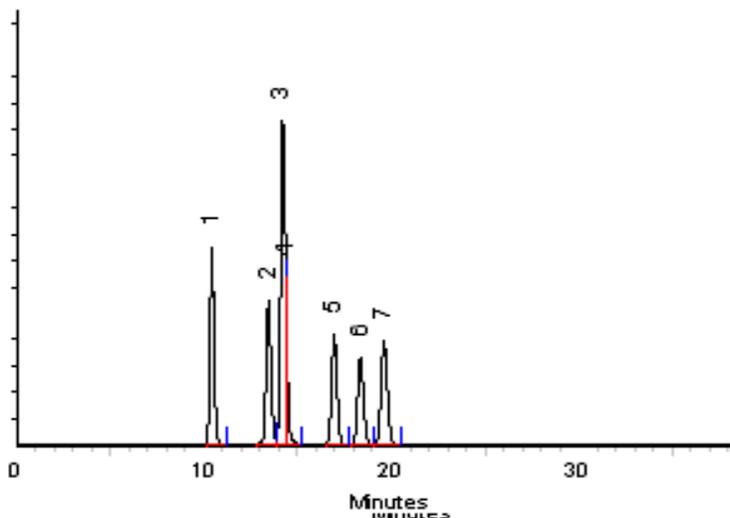
**Mobile Phase A:**  
water:methanol (44:56 V/V)

**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.

Alicia Leathers - Operation Technician I

**Date Mixed:** 07-Jul-2023

**Balance Serial #** B251644995

Jennifer Pollino - Operations Tech III - ARM QC

**Date Passed:** 20-Jul-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:

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

*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

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**8330 Stock\_TS\_00024**



ISO 17034

**Reference Material Certificate**  
**Product Information Sheet**

**Product Name:** Stock Standard

**Lot Number:** 0006684308

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

**Lot Issue Date:** 01-Jun-2022

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

**Expiration Date:** 30-Jun-2025

Component Name	CERTIFIED VALUES			CAS#	Analyte Lot
	Concentration	Expanded Uncertainty			
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

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**8330 Stock\_TS\_00025**



ISO 17034

**Reference Material Certificate**  
**Product Information Sheet**

**Product Name:** Stock Standard

**Lot Number:** 0006684308

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

**Lot Issue Date:** 01-Jun-2022

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

**Expiration Date:** 30-Jun-2025

Component Name	CERTIFIED VALUES			CAS#	Analyte Lot
	Concentration	Expanded Uncertainty			
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

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**8330\_NG\_Stk\_00149**



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*



10/18/2024  
 4:32:00 AM

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.: A0203257  
 Description : Custom Nitroglycerin Standard  
Custom Nitroglycerin Standard 5,000µg/mL, Acetonitrile, 1mL/ampul  
 Container Size : 2 mL Pkg Amt: > 1 mL  
 Expiration Date : October 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%	5,004.0 µg/mL	+/- 236.1755

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

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

Page 60 of 520

### Quality Confirmation Test

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

**Flow Rate:**  
1.0 ml/min.

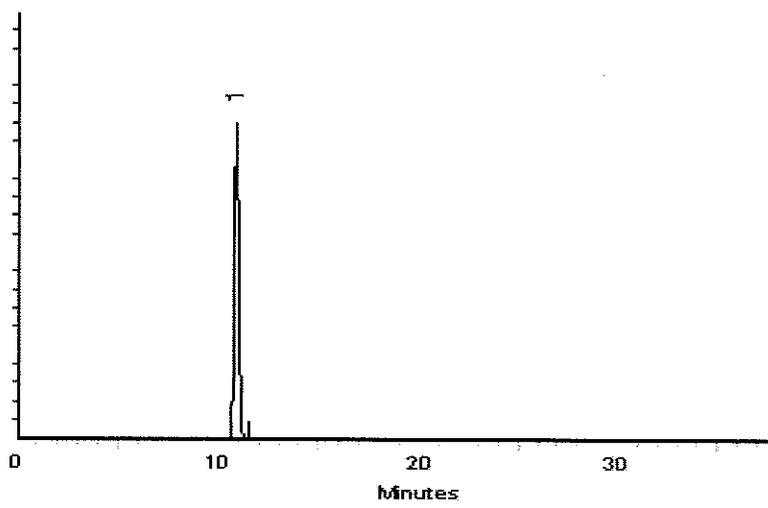
**Mobile Phase A:**  
water:methanol (44:56 V/V)

**Mobile Phase B:**

**Mobile Phase Composition:**  
100%A

**Det. Type:**  
Wavelength: 210nm & 254nm

**Inj. Vol**  
2.0µl



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.

*Sam Moodler*  
Sam Moodler - Operations Tech I

Date Mixed: 17-Oct-2023      Balance Serial #      B442140311

*Jennifer Pollino*  
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 19-Oct-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/ $\mu$ ECD, 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:

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

$k$  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

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**8330\_NG\_Stk\_00151**



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*



10/18/2024  
 4:32:00 AM

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.: A0203257  
 Description : Custom Nitroglycerin Standard  
Custom Nitroglycerin Standard 5,000µg/mL, Acetonitrile, 1mL/ampul  
 Container Size : 2 mL Pkg Amt: > 1 mL  
 Expiration Date : October 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%	5,004.0 µg/mL	+/- 236.1755

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

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

Page 64 of 520

### Quality Confirmation Test

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

**Flow Rate:**  
1.0 ml/min.

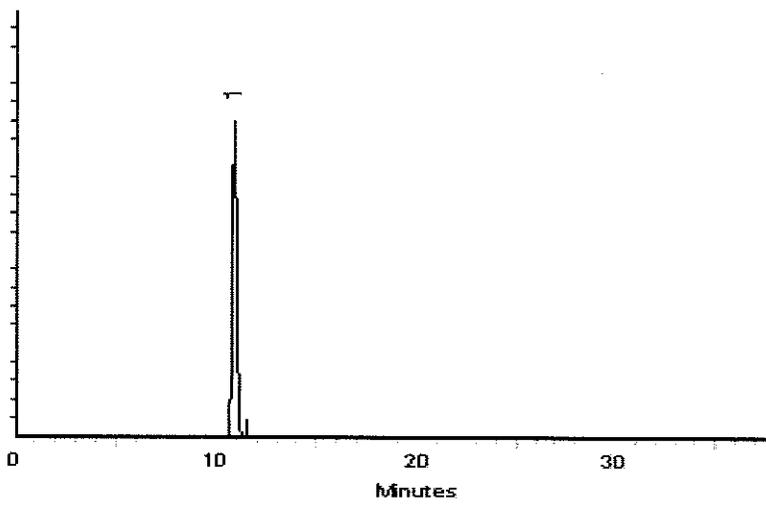
**Mobile Phase A:**  
water:methanol (44:56 V/V)

**Mobile Phase B:**

**Mobile Phase Composition:**  
100%A

**Det. Type:**  
Wavelength: 210nm & 254nm

**Inj. Vol**  
2.0µl



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.

*Sam Moodler*  
Sam Moodler - Operations Tech I

Date Mixed: 17-Oct-2023      Balance Serial #      B442140311

*Jennifer Pollino*  
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 19-Oct-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/ $\mu$ ECD, 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:

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

$k$  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

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**8330\_NG\_Stk\_00152**



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



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.:** A0211998  
**Description :** Custom Nitroglycerin Standard  
Custom Nitroglycerin Standard 5,000µg/mL, Acetonitrile, 1mL/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** May 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	Nitroglycerin	55-63-0	200507JLM	99%	5,000.0 µg/mL	+/- 235.9867

\* 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.

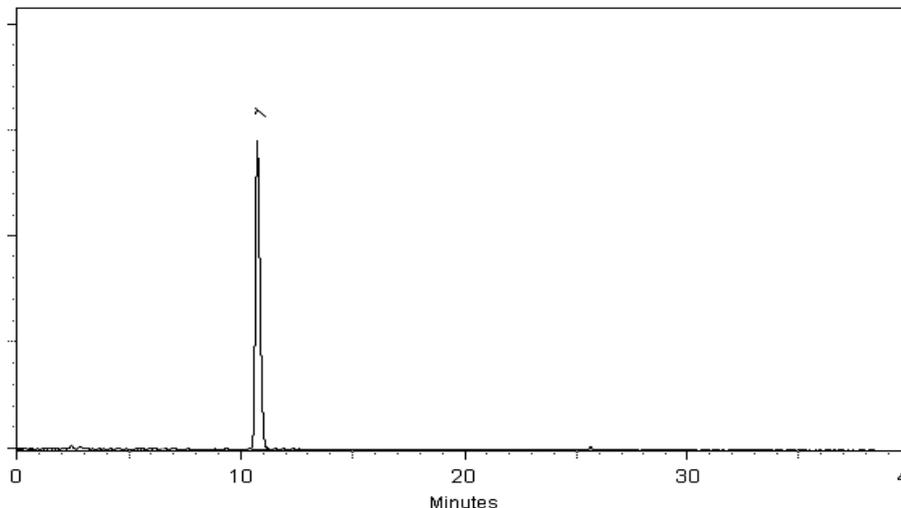
**Mobile Phase A:**  
water:methanol (44:56 V/V)

**Mobile Phase B:**

**Mobile Phase Composition:**  
100%A

**Det. Type:**  
Wavelength: 210nm & 254nm

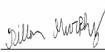
**Inj. Vol**  
2.0µl



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: 24-May-2024      Balance Serial # 1127510105

  
Dillan Murphy - Operations Technician I

Date Passed: 03-Jun-2024

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:

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

*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

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**8330\_NG\_Stk\_00153**



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

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis  
*chromatographic*



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.:** A0211998  
**Description :** Custom Nitroglycerin Standard  
Custom Nitroglycerin Standard 5,000µg/mL, Acetonitrile, 1mL/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** May 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	Nitroglycerin	55-63-0	200507JLM	99%	5,000.0 µg/mL	+/- 235.9867

\* 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.

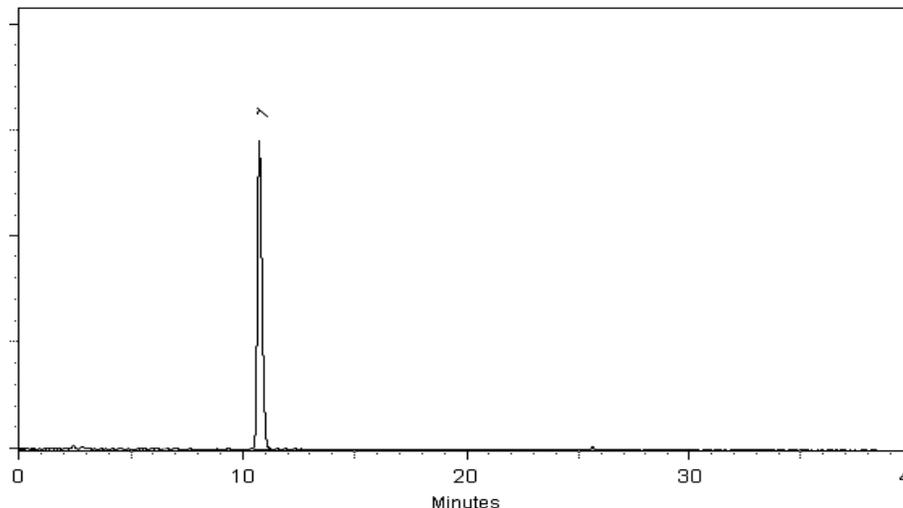
**Mobile Phase A:**  
water:methanol (44:56 V/V)

**Mobile Phase B:**

**Mobile Phase Composition:**  
100%A

**Det. Type:**  
Wavelength: 210nm & 254nm

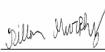
**Inj. Vol**  
2.0µl



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:** 24-May-2024      **Balance Serial #** 1127510105

  
Dillan Murphy - Operations Technician I

**Date Passed:** 03-Jun-2024

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:

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

$k$  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

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**8330\_NG1000\_00015**



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CERTIFIED REFERENCE MATERIAL

**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. :** 31498 **Lot No.:** A0208632  
**Description :** Nitroglycerin Standard  
Nitroglycerin Standard 1,000µg/mL, Methanol, 1mL/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** March 31, 2029 **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%	1,002.0 µg/mL	+/- 46.7451

\* 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.

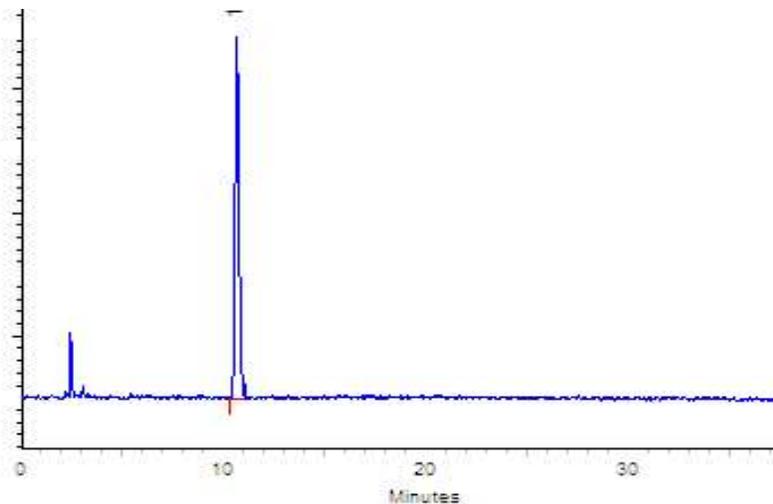
**Mobile Phase A:**  
water:methanol (44:56 V/V)

**Mobile Phase B:**

**Mobile Phase Composition:**  
100%A

**Det. Type:**  
Wavelength: 210nm & 254nm

**Inj. Vol**  
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.

Morgan Craighead - Mix Technician

**Date Mixed:** 04-Mar-2024      **Balance Serial #** 1128342314

Jennifer Pollino - Operations Tech III - ARM QC

**Date Passed:** 06-Mar-2024

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:

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

*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

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**8330\_NG1000\_00017**



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CERTIFIED REFERENCE MATERIAL

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. :** 31498 **Lot No.:** A0213231  
**Description :** Nitroglycerin Standard  
 Nitroglycerin Standard 1,000µg/mL, Methanol, 1mL/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** June 30, 2029 **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%	1,004.0 µg/mL	+/- 46.8384

\* 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.

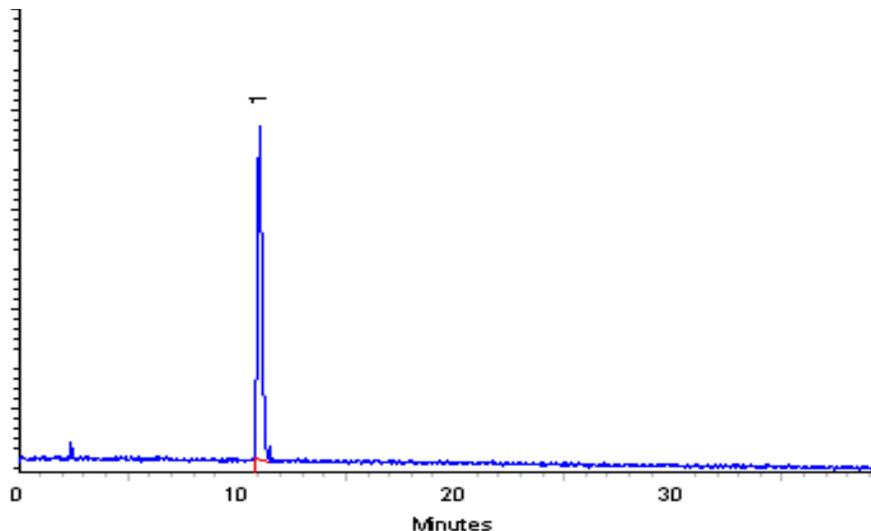
**Mobile Phase A:**  
water:methanol (44:56 V/V)

**Mobile Phase B:**

**Mobile Phase Composition:**  
100%A

**Det. Type:**  
Wavelength: 210nm & 254nm

**Inj. Vol**  
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.

  
Brittany Federinko - Operations Tech I

**Date Mixed:** 26-Jun-2024      **Balance Serial #** 1128360905

  
Jennifer Pollino - Operations Tech III - ARM QC

**Date Passed:** 08-Jul-2024

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:

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

*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

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**8330\_PETN\_Stk\_00157**



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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis  
*chromatographic*



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.:** A0205209  
**Description :** Custom PETN Standard  
Custom PETN Standard 5,000µg/mL, Acetonitrile, 1mL/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** December 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	PETN	78-11-5	051108JLM	99%	5,028.0 µg/mL	+/- 237.3082

\* 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.

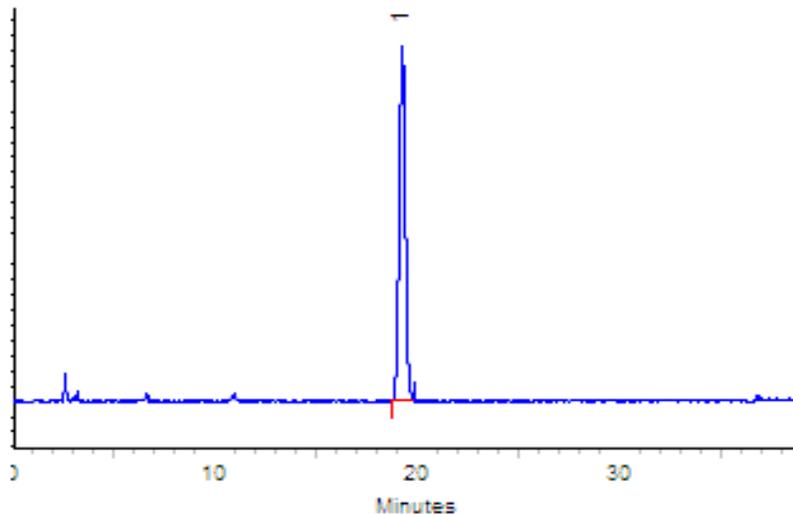
**Mobile Phase A:**  
water:methanol (44:56 V/V)

**Mobile Phase B:**

**Mobile Phase Composition:**  
100%A

**Det. Type:**  
Wavelength: 210nm & 254nm

**Inj. Vol**  
1 $\mu$ l



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.

Russ Bookhamer - Operations Technician I

**Date Mixed:** 07-Dec-2023      **Balance Serial #** B251644995

Jennifer Pollino - Operations Tech III - ARM QC

**Date Passed:** 12-Dec-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:

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

*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

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**8330\_PETN\_Stk\_00158**



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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis  
*chromatographic*



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.:** A0205209  
**Description :** Custom PETN Standard  
Custom PETN Standard 5,000µg/mL, Acetonitrile, 1mL/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** December 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	PETN	78-11-5	051108JLM	99%	5,028.0 µg/mL	+/- 237.3082

\* 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.

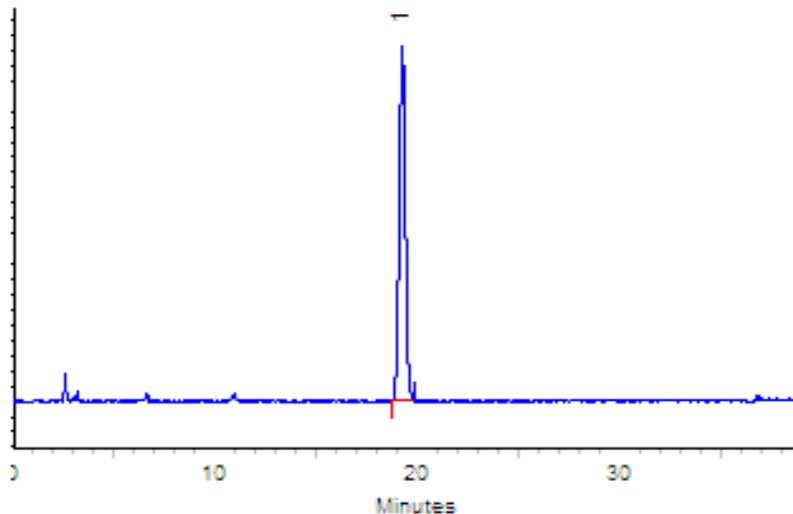
**Mobile Phase A:**  
water:methanol (44:56 V/V)

**Mobile Phase B:**

**Mobile Phase Composition:**  
100%A

**Det. Type:**  
Wavelength: 210nm & 254nm

**Inj. Vol**  
1 $\mu$ l



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.

Russ Bookhamer - Operations Technician I

**Date Mixed:** 07-Dec-2023      **Balance Serial #** B251644995

Jennifer Pollino - Operations Tech III - ARM QC

**Date Passed:** 12-Dec-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:

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

*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

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**8330\_PETN\_Stk\_00159**



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CERTIFIED REFERENCE MATERIAL

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*chromatographic*



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.:** A0205209  
**Description :** Custom PETN Standard  
Custom PETN Standard 5,000µg/mL, Acetonitrile, 1mL/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** December 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	PETN	78-11-5	051108JLM	99%	5,028.0 µg/mL	+/- 237.3082

\* 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.

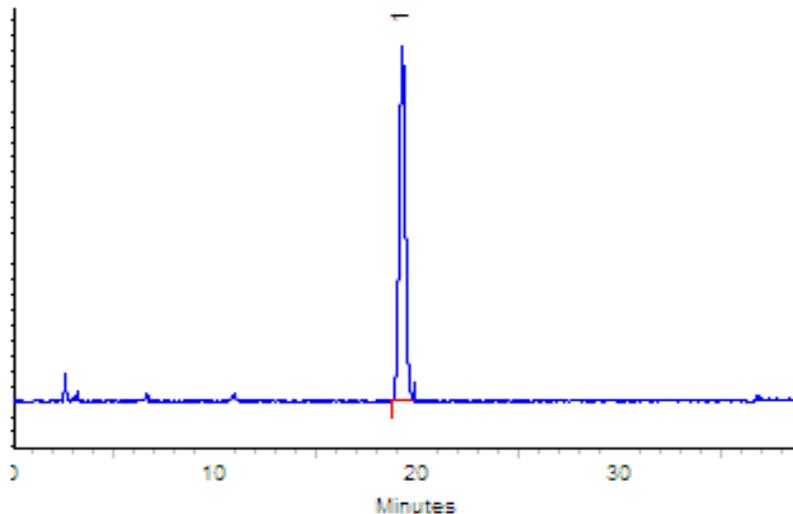
**Mobile Phase A:**  
water:methanol (44:56 V/V)

**Mobile Phase B:**

**Mobile Phase Composition:**  
100%A

**Det. Type:**  
Wavelength: 210nm & 254nm

**Inj. Vol**  
1µl



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.

Russ Bookhamer - Operations Technician I

**Date Mixed:** 07-Dec-2023      **Balance Serial #** B251644995

Jennifer Pollino - Operations Tech III - ARM QC

**Date Passed:** 12-Dec-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:

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

$k$  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

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**8330\_PETN\_Stk\_00160**



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*



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.:** A0205209  
**Description :** Custom PETN Standard  
Custom PETN Standard 5,000µg/mL, Acetonitrile, 1mL/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** December 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	PETN	78-11-5	051108JLM	99%	5,028.0 µg/mL	+/- 237.3082

\* 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.

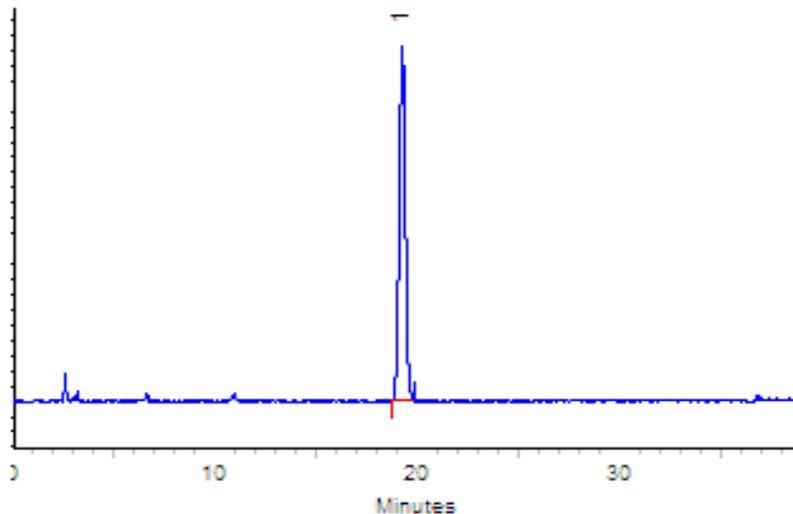
**Mobile Phase A:**  
water:methanol (44:56 V/V)

**Mobile Phase B:**

**Mobile Phase Composition:**  
100%A

**Det. Type:**  
Wavelength: 210nm & 254nm

**Inj. Vol**  
1 $\mu$ l



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.

Russ Bookhamer - Operations Technician I

**Date Mixed:** 07-Dec-2023

**Balance Serial #** B251644995

Jennifer Pollino - Operations Tech III - ARM QC

**Date Passed:** 12-Dec-2023

REVISED

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:

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

*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

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**8330\_PETN1000\_00018**



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*



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.:** A0207895  
**Description :** PETN Standard  
PETN Standard 1000µg/mL, Methanol, 1mL/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** February 28, 2029 **Storage:** 10°C or colder  
**Handling:** Sonicate prior to use. **Ship:** Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	PETN	78-11-5	051108JLM	99%	1,006.3 µg/mL	+/- 46.9434

\* 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.

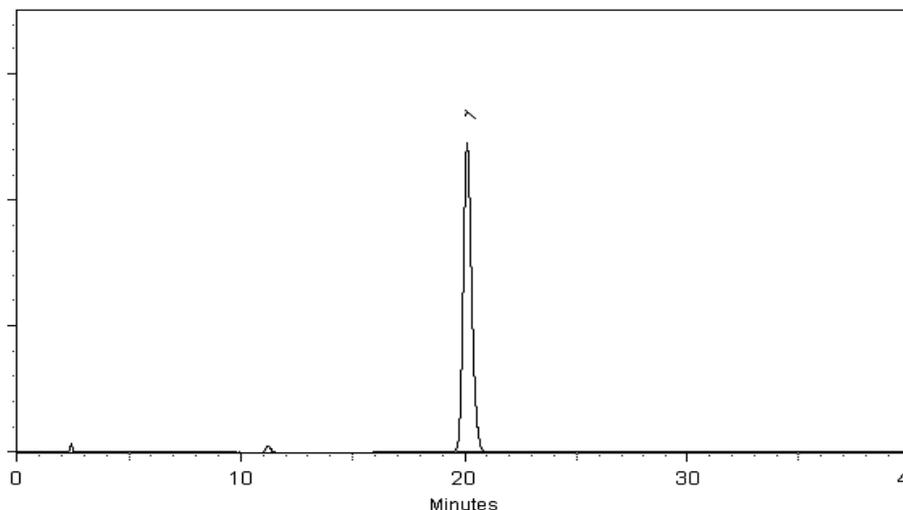
**Mobile Phase A:**  
water:methanol (44:56 V/V)

**Mobile Phase B:**

**Mobile Phase Composition:**  
100%A

**Det. Type:**  
Wavelength: 210nm & 254nm

**Inj. Vol**  
2 $\mu$ l



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:** 15-Feb-2024      **Balance Serial #** 1127510105

Dillan Murphy - Operations Technician I

**Date Passed:** 20-Feb-2024

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:

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

*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

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**8330\_PETN1000\_00020**



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

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CERTIFIED REFERENCE MATERIAL

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. :** 31600 **Lot No.:** A0211856  
**Description :** PETN Standard  
PETN Standard 1000µg/mL, Methanol, 1mL/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** May 31, 2029 **Storage:** 10°C or colder  
**Handling:** Sonicate prior to use. **Ship:** Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	PETN	78-11-5	051108JLM	99%	1,003.8 µg/mL	+/- 46.8267

\* 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.

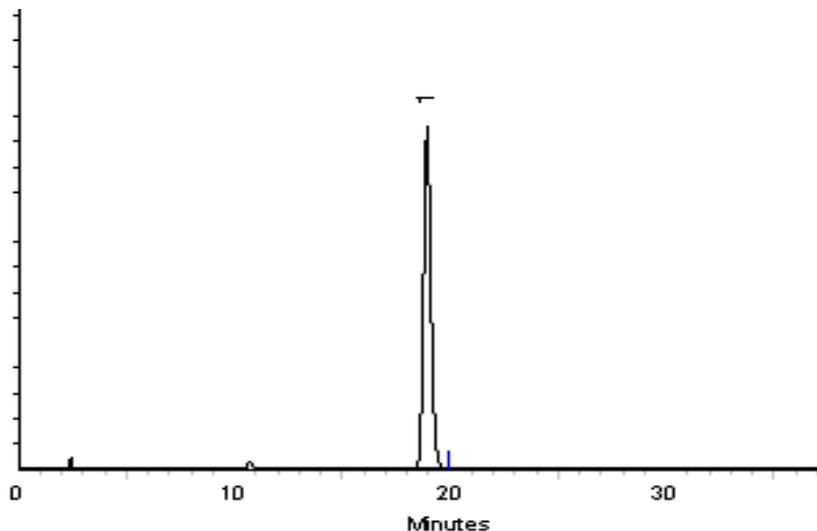
**Mobile Phase A:**  
water:methanol (44:56 V/V)

**Mobile Phase B:**

**Mobile Phase Composition:**  
100%A

**Det. Type:**  
Wavelength: 210nm & 254nm

**Inj. Vol**  
2.0µl



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.

*Brittany Federinko*  
Brittany Federinko - Operations Tech I

**Date Mixed:** 22-May-2024      **Balance Serial #** 1128353505

*Jennifer J. Pollino*  
Jennifer Pollino - Operations Tech III - ARM QC

**Date Passed:** 24-May-2024

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:

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

*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

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**833035DNASTk\_00062**



# CERTIFICATE OF ANALYSIS

**Catalog No:** M-8330-ADD-4  
**Description:** 3,5-Dinitroaniline  
**Lot:** 223041214-01  
**Solvent:** Methanol (50%)  
Acetonitrile (50%)  
**Hazards:** Refer to SDS for complete safety information

**Date Certified:** Dec 6, 2023  
**Expiration:** Jan 6, 2025  
**Sample Size:** 1 mL  
**Components:** 1  
**Storage Condition:** Ambient (>5 °C)



Signal Word: Danger

## Certified Reference Material



AR-1463

Component	CAS #	Purity <sup>3</sup> %	Prepared Concentration <sup>2</sup> (µg/mL)	Certified Analyte Concentration <sup>1</sup> (µg/mL)
3,5-Dinitroaniline	618-87-1	100.0	100.8	100.8

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

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.

<sup>1</sup> 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.

<sup>2</sup> All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

<sup>3</sup> Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

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

**1. Quality Standards:**

ISO 17034:2016 – General Requirements for the Competence of Reference Material Producers

ISO/IEC 17025:2017 – General Requirements for the Competence of Testing And Calibration Laboratories

ISO 9001:2015 – Quality Management System – Requirements  
Eagle Registrations

- 2. Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 7.
- 3. Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards. Good Laboratory Practices have been used throughout the preparation of this Standard.
- 4. Homogeneity:** This product is sufficiently homogeneous and any sample size would be within the uncertainty budget.
- 5. Stability:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label
- 6. Uncertainty:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula:  $u_a = \sqrt{(u(V))^2 + (u(m))^2 + (u(IV))^2 + (u(RO))^2}$  This formula represents uncertainty components from the mass, volume, short-term stability, long-term stability and homogeneity factors associated with the production of this product. The expanded uncertainty, assumes a normal distribution and a coverage factor of  $k=2$  is chosen using approximately a 95% confidence level.
- 7. Legal Notice and Limit of Liability:** This product is for routine laboratory analysis and research purposes only. The company's liability will be limited to replacement of product or refund of purchase price. Notice of claims must be made within thirty (30) days from date of delivery.

Reagent

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**833035DNASTk\_00064**

# CERTIFICATE OF ANALYSIS

**Catalog No:** M-8330-ADD-4  
**Description:** 3,5-Dinitroaniline  
**Lot:** 222011692-04  
**Solvent:** Methanol (50%)  
Acetonitrile (50%)  
**Hazards:** Refer to SDS for complete safety information

**Date Certified:** Jun 17, 2024  
**Expiration:** Jul 17, 2026  
**Sample Size:** 1 mL  
**Components:** 1  
**Storage Condition:** Ambient (>5 °C)



**Signal Word:** Danger

## Certified Reference Material



AR-1463

Component	CAS #	Purity <sup>3</sup> %	Prepared Concentration <sup>2</sup> (µg/mL)	Certified Analyte Concentration <sup>1</sup> (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 (AT-1339) and ISO 17034 (AR-1463)

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.

<sup>1</sup> Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is  $\pm 2.4\%$  and was determined in accordance with ISO 17034. 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.

<sup>2</sup> All weights are traceable through NIST, Test No. 684/289871-17

<sup>3</sup> Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

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

**1. Quality Standards:**

ISO 17034:2016 – General Requirements for the Competence of Reference Material Producers

ISO/IEC 17025:2017 – General Requirements for the Competence of Testing And Calibration Laboratories

ISO 9001:2015 – Quality Management System – Requirements  
Eagle Registrations

- 2. Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 7.
- 3. Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards. Good Laboratory Practices have been used throughout the preparation of this Standard.
- 4. Homogeneity:** This product is sufficiently homogeneous and any sample size would be within the uncertainty budget.
- 5. Stability:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label
- 6. Uncertainty:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula:  $u_a = \sqrt{(u(V))^2 + (u(m))^2 + (u(IV))^2 + (u(RO))^2}$  This formula represents uncertainty components from the mass, volume, short-term stability, long-term stability and homogeneity factors associated with the production of this product. The expanded uncertainty, assumes a normal distribution and a coverage factor of  $k=2$  is chosen using approximately a 95% confidence level.
- 7. Legal Notice and Limit of Liability:** This product is for routine laboratory analysis and research purposes only. The company's liability will be limited to replacement of product or refund of purchase price. Notice of claims must be made within thirty (30) days from date of delivery.

Reagent

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**8330LCSMix1\_00153**



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*



**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.:** A0196548  
**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, 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	HMX	2691-41-0	220927JLM	99%	1,010.0 µg/mL	+/- 47.1183
2	RDX	121-82-4	080228JLM	99%	1,002.0 µg/mL	+/- 46.7451
3	1,3,5-Trinitrobenzene	99-35-4	A6TDK	99%	1,010.0 µg/mL	+/- 47.1183
4	1,3-Dinitrobenzene	99-65-0	1-DXX-24-1	99%	1,008.0 µg/mL	+/- 47.0250
5	Nitrobenzene	98-95-3	10224044	99%	1,009.0 µg/mL	+/- 47.0716
6	2,4,6-Trinitrotoluene	118-96-7	D13332500	99%	1,007.0 µg/mL	+/- 46.9783
7	2,4-Dinitrotoluene	121-14-2	MKAA0690V	99%	1,006.0 µg/mL	+/- 46.9317

\* 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.

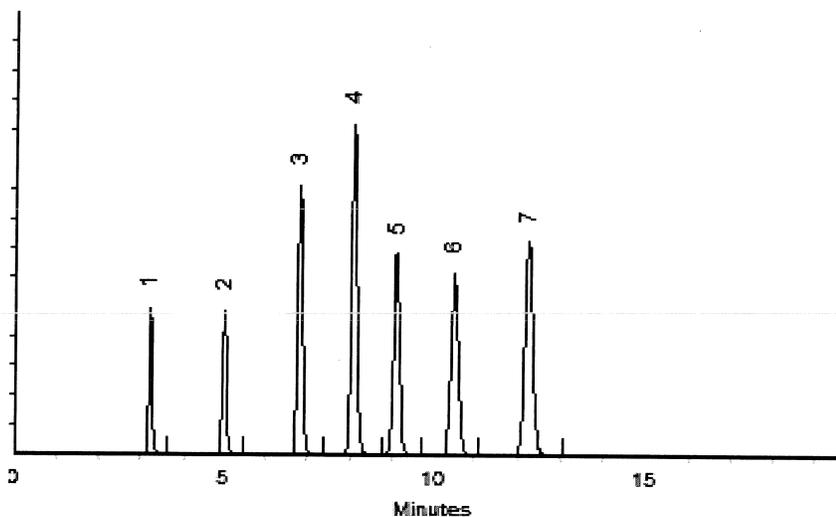
**Mobile Phase A:**  
water:methanol (44:56 V/V)

**Mobile Phase B:**

**Mobile Phase Composition:**  
100%A

**Det. Type:**  
Wavelength: 210nm & 254nm

**Inj. Vol**  
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.

*Sam Moodler*  
Sam Moodler - Operations Tech I

**Date Mixed:** 03-Apr-2023      **Balance Serial #** B251644995

*Jennifer J. Pollino*  
Jennifer Pollino - Operations Tech III - ARM QC

**Date Passed:** 05-Apr-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:

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

$k$  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

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**8330LCSMix1\_00154**



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*



**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.:** A0196548  
**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, 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	HMX	2691-41-0	220927JLM	99%	1,010.0 µg/mL	+/- 47.1183
2	RDX	121-82-4	080228JLM	99%	1,002.0 µg/mL	+/- 46.7451
3	1,3,5-Trinitrobenzene	99-35-4	A6TDK	99%	1,010.0 µg/mL	+/- 47.1183
4	1,3-Dinitrobenzene	99-65-0	1-DXX-24-1	99%	1,008.0 µg/mL	+/- 47.0250
5	Nitrobenzene	98-95-3	10224044	99%	1,009.0 µg/mL	+/- 47.0716
6	2,4,6-Trinitrotoluene	118-96-7	D13332500	99%	1,007.0 µg/mL	+/- 46.9783
7	2,4-Dinitrotoluene	121-14-2	MKAA0690V	99%	1,006.0 µg/mL	+/- 46.9317

\* 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.

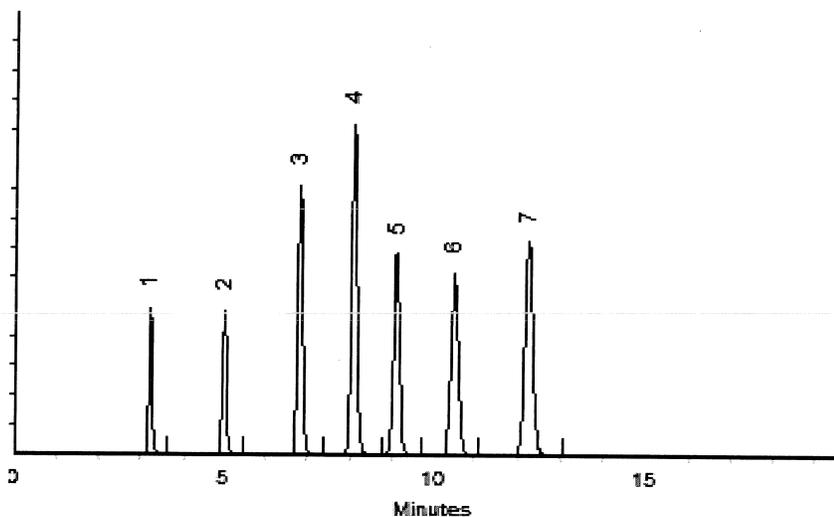
**Mobile Phase A:**  
water:methanol (44:56 V/V)

**Mobile Phase B:**

**Mobile Phase Composition:**  
100%A

**Det. Type:**  
Wavelength: 210nm & 254nm

**Inj. Vol**  
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.

*Sam Moodler*  
Sam Moodler - Operations Tech I

**Date Mixed:** 03-Apr-2023      **Balance Serial #** B251644995

*Jennifer J. Pollino*  
Jennifer Pollino - Operations Tech III - ARM QC

**Date Passed:** 05-Apr-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:

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

$k$  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

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**8330PAsTkPS\_00077**



# CERTIFICATE OF ANALYSIS

**Catalog No:** M-8330-ADD-3

**Description:** Picric acid

**Lot:** 223031306-01

**Solvent:** Acetonitrile (50%)

Methanol (50%)

**Hazards:** Refer to SDS for complete safety information

**Date Certified:** Oct 27, 2023

**Expiration:** Nov 27, 2025

**Sample Size:** 1 mL

**Components:** 1

**Storage Condition:** Ambient (>5 °C)



**Signal Word:** Danger

## Certified Reference Material



AR-1463

Component	CAS #	Purity <sup>3</sup> %	Prepared Concentration <sup>2</sup> (µg/mL)	Certified Analyte Concentration <sup>1</sup> (µg/mL)
Picric acid	88-89-1	99.1	100.4	99.5

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

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.

<sup>1</sup> 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.

<sup>2</sup> All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

<sup>3</sup> Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

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

**1. Quality Standards:**

ISO 17034:2016 – General Requirements for the Competence of Reference Material Producers

ISO/IEC 17025:2017 – General Requirements for the Competence of Testing And Calibration Laboratories

ISO 9001:2015 – Quality Management System – Requirements  
Eagle Registrations

- 2. Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 7.
- 3. Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards. Good Laboratory Practices have been used throughout the preparation of this Standard.
- 4. Homogeneity:** This product is sufficiently homogeneous and any sample size would be within the uncertainty budget.
- 5. Stability:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label
- 6. Uncertainty:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula:  $u_a = \sqrt{(u(V))^2 + (u(m))^2 + (u(IV))^2 + (u(RO))^2}$  This formula represents uncertainty components from the mass, volume, short-term stability, long-term stability and homogeneity factors associated with the production of this product. The expanded uncertainty, assumes a normal distribution and a coverage factor of  $k=2$  is chosen using approximately a 95% confidence level.
- 7. Legal Notice and Limit of Liability:** This product is for routine laboratory analysis and research purposes only. The company's liability will be limited to replacement of product or refund of purchase price. Notice of claims must be made within thirty (30) days from date of delivery.

Reagent

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**8330PASTkPS\_00078**



# CERTIFICATE OF ANALYSIS

**Catalog No:** M-8330-ADD-3

**Description:** Picric acid

**Lot:** 223031306-01

**Solvent:** Acetonitrile (50%)

Methanol (50%)

**Hazards:** Refer to SDS for complete safety information



**Signal Word:** Danger

**Date Certified:** Oct 27, 2023

**Expiration:** Nov 27, 2025

**Sample Size:** 1 mL

**Components:** 1

**Storage Condition:** Ambient (>5 °C)

## Certified Reference Material



AR-1463

Component	CAS #	Purity <sup>3</sup> %	Prepared Concentration <sup>2</sup> (µg/mL)	Certified Analyte Concentration <sup>1</sup> (µg/mL)
Picric acid	88-89-1	99.1	100.4	99.5

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

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.

<sup>1</sup> 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.

<sup>2</sup> All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

<sup>3</sup> Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

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

**1. Quality Standards:**

ISO 17034:2016 – General Requirements for the Competence of Reference Material Producers

ISO/IEC 17025:2017 – General Requirements for the Competence of Testing And Calibration Laboratories

ISO 9001:2015 – Quality Management System – Requirements  
Eagle Registrations

**2. Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 7.

**3. Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards. Good Laboratory Practices have been used throughout the preparation of this Standard.

**4. Homogeneity:** This product is sufficiently homogeneous and any sample size would be within the uncertainty budget.

**5. Stability:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label

**6. Uncertainty:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula:  $u_a = \sqrt{(u(V))^2 + (u(m))^2 + (u(IV))^2 + (u(RO))^2}$  This formula represents uncertainty components from the mass, volume, short-term stability, long-term stability and homogeneity factors associated with the production of this product. The expanded uncertainty, assumes a normal distribution and a coverage factor of  $k=2$  is chosen using approximately a 95% confidence level.

**7. Legal Notice and Limit of Liability:** This product is for routine laboratory analysis and research purposes only. The company's liability will be limited to replacement of product or refund of purchase price. Notice of claims must be made within thirty (30) days from date of delivery.

Reagent

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**8330Surrogate\_00158**

## Preliminary Report

Eurofins Denver

LCS, Lab Control Sample Report

Sample Path: \\chromfs\Denver\ChromData\CHHPLC\_X\20240809-136341.b\08090011.D  
 Lims ID: 8330Surr158 Inj. Date: 09-Aug-2024 15:22:10  
 Worklist ID: 280-0136341-011 Instrument: CHHPLC\_X3  
 Method: 8330\_X3

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 3535
\$ 10 1,2-Dinitrobenzene	0.5000	0.5401	108.0	83-119

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

- |                   |                   |                   |
|-------------------|-------------------|-------------------|
| 280-194788-A-1-A  | 280-194788-B-2-A  | 280-194788-B-3-A  |
| 280-194788-B-4-A  | 280-194788-A-5-A  | 280-194788-B-6-A  |
| 280-194788-B-7-A  | 280-194788-B-8-A  | 280-194788-A-9-A  |
| 280-194788-A-10-A | 280-194788-B-11-A | 280-194788-B-12-A |
| 280-194788-A-13-A | 280-194788-A-14-A | 280-194788-A-15-A |
| 280-194788-A-16-A | 280-194788-B-17-A | 280-194788-B-18-A |
| 280-194788-A-19-A | 280-194788-B-20-A |                   |

Reagent

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**8330Surrogate\_00159**

## Preliminary Report

Eurofins Denver

LCS, Lab Control Sample Report

Sample Path: \\chromfs\Denver\ChromData\CHHPLC\_X\20240919-137694.b\09190011.D

Lims ID: 8330Surr159 Inj. Date: 19-Sep-2024 15:53:23

Worklist ID: 280-0137694-011 Instrument: CHHPLC\_X3

Method: 8330\_X3

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 OB_Sonc_
\$ 10 1,2-Dinitrobenzene	0.5000	0.5089	101.8	83-119

Samples for Limit Group: 1, Lims Prep Method: 8330B\_Sonc\_10g

280-196605-A-1-A	280-196605-A-2-A	280-196605-B-3-A
280-196715-B-1-A	280-196715-A-2-A	280-196715-B-3-A
280-196715-A-4-A		

Reagent

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**8330SurrStkSS\_00324**



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*



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.:** A0205460  
**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, 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	RP231117RSR	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.

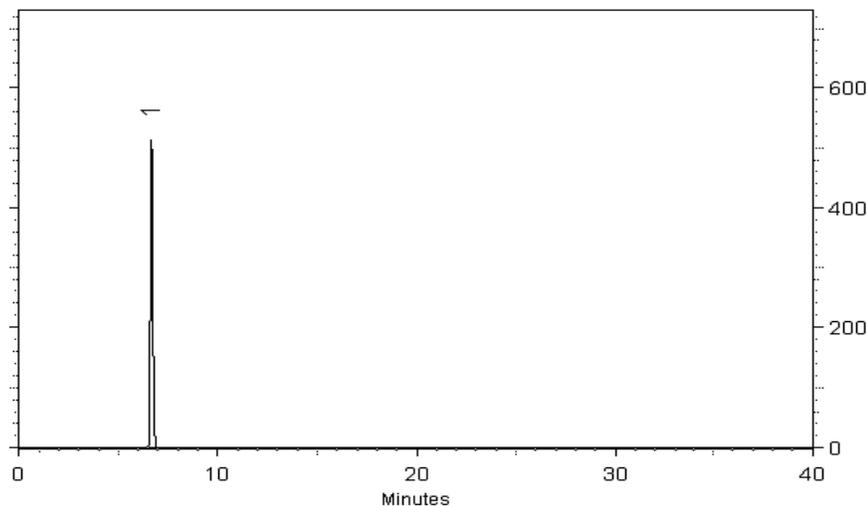
**Mobile Phase A:**  
water:methanol (44:56 V/V)

**Mobile Phase B:**

**Mobile Phase Composition:**  
100%A

**Det. Type:**  
Wavelength: 210nm & 254nm

**Inj. Vol**  
2.0µl



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.

*Malina Homan*  
**Malina Homan - Operations Technician I**

**Date Mixed:** 13-Dec-2023      **Balance Serial #** B707717271

*Jennifer J. Pollino*  
**Jennifer Pollino - Operations Tech III - ARM QC**

**Date Passed:** 19-Dec-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:

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

*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

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**8330SurrStkSS\_00325**



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*



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.:** A0205460  
**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, 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	RP231117RSR	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.

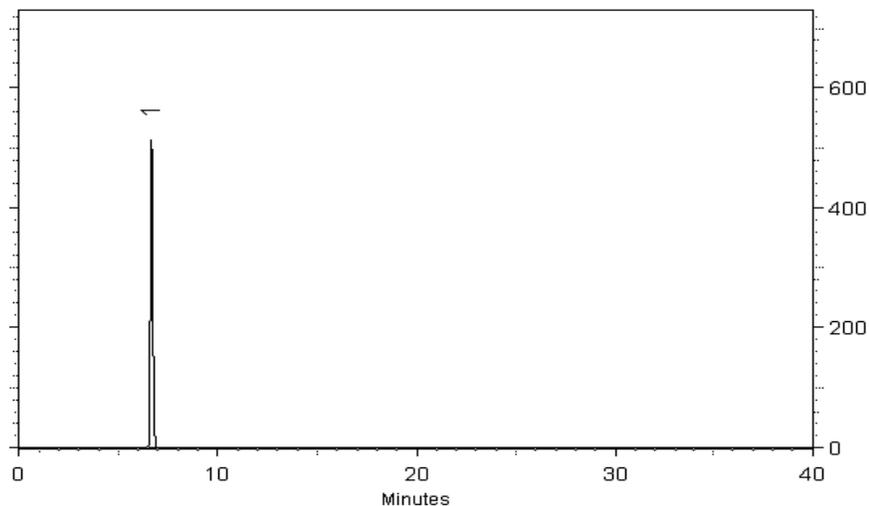
**Mobile Phase A:**  
water:methanol (44:56 V/V)

**Mobile Phase B:**

**Mobile Phase Composition:**  
100%A

**Det. Type:**  
Wavelength: 210nm & 254nm

**Inj. Vol**  
2.0µl



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.

*Malina Homan*  
**Malina Homan - Operations Technician I**

**Date Mixed:** 13-Dec-2023      **Balance Serial #** B707717271

*Jennifer J Pollino*  
**Jennifer Pollino - Operations Tech III - ARM QC**

**Date Passed:** 19-Dec-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:

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

*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

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**8330SurrStkSS\_00326**



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*



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.:** A0205460  
**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, 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	RP231117RSR	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.

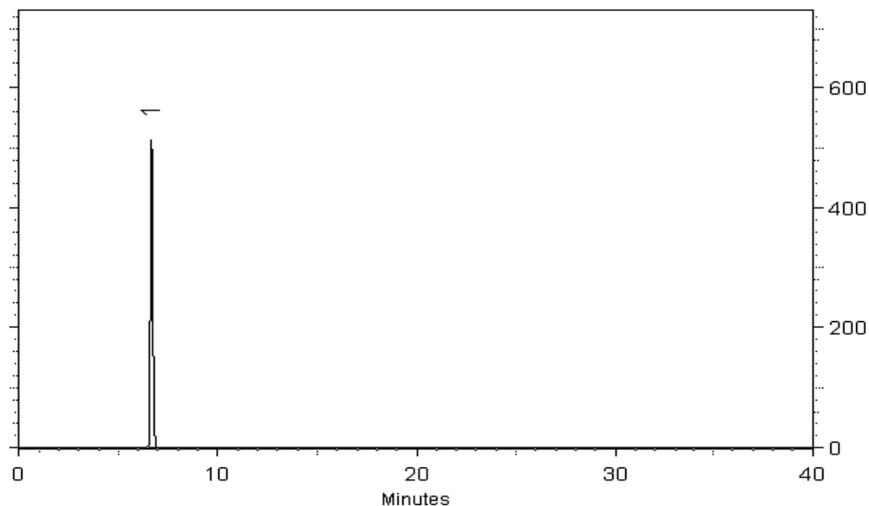
**Mobile Phase A:**  
water:methanol (44:56 V/V)

**Mobile Phase B:**

**Mobile Phase Composition:**  
100%A

**Det. Type:**  
Wavelength: 210nm & 254nm

**Inj. Vol**  
2.0µl



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.

  
Malina Homan - Operations Technician I

**Date Mixed:** 13-Dec-2023      **Balance Serial #** B707717271

  
Jennifer Pollino - Operations Tech III - ARM QC

**Date Passed:** 19-Dec-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:

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

*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

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**8330SurrStkSS\_00327**



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*



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.:** A0205460  
**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, 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	RP231117RSR	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.

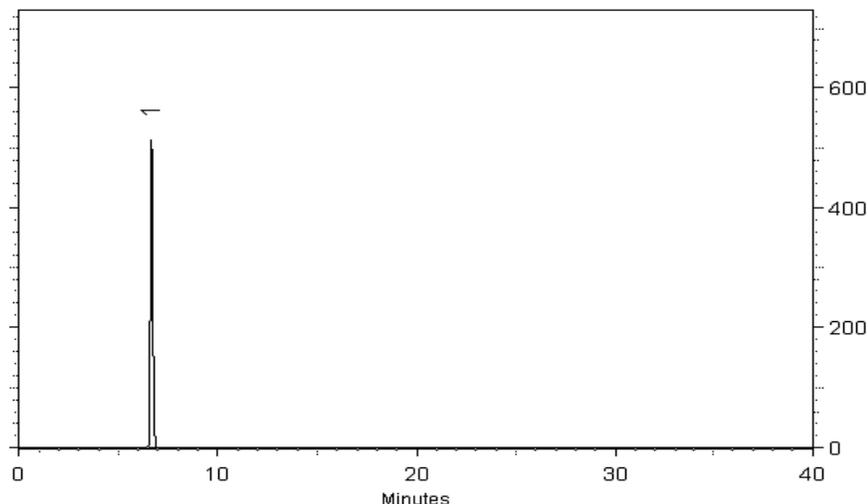
**Mobile Phase A:**  
water:methanol (44:56 V/V)

**Mobile Phase B:**

**Mobile Phase Composition:**  
100%A

**Det. Type:**  
Wavelength: 210nm & 254nm

**Inj. Vol**  
2.0µl



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.

*Malina Homan*  
**Malina Homan - Operations Technician I**

**Date Mixed:** 13-Dec-2023      **Balance Serial #** B707717271

*Jennifer J Pollino*  
**Jennifer Pollino - Operations Tech III - ARM QC**

**Date Passed:** 19-Dec-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:

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

*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

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**8330SurrStkSS\_00328**



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*



**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.:** A0205460  
**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, 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	RP231117RSR	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.

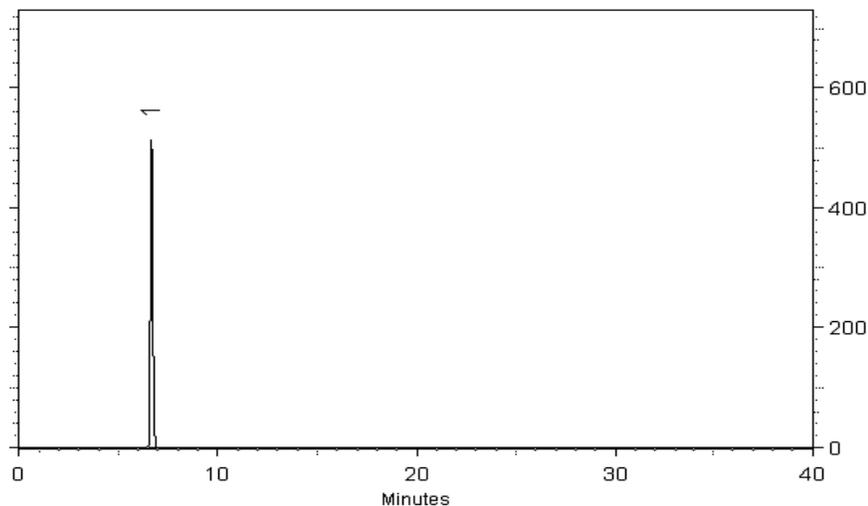
**Mobile Phase A:**  
water:methanol (44:56 V/V)

**Mobile Phase B:**

**Mobile Phase Composition:**  
100%A

**Det. Type:**  
Wavelength: 210nm & 254nm

**Inj. Vol**  
2.0µl



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.

*Malina Homan*  
**Malina Homan - Operations Technician I**

**Date Mixed:** 13-Dec-2023      **Balance Serial #** B707717271

*Jennifer J. Pollino*  
**Jennifer Pollino - Operations Tech III - ARM QC**

**Date Passed:** 19-Dec-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:

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

*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

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**8330SurrStkSS\_00329**



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*



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.:** A0205460 \_\_\_\_\_  
**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, 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	RP231117RSR	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.

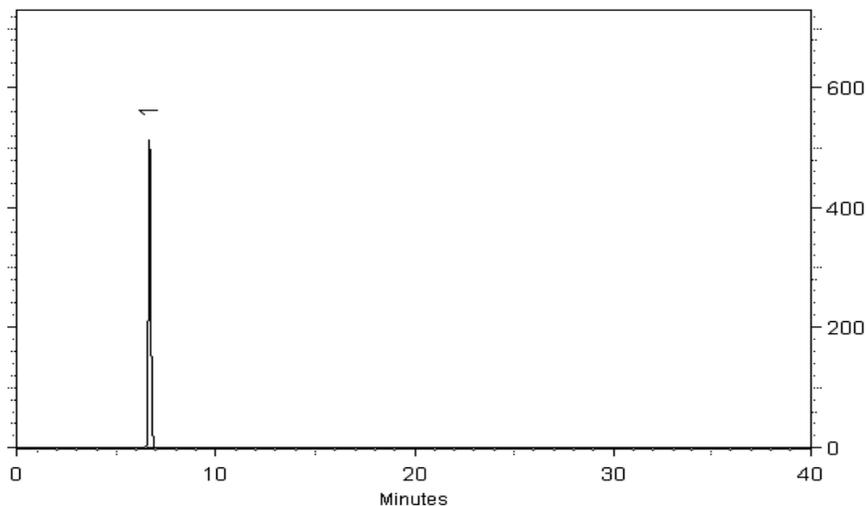
**Mobile Phase A:**  
water:methanol (44:56 V/V)

**Mobile Phase B:**

**Mobile Phase Composition:**  
100%A

**Det. Type:**  
Wavelength: 210nm & 254nm

**Inj. Vol**  
2.0µl



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.

*Malina Homan*  
**Malina Homan - Operations Technician I**

**Date Mixed:** 13-Dec-2023      **Balance Serial #** B707717271

*Jennifer J Pollino*  
**Jennifer Pollino - Operations Tech III - ARM QC**

**Date Passed:** 19-Dec-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:

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

*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

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**8330SurrStkSS\_00336**



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*



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.:** A0211455 \_\_\_\_\_  
**Description :** 8330 Surrogate Mix \_\_\_\_\_  
 8330 Surrogate Mix 1000 µg/mL, Methanol, 1mL/ampul  
**Container Size :** 2 mL \_\_\_\_\_ **Pkg Amt:** > 1 mL \_\_\_\_\_  
**Expiration Date :** May 31, 2029 \_\_\_\_\_ **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	RP231229CTH	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.

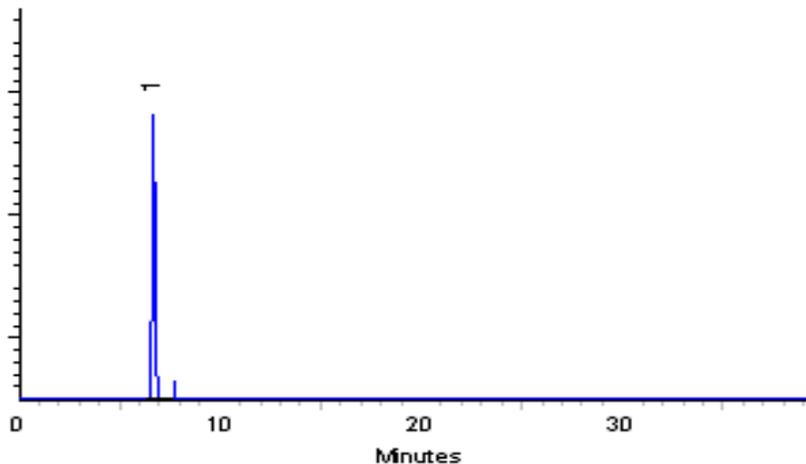
**Mobile Phase A:**  
water:methanol (44:56 V/V)

**Mobile Phase B:**

**Mobile Phase Composition:**  
100%A

**Det. Type:**  
Wavelength: 210nm & 254nm

**Inj. Vol**  
2.0µl



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.

*Wilner Torres*  
**Wilner Torres - Operation Tech I**

**Date Mixed:** 15-May-2024      **Balance Serial #** 1128342314

*Jennifer J Pollino*  
**Jennifer Pollino - Operations Tech III - ARM QC**

**Date Passed:** 17-May-2024

**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:

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

*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

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**8330SurrStkSS\_00337**



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*



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.:** A0211455 \_\_\_\_\_  
**Description :** 8330 Surrogate Mix \_\_\_\_\_  
 8330 Surrogate Mix 1000 µg/mL, Methanol, 1mL/ampul  
**Container Size :** 2 mL \_\_\_\_\_ **Pkg Amt:** > 1 mL \_\_\_\_\_  
**Expiration Date :** May 31, 2029 \_\_\_\_\_ **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	RP231229CTH	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.

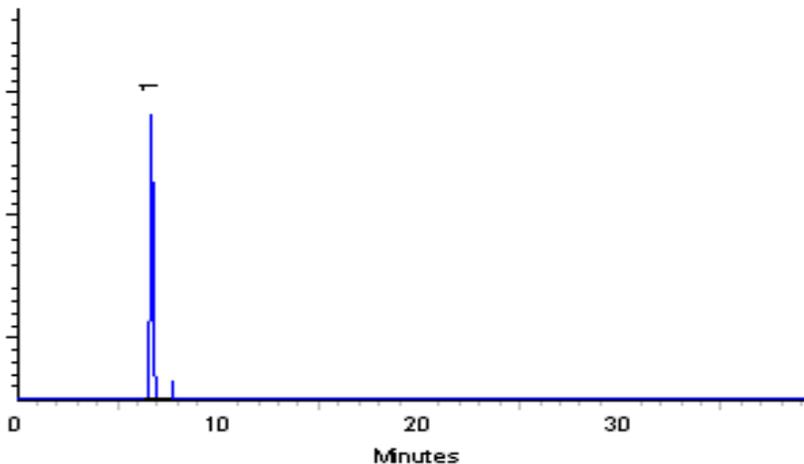
**Mobile Phase A:**  
water:methanol (44:56 V/V)

**Mobile Phase B:**

**Mobile Phase Composition:**  
100%A

**Det. Type:**  
Wavelength: 210nm & 254nm

**Inj. Vol**  
2.0µl



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.

*Wilner Torres*  
**Wilner Torres - Operation Tech I**

**Date Mixed:** 15-May-2024      **Balance Serial #** 1128342314

*Jennifer J Pollino*  
**Jennifer Pollino - Operations Tech III - ARM QC**

**Date Passed:** 17-May-2024

**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:

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

$k$  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

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**8330SurrStkSS\_00339**



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*



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.:** A0211455 \_\_\_\_\_  
**Description :** 8330 Surrogate Mix \_\_\_\_\_  
 8330 Surrogate Mix 1000 µg/mL, Methanol, 1mL/ampul  
**Container Size :** 2 mL \_\_\_\_\_ **Pkg Amt:** > 1 mL \_\_\_\_\_  
**Expiration Date :** May 31, 2029 \_\_\_\_\_ **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	RP231229CTH	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.

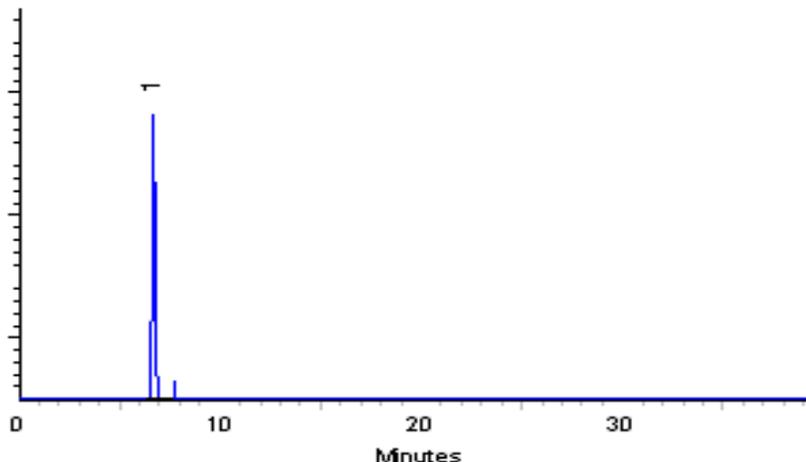
**Mobile Phase A:**  
water:methanol (44:56 V/V)

**Mobile Phase B:**

**Mobile Phase Composition:**  
100%A

**Det. Type:**  
Wavelength: 210nm & 254nm

**Inj. Vol**  
2.0µl



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.

*Wilner Torres*  
**Wilner Torres - Operation Tech I**

**Date Mixed:** 15-May-2024      **Balance Serial #** 1128342314

*Jennifer J. Pollino*  
**Jennifer Pollino - Operations Tech III - ARM QC**

**Date Passed:** 17-May-2024

**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:

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

$k$  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

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**8330SurrStkSS\_00340**



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*



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.:** A0211455 \_\_\_\_\_  
**Description :** 8330 Surrogate Mix \_\_\_\_\_  
 8330 Surrogate Mix 1000 µg/mL, Methanol, 1mL/ampul  
**Container Size :** 2 mL \_\_\_\_\_ **Pkg Amt:** > 1 mL \_\_\_\_\_  
**Expiration Date :** May 31, 2029 \_\_\_\_\_ **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	RP231229CTH	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.

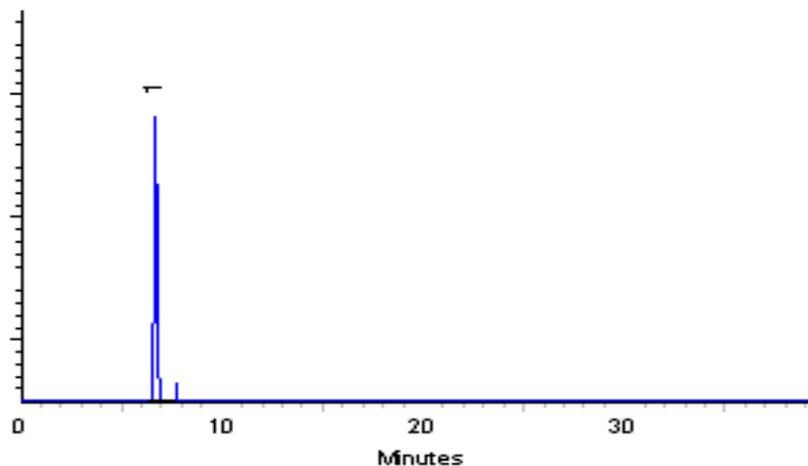
**Mobile Phase A:**  
water:methanol (44:56 V/V)

**Mobile Phase B:**

**Mobile Phase Composition:**  
100%A

**Det. Type:**  
Wavelength: 210nm & 254nm

**Inj. Vol**  
2.0µl



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.

*Wilner Torres*  
**Wilner Torres - Operation Tech I**

**Date Mixed:** 15-May-2024      **Balance Serial #** 1128342314

*Jennifer J Pollino*  
**Jennifer Pollino - Operations Tech III - ARM QC**

**Date Passed:** 17-May-2024

**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:

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

$k$  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

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**8330SurrStock\_00173**

# CERTIFICATE OF ANALYSIS

**Catalog No:** M-8330-SS

**Description:** 1,2-Dinitrobenzene

**Lot:** 219051500

**Solvent:** Methanol

**Hazards:** Refer to SDS for complete safety information

**Date Certified:** May 22, 2019

**Expiration:** May 22, 2029

**Sample Size:** 1 mL

**Components:** 1

**Storage Condition:** Ambient (>5 °C)



Signal Word: **Danger**

**Certified Reference Material**



Component	CAS #	Purity % (GC/FID)	Prepared Concentration <sup>2</sup> (µg/mL)	Certified Analyte Concentration <sup>1</sup> (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.

<sup>2</sup> All weights are traceable through NIST, Test No. 684/289871-17

<sup>1</sup> Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is  $\pm 2.4\%$ . 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

Reagent

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**8330SurrStock\_00174**

# CERTIFICATE OF ANALYSIS

**Catalog No:** M-8330-SS  
**Description:** 1,2-Dinitrobenzene  
**Lot:** 219051500  
**Solvent:** Methanol  
**Hazards:** Refer to SDS for complete safety information

**Date Certified:** May 22, 2019  
**Expiration:** May 22, 2029  
**Sample Size:** 1 mL  
**Components:** 1  
**Storage Condition:** Ambient (>5 °C)



Signal Word: Danger

Certified Reference Material



Component	CAS #	Purity % (GC/FID)	Prepared Concentration <sup>2</sup> (µg/mL)	Certified Analyte Concentration <sup>1</sup> (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.

<sup>2</sup> All weights are traceable through NIST, Test No. 684/289871-17

<sup>1</sup> 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

Reagent

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**MNX , TNX , DNX \_ 00118**

**Reference Material Certificate**  
**Product Information Sheet**

<b>Product Name:</b>	Custom Standard	<b>Lot Number:</b>	0006801479
<b>Product Number:</b>	CUS-23984	<b>Lot Issue Date:</b>	21-Jun-2024
<b>Storage Conditions:</b>	Store at Room Temperature (15° to 30°C).	<b>Expiration Date:</b>	31-Jul-2025

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 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.

**Safety:**

Refer to the Safety Data Sheet on [www.agilent.com](http://www.agilent.com) for information regarding this analytical reference material.

**Intended Use:**

This analytical reference 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:**

The certification of this analytical reference standard is valid until the expiration date specified above, provided the material is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the material is damaged, contaminated, or otherwise modified.

**Maintenance of Certification:**

If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

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**Sample lot approver:**

  
Monica Bourgeois  
QMS Representative

Reagent

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**PicricARestek\_00125**



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*



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.:** A0195778 \_\_\_\_\_  
**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, 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	Picric Acid	88-89-1	06130CU	99%	1,002.0 µg/mL	+/- 46.7451

\* 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.

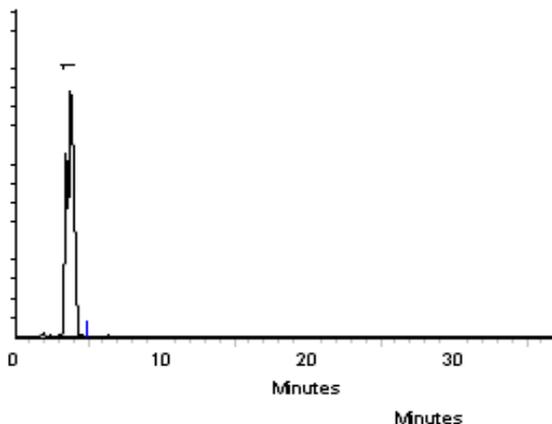
**Mobile Phase A:**  
water:methanol (44:56 V/V)

**Mobile Phase B:**

**Mobile Phase Composition:**  
100%A

**Det. Type:**  
Wavelength: 210nm & 254nm

**Inj. Vol**  
0.2µl



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:** 12-Mar-2023      **Balance Serial #** 1127510105

Jennifer Pollino - Operations Tech III - ARM QC

**Date Passed:** 14-Mar-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:

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

*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.

# 8330B\_DOD5

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Nitroaromatics and Nitramines (HPLC)

FORM II  
HPLC/IC SURROGATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-197532-2

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-090-240901-G W	280-197532-1	86	
LL1mw-080-240901-G W	280-197532-2	82 S1-	
LL1mw-080-240901-G W	280-197532-2		85
LL2mw-059-240901-G W	280-197532-3	90	
LL2mw-059-240901-G W	280-197532-3		94
LL1mw-081-240901-G W	280-197532-4	84	
FWGmw-010-240901-G W	280-197532-5	96	
FWGmw-011-240901-G W	280-197532-6	90	
FWGmw-011-240901-G W	280-197532-6		93
	MB 280-670048/1-A	84	
	LCS 280-670048/2-A	87	
	LCSD 280-670048/3-A	82 S1-	

12DNB = 1,2-Dinitrobenzene

QC LIMITS  
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.: 280-197532-2  
 SDG No.: \_\_\_\_\_  
 Matrix: Water Level: Low Lab File ID: 10090012.D  
 Lab ID: LCS 280-670048/2-A Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,3,5-Trinitrobenzene	2.00	1.988	99	73-125	
1,3-Dinitrobenzene	2.00	1.834	92	78-120	
2,4,6-Trinitrotoluene	2.00	1.745	87	71-123	
2,4-Dinitrotoluene	2.00	1.675	84	78-120	
2,6-Dinitrotoluene	2.00	1.760	88	77-127	
2-Amino-4,6-dinitrotoluene	2.00	1.711	86	79-120	
2-Nitrotoluene	2.00	1.372	69	70-127	*-
3-Nitrotoluene	2.00	1.369	68	73-125	*-
4-Amino-2,6-dinitrotoluene	2.00	1.716	86	76-125	
4-Nitrotoluene	2.00	1.412	71	71-127	
HMX	2.00	1.729	86	65-135	
Nitrobenzene	2.00	1.600	80	65-134	
Nitroglycerin	20.0	21.18	106	74-127	
PETN	20.0	19.92	100	73-127	
RDX	2.00	1.909	95	68-130	
Tetryl	2.00	1.862	93	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.: 280-197532-2  
 SDG No.: \_\_\_\_\_  
 Matrix: Water Level: Low Lab File ID: 10090013.D  
 Lab ID: LCSD 280-670048/3-A Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
1,3,5-Trinitrobenzene	2.00	2.005	100	1	20	73-125	
1,3-Dinitrobenzene	2.00	1.864	93	2	20	78-120	
2,4,6-Trinitrotoluene	2.00	1.786	89	2	20	71-123	
2,4-Dinitrotoluene	2.00	1.713	86	2	20	78-120	
2,6-Dinitrotoluene	2.00	1.734	87	1	20	77-127	
2-Amino-4,6-dinitrotoluene	2.00	1.761	88	3	20	79-120	
2-Nitrotoluene	2.00	1.427	71	4	20	70-127	
3-Nitrotoluene	2.00	1.440	72	5	20	73-125	*-
4-Amino-2,6-dinitrotoluene	2.00	1.733	87	1	20	76-125	
4-Nitrotoluene	2.00	1.462	73	3	20	71-127	
HMX	2.00	1.746	87	1	20	65-135	
Nitrobenzene	2.00	1.640	82	2	20	65-134	
Nitroglycerin	20.0	21.18	106	0	20	74-127	
PETN	20.0	20.23	101	2	20	73-127	
RDX	2.00	1.911	96	0	20	68-130	
Tetryl	2.00	1.861	93	0	20	64-128	

# Column to be used to flag recovery and RPD values

FORM IV  
HPLC/IC METHOD BLANK SUMMARY

Lab Name: Eurofins Denver Job No.: 280-197532-2  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: MB 280-670048/1-A  
 Matrix: Water Date Extracted: 10/08/2024 13:10  
 Lab File ID: (1) 10090011.D Lab File ID: (2) \_\_\_\_\_  
 Date Analyzed: (1) 10/09/2024 19:49 Date Analyzed: (2) \_\_\_\_\_  
 Instrument ID: (1) CHHPLC\_X3 Instrument ID: (2) CHHPLC\_X5  
 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 280-670048/2-A	10/09/2024 20:11	
	LCSD 280-670048/3-A	10/09/2024 20:33	
LL1mw-090-240901-GW	280-197532-1	10/09/2024 20:55	
LL1mw-080-240901-GW	280-197532-2	10/09/2024 21:17	10/10/2024 20:13
LL2mw-059-240901-GW	280-197532-3	10/09/2024 21:38	10/10/2024 20:48
LL1mw-081-240901-GW	280-197532-4	10/09/2024 22:00	
FWGmw-010-240901-GW	280-197532-5	10/09/2024 22:22	
FWGmw-011-240901-GW	280-197532-6	10/09/2024 22:44	10/10/2024 21:23

FORM X  
IDENTIFICATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-197532-2  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: LL1mw-080-240901-GW Lab Sample ID: 280-197532-2  
 Instrument ID (1): CHHPLC\_X3 Instrument ID (2): CHHPLC\_X5  
 Date Analyzed (1): 10/09/2024 21:17 Date Analyzed (2): 10/10/2024 20:13  
 GC Column (1): UltraCarb5uODS ID: 4.6(mm) GC Column (2): Luna-phenylh ID: 4.6(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
HMX	1		6.58	6.43	6.73	0.120		10.3
	2		6.28	6.14	6.44	0.109		
RDX	1		7.53	7.36	7.66	0.453		106.9
	2		8.36	8.24	8.54	0.137		
2-Amino-4,6-dinitrotoluene	1		10.89	10.79	10.99	0.137		10.3
	2		16.25	16.10	16.40	0.152		

FORM X  
IDENTIFICATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-197532-2  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: LL2mw-059-240901-GW Lab Sample ID: 280-197532-3  
 Instrument ID (1): CHHPLC\_X3 Instrument ID (2): CHHPLC\_X5  
 Date Analyzed (1): 10/09/2024 21:38 Date Analyzed (2): 10/10/2024 20:48  
 GC Column (1): UltraCarb5uODS ID: 4.6(mm) GC Column (2): Luna-phenylh ID: 4.6(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
1,3,5-Trinitrobenzene	1		8.49	8.34	8.64	1.39		14.8
	2		16.49	16.32	16.62	1.61		
4-Amino-2,6-dinitrotoluene	1		10.67	10.55	10.75	0.645		65.4
	2		15.51	15.36	15.66	1.27		
2-Amino-4,6-dinitrotoluene	1		10.90	10.79	10.99	0.644		18.1
	2		16.25	16.10	16.40	0.537		
2,4-Dinitrotoluene	1		11.19	11.07	11.27	0.311		10.8
	2		18.04	17.88	18.18	0.279		

FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>Eurofins Denver</u>	Job No.: <u>280-197532-2</u>
SDG No.: _____	
Client Sample ID: <u>LL1mw-090-240901-GW</u>	Lab Sample ID: <u>280-197532-1</u>
Matrix: <u>Water</u>	Lab File ID: <u>10090014.D</u>
Analysis Method: <u>8330B</u>	Date Collected: <u>10/02/2024 08:55</u>
Extraction Method: <u>3535</u>	Date Extracted: <u>10/08/2024 13:10</u>
Sample wt/vol: <u>458.5(mL)</u>	Date Analyzed: <u>10/09/2024 20:55</u>
Con. Extract Vol.: <u>5(mL)</u>	Dilution Factor: <u>1</u>
Injection Volume: <u>100(uL)</u>	GC Column: <u>UltraCarb5uODS</u> ID: <u>4.6(mm)</u>
% Moisture: _____ % Solids: _____	GPC Cleanup: (Y/N) <u>N</u>
Cleanup Factor: _____	
Analysis Batch No.: <u>670390</u>	Units: <u>ug/L</u>
Preparation Batch No.: <u>670048</u>	Instrument ID: <u>CHHPLC_X3</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
99-35-4	1,3,5-Trinitrobenzene	ND		0.229	0.0917
99-65-0	1,3-Dinitrobenzene	ND		0.120	0.0402
118-96-7	2,4,6-Trinitrotoluene	ND		0.120	0.0491
121-14-2	2,4-Dinitrotoluene	ND		0.109	0.0299
606-20-2	2,6-Dinitrotoluene	ND		0.109	0.0437
35572-78-2	2-Amino-4,6-dinitrotoluene	ND		0.120	0.0553
88-72-2	2-Nitrotoluene	ND	*-	0.229	0.0932
99-08-1	3-Nitrotoluene	ND	*-	0.436	0.213
19406-51-0	4-Amino-2,6-dinitrotoluene	ND		0.164	0.0629
99-99-0	4-Nitrotoluene	ND		0.447	0.109
2691-41-0	HMX	ND		0.229	0.0955
98-95-3	Nitrobenzene	ND		0.229	0.0992
55-63-0	Nitroglycerin	ND		2.29	1.00
78-11-5	PETN	ND		1.20	0.487
121-82-4	RDX	ND		0.229	0.0562
479-45-8	Tetryl	ND		0.120	0.0347

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	86		83-119

Eurofins Denver  
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241009-138424.b\10090014.D  
 Lims ID: 280-197532-A-1-A  
 Client ID: LL1mw-090-240901-GW  
 Sample Type: Client  
 Inject. Date: 09-Oct-2024 20:55:07 ALS Bottle#: 14 Worklist Smp#: 14  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: 280-197532-A-1-A  
 Operator ID: JZ Instrument ID: CHHPLC\_X3  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X\20241009-138424.b\8330\_X3.m  
 Limit Group: GCSV - 8330  
 Last Update: 10-Oct-2024 12:47:17 Calib Date: 04-Oct-2024 19:55:02  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\10040019.D  
 Column 1 : UltraCarb5uODS (20) ( 4.60 mm) Det: LC DAD1B, 254 nm  
 Process Host: CTX1665

First Level Reviewer: LV5D Date: 10-Oct-2024 11:03:48

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/mL	Flags
4 HMX	1		6.580			ND	U
8 RDX	1		7.513			ND	
\$ 10 1,2-Dinitrobenzene	1	8.383	8.380	0.003	22381	0.1716	M
11 1,3,5-Trinitrobenzene	1		8.487			ND	
12 1,3-Dinitrobenzene	1		9.047			ND	U
13 Nitrobenzene	1		9.366			ND	
15 Tetryl	1		9.693			ND	
16 Nitroglycerin	2		10.140			ND	
17 2,4,6-Trinitrotoluene	1		10.493			ND	
18 4-Amino-2,6-dinitrotoluene	1		10.653			ND	
19 2-Amino-4,6-dinitrotoluene	1		10.886			ND	
20 2,6-Dinitrotoluene	1		11.020			ND	
21 2,4-Dinitrotoluene	1		11.173			ND	
22 o-Nitrotoluene	1		11.873			ND	
23 p-Nitrotoluene	1		12.246			ND	
24 m-Nitrotoluene	1		12.753			ND	
25 PETN	2		13.840			ND	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

U - Marked Undetected

Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc\_x\20241009-138424.b\10090014.d

Injection Date: 09-Oct-2024 20:55:07

Instrument ID: CHHPLC\_X3

Operator ID: JZ

Lims ID: 280-197532-A-1-A

Lab Sample ID: 280-197532-1

Worklist Smp#: 14

Client ID: LL1mw-090-240901-GW

Injection Vol: 100.0 ul

Dil. Factor: 1.0000

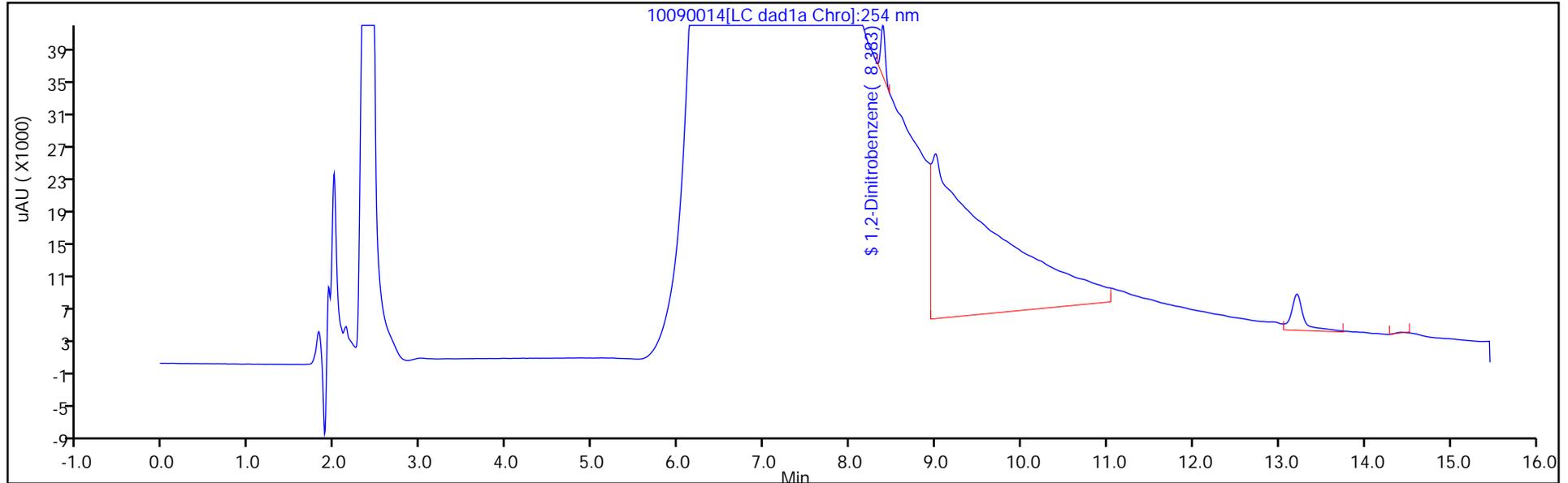
ALS Bottle#: 14

Method: 8330\_X3

Limit Group: GCSV - 8330

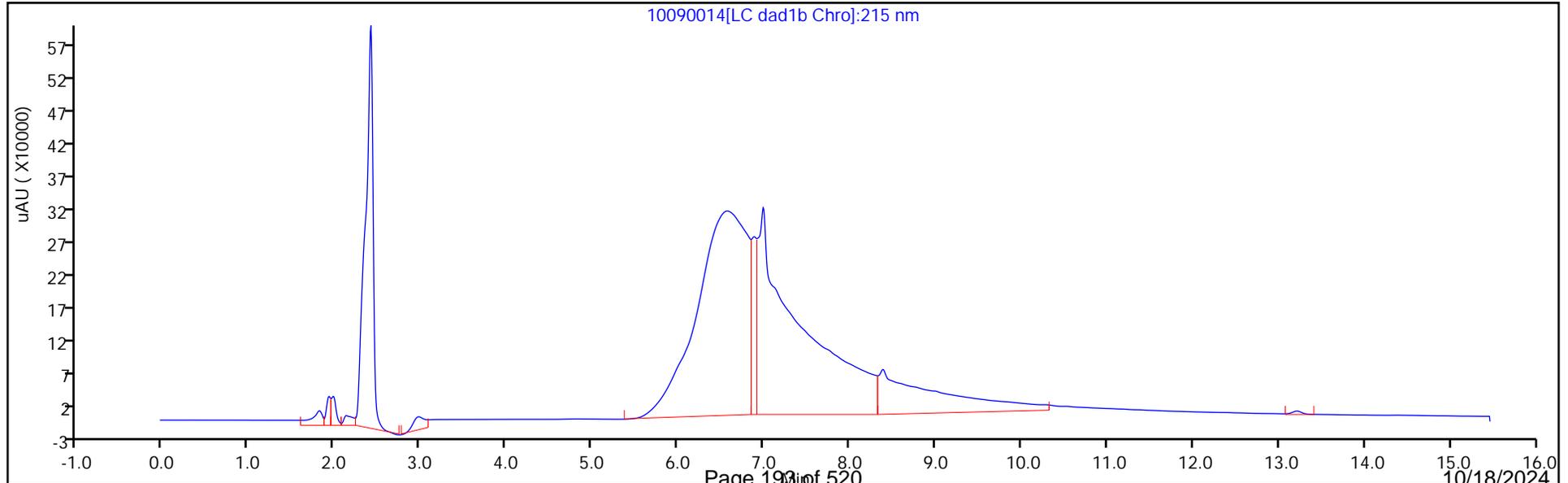
Column: UltraCarb5uODS (20) ( 4.60 mm)

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\20241009-138424.b\10090014.D  
 Lims ID: 280-197532-A-1-A  
 Client ID: LL1mw-090-240901-GW  
 Sample Type: Client  
 Inject. Date: 09-Oct-2024 20:55:07 ALS Bottle#: 14 Worklist Smp#: 14  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: 280-197532-A-1-A  
 Operator ID: JZ Instrument ID: CHHPLC\_X3  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X\20241009-138424.b\8330\_X3.m  
 Limit Group: GCSV - 8330  
 Last Update: 10-Oct-2024 12:47:17 Calib Date: 04-Oct-2024 19:55:02  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\10040019.D  
 Column 1 : UltraCarb5uODS (20) ( 4.60 mm) Det: LC DAD1B, 254 nm  
 Process Host: CTX1665

First Level Reviewer: LV5D Date: 10-Oct-2024 11:03:48

Compound	Amount Added	Amount Recovered	% Rec.
\$ 10 1,2-Dinitrobenzene	0.2000	0.1716	85.81

Eurofins Denver

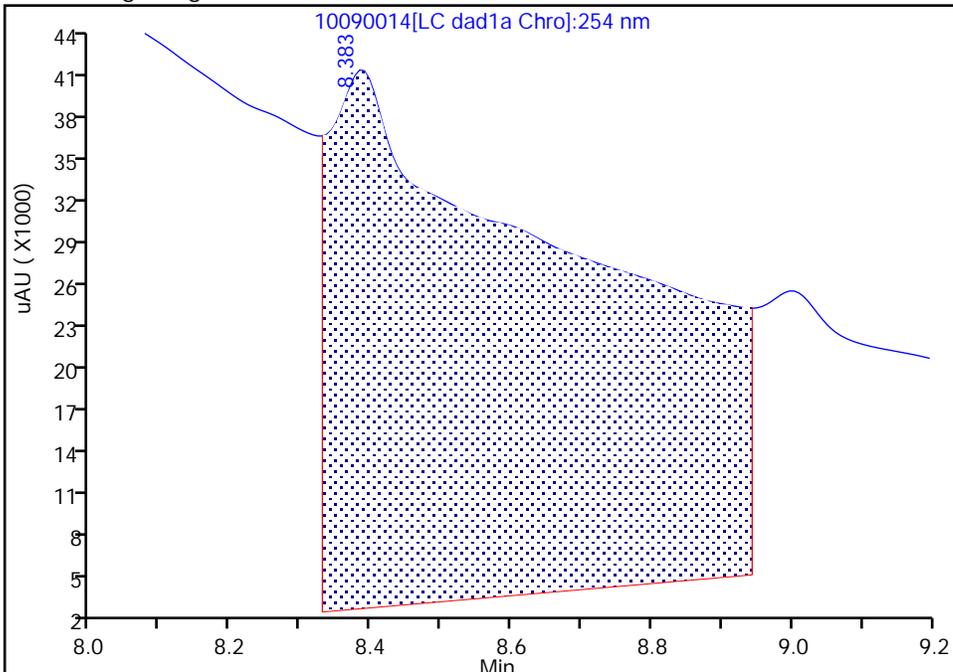
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Injection Date: 09-Oct-2024 20:55:07 Instrument ID: CHHPLC\_X3  
Lims ID: 280-197532-A-1-A Lab Sample ID: 280-197532-1  
Client ID: LL1mw-090-240901-GW  
Operator ID: JZ ALS Bottle#: 14 Worklist Smp#: 14  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

**\$ 10 1,2-Dinitrobenzene, CAS: 528-29-0**

Signal: 1

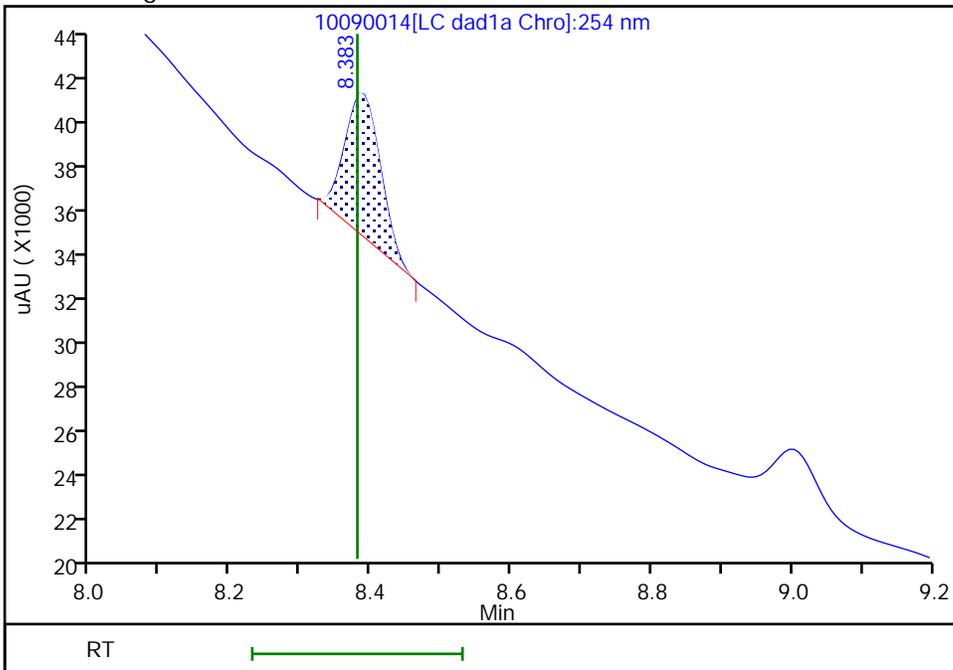
RT: 8.38  
Area: 960593  
Amount: 7.365958  
Amount Units: ug/mL

Processing Integration Results



RT: 8.38  
Area: 22381  
Amount: 0.171621  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 10-Oct-2024 11:03:47 -06:00:00 (UTC)

Audit Action: Manually Integrated

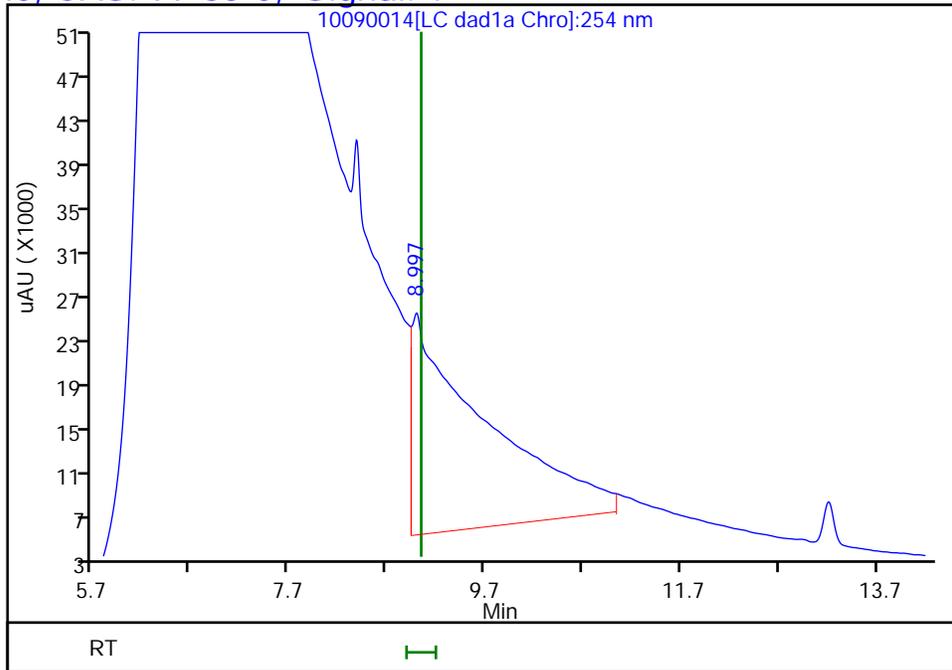
Audit Reason: Baseline

Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc\_x\20241009-138424.b\10090014.d  
Injection Date: 09-Oct-2024 20:55:07 Instrument ID: CHHPLC\_X3  
Lims ID: 280-197532-A-1-A Lab Sample ID: 280-197532-1  
Client ID: LL1mw-090-240901-GW  
Operator ID: JZ 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

12 1,3-Dinitrobenzene, CAS: 99-65-0, Signal: 1

RT: 9.00  
Response: 1042246  
Amount: 3.494750



Reviewer: LV5D, 10-Oct-2024 11:03:48

Audit Action: Marked Compound Undetected

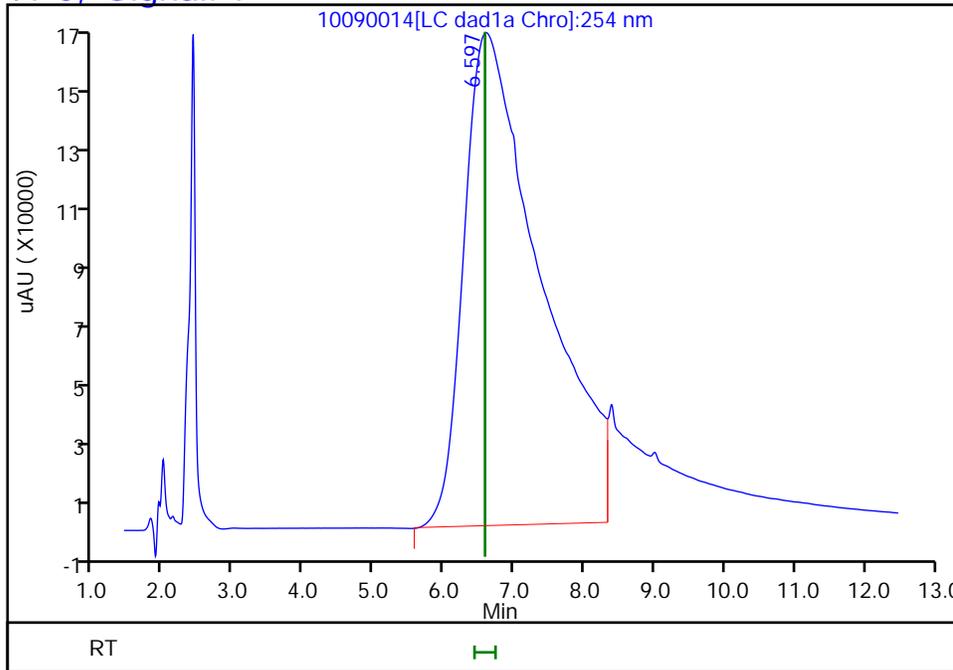
Audit Reason: Invalid Compound ID

Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc\_x\20241009-138424.b\10090014.d  
Injection Date: 09-Oct-2024 20:55:07 Instrument ID: CHHPLC\_X3  
Lims ID: 280-197532-A-1-A Lab Sample ID: 280-197532-1  
Client ID: LL1mw-090-240901-GW  
Operator ID: JZ 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

RT: 6.60  
Response: 12340418  
Amount: 127.6776



Reviewer: LV5D, 10-Oct-2024 11:03:48

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>Eurofins Denver</u>	Job No.: <u>280-197532-2</u>
SDG No.: _____	
Client Sample ID: <u>LL1mw-080-240901-GW</u>	Lab Sample ID: <u>280-197532-2</u>
Matrix: <u>Water</u>	Lab File ID: <u>10090015.D</u>
Analysis Method: <u>8330B</u>	Date Collected: <u>10/02/2024 10:08</u>
Extraction Method: <u>3535</u>	Date Extracted: <u>10/08/2024 13:10</u>
Sample wt/vol: <u>451.7(mL)</u>	Date Analyzed: <u>10/09/2024 21:17</u>
Con. Extract Vol.: <u>5(mL)</u>	Dilution Factor: <u>1</u>
Injection Volume: <u>100(uL)</u>	GC Column: <u>UltraCarb5uODS ID: 4.6(mm)</u>
% Moisture: _____ % Solids: _____	GPC Cleanup: (Y/N) <u>N</u>
Cleanup Factor: _____	
Analysis Batch No.: <u>670390</u>	Units: <u>ug/L</u>
Preparation Batch No.: <u>670048</u>	Instrument ID: <u>CHHPLC_X3</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
99-35-4	1,3,5-Trinitrobenzene	ND		0.232	0.0931
118-96-7	2,4,6-Trinitrotoluene	ND		0.122	0.0498
121-14-2	2,4-Dinitrotoluene	ND		0.111	0.0303
606-20-2	2,6-Dinitrotoluene	ND		0.111	0.0444
35572-78-2	2-Amino-4,6-dinitrotoluene	0.137		0.122	0.0561
88-72-2	2-Nitrotoluene	ND	*-	0.232	0.0946
99-08-1	3-Nitrotoluene	ND	*-	0.443	0.216
99-99-0	4-Nitrotoluene	ND		0.454	0.111
2691-41-0	HMX	0.120	J	0.232	0.0970
98-95-3	Nitrobenzene	ND		0.232	0.101
55-63-0	Nitroglycerin	ND		2.32	1.02
78-11-5	PETN	ND		1.22	0.495
479-45-8	Tetryl	ND		0.122	0.0352

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	82	S1-	83-119

Eurofins Denver  
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241009-138424.b\10090015.D  
 Lims ID: 280-197532-A-2-A  
 Client ID: LL1mw-080-240901-GW  
 Sample Type: Client  
 Inject. Date: 09-Oct-2024 21:17:02 ALS Bottle#: 15 Worklist Smp#: 15  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: 280-197532-A-2-A  
 Operator ID: JZ Instrument ID: CHHPLC\_X3  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X\20241009-138424.b\8330\_X3.m  
 Limit Group: GCSV - 8330  
 Last Update: 10-Oct-2024 12:47:17 Calib Date: 04-Oct-2024 19:55:02  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\10040019.D  
 Column 1 : UltraCarb5uODS (20) ( 4.60 mm) Det: LC DAD1B, 254 nm  
 Process Host: CTX1665

First Level Reviewer: LV5D Date: 10-Oct-2024 11:25:37

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/mL	Flags
4 HMX	1	6.584	6.580	0.004	1052	0.0109	M
8 RDX	1	7.531	7.513	0.018	4461	0.0409	M
\$ 10 1,2-Dinitrobenzene	1	8.391	8.380	0.011	21424	0.1643	M
11 1,3,5-Trinitrobenzene	1		8.487			ND	U
12 1,3-Dinitrobenzene	1	9.004	9.047	-0.043	7548	0.0253	M
13 Nitrobenzene	1		9.366			ND	
15 Tetryl	1		9.693			ND	U
16 Nitroglycerin	2		10.140			ND	
17 2,4,6-Trinitrotoluene	1		10.493			ND	
18 4-Amino-2,6-dinitrotoluene	1	10.664	10.653	0.011	4726	0.0285	
19 2-Amino-4,6-dinitrotoluene	1	10.891	10.886	0.005	2535	0.0124	
20 2,6-Dinitrotoluene	1		11.020			ND	
21 2,4-Dinitrotoluene	1		11.173			ND	
22 o-Nitrotoluene	1		11.873			ND	
23 p-Nitrotoluene	1		12.246			ND	7
24 m-Nitrotoluene	1		12.753			ND	
25 PETN	2		13.840			ND	

**QC Flag Legend**

Processing Flags

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

U - Marked Undetected

Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc\_x\20241009-138424.b\10090015.d

Injection Date: 09-Oct-2024 21:17:02

Instrument ID: CHHPLC\_X3

Operator ID: JZ

Lims ID: 280-197532-A-2-A

Lab Sample ID: 280-197532-2

Worklist Smp#: 15

Client ID: LL1mw-080-240901-GW

Injection Vol: 100.0 ul

Dil. Factor: 1.0000

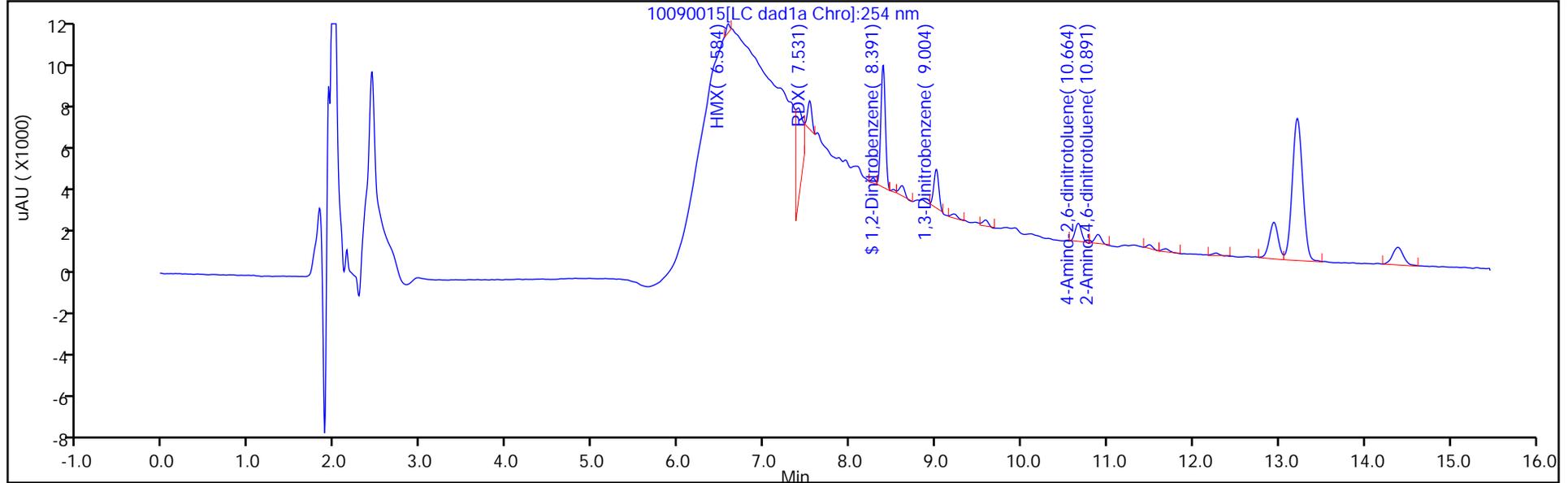
ALS Bottle#: 15

Method: 8330\_X3

Limit Group: GCSV - 8330

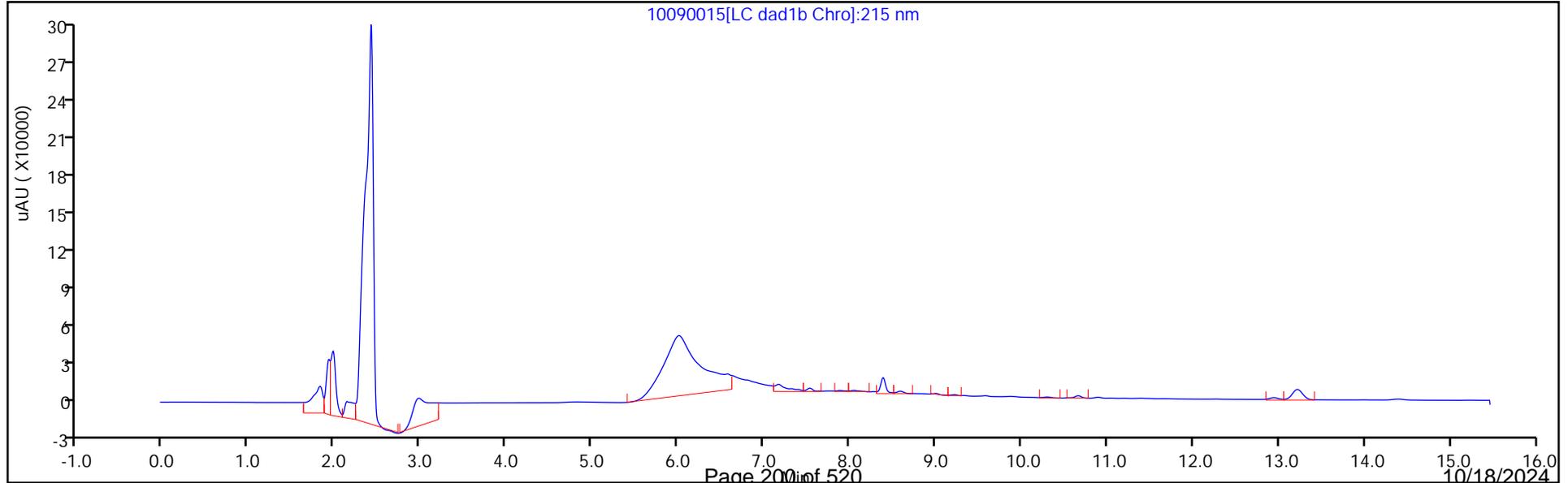
Column: UltraCarb5uODS (20) ( 4.60 mm)

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\20241009-138424.b\10090015.D  
 Lims ID: 280-197532-A-2-A  
 Client ID: LL1mw-080-240901-GW  
 Sample Type: Client  
 Inject. Date: 09-Oct-2024 21:17:02 ALS Bottle#: 15 Worklist Smp#: 15  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: 280-197532-A-2-A  
 Operator ID: JZ Instrument ID: CHHPLC\_X3  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X\20241009-138424.b\8330\_X3.m  
 Limit Group: GCSV - 8330  
 Last Update: 10-Oct-2024 12:47:17 Calib Date: 04-Oct-2024 19:55:02  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\10040019.D  
 Column 1 : UltraCarb5uODS (20) ( 4.60 mm) Det: LC DAD1B, 254 nm  
 Process Host: CTX1665

First Level Reviewer: LV5D Date: 10-Oct-2024 11:25:37

Compound	Amount Added	Amount Recovered	% Rec.
\$ 10 1,2-Dinitrobenzene	0.2000	0.1643	82.14

Eurofins Denver

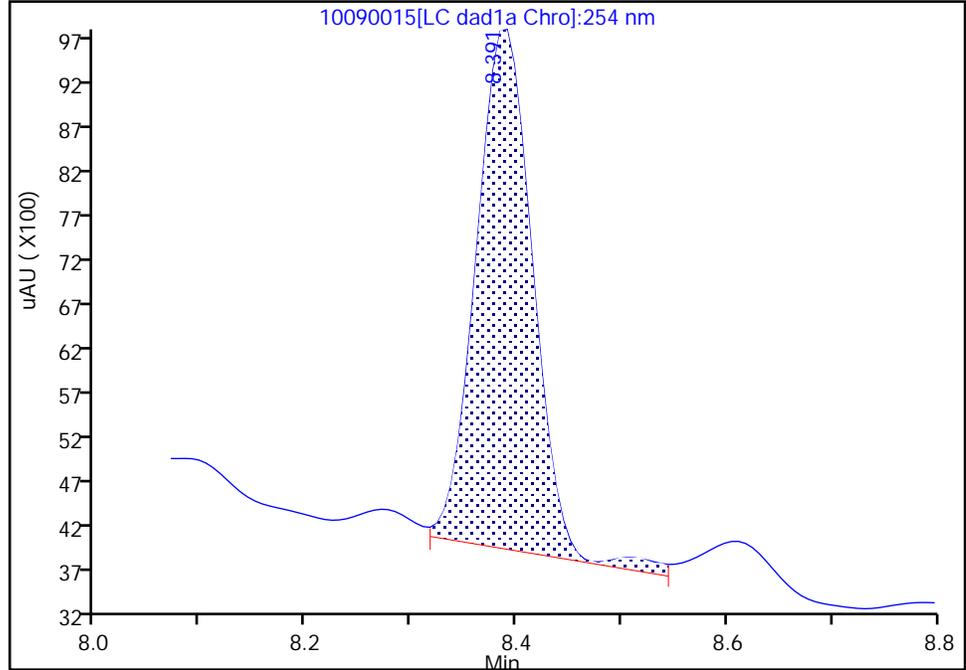
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241009-138424.b\10090015.d  
Injection Date: 09-Oct-2024 21:17:02 Instrument ID: CHHPLC\_X3  
Lims ID: 280-197532-A-2-A Lab Sample ID: 280-197532-2  
Client ID: LL1mw-080-240901-GW  
Operator ID: JZ ALS Bottle#: 15 Worklist Smp#: 15  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

\$ 10 1,2-Dinitrobenzene, CAS: 528-29-0

Signal: 1

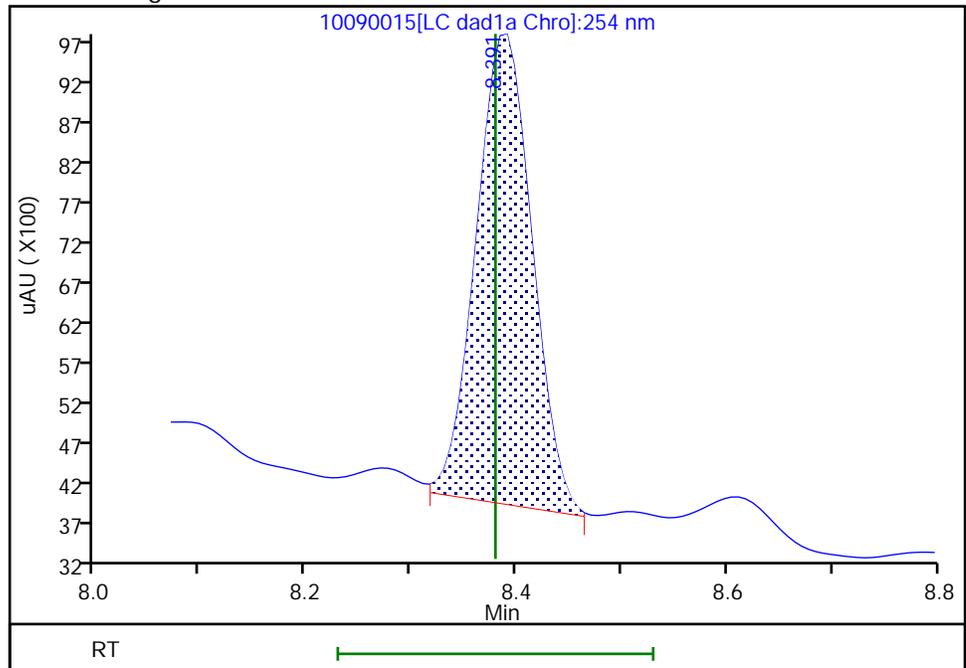
RT: 8.39  
Area: 21897  
Amount: 0.167909  
Amount Units: ug/mL

Processing Integration Results



RT: 8.39  
Area: 21424  
Amount: 0.164282  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 10-Oct-2024 11:25:28 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak

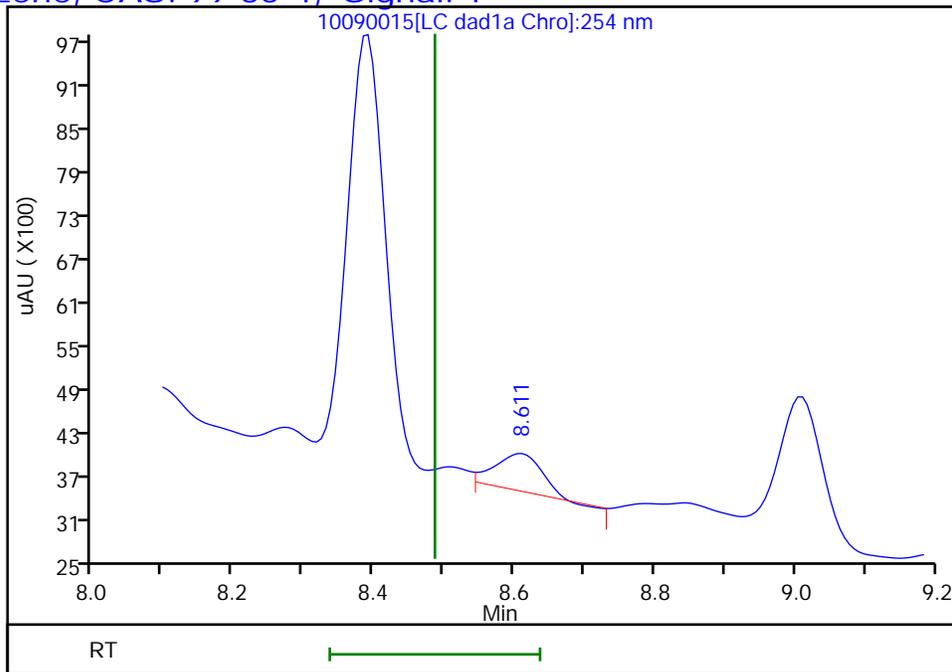
Audit Reason: Baseline

Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc\_x\20241009-138424.b\10090015.d  
Injection Date: 09-Oct-2024 21:17:02 Instrument ID: CHHPLC\_X3  
Lims ID: 280-197532-A-2-A Lab Sample ID: 280-197532-2  
Client ID: LL1mw-080-240901-GW  
Operator ID: JZ 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

11 1,3,5-Trinitrobenzene, CAS: 99-35-4, Signal: 1

RT: 8.61  
Response: 2451  
Amount: 0.011277



Reviewer: LV5D, 10-Oct-2024 11:25:37

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

Eurofins Denver

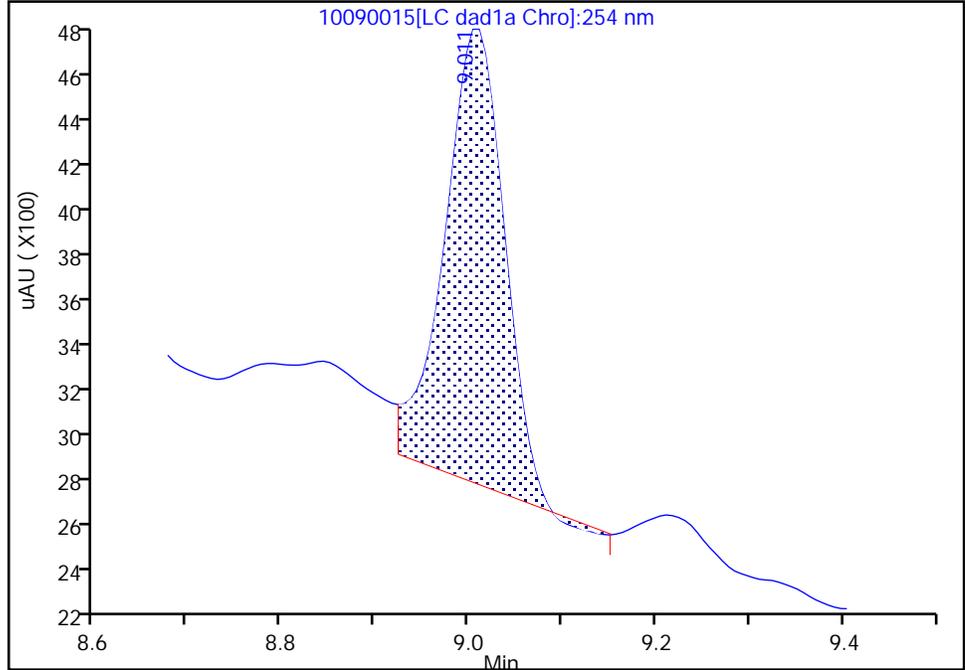
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241009-138424.b\10090015.d  
Injection Date: 09-Oct-2024 21:17:02 Instrument ID: CHHPLC\_X3  
Lims ID: 280-197532-A-2-A Lab Sample ID: 280-197532-2  
Client ID: LL1mw-080-240901-GW  
Operator ID: JZ ALS Bottle#: 15 Worklist Smp#: 15  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

12 1,3-Dinitrobenzene, CAS: 99-65-0

Signal: 1

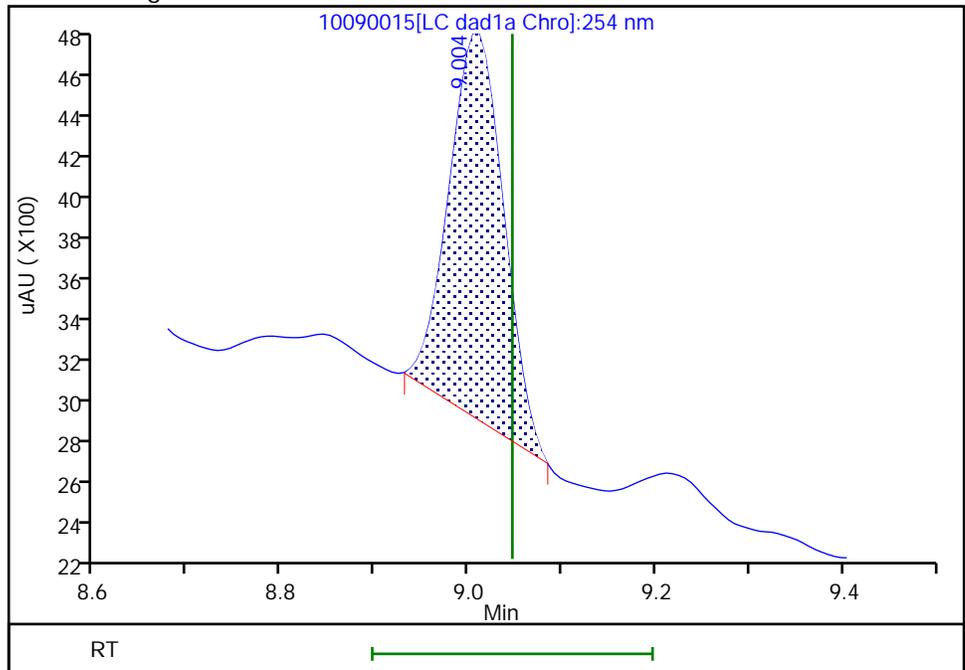
RT: 9.01  
Area: 8973  
Amount: 0.030087  
Amount Units: ug/mL

Processing Integration Results



RT: 9.00  
Area: 7548  
Amount: 0.025309  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 10-Oct-2024 11:25:33 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins Denver

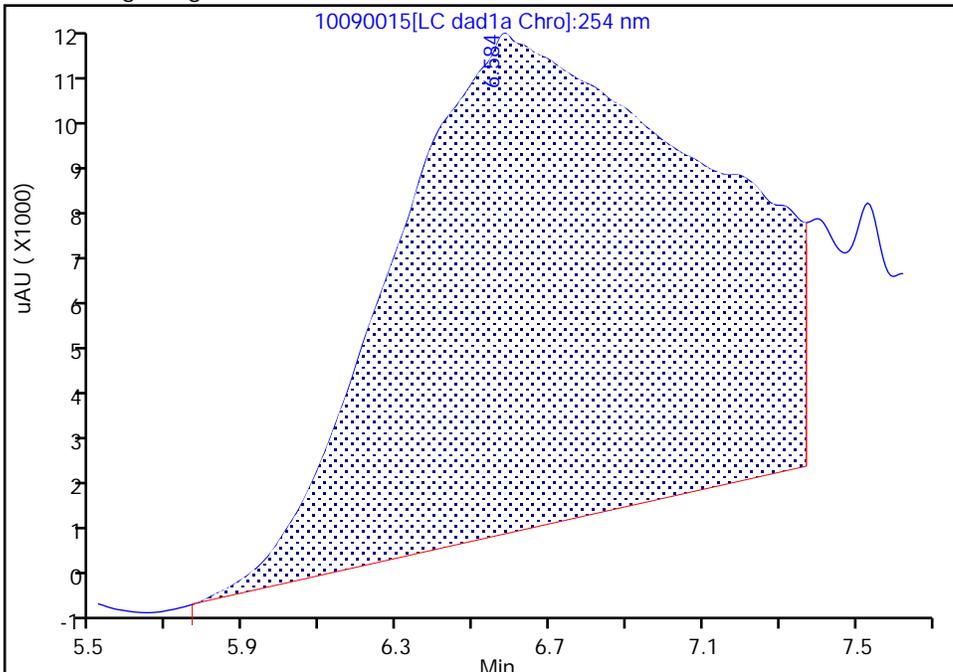
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241009-138424.b\10090015.d  
Injection Date: 09-Oct-2024 21:17:02 Instrument ID: CHHPLC\_X3  
Lims ID: 280-197532-A-2-A Lab Sample ID: 280-197532-2  
Client ID: LL1mw-080-240901-GW  
Operator ID: JZ ALS Bottle#: 15 Worklist Smp#: 15  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

4 HMX, CAS: 2691-41-0

Signal: 1

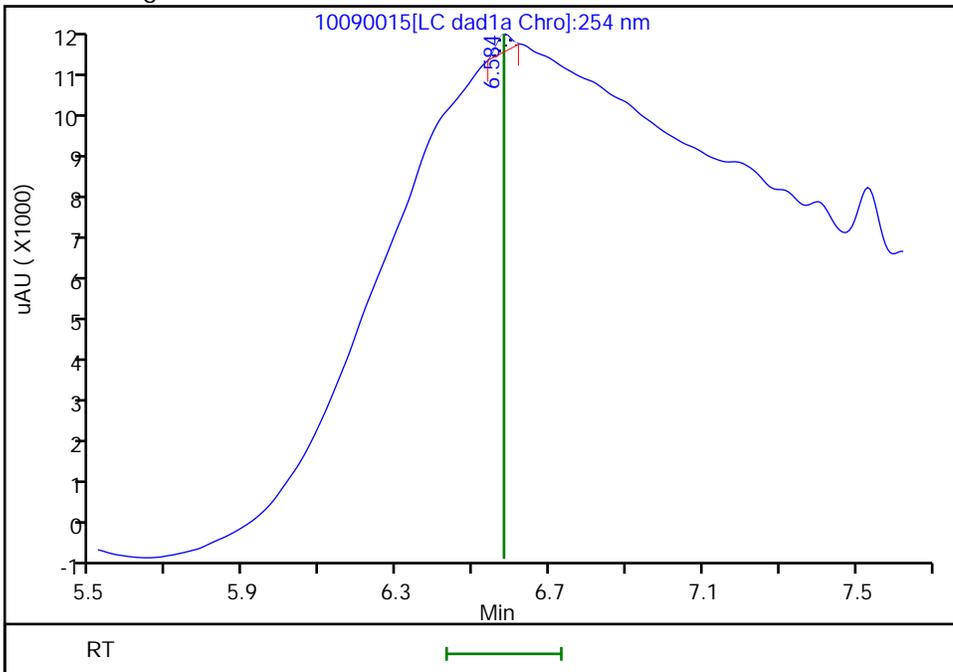
RT: 6.58  
Area: 600868  
Amount: 6.216759  
Amount Units: ug/mL

Processing Integration Results



RT: 6.58  
Area: 1052  
Amount: 0.010884  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 10-Oct-2024 11:25:20 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins Denver

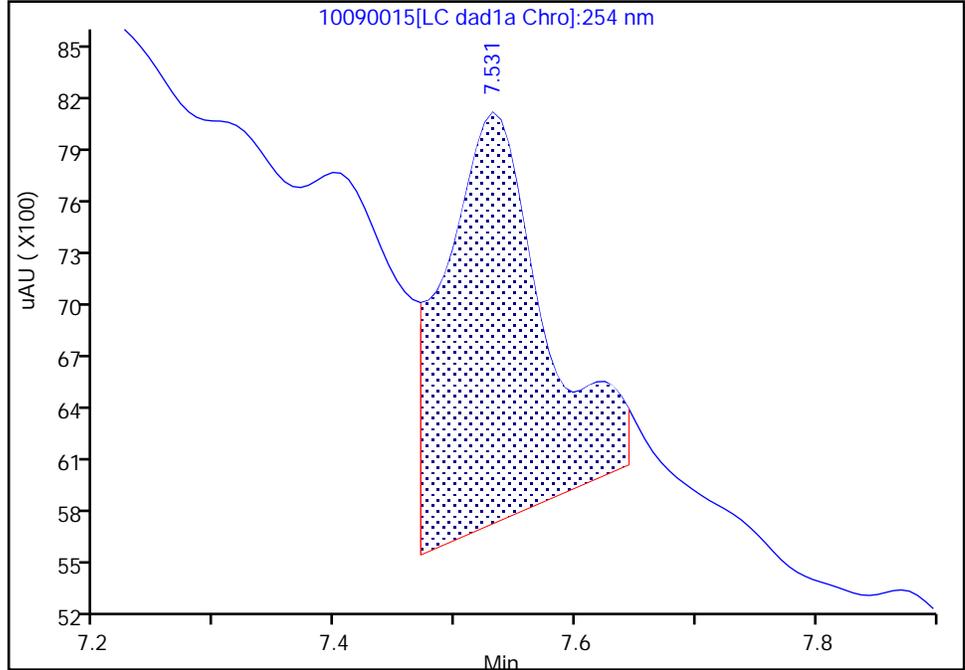
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241009-138424.b\10090015.d  
Injection Date: 09-Oct-2024 21:17:02 Instrument ID: CHHPLC\_X3  
Lims ID: 280-197532-A-2-A Lab Sample ID: 280-197532-2  
Client ID: LL1mw-080-240901-GW  
Operator ID: JZ ALS Bottle#: 15 Worklist Smp#: 15  
Injection Vol: 100.0 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

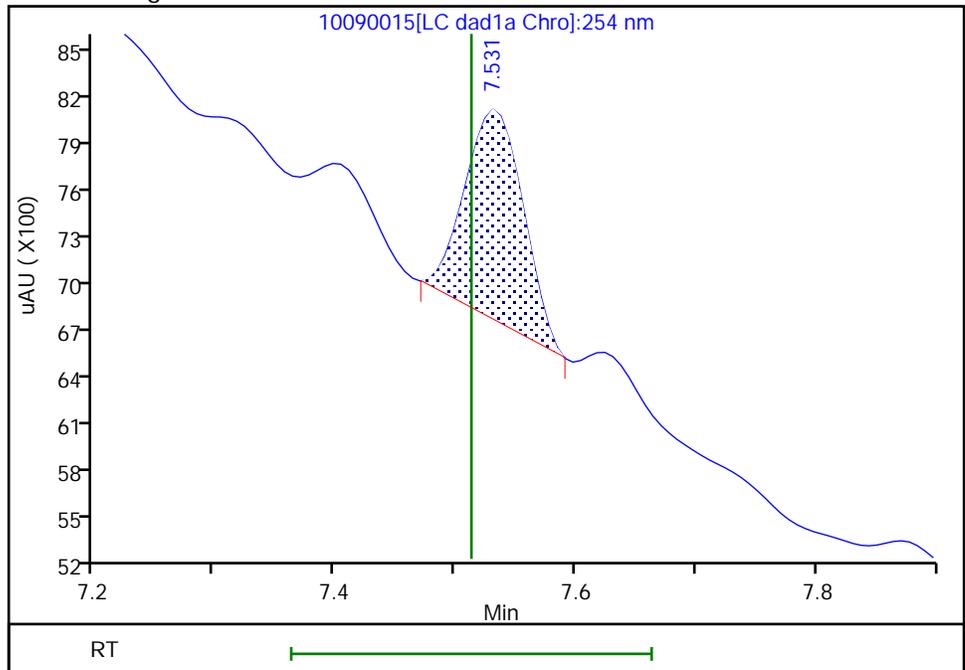
RT: 7.53  
Area: 13396  
Amount: 0.126130  
Amount Units: ug/mL

Processing Integration Results



RT: 7.53  
Area: 4461  
Amount: 0.040899  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 10-Oct-2024 11:25:24 -06:00:00 (UTC)

Audit Action: Manually Integrated

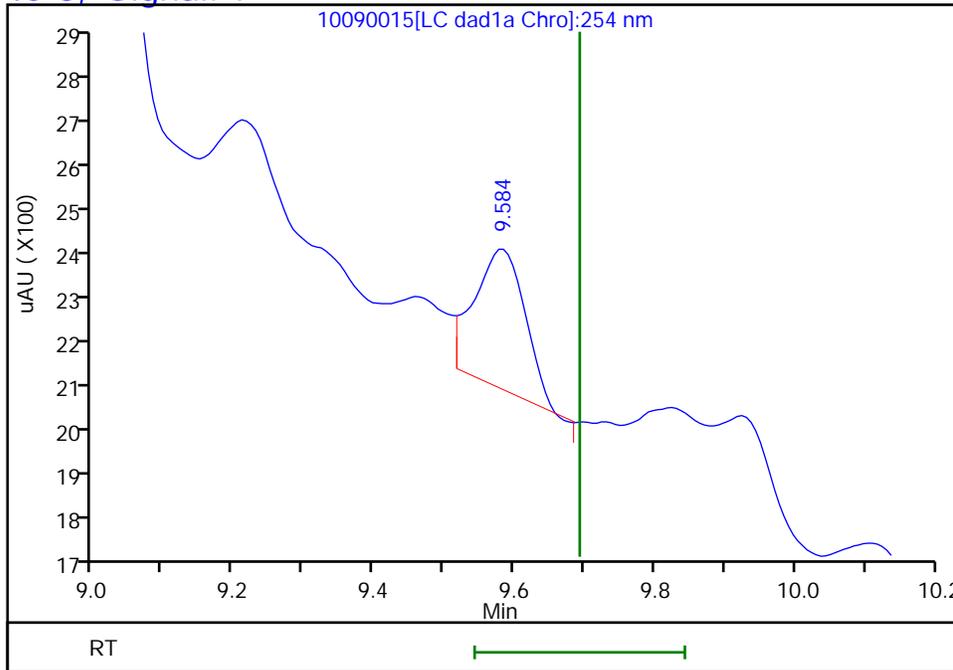
Audit Reason: Baseline

Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc\_x\20241009-138424.b\10090015.d  
Injection Date: 09-Oct-2024 21:17:02 Instrument ID: CHHPLC\_X3  
Lims ID: 280-197532-A-2-A Lab Sample ID: 280-197532-2  
Client ID: LL1mw-080-240901-GW  
Operator ID: JZ 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

15 Tetryl, CAS: 479-45-8, Signal: 1

RT: 9.58  
Response: 1579  
Amount: 0.009903



Reviewer: LV5D, 10-Oct-2024 11:25:37

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>Eurofins Denver</u>	Job No.: <u>280-197532-2</u>
SDG No.: _____	
Client Sample ID: <u>LL1mw-080-240901-GW</u>	Lab Sample ID: <u>280-197532-2</u>
Matrix: <u>Water</u>	Lab File ID: <u>10100014.D</u>
Analysis Method: <u>8330B</u>	Date Collected: <u>10/02/2024 10:08</u>
Extraction Method: <u>3535</u>	Date Extracted: <u>10/08/2024 13:10</u>
Sample wt/vol: <u>451.7(mL)</u>	Date Analyzed: <u>10/10/2024 20:13</u>
Con. Extract Vol.: <u>5(mL)</u>	Dilution Factor: <u>1</u>
Injection Volume: <u>100(uL)</u>	GC Column: <u>Luna-phenylhex</u> ID: <u>4.6(mm)</u>
% Moisture: _____ % Solids: _____	GPC Cleanup: (Y/N) <u>N</u>
Cleanup Factor: _____	
Analysis Batch No.: <u>670528</u>	Units: <u>ug/L</u>
Preparation Batch No.: <u>670048</u>	Instrument ID: <u>CHHPLC_X5</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
99-65-0	1,3-Dinitrobenzene	ND		0.122	0.0408
19406-51-0	4-Amino-2,6-dinitrotoluene	ND	B	0.166	0.0639
121-82-4	RDX	0.137	J p P	0.232	0.0570

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	85		83-119

Eurofins Denver  
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20241010-138456.b\10100014.D  
 Lims ID: 280-197532-A-2-A  
 Client ID: LL1mw-080-240901-GW  
 Sample Type: Client  
 Inject. Date: 10-Oct-2024 20:13:21 ALS Bottle#: 14 Worklist Smp#: 14  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: 280-197532-A-2-A  
 Operator ID: JZ Instrument ID: CHHPLC\_X5  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X5\20241010-138456.b\8330\_X5\_Luna.m  
 Limit Group: GCSV - 8330  
 Last Update: 11-Oct-2024 15:56:55 Calib Date: 11-Aug-2024 06:16:04  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100027.D  
 Column 1 : Luna-Phenyl hexyl ( 4.60 mm) Det: LC mwd1A, 254 nm  
 Process Host: CTX1619

First Level Reviewer: LV5D

Date: 11-Oct-2024 15:48:57

Compound	Det	RT (min.)	Exp RT (min.)	Diff RT (min.)	Response	OnCol Amt ug/ml	Flags
5 HMX	1	6.279	6.287	-0.008	1770	0.009815	M
8 RDX	1	8.359	8.393	-0.034	2734	0.0124	
9 Nitrobenzene	1		10.953			ND	7
\$ 10 1,2-Dinitrobenzene	1	11.759	11.767	-0.008	44420	0.1692	
12 1,3-Dinitrobenzene	1		13.780			ND	7
13 Nitroglycerin	2		14.420			ND	7
14 o-Nitrotoluene	1		14.960			ND	
16 p-Nitrotoluene	1		15.187			ND	U
17 4-Amino-2,6-dinitrotoluene	1		15.513			ND	U
18 m-Nitrotoluene	1		16.007			ND	
19 2-Amino-4,6-dinitrotoluene	1	16.252	16.247	0.005	5352	0.0137	M
20 1,3,5-Trinitrobenzene	1	16.499	16.473	0.026	13080	0.0309	M
21 2,6-Dinitrotoluene	1		17.607			ND	7
22 2,4-Dinitrotoluene	1		18.033			ND	
23 Tetryl	1		21.013			ND	
24 2,4,6-Trinitrotoluene	1		21.900			ND	
25 PETN	2		23.353			ND	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

U - Marked Undetected

Report Date: 11-Oct-2024 15:57:00

Chrom Revision: 2.3 24-Sep-2024 15:19:46

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20241010-138456.b\10100014.D

Injection Date: 10-Oct-2024 20:13:21

Instrument ID: CHHPLC\_X5

Operator ID: JZ

Lims ID: 280-197532-A-2-A

Lab Sample ID: 280-197532-2

Worklist Smp#: 14

Client ID: LL1mw-080-240901-GW

Injection Vol: 100.0 ul

Dil. Factor: 1.0000

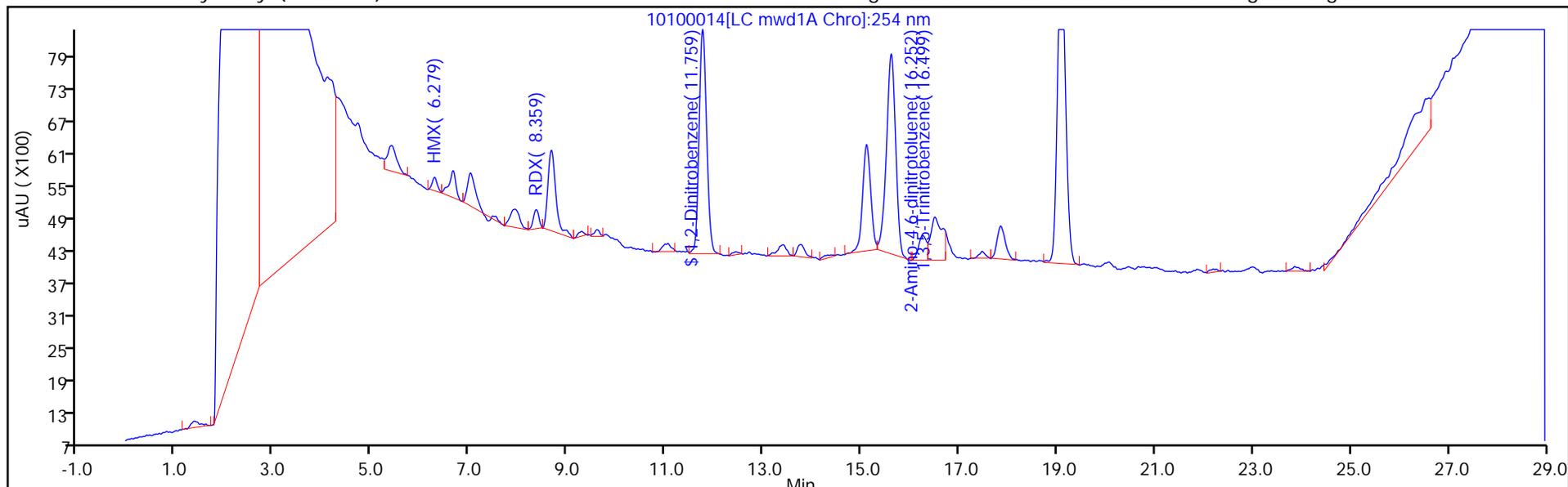
ALS Bottle#: 14

Method: 8330\_X5\_Luna

Limit Group: GCSV - 8330

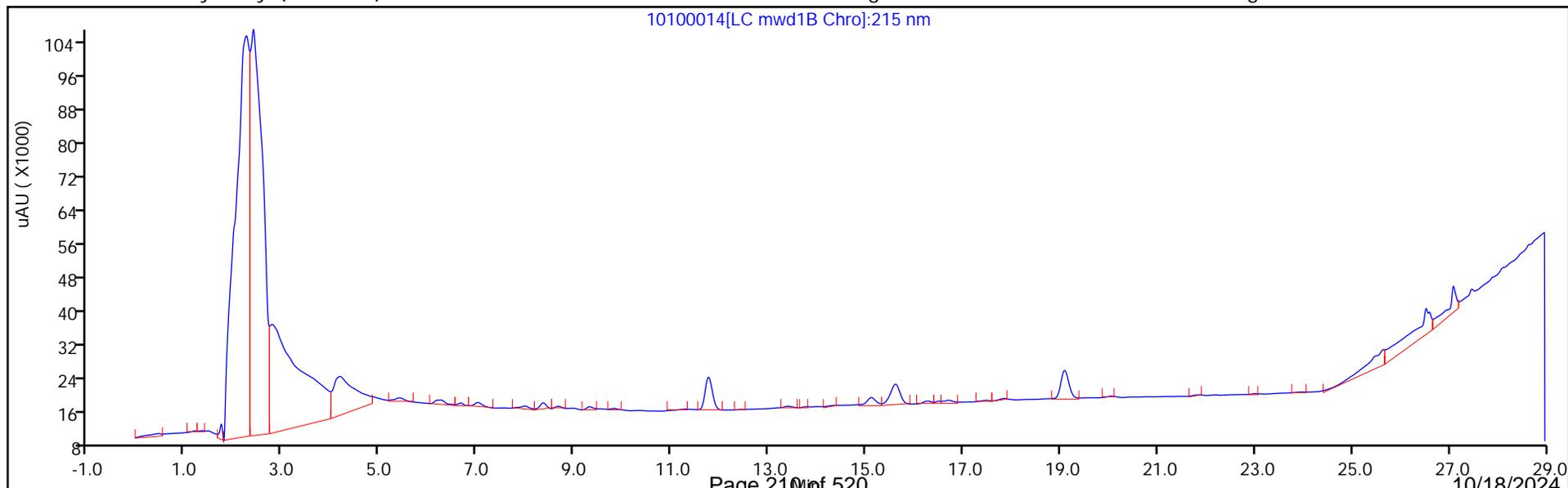
Column: Luna-Phenyl hexyl ( 4.60 mm)

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\CHHPLC\_X5\20241010-138456.b\10100014.D  
 Lims ID: 280-197532-A-2-A  
 Client ID: LL1mw-080-240901-GW  
 Sample Type: Client  
 Inject. Date: 10-Oct-2024 20:13:21 ALS Bottle#: 14 Worklist Smp#: 14  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: 280-197532-A-2-A  
 Operator ID: JZ Instrument ID: CHHPLC\_X5  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X5\20241010-138456.b\8330\_X5\_Luna.m  
 Limit Group: GCSV - 8330  
 Last Update: 11-Oct-2024 15:56:55 Calib Date: 11-Aug-2024 06:16:04  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100027.D  
 Column 1 : Luna-Phenyl hexyl ( 4.60 mm) Det: LC mwd1A, 254 nm  
 Process Host: CTX1619

First Level Reviewer: LV5D

Date: 11-Oct-2024 15:48:57

Compound	Amount Added	Amount Recovered	% Rec.
\$ 10 1,2-Dinitrobenzene	0.2000	0.1692	84.61

Eurofins Denver

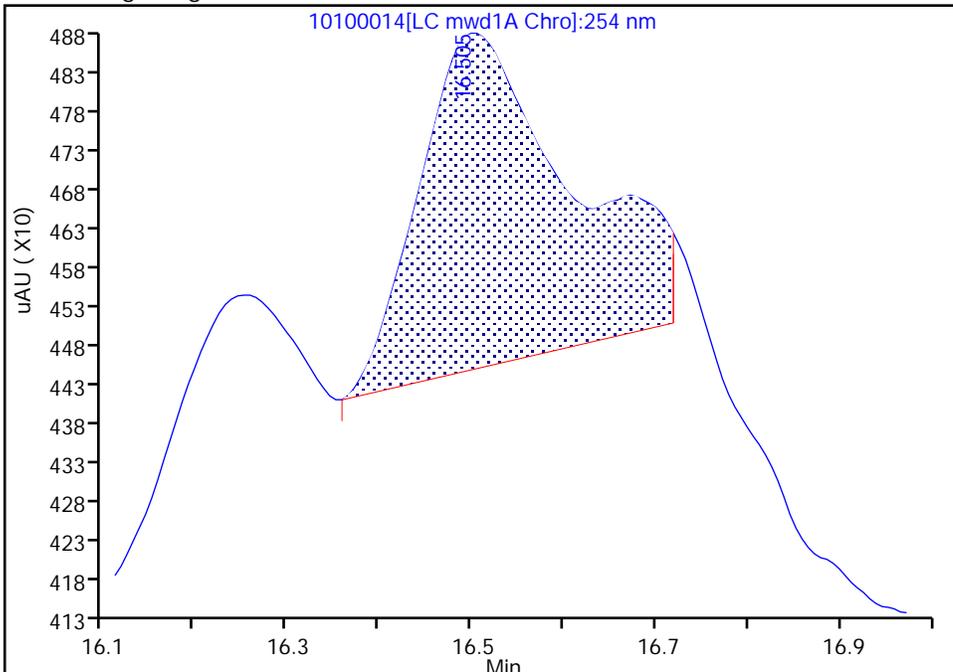
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Injection Date: 10-Oct-2024 20:13:21 Instrument ID: CHHPLC\_X5  
Lims ID: 280-197532-A-2-A Lab Sample ID: 280-197532-2  
Client ID: LL1mw-080-240901-GW  
Operator ID: JZ ALS Bottle#: 14 Worklist Smp#: 14  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

20 1,3,5-Trinitrobenzene, CAS: 99-35-4

Signal: 1

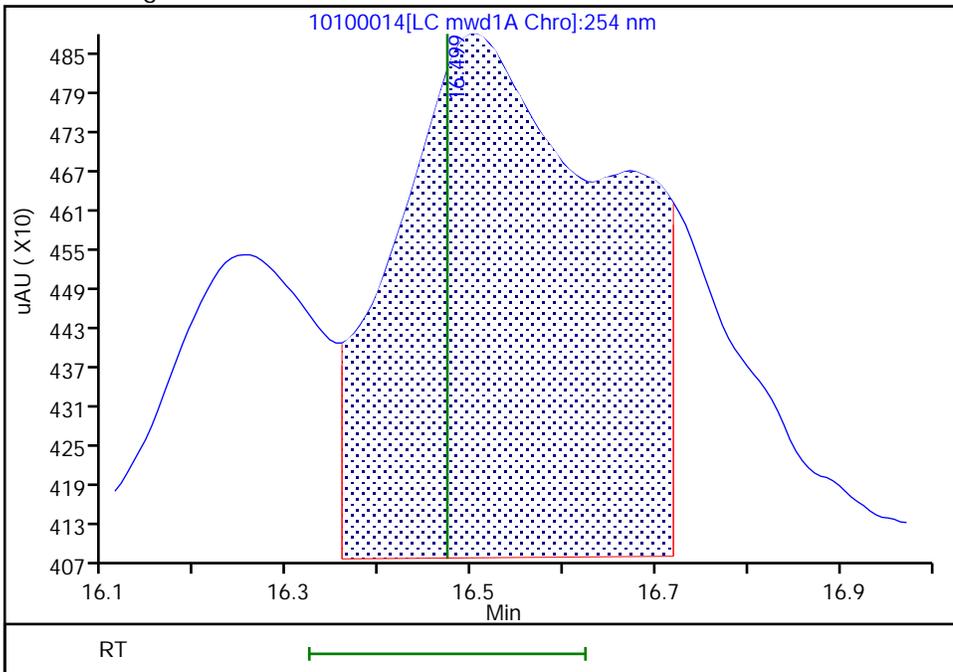
RT: 16.51  
Area: 4937  
Amount: 0.011650  
Amount Units: ug/ml

Processing Integration Results



RT: 16.50  
Area: 13080  
Amount: 0.030864  
Amount Units: ug/ml

Manual Integration Results



Reviewer: LV5D, 11-Oct-2024 15:48:55 -06:00:00 (UTC)

Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Denver

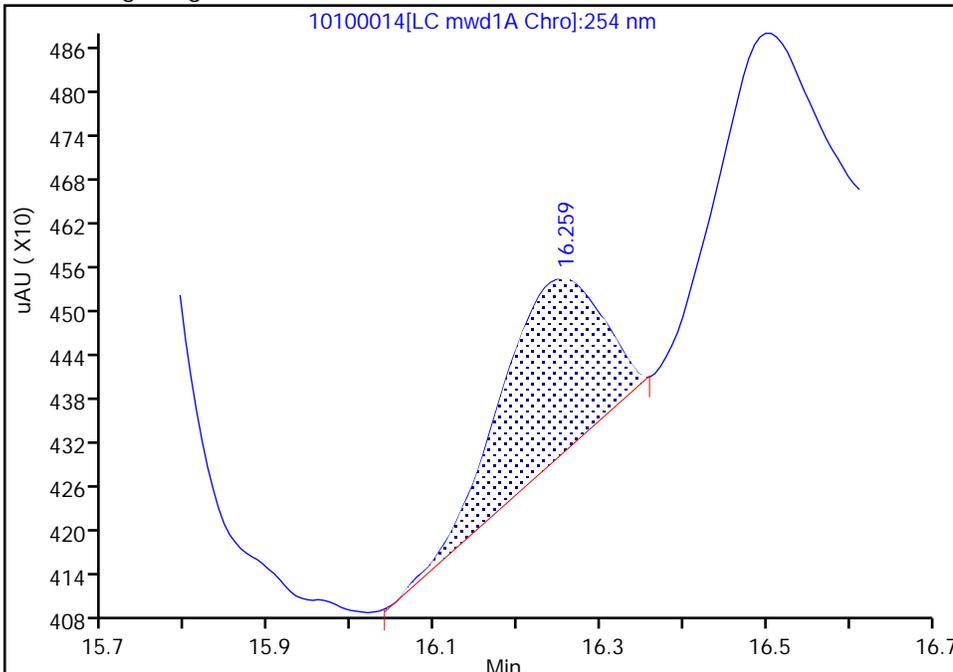
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20241010-138456.b\10100014.D  
Injection Date: 10-Oct-2024 20:13:21 Instrument ID: CHHPLC\_X5  
Lims ID: 280-197532-A-2-A Lab Sample ID: 280-197532-2  
Client ID: LL1mw-080-240901-GW  
Operator ID: JZ ALS Bottle#: 14 Worklist Smp#: 14  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

19 2-Amino-4,6-dinitrotoluene, CAS: 35572-78-2

Signal: 1

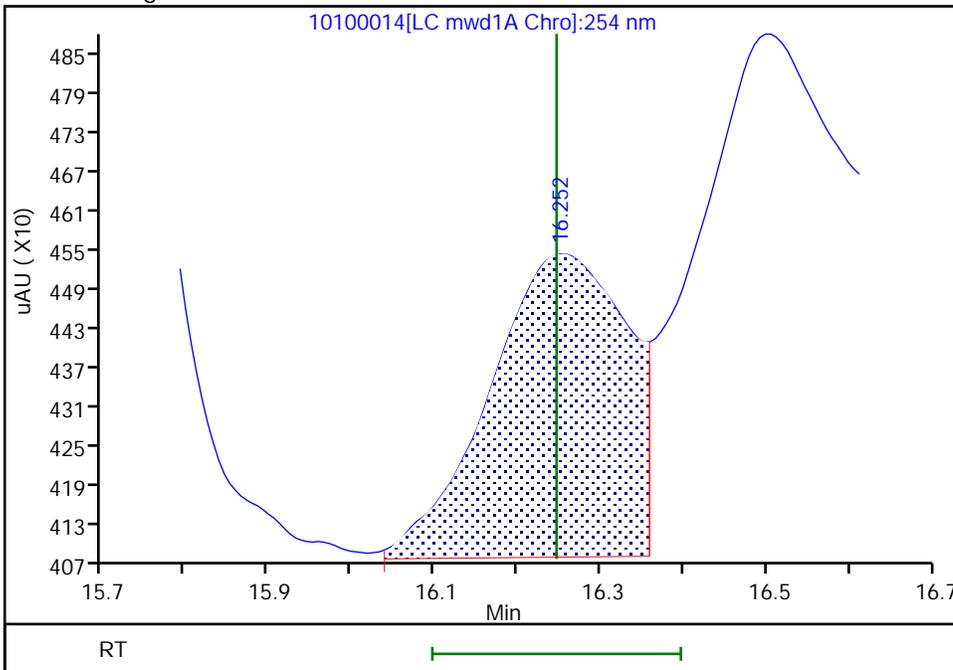
Processing Integration Results

RT: 16.26  
Area: 2127  
Amount: 0.005462  
Amount Units: ug/ml



Manual Integration Results

RT: 16.25  
Area: 5352  
Amount: 0.013744  
Amount Units: ug/ml



Reviewer: LV5D, 11-Oct-2024 15:48:55 -06:00:00 (UTC)

Audit Action: Assigned New Baseline

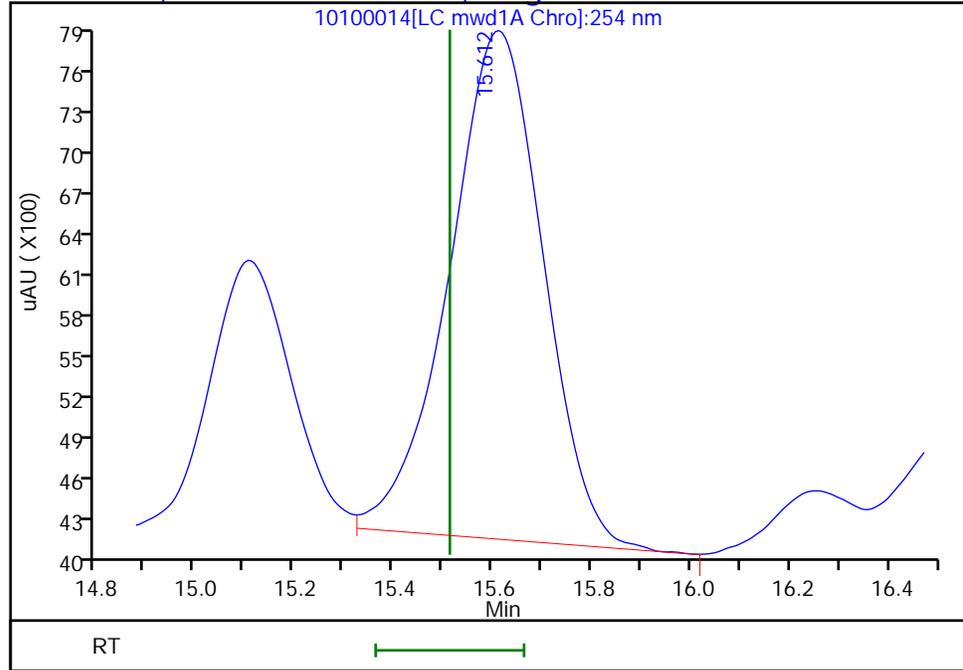
Audit Reason: Baseline Smoothing

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20241010-138456.b\10100014.D  
Injection Date: 10-Oct-2024 20:13:21 Instrument ID: CHHPLC\_X5  
Lims ID: 280-197532-A-2-A Lab Sample ID: 280-197532-2  
Client ID: LL1mw-080-240901-GW  
Operator ID: JZ ALS Bottle#: 14 Worklist Smp#: 14  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector LC mwd1A, 254 nm

**17 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0, Signal: 1**

RT: 15.61  
Response: 48504  
Amount: 0.174107



Reviewer: LV5D, 11-Oct-2024 15:48:57

Audit Action: Marked Compound Undetected

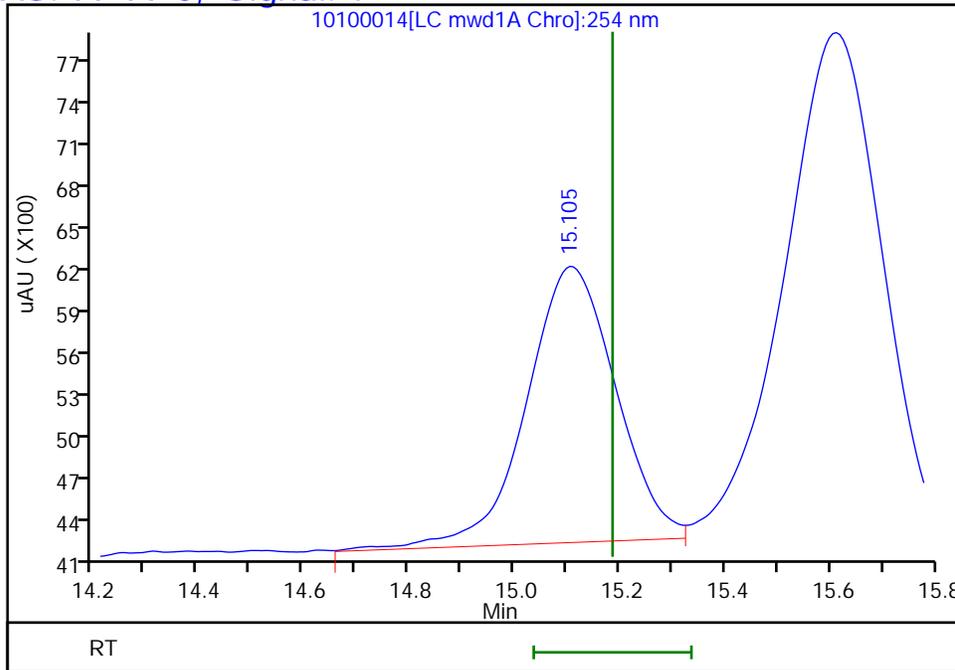
Audit Reason: Invalid Compound ID

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20241010-138456.b\10100014.D  
Injection Date: 10-Oct-2024 20:13:21 Instrument ID: CHHPLC\_X5  
Lims ID: 280-197532-A-2-A Lab Sample ID: 280-197532-2  
Client ID: LL1mw-080-240901-GW  
Operator ID: JZ ALS Bottle#: 14 Worklist Smp#: 14  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector LC mwd1A, 254 nm

16 p-Nitrotoluene, CAS: 99-99-0, Signal: 1

RT: 15.11  
Response: 23144  
Amount: 0.109340



Reviewer: LV5D, 11-Oct-2024 15:48:57

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

Eurofins Denver

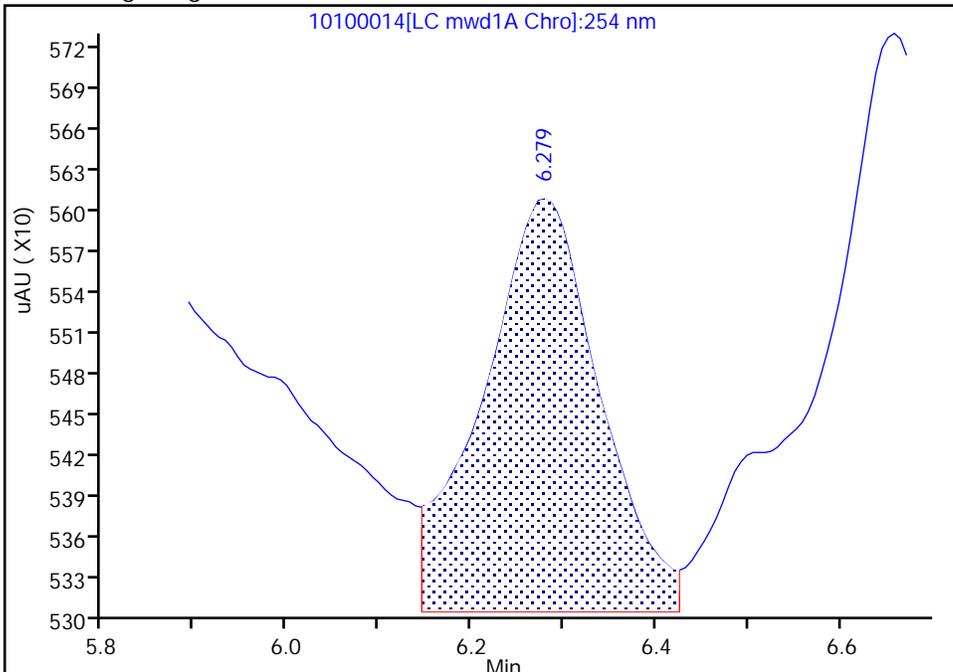
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20241010-138456.b\10100014.D  
Injection Date: 10-Oct-2024 20:13:21 Instrument ID: CHHPLC\_X5  
Lims ID: 280-197532-A-2-A Lab Sample ID: 280-197532-2  
Client ID: LL1mw-080-240901-GW  
Operator ID: JZ ALS Bottle#: 14 Worklist Smp#: 14  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

5 HMX, CAS: 2691-41-0

Signal: 1

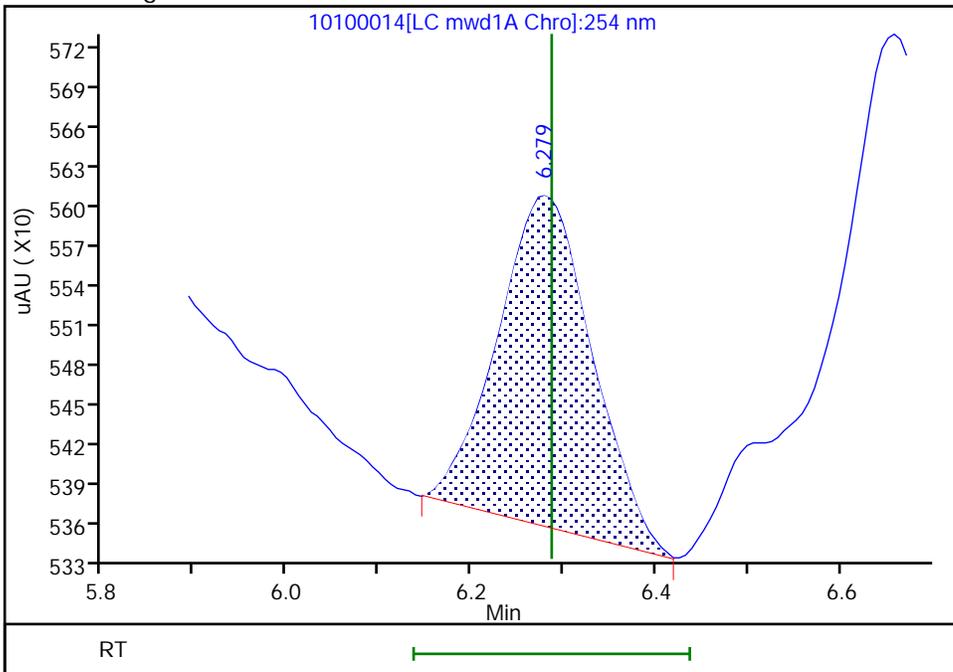
RT: 6.28  
Area: 2668  
Amount: 0.014794  
Amount Units: ug/ml

Processing Integration Results



RT: 6.28  
Area: 1770  
Amount: 0.009815  
Amount Units: ug/ml

Manual Integration Results



FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>Eurofins Denver</u>	Job No.: <u>280-197532-2</u>
SDG No.: _____	
Client Sample ID: <u>LL2mw-059-240901-GW</u>	Lab Sample ID: <u>280-197532-3</u>
Matrix: <u>Water</u>	Lab File ID: <u>10090016.D</u>
Analysis Method: <u>8330B</u>	Date Collected: <u>10/02/2024 11:21</u>
Extraction Method: <u>3535</u>	Date Extracted: <u>10/08/2024 13:10</u>
Sample wt/vol: <u>462.6(mL)</u>	Date Analyzed: <u>10/09/2024 21:38</u>
Con. Extract Vol.: <u>5(mL)</u>	Dilution Factor: <u>1</u>
Injection Volume: <u>100(uL)</u>	GC Column: <u>UltraCarb5uODS ID: 4.6(mm)</u>
% Moisture: _____ % Solids: _____	GPC Cleanup: (Y/N) <u>N</u>
Cleanup Factor: _____	
Analysis Batch No.: <u>670390</u>	Units: <u>ug/L</u>
Preparation Batch No.: <u>670048</u>	Instrument ID: <u>CHHPLC_X3</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
99-35-4	1,3,5-Trinitrobenzene	1.39		0.227	0.0909
118-96-7	2,4,6-Trinitrotoluene	ND		0.119	0.0486
121-14-2	2,4-Dinitrotoluene	0.311		0.108	0.0296
606-20-2	2,6-Dinitrotoluene	ND		0.108	0.0433
35572-78-2	2-Amino-4,6-dinitrotoluene	0.644		0.119	0.0548
88-72-2	2-Nitrotoluene	ND	*-	0.227	0.0924
99-08-1	3-Nitrotoluene	ND	*-	0.432	0.211
19406-51-0	4-Amino-2,6-dinitrotoluene	0.645	p P	0.162	0.0624
99-99-0	4-Nitrotoluene	ND		0.443	0.108
2691-41-0	HMX	ND		0.227	0.0947
98-95-3	Nitrobenzene	ND		0.227	0.0984
55-63-0	Nitroglycerin	ND		2.27	0.995
78-11-5	PETN	ND		1.19	0.483
121-82-4	RDX	ND		0.227	0.0557
479-45-8	Tetryl	ND		0.119	0.0344

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	90		83-119

Eurofins Denver  
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241009-138424.b\10090016.D  
 Lims ID: 280-197532-A-3-A  
 Client ID: LL2mw-059-240901-GW  
 Sample Type: Client  
 Inject. Date: 09-Oct-2024 21:38:55 ALS Bottle#: 16 Worklist Smp#: 16  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: 280-197532-A-3-A  
 Operator ID: JZ Instrument ID: CHHPLC\_X3  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X\20241009-138424.b\8330\_X3.m  
 Limit Group: GCSV - 8330  
 Last Update: 10-Oct-2024 12:47:17 Calib Date: 04-Oct-2024 19:55:02  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\10040019.D  
 Column 1 : UltraCarb5uODS (20) ( 4.60 mm) Det: LC DAD1B, 254 nm  
 Process Host: CTX1665

First Level Reviewer: LV5D

Date: 10-Oct-2024 11:32:27

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/mL	Flags
4 HMX	1	6.579	6.580	-0.001	772	0.007987	M
8 RDX	1		7.513			ND	
\$ 10 1,2-Dinitrobenzene	1	8.386	8.380	0.006	23422	0.1796	
11 1,3,5-Trinitrobenzene	1	8.486	8.487	-0.001	27912	0.1284	M
12 1,3-Dinitrobenzene	1	9.059	9.047	0.012	11382	0.0382	
13 Nitrobenzene	1		9.366			ND	
15 Tetryl	1		9.693			ND	U
16 Nitroglycerin	2		10.140			ND	
17 2,4,6-Trinitrotoluene	1		10.493			ND	
18 4-Amino-2,6-dinitrotoluene	1	10.666	10.653	0.013	9197	0.0596	
19 2-Amino-4,6-dinitrotoluene	1	10.899	10.886	0.013	12188	0.0596	
20 2,6-Dinitrotoluene	1		11.020			ND	
21 2,4-Dinitrotoluene	1	11.186	11.173	0.013	8404	0.0288	
22 o-Nitrotoluene	1		11.873			ND	U
23 p-Nitrotoluene	1		12.246			ND	
24 m-Nitrotoluene	1		12.753			ND	
25 PETN	2		13.840			ND	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

U - Marked Undetected

Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc\_x\20241009-138424.b\10090016.d

Injection Date: 09-Oct-2024 21:38:55

Instrument ID: CHHPLC\_X3

Operator ID: JZ

Lims ID: 280-197532-A-3-A

Lab Sample ID: 280-197532-3

Worklist Smp#: 16

Client ID: LL2mw-059-240901-GW

Injection Vol: 100.0 ul

Dil. Factor: 1.0000

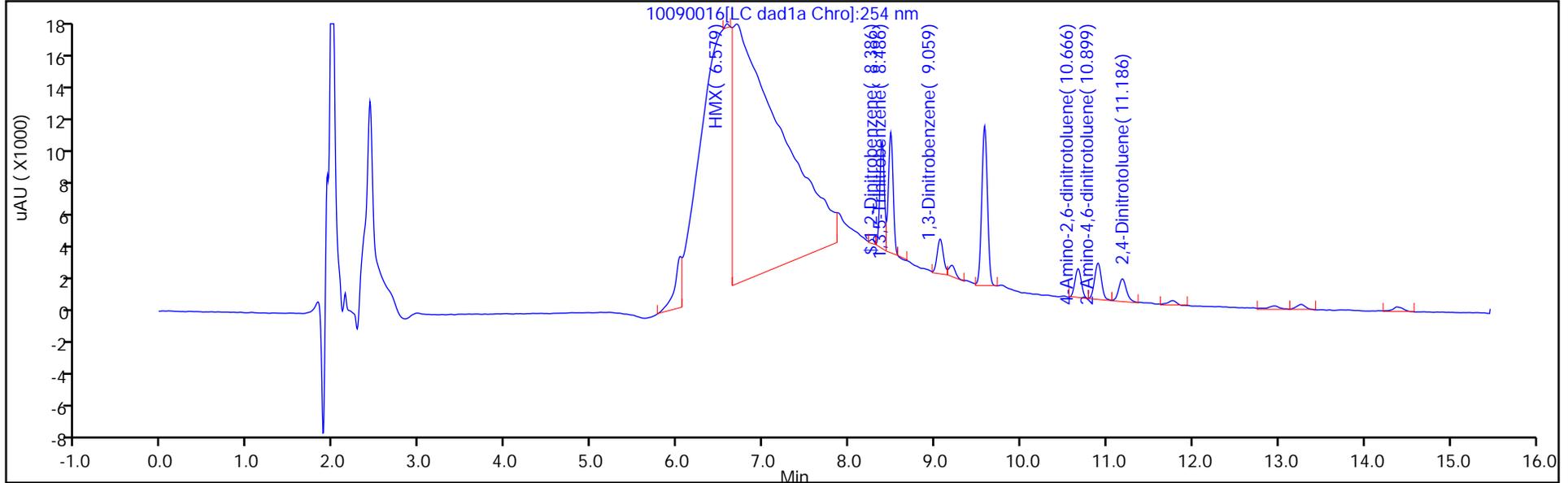
ALS Bottle#: 16

Method: 8330\_X3

Limit Group: GCSV - 8330

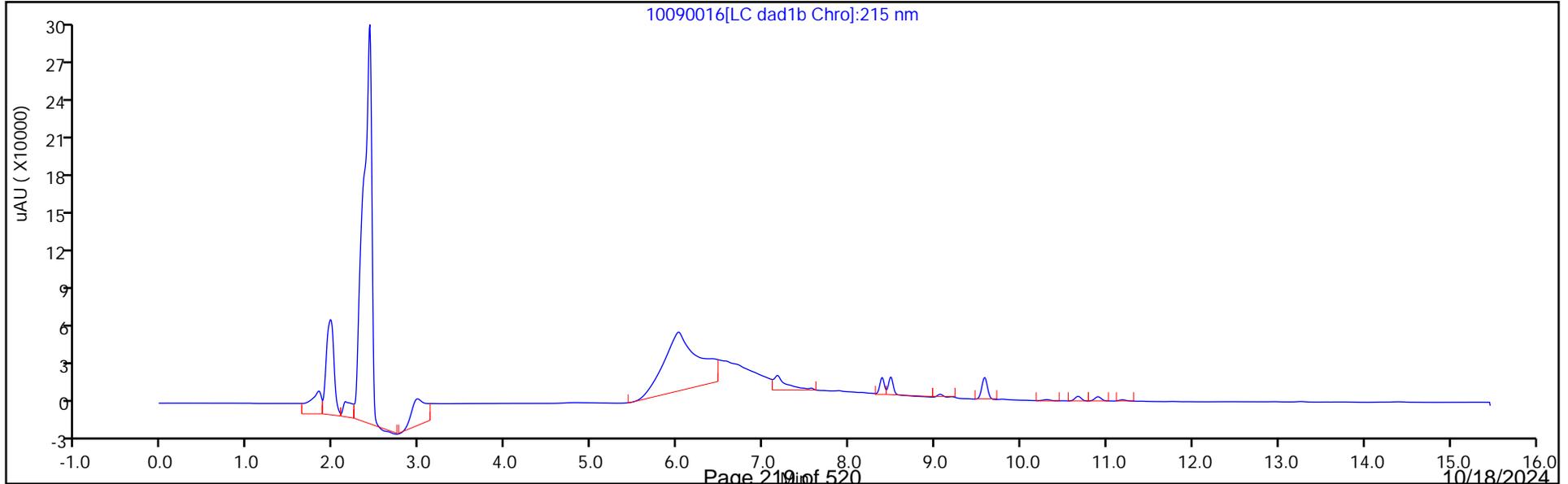
Column: UltraCarb5uODS (20) ( 4.60 mm)

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\20241009-138424.b\10090016.D  
 Lims ID: 280-197532-A-3-A  
 Client ID: LL2mw-059-240901-GW  
 Sample Type: Client  
 Inject. Date: 09-Oct-2024 21:38:55 ALS Bottle#: 16 Worklist Smp#: 16  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: 280-197532-A-3-A  
 Operator ID: JZ Instrument ID: CHHPLC\_X3  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X\20241009-138424.b\8330\_X3.m  
 Limit Group: GCSV - 8330  
 Last Update: 10-Oct-2024 12:47:17 Calib Date: 04-Oct-2024 19:55:02  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\10040019.D  
 Column 1 : UltraCarb5uODS (20) ( 4.60 mm) Det: LC DAD1B, 254 nm  
 Process Host: CTX1665

First Level Reviewer: LV5D Date: 10-Oct-2024 11:32:27

Compound	Amount Added	Amount Recovered	% Rec.
\$ 10 1,2-Dinitrobenzene	0.2000	0.1796	89.80

Eurofins Denver

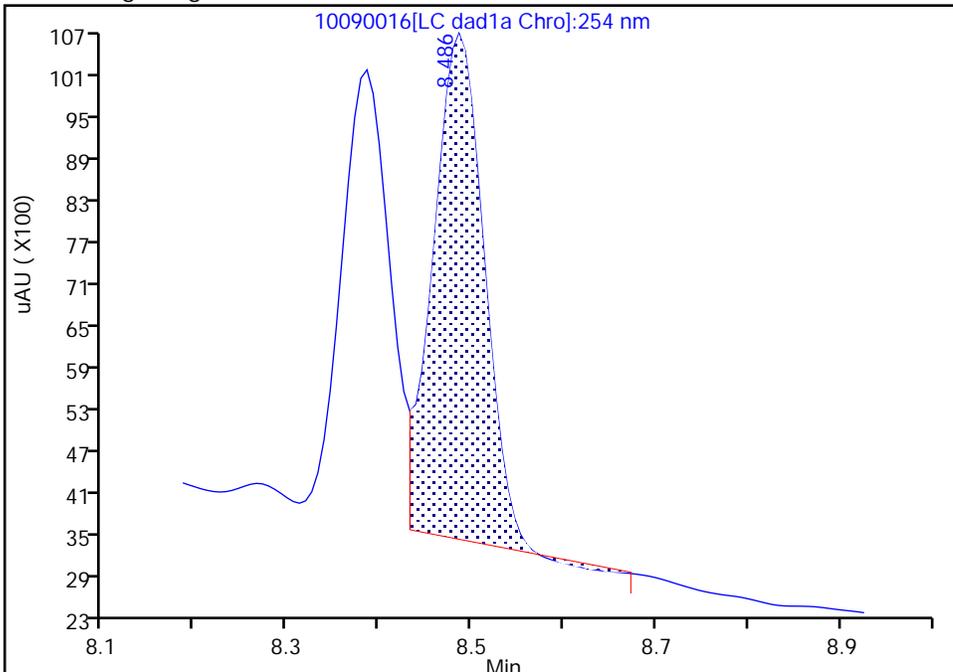
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241009-138424.b\10090016.d  
Injection Date: 09-Oct-2024 21:38:55 Instrument ID: CHHPLC\_X3  
Lims ID: 280-197532-A-3-A Lab Sample ID: 280-197532-3  
Client ID: LL2mw-059-240901-GW  
Operator ID: JZ ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

11 1,3,5-Trinitrobenzene, CAS: 99-35-4

Signal: 1

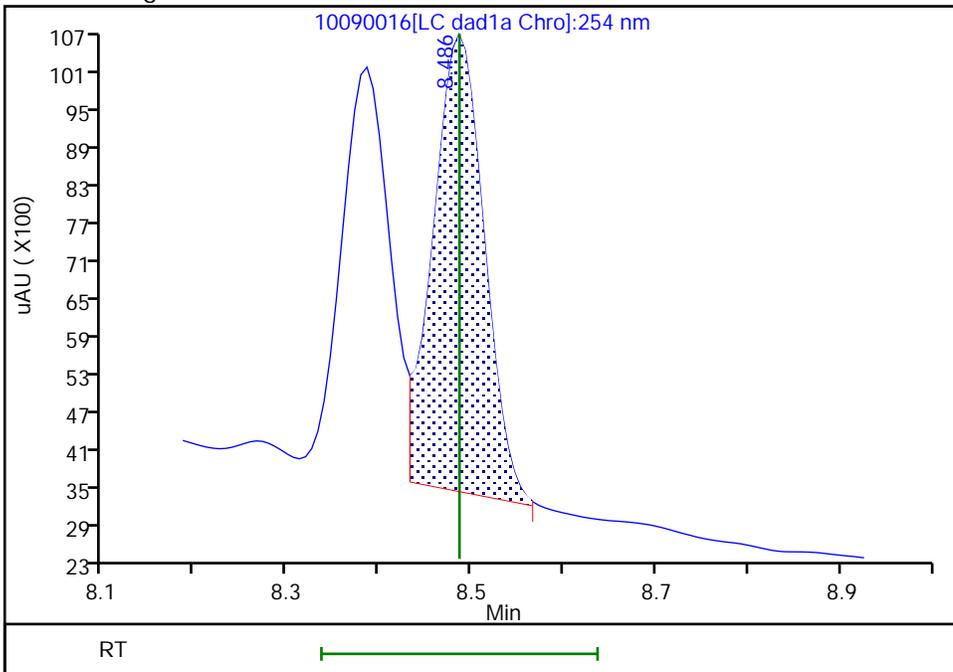
RT: 8.49  
Area: 28185  
Amount: 0.129676  
Amount Units: ug/mL

Processing Integration Results



RT: 8.49  
Area: 27912  
Amount: 0.128420  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 10-Oct-2024 11:32:16 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak

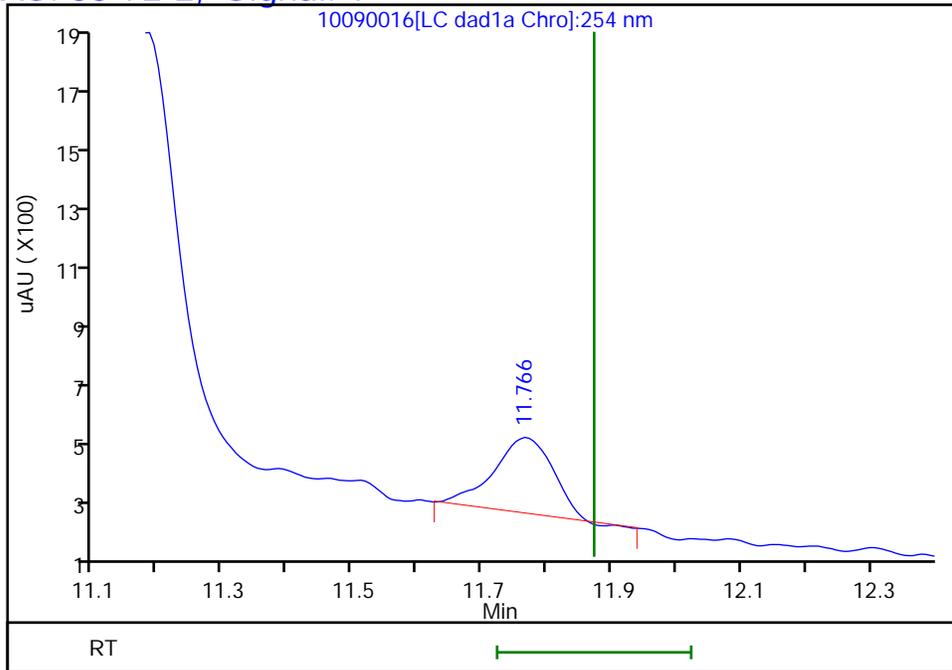
Audit Reason: Baseline

Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc\_x\20241009-138424.b\10090016.d  
Injection Date: 09-Oct-2024 21:38:55 Instrument ID: CHHPLC\_X3  
Lims ID: 280-197532-A-3-A Lab Sample ID: 280-197532-3  
Client ID: LL2mw-059-240901-GW  
Operator ID: JZ 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

22 o-Nitrotoluene, CAS: 88-72-2, Signal: 1

RT: 11.77  
Response: 1652  
Amount: 0.013167



Reviewer: LV5D, 10-Oct-2024 11:32:27

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

Eurofins Denver

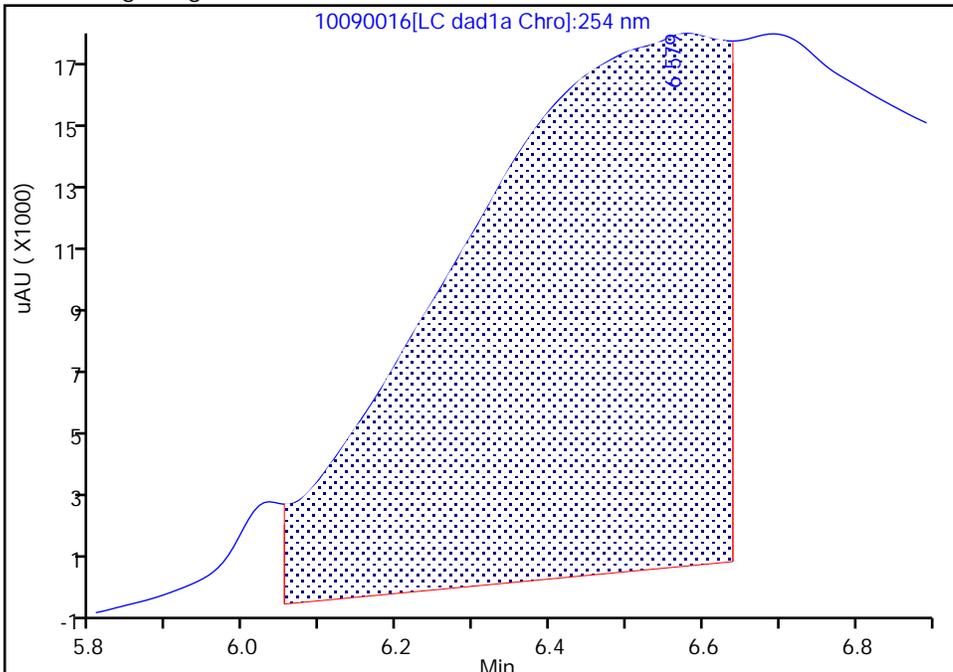
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241009-138424.b\10090016.d  
Injection Date: 09-Oct-2024 21:38:55 Instrument ID: CHHPLC\_X3  
Lims ID: 280-197532-A-3-A Lab Sample ID: 280-197532-3  
Client ID: LL2mw-059-240901-GW  
Operator ID: JZ ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

4 HMX, CAS: 2691-41-0

Signal: 1

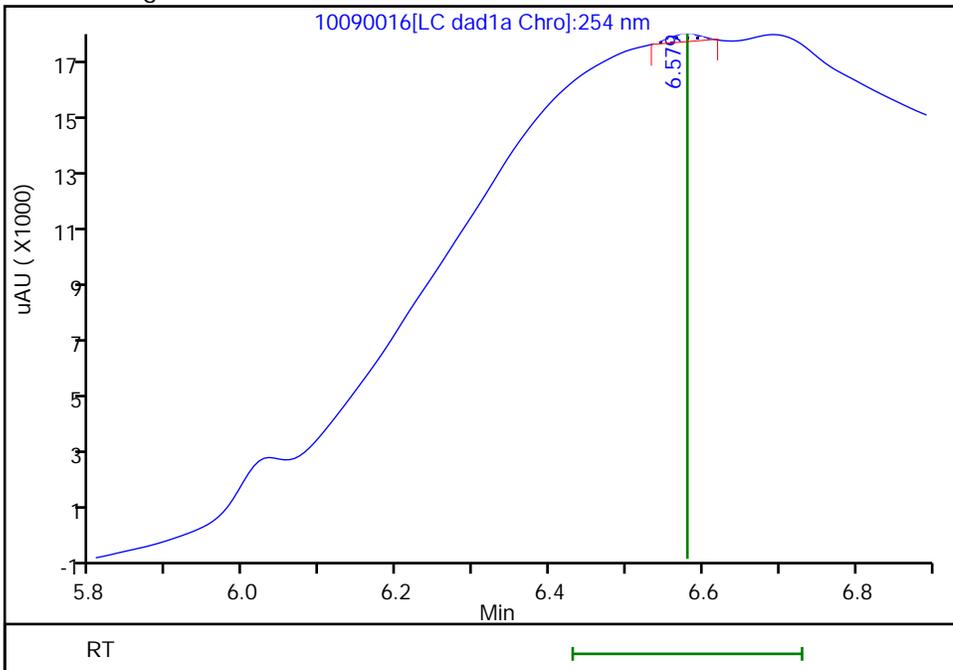
RT: 6.58  
Area: 389499  
Amount: 4.029872  
Amount Units: ug/mL

Processing Integration Results



RT: 6.58  
Area: 772  
Amount: 0.007987  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 10-Oct-2024 11:32:10 -06:00:00 (UTC)

Audit Action: Manually Integrated

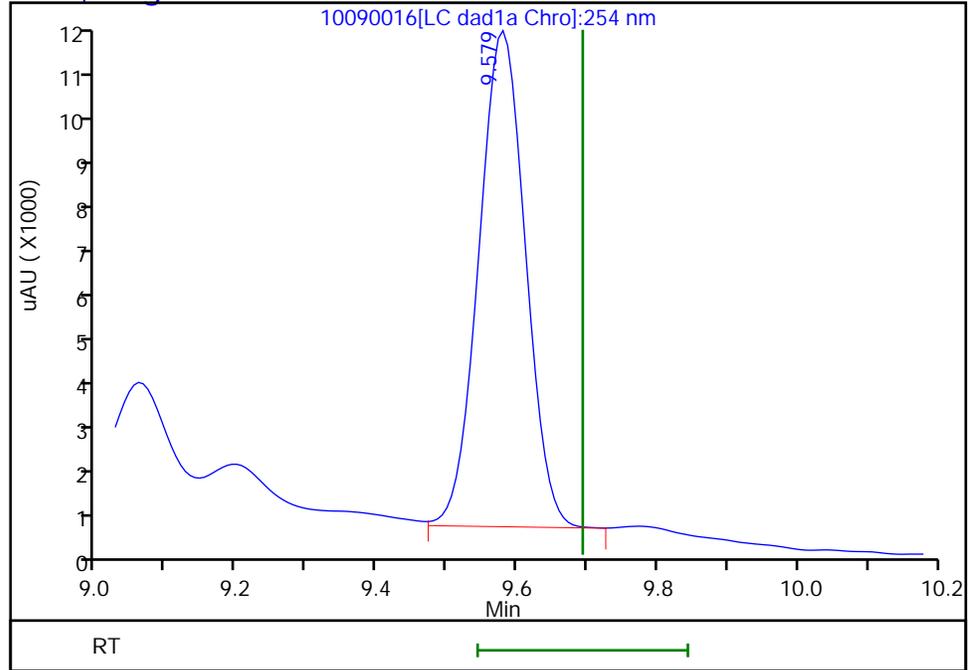
Audit Reason: Baseline

Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc\_x\20241009-138424.b\10090016.d  
Injection Date: 09-Oct-2024 21:38:55 Instrument ID: CHHPLC\_X3  
Lims ID: 280-197532-A-3-A Lab Sample ID: 280-197532-3  
Client ID: LL2mw-059-240901-GW  
Operator ID: JZ 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

15 Tetryl, CAS: 479-45-8, Signal: 1

RT: 9.58  
Response: 44372  
Amount: 0.259740



Reviewer: LV5D, 10-Oct-2024 11:32:27

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>Eurofins Denver</u>	Job No.: <u>280-197532-2</u>
SDG No.: _____	
Client Sample ID: <u>LL2mw-059-240901-GW</u>	Lab Sample ID: <u>280-197532-3</u>
Matrix: <u>Water</u>	Lab File ID: <u>10100015.D</u>
Analysis Method: <u>8330B</u>	Date Collected: <u>10/02/2024 11:21</u>
Extraction Method: <u>3535</u>	Date Extracted: <u>10/08/2024 13:10</u>
Sample wt/vol: <u>462.6(mL)</u>	Date Analyzed: <u>10/10/2024 20:48</u>
Con. Extract Vol.: <u>5(mL)</u>	Dilution Factor: <u>1</u>
Injection Volume: <u>100(uL)</u>	GC Column: <u>Luna-phenylhex</u> ID: <u>4.6(mm)</u>
% Moisture: _____ % Solids: _____	GPC Cleanup: (Y/N) <u>N</u>
Cleanup Factor: _____	
Analysis Batch No.: <u>670528</u>	Units: <u>ug/L</u>
Preparation Batch No.: <u>670048</u>	Instrument ID: <u>CHHPLC_X5</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
99-65-0	1,3-Dinitrobenzene	ND		0.119	0.0399

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\_X5\20241010-138456.b\10100015.D  
 Lims ID: 280-197532-A-3-A  
 Client ID: LL2mw-059-240901-GW  
 Sample Type: Client  
 Inject. Date: 10-Oct-2024 20:48:18 ALS Bottle#: 15 Worklist Smp#: 15  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: 280-197532-A-3-A  
 Operator ID: JZ Instrument ID: CHHPLC\_X5  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X5\20241010-138456.b\8330\_X5\_Luna.m  
 Limit Group: GCSV - 8330  
 Last Update: 11-Oct-2024 15:56:55 Calib Date: 11-Aug-2024 06:16:04  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100027.D  
 Column 1 : Luna-Phenyl hexyl ( 4.60 mm) Det: LC mwd1A, 254 nm  
 Process Host: CTX1619

First Level Reviewer: LV5D

Date: 11-Oct-2024 15:51:26

Compound	Det	RT (min.)	Exp RT (min.)	Diff RT (min.)	Response	OnCol Amt ug/ml	Flags
5 HMX	1	6.266	6.287	-0.021	1217	0.006748	M
8 RDX	1		8.393			ND	
9 Nitrobenzene	1		10.953			ND	
\$ 10 1,2-Dinitrobenzene	1	11.752	11.767	-0.015	49444	0.1884	
12 1,3-Dinitrobenzene	1		13.780			ND	
13 Nitroglycerin	2		14.420			ND	
14 o-Nitrotoluene	1		14.960			ND	
16 p-Nitrotoluene	1	15.112	15.187	-0.075	2352	0.0111	
17 4-Amino-2,6-dinitrotoluene	1	15.512	15.513	-0.001	32764	0.1176	
18 m-Nitrotoluene	1		16.007			ND	
19 2-Amino-4,6-dinitrotoluene	1	16.252	16.247	0.005	19348	0.0497	
20 1,3,5-Trinitrobenzene	1	16.485	16.473	0.012	63113	0.1489	
21 2,6-Dinitrotoluene	1		17.607			ND	
22 2,4-Dinitrotoluene	1	18.039	18.033	0.006	14688	0.0258	M
23 Tetryl	1		21.013			ND	
24 2,4,6-Trinitrotoluene	1		21.900			ND	
25 PETN	2		23.353			ND	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20241010-138456.b\10100015.D

Injection Date: 10-Oct-2024 20:48:18

Instrument ID: CHHPLC\_X5

Operator ID: JZ

Lims ID: 280-197532-A-3-A

Lab Sample ID: 280-197532-3

Worklist Smp#: 15

Client ID: LL2mw-059-240901-GW

Injection Vol: 100.0 ul

Dil. Factor: 1.0000

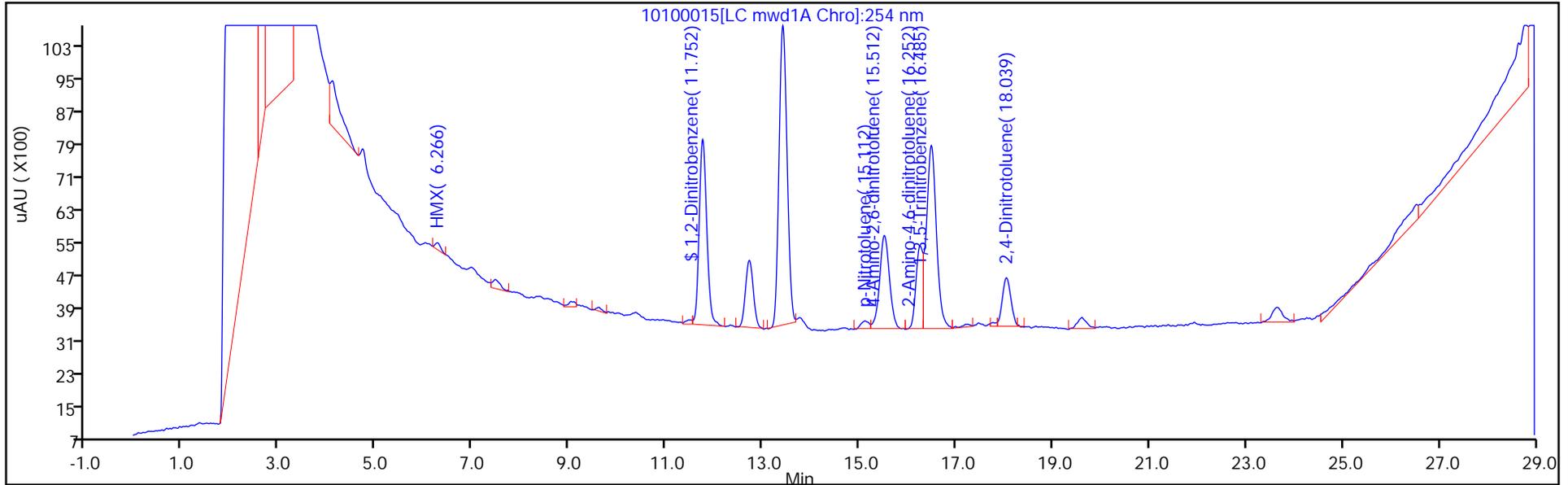
ALS Bottle#: 15

Method: 8330\_X5\_Luna

Limit Group: GCSV - 8330

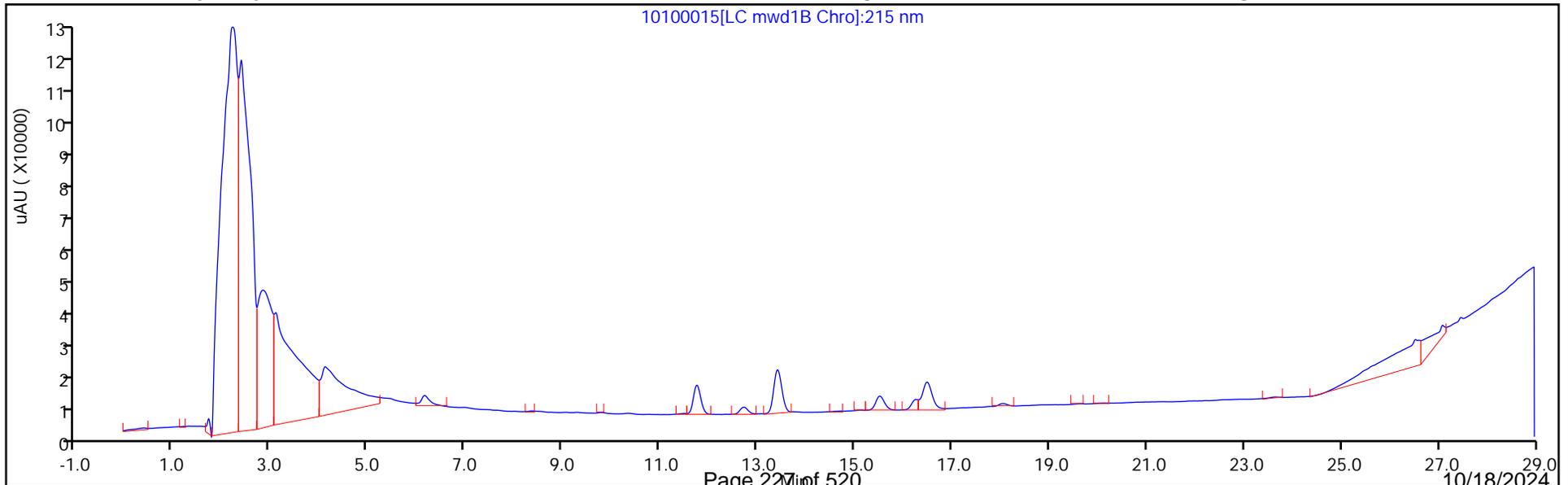
Column: Luna-Phenyl hexyl ( 4.60 mm)

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\CHHPLC\_X5\20241010-138456.b\10100015.D  
 Lims ID: 280-197532-A-3-A  
 Client ID: LL2mw-059-240901-GW  
 Sample Type: Client  
 Inject. Date: 10-Oct-2024 20:48:18 ALS Bottle#: 15 Worklist Smp#: 15  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: 280-197532-A-3-A  
 Operator ID: JZ Instrument ID: CHHPLC\_X5  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X5\20241010-138456.b\8330\_X5\_Luna.m  
 Limit Group: GCSV - 8330  
 Last Update: 11-Oct-2024 15:56:55 Calib Date: 11-Aug-2024 06:16:04  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100027.D  
 Column 1 : Luna-Phenyl hexyl ( 4.60 mm) Det: LC mwd1A, 254 nm  
 Process Host: CTX1619

First Level Reviewer: LV5D

Date: 11-Oct-2024 15:51:26

Compound	Amount Added	Amount Recovered	% Rec.
\$ 10 1,2-Dinitrobenzene	0.2000	0.1884	94.18

Eurofins Denver

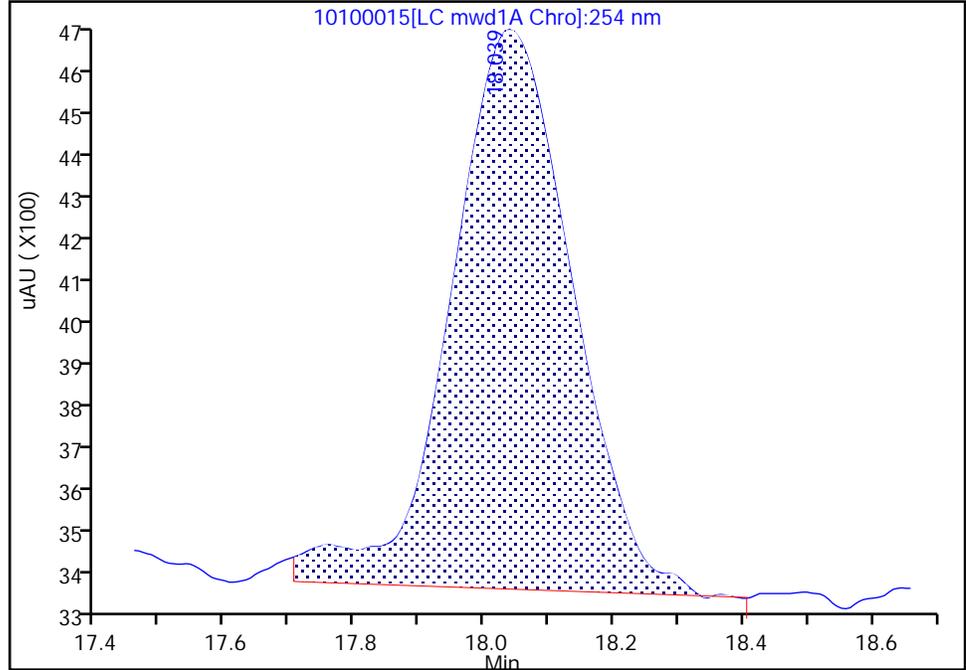
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20241010-138456.b\10100015.D  
Injection Date: 10-Oct-2024 20:48:18 Instrument ID: CHHPLC\_X5  
Lims ID: 280-197532-A-3-A Lab Sample ID: 280-197532-3  
Client ID: LL2mw-059-240901-GW  
Operator ID: JZ ALS Bottle#: 15 Worklist Smp#: 15  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

22 2,4-Dinitrotoluene, CAS: 121-14-2

Signal: 1

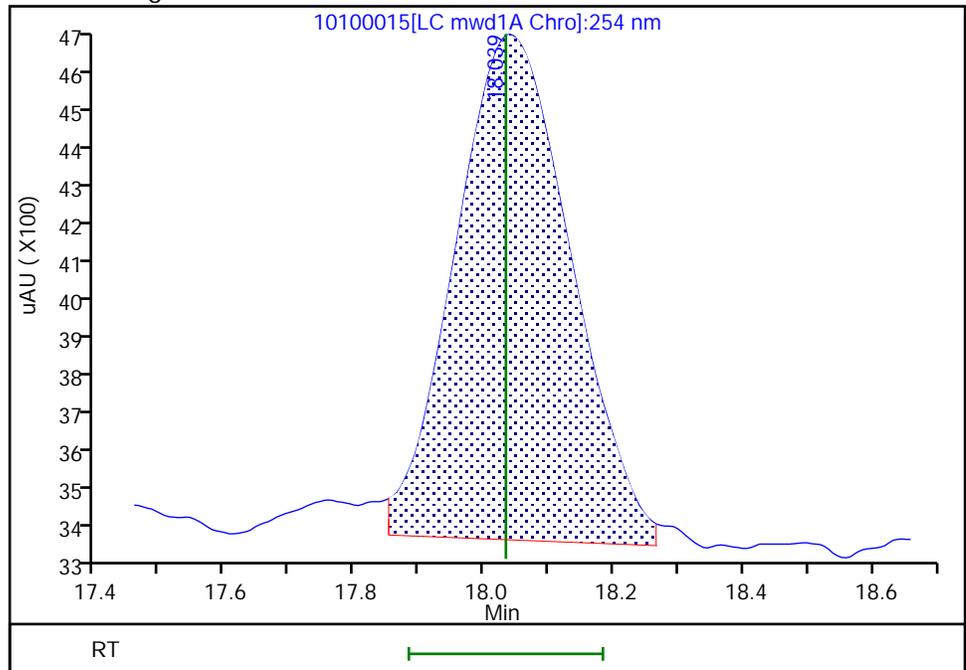
RT: 18.04  
Area: 15508  
Amount: 0.027278  
Amount Units: ug/ml

Processing Integration Results



RT: 18.04  
Area: 14688  
Amount: 0.025836  
Amount Units: ug/ml

Manual Integration Results



Reviewer: LV5D, 11-Oct-2024 15:51:26 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak

Audit Reason: Baseline Smoothing

Eurofins Denver

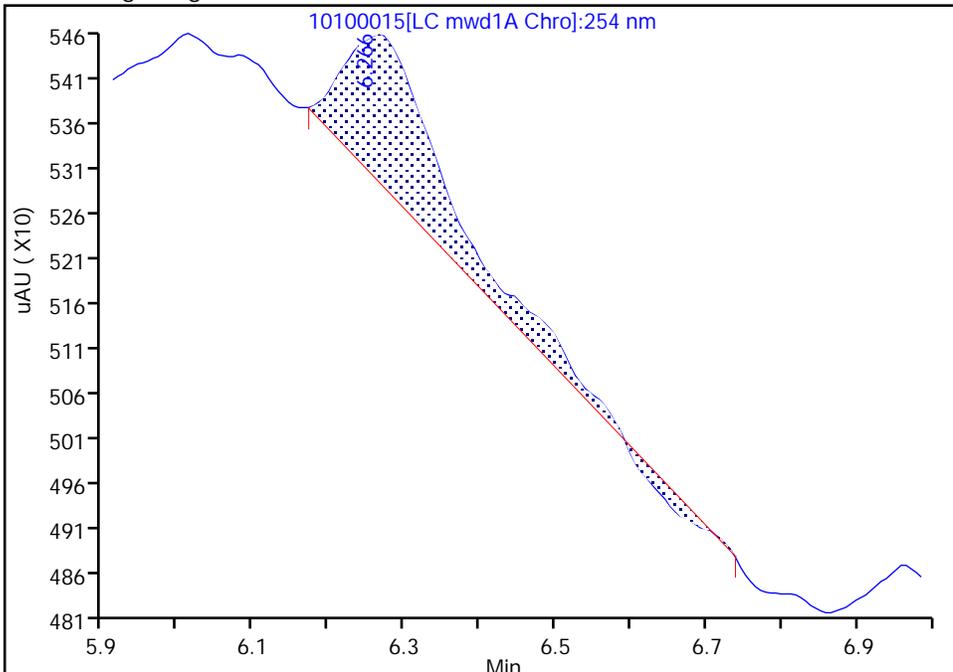
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20241010-138456.b\10100015.D  
Injection Date: 10-Oct-2024 20:48:18 Instrument ID: CHHPLC\_X5  
Lims ID: 280-197532-A-3-A Lab Sample ID: 280-197532-3  
Client ID: LL2mw-059-240901-GW  
Operator ID: JZ ALS Bottle#: 15 Worklist Smp#: 15  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

5 HMX, CAS: 2691-41-0

Signal: 1

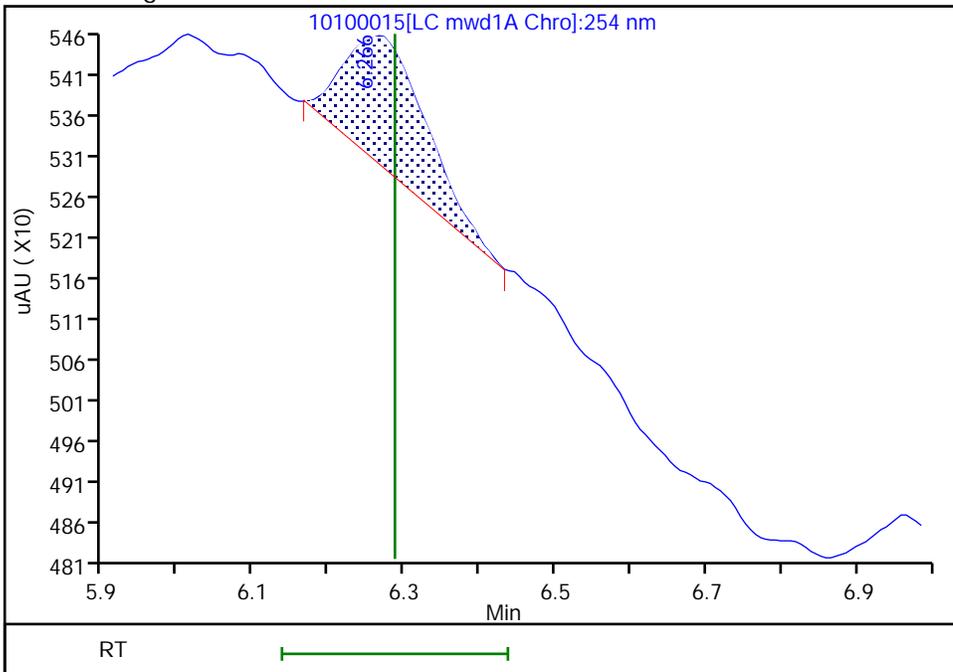
RT: 6.27  
Area: 1863  
Amount: 0.010331  
Amount Units: ug/ml

Processing Integration Results



RT: 6.27  
Area: 1217  
Amount: 0.006748  
Amount Units: ug/ml

Manual Integration Results



Reviewer: LV5D, 11-Oct-2024 15:51:13 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>Eurofins Denver</u>	Job No.: <u>280-197532-2</u>
SDG No.: _____	
Client Sample ID: <u>LL1mw-081-240901-GW</u>	Lab Sample ID: <u>280-197532-4</u>
Matrix: <u>Water</u>	Lab File ID: <u>10090017.D</u>
Analysis Method: <u>8330B</u>	Date Collected: <u>10/02/2024 12:26</u>
Extraction Method: <u>3535</u>	Date Extracted: <u>10/08/2024 13:10</u>
Sample wt/vol: <u>466(mL)</u>	Date Analyzed: <u>10/09/2024 22:00</u>
Con. Extract Vol.: <u>5(mL)</u>	Dilution Factor: <u>1</u>
Injection Volume: <u>100(uL)</u>	GC Column: <u>UltraCarb5uODS</u> ID: <u>4.6(mm)</u>
% Moisture: _____ % Solids: _____	GPC Cleanup: (Y/N) <u>N</u>
Cleanup Factor: _____	
Analysis Batch No.: <u>670390</u>	Units: <u>ug/L</u>
Preparation Batch No.: <u>670048</u>	Instrument ID: <u>CHHPLC_X3</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
99-35-4	1,3,5-Trinitrobenzene	ND		0.225	0.0902
99-65-0	1,3-Dinitrobenzene	ND		0.118	0.0396
118-96-7	2,4,6-Trinitrotoluene	ND		0.118	0.0483
121-14-2	2,4-Dinitrotoluene	ND		0.107	0.0294
606-20-2	2,6-Dinitrotoluene	ND		0.107	0.0430
35572-78-2	2-Amino-4,6-dinitrotoluene	ND		0.118	0.0544
88-72-2	2-Nitrotoluene	ND	*-	0.225	0.0917
99-08-1	3-Nitrotoluene	ND	*-	0.429	0.209
19406-51-0	4-Amino-2,6-dinitrotoluene	ND		0.161	0.0619
99-99-0	4-Nitrotoluene	ND		0.440	0.107
2691-41-0	HMX	ND		0.225	0.0940
98-95-3	Nitrobenzene	ND		0.225	0.0976
55-63-0	Nitroglycerin	ND		2.25	0.988
78-11-5	PETN	ND		1.18	0.480
121-82-4	RDX	ND		0.225	0.0553
479-45-8	Tetryl	ND		0.118	0.0341

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	84		83-119

Eurofins Denver  
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241009-138424.b\10090017.D  
 Lims ID: 280-197532-A-4-A  
 Client ID: LL1mw-081-240901-GW  
 Sample Type: Client  
 Inject. Date: 09-Oct-2024 22:00:51 ALS Bottle#: 17 Worklist Smp#: 17  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: 280-197532-A-4-A  
 Operator ID: JZ Instrument ID: CHHPLC\_X3  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X\20241009-138424.b\8330\_X3.m  
 Limit Group: GCSV - 8330  
 Last Update: 10-Oct-2024 12:47:17 Calib Date: 04-Oct-2024 19:55:02  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\10040019.D  
 Column 1 : UltraCarb5uODS (20) ( 4.60 mm) Det: LC DAD1B, 254 nm  
 Process Host: CTX1665

First Level Reviewer: LV5D Date: 10-Oct-2024 11:32:38

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/mL	Flags
4 HMX	1		6.580			ND	U
8 RDX	1		7.513			ND	
\$ 10 1,2-Dinitrobenzene	1	8.384	8.380	0.004	21889	0.1678	M
11 1,3,5-Trinitrobenzene	1		8.487			ND	
12 1,3-Dinitrobenzene	1		9.047			ND	U
13 Nitrobenzene	1		9.366			ND	
15 Tetryl	1		9.693			ND	
16 Nitroglycerin	2		10.140			ND	
17 2,4,6-Trinitrotoluene	1		10.493			ND	
18 4-Amino-2,6-dinitrotoluene	1		10.653			ND	
19 2-Amino-4,6-dinitrotoluene	1		10.886			ND	
20 2,6-Dinitrotoluene	1		11.020			ND	
21 2,4-Dinitrotoluene	1		11.173			ND	
22 o-Nitrotoluene	1		11.873			ND	
23 p-Nitrotoluene	1		12.246			ND	
24 m-Nitrotoluene	1		12.753			ND	
25 PETN	2		13.840			ND	

QC Flag Legend

Processing Flags

Review Flags

- M - Manually Integrated
- U - Marked Undetected

Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc\_x\20241009-138424.b\10090017.d

Injection Date: 09-Oct-2024 22:00:51

Instrument ID: CHHPLC\_X3

Operator ID: JZ

Lims ID: 280-197532-A-4-A

Lab Sample ID: 280-197532-4

Worklist Smp#: 17

Client ID: LL1mw-081-240901-GW

Injection Vol: 100.0 ul

Dil. Factor: 1.0000

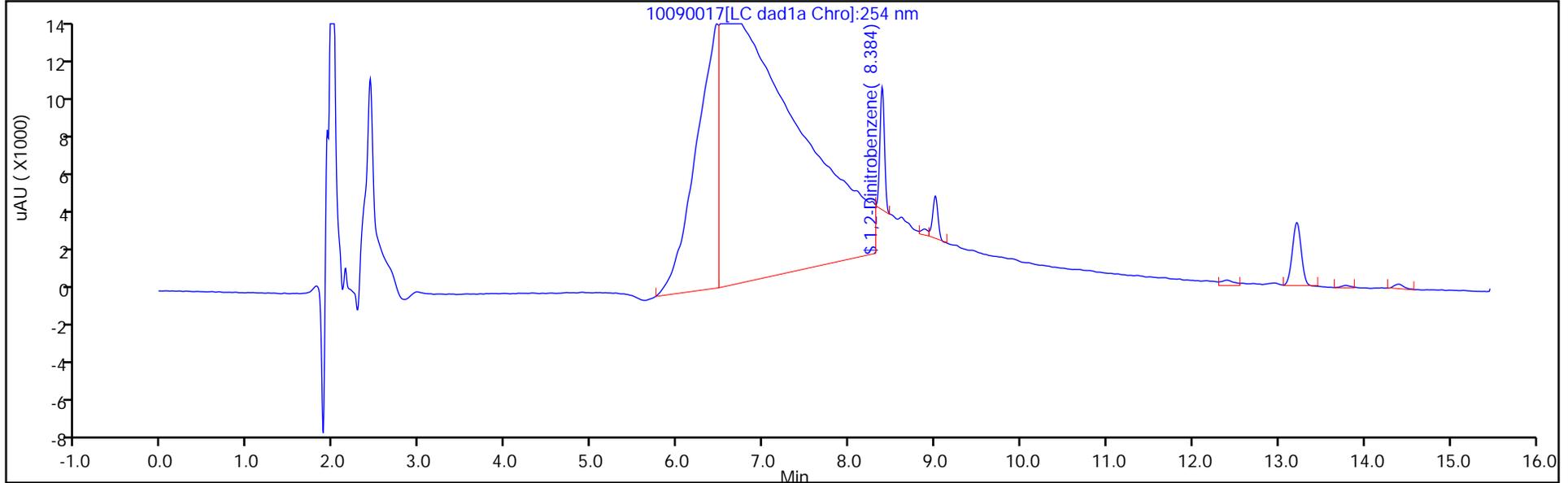
ALS Bottle#: 17

Method: 8330\_X3

Limit Group: GCSV - 8330

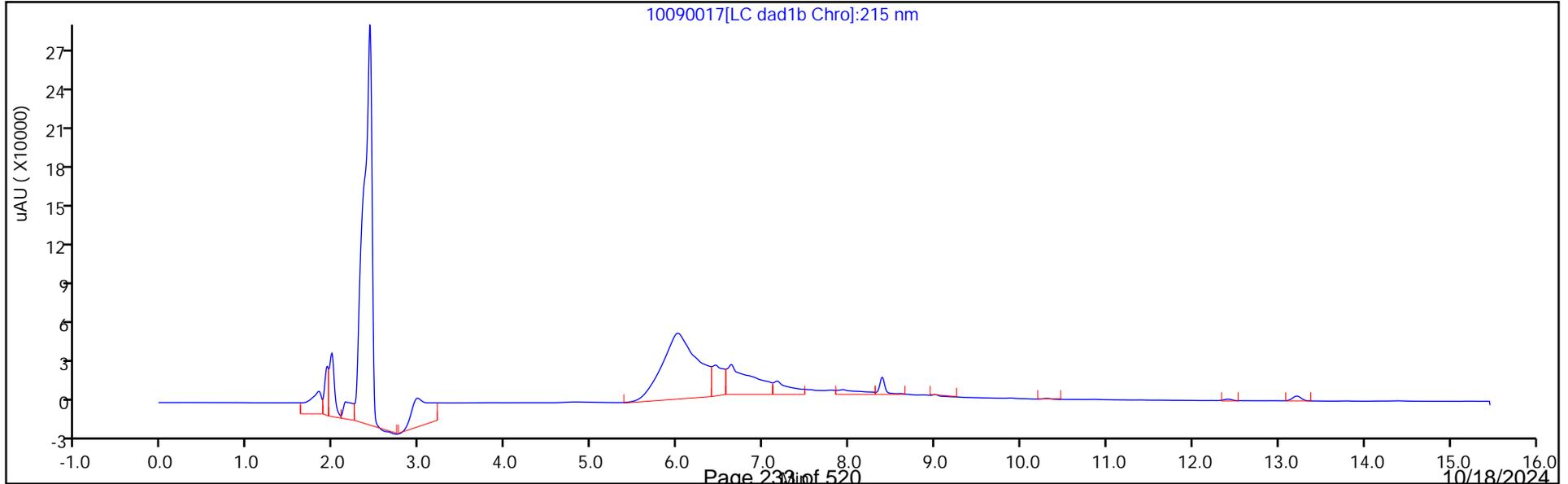
Column: UltraCarb5uODS (20) ( 4.60 mm)

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\20241009-138424.b\10090017.D  
 Lims ID: 280-197532-A-4-A  
 Client ID: LL1mw-081-240901-GW  
 Sample Type: Client  
 Inject. Date: 09-Oct-2024 22:00:51 ALS Bottle#: 17 Worklist Smp#: 17  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: 280-197532-A-4-A  
 Operator ID: JZ Instrument ID: CHHPLC\_X3  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X\20241009-138424.b\8330\_X3.m  
 Limit Group: GCSV - 8330  
 Last Update: 10-Oct-2024 12:47:17 Calib Date: 04-Oct-2024 19:55:02  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\10040019.D  
 Column 1 : UltraCarb5uODS (20) ( 4.60 mm) Det: LC DAD1B, 254 nm  
 Process Host: CTX1665

First Level Reviewer: LV5D Date: 10-Oct-2024 11:32:38

Compound	Amount Added	Amount Recovered	% Rec.
\$ 10 1,2-Dinitrobenzene	0.2000	0.1678	83.92

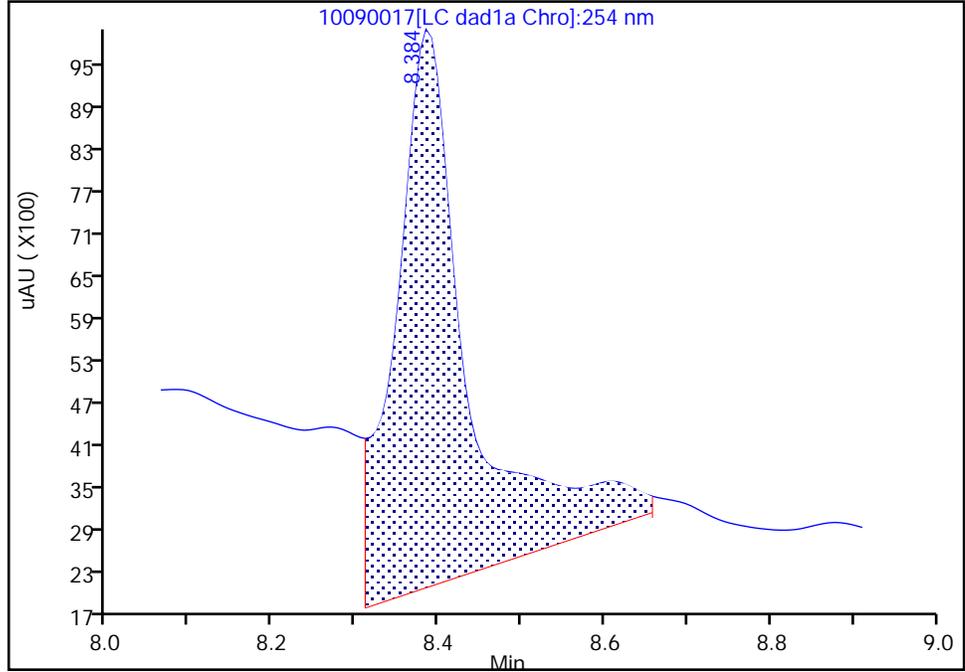
Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc\_x\20241009-138424.b\10090017.d  
Injection Date: 09-Oct-2024 22:00:51 Instrument ID: CHHPLC\_X3  
Lims ID: 280-197532-A-4-A Lab Sample ID: 280-197532-4  
Client ID: LL1mw-081-240901-GW  
Operator ID: JZ 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

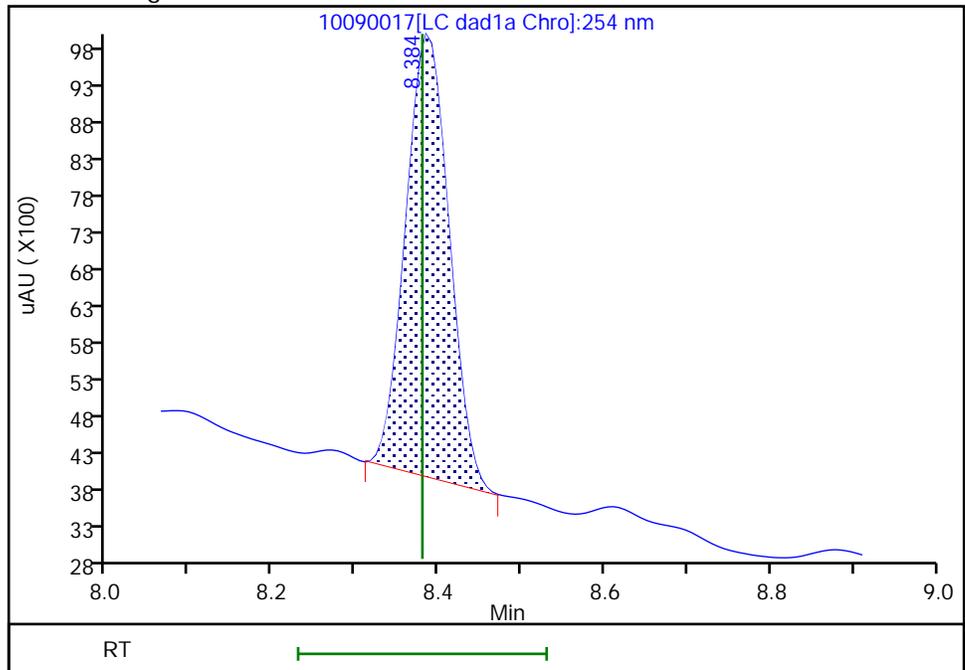
RT: 8.38  
Area: 48686  
Amount: 0.373331  
Amount Units: ug/mL

Processing Integration Results



RT: 8.38  
Area: 21889  
Amount: 0.167848  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 10-Oct-2024 11:32:37 -06:00:00 (UTC)

Audit Action: Manually Integrated

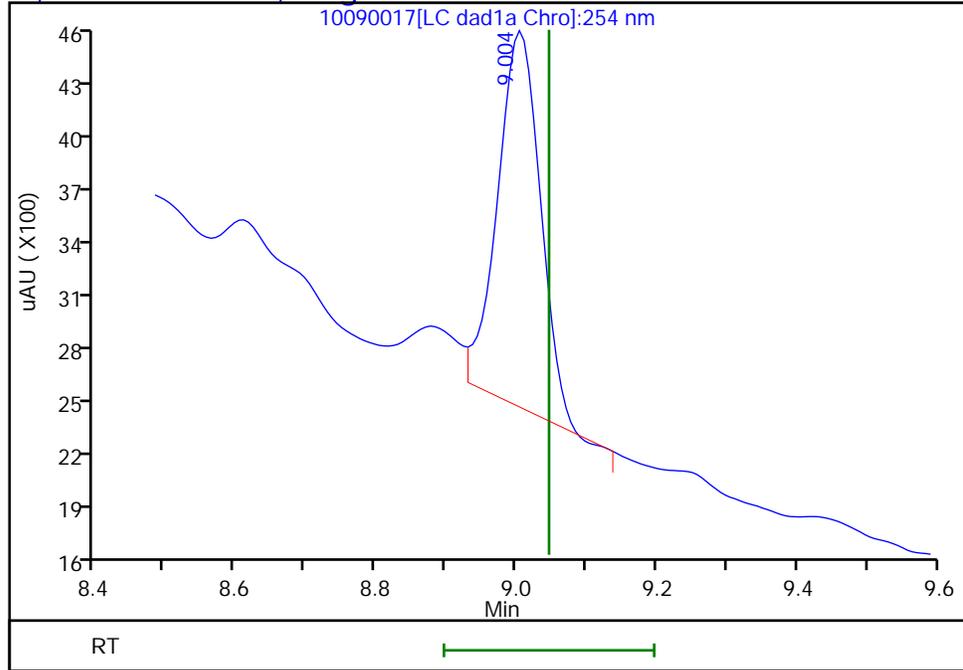
Audit Reason: Baseline

Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc\_x\20241009-138424.b\10090017.d  
Injection Date: 09-Oct-2024 22:00:51 Instrument ID: CHHPLC\_X3  
Lims ID: 280-197532-A-4-A Lab Sample ID: 280-197532-4  
Client ID: LL1mw-081-240901-GW  
Operator ID: JZ 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

12 1,3-Dinitrobenzene, CAS: 99-65-0, Signal: 1

RT: 9.00  
Response: 8937  
Amount: 0.029967



Reviewer: LV5D, 10-Oct-2024 11:32:38

Audit Action: Marked Compound Undetected

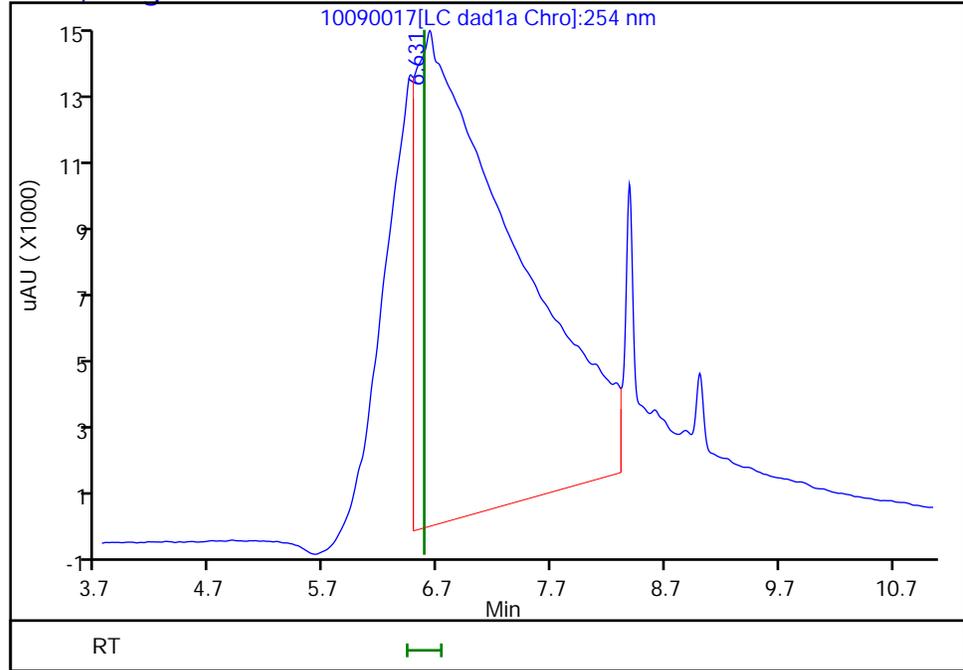
Audit Reason: Invalid Compound ID

Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc\_x\20241009-138424.b\10090017.d  
Injection Date: 09-Oct-2024 22:00:51 Instrument ID: CHHPLC\_X3  
Lims ID: 280-197532-A-4-A Lab Sample ID: 280-197532-4  
Client ID: LL1mw-081-240901-GW  
Operator ID: JZ 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

RT: 6.63  
Response: 840219  
Amount: 8.693155



Reviewer: LV5D, 10-Oct-2024 11:32:38

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>Eurofins Denver</u>	Job No.: <u>280-197532-2</u>
SDG No.: _____	
Client Sample ID: <u>FWGmw-010-240901-GW</u>	Lab Sample ID: <u>280-197532-5</u>
Matrix: <u>Water</u>	Lab File ID: <u>10090018.D</u>
Analysis Method: <u>8330B</u>	Date Collected: <u>10/02/2024 12:34</u>
Extraction Method: <u>3535</u>	Date Extracted: <u>10/08/2024 13:10</u>
Sample wt/vol: <u>433.4 (mL)</u>	Date Analyzed: <u>10/09/2024 22:22</u>
Con. Extract Vol.: <u>5 (mL)</u>	Dilution Factor: <u>1</u>
Injection Volume: <u>100 (uL)</u>	GC Column: <u>UltraCarb5uODS</u> ID: <u>4.6 (mm)</u>
% Moisture: _____ % Solids: _____	GPC Cleanup: (Y/N) <u>N</u>
Cleanup Factor: _____	
Analysis Batch No.: <u>670390</u>	Units: <u>ug/L</u>
Preparation Batch No.: <u>670048</u>	Instrument ID: <u>CHHPLC_X3</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
99-35-4	1,3,5-Trinitrobenzene	ND		0.242	0.0970
99-65-0	1,3-Dinitrobenzene	ND		0.127	0.0426
118-96-7	2,4,6-Trinitrotoluene	ND		0.127	0.0519
121-14-2	2,4-Dinitrotoluene	ND		0.115	0.0316
606-20-2	2,6-Dinitrotoluene	ND		0.115	0.0463
35572-78-2	2-Amino-4,6-dinitrotoluene	ND		0.127	0.0585
88-72-2	2-Nitrotoluene	ND	*-	0.242	0.0986
99-08-1	3-Nitrotoluene	ND	*-	0.461	0.225
19406-51-0	4-Amino-2,6-dinitrotoluene	ND		0.173	0.0666
99-99-0	4-Nitrotoluene	ND		0.473	0.115
2691-41-0	HMX	ND		0.242	0.101
98-95-3	Nitrobenzene	ND		0.242	0.105
55-63-0	Nitroglycerin	ND		2.42	1.06
78-11-5	PETN	ND		1.27	0.516
121-82-4	RDX	ND		0.242	0.0594
479-45-8	Tetryl	ND		0.127	0.0367

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	96		83-119

Eurofins Denver  
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241009-138424.b\10090018.D  
 Lims ID: 280-197532-A-5-A  
 Client ID: FWGmw-010-240901-GW  
 Sample Type: Client  
 Inject. Date: 09-Oct-2024 22:22:49 ALS Bottle#: 18 Worklist Smp#: 18  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: 280-197532-A-5-A  
 Operator ID: JZ Instrument ID: CHHPLC\_X3  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X\20241009-138424.b\8330\_X3.m  
 Limit Group: GCSV - 8330  
 Last Update: 10-Oct-2024 12:47:17 Calib Date: 04-Oct-2024 19:55:02  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\10040019.D  
 Column 1 : UltraCarb5uODS (20) ( 4.60 mm) Det: LC DAD1B, 254 nm  
 Process Host: CTX1665

First Level Reviewer: LV5D Date: 10-Oct-2024 11:32:46

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/mL	Flags
4 HMX	1		6.580			ND	U
8 RDX	1		7.513			ND	U
\$ 10 1,2-Dinitrobenzene	1	8.380	8.380	0.000	24920	0.1911	M
11 1,3,5-Trinitrobenzene	1		8.487			ND	
12 1,3-Dinitrobenzene	1		9.047			ND	
13 Nitrobenzene	1		9.366			ND	
15 Tetryl	1		9.693			ND	
16 Nitroglycerin	2		10.140			ND	
17 2,4,6-Trinitrotoluene	1		10.493			ND	
18 4-Amino-2,6-dinitrotoluene	1		10.653			ND	
19 2-Amino-4,6-dinitrotoluene	1		10.886			ND	
20 2,6-Dinitrotoluene	1		11.020			ND	
21 2,4-Dinitrotoluene	1		11.173			ND	
22 o-Nitrotoluene	1		11.873			ND	
23 p-Nitrotoluene	1		12.246			ND	
24 m-Nitrotoluene	1		12.753			ND	
25 PETN	2		13.840			ND	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

U - Marked Undetected

Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc\_x\20241009-138424.b\10090018.d

Injection Date: 09-Oct-2024 22:22:49

Instrument ID: CHHPLC\_X3

Operator ID: JZ

Lims ID: 280-197532-A-5-A

Lab Sample ID: 280-197532-5

Worklist Smp#: 18

Client ID: FWGmw-010-240901-GW

Injection Vol: 100.0 ul

Dil. Factor: 1.0000

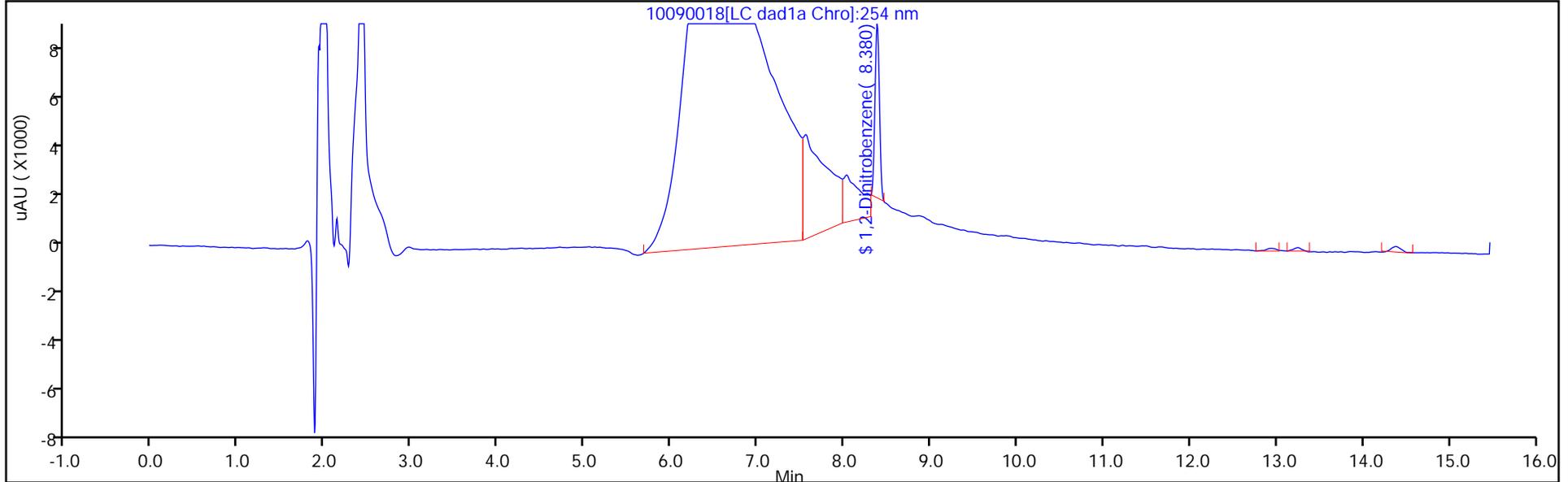
ALS Bottle#: 18

Method: 8330\_X3

Limit Group: GCSV - 8330

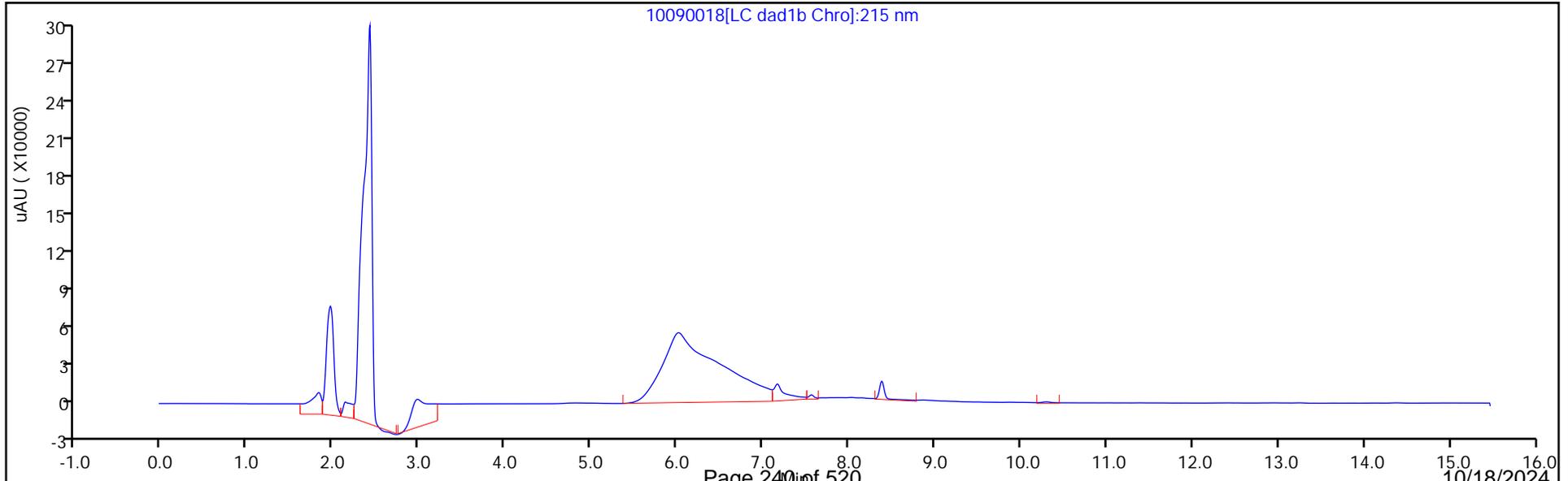
Column: UltraCarb5uODS (20) ( 4.60 mm)

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\20241009-138424.b\10090018.D  
 Lims ID: 280-197532-A-5-A  
 Client ID: FWGmw-010-240901-GW  
 Sample Type: Client  
 Inject. Date: 09-Oct-2024 22:22:49 ALS Bottle#: 18 Worklist Smp#: 18  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: 280-197532-A-5-A  
 Operator ID: JZ Instrument ID: CHHPLC\_X3  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X\20241009-138424.b\8330\_X3.m  
 Limit Group: GCSV - 8330  
 Last Update: 10-Oct-2024 12:47:17 Calib Date: 04-Oct-2024 19:55:02  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\10040019.D  
 Column 1 : UltraCarb5uODS (20) ( 4.60 mm) Det: LC DAD1B, 254 nm  
 Process Host: CTX1665

First Level Reviewer: LV5D Date: 10-Oct-2024 11:32:46

Compound	Amount Added	Amount Recovered	% Rec.
\$ 10 1,2-Dinitrobenzene	0.2000	0.1911	95.54

Eurofins Denver

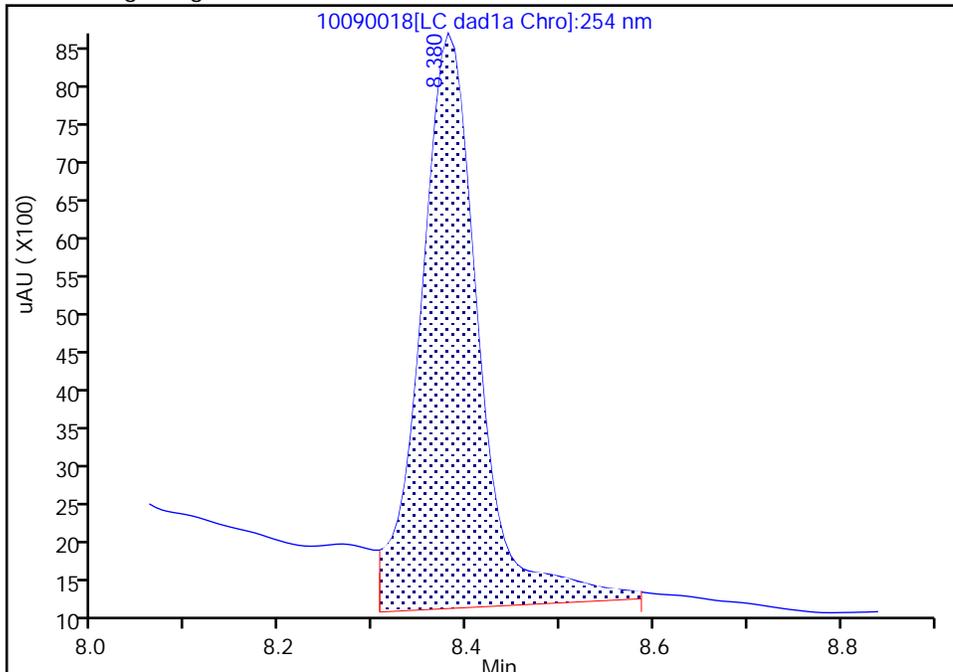
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241009-138424.b\10090018.d  
Injection Date: 09-Oct-2024 22:22:49 Instrument ID: CHHPLC\_X3  
Lims ID: 280-197532-A-5-A Lab Sample ID: 280-197532-5  
Client ID: FWGmw-010-240901-GW  
Operator ID: JZ ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

\$ 10 1,2-Dinitrobenzene, CAS: 528-29-0

Signal: 1

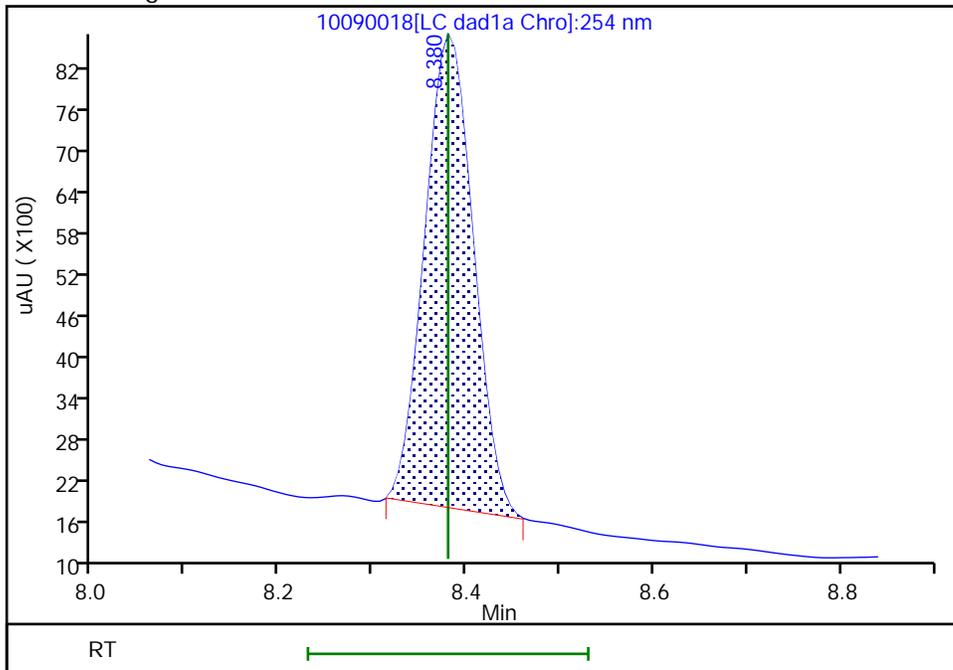
RT: 8.38  
Area: 33083  
Amount: 0.253685  
Amount Units: ug/mL

Processing Integration Results



RT: 8.38  
Area: 24920  
Amount: 0.191090  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 10-Oct-2024 11:32:42 -06:00:00 (UTC)

Audit Action: Manually Integrated

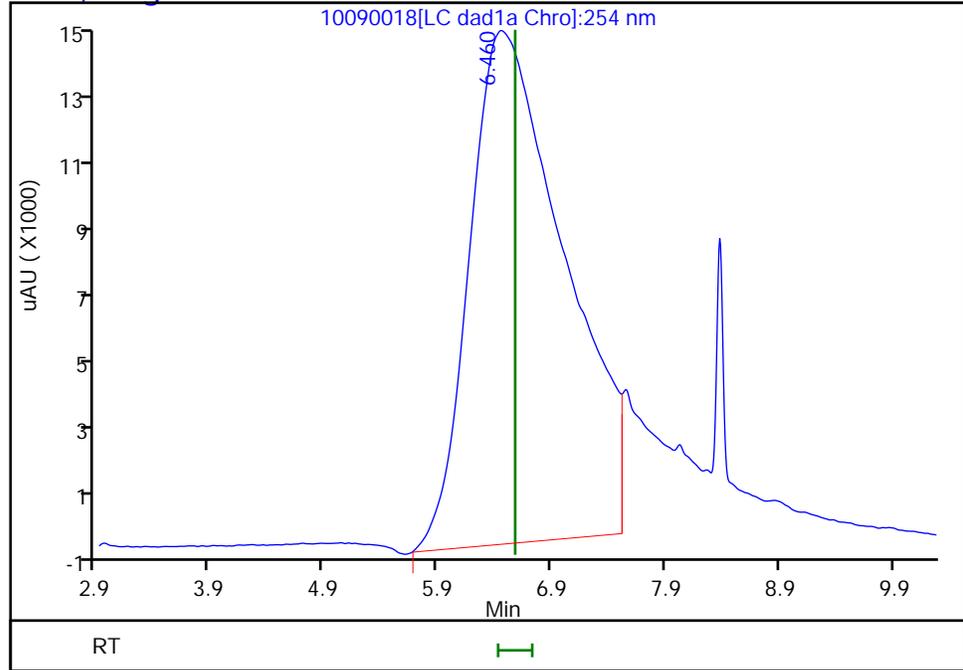
Audit Reason: Baseline

Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc\_x\20241009-138424.b\10090018.d  
Injection Date: 09-Oct-2024 22:22:49 Instrument ID: CHHPLC\_X3  
Lims ID: 280-197532-A-5-A Lab Sample ID: 280-197532-5  
Client ID: FWGmw-010-240901-GW  
Operator ID: JZ 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

RT: 6.46  
Response: 865367  
Amount: 8.953344



Reviewer: LV5D, 10-Oct-2024 11:32:46

Audit Action: Marked Compound Undetected

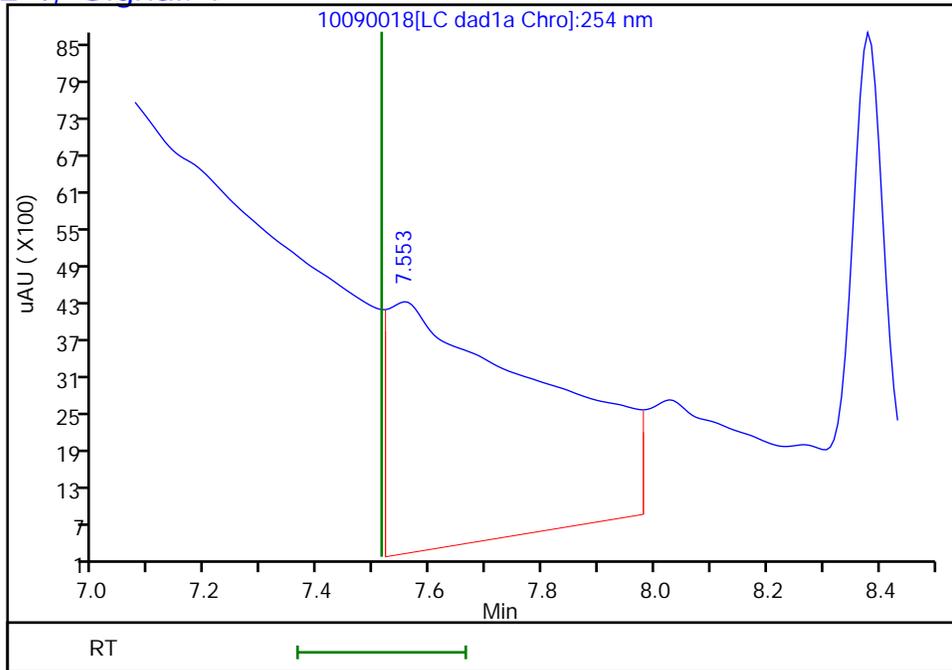
Audit Reason: Invalid Compound ID

Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc\_x\20241009-138424.b\10090018.d  
Injection Date: 09-Oct-2024 22:22:49 Instrument ID: CHHPLC\_X3  
Lims ID: 280-197532-A-5-A Lab Sample ID: 280-197532-5  
Client ID: FWGmw-010-240901-GW  
Operator ID: JZ 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

RT: 7.55  
Response: 76413  
Amount: 0.727252



Reviewer: LV5D, 10-Oct-2024 11:32:46

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>Eurofins Denver</u>	Job No.: <u>280-197532-2</u>
SDG No.: _____	
Client Sample ID: <u>FWGmw-011-240901-GW</u>	Lab Sample ID: <u>280-197532-6</u>
Matrix: <u>Water</u>	Lab File ID: <u>10090019.D</u>
Analysis Method: <u>8330B</u>	Date Collected: <u>10/02/2024 16:05</u>
Extraction Method: <u>3535</u>	Date Extracted: <u>10/08/2024 13:10</u>
Sample wt/vol: <u>466.1(mL)</u>	Date Analyzed: <u>10/09/2024 22:44</u>
Con. Extract Vol.: <u>5(mL)</u>	Dilution Factor: <u>1</u>
Injection Volume: <u>100(uL)</u>	GC Column: <u>UltraCarb5uODS</u> ID: <u>4.6(mm)</u>
% Moisture: _____ % Solids: _____	GPC Cleanup: (Y/N) <u>N</u>
Cleanup Factor: _____	
Analysis Batch No.: <u>670390</u>	Units: <u>ug/L</u>
Preparation Batch No.: <u>670048</u>	Instrument ID: <u>CHHPLC_X3</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
99-35-4	1,3,5-Trinitrobenzene	ND		0.225	0.0902
99-65-0	1,3-Dinitrobenzene	ND		0.118	0.0396
118-96-7	2,4,6-Trinitrotoluene	ND		0.118	0.0483
121-14-2	2,4-Dinitrotoluene	ND		0.107	0.0294
606-20-2	2,6-Dinitrotoluene	ND		0.107	0.0430
35572-78-2	2-Amino-4,6-dinitrotoluene	ND		0.118	0.0544
88-72-2	2-Nitrotoluene	ND	*-	0.225	0.0917
99-08-1	3-Nitrotoluene	ND	*-	0.429	0.209
19406-51-0	4-Amino-2,6-dinitrotoluene	ND		0.161	0.0619
99-99-0	4-Nitrotoluene	ND		0.440	0.107
2691-41-0	HMX	ND		0.225	0.0940
98-95-3	Nitrobenzene	ND		0.225	0.0976
55-63-0	Nitroglycerin	ND		2.25	0.988
78-11-5	PETN	ND		1.18	0.480
479-45-8	Tetryl	ND		0.118	0.0341

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	90		83-119

Eurofins Denver  
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241009-138424.b\10090019.D  
 Lims ID: 280-197532-A-6-A  
 Client ID: FWGmw-011-240901-GW  
 Sample Type: Client  
 Inject. Date: 09-Oct-2024 22:44:47 ALS Bottle#: 19 Worklist Smp#: 19  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: 280-197532-A-6-A  
 Operator ID: JZ Instrument ID: CHHPLC\_X3  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X\20241009-138424.b\8330\_X3.m  
 Limit Group: GCSV - 8330  
 Last Update: 10-Oct-2024 12:47:17 Calib Date: 04-Oct-2024 19:55:02  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\10040019.D  
 Column 1 : UltraCarb5uODS (20) ( 4.60 mm) Det: LC DAD1B, 254 nm  
 Process Host: CTX1665

First Level Reviewer: LV5D Date: 10-Oct-2024 12:10:16

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/mL	Flags
4 HMX	1		6.580			ND	U
8 RDX	1	7.532	7.513	0.019	1466	0.0123	M
\$ 10 1,2-Dinitrobenzene	1	8.379	8.380	-0.001	23352	0.1791	M
11 1,3,5-Trinitrobenzene	1		8.487			ND	U
12 1,3-Dinitrobenzene	1		9.047			ND	U
13 Nitrobenzene	1		9.366			ND	
15 Tetryl	1		9.693			ND	
16 Nitroglycerin	2		10.140			ND	
17 2,4,6-Trinitrotoluene	1		10.493			ND	
18 4-Amino-2,6-dinitrotoluene	1		10.653			ND	
19 2-Amino-4,6-dinitrotoluene	1		10.886			ND	
20 2,6-Dinitrotoluene	1		11.020			ND	
21 2,4-Dinitrotoluene	1		11.173			ND	
22 o-Nitrotoluene	1		11.873			ND	
23 p-Nitrotoluene	1		12.246			ND	
24 m-Nitrotoluene	1		12.753			ND	
25 PETN	2		13.840			ND	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

U - Marked Undetected

Report Date: 10-Oct-2024 12:47:29

Chrom Revision: 2.3 24-Sep-2024 15:19:46

Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc\_x\20241009-138424.b\10090019.d

Injection Date: 09-Oct-2024 22:44:47

Instrument ID: CHHPLC\_X3

Operator ID: JZ

Lims ID: 280-197532-A-6-A

Lab Sample ID: 280-197532-6

Worklist Smp#: 19

Client ID: FWGmw-011-240901-GW

Injection Vol: 100.0 ul

Dil. Factor: 1.0000

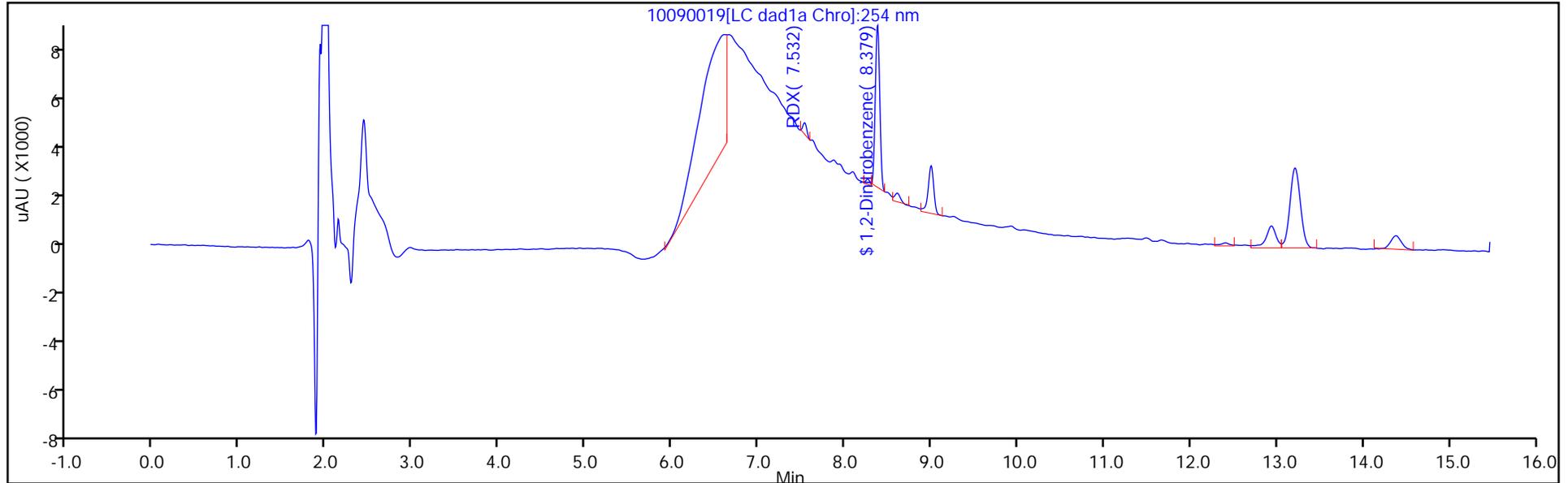
ALS Bottle#: 19

Method: 8330\_X3

Limit Group: GCSV - 8330

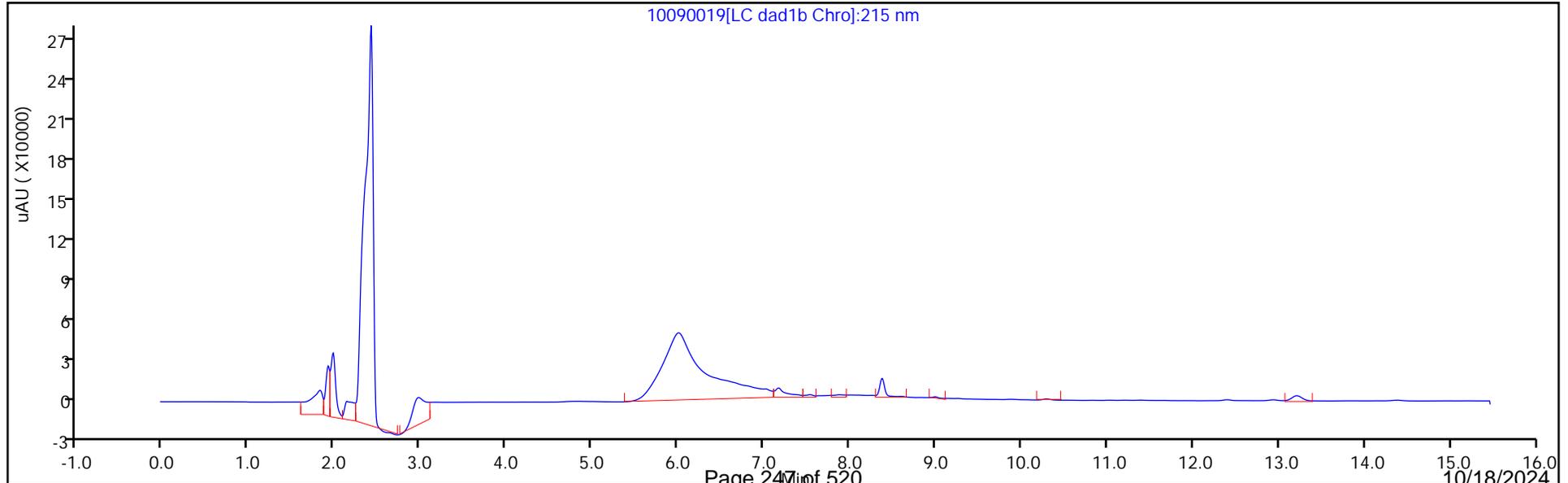
Column: UltraCarb5uODS (20) ( 4.60 mm)

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\20241009-138424.b\10090019.D  
 Lims ID: 280-197532-A-6-A  
 Client ID: FWGmw-011-240901-GW  
 Sample Type: Client  
 Inject. Date: 09-Oct-2024 22:44:47 ALS Bottle#: 19 Worklist Smp#: 19  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: 280-197532-A-6-A  
 Operator ID: JZ Instrument ID: CHHPLC\_X3  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X\20241009-138424.b\8330\_X3.m  
 Limit Group: GCSV - 8330  
 Last Update: 10-Oct-2024 12:47:17 Calib Date: 04-Oct-2024 19:55:02  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\10040019.D  
 Column 1 : UltraCarb5uODS (20) ( 4.60 mm) Det: LC DAD1B, 254 nm  
 Process Host: CTX1665

First Level Reviewer: LV5D Date: 10-Oct-2024 12:10:16

Compound	Amount Added	Amount Recovered	% Rec.
\$ 10 1,2-Dinitrobenzene	0.2000	0.1791	89.53

Eurofins Denver

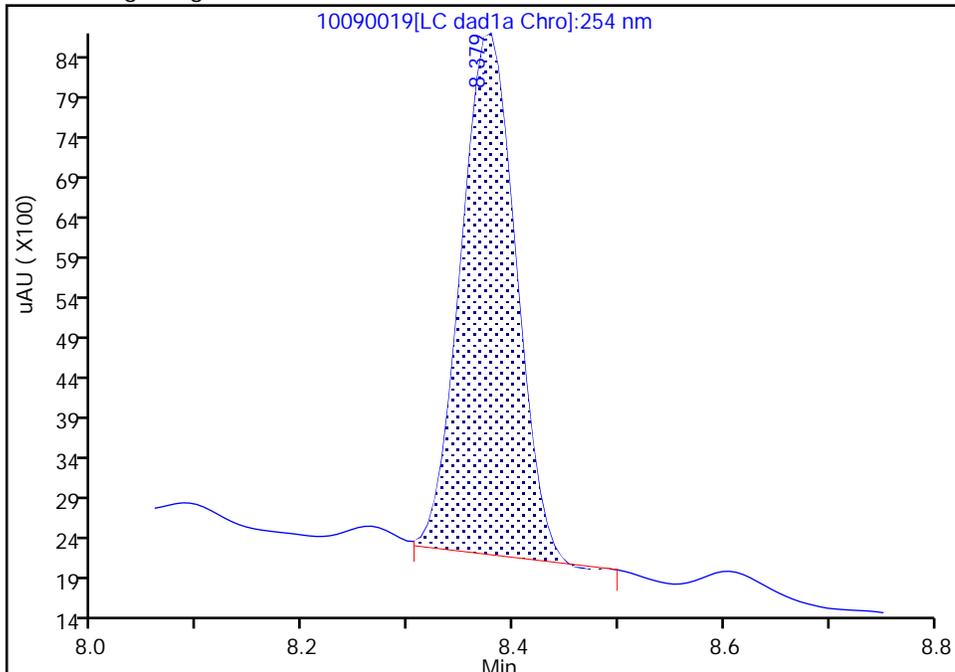
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241009-138424.b\10090019.d  
Injection Date: 09-Oct-2024 22:44:47 Instrument ID: CHHPLC\_X3  
Lims ID: 280-197532-A-6-A Lab Sample ID: 280-197532-6  
Client ID: FWGmw-011-240901-GW  
Operator ID: JZ ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 100.0 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

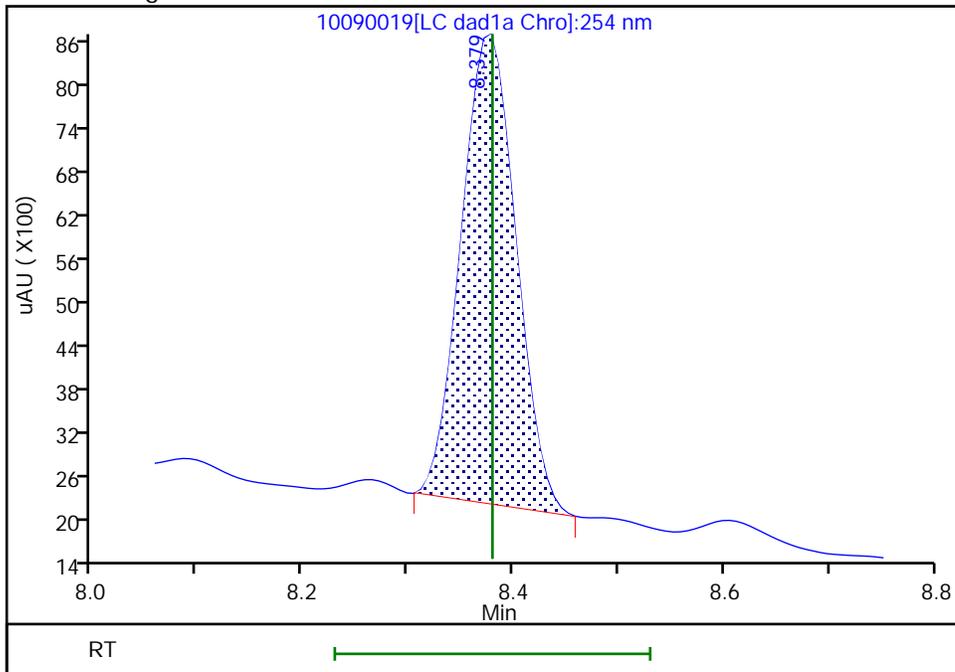
RT: 8.38  
Area: 23691  
Amount: 0.181666  
Amount Units: ug/mL

Processing Integration Results



RT: 8.38  
Area: 23352  
Amount: 0.179066  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 10-Oct-2024 12:10:11 -06:00:00 (UTC)

Audit Action: Manually Integrated

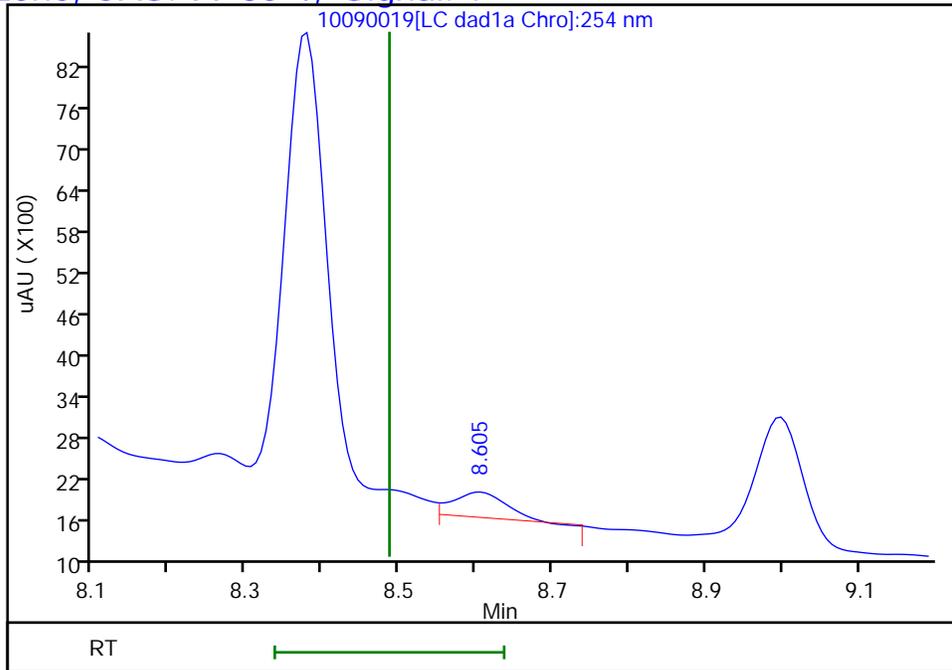
Audit Reason: Baseline

Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc\_x\20241009-138424.b\10090019.d  
Injection Date: 09-Oct-2024 22:44:47 Instrument ID: CHHPLC\_X3  
Lims ID: 280-197532-A-6-A Lab Sample ID: 280-197532-6  
Client ID: FWGmw-011-240901-GW  
Operator ID: JZ ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector LC DAD1B, 254 nm

11 1,3,5-Trinitrobenzene, CAS: 99-35-4, Signal: 1

RT: 8.61  
Response: 1830  
Amount: 0.008420



Reviewer: LV5D, 10-Oct-2024 12:10:16

Audit Action: Marked Compound Undetected

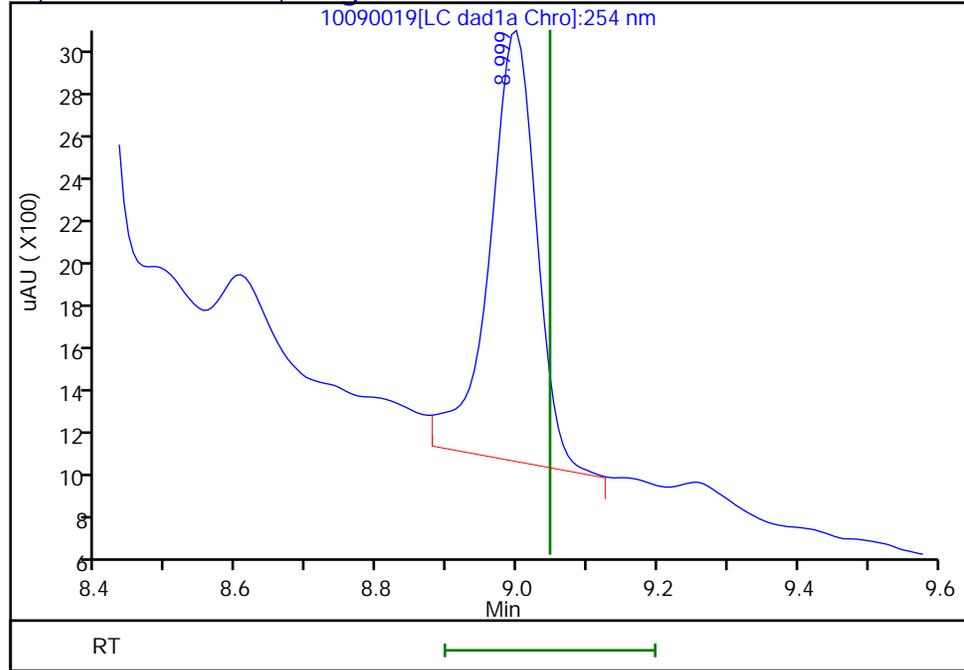
Audit Reason: Invalid Compound ID

Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc\_x\20241009-138424.b\10090019.d  
Injection Date: 09-Oct-2024 22:44:47 Instrument ID: CHHPLC\_X3  
Lims ID: 280-197532-A-6-A Lab Sample ID: 280-197532-6  
Client ID: FWGmw-011-240901-GW  
Operator ID: JZ 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

12 1,3-Dinitrobenzene, CAS: 99-65-0, Signal: 1

RT: 9.00  
Response: 8925  
Amount: 0.029926



Reviewer: LV5D, 10-Oct-2024 12:10:16

Audit Action: Marked Compound Undetected

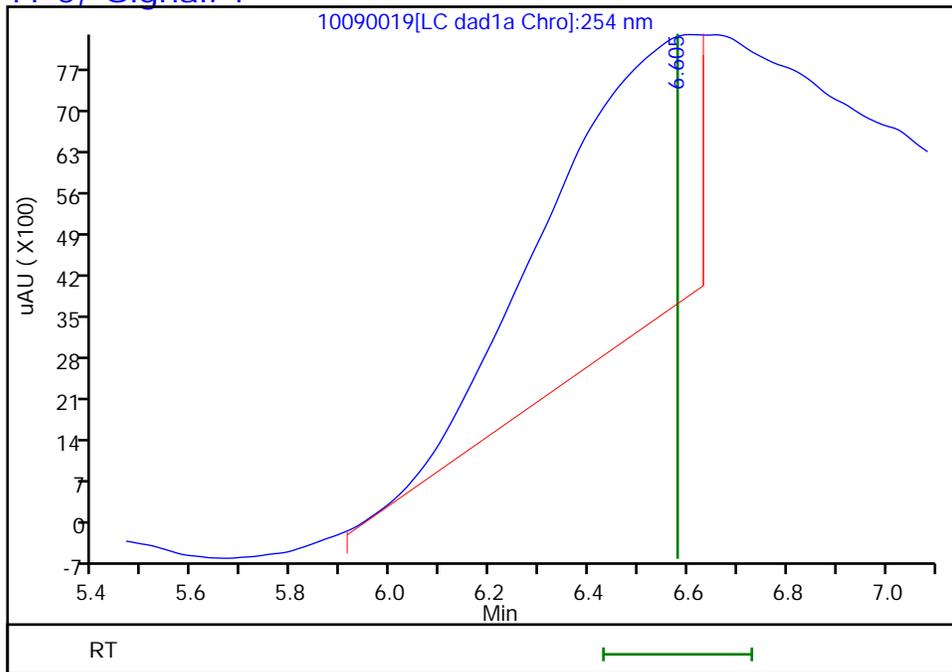
Audit Reason: Invalid Compound ID

Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc\_x\20241009-138424.b\10090019.d  
Injection Date: 09-Oct-2024 22:44:47 Instrument ID: CHHPLC\_X3  
Lims ID: 280-197532-A-6-A Lab Sample ID: 280-197532-6  
Client ID: FWGmw-011-240901-GW  
Operator ID: JZ 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

RT: 6.61  
Response: 101591  
Amount: 1.051091



Reviewer: LV5D, 10-Oct-2024 12:10:16

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

Eurofins Denver

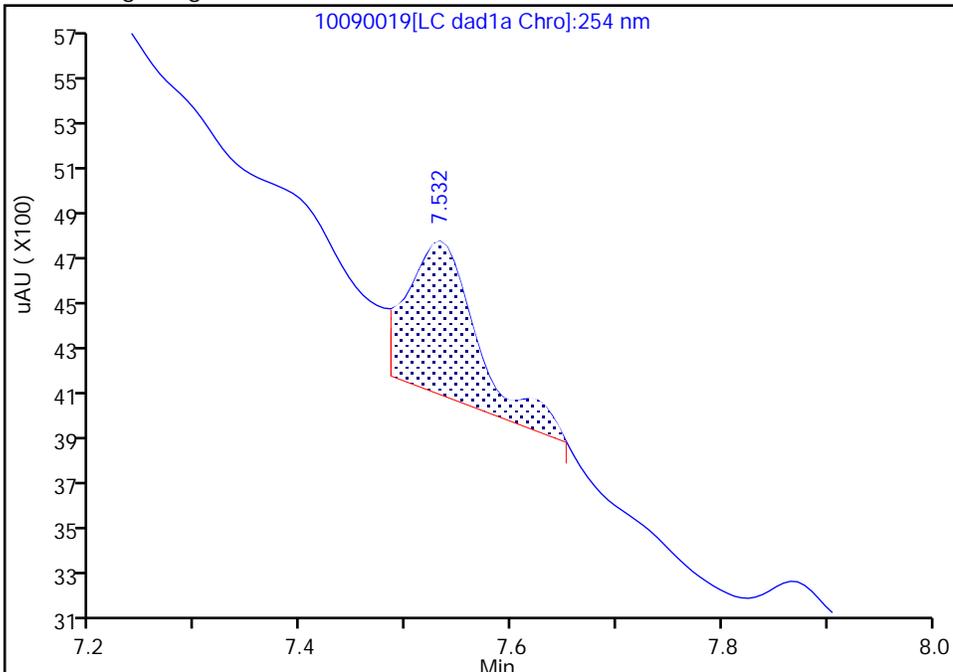
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Injection Date: 09-Oct-2024 22:44:47 Instrument ID: CHHPLC\_X3  
Lims ID: 280-197532-A-6-A Lab Sample ID: 280-197532-6  
Client ID: FWGmw-011-240901-GW  
Operator ID: JZ ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
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

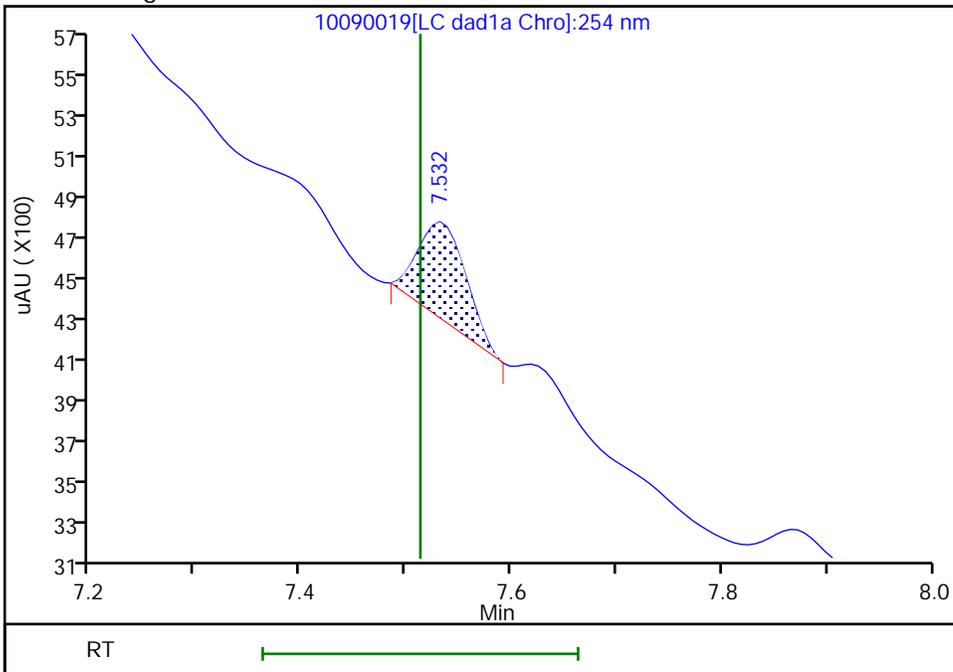
RT: 7.53  
Area: 3016  
Amount: 0.027115  
Amount Units: ug/mL

Processing Integration Results



RT: 7.53  
Area: 1466  
Amount: 0.012329  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 10-Oct-2024 12:10:06 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline

FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>Eurofins Denver</u>	Job No.: <u>280-197532-2</u>
SDG No.: _____	
Client Sample ID: <u>FWGmw-011-240901-GW</u>	Lab Sample ID: <u>280-197532-6</u>
Matrix: <u>Water</u>	Lab File ID: <u>10100018.D</u>
Analysis Method: <u>8330B</u>	Date Collected: <u>10/02/2024 16:05</u>
Extraction Method: <u>3535</u>	Date Extracted: <u>10/08/2024 13:10</u>
Sample wt/vol: <u>466.1(mL)</u>	Date Analyzed: <u>10/10/2024 21:23</u>
Con. Extract Vol.: <u>5(mL)</u>	Dilution Factor: <u>1</u>
Injection Volume: <u>100(uL)</u>	GC Column: <u>Luna-phenylhex</u> ID: <u>4.6(mm)</u>
% Moisture: _____ % Solids: _____	GPC Cleanup: (Y/N) <u>N</u>
Cleanup Factor: _____	
Analysis Batch No.: <u>670528</u>	Units: <u>ug/L</u>
Preparation Batch No.: <u>670048</u>	Instrument ID: <u>CHHPLC_X5</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
121-82-4	RDX	ND		0.225	0.0552

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	93		83-119

Eurofins Denver  
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20241010-138456.b\10100018.D  
 Lims ID: 280-197532-A-6-A  
 Client ID: FWGmw-011-240901-GW  
 Sample Type: Client  
 Inject. Date: 10-Oct-2024 21:23:15 ALS Bottle#: 18 Worklist Smp#: 18  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: 280-197532-A-6-A  
 Operator ID: JZ Instrument ID: CHHPLC\_X5  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X5\20241010-138456.b\8330\_X5\_Luna.m  
 Limit Group: GCSV - 8330  
 Last Update: 11-Oct-2024 15:56:55 Calib Date: 11-Aug-2024 06:16:04  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100027.D  
 Column 1 : Luna-Phenyl hexyl ( 4.60 mm) Det: LC mwd1A, 254 nm  
 Process Host: CTX1619

First Level Reviewer: LV5D

Date: 11-Oct-2024 15:51:42

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
5 HMX	1		6.287			ND	
8 RDX	1		8.393			ND	
9 Nitrobenzene	1		10.953			ND	
\$ 10 1,2-Dinitrobenzene	1	11.759	11.767	-0.008	48775	0.1858	
12 1,3-Dinitrobenzene	1		13.780			ND	7
13 Nitroglycerin	2		14.420			ND	
14 o-Nitrotoluene	1		14.960			ND	
16 p-Nitrotoluene	1	15.112	15.187	-0.075	11661	0.0551	
17 4-Amino-2,6-dinitrotoluene	1		15.513			ND	U
18 m-Nitrotoluene	1		16.007			ND	
19 2-Amino-4,6-dinitrotoluene	1		16.247			ND	
20 1,3,5-Trinitrobenzene	1	16.499	16.473	0.026	5394	0.0127	M
21 2,6-Dinitrotoluene	1		17.607			ND	7
22 2,4-Dinitrotoluene	1		18.033			ND	
23 Tetryl	1		21.013			ND	
24 2,4,6-Trinitrotoluene	1		21.900			ND	
25 PETN	2		23.353			ND	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

U - Marked Undetected

Report Date: 11-Oct-2024 15:57:02

Chrom Revision: 2.3 24-Sep-2024 15:19:46

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20241010-138456.b\10100018.D

Injection Date: 10-Oct-2024 21:23:15

Instrument ID: CHHPLC\_X5

Operator ID: JZ

Lims ID: 280-197532-A-6-A

Lab Sample ID: 280-197532-6

Worklist Smp#: 18

Client ID: FWGmw-011-240901-GW

Injection Vol: 100.0 ul

Dil. Factor: 1.0000

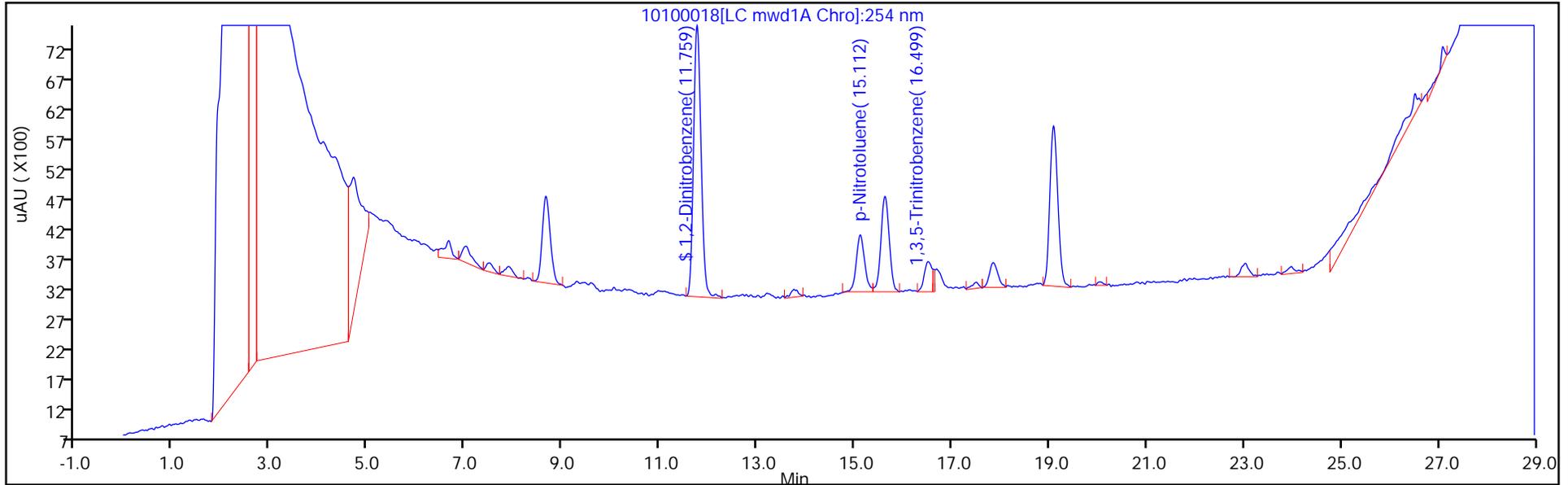
ALS Bottle#: 18

Method: 8330\_X5\_Luna

Limit Group: GCSV - 8330

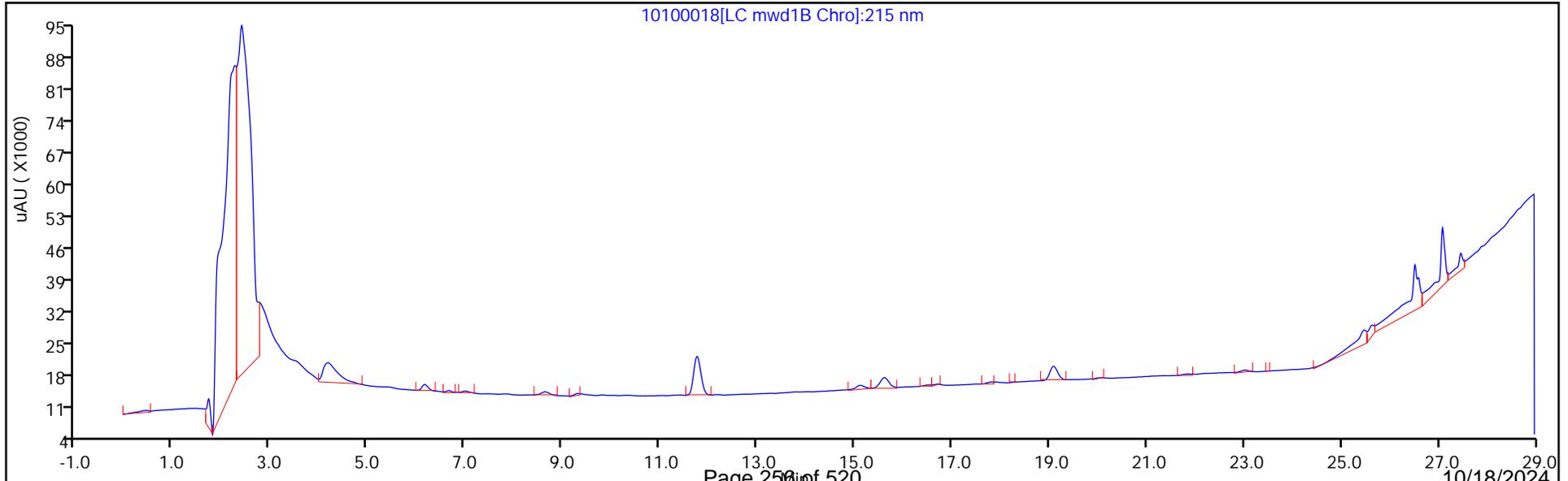
Column: Luna-Phenyl hexyl ( 4.60 mm)

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\CHHPLC\_X5\20241010-138456.b\10100018.D  
 Lims ID: 280-197532-A-6-A  
 Client ID: FWGmw-011-240901-GW  
 Sample Type: Client  
 Inject. Date: 10-Oct-2024 21:23:15 ALS Bottle#: 18 Worklist Smp#: 18  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: 280-197532-A-6-A  
 Operator ID: JZ Instrument ID: CHHPLC\_X5  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X5\20241010-138456.b\8330\_X5\_Luna.m  
 Limit Group: GCSV - 8330  
 Last Update: 11-Oct-2024 15:56:55 Calib Date: 11-Aug-2024 06:16:04  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100027.D  
 Column 1 : Luna-Phenyl hexyl ( 4.60 mm) Det: LC mwd1A, 254 nm  
 Process Host: CTX1619

First Level Reviewer: LV5D

Date: 11-Oct-2024 15:51:42

Compound	Amount Added	Amount Recovered	% Rec.
\$ 10 1,2-Dinitrobenzene	0.2000	0.1858	92.91

Eurofins Denver

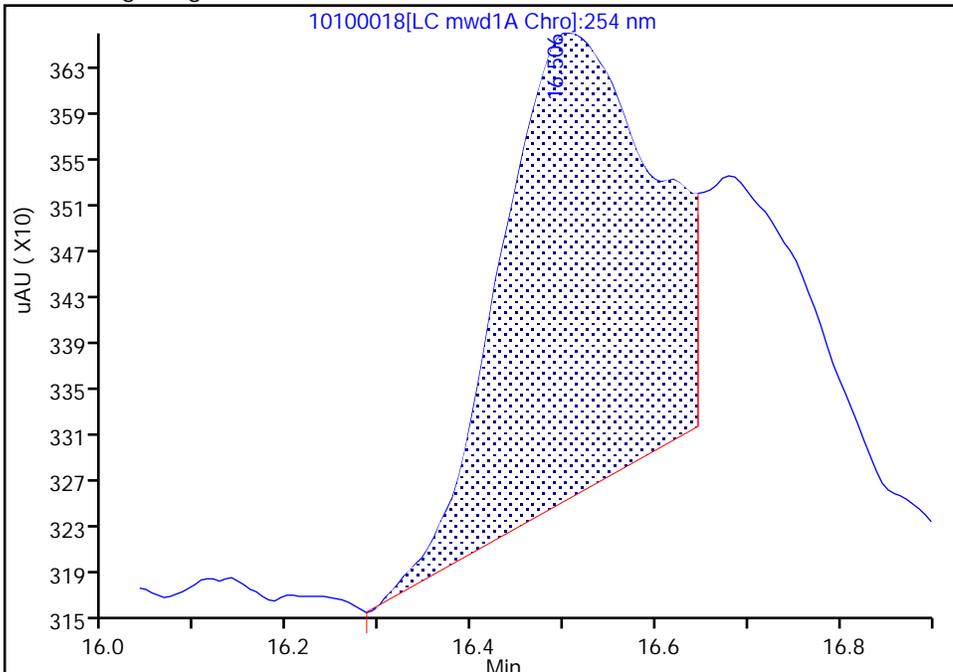
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20241010-138456.b\10100018.D  
Injection Date: 10-Oct-2024 21:23:15 Instrument ID: CHHPLC\_X5  
Lims ID: 280-197532-A-6-A Lab Sample ID: 280-197532-6  
Client ID: FWGmw-011-240901-GW  
Operator ID: JZ ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

20 1,3,5-Trinitrobenzene, CAS: 99-35-4

Signal: 1

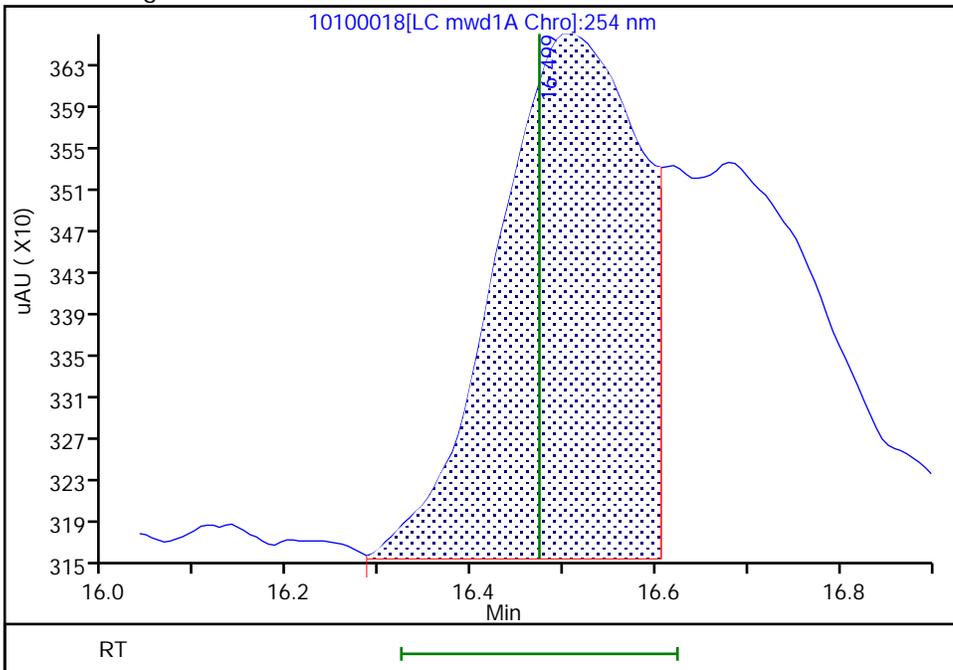
RT: 16.51  
Area: 4517  
Amount: 0.010658  
Amount Units: ug/ml

Processing Integration Results



RT: 16.50  
Area: 5394  
Amount: 0.012728  
Amount Units: ug/ml

Manual Integration Results



Reviewer: LV5D, 11-Oct-2024 15:51:41 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak

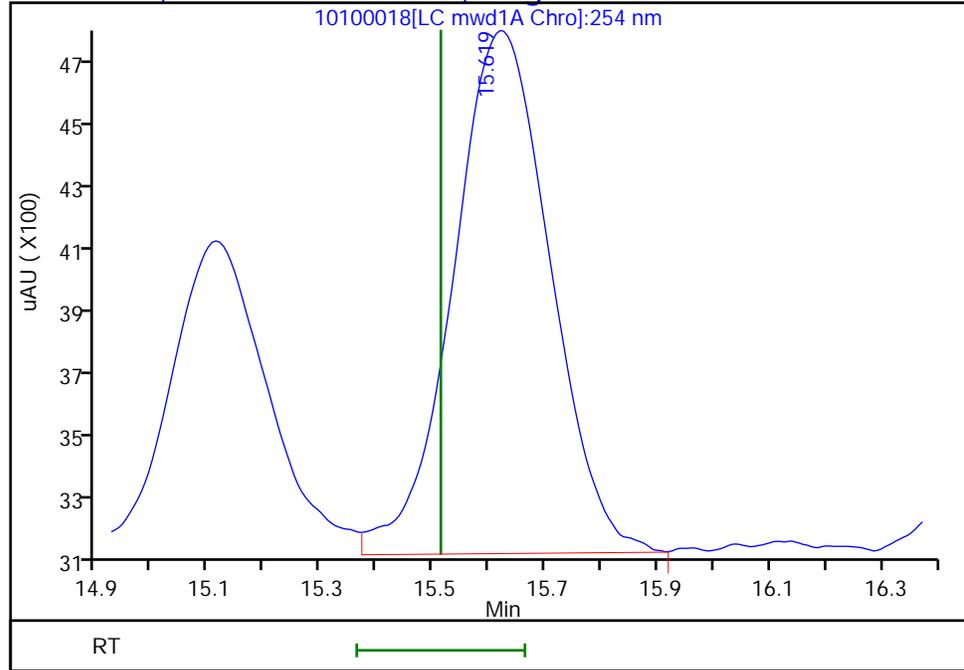
Audit Reason: Baseline Smoothing

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20241010-138456.b\10100018.D  
Injection Date: 10-Oct-2024 21:23:15 Instrument ID: CHHPLC\_X5  
Lims ID: 280-197532-A-6-A Lab Sample ID: 280-197532-6  
Client ID: FWGmw-011-240901-GW  
Operator ID: JZ ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector LC mwd1A, 254 nm

**17 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0, Signal: 1**

RT: 15.62  
Response: 19046  
Amount: 0.068366



Reviewer: LV5D, 11-Oct-2024 15:51:42

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.: 280-197532-2 Analy Batch No.: 669870  
 SDG No.: \_\_\_\_\_  
 Instrument ID: CHHPLC\_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N  
 Calibration Start Date: 10/04/2024 16:59 Calibration End Date: 10/04/2024 19:55 Calibration ID: 98019

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-669870/19	10040019.D
Level 2	IC 280-669870/18	10040018.D
Level 3	IC 280-669870/17	10040017.D
Level 4	IC 280-669870/16	10040016.D
Level 5	IC 280-669870/15	10040015.D
Level 6	IC 280-669870/14	10040014.D
Level 7	IC 280-669870/13	10040013.D
Level 8	IC 280-669870/12	10040012.D
Level 9	IC 280-669870/11	10040011.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	6.438	6.433	6.434	6.437	6.436	6.434	6.436	6.438	6.428		6.337 - 6.537	6.435
HMX	6.571	6.573	6.574	6.577	6.576	6.567	6.576	6.571	6.568		6.427 - 6.727	6.573
DNX	6.751	6.747	6.747	6.751	6.749	6.747	6.749	6.751	6.741		6.651 - 6.851	6.748
MNX	7.151	7.153	7.154	7.151	7.156	7.154	7.156	7.151	7.141		7.001 - 7.301	7.152
RDX	7.505	7.507	7.507	7.511	7.509	7.507	7.509	7.505	7.501		7.361 - 7.661	7.507
Picric acid	++++	7.940	7.941	7.937	7.936	7.927	7.916	7.905	7.868		7.787 - 8.087	7.921
1,3,5-Trinitrobenzene	8.471	8.473	8.474	8.477	8.476	8.480	8.476	8.478	8.468		8.327 - 8.627	8.475
1,3-Dinitrobenzene	9.031	9.033	9.034	9.037	9.036	9.047	9.036	9.038	9.028		8.887 - 9.187	9.036
Nitrobenzene	9.351	9.353	9.354	9.357	9.356	9.367	9.356	9.358	9.341		9.207 - 9.507	9.355
3,5-Dinitroaniline	9.558	9.560	9.561	9.564	9.563	9.573	9.562	9.558	9.548		9.414 - 9.714	9.561
Tetryl	9.678	9.680	9.681	9.684	9.683	9.700	9.682	9.685	9.668		9.534 - 9.834	9.682
Nitroglycerin	10.124	10.127	10.121	10.124	10.123	10.140	10.129	10.125	10.108		9.974 - 10.274	10.125
2,4,6-Trinitrotoluene	10.478	10.473	10.474	10.477	10.476	10.493	10.482	10.478	10.468		10.377 - 10.577	10.478
4-Amino-2,6-dinitrotoluene	10.638	10.640	10.634	10.637	10.636	10.653	10.642	10.631	10.621		10.537 - 10.737	10.637
2-Amino-4,6-dinitrotoluene	10.864	10.867	10.861	10.864	10.863	10.880	10.869	10.865	10.848		10.764 - 10.964	10.865
2,6-Dinitrotoluene	11.004	11.007	11.001	11.004	11.003	11.020	11.009	11.005	10.988		10.904 - 11.104	11.005
2,4-Dinitrotoluene	11.151	11.153	11.154	11.150	11.149	11.167	11.156	11.151	11.134		11.050 - 11.250	11.152
2-Nitrotoluene	11.844	11.847	11.847	11.850	11.849	11.867	11.862	11.851	11.834		11.700 - 12.000	11.850
4-Nitrotoluene	12.218	12.220	12.221	12.217	12.223	12.240	12.229	12.218	12.208		12.067 - 12.367	12.222
3-Nitrotoluene	12.718	12.713	12.721	12.724	12.723	12.740	12.736	12.725	12.708		12.574 - 12.874	12.723
PETN	13.784	13.787	13.794	13.797	13.796	13.827	13.822	13.805	13.794		13.647 - 13.947	13.801
1,2-Dinitrobenzene	8.371	8.373	8.374	8.377	8.376	8.380	8.376	8.371	8.368		8.227 - 8.527	8.374

FORM VI  
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA  
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-197532-2 Analy Batch No.: 669870

SDG No.: \_\_\_\_\_

Instrument ID: CHHPLC\_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/04/2024 16:59 Calibration End Date: 10/04/2024 19:55 Calibration ID: 98019

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-669870/19	10040019.D
Level 2	IC 280-669870/18	10040018.D
Level 3	IC 280-669870/17	10040017.D
Level 4	IC 280-669870/16	10040016.D
Level 5	IC 280-669870/15	10040015.D
Level 6	IC 280-669870/14	10040014.D
Level 7	IC 280-669870/13	10040013.D
Level 8	IC 280-669870/12	10040012.D
Level 9	IC 280-669870/11	10040011.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	194516 207358 206104	200399 202293	206720 203873	202742 203696	Ave		203077.88 7			1.9		20.0				
HMX	93000 97508 95522	106250 97445	99580 96131	87750 96690	Ave		96652.936 5			5.1		20.0				
DNX	140460 150134 150243	140060 149128	146114 149306	141349 147581	Ave		146041.71 5			2.9		20.0				
MNX	139160 134612 134910	126735 131392	131962 133087	131422 133128	Ave		132934.34 8			2.5		20.0				
RDX	126400 106776 105154	104900 106223	107720 104480	107730 106956	Lin2	173.49829 2	104832.25 7						0.9990		0.9900	
Picric acid	++++ 75344 74908	77950 75140	76140 74266	73910 75756	Ave		75426.764 3			1.7		20.0				
1,3,5-Trinitrobenzene	220300 214216 215272	214050 212963	233920 212653	214070 218705	Ave		217349.77 3			3.1		20.0				
1,3-Dinitrobenzene	301200 294592 296094	302700 296218	301160 293594	296590 301939	Ave		298231.91 0			1.2		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.: 280-197532-2 Analy Batch No.: 669870

SDG No.: \_\_\_\_\_

Instrument ID: CHHPLC\_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/04/2024 16:59 Calibration End Date: 10/04/2024 19:55 Calibration ID: 98019

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								
Nitrobenzene	203800 189692 194988	195200 192533	196020 191901	193600 198867	Ave		195177.92 5			2.1		20.0				
3,5-Dinitroaniline	223700 227780 235024	233250 231803	231220 229723	232920 238621	Lin2	-77.78784 7	233196.46 9						1.0000		0.9900	
Tetryl	164200 169664 172761	155150 166958	171240 168961	171300 179110	Lin2	-117.3061 5	171283.72 6						0.9990		0.9900	
Nitroglycerin	61210 65034 64690	60715 64271	64318 63656	63200 65375	Lin2	-403.2320 1	64455.873 6						1.0000		0.9900	
2,4,6-Trinitrotoluene	225700 213288 217208	219100 214585	218880 212211	216850 217864	Ave		217298.49 2			1.8		20.0				
4-Amino-2,6-dinitrotoluene	209900 146676 143972	167850 143735	155020 144779	151470 148480	Lin2	625.42442 7	143718.94 0						0.9990		0.9900	
2-Amino-4,6-dinitrotoluene	202900 201384 207688	211200 199510	204980 198944	206120 208057	Ave		204531.47 6			2.0		20.0				
2,6-Dinitrotoluene	160000 139512 134291	146450 143753	146900 142416	143340 141490	Lin2	188.15461 4	140280.93 0						0.9990		0.9900	
2,4-Dinitrotoluene	296800 287776 296269	296350 284400	286560 284846	297230 296080	Ave		291812.27 9			2.0		20.0				
2-Nitrotoluene	127300 124236 126481	120550 124605	129460 124796	124870 126917	Ave		125468.32 4			2.0		20.0				
4-Nitrotoluene	122900 107584 109290	117150 107470	113220 107763	106240 109373	Lin2	157.36641 0	107910.70 0						1.0000		0.9900	
3-Nitrotoluene	159800 134928 138727	149600 135250	138940 134671	133450 138022	Lin2	249.90061 2	135119.43 4						1.0000		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.: 280-197532-2 Analy Batch No.: 669870

SDG No.: \_\_\_\_\_

Instrument ID: CHHPLC\_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/04/2024 16:59 Calibration End Date: 10/04/2024 19:55 Calibration ID: 98019

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD /RSE	#	MAX %RSD /RSE	R <sup>2</sup> OR COD	#	MIN R <sup>2</sup> OR COD
	LVL 1 LVL 5 LVL 9	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4 LVL 8		B	M1	M2								
PETN	70530 72744 73523	68860 72834	72696 72584	71766 74375	Ave		72212.329 2			2.3		20.0				
1,2-Dinitrobenzene	131500 129000 131478	126500 128563	135900 128147	132380 130220	Ave		130409.78 3			2.1		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.: 280-197532-2 Analy Batch No.: 669870

SDG No.: \_\_\_\_\_

Instrument ID: CHHPLC\_X3 GC Column: UltraCarb5 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/04/2024 16:59 Calibration End Date: 10/04/2024 19:55 Calibration ID: 98019

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-669870/19	10040019.D
Level 2	IC 280-669870/18	10040018.D
Level 3	IC 280-669870/17	10040017.D
Level 4	IC 280-669870/16	10040016.D
Level 5	IC 280-669870/15	10040015.D
Level 6	IC 280-669870/14	10040014.D
Level 7	IC 280-669870/13	10040013.D
Level 8	IC 280-669870/12	10040012.D
Level 9	IC 280-669870/11	10040011.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
		LVL 6	LVL 7	LVL 8	LVL 9		LVL 6	LVL 7	LVL 8	LVL 9	
TNX	Ave	1951 81160	4020 143139	10367 204307	20335 516807	51995	0.0100 0.401	0.0201 0.702	0.0502 1.00	0.100 2.51	0.251
HMX	Ave	930 38978	2125 67292	4979 96690	8775 238805	24377	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
DNX	Ave	1406 59711	2804 104619	7313 147729	14149 375984	37571	0.0100 0.400	0.0200 0.701	0.0501 1.00	0.100 2.50	0.250
MNX	Ave	1624 61334	2958 108719	7700 155360	15337 393599	39273	0.0117 0.467	0.0233 0.817	0.0584 1.17	0.117 2.92	0.292
RDX	Lin2	1264 42489	2098 73136	5386 106956	10773 262885	26694	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
Picric acid	Ave	+++++ 30056	1559 51986	3807 75756	7391 187271	18836	+++++ 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
1,3,5-Trinitrobenzene	Ave	2203 85185	4281 148857	11696 218705	21407 538179	53554	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
1,3-Dinitrobenzene	Ave	3012 118487	6054 205516	15058 301939	29659 740236	73648	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
Nitrobenzene	Ave	2038 77013	3904 134331	9801 198867	19360 487471	47423	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
3,5-Dinitroaniline	Lin2	2237 92721	4665 160806	11561 238621	23292 587561	56945	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
Tetryl	Lin2	1642 66783	3103 118273	8562 179110	17130 431903	42416	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
Nitroglycerin	Lin2	6121 257082	12143 445595	32159 653746	63200 1617250	162585	0.100 4.00	0.200 7.00	0.500 10.0	1.00 25.0	2.50
2,4,6-Trinitrotoluene	Ave	2257 85834	4382 148548	10944 217864	21685 543020	53322	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
4-Amino-2,6-dinitrotoluene	Lin2	2099 57494	3357 101345	7751 148480	15147 359929	36669	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
2-Amino-4,6-dinitrotoluene	Ave	2029	4224	10249	20612	50346	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.: 280-197532-2 Analy Batch No.: 669870

SDG No.: \_\_\_\_\_

Instrument ID: CHHPLC\_X3 GC Column: UltraCarb5 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/04/2024 16:59 Calibration End Date: 10/04/2024 19:55 Calibration ID: 98019

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
		79804	139261	208057	519220		0.400	0.700	1.00	2.50	
2,6-Dinitrotoluene	Lin2	1600	2929	7345	14334	34878	0.0100	0.0200	0.0500	0.100	0.250
		57501	99691	141490	335728		0.400	0.700	1.00	2.50	
2,4-Dinitrotoluene	Ave	2968	5927	14328	29723	71944	0.0100	0.0200	0.0500	0.100	0.250
		113760	199392	296080	740672		0.400	0.700	1.00	2.50	
2-Nitrotoluene	Ave	1273	2411	6473	12487	31059	0.0100	0.0200	0.0500	0.100	0.250
		49842	87357	126917	316203		0.400	0.700	1.00	2.50	
4-Nitrotoluene	Lin2	1229	2343	5661	10624	26896	0.0100	0.0200	0.0500	0.100	0.250
		42988	75434	109373	273226		0.400	0.700	1.00	2.50	
3-Nitrotoluene	Lin2	1598	2992	6947	13345	33732	0.0100	0.0200	0.0500	0.100	0.250
		54100	94270	138022	346817		0.400	0.700	1.00	2.50	
PETN	Ave	7053	13772	36348	71766	181859	0.100	0.200	0.500	1.00	2.50
		291336	508089	743747	1838063		4.00	7.00	10.0	25.0	
1,2-Dinitrobenzene	Ave	1315	2530	6795	13238	32250	0.0100	0.0200	0.0500	0.100	0.250
		51425	89703	130220	328696		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\20241004-138284.b\10040011.D  
 Lims ID: IC INT/DMT 9  
 Client ID:  
 Sample Type: IC Calib Level: 9  
 Inject. Date: 04-Oct-2024 16:59:29 ALS Bottle#: 11 Worklist Smp#: 11  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: IC INT/DMT 9  
 Operator ID: JZ Instrument ID: CHHPLC\_X3  
 Sublist: chrom-8330\_X3\*sub27  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\8330\_X3.m  
 Limit Group: GCSV - 8330  
 Last Update: 08-Oct-2024 13:19:10 Calib Date: 04-Oct-2024 19:55:02  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\10040019.D  
 Column 1 : UltraCarb5uODS (20) ( 4.60 mm) Det: LC DAD1B, 254 nm  
 Process Host: CTX1654

First Level Reviewer: LV5D Date: 04-Oct-2024 17:24:36

Compound	Det	RT (min.)	Exp RT (min.)	Diff RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
3 TNX	1	6.428	6.437	-0.009	516807	2.51	2.54	M
4 HMX	1	6.568	6.577	-0.009	238805	2.50	2.47	M
6 DNX	1	6.741	6.751	-0.010	375984	2.50	2.57	M
7 MNX	1	7.141	7.151	-0.010	393599	2.92	2.96	M
8 RDX	1	7.501	7.511	-0.010	262885	2.50	2.51	
9 2,4,6-Trinitrophenol	1	7.868	7.937	-0.069	187271	2.50	2.48	
\$ 10 1,2-Dinitrobenzene	1	8.368	8.377	-0.009	328696	2.50	2.52	
11 1,3,5-Trinitrobenzene	1	8.468	8.477	-0.009	538179	2.50	2.48	
12 1,3-Dinitrobenzene	1	9.028	9.037	-0.009	740236	2.50	2.48	
13 Nitrobenzene	1	9.341	9.357	-0.016	487471	2.50	2.50	
14 3,5-Dinitroaniline	1	9.548	9.564	-0.016	587561	2.50	2.52	
15 Tetryl	1	9.668	9.684	-0.016	431903	2.50	2.52	
16 Nitroglycerin	2	10.108	10.124	-0.016	1617250	25.0	25.1	M
17 2,4,6-Trinitrotoluene	1	10.468	10.477	-0.009	543020	2.50	2.50	
18 4-Amino-2,6-dinitrotoluene	1	10.621	10.637	-0.016	359929	2.50	2.50	
19 2-Amino-4,6-dinitrotoluene	1	10.848	10.864	-0.016	519220	2.50	2.54	
20 2,6-Dinitrotoluene	1	10.988	11.004	-0.016	335728	2.50	2.39	
21 2,4-Dinitrotoluene	1	11.134	11.150	-0.016	740672	2.50	2.54	
22 o-Nitrotoluene	1	11.834	11.850	-0.016	316203	2.50	2.52	
23 p-Nitrotoluene	1	12.208	12.217	-0.009	273226	2.50	2.53	
24 m-Nitrotoluene	1	12.708	12.724	-0.016	346817	2.50	2.56	
25 PETN	2	13.794	13.797	-0.003	1838063	25.0	25.5	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

8330IntermStk\_00083

Amount Added: 250.00

Units: uL

8330 DMT\_00018

Amount Added: 125.00

Units: uL

Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040011.d

Injection Date: 04-Oct-2024 16:59:29

Instrument ID: CHHPLC\_X3

Operator ID: JZ

Lims ID: IC INT/DMT 9

Worklist Smp#: 11

Client ID:

Injection Vol: 100.0 ul

Dil. Factor: 1.0000

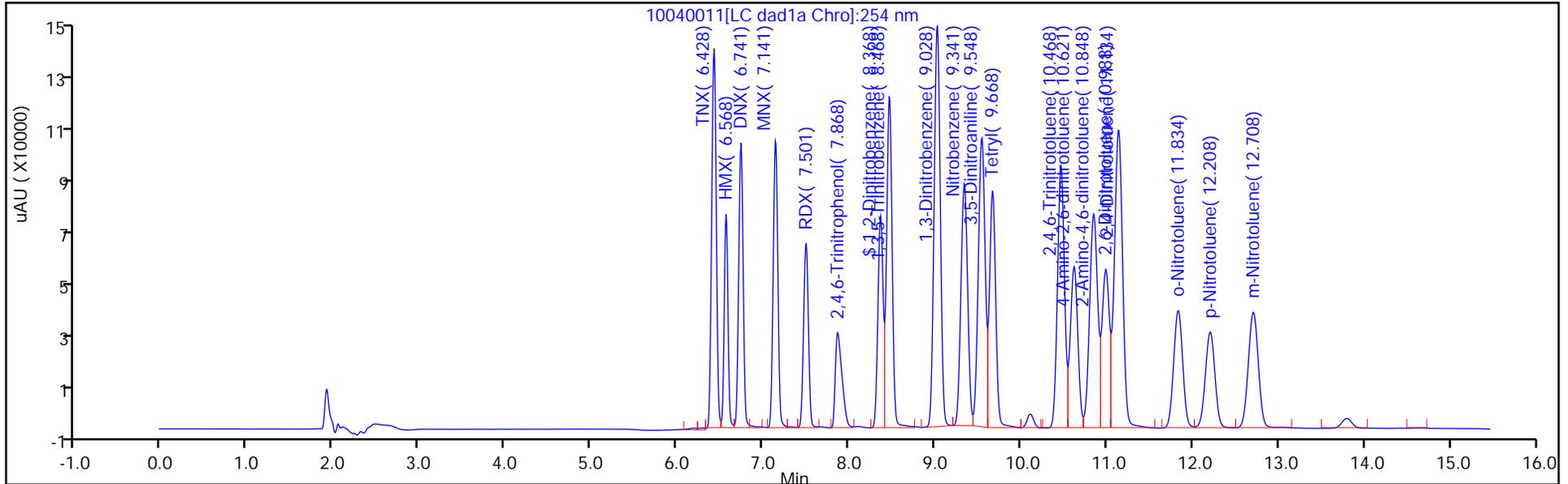
ALS Bottle#: 11

Method: 8330\_X3

Limit Group: GCSV - 8330

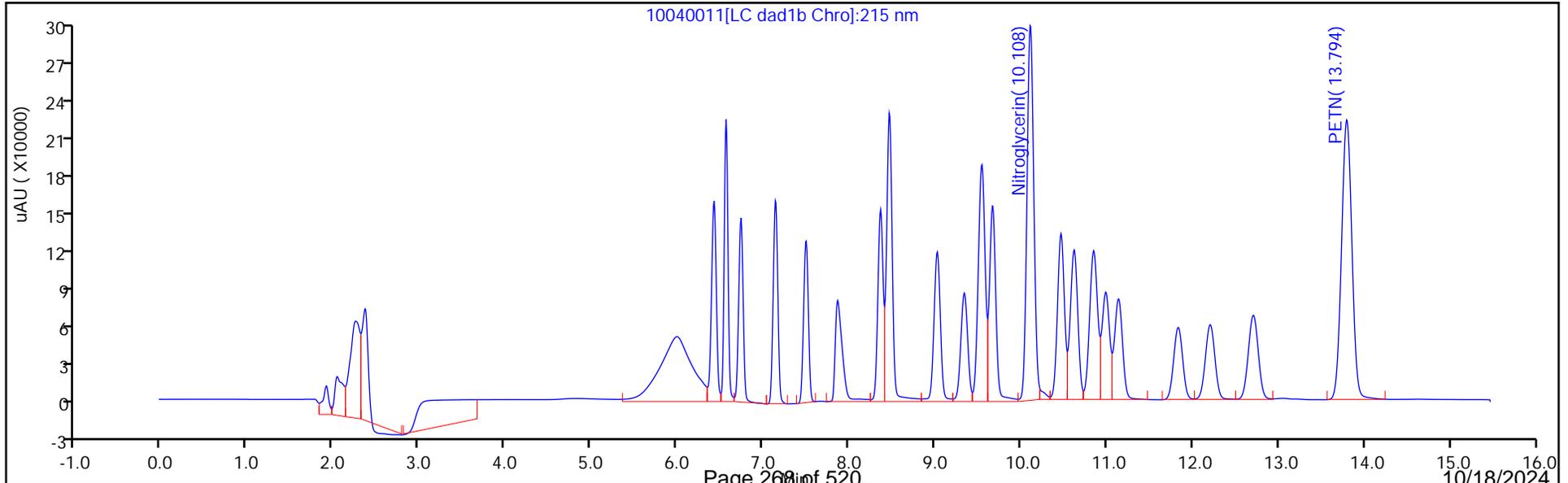
Column: UltraCarb5uODS (20) ( 4.60 mm)

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



Eurofins Denver

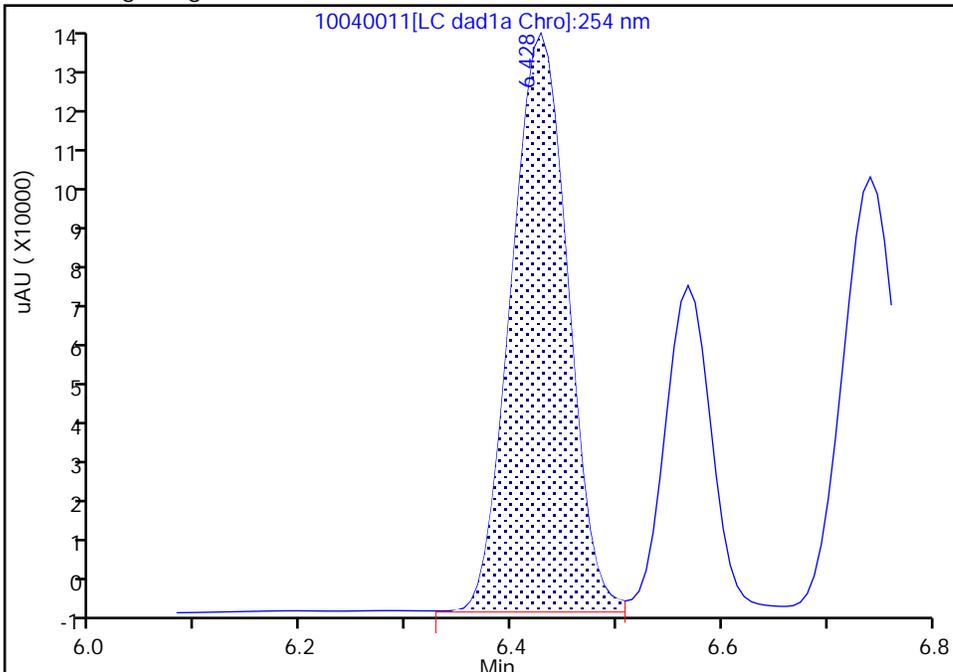
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 Injection Date: 04-Oct-2024 16:59:29 Instrument ID: CHHPLC\_X3  
 Lims ID: IC INT/DMT 9  
 Client ID:  
 Operator ID: JZ ALS Bottle#: 11 Worklist Smp#: 11  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Method: 8330\_X3 Limit Group: GCSV - 8330  
 Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

3 TNX, CAS: 13980-04-6

Signal: 1

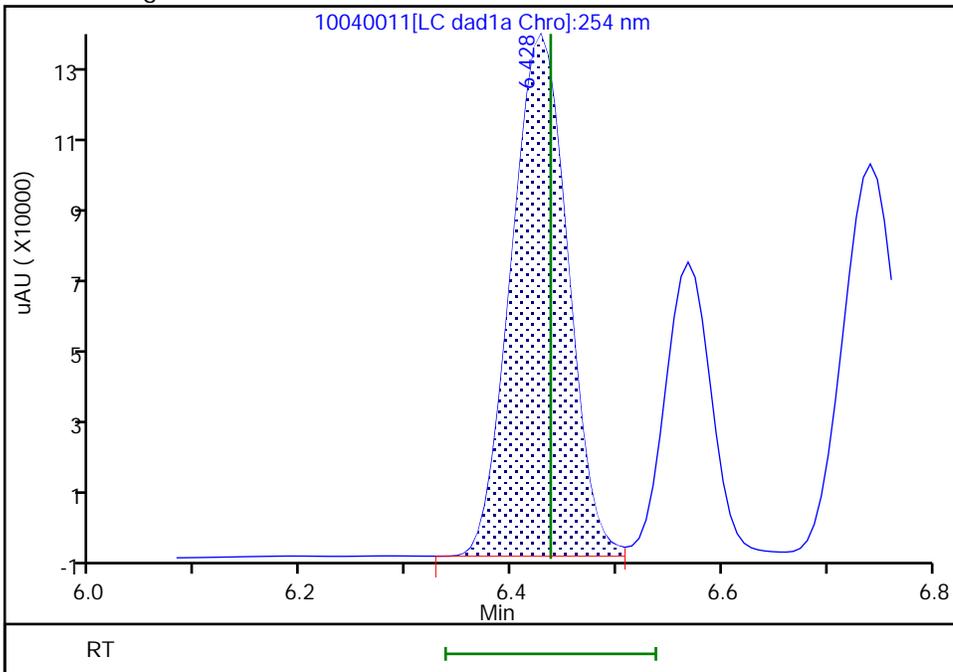
RT: 6.43  
 Area: 518719  
 Amount: 2.507500  
 Amount Units: ug/mL

Processing Integration Results



RT: 6.43  
 Area: 516807  
 Amount: 2.544871  
 Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 04-Oct-2024 17:24:16 -06:00:00 (UTC)

Audit Action: Assigned New Baseline

Audit Reason: Baseline

Eurofins Denver

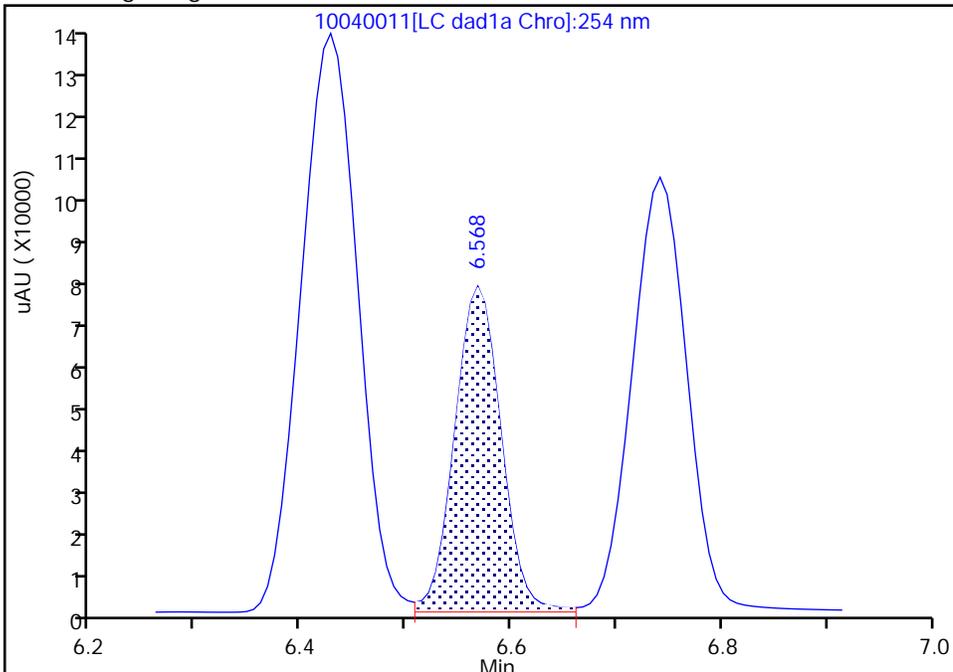
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040011.d  
Injection Date: 04-Oct-2024 16:59:29 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 9  
Client ID:  
Operator ID: JZ ALS Bottle#: 11 Worklist Smp#: 11  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

4 HMX, CAS: 2691-41-0

Signal: 1

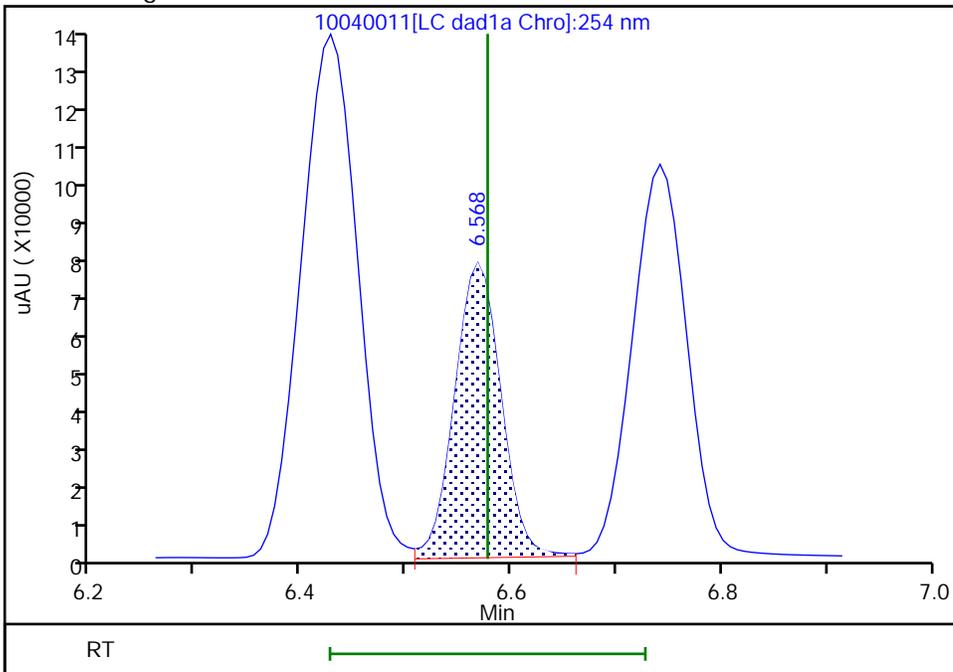
RT: 6.57  
Area: 239730  
Amount: 2.500000  
Amount Units: ug/mL

Processing Integration Results



RT: 6.57  
Area: 238805  
Amount: 2.470747  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 04-Oct-2024 17:24:16 -06:00:00 (UTC)

Audit Action: Assigned New Baseline

Audit Reason: Baseline

Eurofins Denver

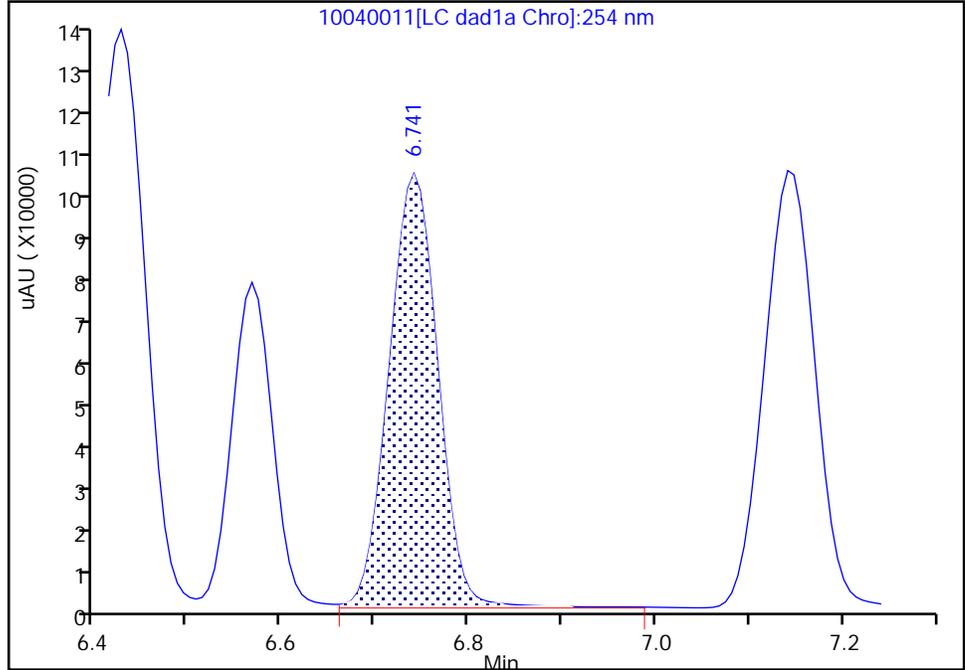
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Lims ID: IC INT/DMT 9  
Client ID:  
Operator ID: JZ ALS Bottle#: 11 Worklist Smp#: 11  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

6 DNX, CAS: 80251-29-2

Signal: 1

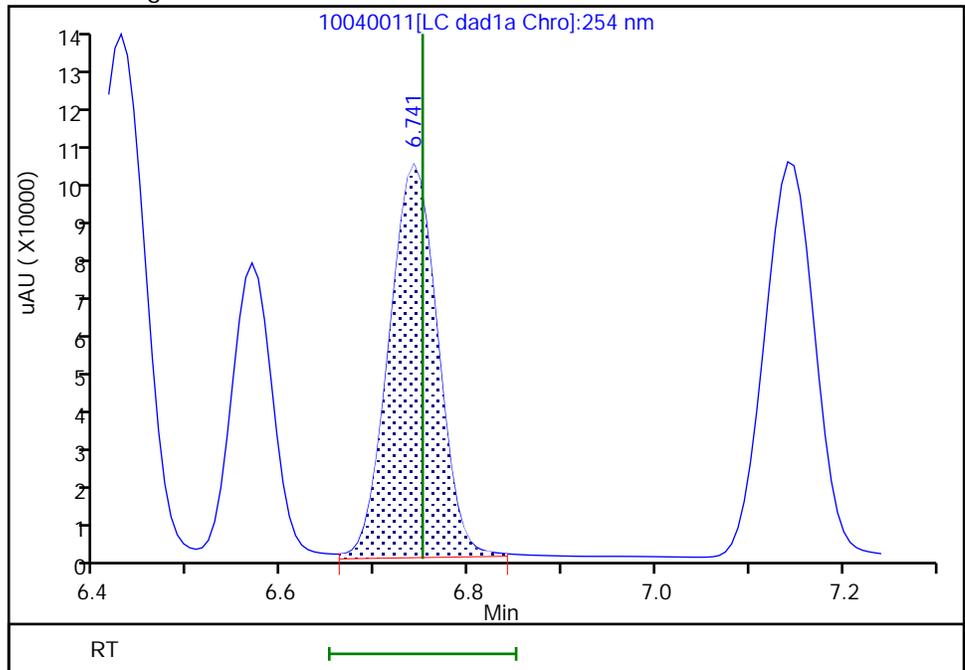
RT: 6.74  
Area: 379790  
Amount: 2.502500  
Amount Units: ug/mL

Processing Integration Results



RT: 6.74  
Area: 375984  
Amount: 2.574497  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 04-Oct-2024 17:24:19 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak

Audit Reason: Baseline

Eurofins Denver

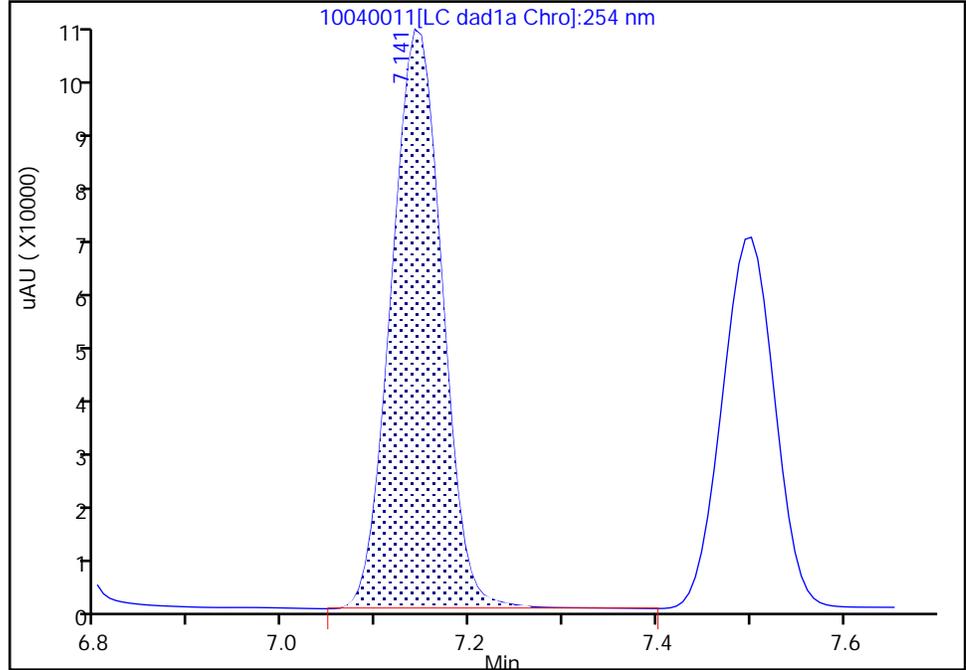
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Injection Date: 04-Oct-2024 16:59:29 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 9  
Client ID:  
Operator ID: JZ ALS Bottle#: 11 Worklist Smp#: 11  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

7 MNX, CAS: 5755-27-1

Signal: 1

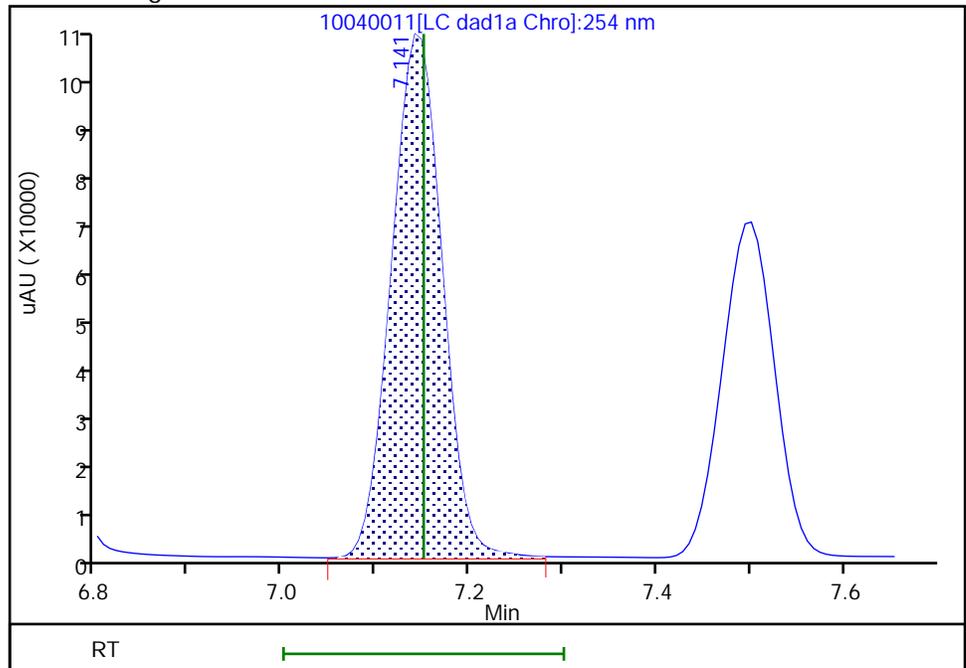
RT: 7.14  
Area: 394458  
Amount: 2.917500  
Amount Units: ug/mL

Processing Integration Results



RT: 7.14  
Area: 393599  
Amount: 2.960853  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 04-Oct-2024 17:24:24 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak

Audit Reason: Baseline

Eurofins Denver

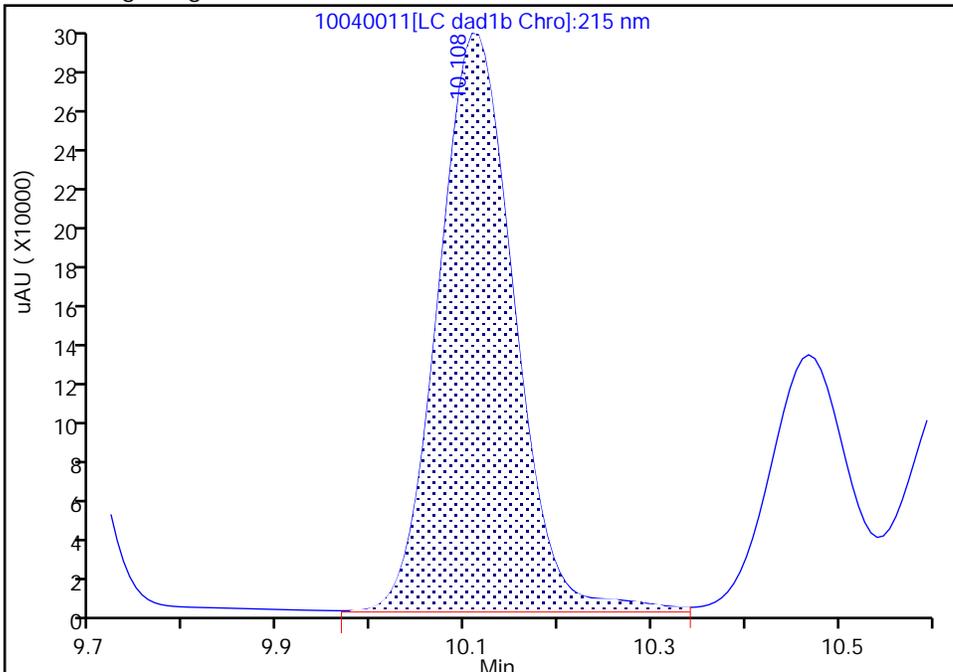
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Injection Date: 04-Oct-2024 16:59:29 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 9  
Client ID:  
Operator ID: JZ ALS Bottle#: 11 Worklist Smp#: 11  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1C, 215 nm

16 Nitroglycerin, CAS: 55-63-0

Signal: 1

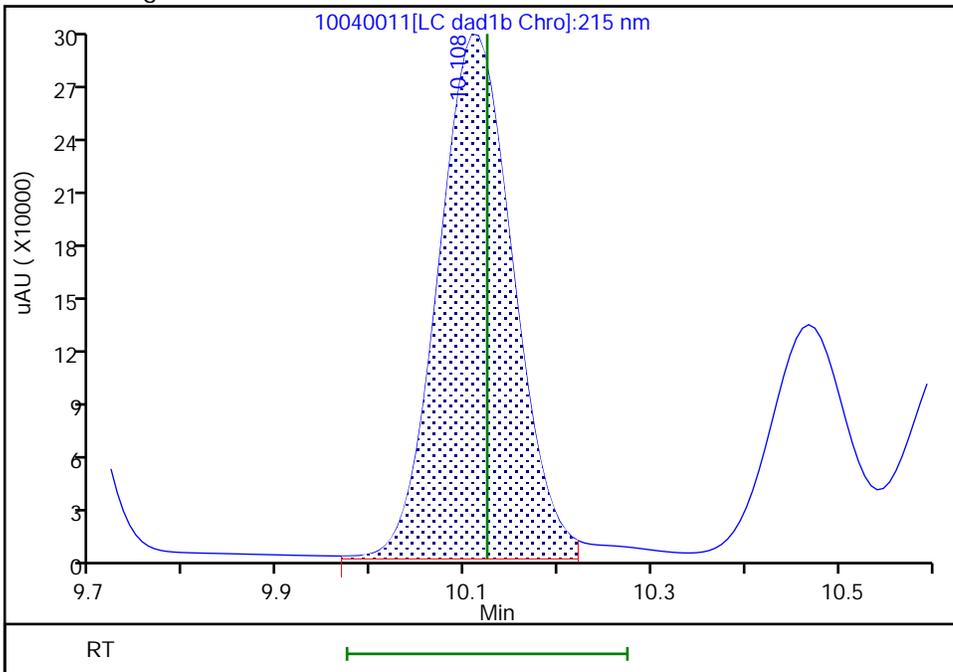
RT: 10.11  
Area: 1655248  
Amount: 23.821068  
Amount Units: ug/mL

Processing Integration Results



RT: 10.11  
Area: 1617250  
Amount: 25.097065  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:08:47 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak

Audit Reason: Baseline

Eurofins Denver  
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\10040012.D  
 Lims ID: IC INT/DMT 8  
 Client ID:  
 Sample Type: IC Calib Level: 8  
 Inject. Date: 04-Oct-2024 17:21:25 ALS Bottle#: 12 Worklist Smp#: 12  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: IC INT/DMT 8  
 Operator ID: JZ Instrument ID: CHHPLC\_X3  
 Sublist: chrom-8330\_X3\*sub27  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\8330\_X3.m  
 Limit Group: GCSV - 8330  
 Last Update: 08-Oct-2024 13:19:12 Calib Date: 04-Oct-2024 19:55:02  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\10040019.D  
 Column 1 : UltraCarb5uODS (20) ( 4.60 mm) Det: LC DAD1B, 254 nm  
 Process Host: CTX1654

First Level Reviewer: LV5D Date: 08-Oct-2024 12:59:39

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
3 TNX	1	6.438	6.437	0.001	204307	1.00	1.01	
4 HMX	1	6.571	6.577	-0.006	96690	1.00	1.00	M
6 DNX	1	6.751	6.751	0.000	147729	1.00	1.01	M
7 MNX	1	7.151	7.151	0.000	155360	1.17	1.17	
8 RDX	1	7.505	7.511	-0.006	106956	1.00	1.02	
9 2,4,6-Trinitrophenol	1	7.905	7.937	-0.032	75756	1.00	1.00	
\$ 10 1,2-Dinitrobenzene	1	8.371	8.377	-0.006	130220	1.00	1.00	
11 1,3,5-Trinitrobenzene	1	8.478	8.477	0.001	218705	1.00	1.01	
12 1,3-Dinitrobenzene	1	9.038	9.037	0.001	301939	1.00	1.01	
13 Nitrobenzene	1	9.358	9.357	0.001	198867	1.00	1.02	
14 3,5-Dinitroaniline	1	9.558	9.564	-0.006	238621	1.00	1.02	
15 Tetryl	1	9.685	9.684	0.001	179110	1.00	1.05	
16 Nitroglycerin	2	10.125	10.124	0.001	653746	10.0	10.1	M
17 2,4,6-Trinitrotoluene	1	10.478	10.477	0.001	217864	1.00	1.00	
18 4-Amino-2,6-dinitrotoluene	1	10.631	10.637	-0.006	148480	1.00	1.03	
19 2-Amino-4,6-dinitrotoluene	1	10.865	10.864	0.001	208057	1.00	1.02	
20 2,6-Dinitrotoluene	1	11.005	11.004	0.001	141490	1.00	1.01	
21 2,4-Dinitrotoluene	1	11.151	11.150	0.001	296080	1.00	1.01	
22 o-Nitrotoluene	1	11.851	11.850	0.001	126917	1.00	1.01	
23 p-Nitrotoluene	1	12.218	12.217	0.001	109373	1.00	1.01	
24 m-Nitrotoluene	1	12.725	12.724	0.001	138022	1.00	1.02	
25 PETN	2	13.805	13.797	0.008	743747	10.0	10.3	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

**Reagents:**

8330 DMT\_00018

Amount Added: 50.00

Units: uL

8330IntermStk\_00083

Amount Added: 100.00

Units: uL

Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040012.d

Injection Date: 04-Oct-2024 17:21:25

Instrument ID: CHHPLC\_X3

Operator ID: JZ

Lims ID: IC INT/DMT 8

Worklist Smp#: 12

Client ID:

Injection Vol: 100.0 ul

Dil. Factor: 1.0000

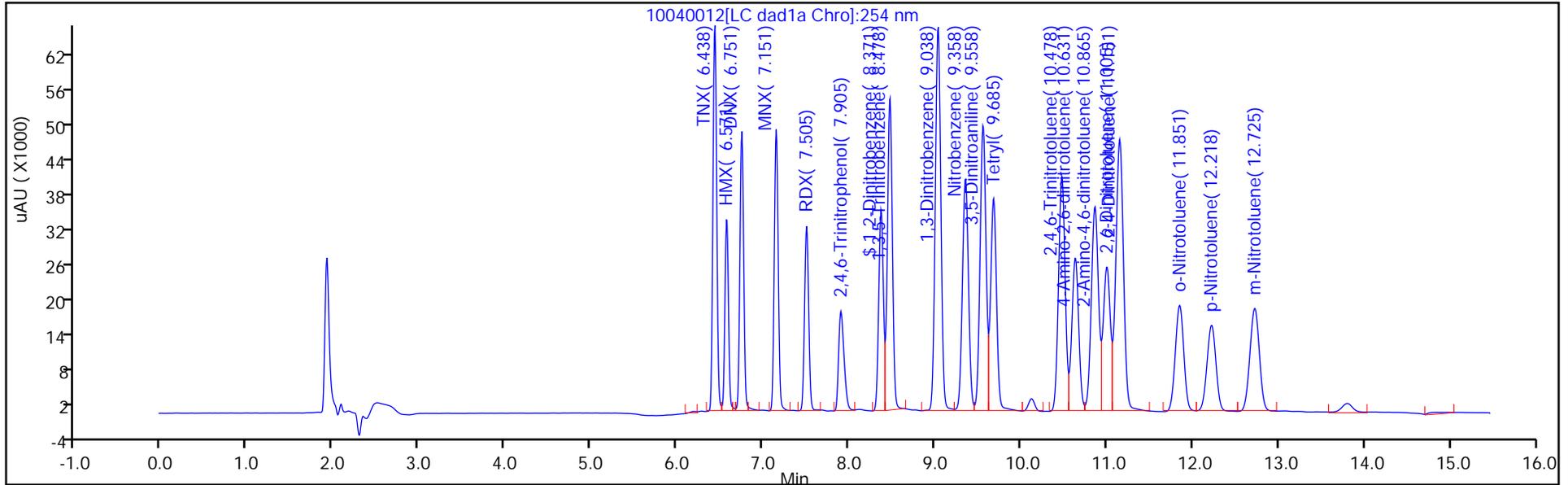
ALS Bottle#: 12

Method: 8330\_X3

Limit Group: GCSV - 8330

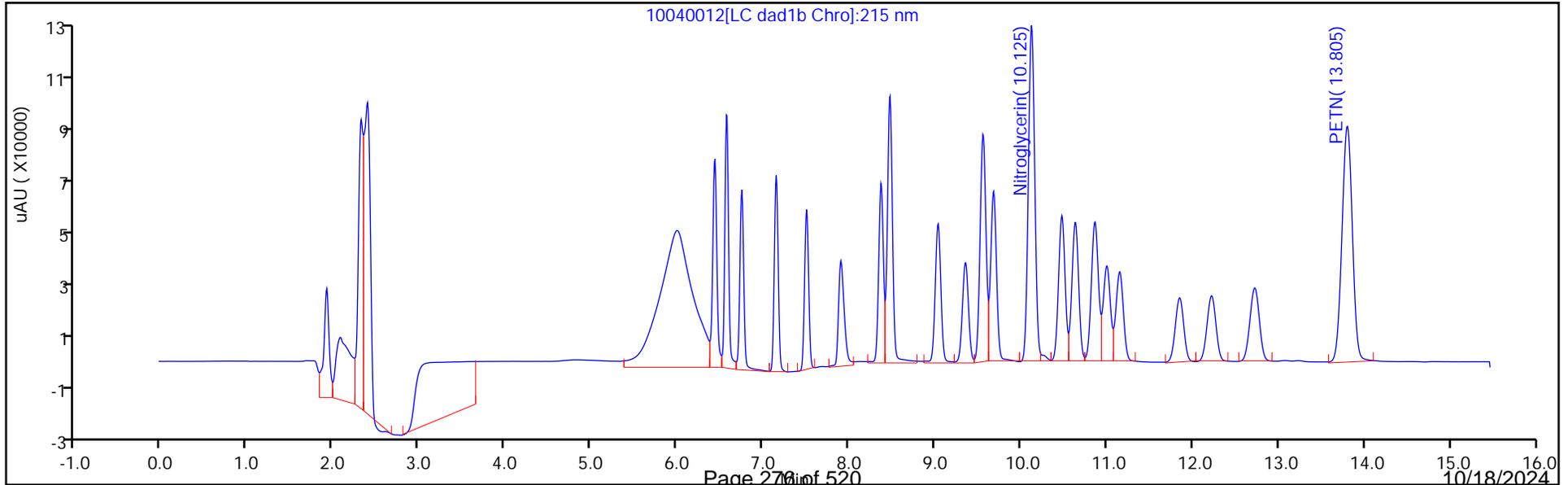
Column: UltraCarb5uODS (20) ( 4.60 mm)

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



Eurofins Denver

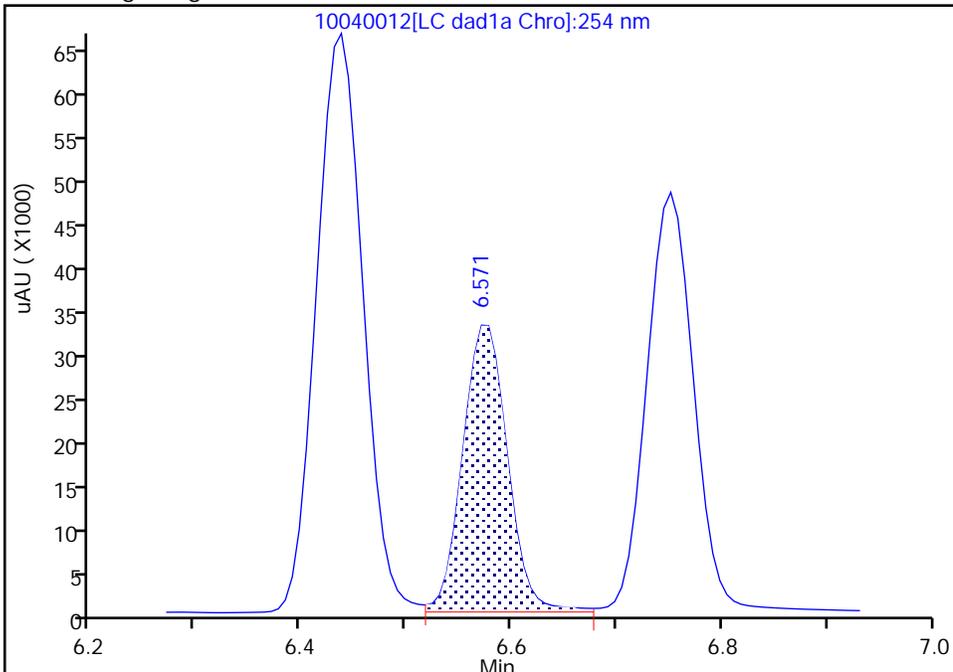
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040012.d  
Injection Date: 04-Oct-2024 17:21:25 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 8  
Client ID:  
Operator ID: JZ ALS Bottle#: 12 Worklist Smp#: 12  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

4 HMX, CAS: 2691-41-0

Signal: 1

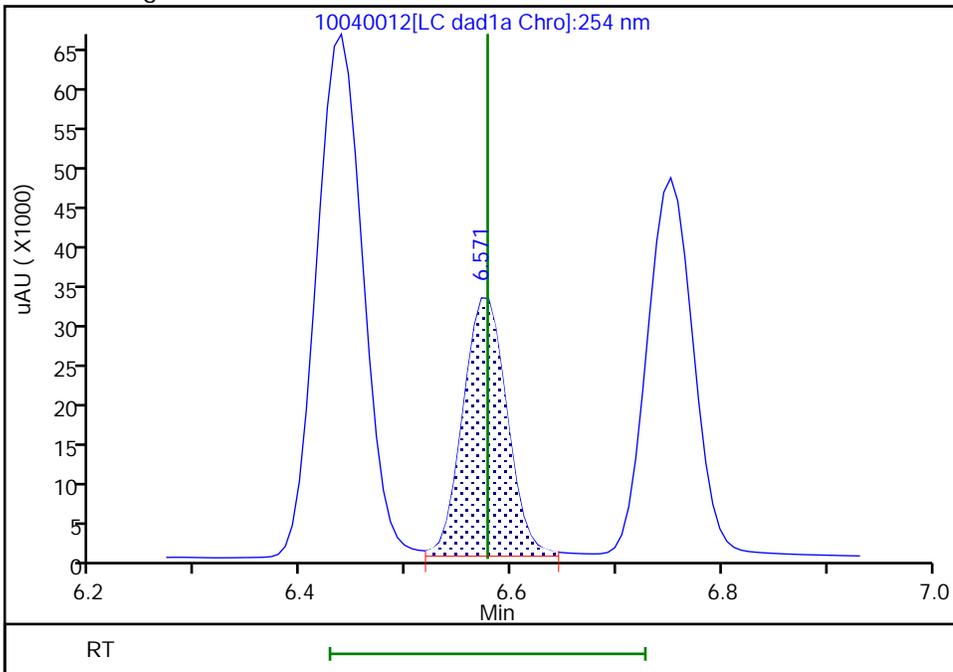
RT: 6.57  
Area: 97637  
Amount: 1.048050  
Amount Units: ug/mL

Processing Integration Results



RT: 6.57  
Area: 96690  
Amount: 1.000383  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 12:59:37 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak

Audit Reason: Baseline

Eurofins Denver

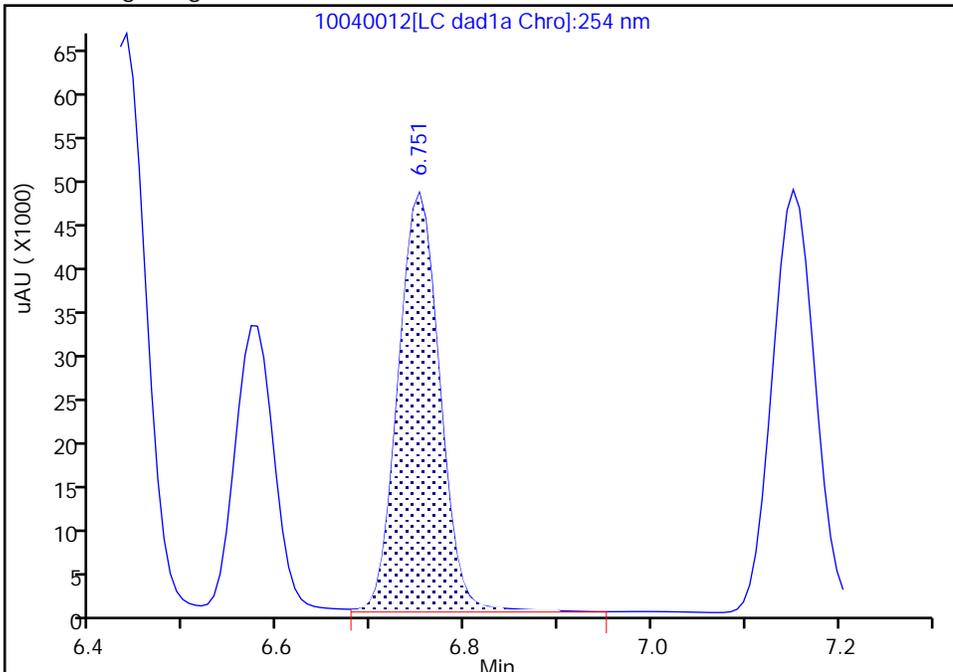
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040012.d  
Injection Date: 04-Oct-2024 17:21:25 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 8  
Client ID:  
Operator ID: JZ ALS Bottle#: 12 Worklist Smp#: 12  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

6 DNX, CAS: 80251-29-2

Signal: 1

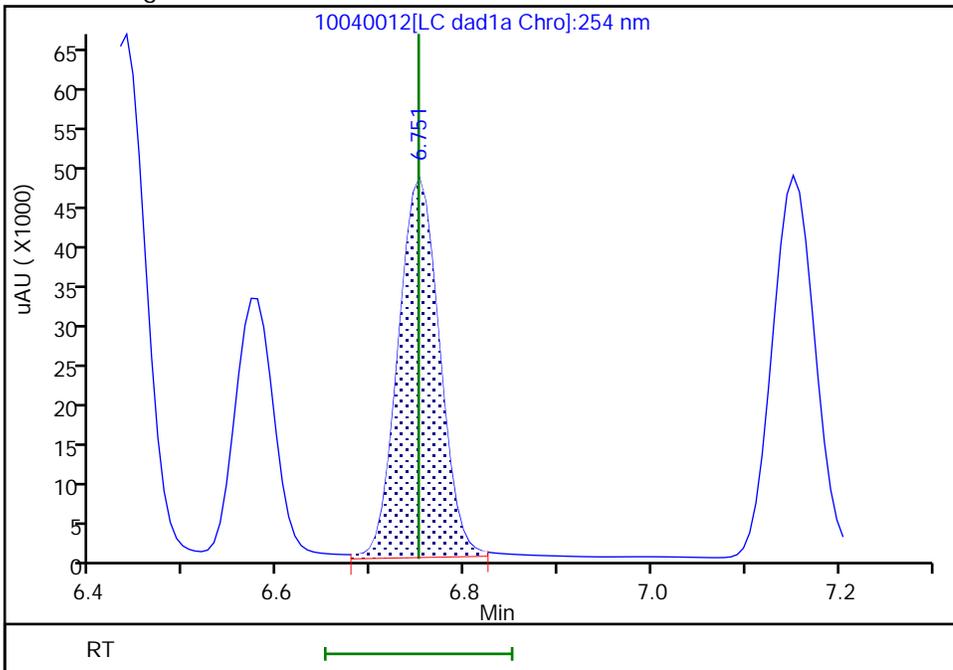
RT: 6.75  
Area: 149634  
Amount: 0.974610  
Amount Units: ug/mL

Processing Integration Results



RT: 6.75  
Area: 147729  
Amount: 1.011553  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 12:59:36 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak

Audit Reason: Baseline

Eurofins Denver

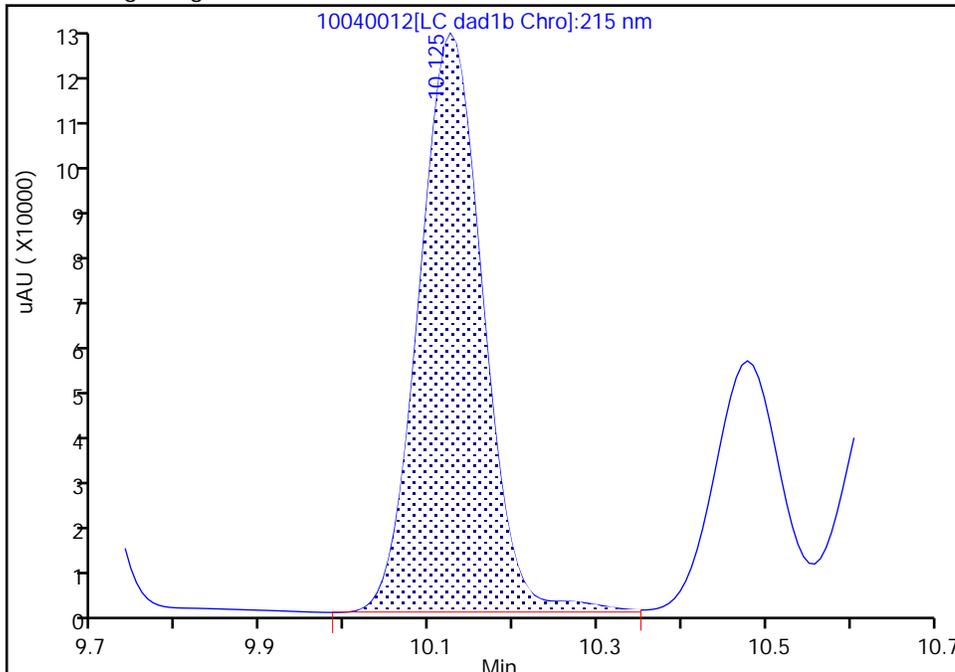
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040012.d  
Injection Date: 04-Oct-2024 17:21:25 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 8  
Client ID:  
Operator ID: JZ ALS Bottle#: 12 Worklist Smp#: 12  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1C, 215 nm

16 Nitroglycerin, CAS: 55-63-0

Signal: 1

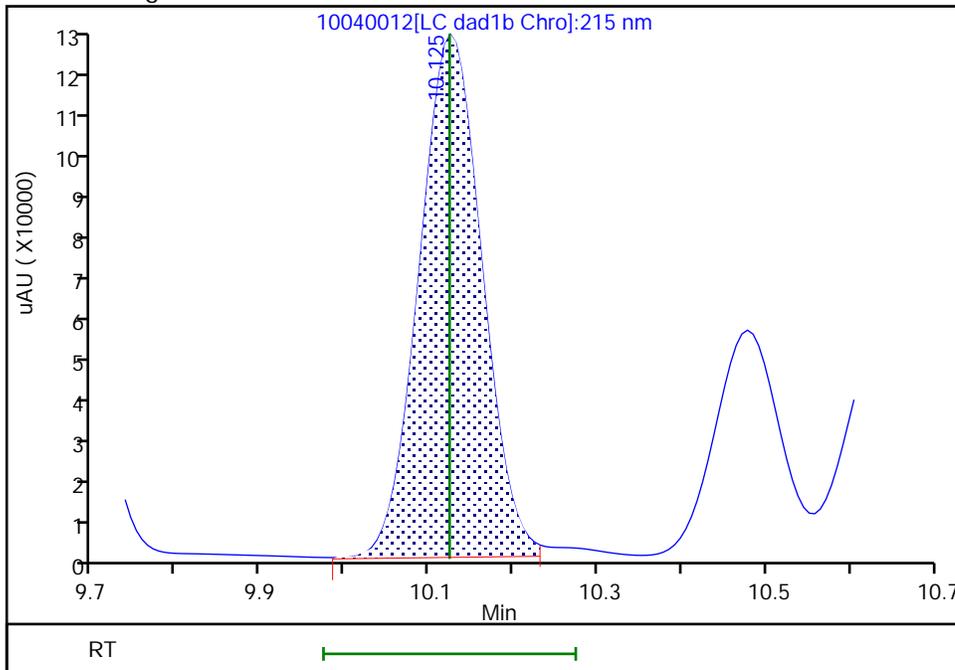
RT: 10.12  
Area: 665997  
Amount: 9.607872  
Amount Units: ug/mL

Processing Integration Results



RT: 10.12  
Area: 653746  
Amount: 10.148792  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:08:54 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak

Audit Reason: Baseline

Eurofins Denver  
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\10040013.D  
 Lims ID: IC INT/DMT 7  
 Client ID:  
 Sample Type: IC Calib Level: 7  
 Inject. Date: 04-Oct-2024 17:43:18 ALS Bottle#: 13 Worklist Smp#: 13  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: IC INT/DMT 7  
 Operator ID: JZ Instrument ID: CHHPLC\_X3  
 Sublist: chrom-8330\_X3\*sub27  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\8330\_X3.m  
 Limit Group: GCSV - 8330  
 Last Update: 08-Oct-2024 13:19:14 Calib Date: 04-Oct-2024 19:55:02  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\10040019.D  
 Column 1 : UltraCarb5uODS (20) ( 4.60 mm) Det: LC DAD1B, 254 nm  
 Process Host: CTX1654

First Level Reviewer: LV5D Date: 08-Oct-2024 13:09:03

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
3 TNX	1	6.436	6.437	-0.001	143139	0.7021	0.7048	
4 HMX	1	6.576	6.577	-0.001	67292	0.7000	0.6962	
6 DNx	1	6.749	6.751	-0.002	104619	0.7007	0.7164	
7 MNx	1	7.156	7.151	0.005	108719	0.8169	0.8178	
8 RDX	1	7.509	7.511	-0.002	73136	0.7000	0.6960	
9 2,4,6-Trinitrophenol	1	7.916	7.937	-0.021	51986	0.7000	0.6892	
\$ 10 1,2-Dinitrobenzene	1	8.376	8.377	-0.001	89703	0.7000	0.6879	
11 1,3,5-Trinitrobenzene	1	8.476	8.477	-0.001	148857	0.7000	0.6849	
12 1,3-Dinitrobenzene	1	9.036	9.037	-0.001	205516	0.7000	0.6891	
13 Nitrobenzene	1	9.356	9.357	-0.001	134331	0.7000	0.6882	
14 3,5-Dinitroaniline	1	9.562	9.564	-0.002	160806	0.7000	0.6899	
15 Tetryl	1	9.682	9.684	-0.002	118273	0.7000	0.6912	
16 Nitroglycerin	2	10.129	10.124	0.005	445595	7.00	6.92	M
17 2,4,6-Trinitrotoluene	1	10.482	10.477	0.005	148548	0.7000	0.6836	
18 4-Amino-2,6-dinitrotoluene	1	10.642	10.637	0.005	101345	0.7000	0.7008	
19 2-Amino-4,6-dinitrotoluene	1	10.869	10.864	0.005	139261	0.7000	0.6809	
20 2,6-Dinitrotoluene	1	11.009	11.004	0.005	99691	0.7000	0.7093	
21 2,4-Dinitrotoluene	1	11.156	11.150	0.006	199392	0.7000	0.6833	
22 o-Nitrotoluene	1	11.862	11.850	0.012	87357	0.7000	0.6962	
23 p-Nitrotoluene	1	12.229	12.217	0.012	75434	0.7000	0.6976	
24 m-Nitrotoluene	1	12.736	12.724	0.012	94270	0.7000	0.6958	
25 PETN	2	13.822	13.797	0.025	508089	7.00	7.04	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

**Reagents:**

8330 DMT\_00018

Amount Added: 35.00

Units: uL

8330IntermStk\_00083

Amount Added: 70.00

Units: uL

Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040013.d

Injection Date: 04-Oct-2024 17:43:18

Instrument ID: CHHPLC\_X3

Operator ID: JZ

Lims ID: IC INT/DMT 7

Worklist Smp#: 13

Client ID:

Injection Vol: 100.0 ul

Dil. Factor: 1.0000

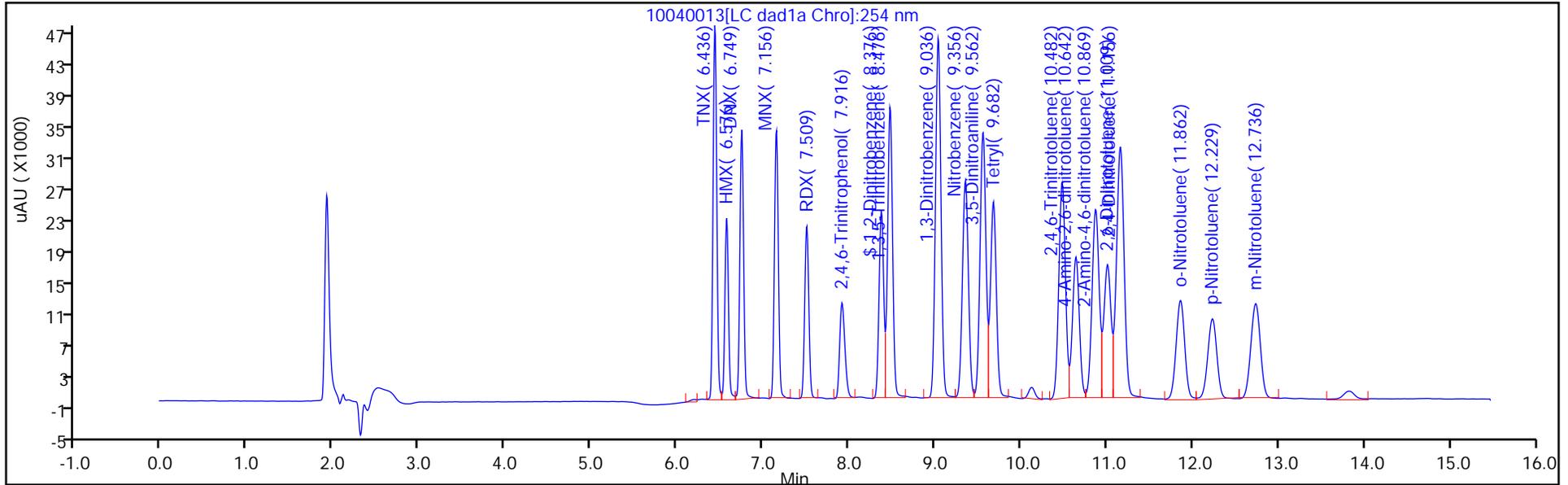
ALS Bottle#: 13

Method: 8330\_X3

Limit Group: GCSV - 8330

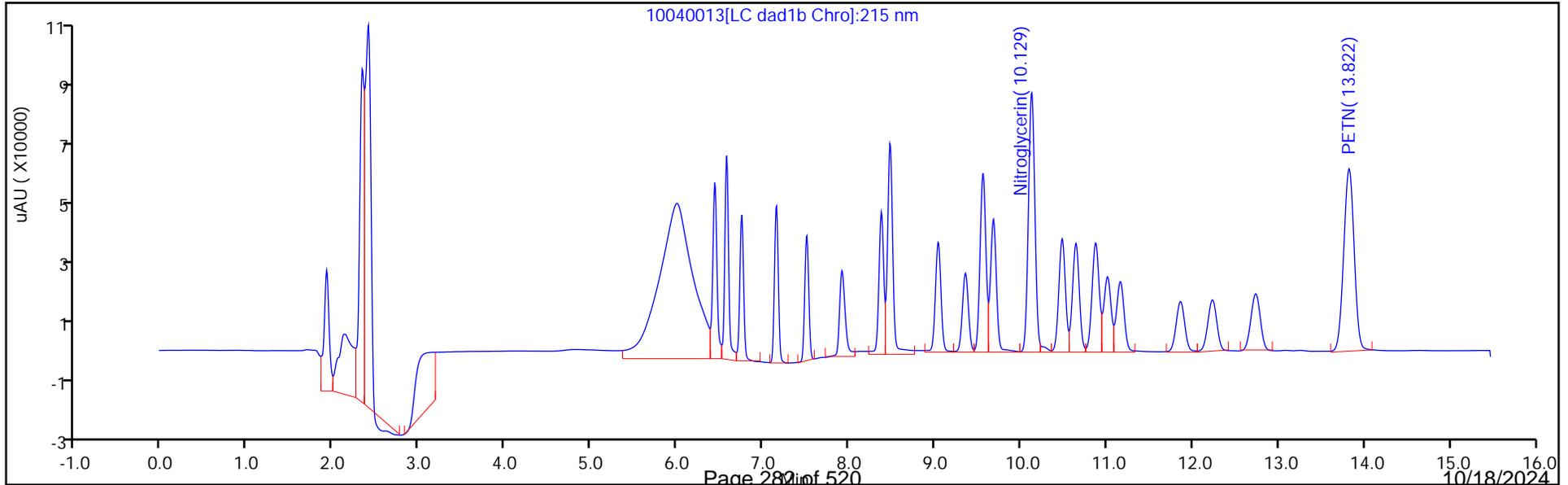
Column: UltraCarb5uODS (20) ( 4.60 mm)

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



Eurofins Denver

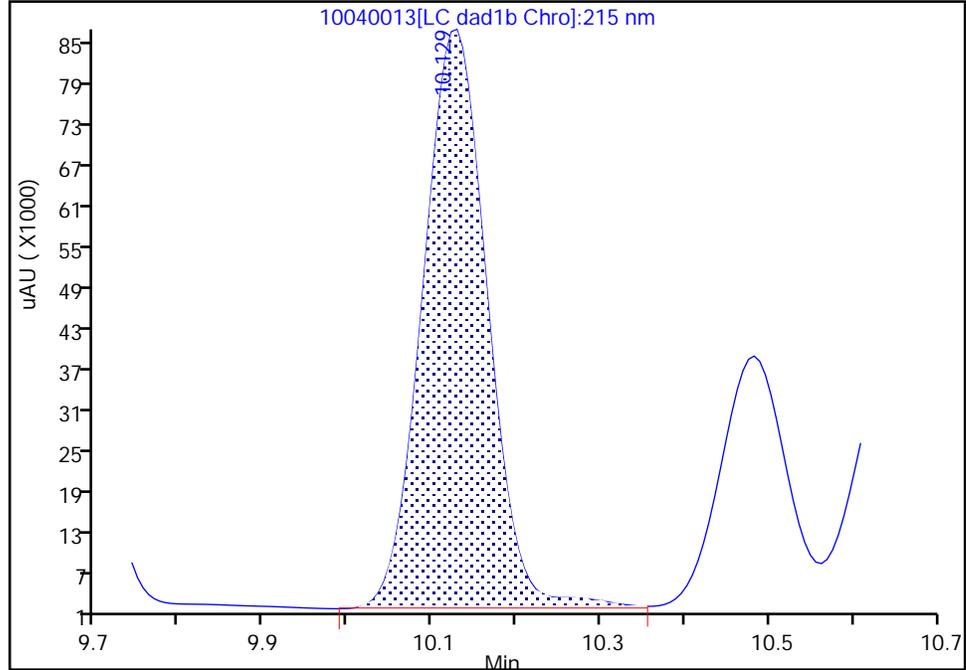
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040013.d		
Injection Date:	04-Oct-2024 17:43:18	Instrument ID:	CHHPLC_X3
Lims ID:	IC INT/DMT 7		
Client ID:			
Operator ID:	JZ	ALS Bottle#:	13      Worklist Smp#:    13
Injection Vol:	100.0 ul	Dil. Factor:	1.0000
Method:	8330_X3	Limit Group:	GCSV - 8330
Column:	UltraCarb5uODS (20) ( 4.60 mm)	Detector:	LC DAD1C, 215 nm

16 Nitroglycerin, CAS: 55-63-0

Signal: 1

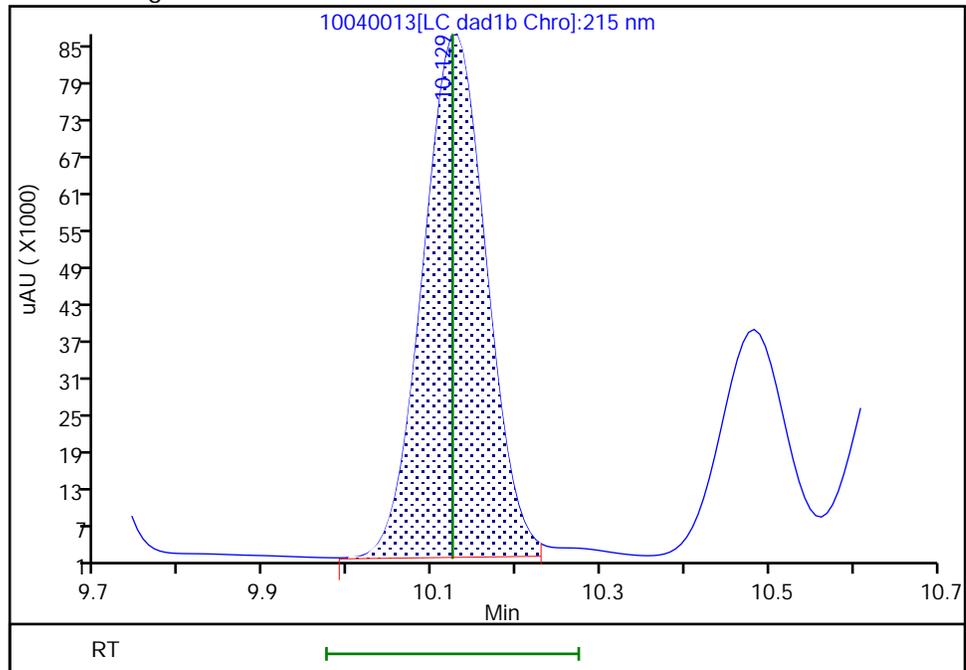
RT: 10.13  
Area: 453503  
Amount: 6.555243  
Amount Units: ug/mL

Processing Integration Results



RT: 10.13  
Area: 445595  
Amount: 6.919435  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:09:02 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak

Audit Reason: Baseline

Eurofins Denver  
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\10040014.D  
 Lims ID: IC INT/DMT 6  
 Client ID:  
 Sample Type: IC Calib Level: 6  
 Inject. Date: 04-Oct-2024 18:05:18 ALS Bottle#: 14 Worklist Smp#: 14  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: IC INT/DMT 6  
 Operator ID: JZ Instrument ID: CHHPLC\_X3  
 Sublist: chrom-8330\_X3\*sub27  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\8330\_X3.m  
 Limit Group: GCSV - 8330  
 Last Update: 08-Oct-2024 13:19:15 Calib Date: 04-Oct-2024 19:55:02  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\10040019.D  
 Column 1 : UltraCarb5uODS (20) ( 4.60 mm) Det: LC DAD1B, 254 nm  
 Process Host: CTX1654

First Level Reviewer: LV5D Date: 08-Oct-2024 13:01:15

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
3 TNX	1	6.434	6.437	-0.003	81160	0.4012	0.3996	
4 HMX	1	6.567	6.577	-0.010	38978	0.4000	0.4033	
6 DNx	1	6.747	6.751	-0.004	59711	0.4004	0.4089	
7 MNx	1	7.154	7.151	0.003	61334	0.4668	0.4614	
8 RDX	1	7.507	7.511	-0.004	42489	0.4000	0.4036	
9 2,4,6-Trinitrophenol	1	7.927	7.937	-0.010	30056	0.4000	0.3985	
\$ 10 1,2-Dinitrobenzene	1	8.380	8.377	0.003	51425	0.4000	0.3943	
11 1,3,5-Trinitrobenzene	1	8.480	8.477	0.003	85185	0.4000	0.3919	
12 1,3-Dinitrobenzene	1	9.047	9.037	0.010	118487	0.4000	0.3973	
13 Nitrobenzene	1	9.367	9.357	0.010	77013	0.4000	0.3946	
14 3,5-Dinitroaniline	1	9.573	9.564	0.009	92721	0.4000	0.3979	
15 Tetryl	1	9.700	9.684	0.016	66783	0.4000	0.3906	
16 Nitroglycerin	2	10.140	10.124	0.016	257082	4.00	3.99	M
17 2,4,6-Trinitrotoluene	1	10.493	10.477	0.016	85834	0.4000	0.3950	
18 4-Amino-2,6-dinitrotoluene	1	10.653	10.637	0.016	57494	0.4000	0.3957	
19 2-Amino-4,6-dinitrotoluene	1	10.880	10.864	0.016	79804	0.4000	0.3902	
20 2,6-Dinitrotoluene	1	11.020	11.004	0.016	57501	0.4000	0.4086	
21 2,4-Dinitrotoluene	1	11.167	11.150	0.017	113760	0.4000	0.3898	
22 o-Nitrotoluene	1	11.867	11.850	0.017	49842	0.4000	0.3972	
23 p-Nitrotoluene	1	12.240	12.217	0.023	42988	0.4000	0.3969	
24 m-Nitrotoluene	1	12.740	12.724	0.016	54100	0.4000	0.3985	
25 PETN	2	13.827	13.797	0.030	291336	4.00	4.03	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

**Reagents:**

8330IntermStk\_00083

Amount Added: 40.00

Units: uL

8330 DMT\_00018

Amount Added: 20.00

Units: uL

Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040014.d

Injection Date: 04-Oct-2024 18:05:18

Instrument ID: CHHPLC\_X3

Operator ID: JZ

Lims ID: IC INT/DMT 6

Worklist Smp#: 14

Client ID:

Injection Vol: 100.0 ul

Dil. Factor: 1.0000

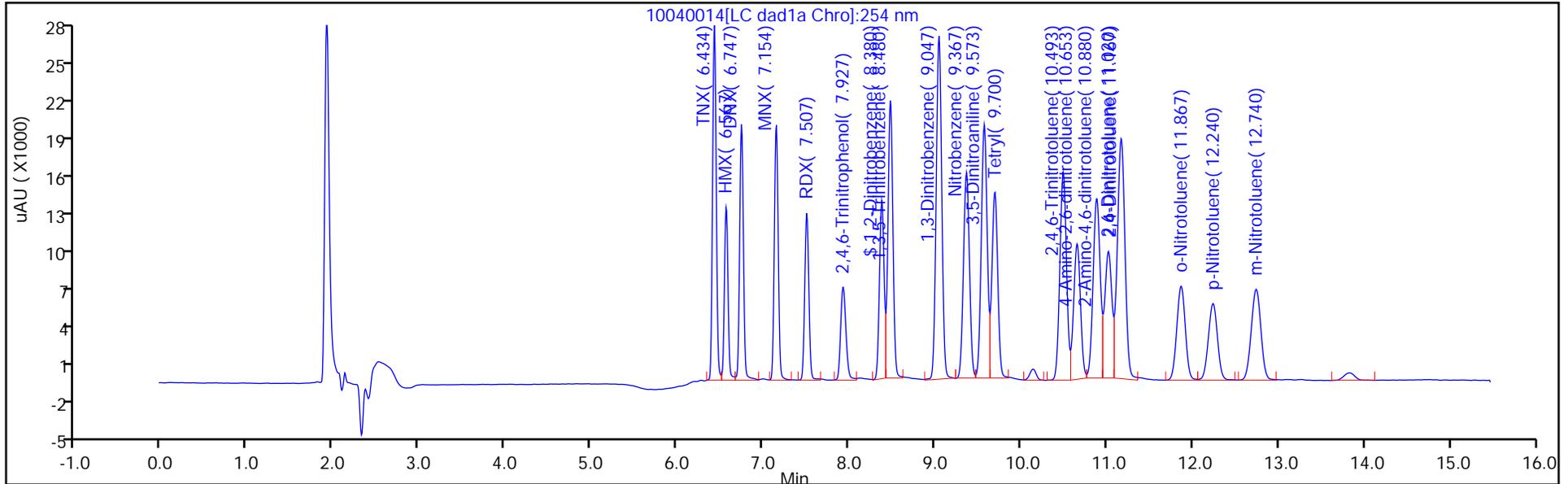
ALS Bottle#: 14

Method: 8330\_X3

Limit Group: GCSV - 8330

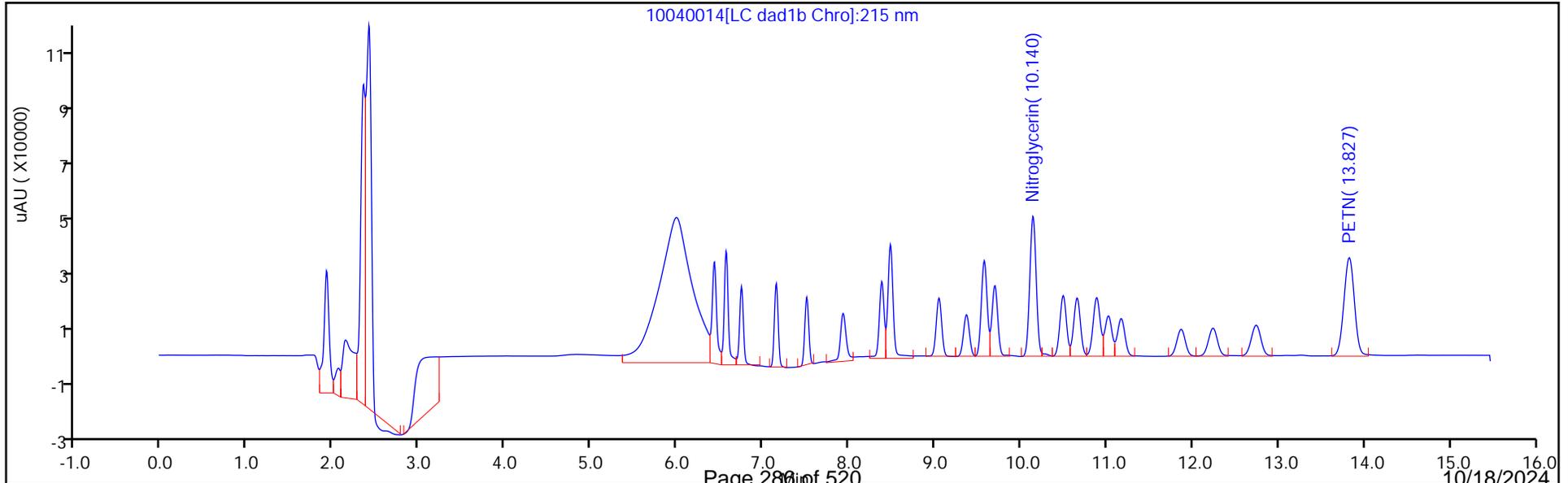
Column: UltraCarb5uODS (20) ( 4.60 mm)

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



Eurofins Denver

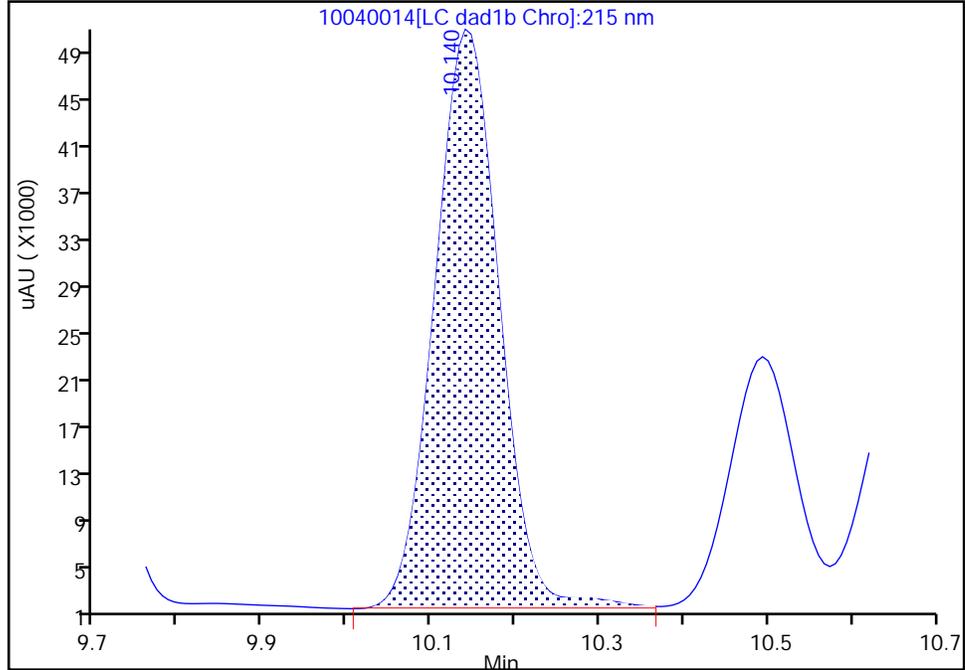
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040014.d  
Injection Date: 04-Oct-2024 18:05:18 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 6  
Client ID:  
Operator ID: JZ ALS Bottle#: 14 Worklist Smp#: 14  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector LC DAD1C, 215 nm

16 Nitroglycerin, CAS: 55-63-0

Signal: 1

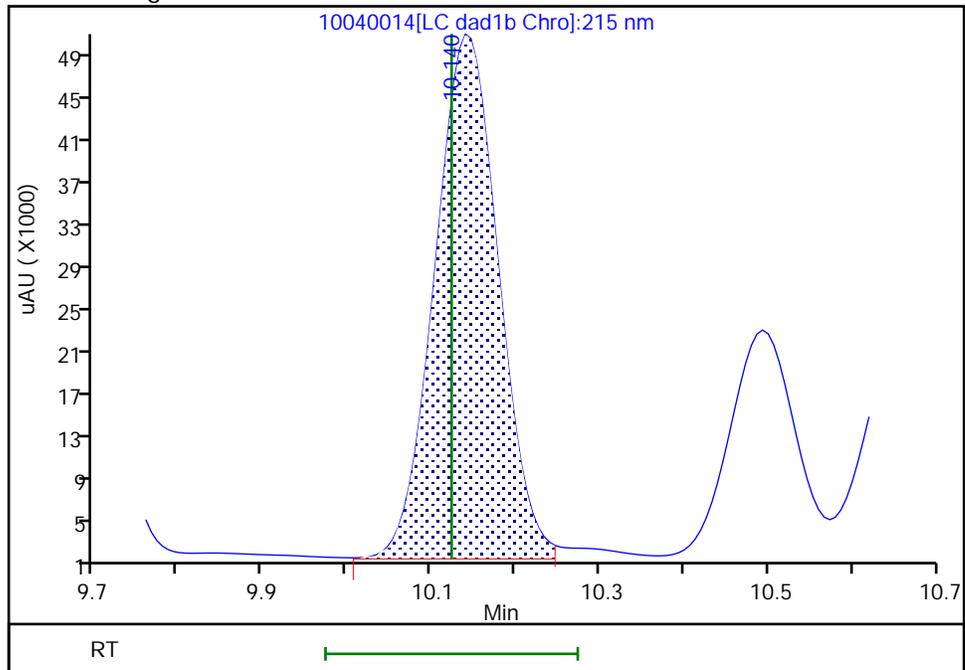
RT: 10.14  
Area: 261803  
Amount: 3.791159  
Amount Units: ug/mL

Processing Integration Results



RT: 10.14  
Area: 257082  
Amount: 3.994752  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:09:09 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak

Audit Reason: Baseline

Eurofins Denver  
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\10040015.D  
 Lims ID: IC INT/DMT 5  
 Client ID:  
 Sample Type: IC Calib Level: 5  
 Inject. Date: 04-Oct-2024 18:27:10 ALS Bottle#: 15 Worklist Smp#: 15  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: IC INT/DMT 5  
 Operator ID: JZ Instrument ID: CHHPLC\_X3  
 Sublist: chrom-8330\_X3\*sub27  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\8330\_X3.m  
 Limit Group: GCSV - 8330  
 Last Update: 08-Oct-2024 13:19:18 Calib Date: 04-Oct-2024 19:55:02  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\10040019.D  
 Column 1 : UltraCarb5uODS (20) ( 4.60 mm) Det: LC DAD1B, 254 nm  
 Process Host: CTX1654

First Level Reviewer: LV5D

Date: 08-Oct-2024 13:01:47

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
3 TNX	1	6.436	6.437	-0.001	51995	0.2508	0.2560	M
4 HMX	1	6.576	6.577	-0.001	24377	0.2500	0.2522	M
6 DNX	1	6.749	6.751	-0.002	37571	0.2503	0.2573	M
7 MNX	1	7.156	7.151	0.005	39273	0.2918	0.2954	
8 RDX	1	7.509	7.511	-0.002	26694	0.2500	0.2530	
9 2,4,6-Trinitrophenol	1	7.936	7.937	-0.001	18836	0.2500	0.2497	
\$ 10 1,2-Dinitrobenzene	1	8.376	8.377	-0.001	32250	0.2500	0.2473	
11 1,3,5-Trinitrobenzene	1	8.476	8.477	-0.001	53554	0.2500	0.2464	
12 1,3-Dinitrobenzene	1	9.036	9.037	-0.001	73648	0.2500	0.2469	
13 Nitrobenzene	1	9.356	9.357	-0.001	47423	0.2500	0.2430	
14 3,5-Dinitroaniline	1	9.563	9.564	-0.001	56945	0.2500	0.2445	
15 Tetryl	1	9.683	9.684	-0.001	42416	0.2500	0.2483	
16 Nitroglycerin	2	10.123	10.124	-0.001	162585	2.50	2.53	M
17 2,4,6-Trinitrotoluene	1	10.476	10.477	-0.001	53322	0.2500	0.2454	
18 4-Amino-2,6-dinitrotoluene	1	10.636	10.637	-0.001	36669	0.2500	0.2508	
19 2-Amino-4,6-dinitrotoluene	1	10.863	10.864	-0.001	50346	0.2500	0.2462	
20 2,6-Dinitrotoluene	1	11.003	11.004	-0.001	34878	0.2500	0.2473	
21 2,4-Dinitrotoluene	1	11.149	11.150	-0.001	71944	0.2500	0.2465	
22 o-Nitrotoluene	1	11.849	11.850	-0.001	31059	0.2500	0.2475	
23 p-Nitrotoluene	1	12.223	12.217	0.006	26896	0.2500	0.2478	
24 m-Nitrotoluene	1	12.723	12.724	-0.001	33732	0.2500	0.2478	
25 PETN	2	13.796	13.797	-0.001	181859	2.50	2.52	

## QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

**Reagents:**

8330IntermStk\_00083

Amount Added: 25.00

Units: uL

8330 DMT\_00018

Amount Added: 12.50

Units: uL

Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040015.d

Injection Date: 04-Oct-2024 18:27:10

Instrument ID: CHHPLC\_X3

Operator ID: JZ

Lims ID: IC INT/DMT 5

Worklist Smp#: 15

Client ID:

Injection Vol: 100.0 ul

Dil. Factor: 1.0000

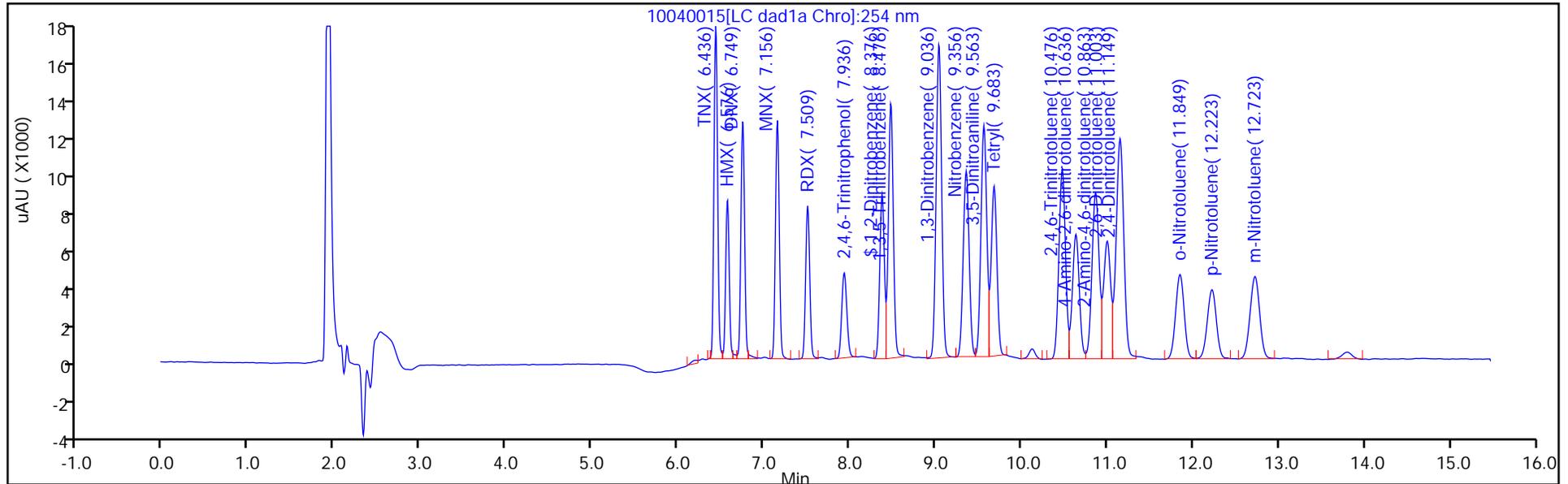
ALS Bottle#: 15

Method: 8330\_X3

Limit Group: GCSV - 8330

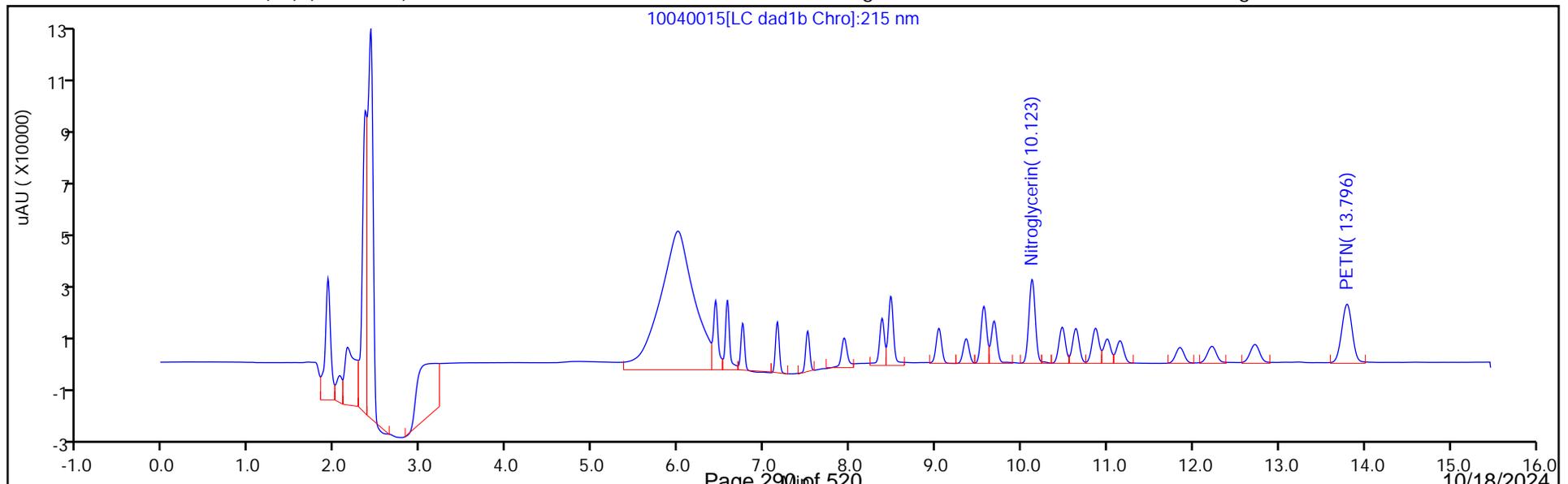
Column: UltraCarb5uODS (20) ( 4.60 mm)

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



Eurofins Denver

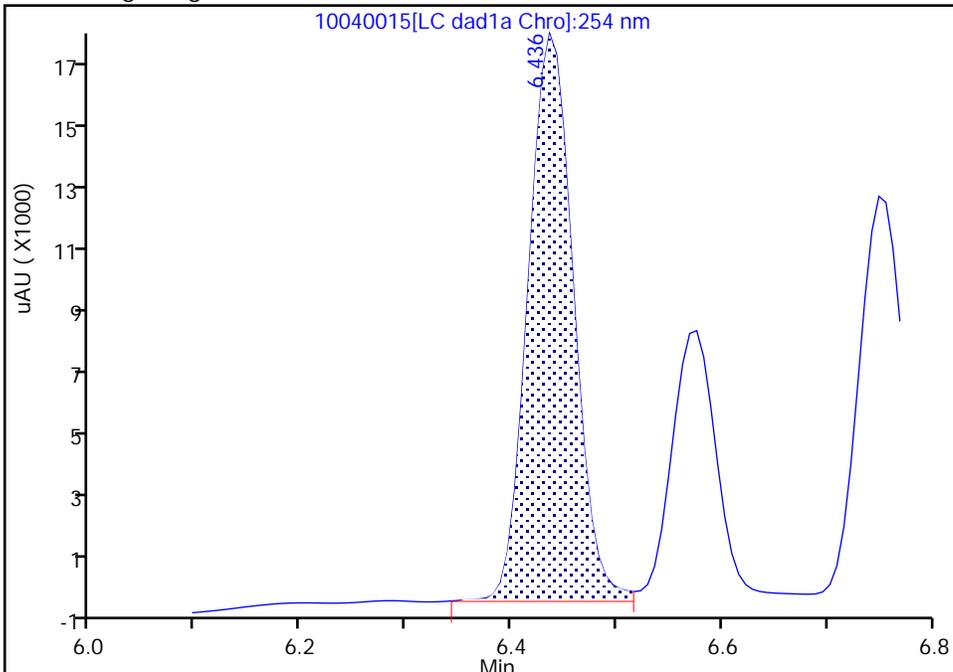
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040015.d  
Injection Date: 04-Oct-2024 18:27:10 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 5  
Client ID:  
Operator ID: JZ ALS Bottle#: 15 Worklist Smp#: 15  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

3 TNX, CAS: 13980-04-6

Signal: 1

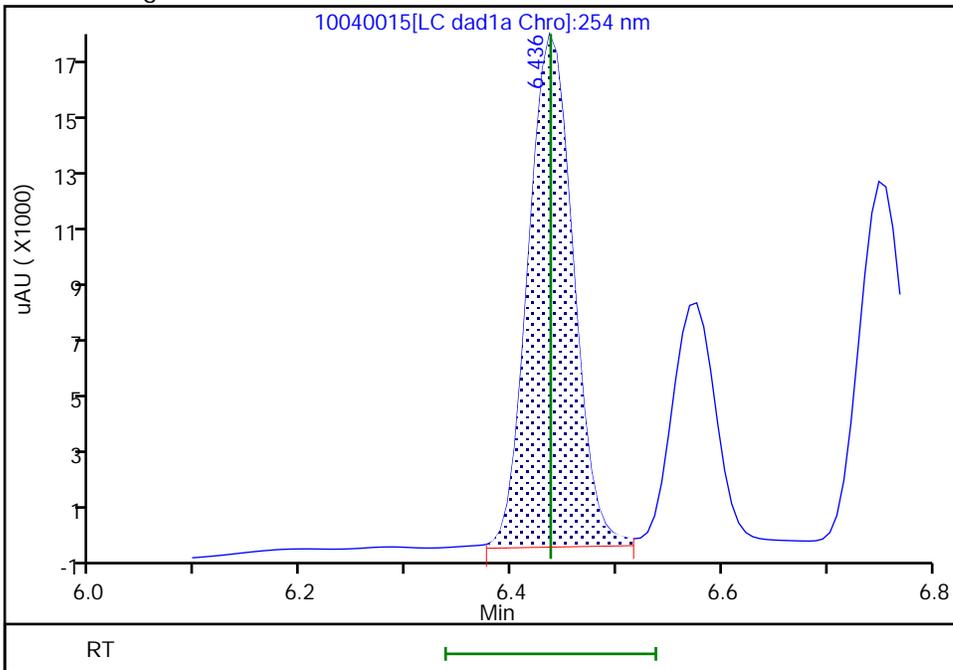
RT: 6.44  
Area: 52071  
Amount: 0.246404  
Amount Units: ug/mL

Processing Integration Results



RT: 6.44  
Area: 51995  
Amount: 0.256035  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:01:42 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak

Audit Reason: Baseline

Eurofins Denver

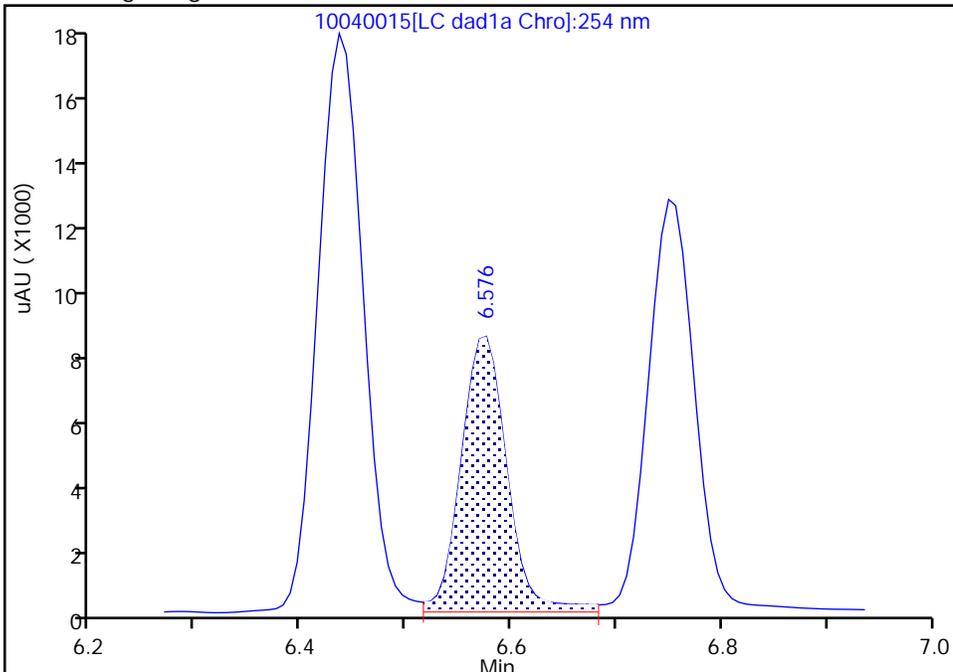
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040015.d  
Injection Date: 04-Oct-2024 18:27:10 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 5  
Client ID:  
Operator ID: JZ ALS Bottle#: 15 Worklist Smp#: 15  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

4 HMX, CAS: 2691-41-0

Signal: 1

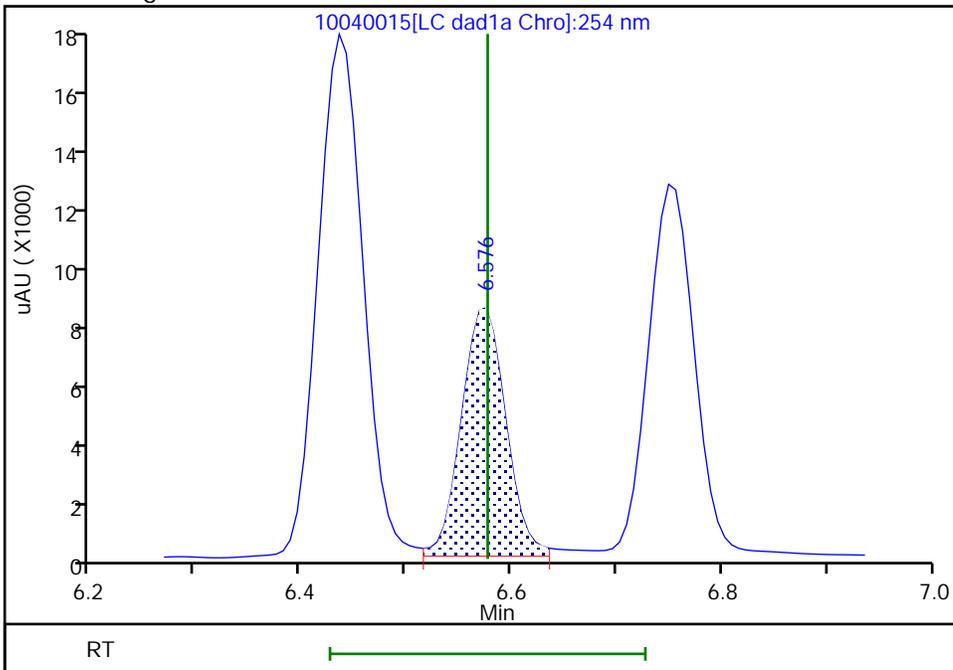
RT: 6.58  
Area: 24952  
Amount: 0.261690  
Amount Units: ug/mL

Processing Integration Results



RT: 6.58  
Area: 24377  
Amount: 0.252212  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:01:43 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak

Audit Reason: Baseline

Eurofins Denver

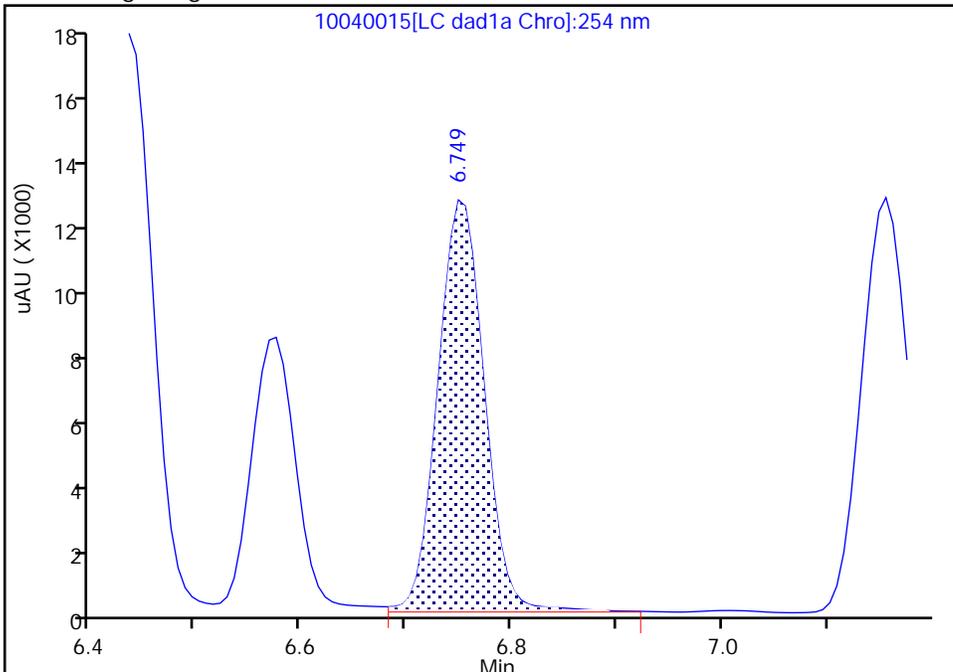
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040015.d  
Injection Date: 04-Oct-2024 18:27:10 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 5  
Client ID:  
Operator ID: JZ ALS Bottle#: 15 Worklist Smp#: 15  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

6 DNX, CAS: 80251-29-2

Signal: 1

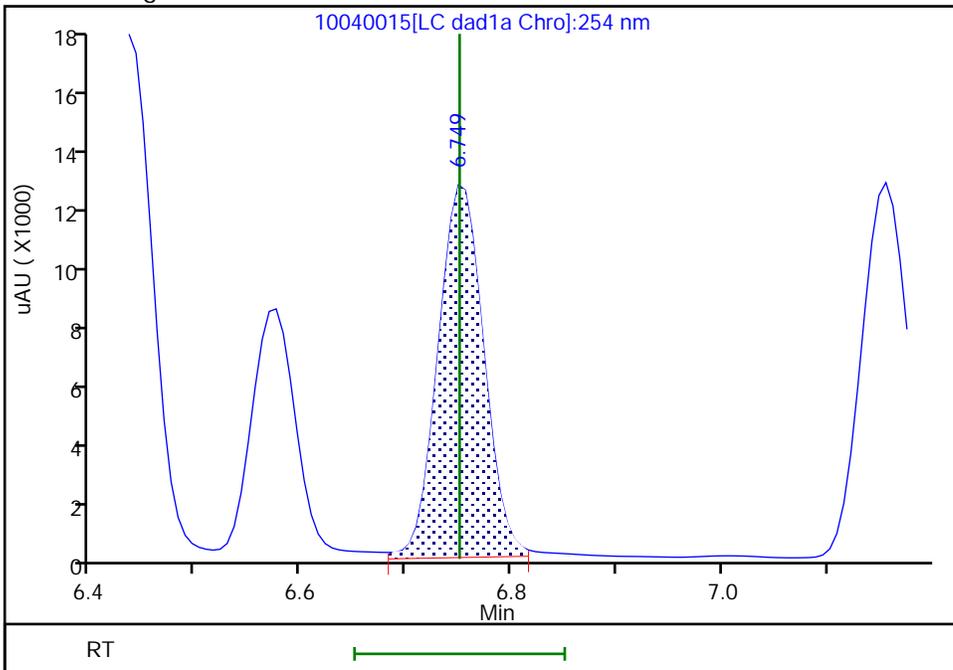
RT: 6.75  
Area: 38135  
Amount: 0.248727  
Amount Units: ug/mL

Processing Integration Results



RT: 6.75  
Area: 37571  
Amount: 0.257262  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:01:45 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak

Audit Reason: Baseline

Eurofins Denver

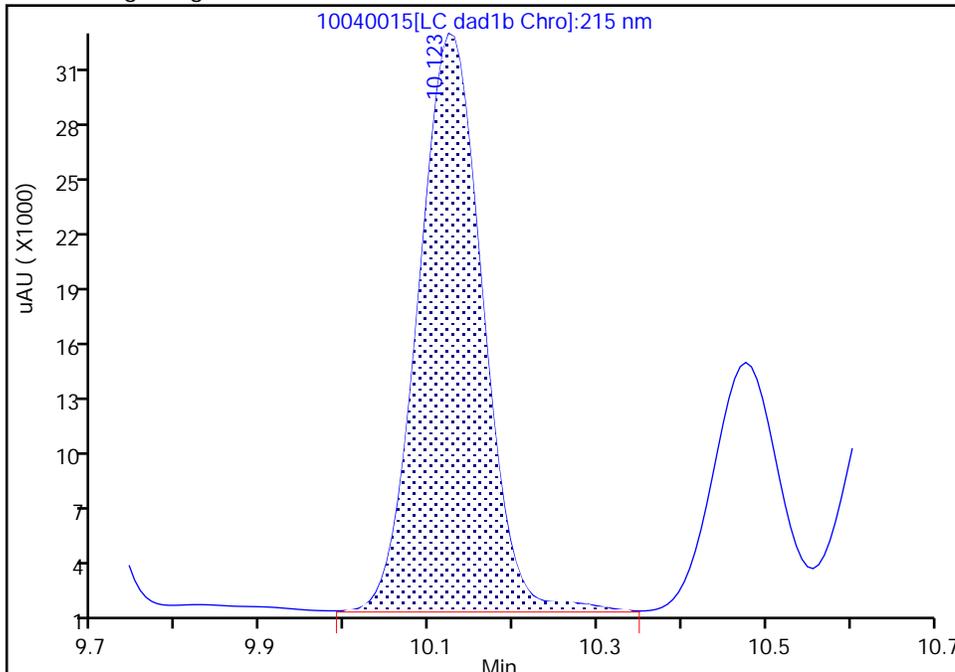
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040015.d		
Injection Date:	04-Oct-2024 18:27:10	Instrument ID:	CHHPLC_X3
Lims ID:	IC INT/DMT 5		
Client ID:			
Operator ID:	JZ	ALS Bottle#:	15 Worklist Smp#: 15
Injection Vol:	100.0 ul	Dil. Factor:	1.0000
Method:	8330_X3	Limit Group:	GCSV - 8330
Column:	UltraCarb5uODS (20) ( 4.60 mm)	Detector:	LC DAD1C, 215 nm

16 Nitroglycerin, CAS: 55-63-0

Signal: 1

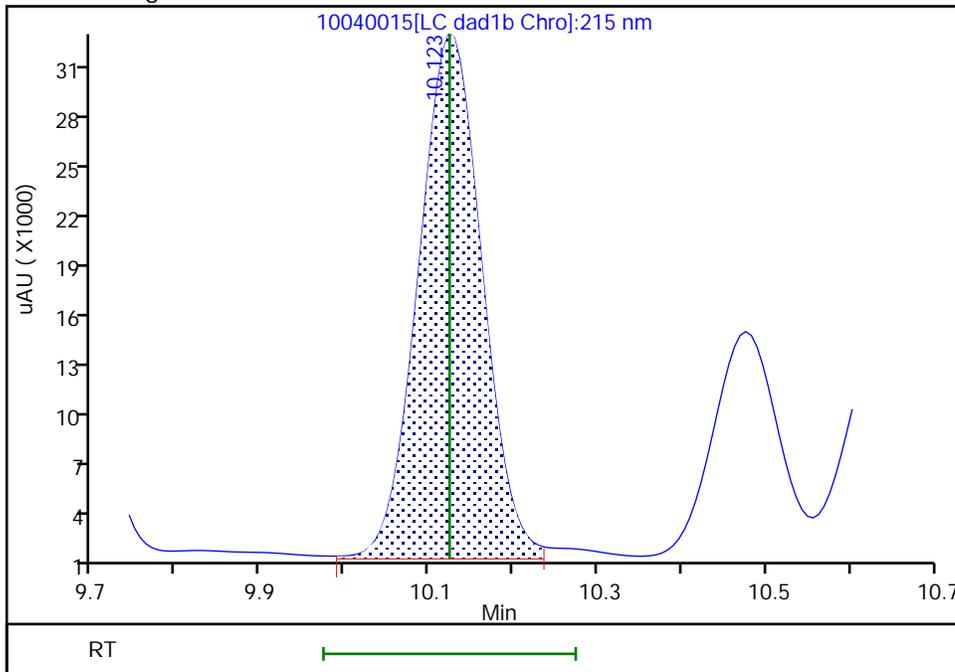
RT: 10.12  
 Area: 165170  
 Amount: 2.396371  
 Amount Units: ug/mL

Processing Integration Results



RT: 10.12  
 Area: 162585  
 Amount: 2.528679  
 Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:09:17 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak

Audit Reason: Baseline

Eurofins Denver  
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\10040016.D  
 Lims ID: IC INT/DMT 4  
 Client ID:  
 Sample Type: IC Calib Level: 4  
 Inject. Date: 04-Oct-2024 18:49:07 ALS Bottle#: 16 Worklist Smp#: 16  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: IC INT/DMT 4  
 Operator ID: JZ Instrument ID: CHHPLC\_X3  
 Sublist: chrom-8330\_X3\*sub27  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\8330\_X3.m  
 Limit Group: GCSV - 8330  
 Last Update: 08-Oct-2024 13:19:19 Calib Date: 04-Oct-2024 19:55:02  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\10040019.D  
 Column 1 : UltraCarb5uODS (20) ( 4.60 mm) Det: LC DAD1B, 254 nm  
 Process Host: CTX1654

First Level Reviewer: LV5D Date: 08-Oct-2024 13:04:07

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	20335	0.1003	0.1001	M
4 HMX	1	6.577	6.577	0.000	8775	0.1000	0.0908	M
6 DNX	1	6.751	6.751	0.000	14149	0.1001	0.0969	M
7 MNX	1	7.151	7.151	0.000	15337	0.1167	0.1154	
8 RDX	1	7.511	7.511	0.000	10773	0.1000	0.1011	M
9 2,4,6-Trinitrophenol	1	7.937	7.937	0.000	7391	0.1000	0.0980	M
\$ 10 1,2-Dinitrobenzene	1	8.377	8.377	0.000	13238	0.1000	0.1015	
11 1,3,5-Trinitrobenzene	1	8.477	8.477	0.000	21407	0.1000	0.0985	
12 1,3-Dinitrobenzene	1	9.037	9.037	0.000	29659	0.1000	0.0994	
13 Nitrobenzene	1	9.357	9.357	0.000	19360	0.1000	0.0992	
14 3,5-Dinitroaniline	1	9.564	9.564	0.000	23292	0.1000	0.1002	
15 Tetryl	1	9.684	9.684	0.000	17130	0.1000	0.1007	M
16 Nitroglycerin	2	10.124	10.124	0.000	63200	1.00	0.9868	M
17 2,4,6-Trinitrotoluene	1	10.477	10.477	0.000	21685	0.1000	0.0998	
18 4-Amino-2,6-dinitrotoluene	1	10.637	10.637	0.000	15147	0.1000	0.1010	
19 2-Amino-4,6-dinitrotoluene	1	10.864	10.864	0.000	20612	0.1000	0.1008	
20 2,6-Dinitrotoluene	1	11.004	11.004	0.000	14334	0.1000	0.1008	
21 2,4-Dinitrotoluene	1	11.150	11.150	0.000	29723	0.1000	0.1019	
22 o-Nitrotoluene	1	11.850	11.850	0.000	12487	0.1000	0.0995	M
23 p-Nitrotoluene	1	12.217	12.217	0.000	10624	0.1000	0.0970	M
24 m-Nitrotoluene	1	12.724	12.724	0.000	13345	0.1000	0.0969	M
25 PETN	2	13.797	13.797	0.000	71766	1.00	0.99	M

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

**Reagents:**

8330IntermStk\_00083

Amount Added: 10.00

Units: uL

8330 DMT\_00018

Amount Added: 5.00

Units: uL

Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040016.d

Injection Date: 04-Oct-2024 18:49:07

Instrument ID: CHHPLC\_X3

Operator ID: JZ

Lims ID: IC INT/DMT 4

Worklist Smp#: 16

Client ID:

Injection Vol: 100.0 ul

Dil. Factor: 1.0000

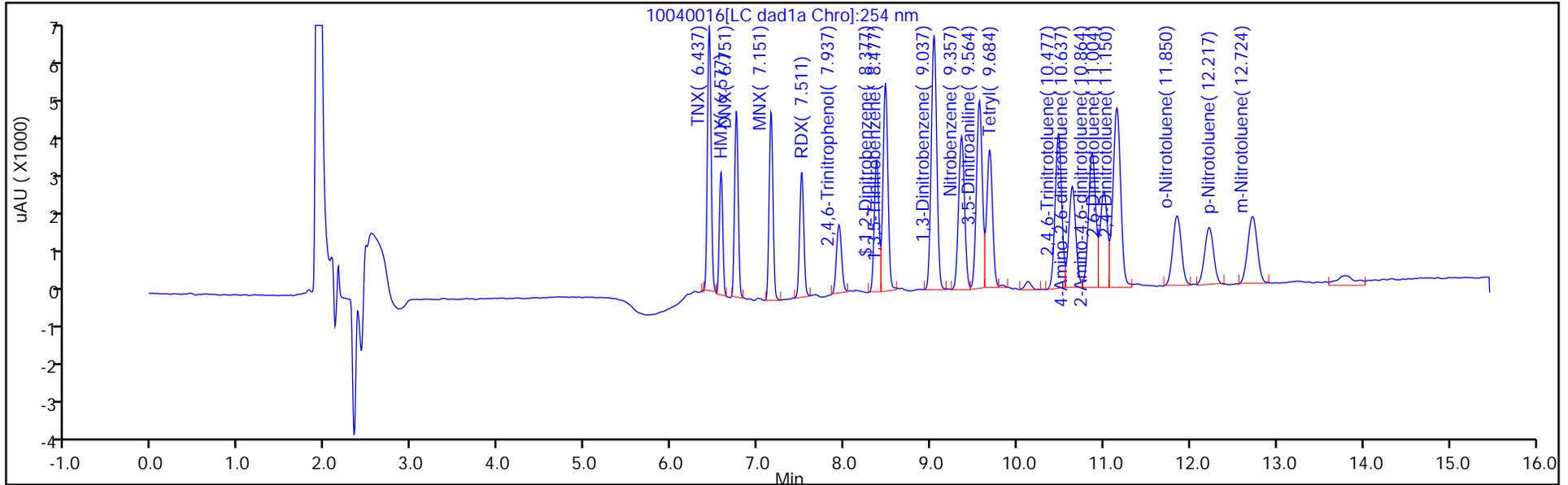
ALS Bottle#: 16

Method: 8330\_X3

Limit Group: GCSV - 8330

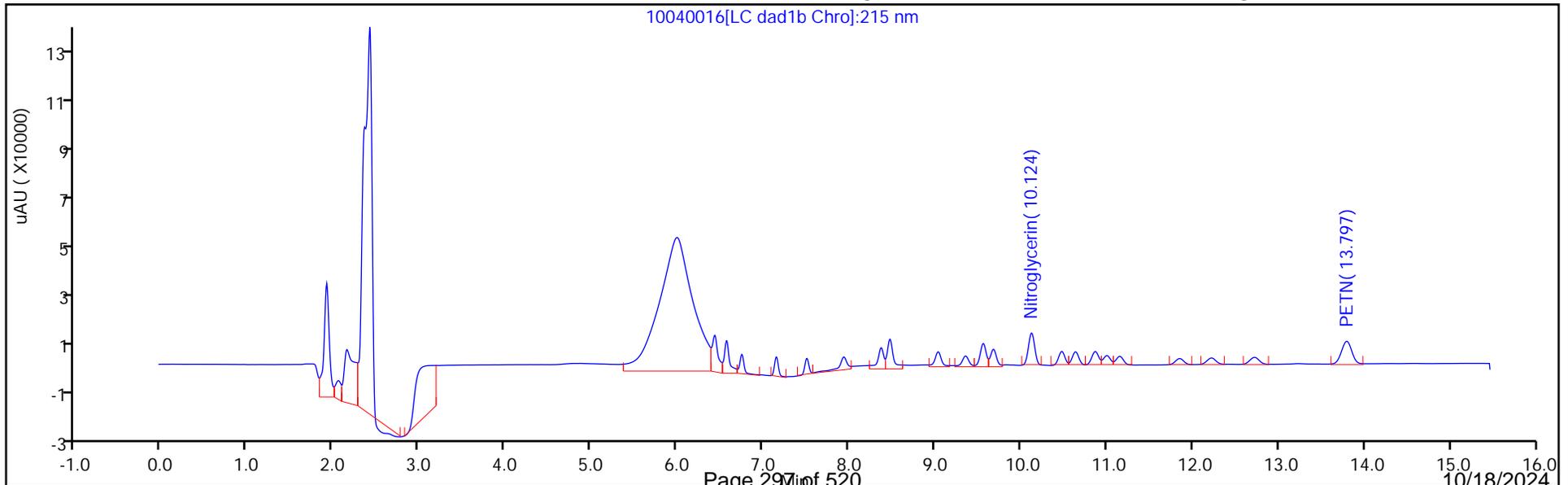
Column: UltraCarb5uODS (20) ( 4.60 mm)

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



Eurofins Denver

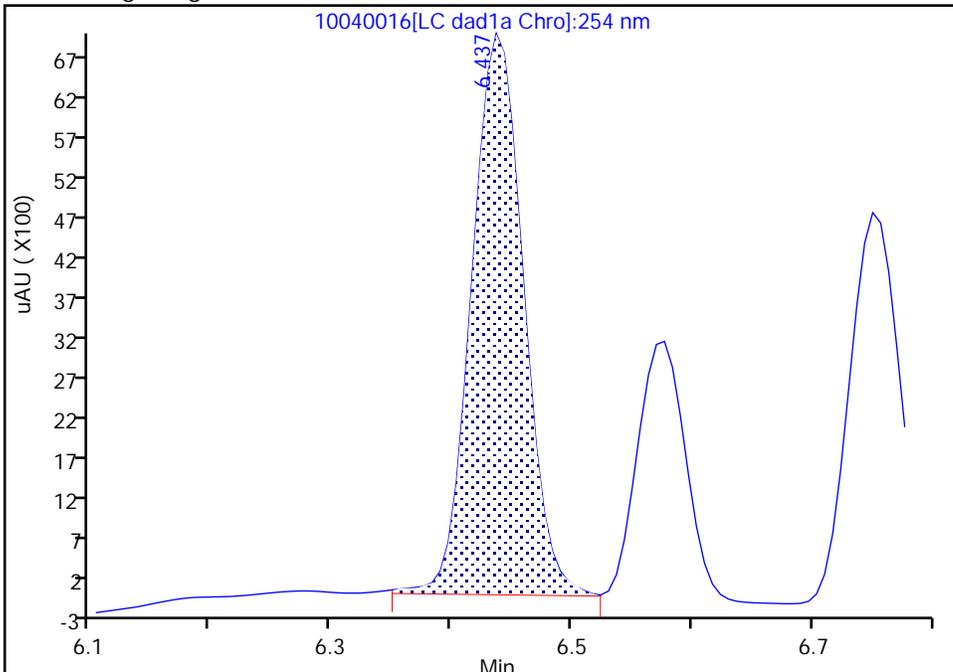
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040016.d  
Injection Date: 04-Oct-2024 18:49:07 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 4  
Client ID:  
Operator ID: JZ ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

3 TNX, CAS: 13980-04-6

Signal: 1

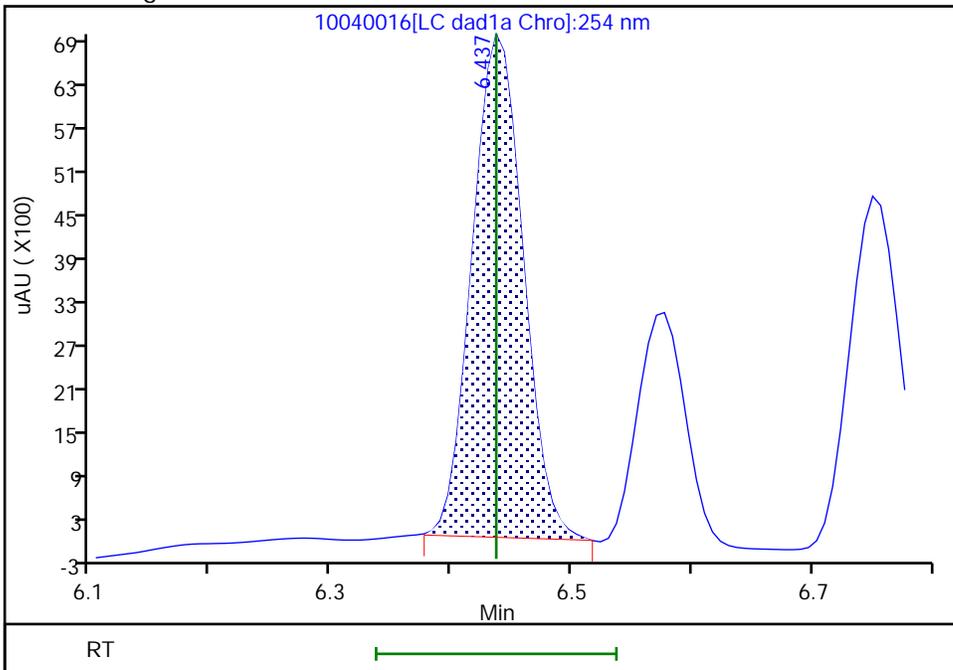
RT: 6.44  
Area: 20842  
Amount: 0.098642  
Amount Units: ug/mL

Processing Integration Results



RT: 6.44  
Area: 20335  
Amount: 0.100134  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:02:31 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins Denver

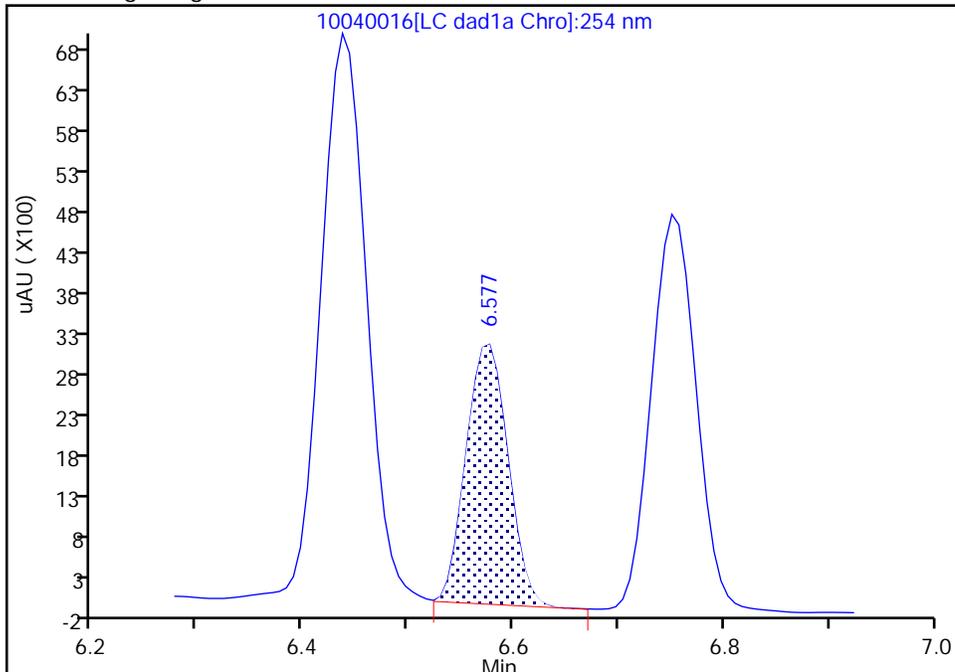
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040016.d  
Injection Date: 04-Oct-2024 18:49:07 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 4  
Client ID:  
Operator ID: JZ ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

4 HMX, CAS: 2691-41-0

Signal: 1

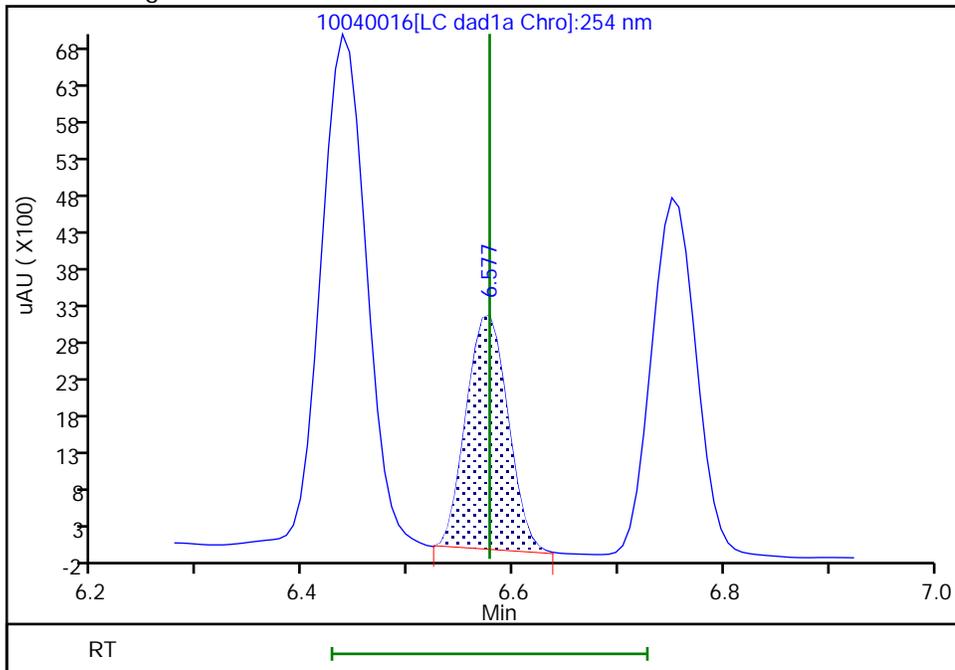
RT: 6.58  
Area: 8824  
Amount: 0.087114  
Amount Units: ug/mL

Processing Integration Results



RT: 6.58  
Area: 8775  
Amount: 0.090789  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:02:33 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins Denver

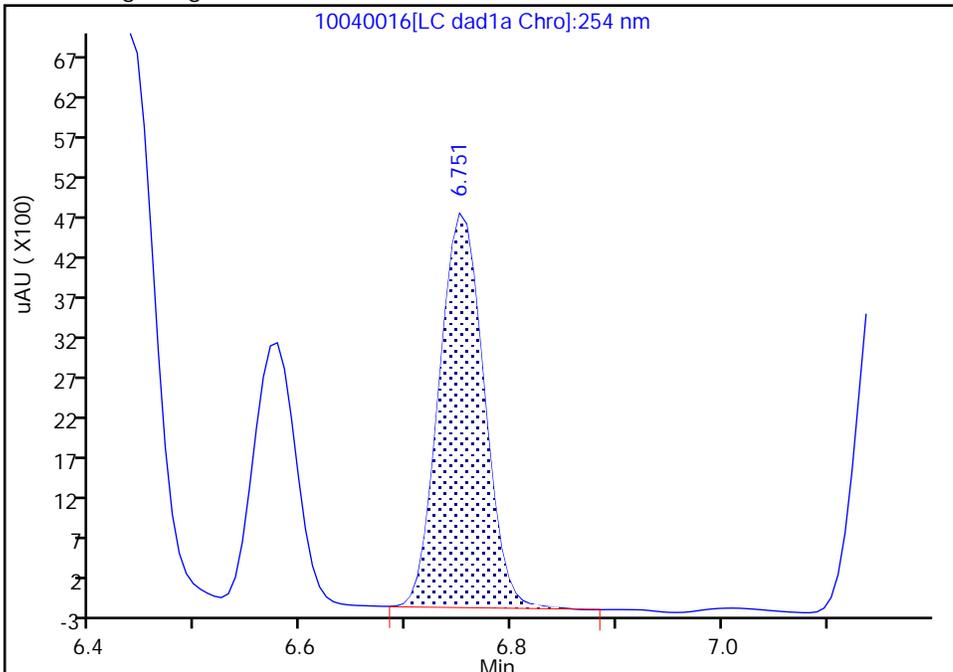
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Injection Date: 04-Oct-2024 18:49:07 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 4  
Client ID:  
Operator ID: JZ ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

6 DNX, CAS: 80251-29-2

Signal: 1

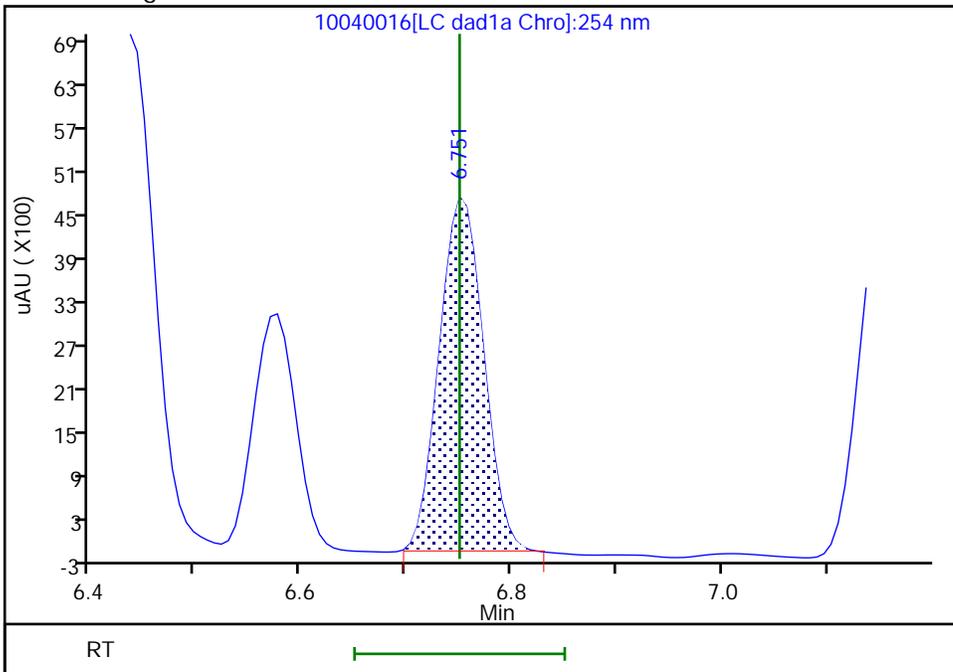
RT: 6.75  
Area: 14575  
Amount: 0.095218  
Amount Units: ug/mL

Processing Integration Results



RT: 6.75  
Area: 14149  
Amount: 0.096883  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:02:38 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins Denver

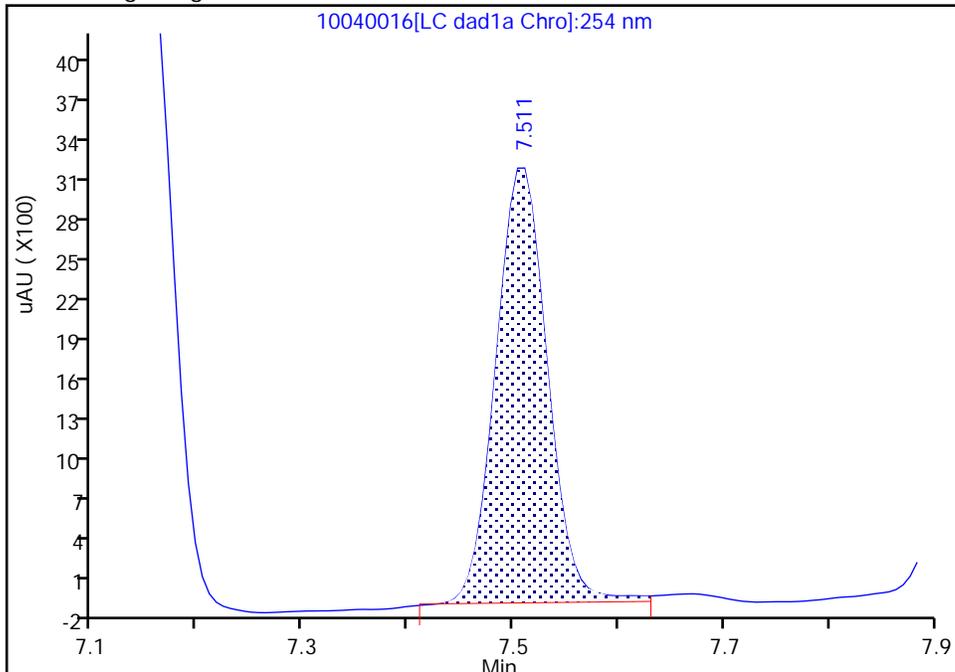
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040016.d  
Injection Date: 04-Oct-2024 18:49:07 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 4  
Client ID:  
Operator ID: JZ ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

8 RDX, CAS: 121-82-4

Signal: 1

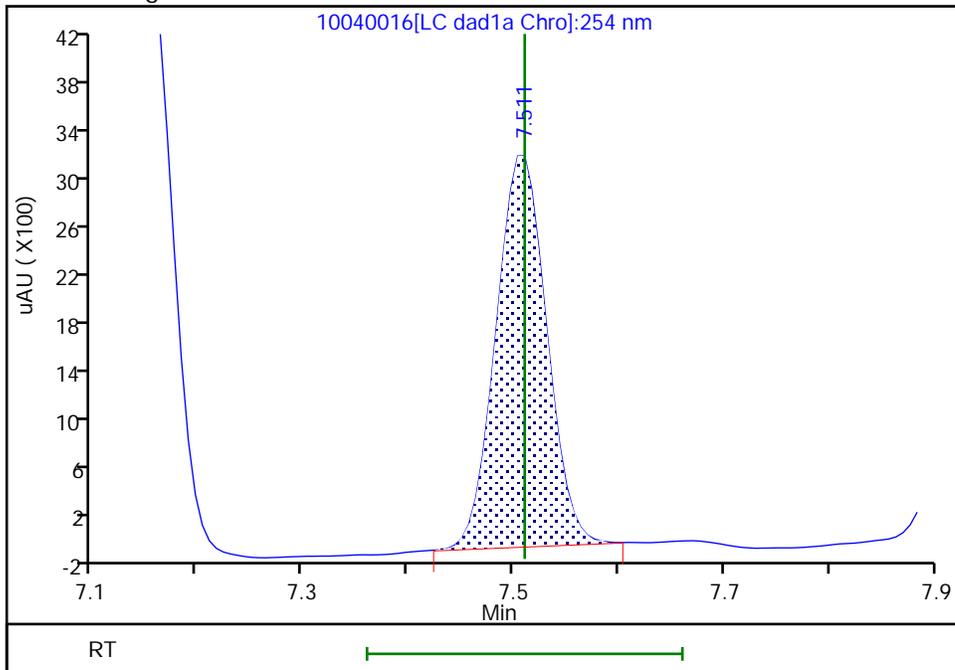
RT: 7.51  
Area: 11085  
Amount: 0.100964  
Amount Units: ug/mL

Processing Integration Results



RT: 7.51  
Area: 10773  
Amount: 0.101109  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:02:47 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins Denver

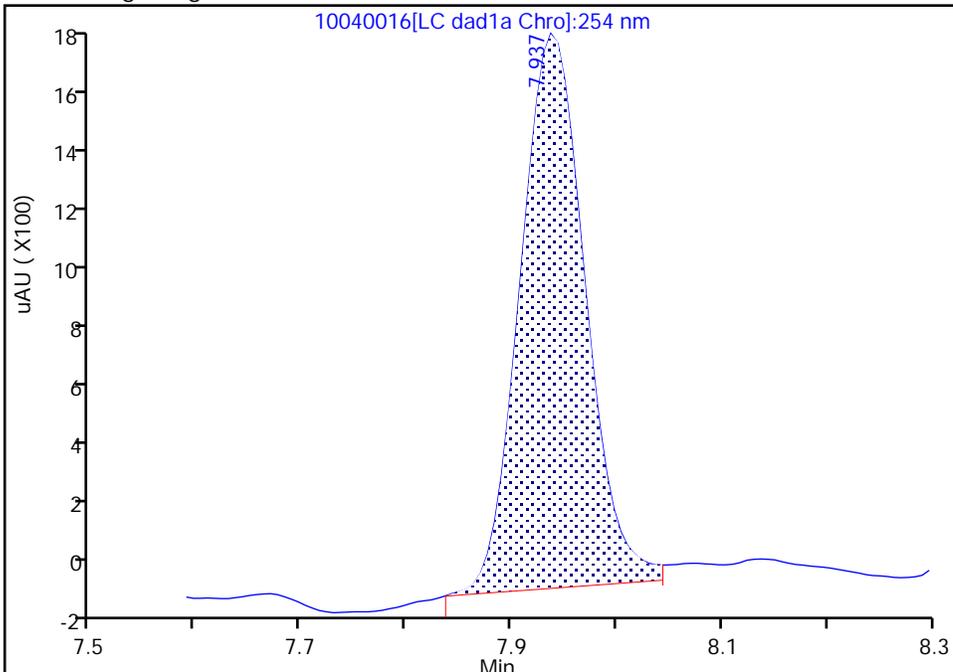
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040016.d  
Injection Date: 04-Oct-2024 18:49:07 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 4  
Client ID:  
Operator ID: JZ ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

9 2,4,6-Trinitrophenol, CAS: 88-89-1

Signal: 1

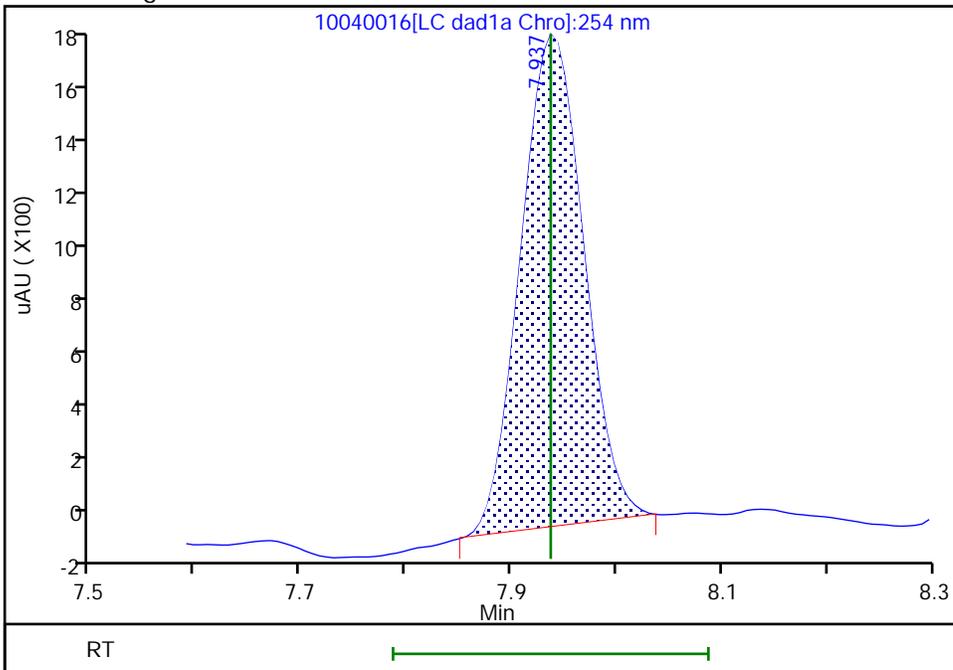
RT: 7.94  
Area: 7772  
Amount: 0.095498  
Amount Units: ug/mL

Processing Integration Results



RT: 7.94  
Area: 7391  
Amount: 0.097989  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:02:51 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins Denver

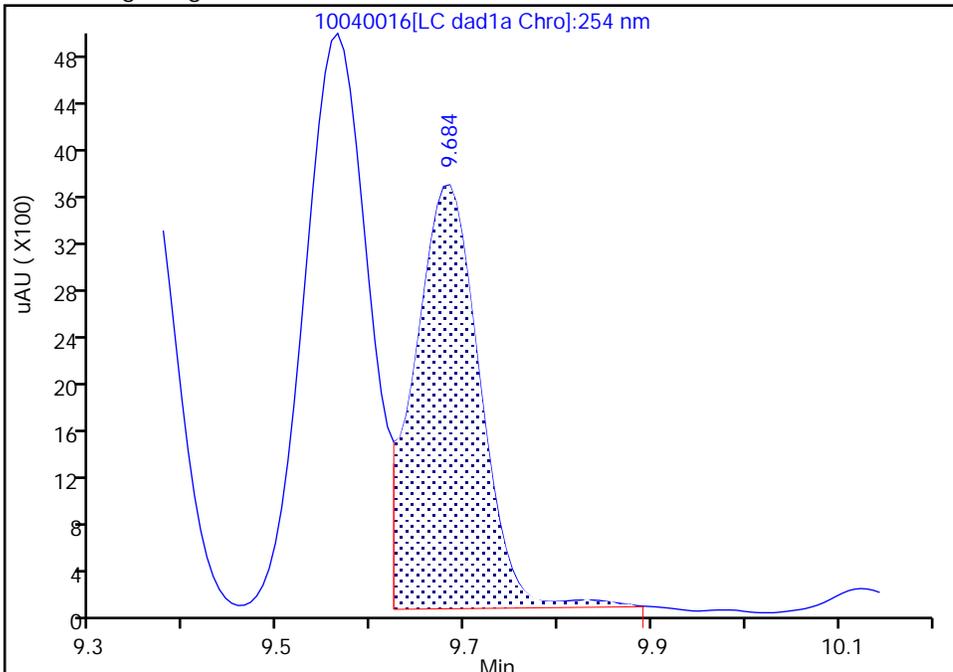
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040016.d  
Injection Date: 04-Oct-2024 18:49:07 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 4  
Client ID:  
Operator ID: JZ ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

15 Tetryl, CAS: 479-45-8

Signal: 1

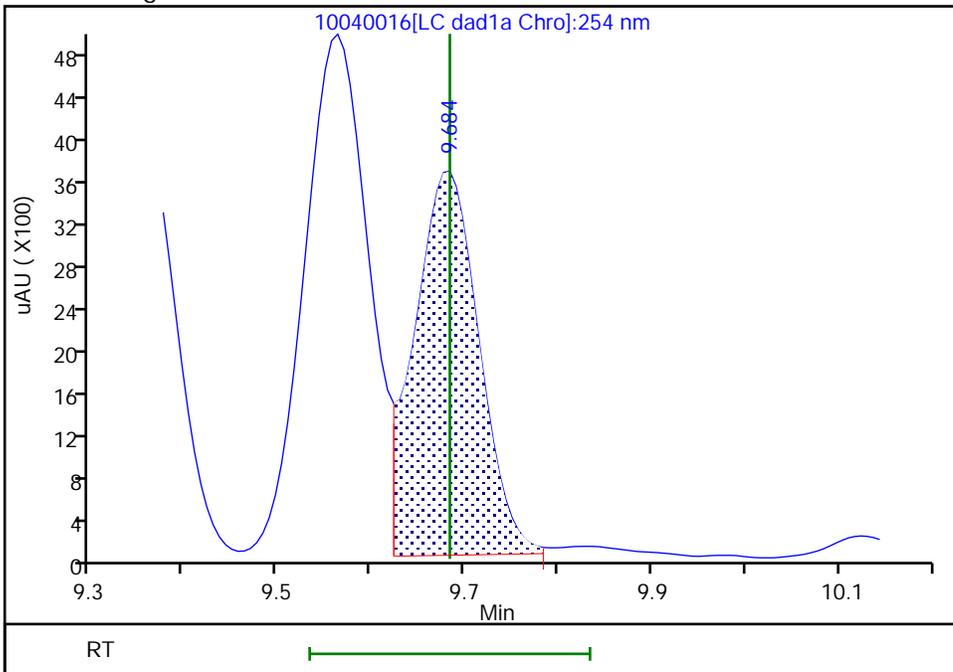
RT: 9.68  
Area: 17446  
Amount: 0.103129  
Amount Units: ug/mL

Processing Integration Results



RT: 9.68  
Area: 17130  
Amount: 0.100694  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:03:04 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak

Audit Reason: Baseline

Eurofins Denver

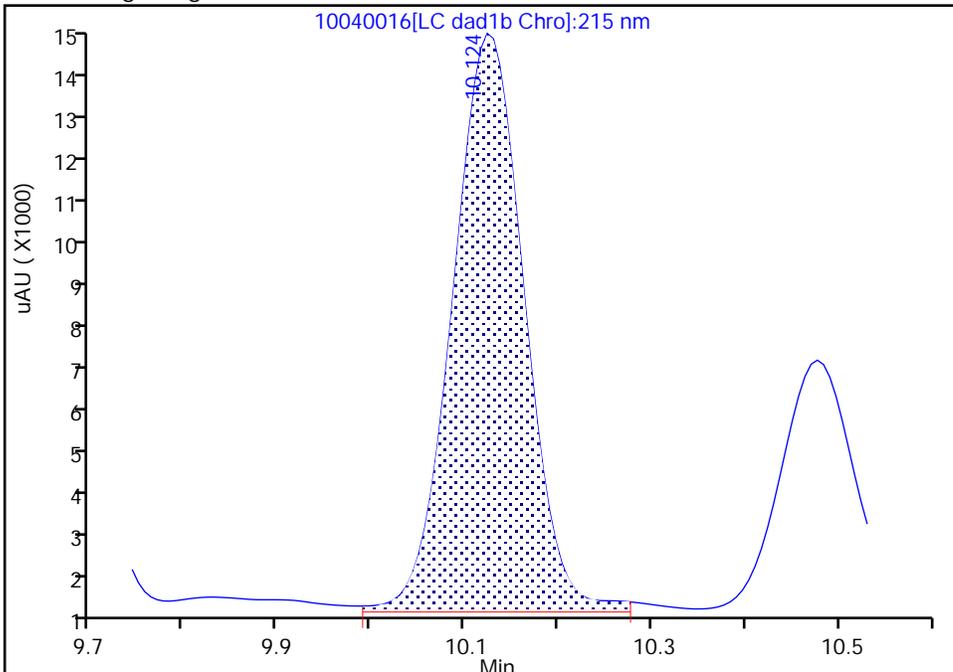
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040016.d  
Injection Date: 04-Oct-2024 18:49:07 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 4  
Client ID:  
Operator ID: JZ ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1C, 215 nm

16 Nitroglycerin, CAS: 55-63-0

Signal: 1

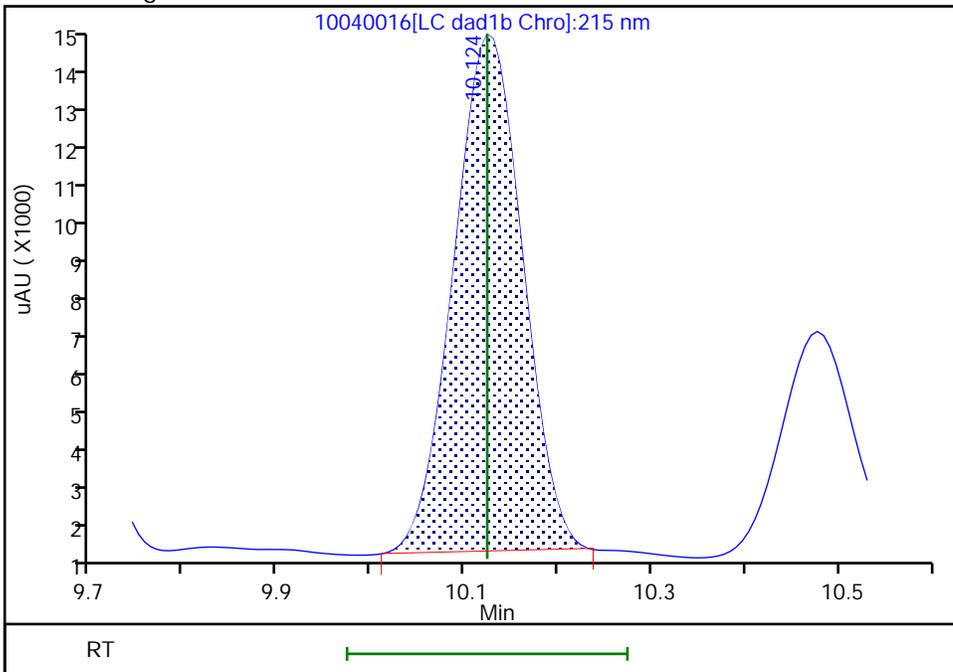
RT: 10.12  
Area: 67088  
Amount: 0.959514  
Amount Units: ug/mL

Processing Integration Results



RT: 10.12  
Area: 63200  
Amount: 0.986772  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:03:11 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins Denver

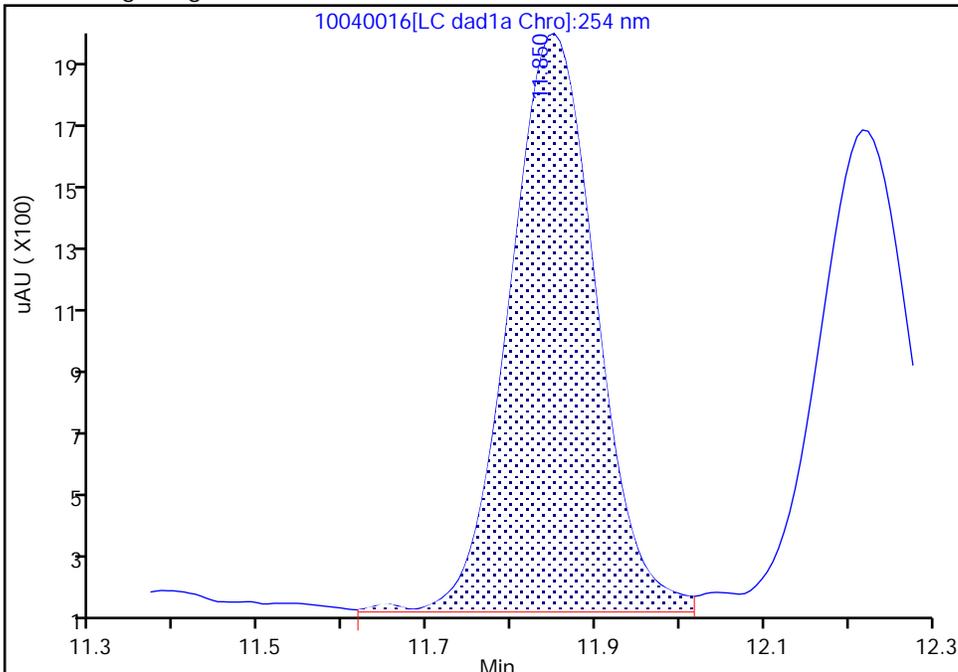
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040016.d  
Injection Date: 04-Oct-2024 18:49:07 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 4  
Client ID:  
Operator ID: JZ ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

22 o-Nitrotoluene, CAS: 88-72-2

Signal: 1

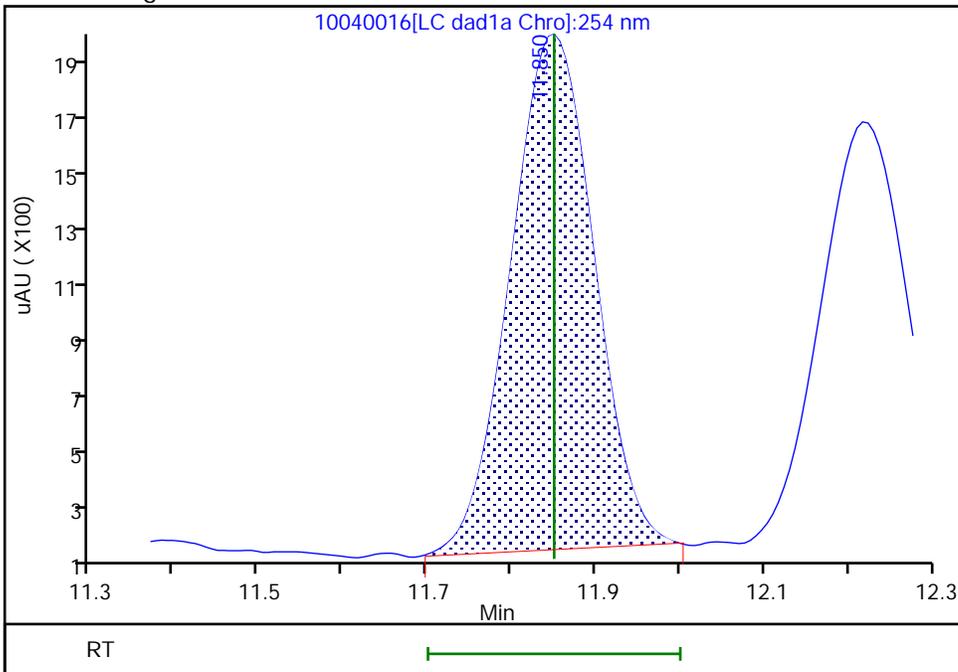
RT: 11.85  
Area: 13314  
Amount: 0.103639  
Amount Units: ug/mL

Processing Integration Results



RT: 11.85  
Area: 12487  
Amount: 0.099523  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:03:36 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins Denver

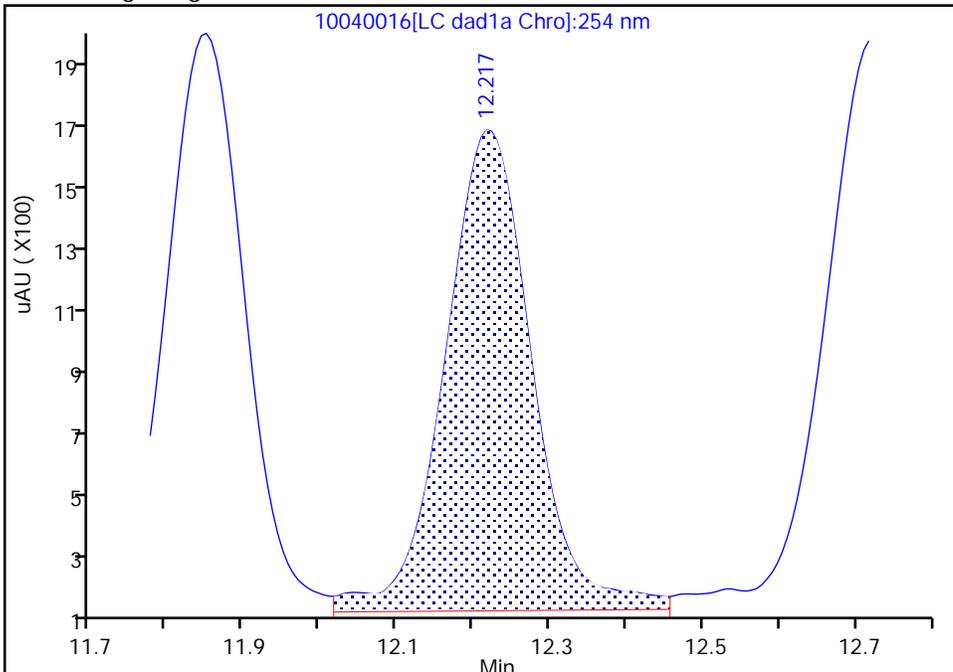
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040016.d  
Injection Date: 04-Oct-2024 18:49:07 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 4  
Client ID:  
Operator ID: JZ ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

23 p-Nitrotoluene, CAS: 99-99-0

Signal: 1

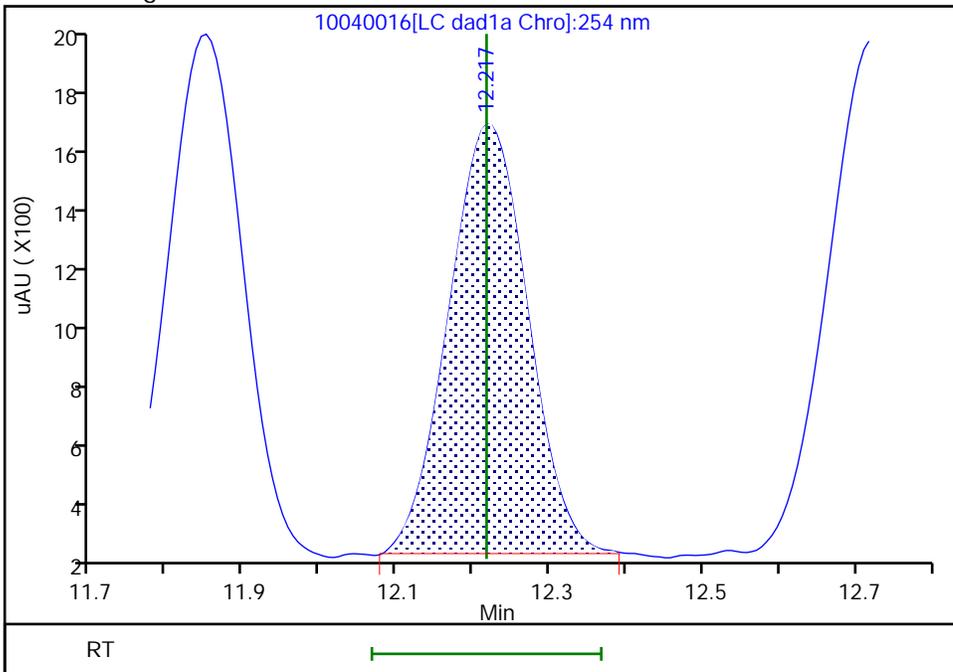
RT: 12.22  
Area: 12196  
Amount: 0.107960  
Amount Units: ug/mL

Processing Integration Results



RT: 12.22  
Area: 10624  
Amount: 0.096993  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:03:40 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins Denver

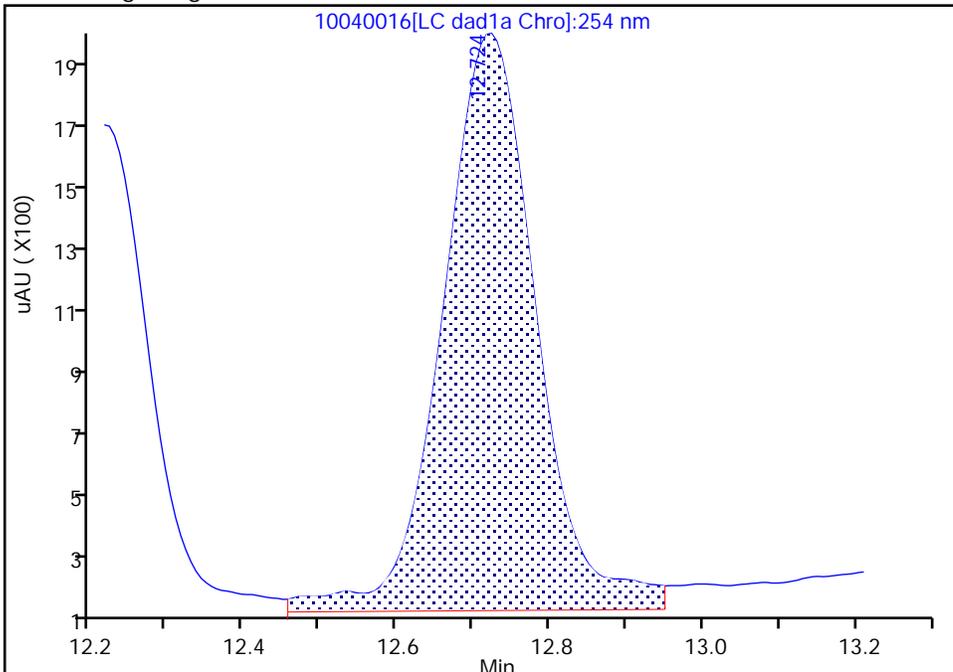
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040016.d  
Injection Date: 04-Oct-2024 18:49:07 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 4  
Client ID:  
Operator ID: JZ ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

24 m-Nitrotoluene, CAS: 99-08-1

Signal: 1

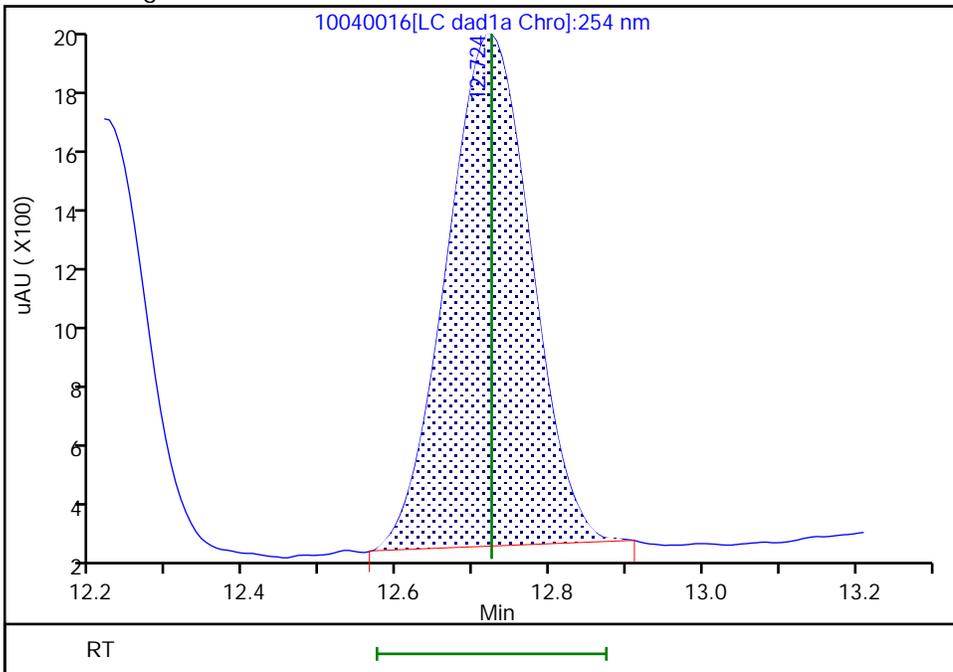
RT: 12.72  
Area: 15464  
Amount: 0.107416  
Amount Units: ug/mL

Processing Integration Results



RT: 12.72  
Area: 13345  
Amount: 0.096915  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:03:43 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins Denver

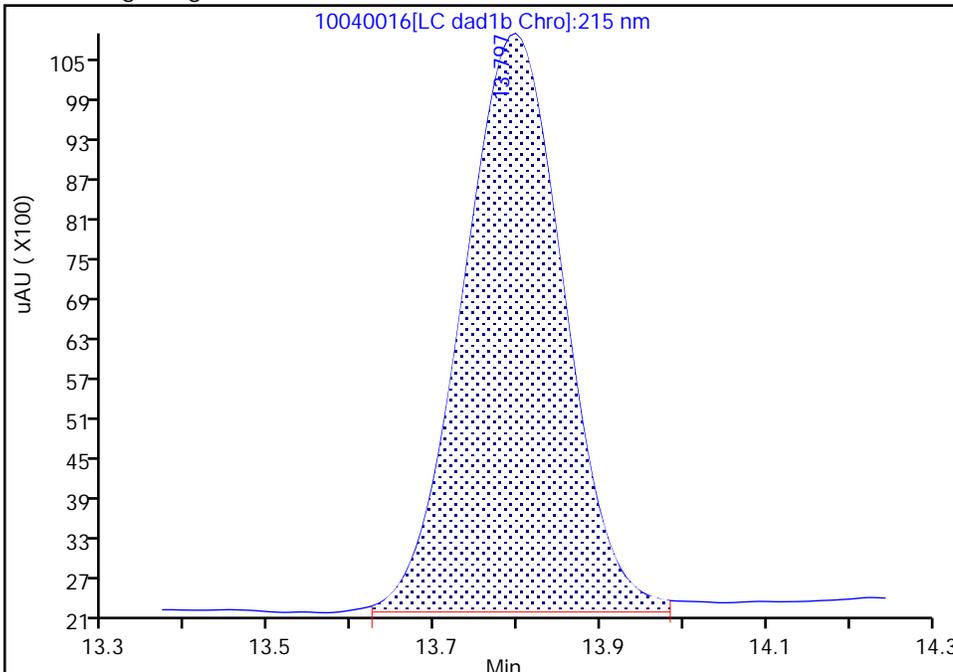
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040016.d		
Injection Date:	04-Oct-2024 18:49:07	Instrument ID:	CHHPLC_X3
Lims ID:	IC INT/DMT 4		
Client ID:			
Operator ID:	JZ	ALS Bottle#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000
Method:	8330_X3	Limit Group:	GCSV - 8330
Column:	UltraCarb5uODS (20) ( 4.60 mm)	Detector:	LC DAD1C, 215 nm
		Worklist Smp#:	16

25 PETN, CAS: 78-11-5

Signal: 1

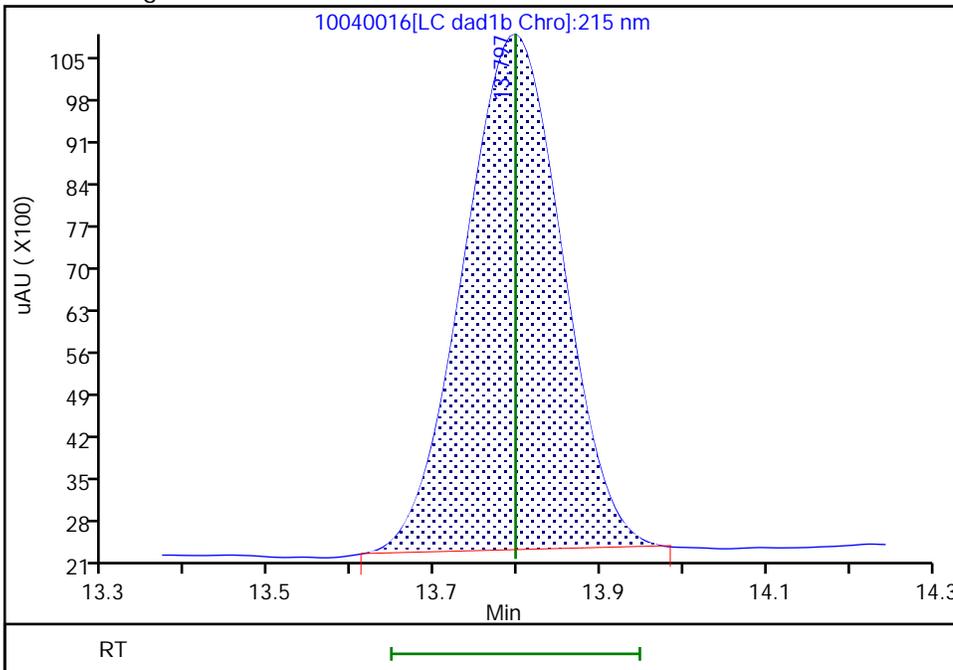
RT: 13.80  
 Area: 74197  
 Amount: 1.031477  
 Amount Units: ug/mL

Processing Integration Results



RT: 13.80  
 Area: 71766  
 Amount: 0.993819  
 Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:04:03 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins Denver  
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\10040017.D  
 Lims ID: IC INT/DMT 3  
 Client ID:  
 Sample Type: IC Calib Level: 3  
 Inject. Date: 04-Oct-2024 19:11:05 ALS Bottle#: 17 Worklist Smp#: 17  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: IC INT/DMT 3  
 Operator ID: JZ Instrument ID: CHHPLC\_X3  
 Sublist: chrom-8330\_X3\*sub27  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\8330\_X3.m  
 Limit Group: GCSV - 8330  
 Last Update: 08-Oct-2024 13:19:21 Calib Date: 04-Oct-2024 19:55:02  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\10040019.D  
 Column 1 : UltraCarb5uODS (20) ( 4.60 mm) Det: LC DAD1B, 254 nm  
 Process Host: CTX1654

First Level Reviewer: LV5D Date: 08-Oct-2024 13:05:11

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
3 TNX	1	6.434	6.437	-0.003	10367	0.0502	0.0510	M
4 HMX	1	6.574	6.577	-0.003	4979	0.0500	0.0515	M
6 DNX	1	6.747	6.751	-0.004	7313	0.0501	0.0501	M
7 MNX	1	7.154	7.151	0.003	7700	0.0584	0.0579	M
8 RDX	1	7.507	7.511	-0.004	5386	0.0500	0.0497	M
9 2,4,6-Trinitrophenol	1	7.941	7.937	0.004	3807	0.0500	0.0505	M
\$ 10 1,2-Dinitrobenzene	1	8.374	8.377	-0.003	6795	0.0500	0.0521	M
11 1,3,5-Trinitrobenzene	1	8.474	8.477	-0.003	11696	0.0500	0.0538	M
12 1,3-Dinitrobenzene	1	9.034	9.037	-0.003	15058	0.0500	0.0505	
13 Nitrobenzene	1	9.354	9.357	-0.003	9801	0.0500	0.0502	
14 3,5-Dinitroaniline	1	9.561	9.564	-0.003	11561	0.0500	0.0499	
15 Tetryl	1	9.681	9.684	-0.003	8562	0.0500	0.0507	
16 Nitroglycerin	2	10.121	10.124	-0.003	32159	0.5000	0.5052	M
17 2,4,6-Trinitrotoluene	1	10.474	10.477	-0.003	10944	0.0500	0.0504	
18 4-Amino-2,6-dinitrotoluene	1	10.634	10.637	-0.003	7751	0.0500	0.0496	
19 2-Amino-4,6-dinitrotoluene	1	10.861	10.864	-0.003	10249	0.0500	0.0501	
20 2,6-Dinitrotoluene	1	11.001	11.004	-0.003	7345	0.0500	0.0510	
21 2,4-Dinitrotoluene	1	11.154	11.150	0.004	14328	0.0500	0.0491	
22 o-Nitrotoluene	1	11.847	11.850	-0.003	6473	0.0500	0.0516	
23 p-Nitrotoluene	1	12.221	12.217	0.004	5661	0.0500	0.0510	
24 m-Nitrotoluene	1	12.721	12.724	-0.003	6947	0.0500	0.0496	
25 PETN	2	13.794	13.797	-0.003	36348	0.5000	0.5033	M

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

8330IntermStk\_00083

Amount Added: 5.00

Units: uL

8330 DMT\_00018

Amount Added: 2.50

Units: uL

Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040017.d

Injection Date: 04-Oct-2024 19:11:05

Instrument ID: CHHPLC\_X3

Operator ID: JZ

Lims ID: IC INT/DMT 3

Worklist Smp#: 17

Client ID:

Injection Vol: 100.0 ul

Dil. Factor: 1.0000

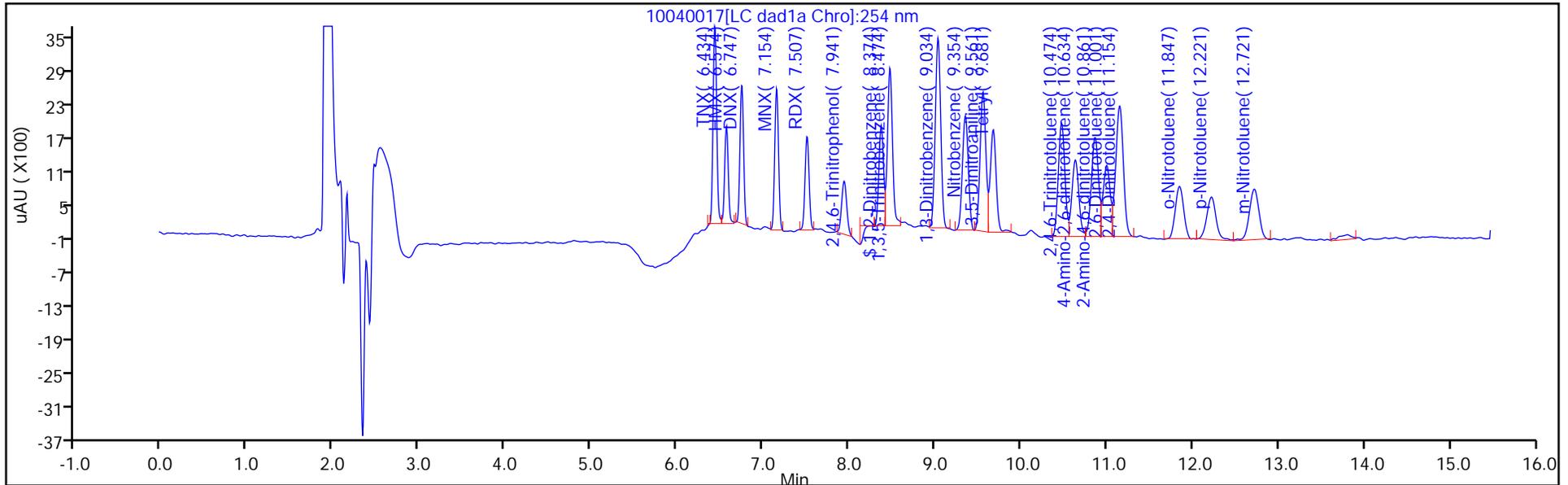
ALS Bottle#: 17

Method: 8330\_X3

Limit Group: GCSV - 8330

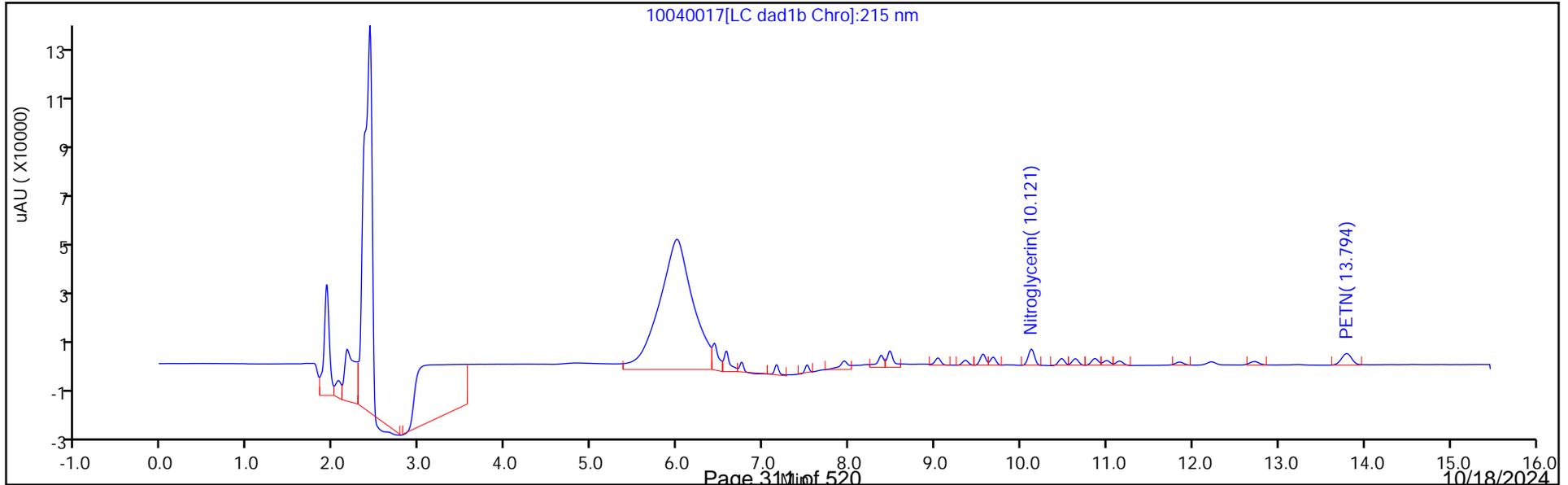
Column: UltraCarb5uODS (20) ( 4.60 mm)

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



Eurofins Denver

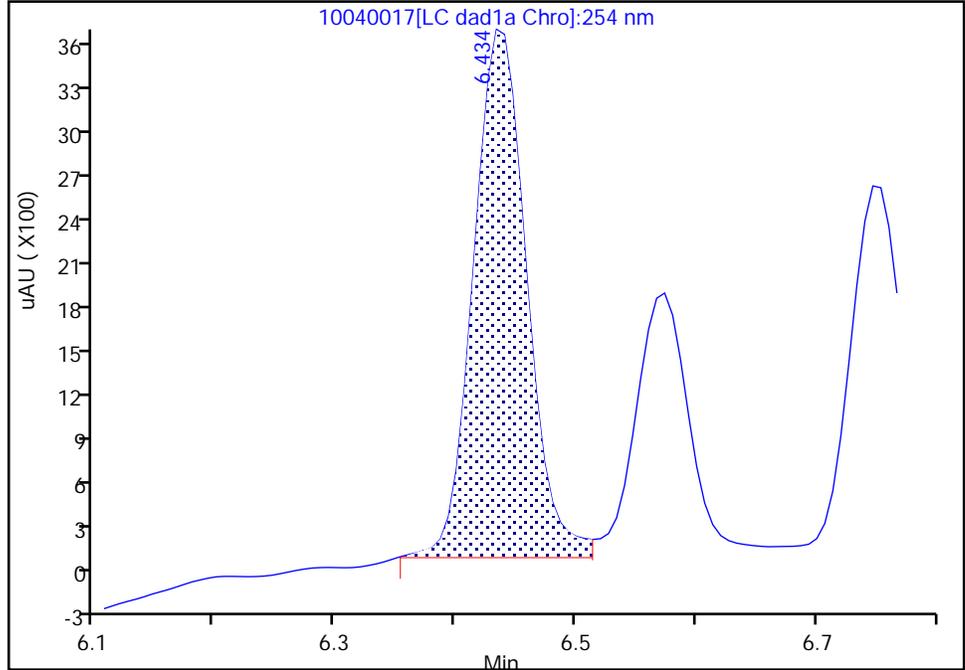
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040017.d  
Injection Date: 04-Oct-2024 19:11:05 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 3  
Client ID:  
Operator ID: JZ ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

3 TNX, CAS: 13980-04-6

Signal: 1

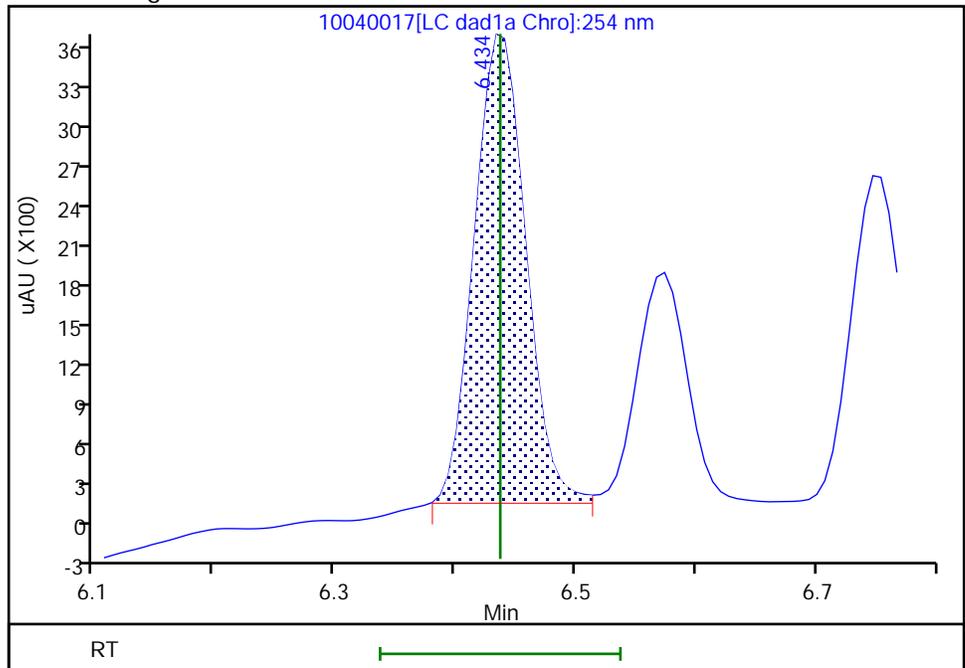
RT: 6.43  
Area: 10875  
Amount: 0.051607  
Amount Units: ug/mL

Processing Integration Results



RT: 6.43  
Area: 10367  
Amount: 0.051049  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:05:07 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak

Audit Reason: Baseline

Eurofins Denver

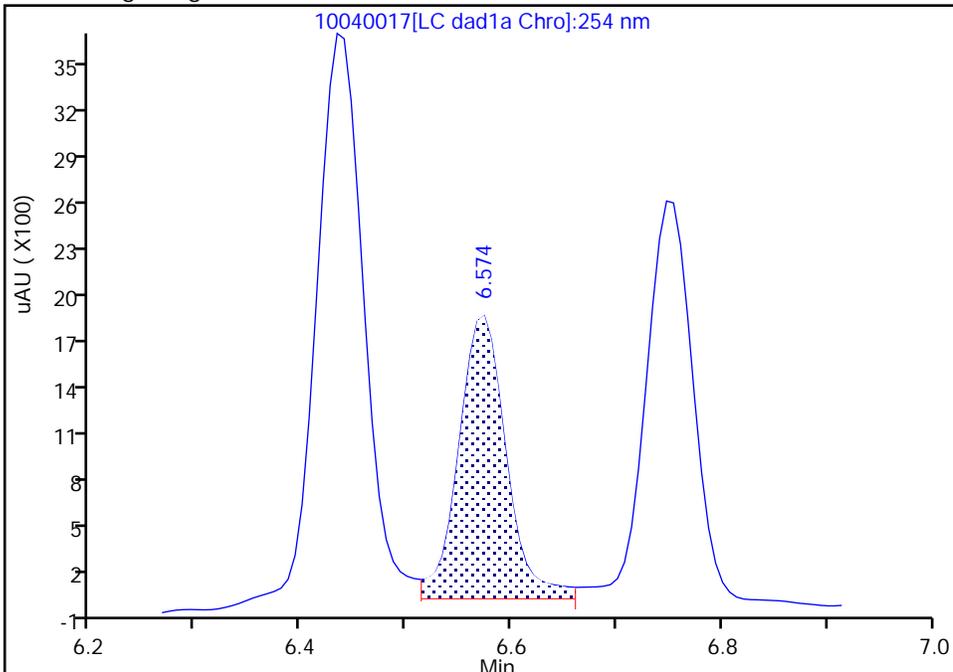
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040017.d		
Injection Date:	04-Oct-2024 19:11:05	Instrument ID:	CHHPLC_X3
Lims ID:	IC INT/DMT 3		
Client ID:			
Operator ID:	JZ	ALS Bottle#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000
Method:	8330_X3	Limit Group:	GCSV - 8330
Column:	UltraCarb5uODS (20) ( 4.60 mm)	Detector:	LC DAD1B, 254 nm
		Worklist Smp#:	17

4 HMX, CAS: 2691-41-0

Signal: 1

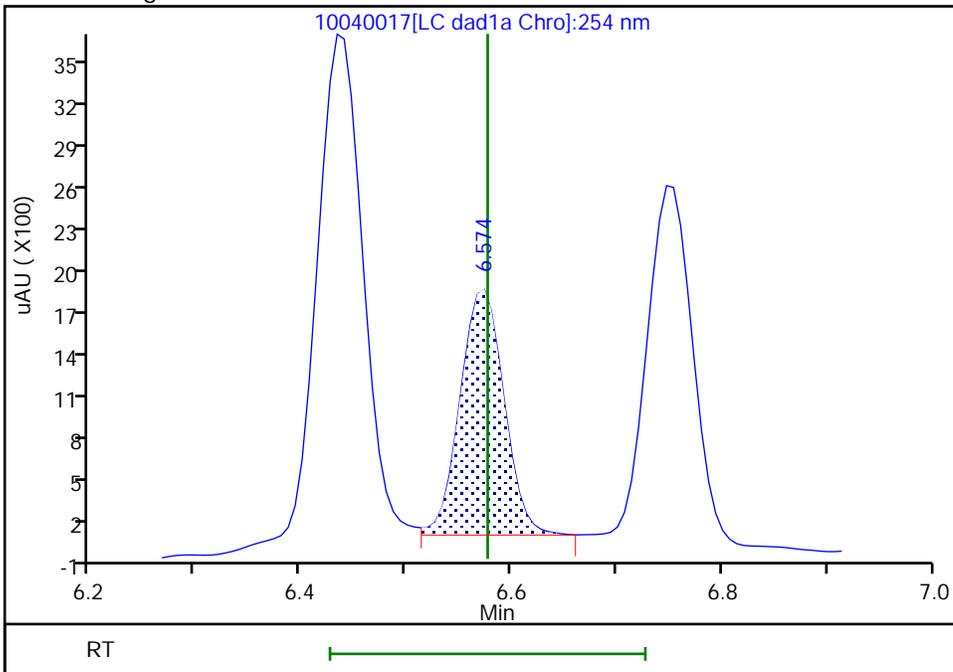
RT: 6.57  
 Area: 5573  
 Amount: 0.051766  
 Amount Units: ug/mL

Processing Integration Results



RT: 6.57  
 Area: 4979  
 Amount: 0.051514  
 Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:05:03 -06:00:00 (UTC)

Audit Action: Assigned New Baseline

Audit Reason: Baseline

Eurofins Denver

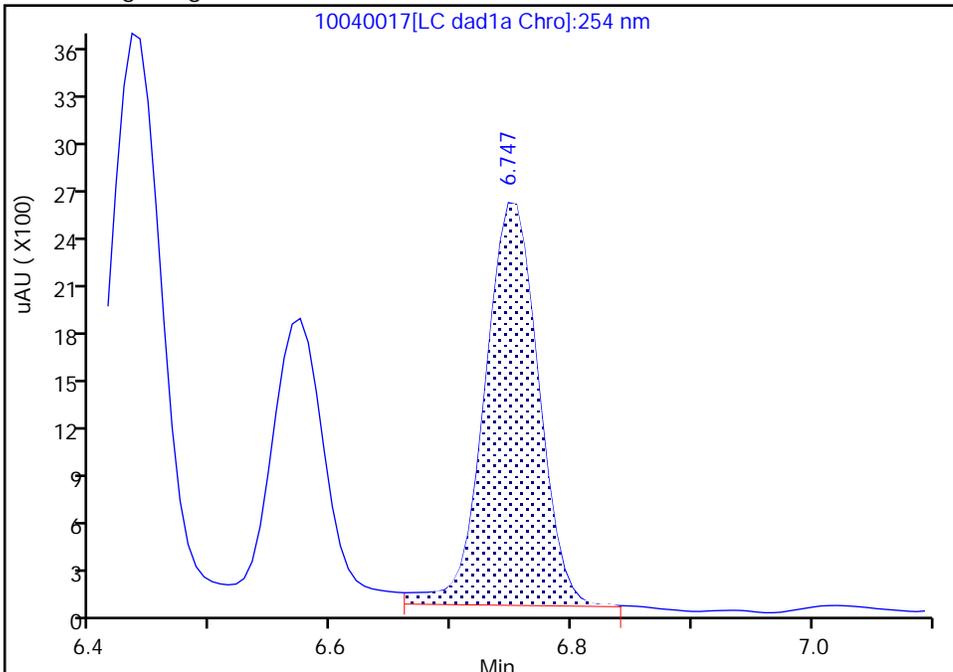
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040017.d  
Injection Date: 04-Oct-2024 19:11:05 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 3  
Client ID:  
Operator ID: JZ ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

6 DNX, CAS: 80251-29-2

Signal: 1

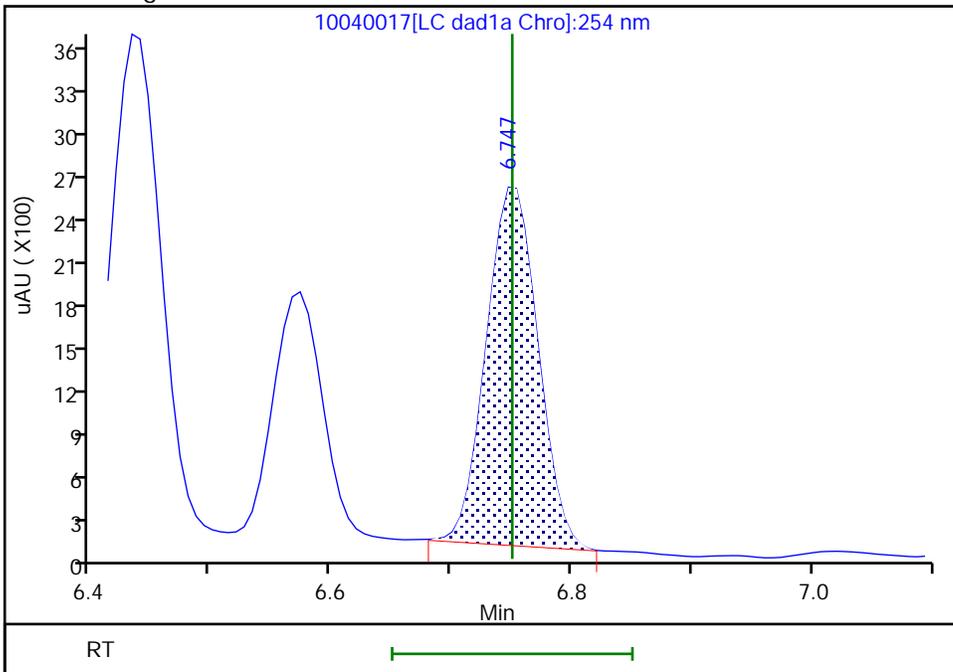
RT: 6.75  
Area: 7771  
Amount: 0.050925  
Amount Units: ug/mL

Processing Integration Results



RT: 6.75  
Area: 7313  
Amount: 0.050075  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:04:59 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins Denver

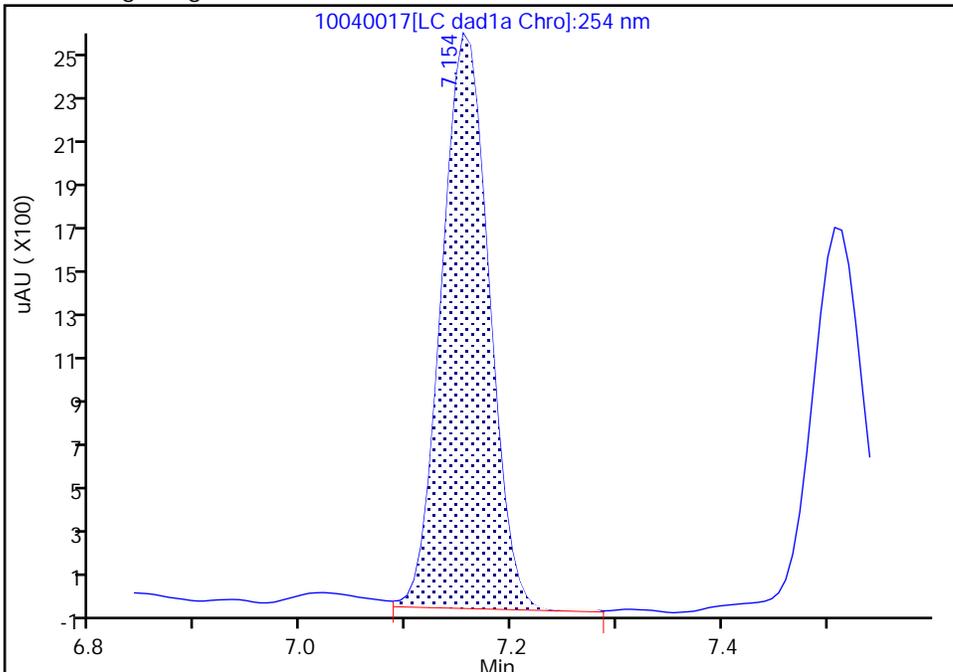
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040017.d  
Injection Date: 04-Oct-2024 19:11:05 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 3  
Client ID:  
Operator ID: JZ ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

7 MNX, CAS: 5755-27-1

Signal: 1

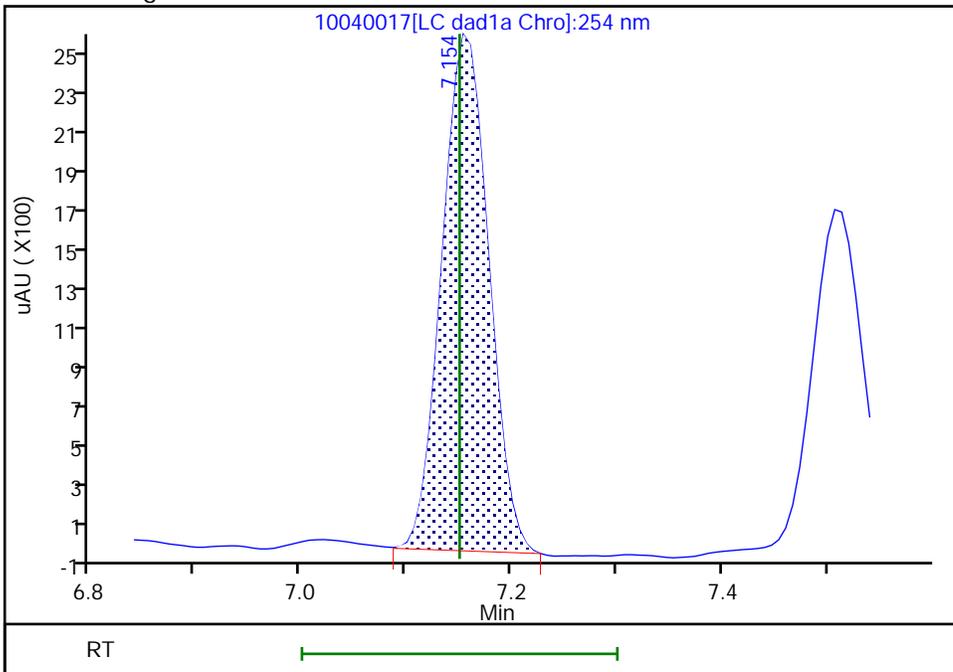
RT: 7.15  
Area: 7839  
Amount: 0.058573  
Amount Units: ug/mL

Processing Integration Results



RT: 7.15  
Area: 7700  
Amount: 0.057923  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:04:53 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins Denver

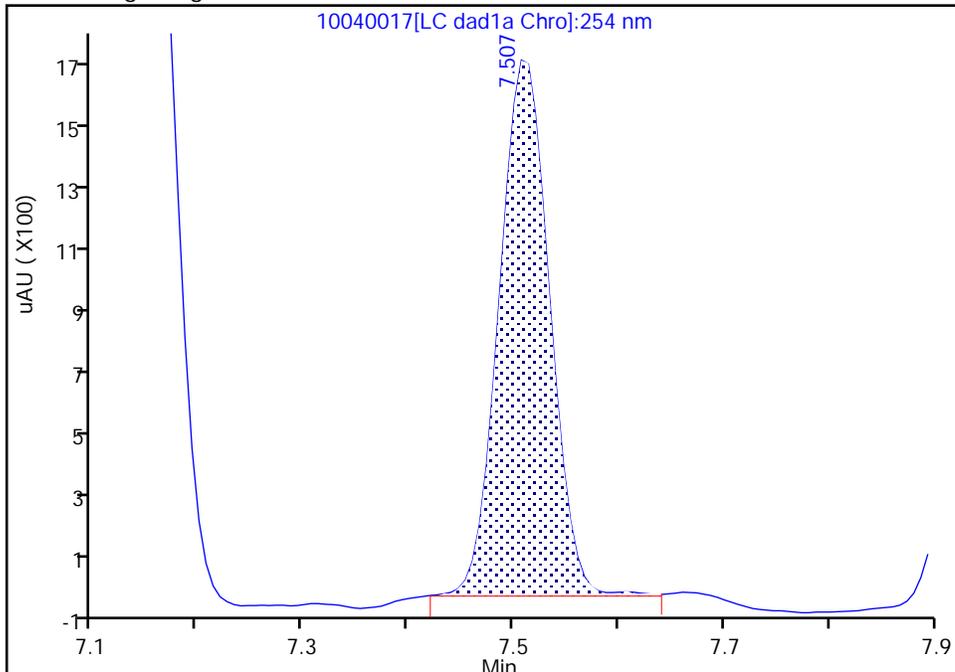
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040017.d  
Injection Date: 04-Oct-2024 19:11:05 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 3  
Client ID:  
Operator ID: JZ ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

8 RDX, CAS: 121-82-4

Signal: 1

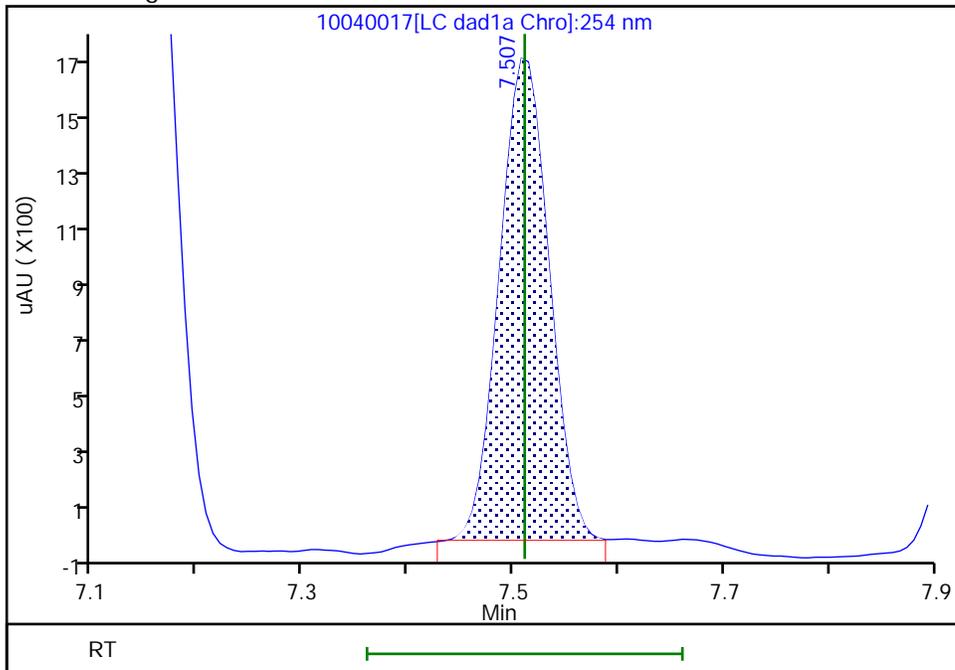
RT: 7.51  
Area: 5457  
Amount: 0.049860  
Amount Units: ug/mL

Processing Integration Results



RT: 7.51  
Area: 5386  
Amount: 0.049722  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:04:45 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins Denver

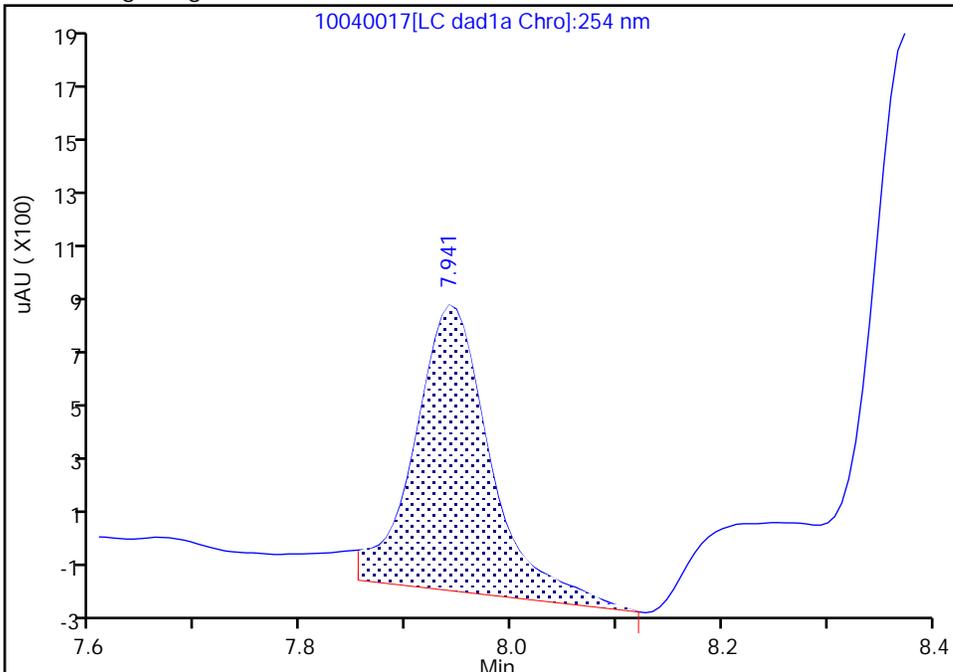
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040017.d  
Injection Date: 04-Oct-2024 19:11:05 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 3  
Client ID:  
Operator ID: JZ ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

9 2,4,6-Trinitrophenol, CAS: 88-89-1

Signal: 1

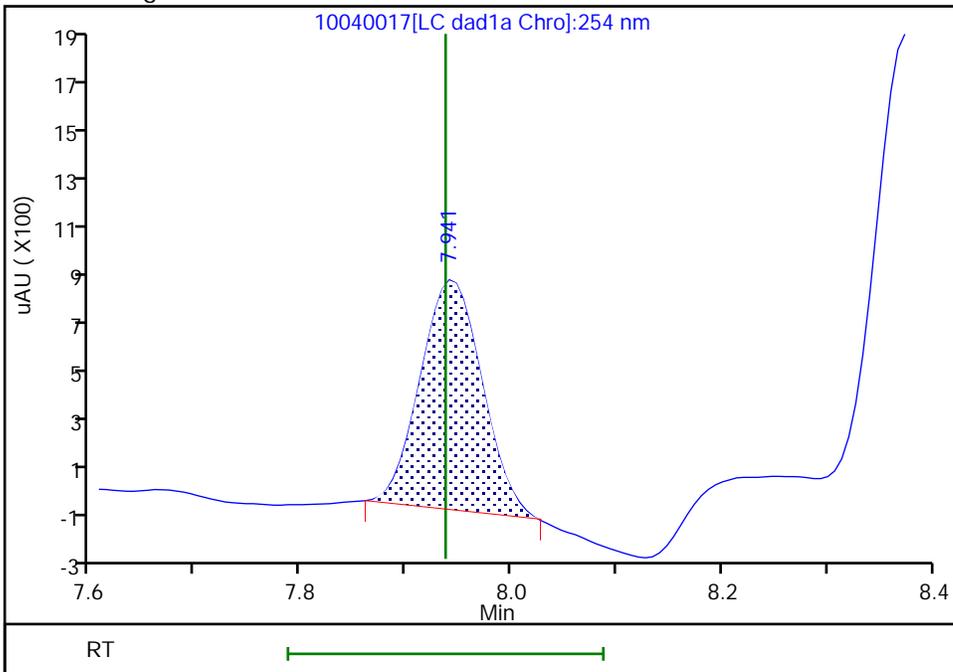
RT: 7.94  
Area: 5246  
Amount: 0.064797  
Amount Units: ug/mL

Processing Integration Results



RT: 7.94  
Area: 3807  
Amount: 0.050473  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:04:36 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline

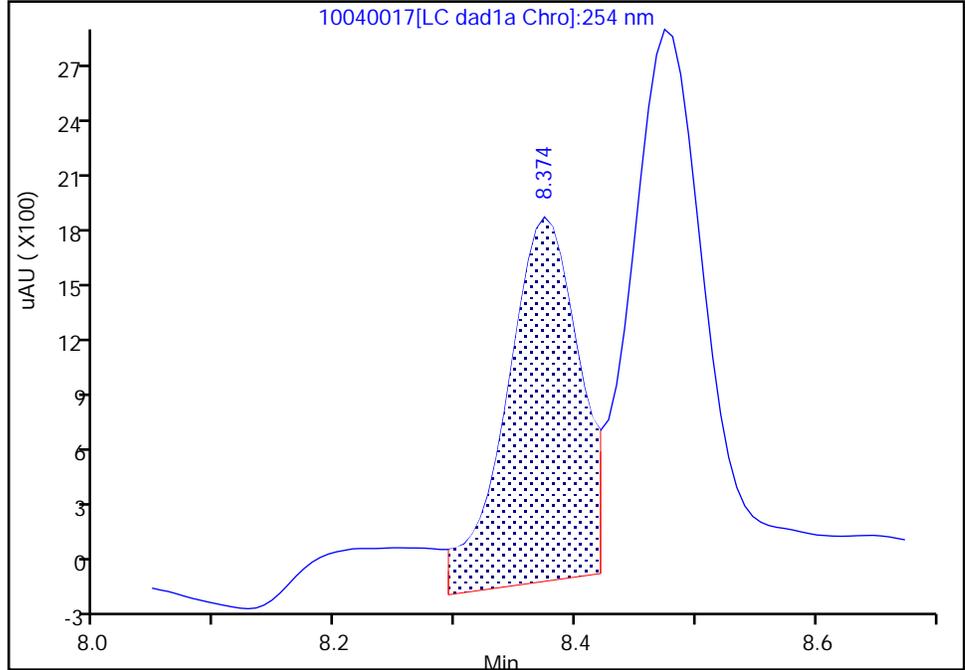
Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040017.d  
Injection Date: 04-Oct-2024 19:11:05 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 3  
Client ID:  
Operator ID: JZ 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

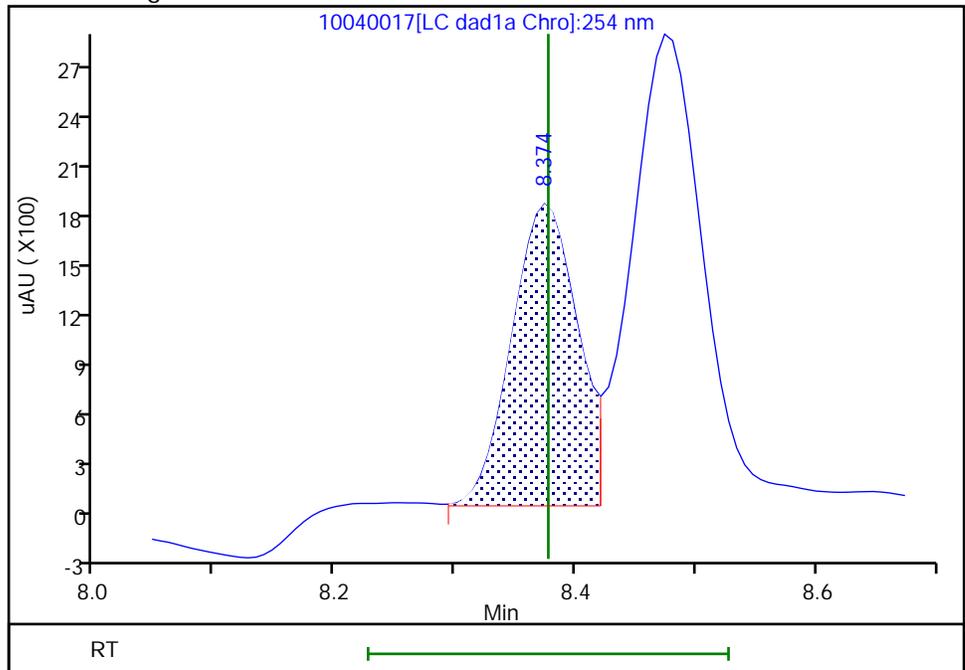
RT: 8.37  
Area: 8186  
Amount: 0.061318  
Amount Units: ug/mL

Processing Integration Results



RT: 8.37  
Area: 6795  
Amount: 0.052105  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:04:29 -06:00:00 (UTC)

Audit Action: Assigned New Baseline

Audit Reason: Baseline

Euofins Denver

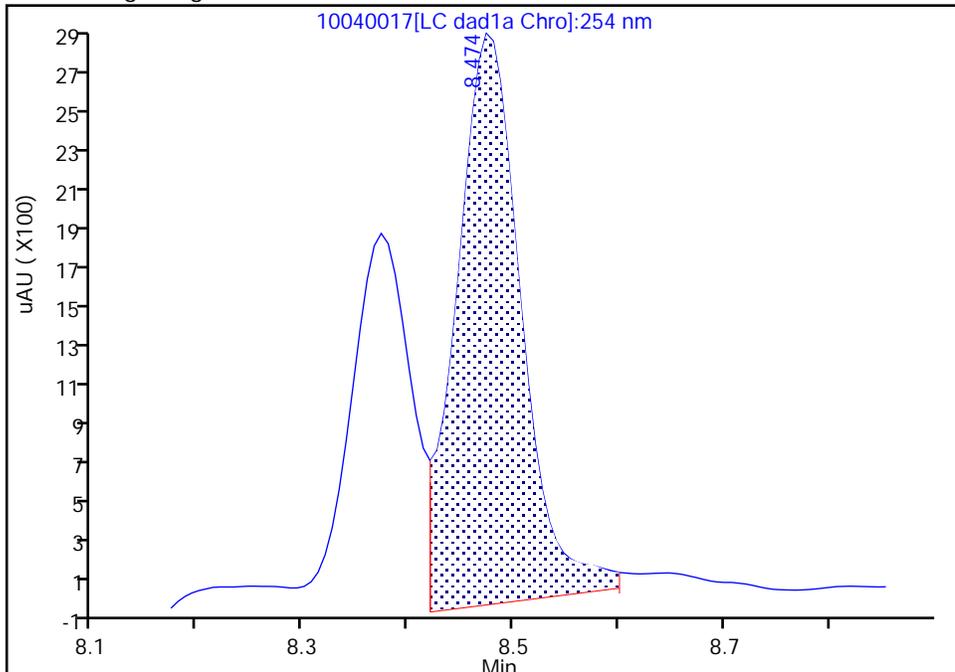
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040017.d  
Injection Date: 04-Oct-2024 19:11:05 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 3  
Client ID:  
Operator ID: JZ ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

11 1,3,5-Trinitrobenzene, CAS: 99-35-4

Signal: 1

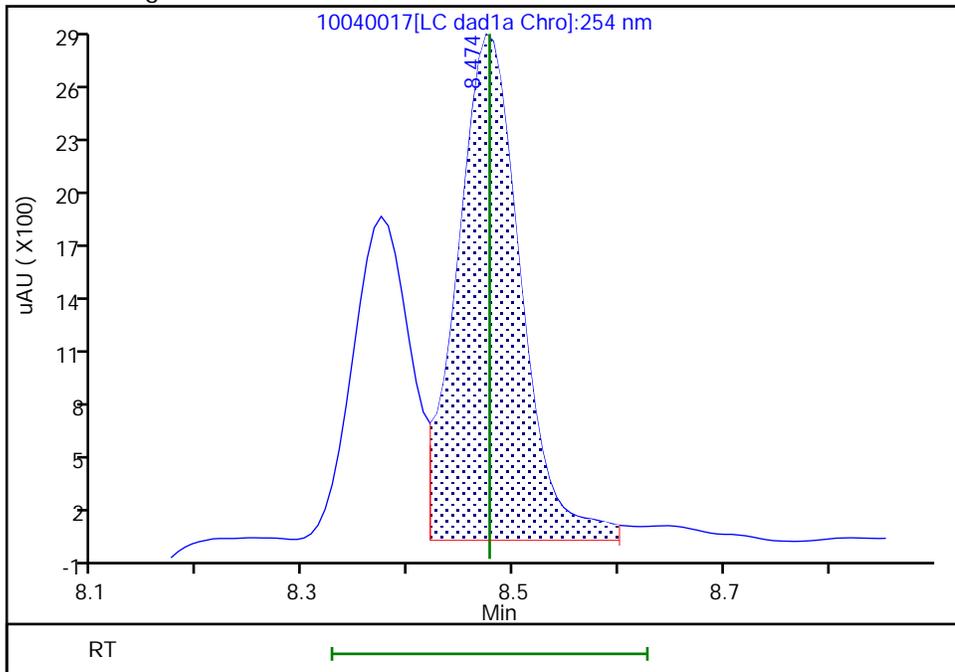
RT: 8.47  
Area: 12317  
Amount: 0.056311  
Amount Units: ug/mL

Processing Integration Results



RT: 8.47  
Area: 11696  
Amount: 0.053812  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:04:29 -06:00:00 (UTC)

Audit Action: Assigned New Baseline

Audit Reason: Baseline

Eurofins Denver

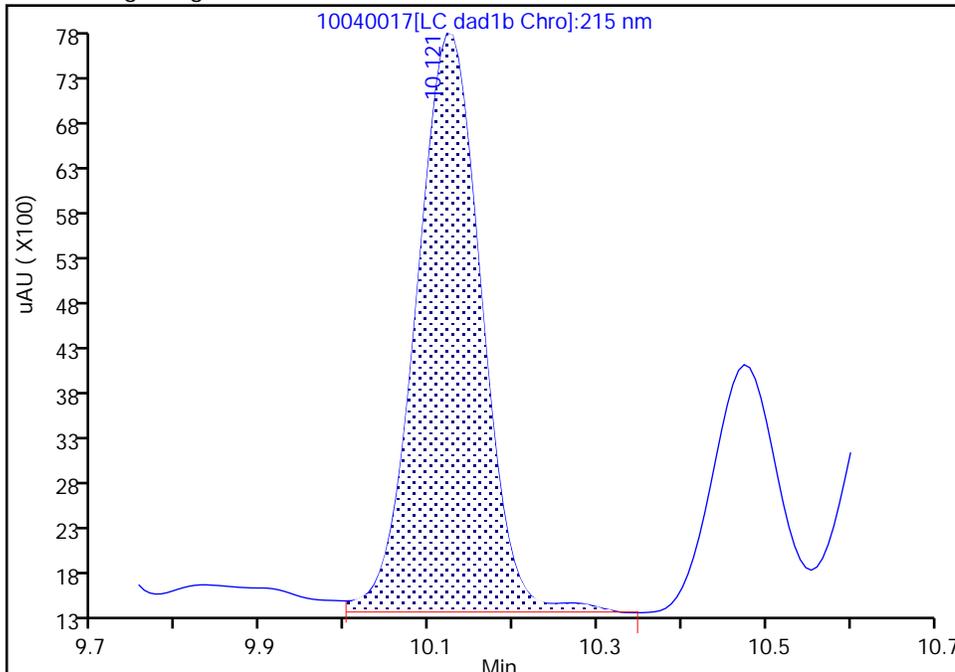
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040017.d  
Injection Date: 04-Oct-2024 19:11:05 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 3  
Client ID:  
Operator ID: JZ ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1C, 215 nm

16 Nitroglycerin, CAS: 55-63-0

Signal: 1

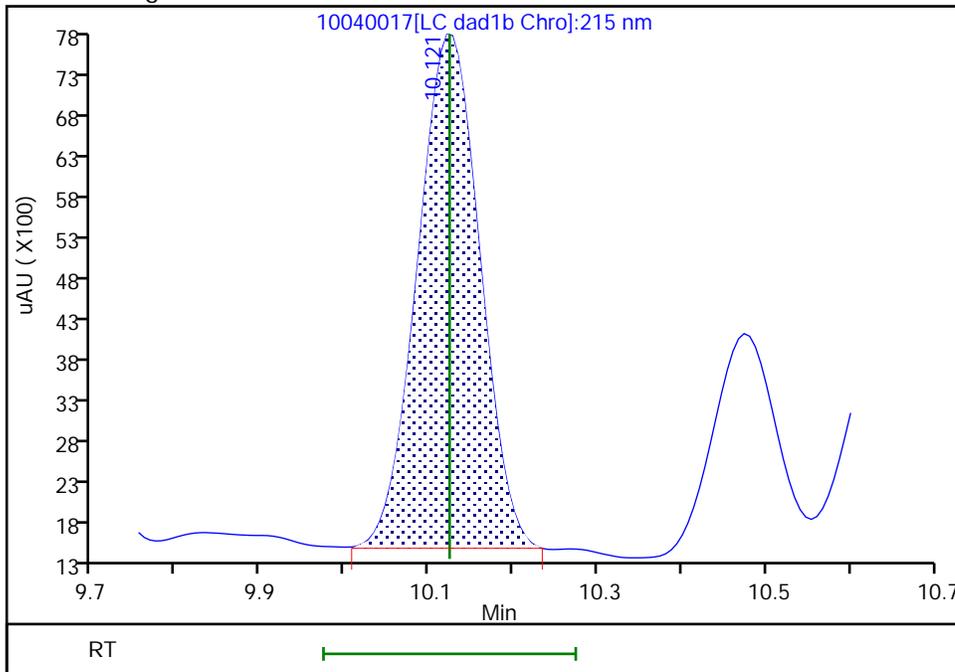
RT: 10.12  
Area: 34193  
Amount: 0.496918  
Amount Units: ug/mL

Processing Integration Results



RT: 10.12  
Area: 32159  
Amount: 0.505186  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:09:34 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins Denver

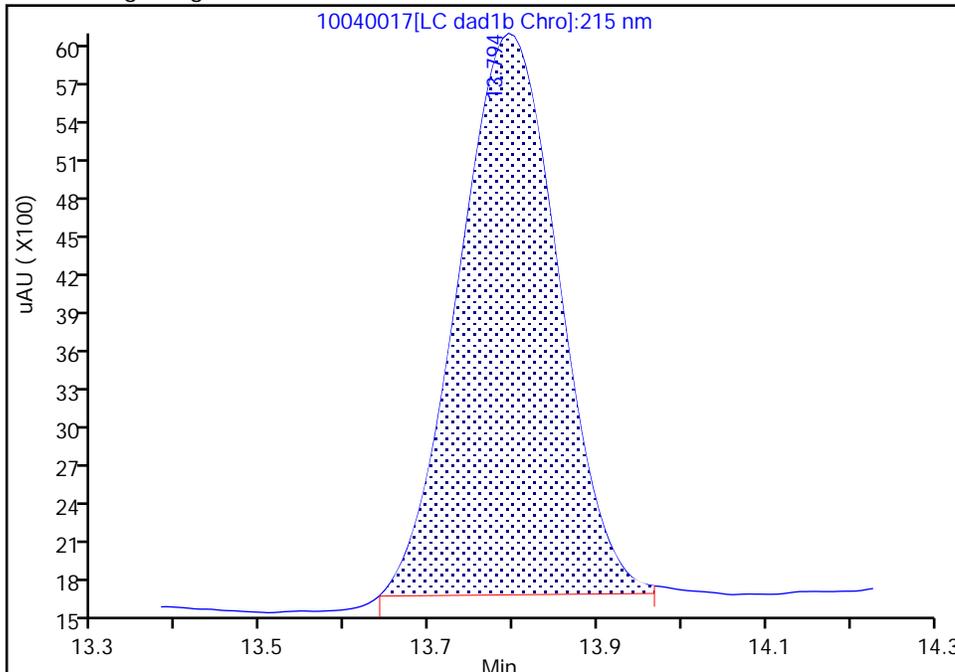
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040017.d  
Injection Date: 04-Oct-2024 19:11:05 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 3  
Client ID:  
Operator ID: JZ ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1C, 215 nm

25 PETN, CAS: 78-11-5

Signal: 1

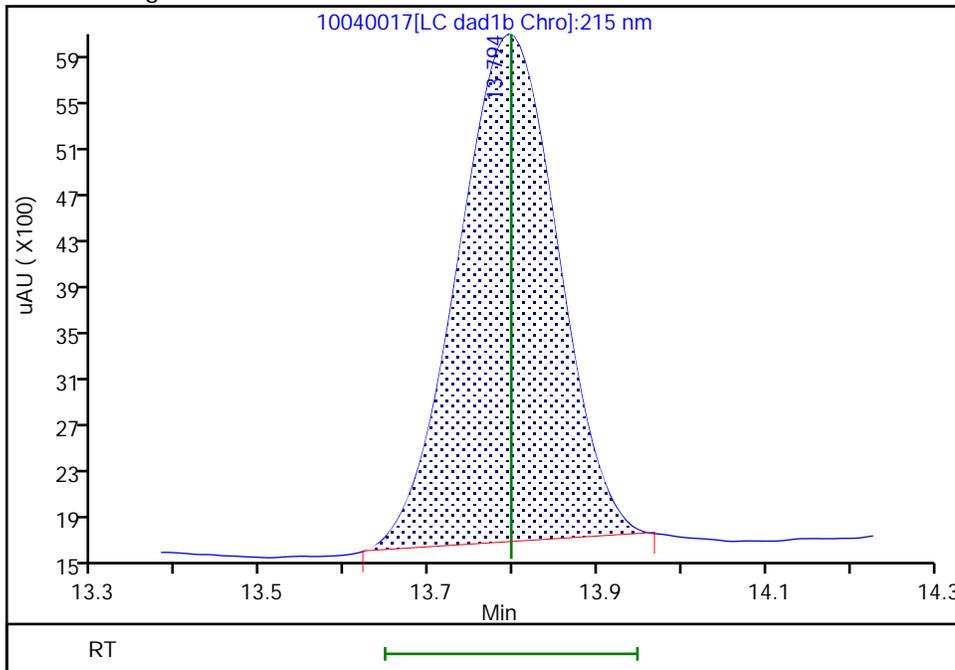
RT: 13.79  
Area: 36213  
Amount: 0.505564  
Amount Units: ug/mL

Processing Integration Results



RT: 13.79  
Area: 36348  
Amount: 0.503349  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:04:14 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins Denver  
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\10040018.D  
 Lims ID: IC INT/DMT 2  
 Client ID:  
 Sample Type: IC Calib Level: 2  
 Inject. Date: 04-Oct-2024 19:33:04 ALS Bottle#: 18 Worklist Smp#: 18  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: IC INT/DMT 2  
 Operator ID: JZ Instrument ID: CHHPLC\_X3  
 Sublist: chrom-8330\_X3\*sub27  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\8330\_X3.m  
 Limit Group: GCSV - 8330  
 Last Update: 08-Oct-2024 13:19:23 Calib Date: 04-Oct-2024 19:55:02  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\10040019.D  
 Column 1 : UltraCarb5uODS (20) ( 4.60 mm) Det: LC DAD1B, 254 nm  
 Process Host: CTX1654

First Level Reviewer: LV5D Date: 08-Oct-2024 13:06:11

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	6.437	-0.004	4020	0.0201	0.0198	M
4 HMX	1	6.573	6.577	-0.004	2125	0.0200	0.0220	M
6 DNX	1	6.747	6.751	-0.004	2804	0.0200	0.0192	M
7 MNX	1	7.153	7.151	0.002	2958	0.0233	0.0223	M
8 RDX	1	7.507	7.511	-0.004	2098	0.0200	0.0184	M
9 2,4,6-Trinitrophenol	1	7.940	7.937	0.003	1559	0.0200	0.0207	M
\$ 10 1,2-Dinitrobenzene	1	8.373	8.377	-0.004	2530	0.0200	0.0194	
11 1,3,5-Trinitrobenzene	1	8.473	8.477	-0.004	4281	0.0200	0.0197	
12 1,3-Dinitrobenzene	1	9.033	9.037	-0.004	6054	0.0200	0.0203	
13 Nitrobenzene	1	9.353	9.357	-0.004	3904	0.0200	0.0200	
14 3,5-Dinitroaniline	1	9.560	9.564	-0.004	4665	0.0200	0.0203	
15 Tetryl	1	9.680	9.684	-0.004	3103	0.0200	0.0188	
16 Nitroglycerin	2	10.127	10.124	0.003	12143	0.2000	0.1946	M
17 2,4,6-Trinitrotoluene	1	10.473	10.477	-0.004	4382	0.0200	0.0202	
18 4-Amino-2,6-dinitrotoluene	1	10.640	10.637	0.003	3357	0.0200	0.0190	
19 2-Amino-4,6-dinitrotoluene	1	10.867	10.864	0.003	4224	0.0200	0.0207	
20 2,6-Dinitrotoluene	1	11.007	11.004	0.003	2929	0.0200	0.0195	
21 2,4-Dinitrotoluene	1	11.153	11.150	0.003	5927	0.0200	0.0203	
22 o-Nitrotoluene	1	11.847	11.850	-0.003	2411	0.0200	0.0192	
23 p-Nitrotoluene	1	12.220	12.217	0.003	2343	0.0200	0.0203	
24 m-Nitrotoluene	1	12.713	12.724	-0.011	2992	0.0200	0.0203	
25 PETN	2	13.787	13.797	-0.010	13772	0.2000	0.1907	M

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

8330IntermStk\_00083

Amount Added: 2.00

Units: uL

8330 DMT\_00018

Amount Added: 1.00

Units: uL

Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040018.d

Injection Date: 04-Oct-2024 19:33:04 Instrument ID: CHHPLC\_X3

Lims ID: IC INT/DMT 2

Operator ID: JZ

Client ID:

Worklist Smp#: 18

Injection Vol: 100.0 ul

Dil. Factor: 1.0000

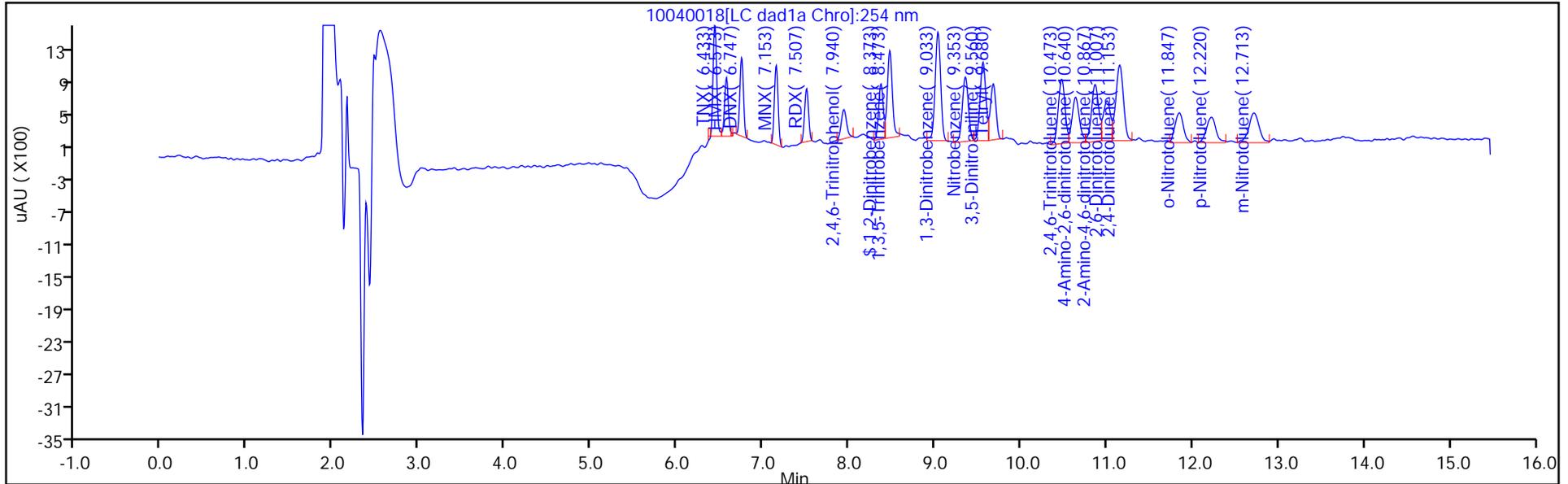
ALS Bottle#: 18

Method: 8330\_X3

Limit Group: GCSV - 8330

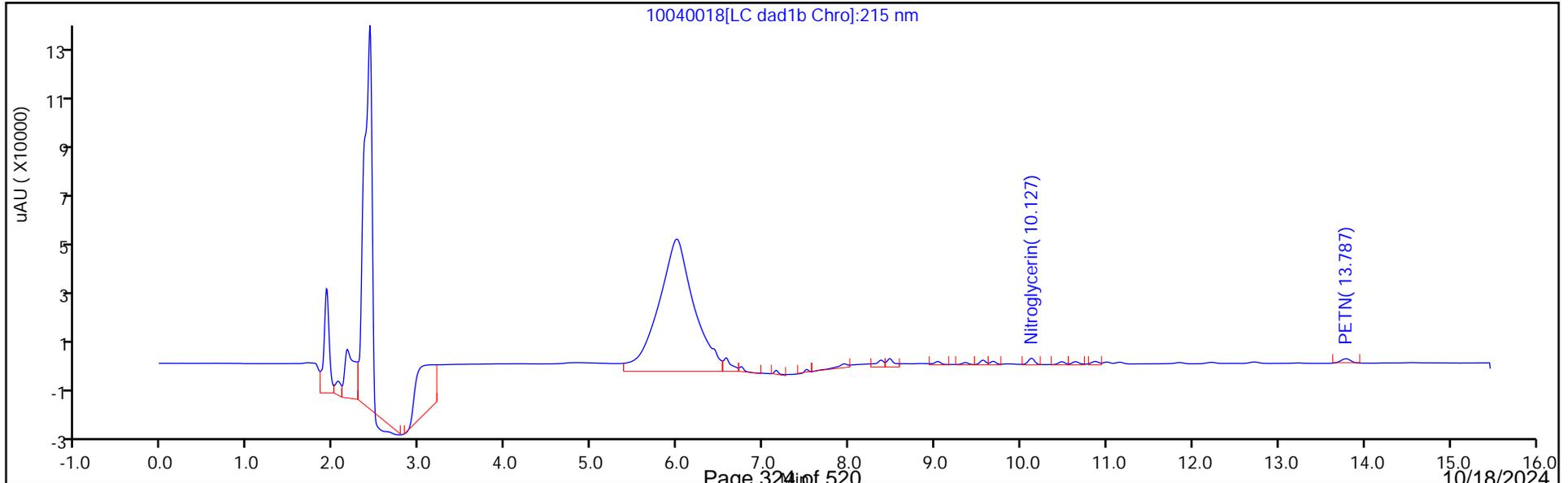
Column: UltraCarb5uODS (20) ( 4.60 mm)

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

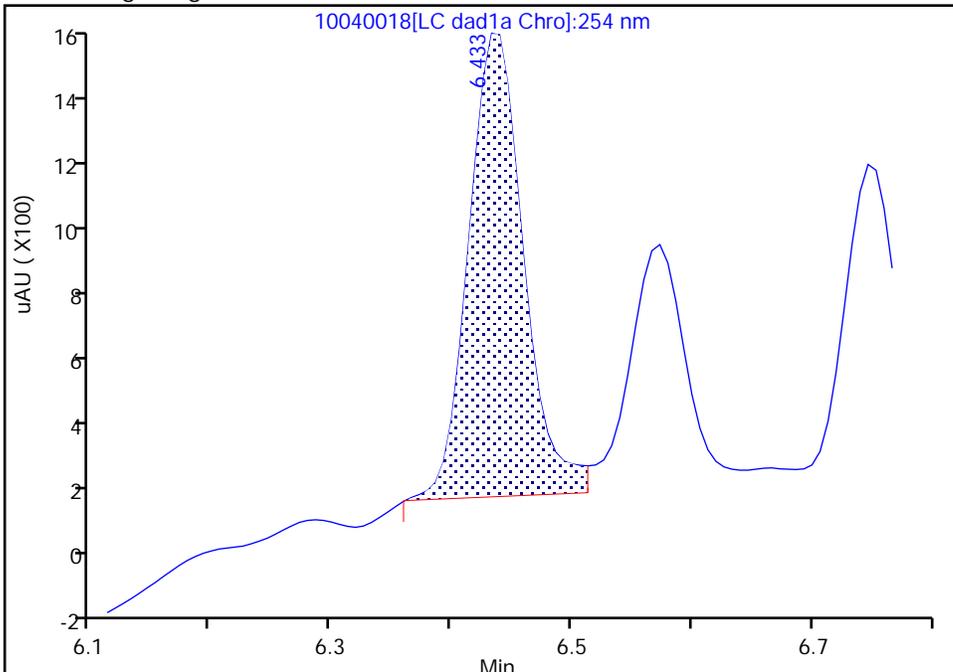
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040018.d  
Injection Date: 04-Oct-2024 19:33:04 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 2  
Client ID:  
Operator ID: JZ ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

3 TNX, CAS: 13980-04-6

Signal: 1

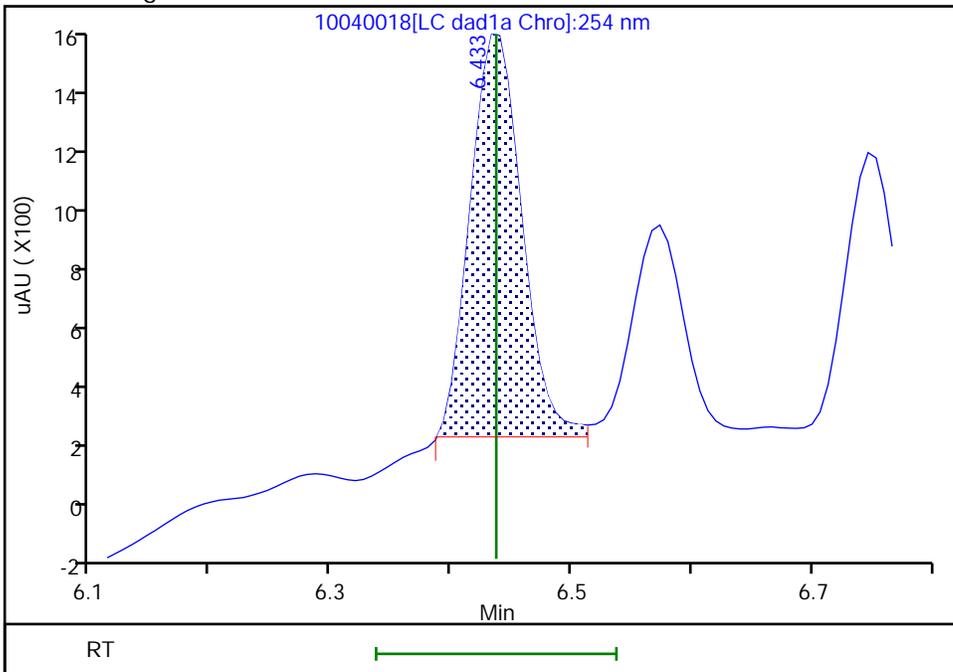
RT: 6.43  
Area: 4490  
Amount: 0.021421  
Amount Units: ug/mL

Processing Integration Results



RT: 6.43  
Area: 4020  
Amount: 0.019795  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:05:26 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak

Audit Reason: Baseline

Eurofins Denver

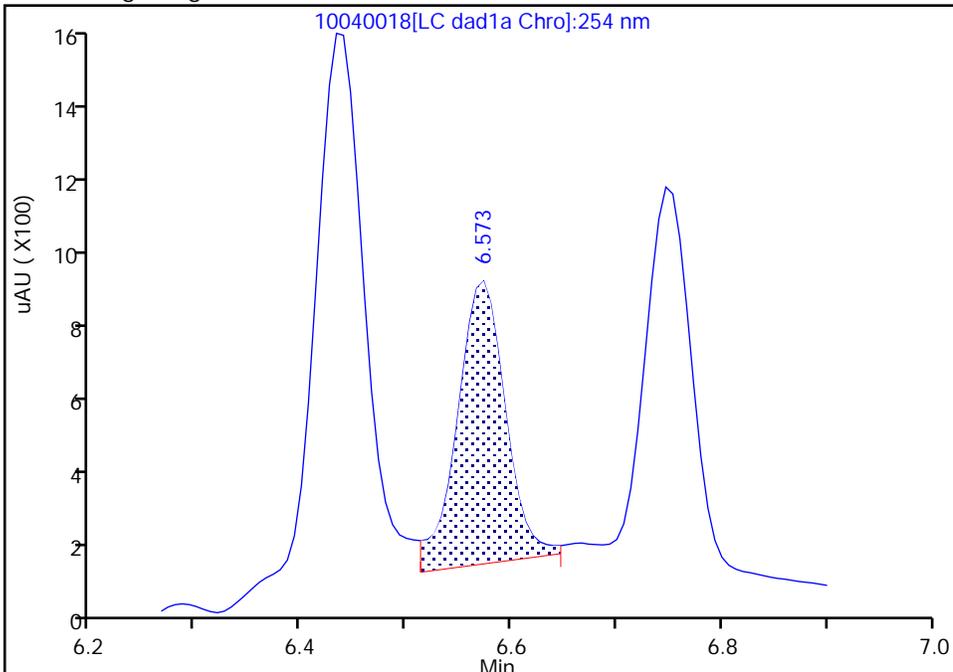
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040018.d  
Injection Date: 04-Oct-2024 19:33:04 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 2  
Client ID:  
Operator ID: JZ ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

4 HMX, CAS: 2691-41-0

Signal: 1

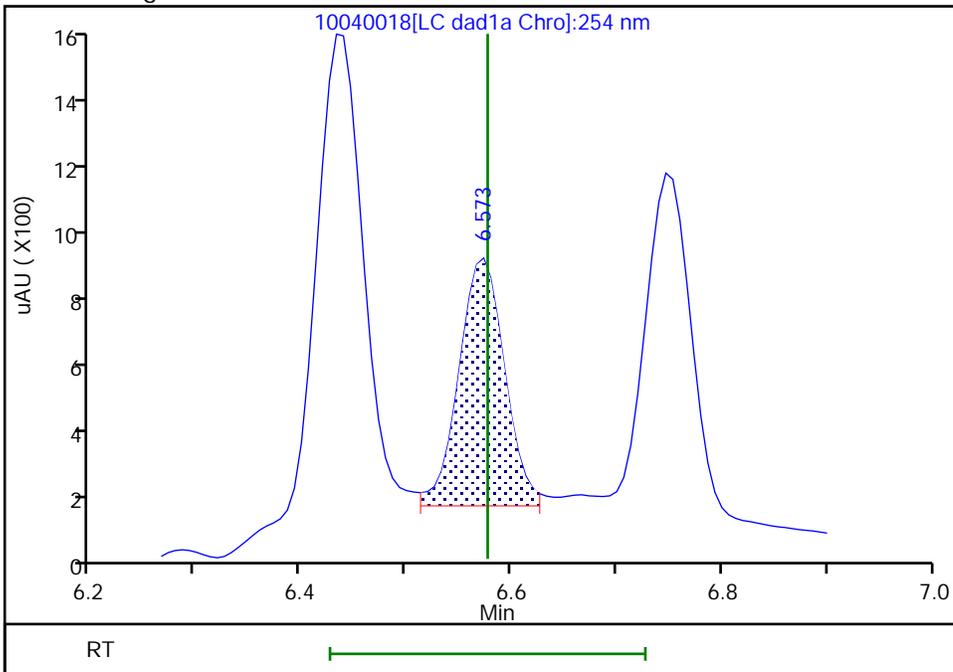
RT: 6.57  
Area: 2344  
Amount: 0.018346  
Amount Units: ug/mL

Processing Integration Results



RT: 6.57  
Area: 2125  
Amount: 0.021986  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:05:28 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak

Audit Reason: Baseline

Eurofins Denver

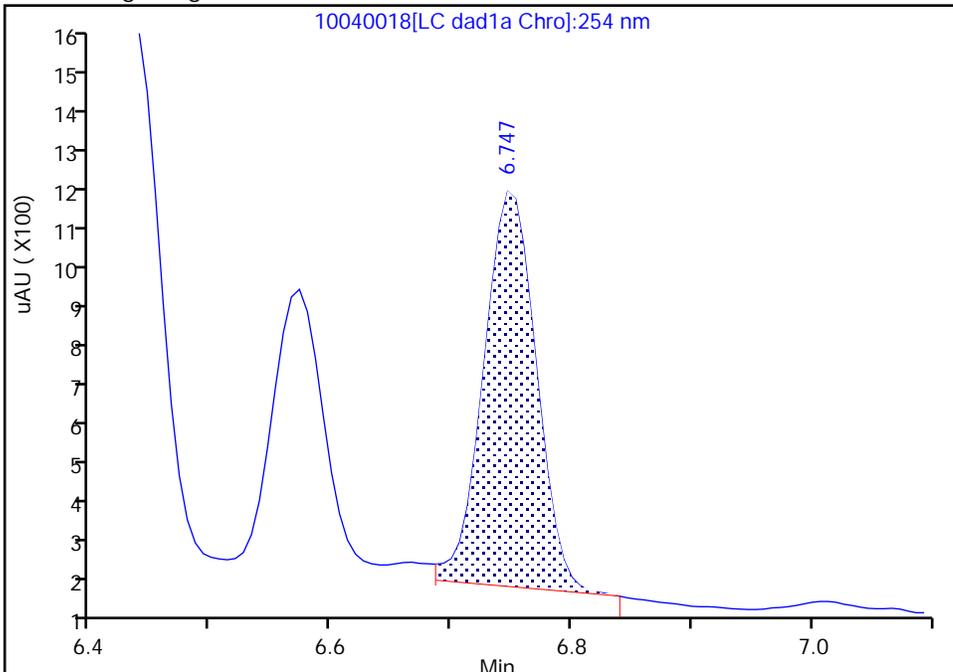
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040018.d  
Injection Date: 04-Oct-2024 19:33:04 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 2  
Client ID:  
Operator ID: JZ ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

6 DNX, CAS: 80251-29-2

Signal: 1

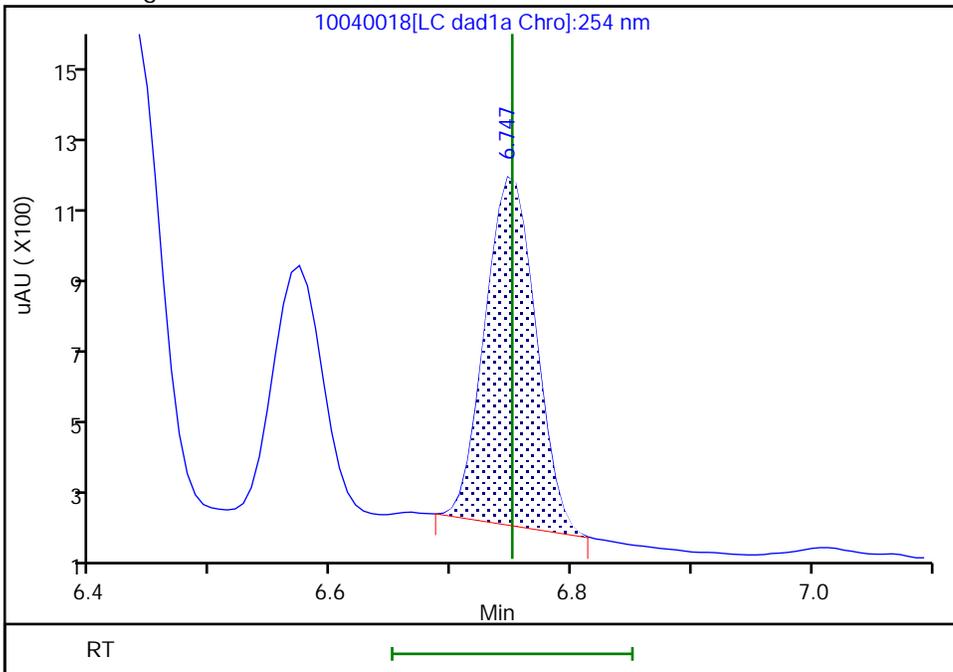
RT: 6.75  
Area: 3002  
Amount: 0.019805  
Amount Units: ug/mL

Processing Integration Results



RT: 6.75  
Area: 2804  
Amount: 0.019200  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:05:36 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins Denver

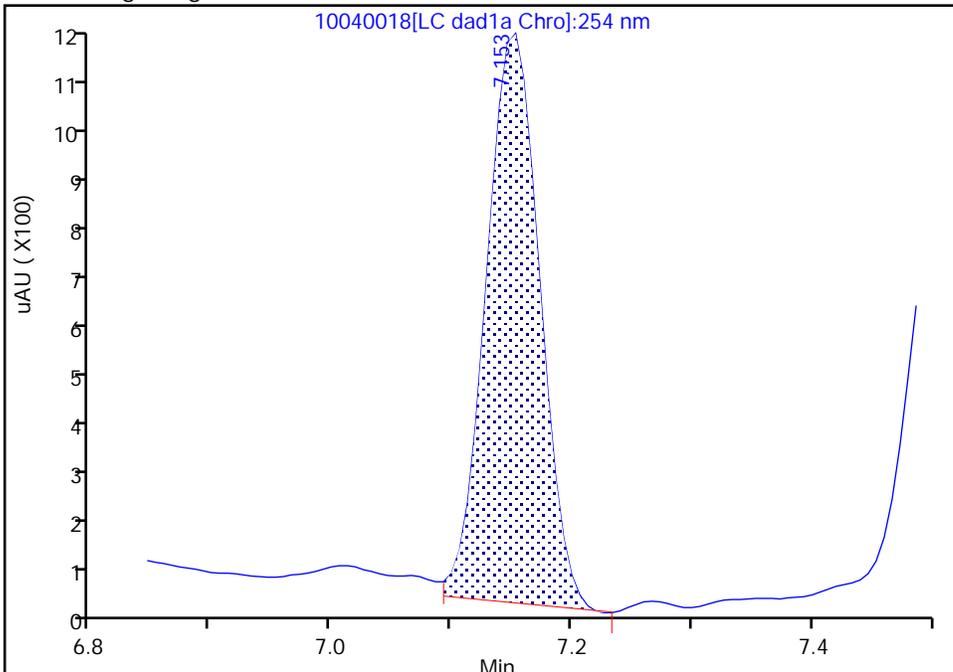
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040018.d  
Injection Date: 04-Oct-2024 19:33:04 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 2  
Client ID:  
Operator ID: JZ ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

7 MNX, CAS: 5755-27-1

Signal: 1

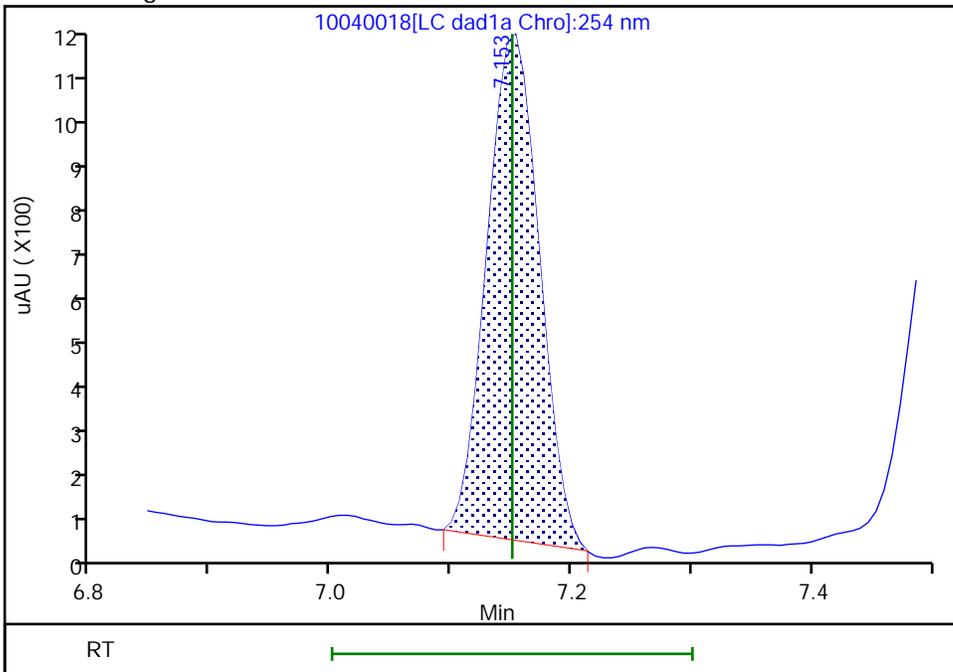
RT: 7.15  
Area: 3091  
Amount: 0.023142  
Amount Units: ug/mL

Processing Integration Results



RT: 7.15  
Area: 2958  
Amount: 0.022252  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:05:43 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins Denver

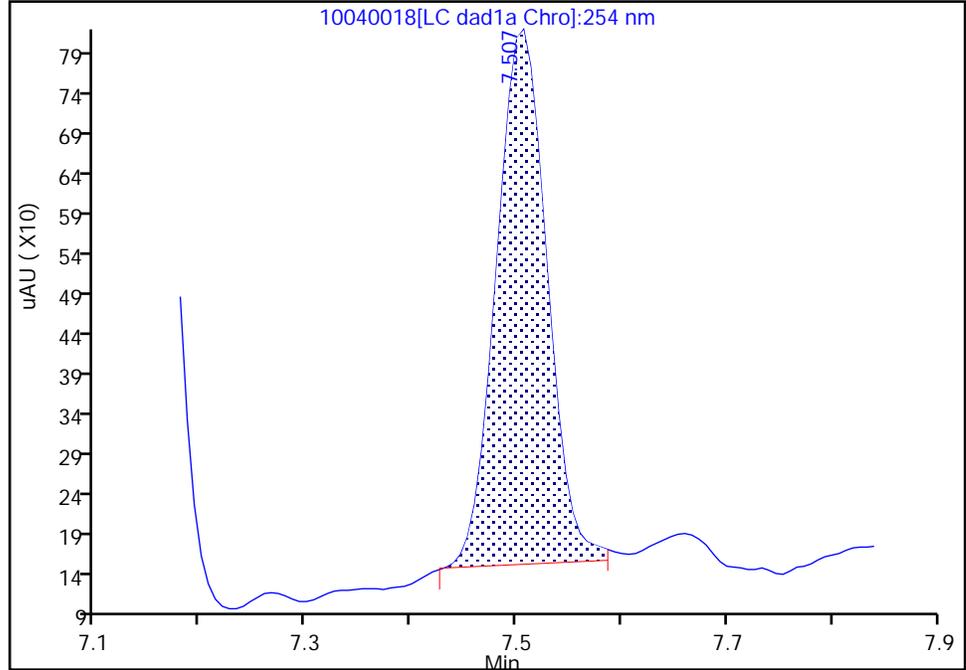
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040018.d  
Injection Date: 04-Oct-2024 19:33:04 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 2  
Client ID:  
Operator ID: JZ ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

8 RDX, CAS: 121-82-4

Signal: 1

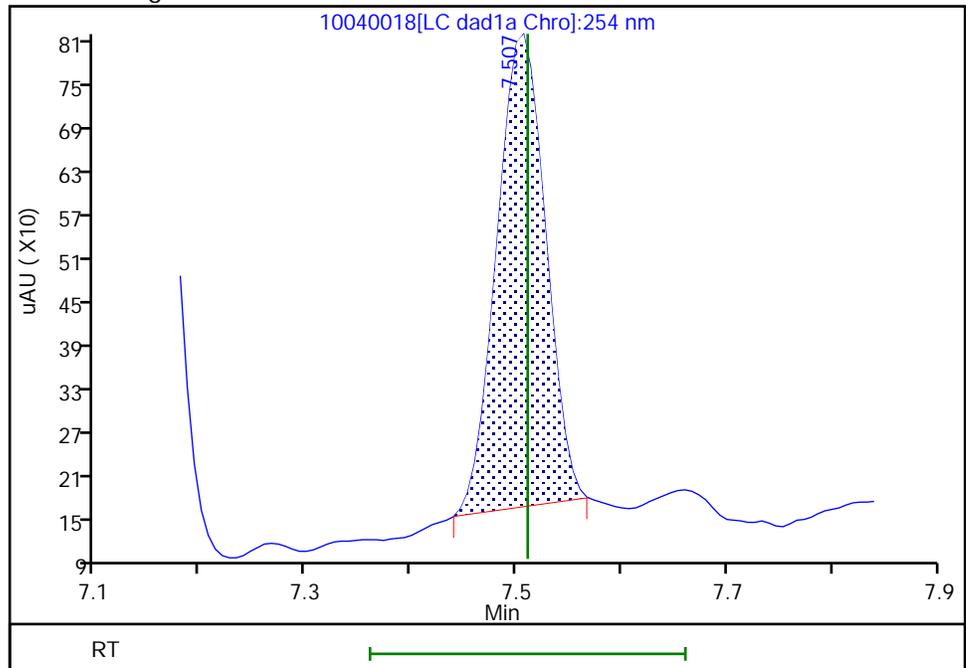
RT: 7.51  
Area: 2243  
Amount: 0.020524  
Amount Units: ug/mL

Processing Integration Results



RT: 7.51  
Area: 2098  
Amount: 0.018358  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:05:48 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins Denver

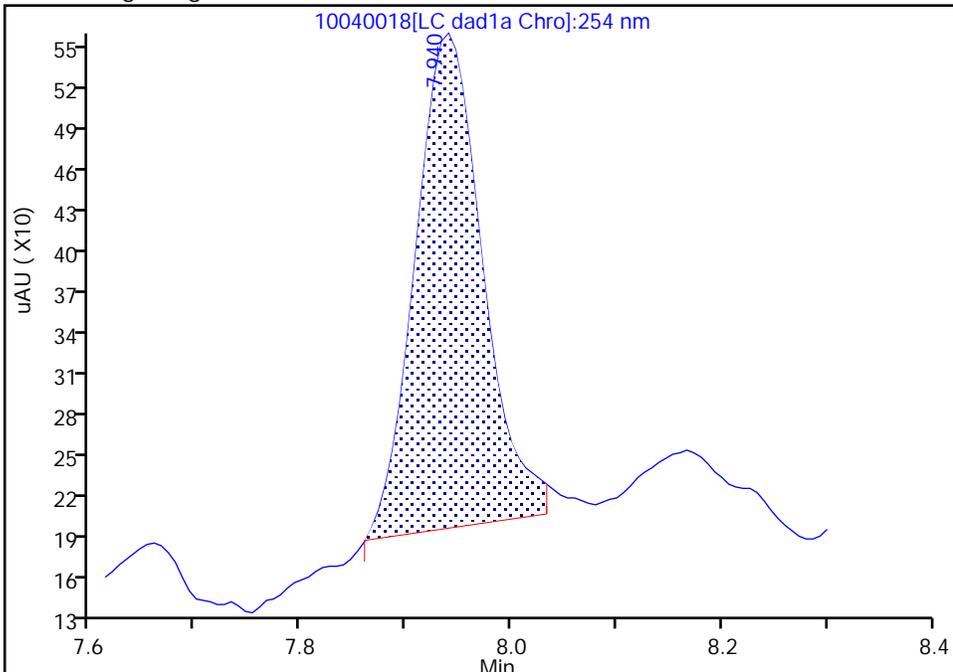
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040018.d  
Injection Date: 04-Oct-2024 19:33:04 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 2  
Client ID:  
Operator ID: JZ ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector LC DAD1B, 254 nm

9 2,4,6-Trinitrophenol, CAS: 88-89-1

Signal: 1

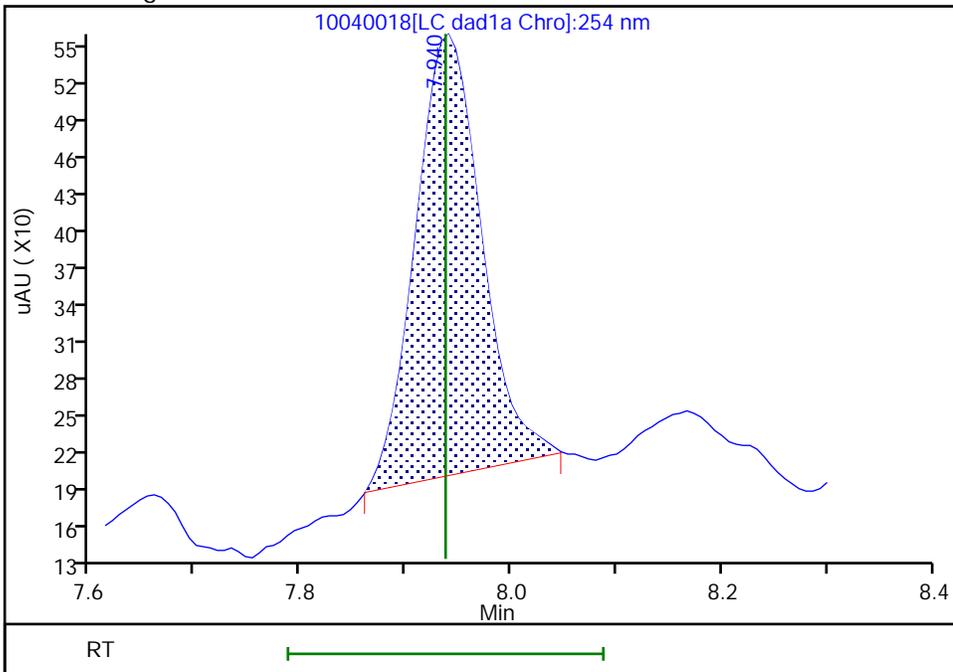
RT: 7.94  
Area: 1610  
Amount: 0.020704  
Amount Units: ug/mL

Processing Integration Results



RT: 7.94  
Area: 1559  
Amount: 0.020669  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:05:52 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins Denver

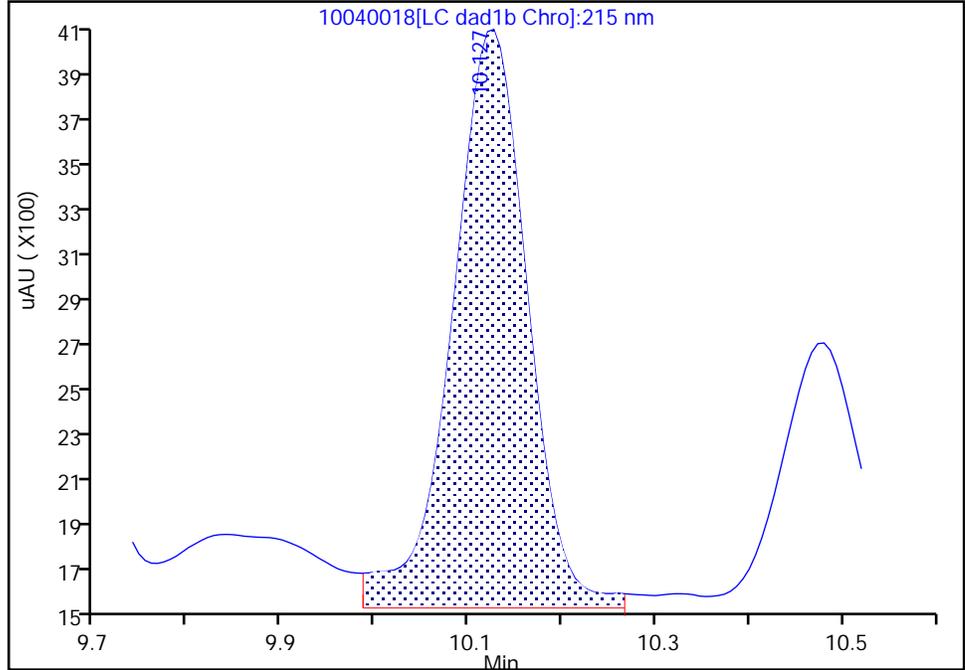
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040018.d  
Injection Date: 04-Oct-2024 19:33:04 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 2  
Client ID:  
Operator ID: JZ ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1C, 215 nm

16 Nitroglycerin, CAS: 55-63-0

Signal: 1

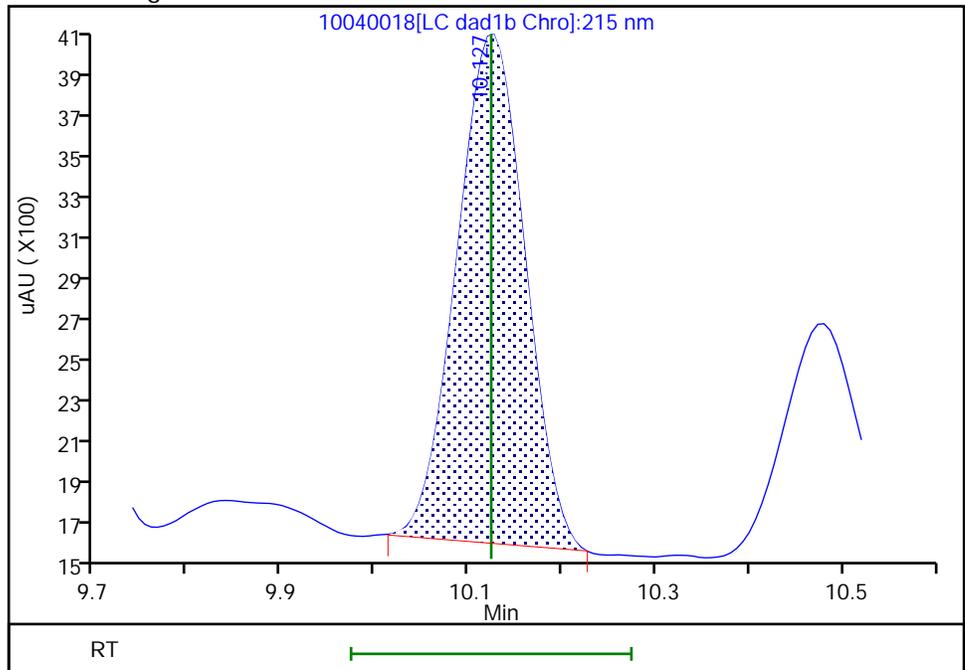
RT: 10.13  
Area: 14150  
Amount: 0.206998  
Amount Units: ug/mL

Processing Integration Results



RT: 10.13  
Area: 12143  
Amount: 0.194648  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:09:41 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins Denver

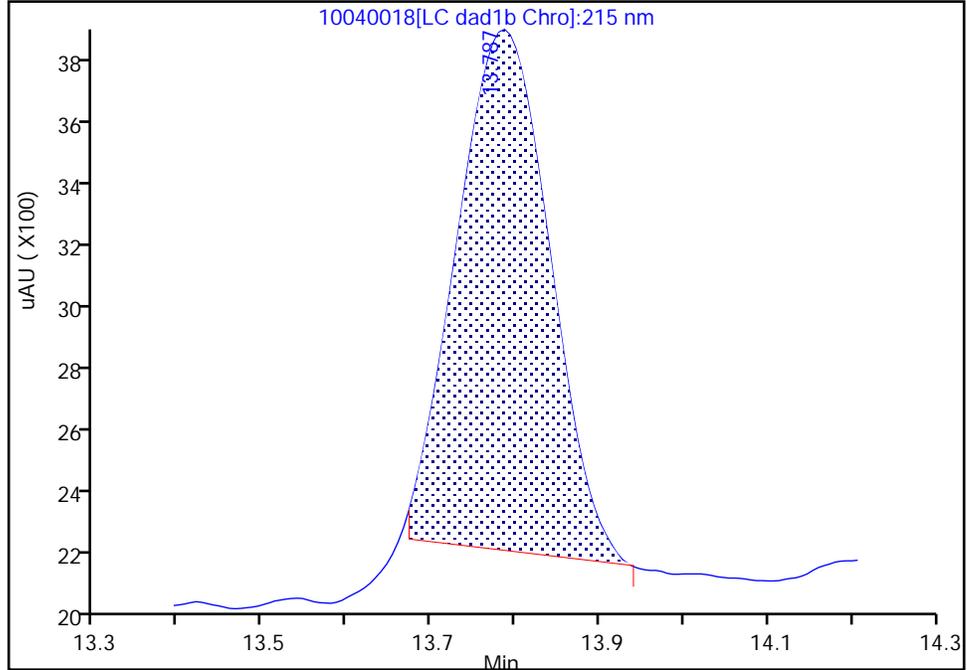
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040018.d  
Injection Date: 04-Oct-2024 19:33:04 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 2  
Client ID:  
Operator ID: JZ ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1C, 215 nm

25 PETN, CAS: 78-11-5

Signal: 1

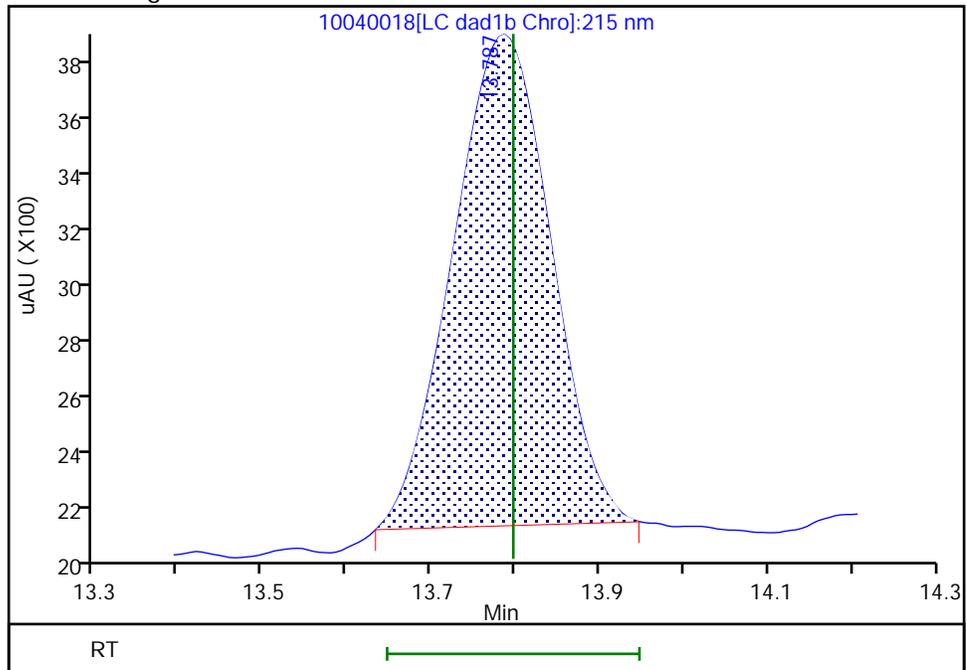
RT: 13.79  
Area: 12556  
Amount: 0.175210  
Amount Units: ug/mL

Processing Integration Results



RT: 13.79  
Area: 13772  
Amount: 0.190715  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:06:07 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins Denver  
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\10040019.D  
 Lims ID: IC INT/DMT 1  
 Client ID:  
 Sample Type: IC Calib Level: 1  
 Inject. Date: 04-Oct-2024 19:55:02 ALS Bottle#: 19 Worklist Smp#: 19  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: IC INT/DMT 1  
 Operator ID: JZ Instrument ID: CHHPLC\_X3  
 Sublist: chrom-8330\_X3\*sub27  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\8330\_X3.m  
 Limit Group: GCSV - 8330  
 Last Update: 08-Oct-2024 13:19:25 Calib Date: 04-Oct-2024 19:55:02  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\10040019.D  
 Column 1 : UltraCarb5uODS (20) ( 4.60 mm) Det: LC DAD1B, 254 nm  
 Process Host: CTX1654

First Level Reviewer: LV5D Date: 08-Oct-2024 13:08:37

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
3 TNX	1	6.438	6.437	0.001	1951	0.0100	0.009607	M
4 HMX	1	6.571	6.577	-0.006	930	0.0100	0.009622	M
6 DNX	1	6.751	6.751	0.000	1406	0.0100	0.009627	M
7 MNX	1	7.151	7.151	0.000	1624	0.0117	0.0122	
8 RDX	1	7.505	7.511	-0.006	1264	0.0100	0.0104	
9 2,4,6-Trinitrophenol	1	7.938	7.937	0.001	939	0.0100	0.0124	
\$ 10 1,2-Dinitrobenzene	1	8.371	8.377	-0.006	1315	0.0100	0.0101	
11 1,3,5-Trinitrobenzene	1	8.471	8.477	-0.006	2203	0.0100	0.0101	
12 1,3-Dinitrobenzene	1	9.031	9.037	-0.006	3012	0.0100	0.0101	
13 Nitrobenzene	1	9.351	9.357	-0.006	2038	0.0100	0.0104	
14 3,5-Dinitroaniline	1	9.558	9.564	-0.006	2237	0.0100	0.0099	
15 Tetryl	1	9.678	9.684	-0.006	1642	0.0100	0.0103	
16 Nitroglycerin	2	10.124	10.124	0.000	6121	0.1000	0.1012	M
17 2,4,6-Trinitrotoluene	1	10.478	10.477	0.001	2257	0.0100	0.0104	
18 4-Amino-2,6-dinitrotoluene	1	10.638	10.637	0.001	2099	0.0100	0.0103	
19 2-Amino-4,6-dinitrotoluene	1	10.864	10.864	0.000	2029	0.0100	0.0099	
20 2,6-Dinitrotoluene	1	11.004	11.004	0.000	1600	0.0100	0.0101	
21 2,4-Dinitrotoluene	1	11.151	11.150	0.001	2968	0.0100	0.0102	
22 o-Nitrotoluene	1	11.844	11.850	-0.006	1273	0.0100	0.0101	M
23 p-Nitrotoluene	1	12.218	12.217	0.001	1229	0.0100	0.0099	
24 m-Nitrotoluene	1	12.718	12.724	-0.006	1598	0.0100	0.0100	M
25 PETN	2	13.784	13.797	-0.013	7053	0.1000	0.0977	Ma

QC Flag Legend  
Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

8330IntermStk\_00083

Amount Added: 1.00

Units: uL

8330 DMT\_00018

Amount Added: 0.50

Units: uL

Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040019.d

Injection Date: 04-Oct-2024 19:55:02 Instrument ID: CHHPLC\_X3

Operator ID: JZ

Lims ID: IC INT/DMT 1

Worklist Smp#: 19

Client ID:

Injection Vol: 100.0 ul

Dil. Factor: 1.0000

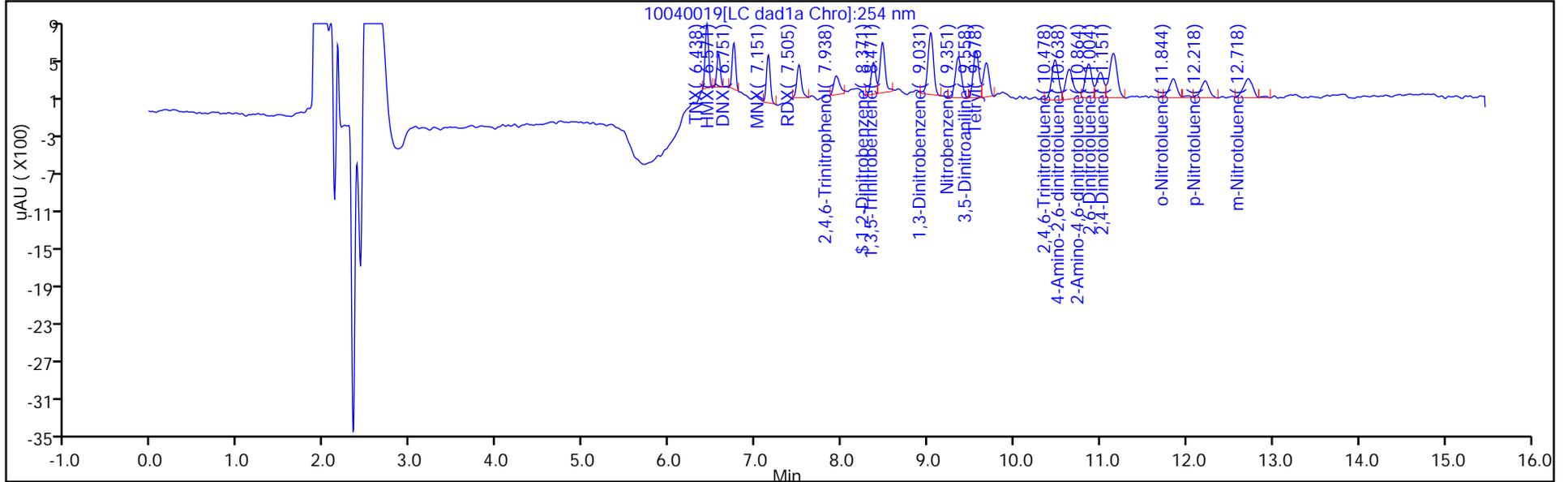
ALS Bottle#: 19

Method: 8330\_X3

Limit Group: GCSV - 8330

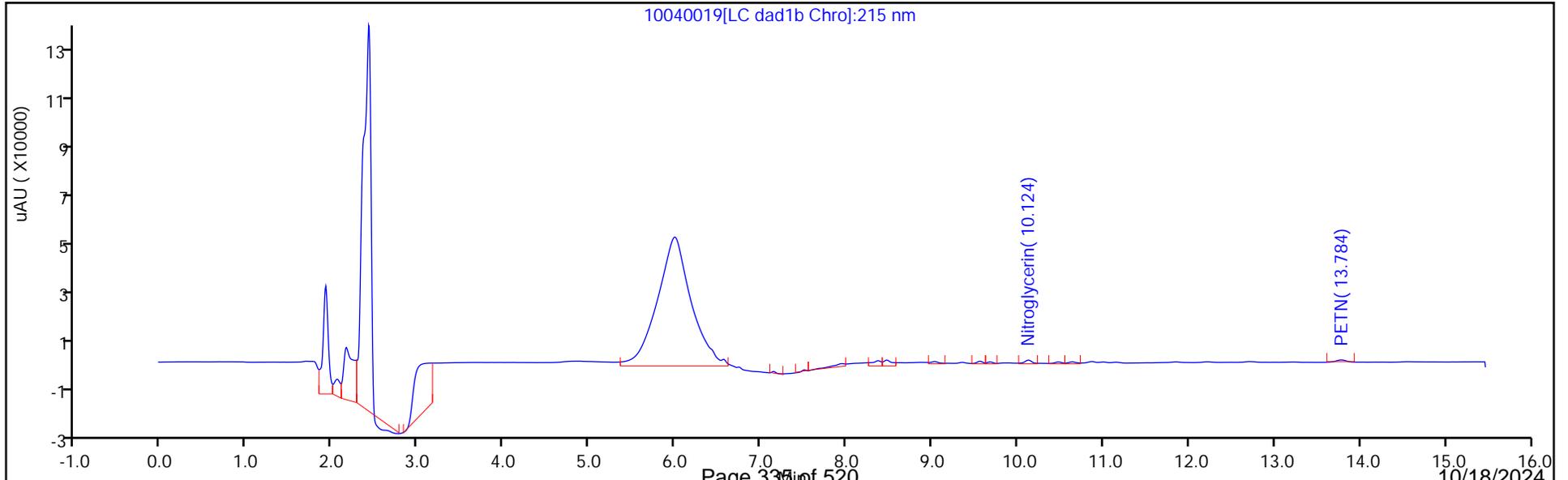
Column: UltraCarb5uODS (20) ( 4.60 mm)

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



Eurofins Denver

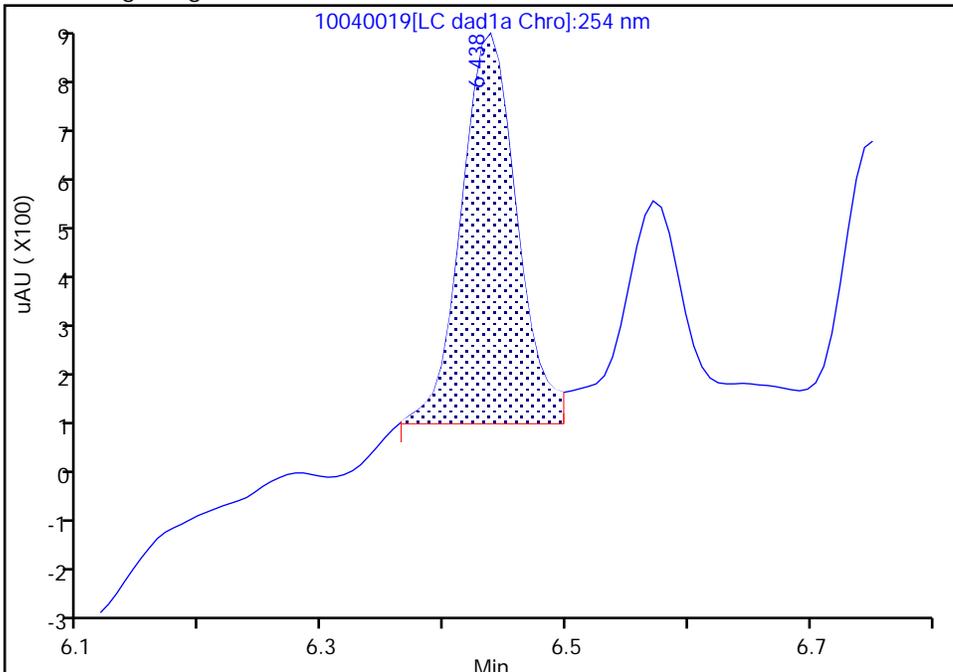
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040019.d  
Injection Date: 04-Oct-2024 19:55:02 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 1  
Client ID:  
Operator ID: JZ ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

3 TNX, CAS: 13980-04-6

Signal: 1

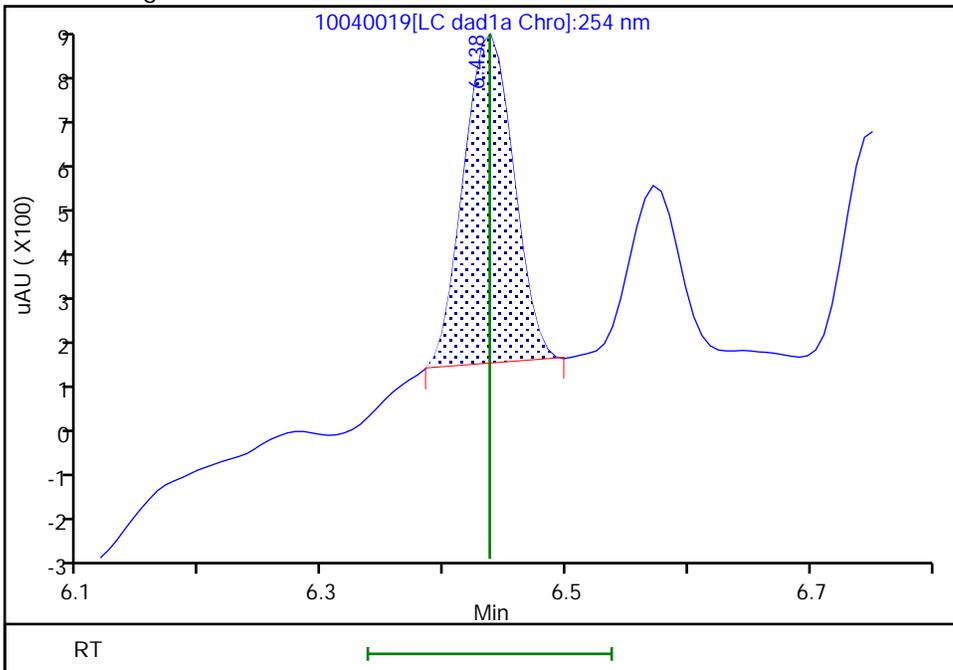
RT: 6.44  
Area: 2305  
Amount: 0.011135  
Amount Units: ug/mL

Processing Integration Results



RT: 6.44  
Area: 1951  
Amount: 0.009607  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:07:17 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins Denver

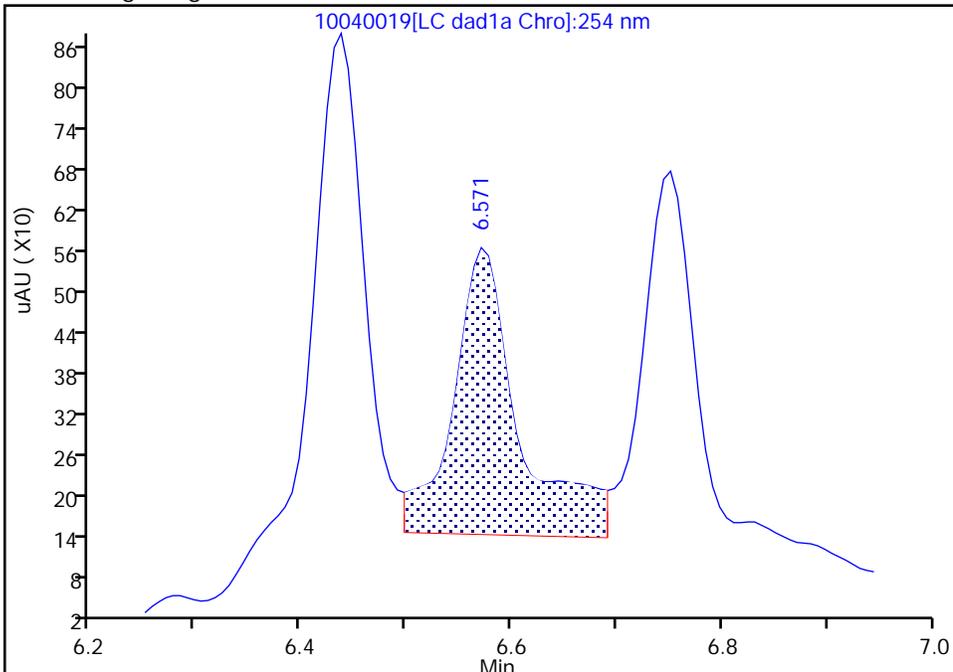
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040019.d  
Injection Date: 04-Oct-2024 19:55:02 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 1  
Client ID:  
Operator ID: JZ ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

4 HMX, CAS: 2691-41-0

Signal: 1

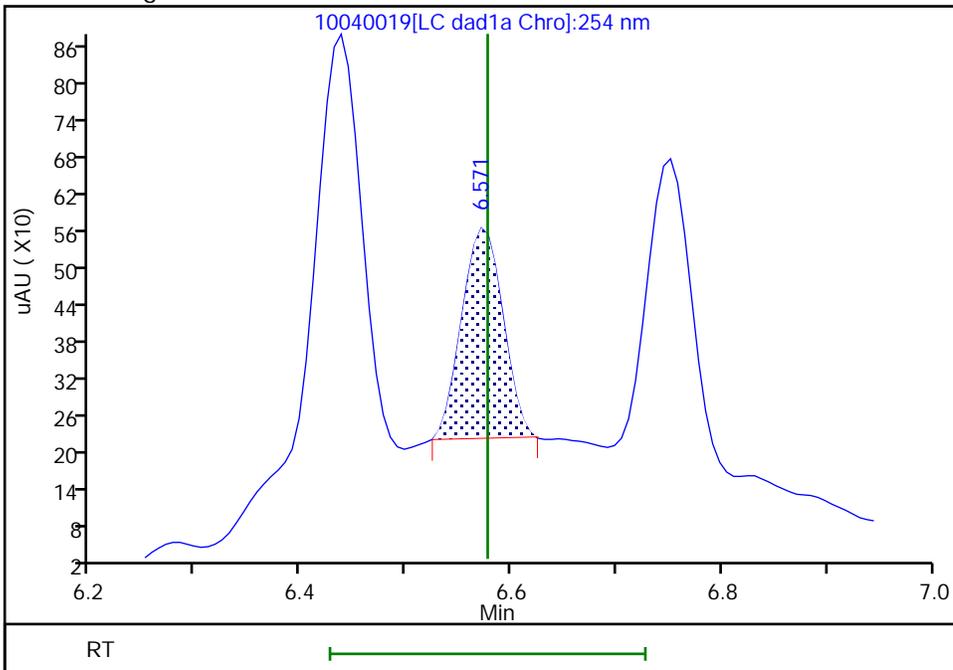
RT: 6.57  
Area: 1819  
Amount: 0.013460  
Amount Units: ug/mL

Processing Integration Results



RT: 6.57  
Area: 930  
Amount: 0.009622  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:07:10 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins Denver

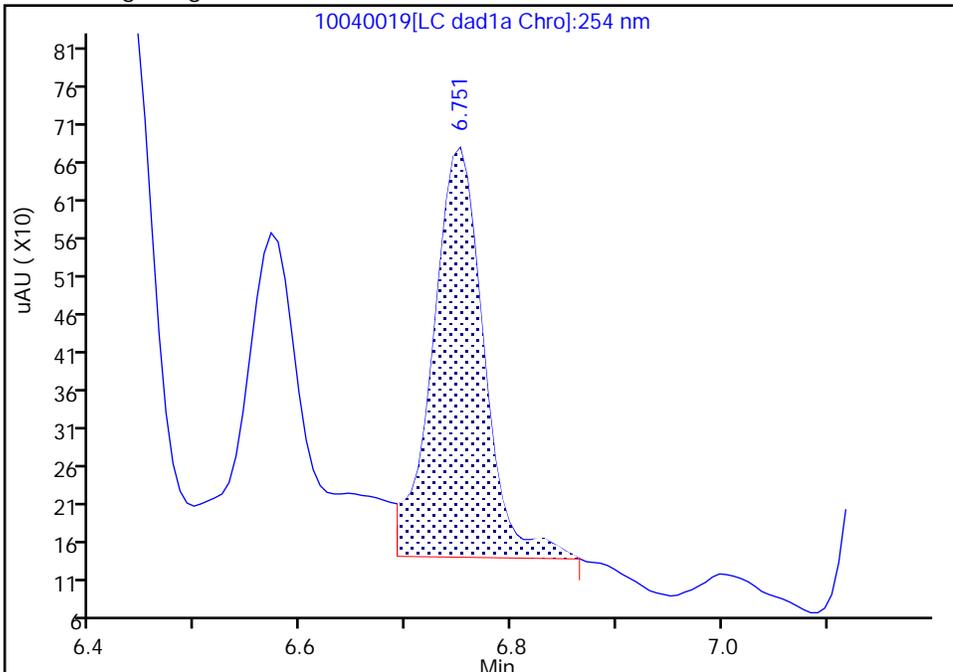
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040019.d  
Injection Date: 04-Oct-2024 19:55:02 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 1  
Client ID:  
Operator ID: JZ ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

6 DNX, CAS: 80251-29-2

Signal: 1

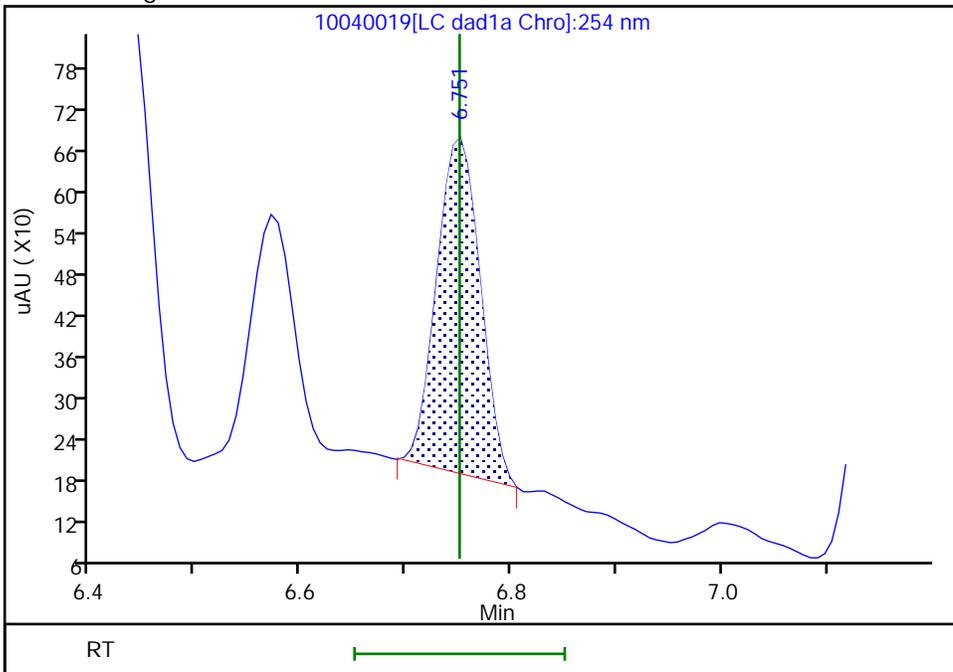
RT: 6.75  
Area: 1806  
Amount: 0.012001  
Amount Units: ug/mL

Processing Integration Results



RT: 6.75  
Area: 1406  
Amount: 0.009627  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:07:06 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins Denver

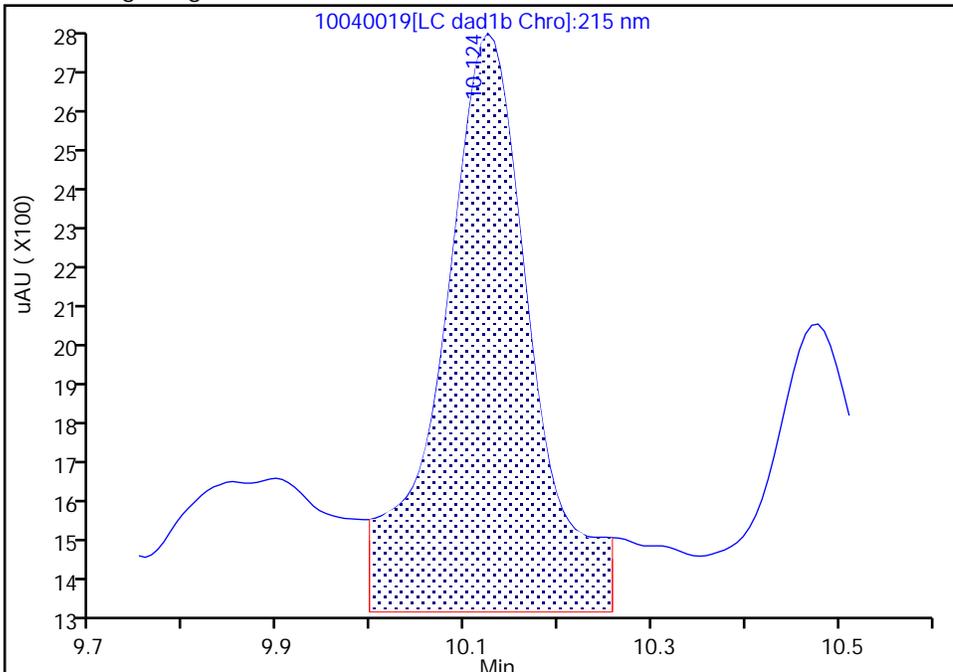
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040019.d  
Injection Date: 04-Oct-2024 19:55:02 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 1  
Client ID:  
Operator ID: JZ ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1C, 215 nm

16 Nitroglycerin, CAS: 55-63-0

Signal: 1

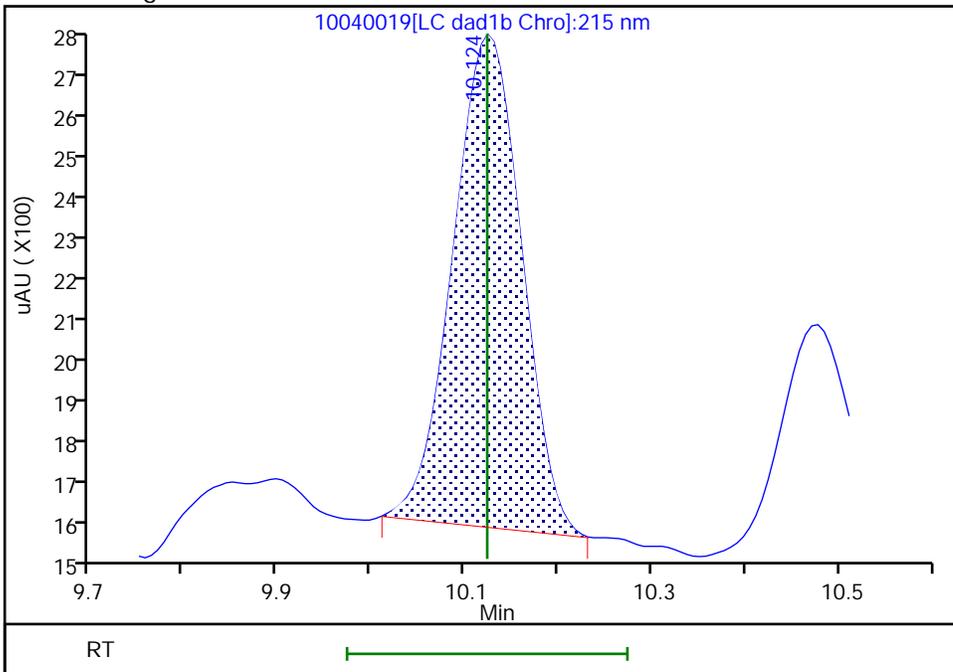
RT: 10.12  
Area: 9393  
Amount: 0.139687  
Amount Units: ug/mL

Processing Integration Results



RT: 10.12  
Area: 6121  
Amount: 0.101220  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:09:48 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins Denver

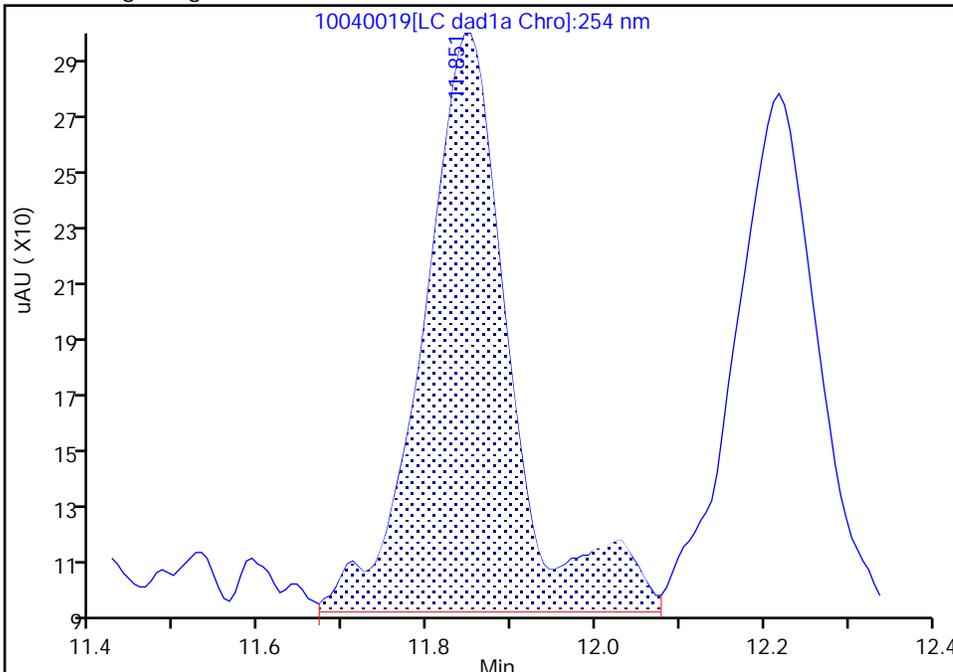
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040019.d  
Injection Date: 04-Oct-2024 19:55:02 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 1  
Client ID:  
Operator ID: JZ ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

22 o-Nitrotoluene, CAS: 88-72-2

Signal: 1

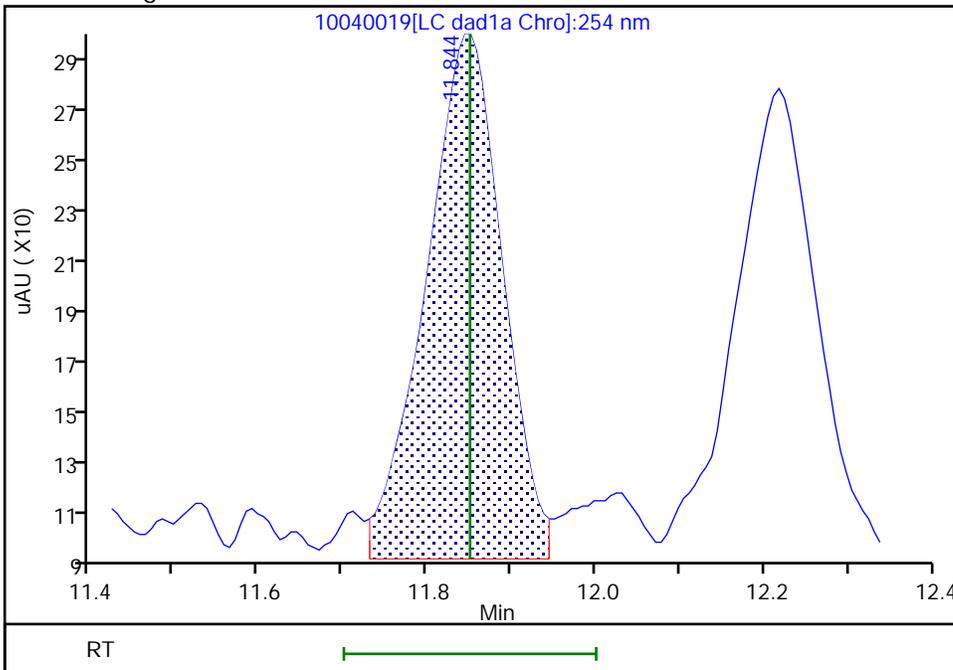
RT: 11.85  
Area: 1460  
Amount: 0.011447  
Amount Units: ug/mL

Processing Integration Results



RT: 11.84  
Area: 1273  
Amount: 0.010146  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:06:44 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak

Audit Reason: Baseline

Eurofins Denver

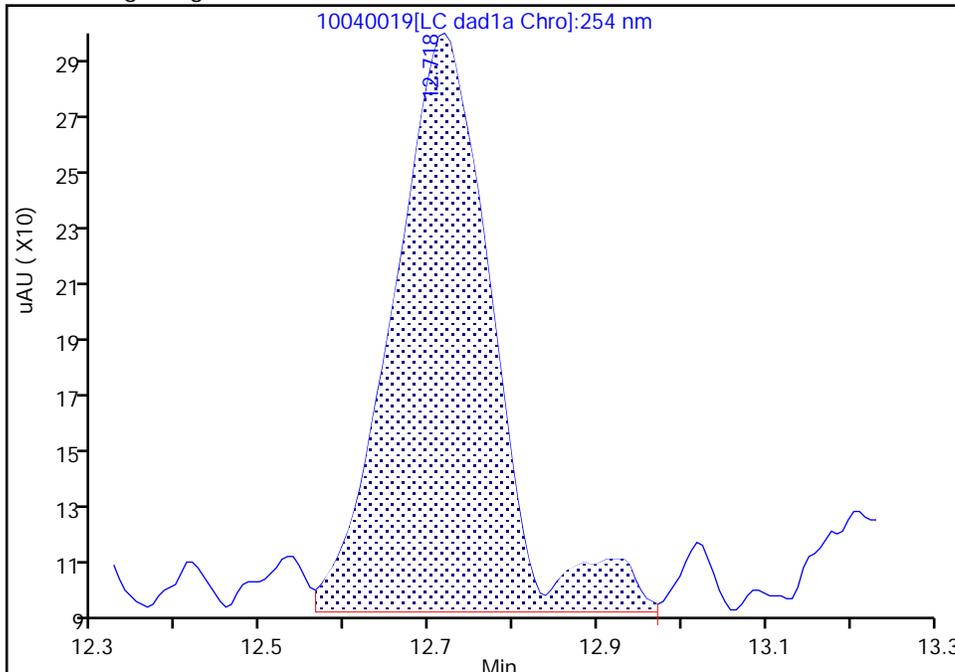
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040019.d  
Injection Date: 04-Oct-2024 19:55:02 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 1  
Client ID:  
Operator ID: JZ ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

24 m-Nitrotoluene, CAS: 99-08-1

Signal: 1

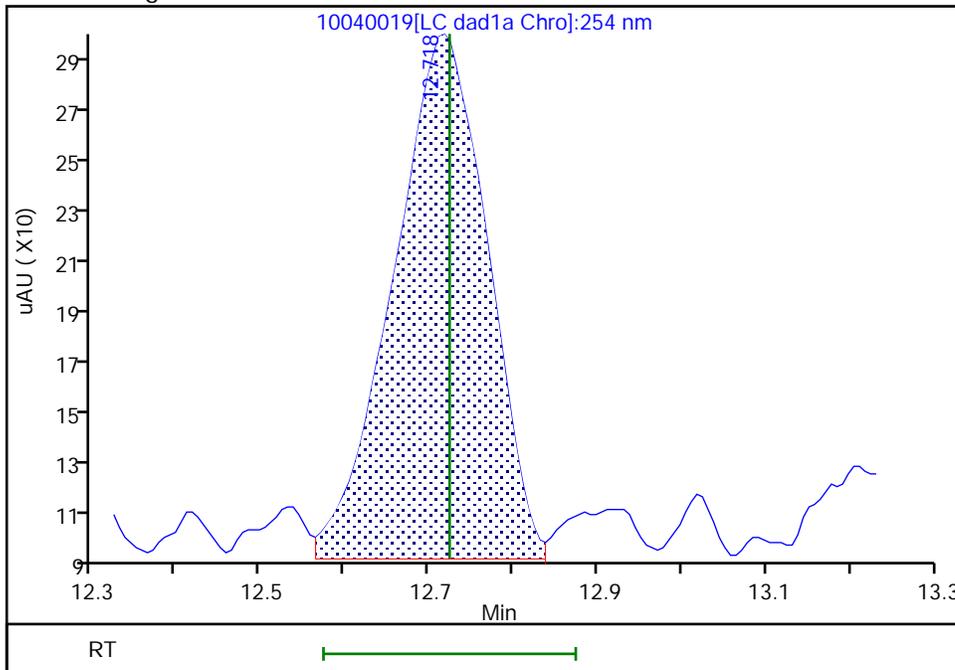
RT: 12.72  
Area: 1709  
Amount: 0.012068  
Amount Units: ug/mL

Processing Integration Results



RT: 12.72  
Area: 1598  
Amount: 0.009977  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:06:32 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak

Audit Reason: Baseline

Eurofins Denver

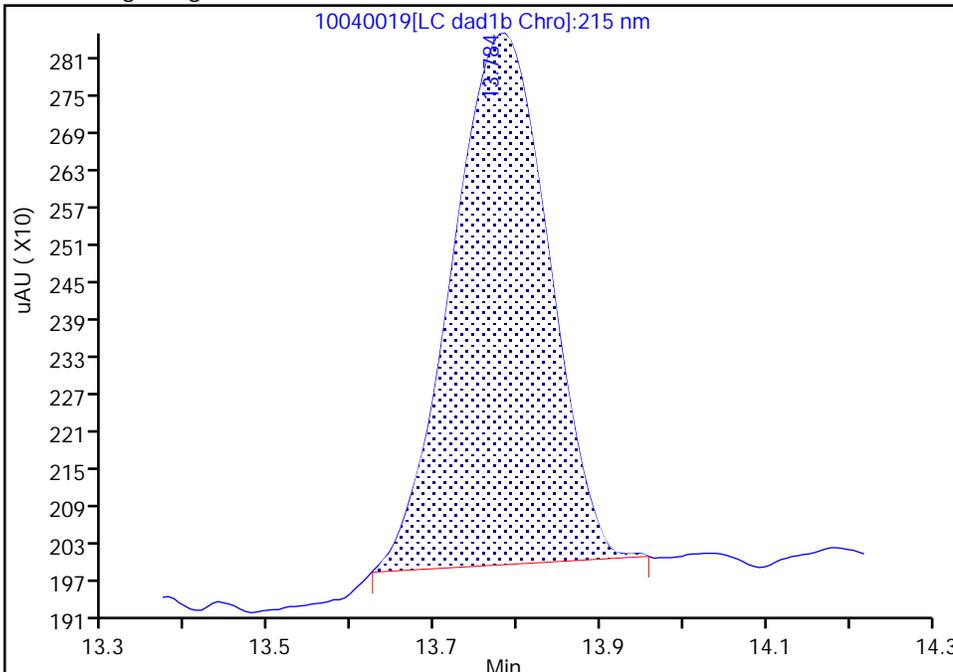
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040019.d  
Injection Date: 04-Oct-2024 19:55:02 Instrument ID: CHHPLC\_X3  
Lims ID: IC INT/DMT 1  
Client ID:  
Operator ID: JZ ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1C, 215 nm

25 PETN, CAS: 78-11-5

Signal: 1

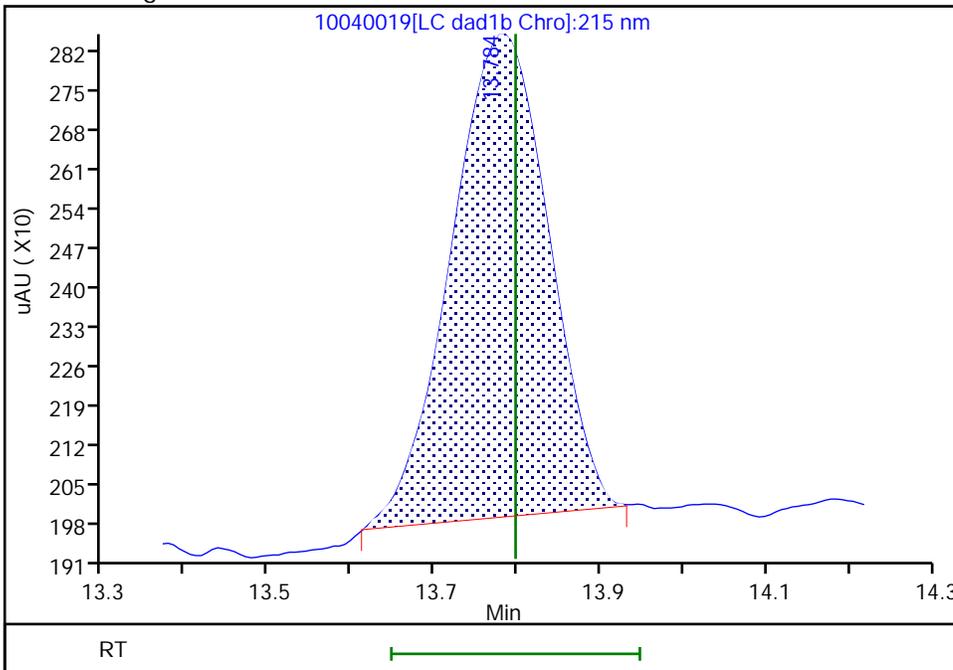
RT: 13.78  
Area: 6952  
Amount: 0.096421  
Amount Units: ug/mL

Processing Integration Results



RT: 13.78  
Area: 7053  
Amount: 0.097670  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:06:22 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline

Calibration

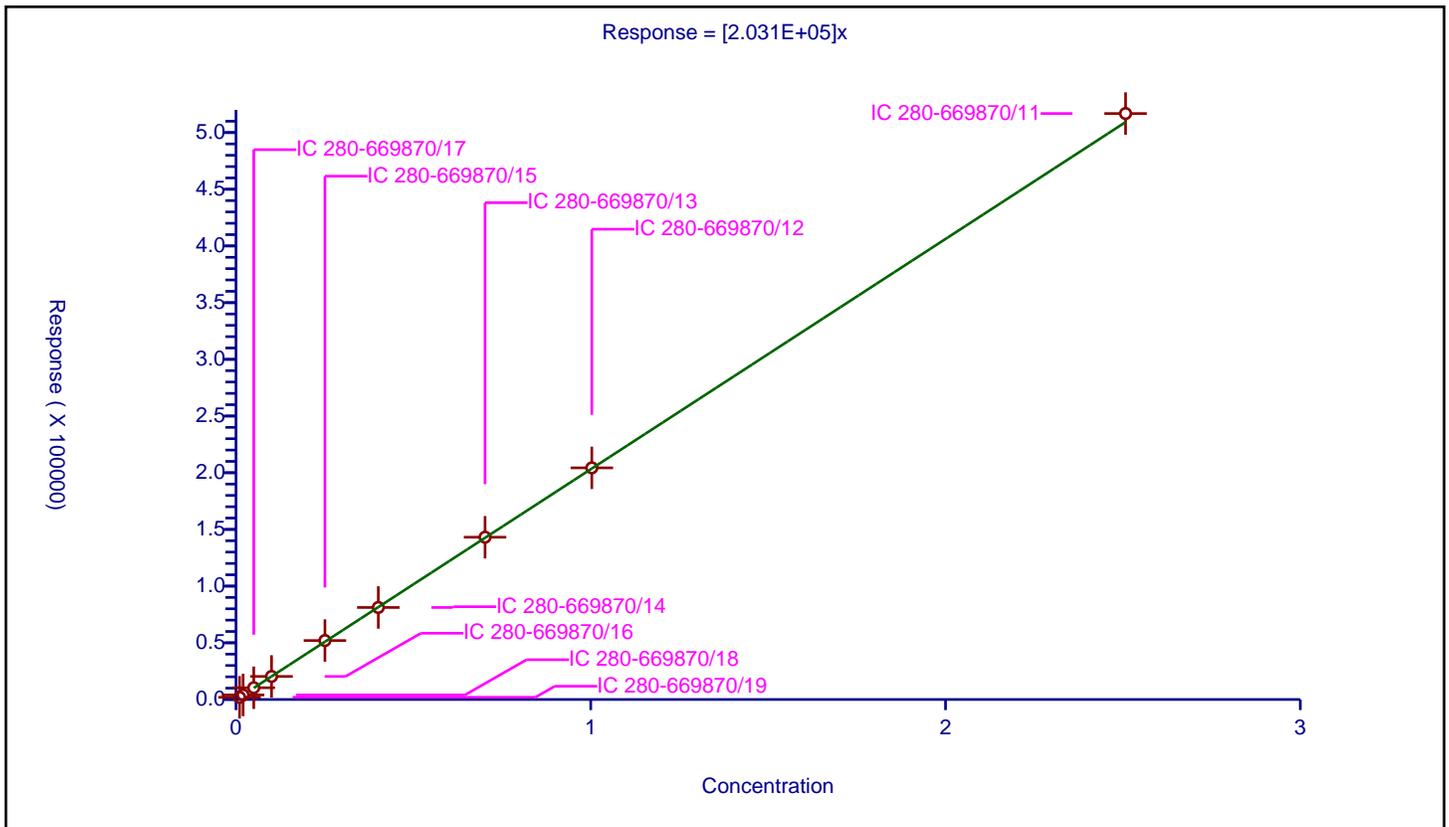
/ TNX

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	2.031E+05

Error Coefficients	
Relative Standard Deviation:	1.9

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-669870/19	0.01003	1951.0			194516.450648	Y
2	IC 280-669870/18	0.02006	4020.0			200398.803589	Y
3	IC 280-669870/17	0.05015	10367.0			206719.840479	Y
4	IC 280-669870/16	0.1003	20335.0			202741.774676	Y
5	IC 280-669870/15	0.25075	51995.0			207357.926221	Y
6	IC 280-669870/14	0.4012	81160.0			202293.120638	Y
7	IC 280-669870/13	0.7021	143139.0			203872.667711	Y
8	IC 280-669870/12	1.003	204307.0			203695.912263	Y
9	IC 280-669870/11	2.5075	516807.0			206104.48654	Y



Calibration

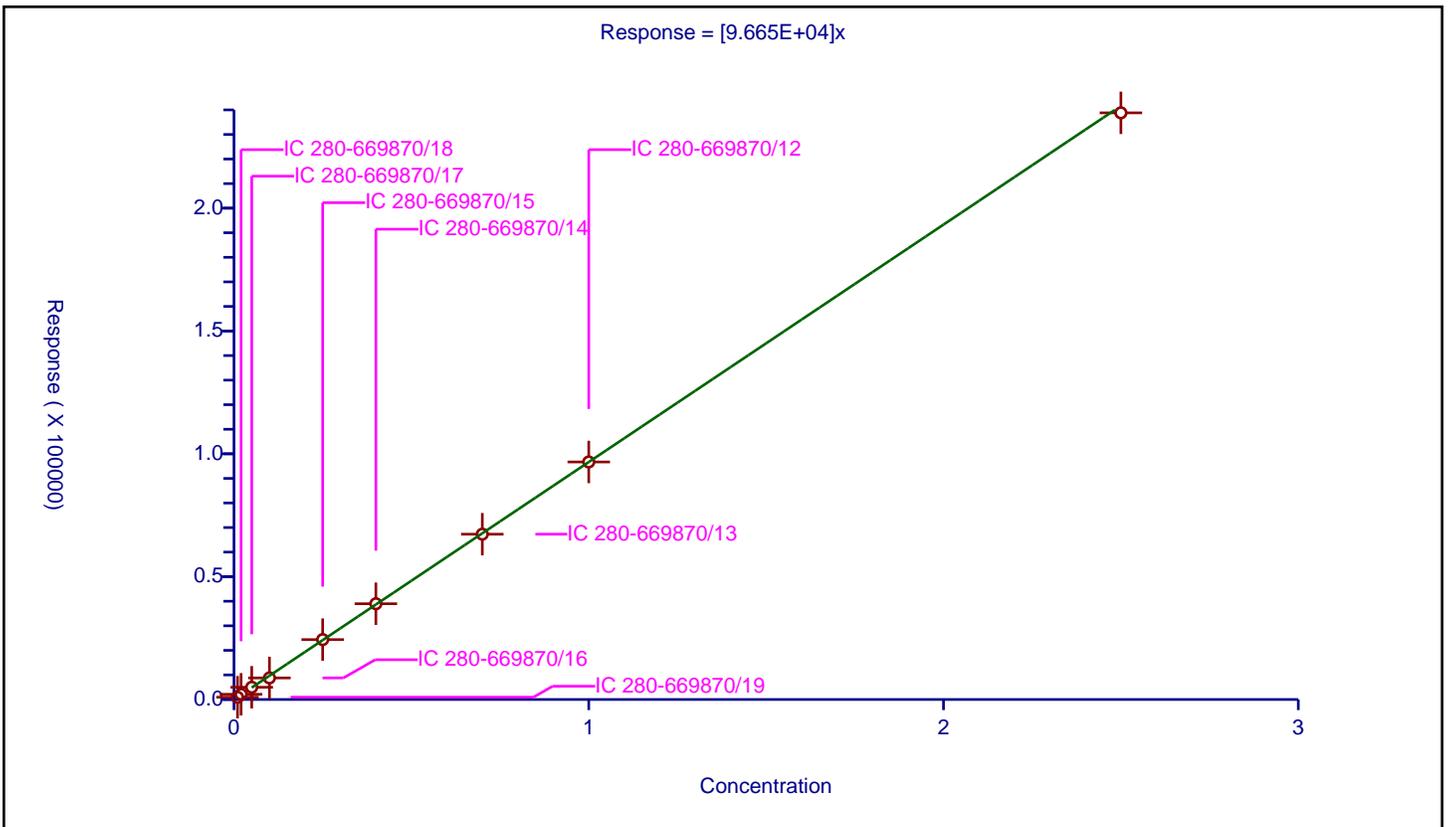
/ HMX

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	9.665E+04

Error Coefficients	
Relative Standard Deviation:	5.1

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-669870/19	0.01	930.0			93000.0	Y
2	IC 280-669870/18	0.02	2125.0			106250.0	Y
3	IC 280-669870/17	0.05	4979.0			99580.0	Y
4	IC 280-669870/16	0.1	8775.0			87750.0	Y
5	IC 280-669870/15	0.25	24377.0			97508.0	Y
6	IC 280-669870/14	0.4	38978.0			97445.0	Y
7	IC 280-669870/13	0.7	67292.0			96131.428571	Y
8	IC 280-669870/12	1.0	96690.0			96690.0	Y
9	IC 280-669870/11	2.5	238805.0			95522.0	Y



**Calibration**

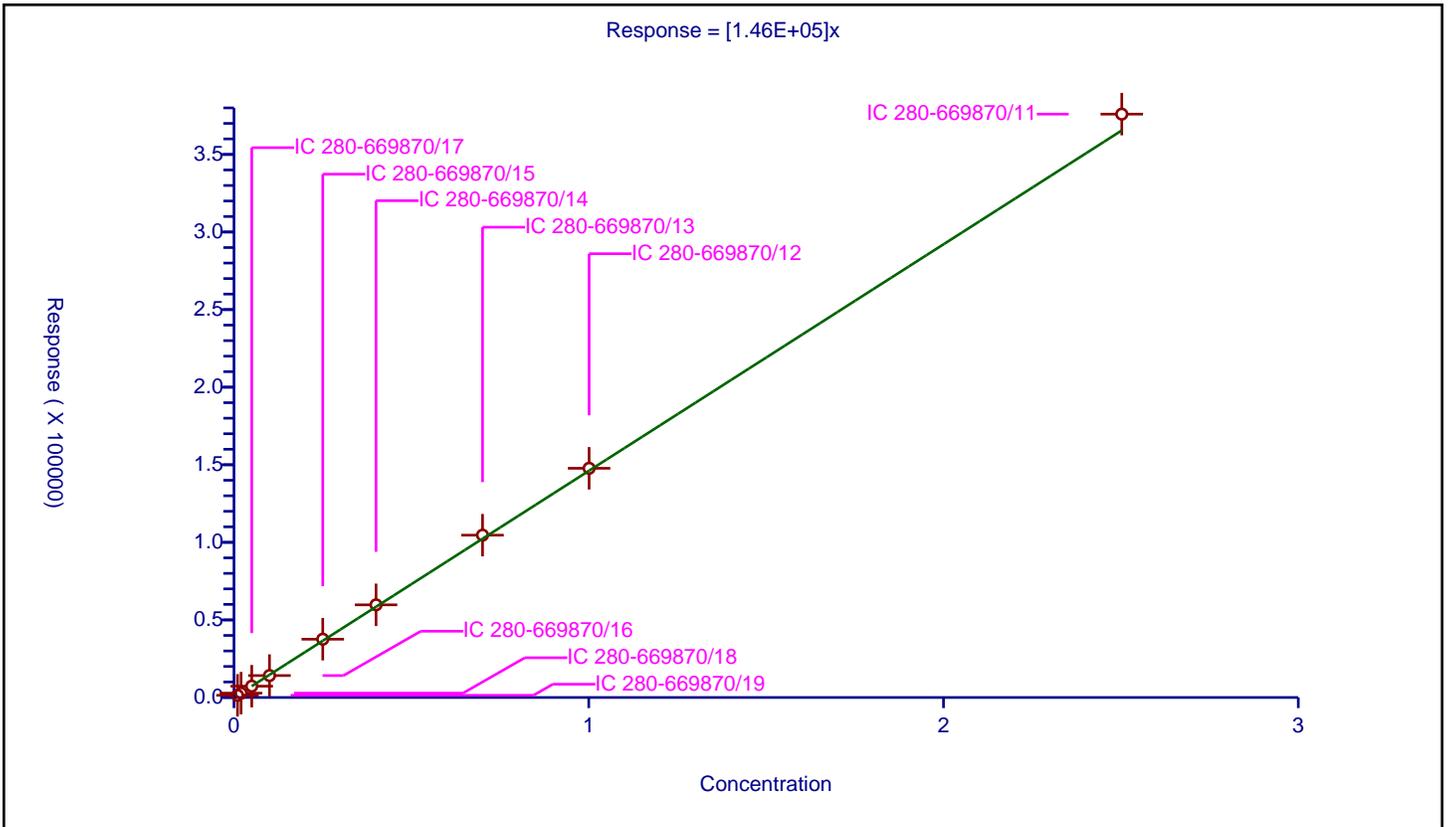
/ DNX

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	1.46E+05

Error Coefficients	
Relative Standard Deviation:	2.9

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-669870/19	0.01001	1406.0			140459.54046	Y
2	IC 280-669870/18	0.02002	2804.0			140059.94006	Y
3	IC 280-669870/17	0.05005	7313.0			146113.886114	Y
4	IC 280-669870/16	0.1001	14149.0			141348.651349	Y
5	IC 280-669870/15	0.25025	37571.0			150133.866134	Y
6	IC 280-669870/14	0.4004	59711.0			149128.371628	Y
7	IC 280-669870/13	0.7007	104619.0			149306.407878	Y
8	IC 280-669870/12	1.001	147729.0			147581.418581	Y
9	IC 280-669870/11	2.5025	375984.0			150243.356643	Y



Calibration

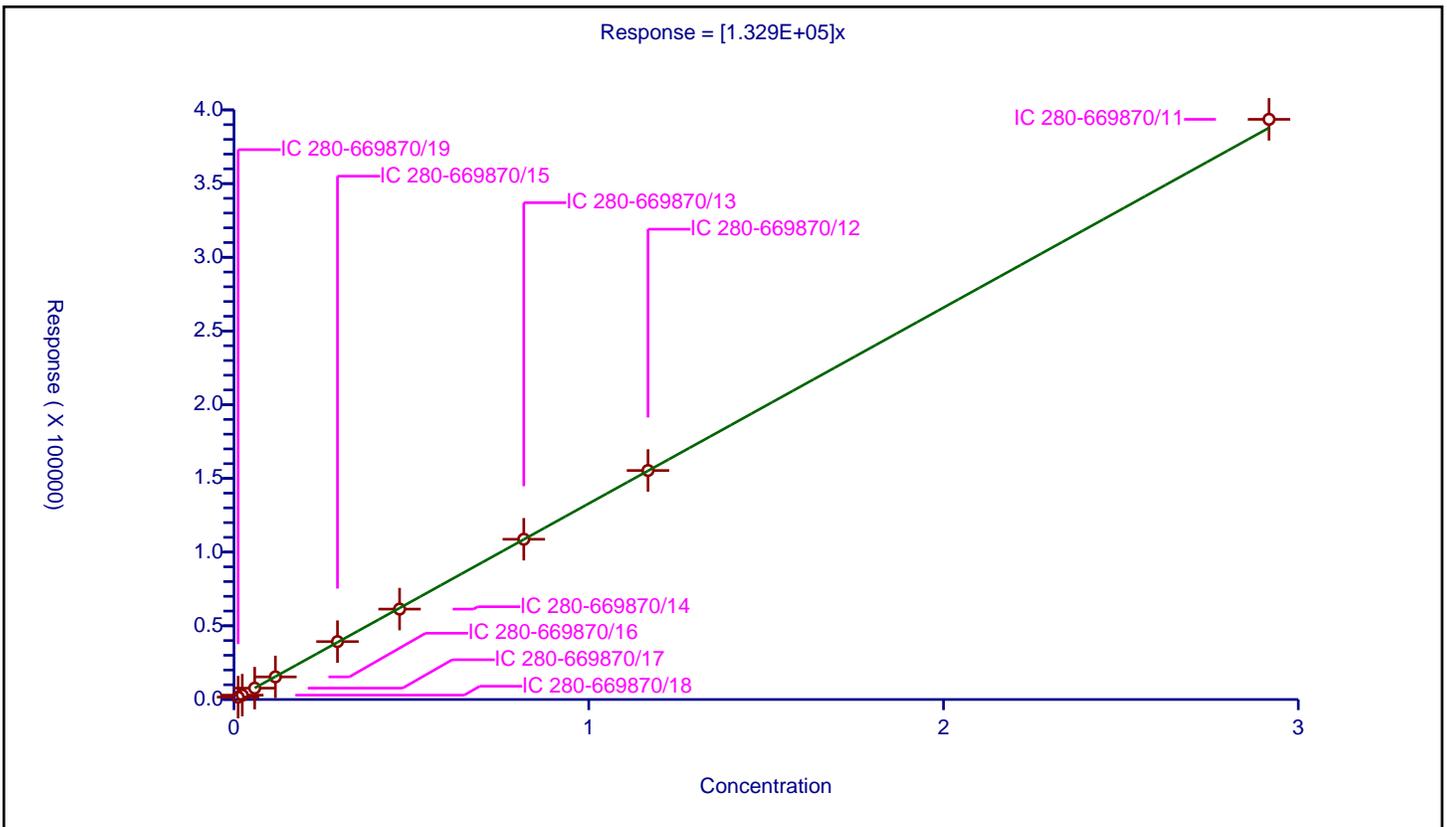
/ MNX

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	1.329E+05

Error Coefficients	
Relative Standard Deviation:	2.5

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-669870/19	0.01167	1624.0			139160.239931	Y
2	IC 280-669870/18	0.02334	2958.0			126735.218509	Y
3	IC 280-669870/17	0.05835	7700.0			131962.296487	Y
4	IC 280-669870/16	0.1167	15337.0			131422.450728	Y
5	IC 280-669870/15	0.29175	39273.0			134611.825193	Y
6	IC 280-669870/14	0.4668	61334.0			131392.459297	Y
7	IC 280-669870/13	0.8169	108719.0			133087.281185	Y
8	IC 280-669870/12	1.167	155360.0			133127.677806	Y
9	IC 280-669870/11	2.9175	393599.0			134909.682948	Y



Calibration

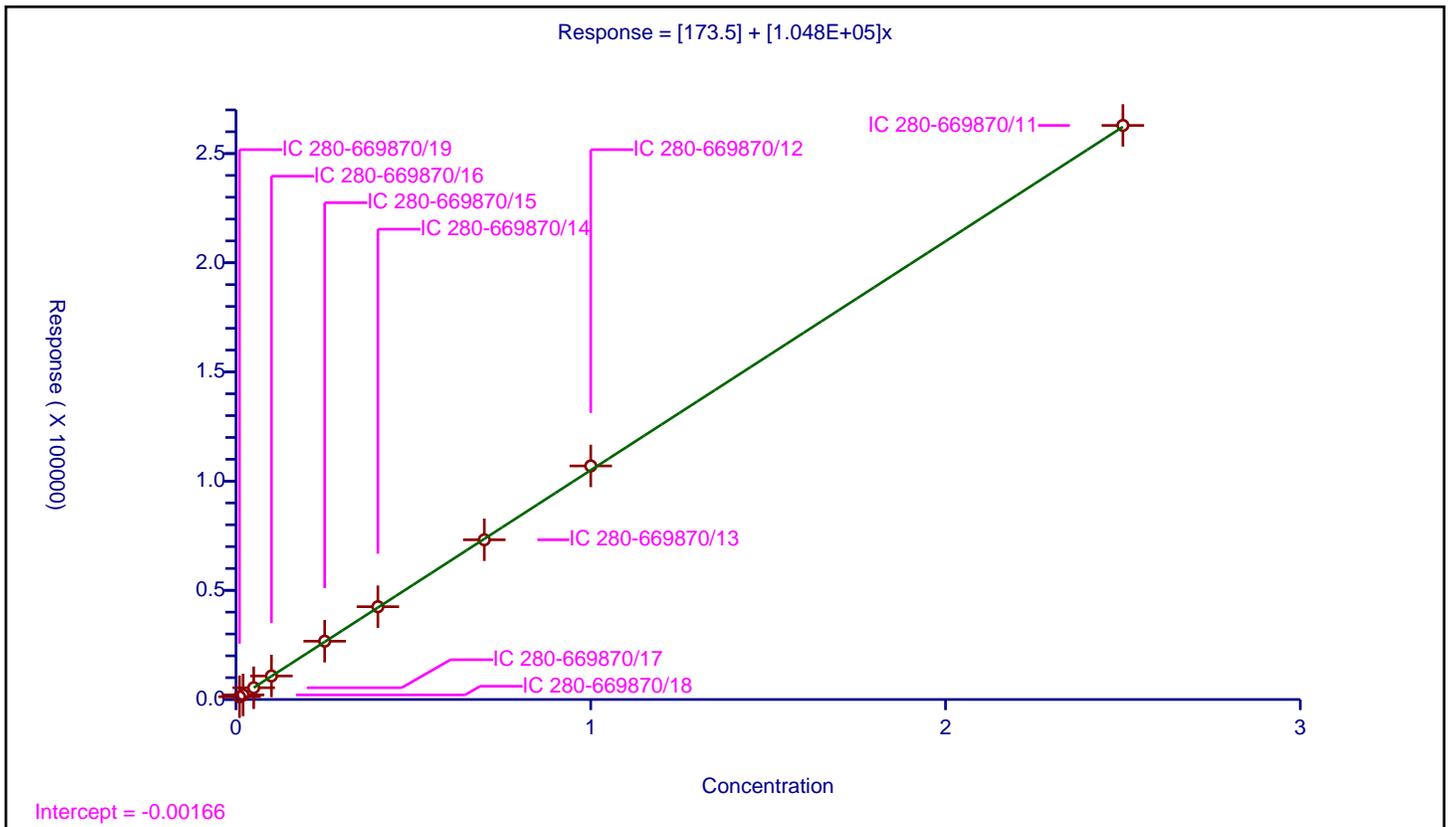
/ RDX

Curve Type: Linear  
 Weighting: Conc\_Sq  
 Origin: None  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	173.5
Slope:	1.048E+05

Error Coefficients	
Relative Standard Deviation:	3.6

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-669870/19	0.01	1264.0			126400.0	Y
2	IC 280-669870/18	0.02	2098.0			104900.0	Y
3	IC 280-669870/17	0.05	5386.0			107720.0	Y
4	IC 280-669870/16	0.1	10773.0			107730.0	Y
5	IC 280-669870/15	0.25	26694.0			106776.0	Y
6	IC 280-669870/14	0.4	42489.0			106222.5	Y
7	IC 280-669870/13	0.7	73136.0			104480.0	Y
8	IC 280-669870/12	1.0	106956.0			106956.0	Y </td
9	IC 280-669870/11	2.5	262885.0			105154.0	Y



**Calibration**

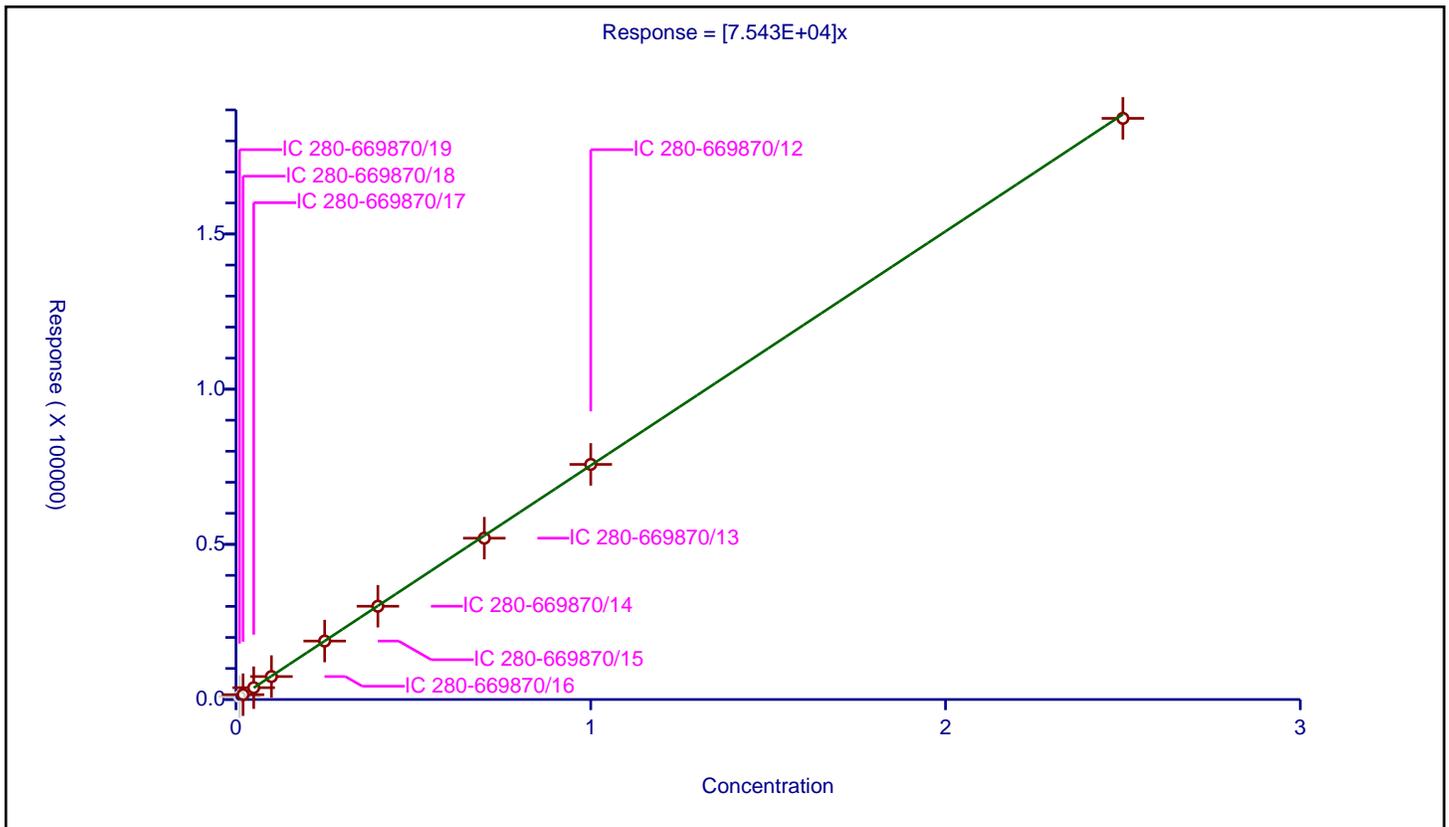
**/ 2,4,6-Trinitrophenol**

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	7.543E+04

Error Coefficients	
Relative Standard Deviation:	1.7

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-669870/19	0.01	939.0			93900.0	N
2	IC 280-669870/18	0.02	1559.0			77950.0	Y
3	IC 280-669870/17	0.05	3807.0			76140.0	Y
4	IC 280-669870/16	0.1	7391.0			73910.0	Y
5	IC 280-669870/15	0.25	18836.0			75344.0	Y
6	IC 280-669870/14	0.4	30056.0			75140.0	Y
7	IC 280-669870/13	0.7	51986.0			74265.714286	Y
8	IC 280-669870/12	1.0	75756.0			75756.0	Y
9	IC 280-669870/11	2.5	187271.0			74908.4	Y



Calibration

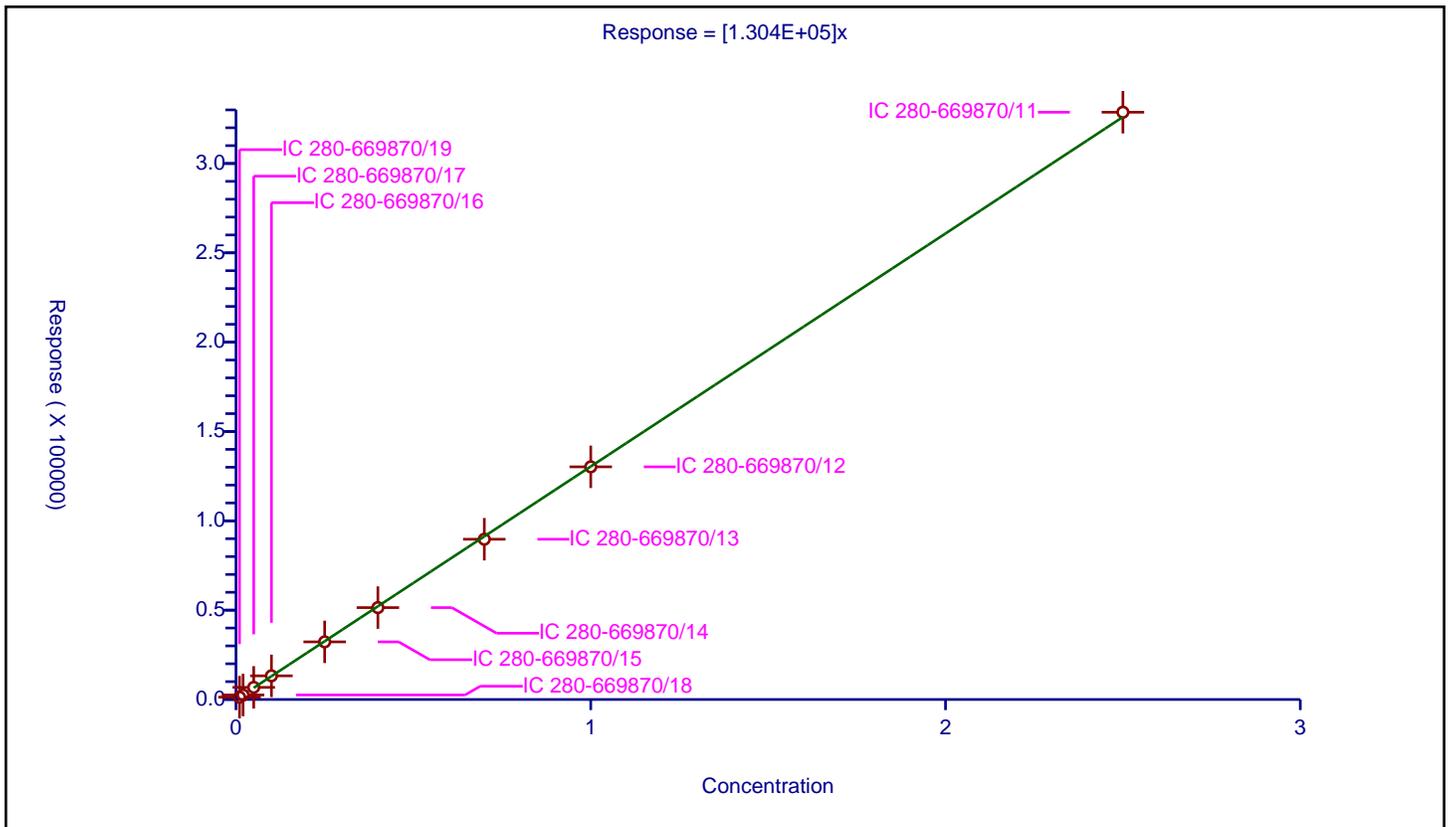
/ 1,2-Dinitrobenzene

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	1.304E+05

Error Coefficients	
Relative Standard Deviation:	2.1

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-669870/19	0.01	1315.0			131500.0	Y
2	IC 280-669870/18	0.02	2530.0			126500.0	Y
3	IC 280-669870/17	0.05	6795.0			135900.0	Y
4	IC 280-669870/16	0.1	13238.0			132380.0	Y
5	IC 280-669870/15	0.25	32250.0			129000.0	Y
6	IC 280-669870/14	0.4	51425.0			128562.5	Y
7	IC 280-669870/13	0.7	89703.0			128147.142857	Y
8	IC 280-669870/12	1.0	130220.0			130220.0	Y
9	IC 280-669870/11	2.5	328696.0			131478.4	Y



**Calibration**

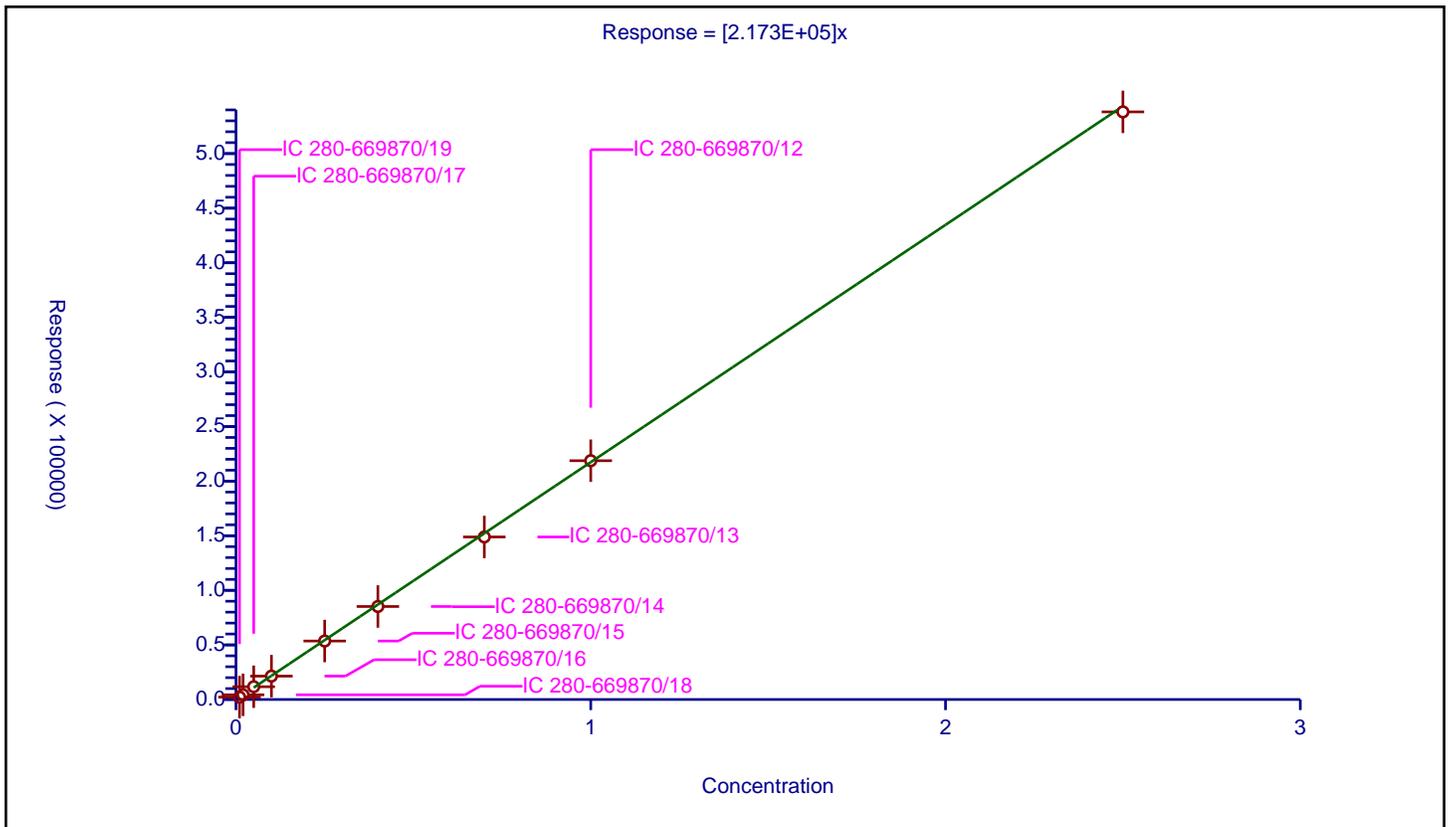
/ 1,3,5-Trinitrobenzene

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	2.173E+05

Error Coefficients	
Relative Standard Deviation:	3.1

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-669870/19	0.01	2203.0			220300.0	Y
2	IC 280-669870/18	0.02	4281.0			214050.0	Y
3	IC 280-669870/17	0.05	11696.0			233920.0	Y
4	IC 280-669870/16	0.1	21407.0			214070.0	Y
5	IC 280-669870/15	0.25	53554.0			214216.0	Y
6	IC 280-669870/14	0.4	85185.0			212962.5	Y
7	IC 280-669870/13	0.7	148857.0			212652.857143	Y
8	IC 280-669870/12	1.0	218705.0			218705.0	Y
9	IC 280-669870/11	2.5	538179.0			215271.6	Y



Calibration

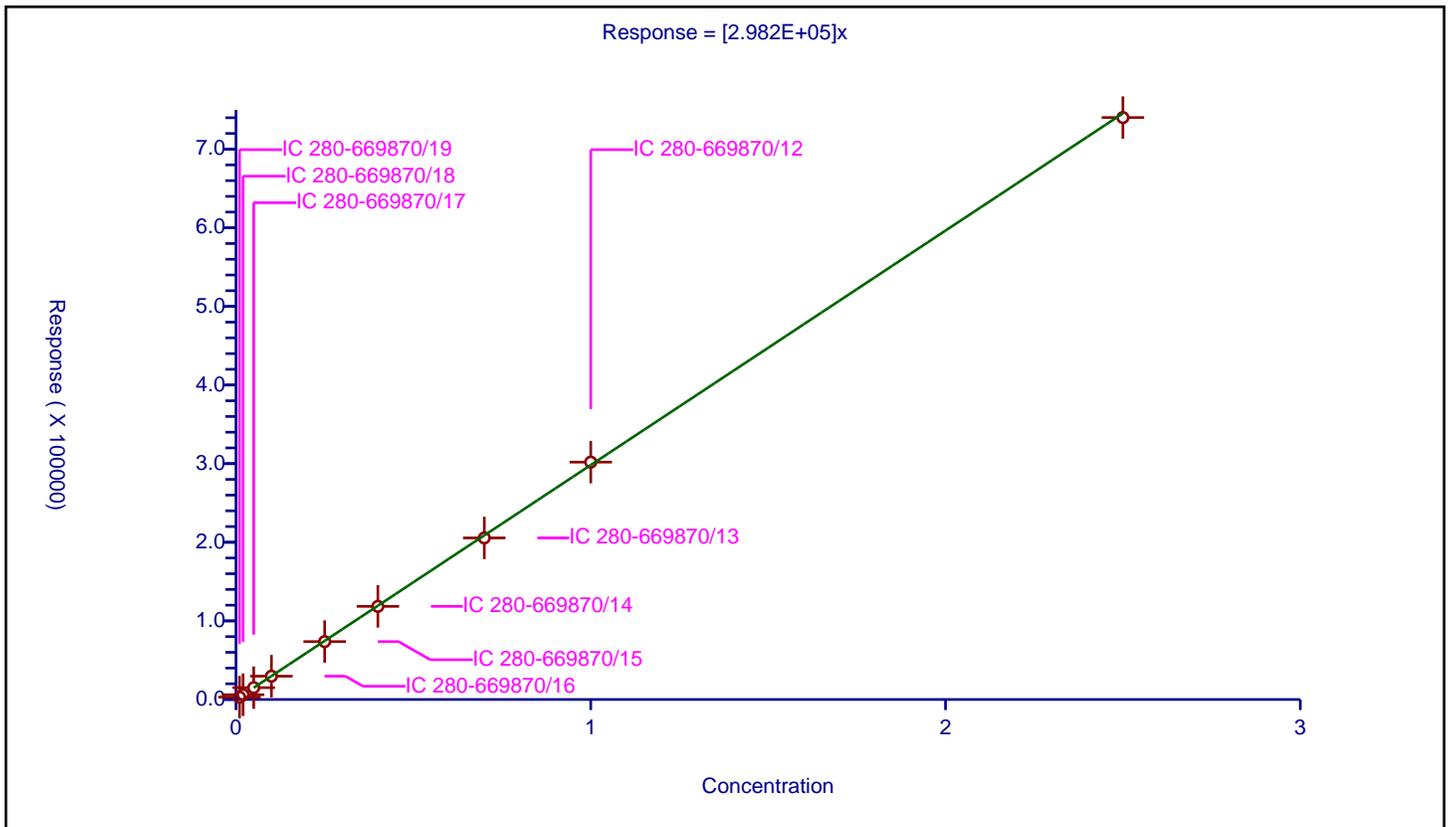
/ 1,3-Dinitrobenzene

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	2.982E+05

Error Coefficients	
Relative Standard Deviation:	1.2

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-669870/19	0.01	3012.0			301200.0	Y
2	IC 280-669870/18	0.02	6054.0			302700.0	Y
3	IC 280-669870/17	0.05	15058.0			301160.0	Y
4	IC 280-669870/16	0.1	29659.0			296590.0	Y
5	IC 280-669870/15	0.25	73648.0			294592.0	Y
6	IC 280-669870/14	0.4	118487.0			296217.5	Y
7	IC 280-669870/13	0.7	205516.0			293594.285714	Y
8	IC 280-669870/12	1.0	301939.0			301939.0	Y
9	IC 280-669870/11	2.5	740236.0			296094.4	Y



**Calibration**

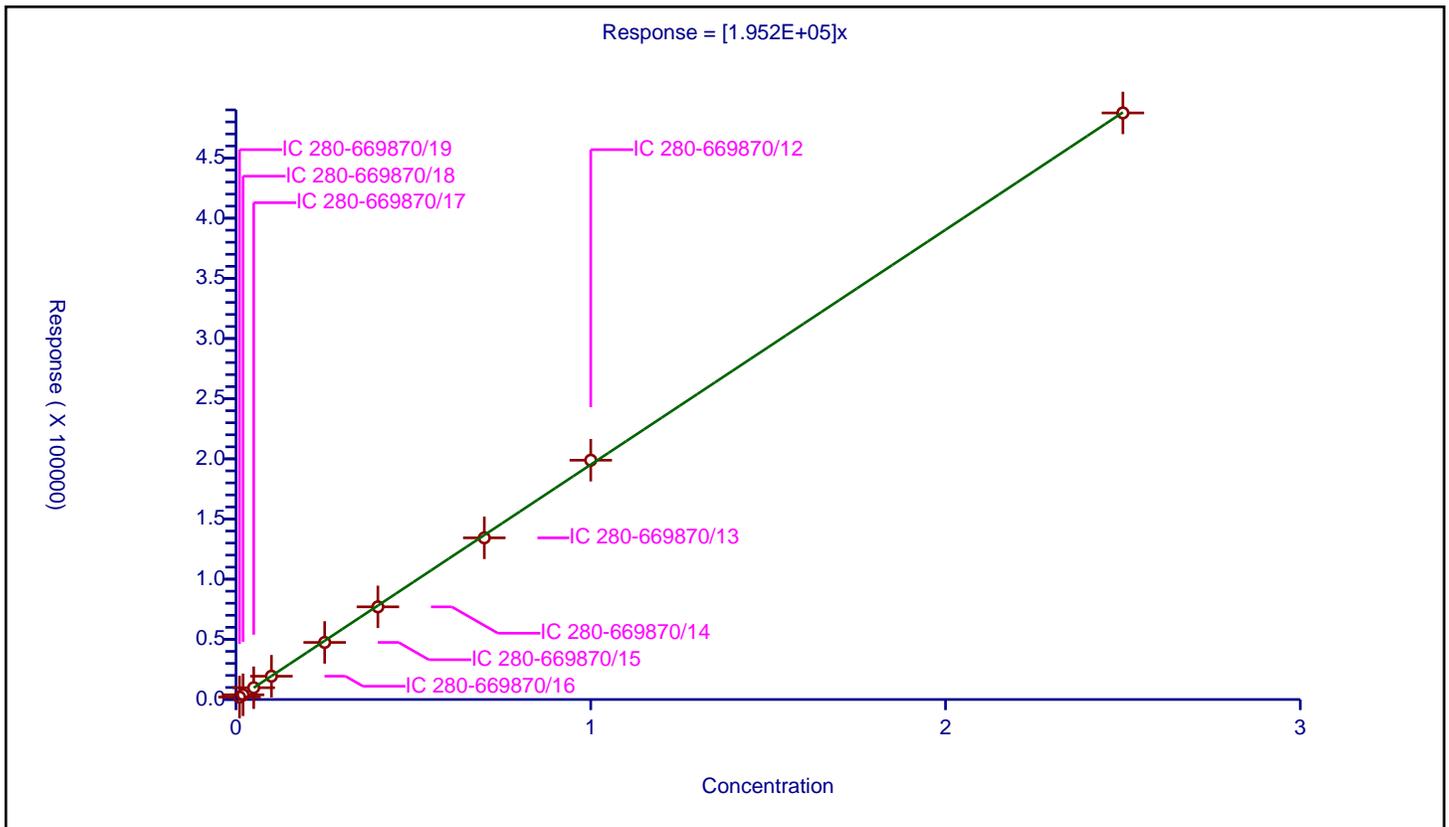
**/ Nitrobenzene**

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	1.952E+05

Error Coefficients	
Relative Standard Deviation:	2.1

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-669870/19	0.01	2038.0			203800.0	Y
2	IC 280-669870/18	0.02	3904.0			195200.0	Y
3	IC 280-669870/17	0.05	9801.0			196020.0	Y
4	IC 280-669870/16	0.1	19360.0			193600.0	Y
5	IC 280-669870/15	0.25	47423.0			189692.0	Y
6	IC 280-669870/14	0.4	77013.0			192532.5	Y
7	IC 280-669870/13	0.7	134331.0			191901.428571	Y
8	IC 280-669870/12	1.0	198867.0			198867.0	Y
9	IC 280-669870/11	2.5	487471.0			194988.4	Y



Calibration

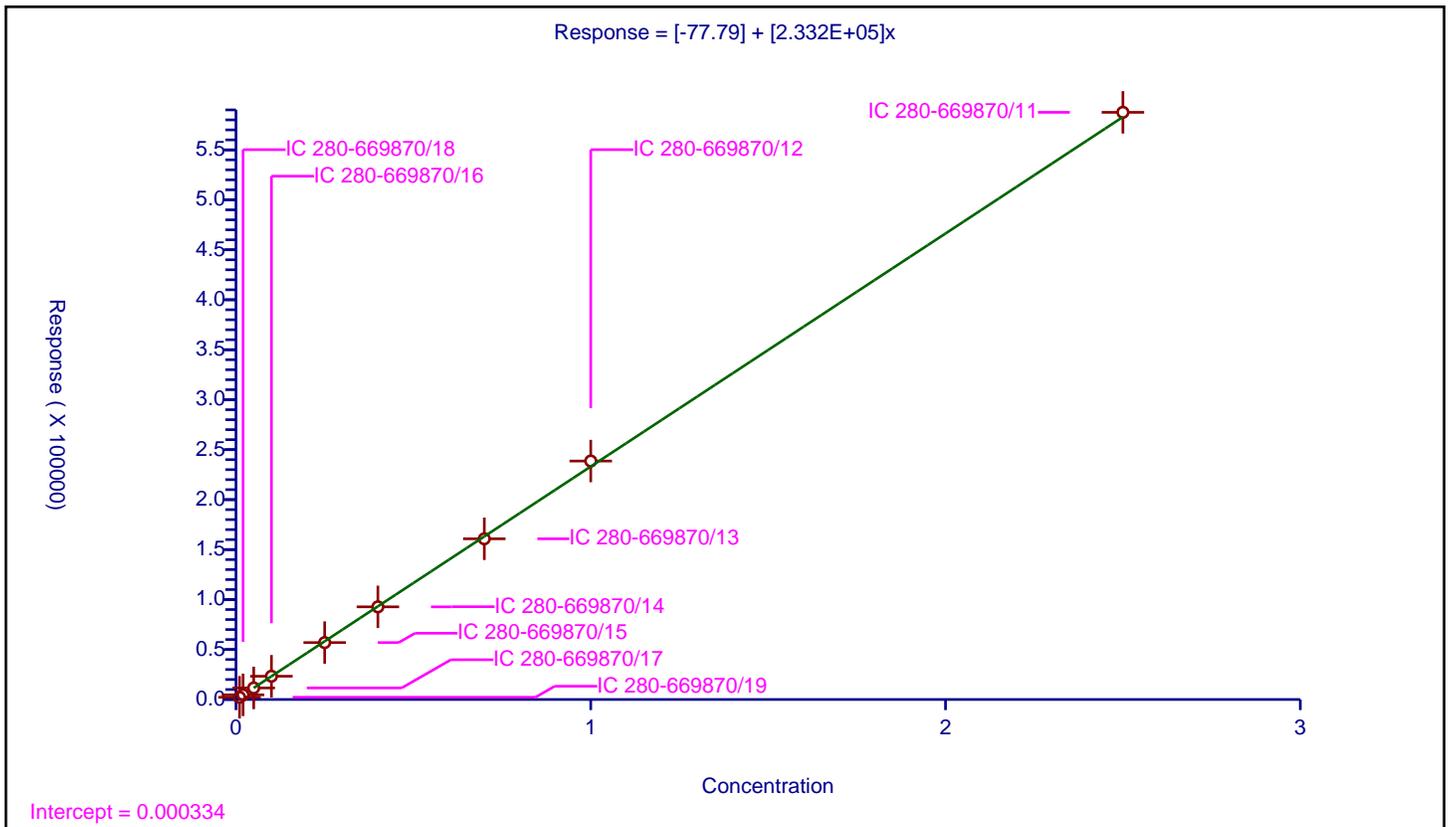
/ 3,5-Dinitroaniline

Curve Type: Linear  
 Weighting: Conc\_Sq  
 Origin: None  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	-77.79
Slope:	2.332E+05

Error Coefficients	
Relative Standard Deviation:	1.6

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-669870/19	0.01	2237.0			223700.0	Y
2	IC 280-669870/18	0.02	4665.0			233250.0	Y
3	IC 280-669870/17	0.05	11561.0			231220.0	Y
4	IC 280-669870/16	0.1	23292.0			232920.0	Y
5	IC 280-669870/15	0.25	56945.0			227780.0	Y
6	IC 280-669870/14	0.4	92721.0			231802.5	Y
7	IC 280-669870/13	0.7	160806.0			229722.857143	Y
8	IC 280-669870/12	1.0	238621.0			238621.0	Y
9	IC 280-669870/11	2.5	587561.0			235024.4	Y



Calibration

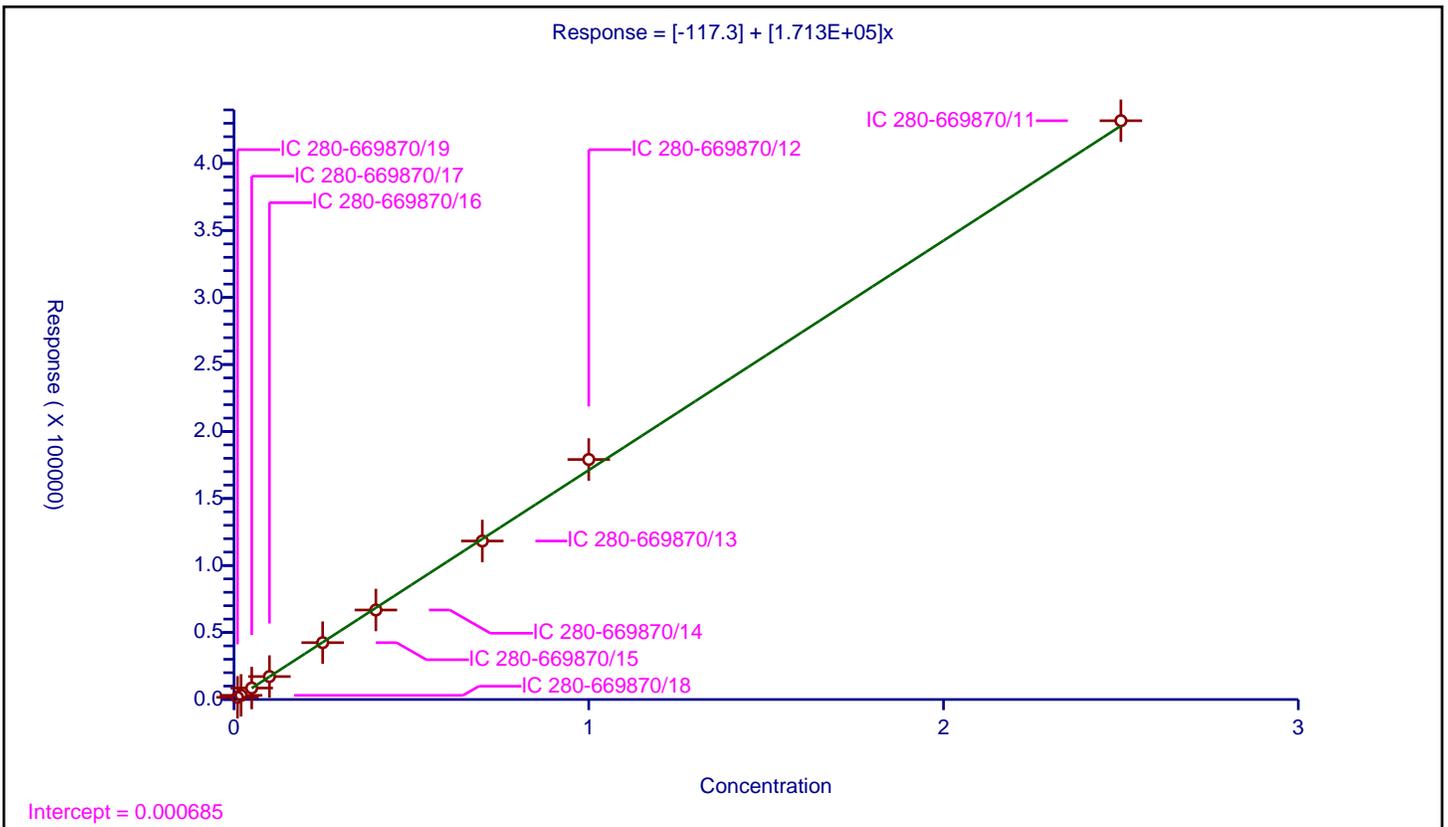
/ Tetryl

Curve Type: Linear  
 Weighting: Conc\_Sq  
 Origin: None  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	-117.3
Slope:	1.713E+05

Error Coefficients	
Relative Standard Deviation:	3.3

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-669870/19	0.01	1642.0			164200.0	Y
2	IC 280-669870/18	0.02	3103.0			155150.0	Y
3	IC 280-669870/17	0.05	8562.0			171240.0	Y
4	IC 280-669870/16	0.1	17130.0			171300.0	Y
5	IC 280-669870/15	0.25	42416.0			169664.0	Y
6	IC 280-669870/14	0.4	66783.0			166957.5	Y
7	IC 280-669870/13	0.7	118273.0			168961.428571	Y
8	IC 280-669870/12	1.0	179110.0			179110.0	Y
9	IC 280-669870/11	2.5	431903.0			172761.2	Y



**Calibration**

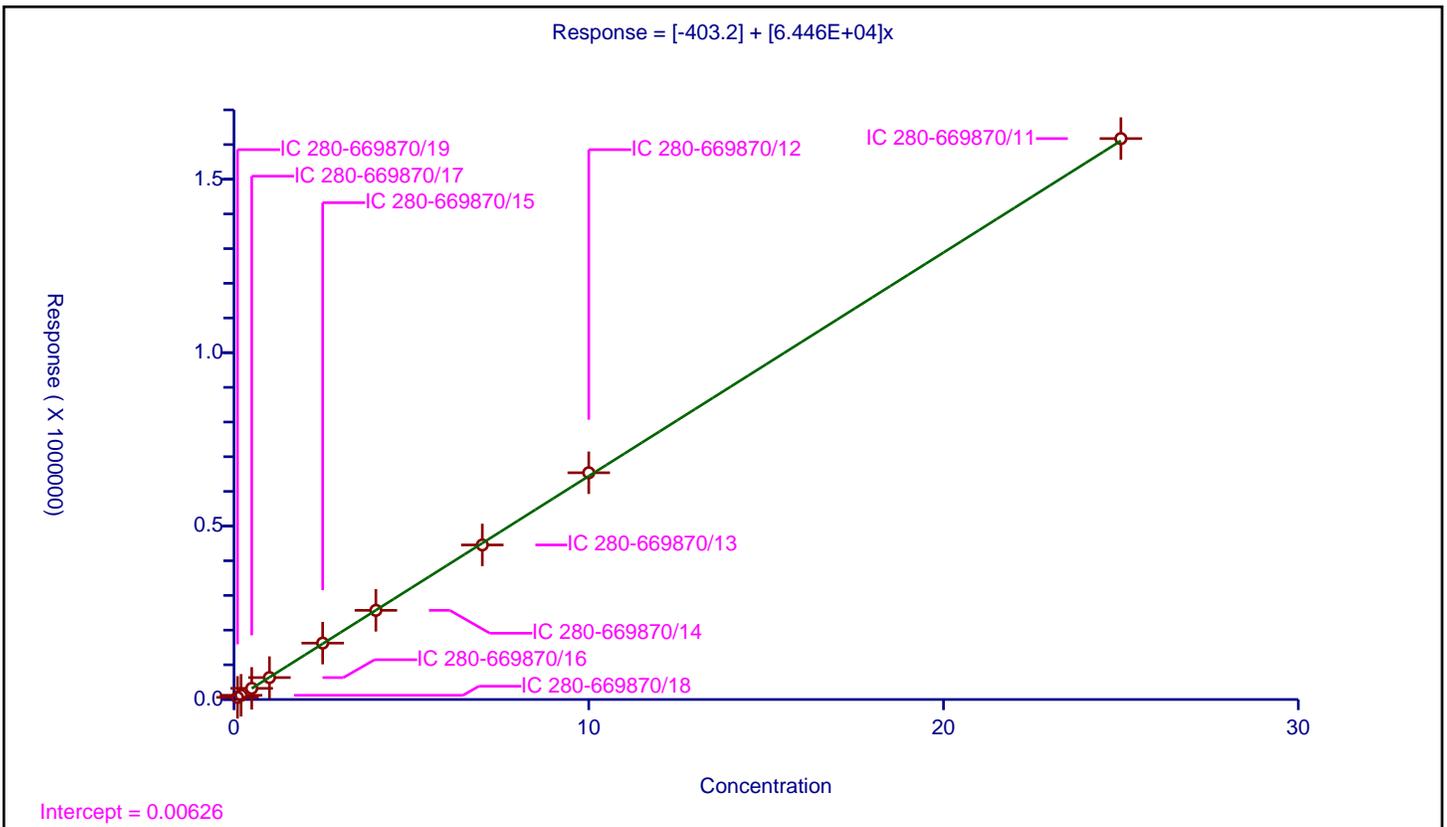
/ Nitroglycerin

Curve Type: Linear  
 Weighting: Conc\_Sq  
 Origin: None  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	-403.2
Slope:	6.446E+04

Error Coefficients	
Relative Standard Deviation:	1.5

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-669870/19	0.1	6121.0			61210.0	Y
2	IC 280-669870/18	0.2	12143.0			60715.0	Y
3	IC 280-669870/17	0.5	32159.0			64318.0	Y
4	IC 280-669870/16	1.0	63200.0			63200.0	Y
5	IC 280-669870/15	2.5	162585.0			65034.0	Y
6	IC 280-669870/14	4.0	257082.0			64270.5	Y
7	IC 280-669870/13	7.0	445595.0			63656.428571	Y
8	IC 280-669870/12	10.0	653746.0			65374.6	Y
9	IC 280-669870/11	25.0	1617250.0			64690.0	Y



Calibration

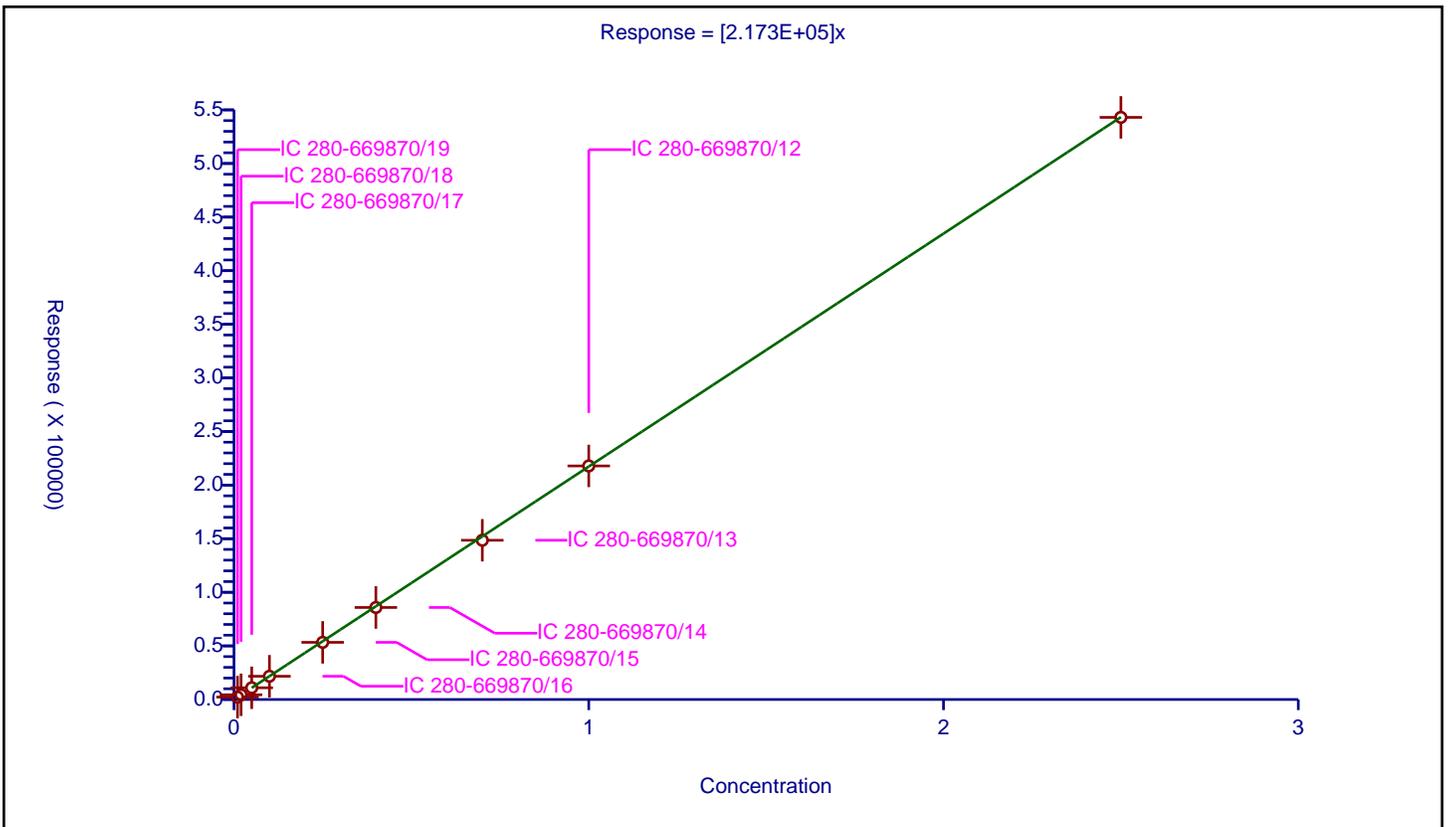
/ 2,4,6-Trinitrotoluene

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	2.173E+05

Error Coefficients	
Relative Standard Deviation:	1.8

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-669870/19	0.01	2257.0			225700.0	Y
2	IC 280-669870/18	0.02	4382.0			219100.0	Y
3	IC 280-669870/17	0.05	10944.0			218880.0	Y
4	IC 280-669870/16	0.1	21685.0			216850.0	Y
5	IC 280-669870/15	0.25	53322.0			213288.0	Y
6	IC 280-669870/14	0.4	85834.0			214585.0	Y
7	IC 280-669870/13	0.7	148548.0			212211.428571	Y
8	IC 280-669870/12	1.0	217864.0			217864.0	Y
9	IC 280-669870/11	2.5	543020.0			217208.0	Y



Calibration

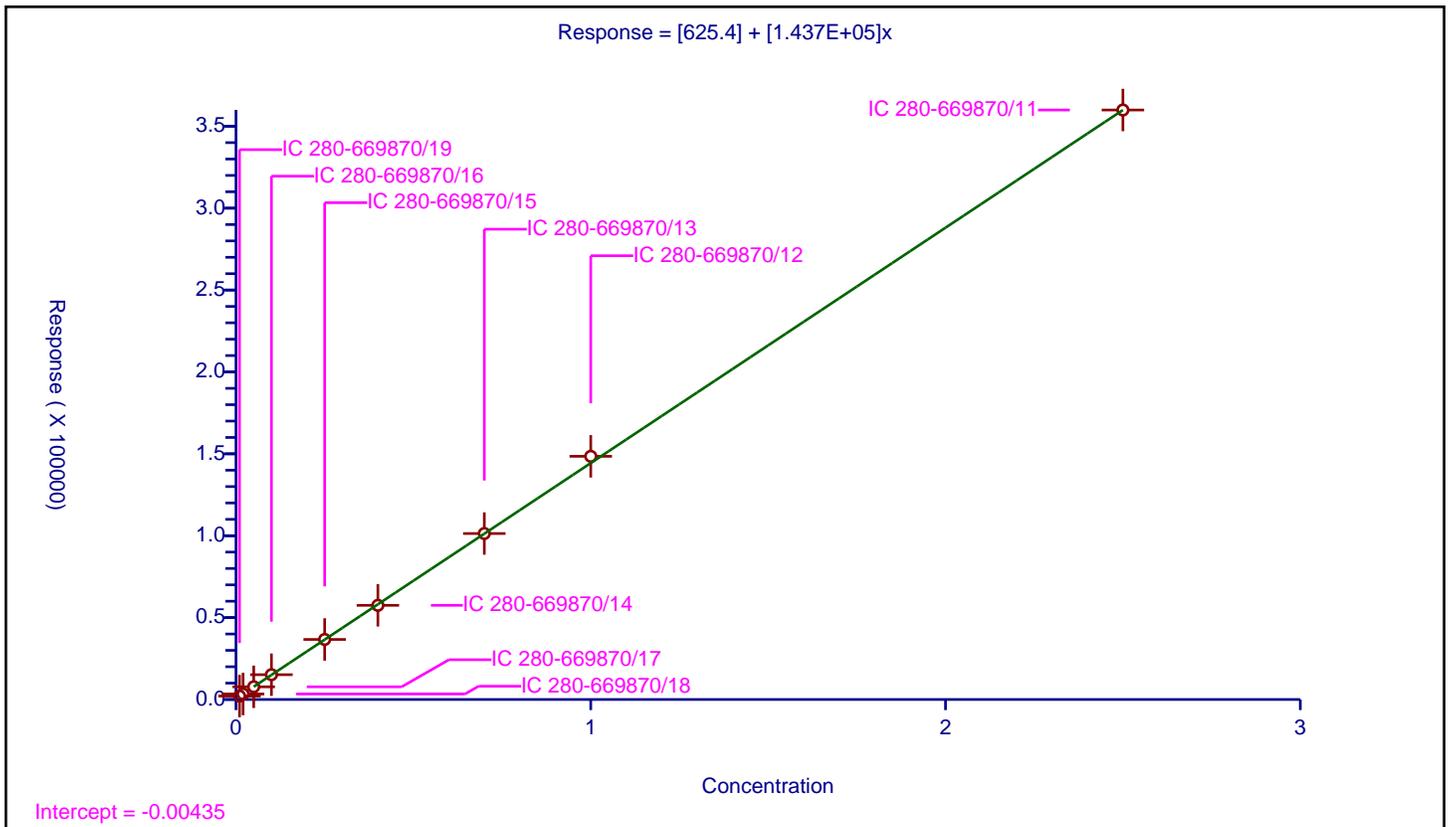
/ 4-Amino-2,6-dinitrotoluene

Curve Type: Linear  
 Weighting: Conc\_Sq  
 Origin: None  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	625.4
Slope:	1.437E+05

Error Coefficients	
Relative Standard Deviation:	2.5

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-669870/19	0.01	2099.0			209900.0	Y
2	IC 280-669870/18	0.02	3357.0			167850.0	Y
3	IC 280-669870/17	0.05	7751.0			155020.0	Y
4	IC 280-669870/16	0.1	15147.0			151470.0	Y
5	IC 280-669870/15	0.25	36669.0			146676.0	Y
6	IC 280-669870/14	0.4	57494.0			143735.0	Y
7	IC 280-669870/13	0.7	101345.0			144778.571429	Y
8	IC 280-669870/12	1.0	148480.0			148480.0	Y
9	IC 280-669870/11	2.5	359929.0			143971.6	Y



**Calibration**

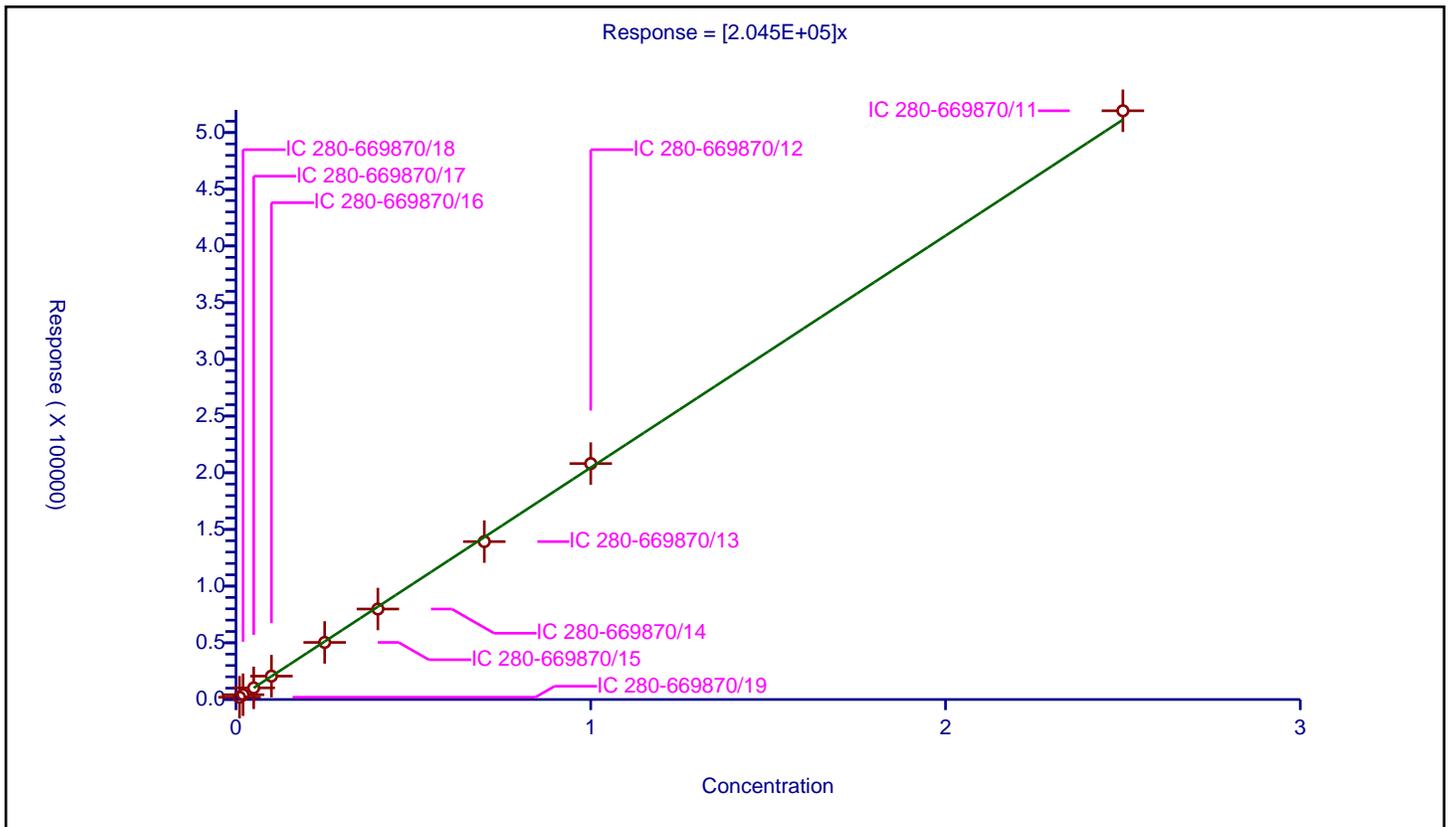
**/ 2-Amino-4,6-dinitrotoluene**

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	2.045E+05

Error Coefficients	
Relative Standard Deviation:	2.0

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-669870/19	0.01	2029.0			202900.0	Y
2	IC 280-669870/18	0.02	4224.0			211200.0	Y
3	IC 280-669870/17	0.05	10249.0			204980.0	Y
4	IC 280-669870/16	0.1	20612.0			206120.0	Y
5	IC 280-669870/15	0.25	50346.0			201384.0	Y
6	IC 280-669870/14	0.4	79804.0			199510.0	Y
7	IC 280-669870/13	0.7	139261.0			198944.285714	Y
8	IC 280-669870/12	1.0	208057.0			208057.0	Y
9	IC 280-669870/11	2.5	519220.0			207688.0	Y



**Calibration**

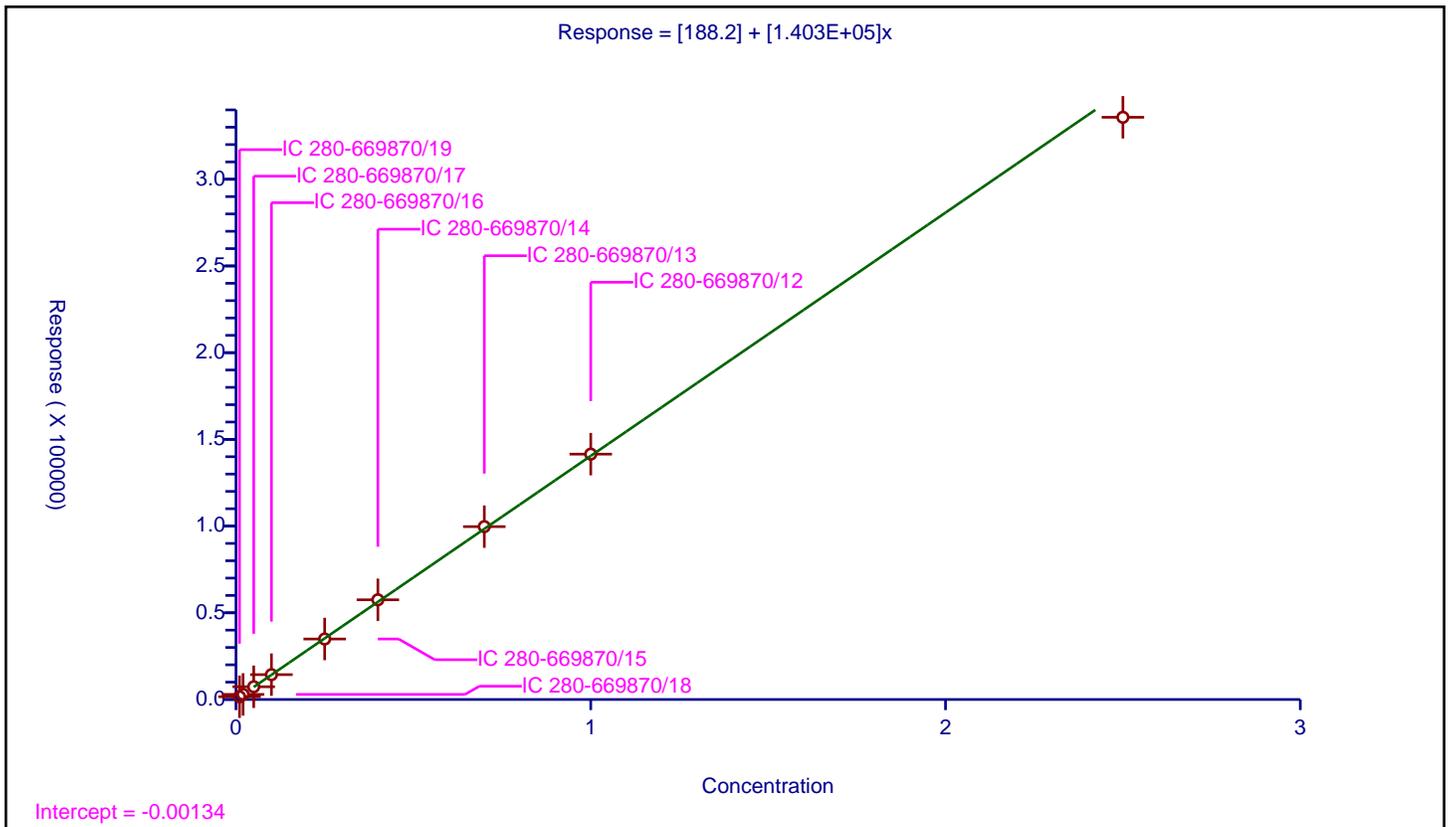
**/ 2,6-Dinitrotoluene**

**Curve Type:** Linear  
**Weighting:** Conc\_Sq  
**Origin:** None  
**Dependency:** Response  
**Calib Mode:** ESTD  
**Response Base:** AREA  
**RF Rounding:** 0

Curve Coefficients	
<b>Intercept:</b>	188.2
<b>Slope:</b>	1.403E+05

Error Coefficients	
<b>Relative Standard Deviation:</b>	2.3

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-669870/19	0.01	1600.0			160000.0	Y
2	IC 280-669870/18	0.02	2929.0			146450.0	Y
3	IC 280-669870/17	0.05	7345.0			146900.0	Y
4	IC 280-669870/16	0.1	14334.0			143340.0	Y
5	IC 280-669870/15	0.25	34878.0			139512.0	Y
6	IC 280-669870/14	0.4	57501.0			143752.5	Y
7	IC 280-669870/13	0.7	99691.0			142415.714286	Y
8	IC 280-669870/12	1.0	141490.0			141490.0	Y
9	IC 280-669870/11	2.5	335728.0			134291.2	Y



**Calibration**

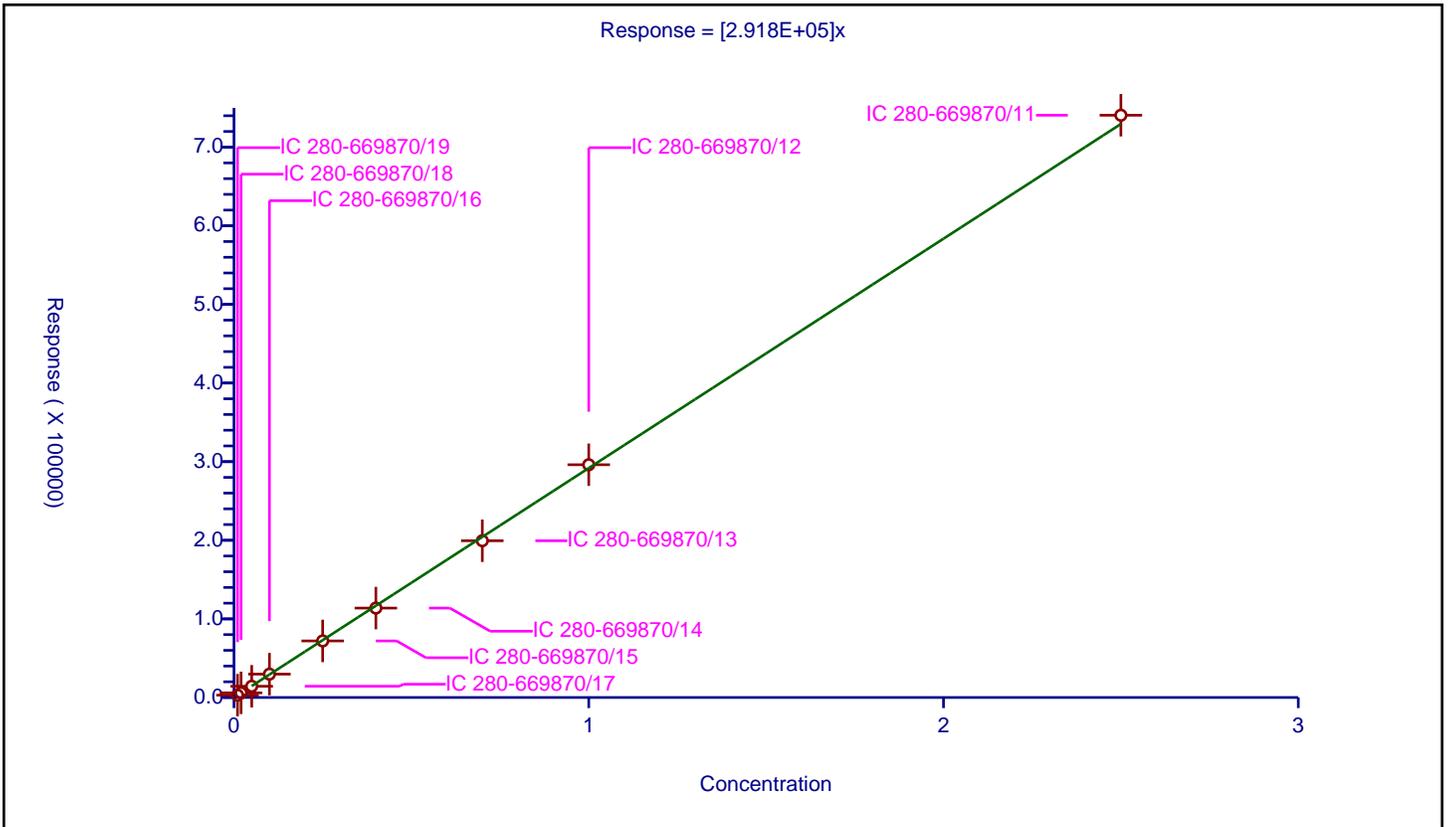
/ 2,4-Dinitrotoluene

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	2.918E+05

Error Coefficients	
Relative Standard Deviation:	2.0

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-669870/19	0.01	2968.0			296800.0	Y
2	IC 280-669870/18	0.02	5927.0			296350.0	Y
3	IC 280-669870/17	0.05	14328.0			286560.0	Y
4	IC 280-669870/16	0.1	29723.0			297230.0	Y
5	IC 280-669870/15	0.25	71944.0			287776.0	Y
6	IC 280-669870/14	0.4	113760.0			284400.0	Y
7	IC 280-669870/13	0.7	199392.0			284845.714286	Y
8	IC 280-669870/12	1.0	296080.0			296080.0	Y
9	IC 280-669870/11	2.5	740672.0			296268.8	Y



**Calibration**

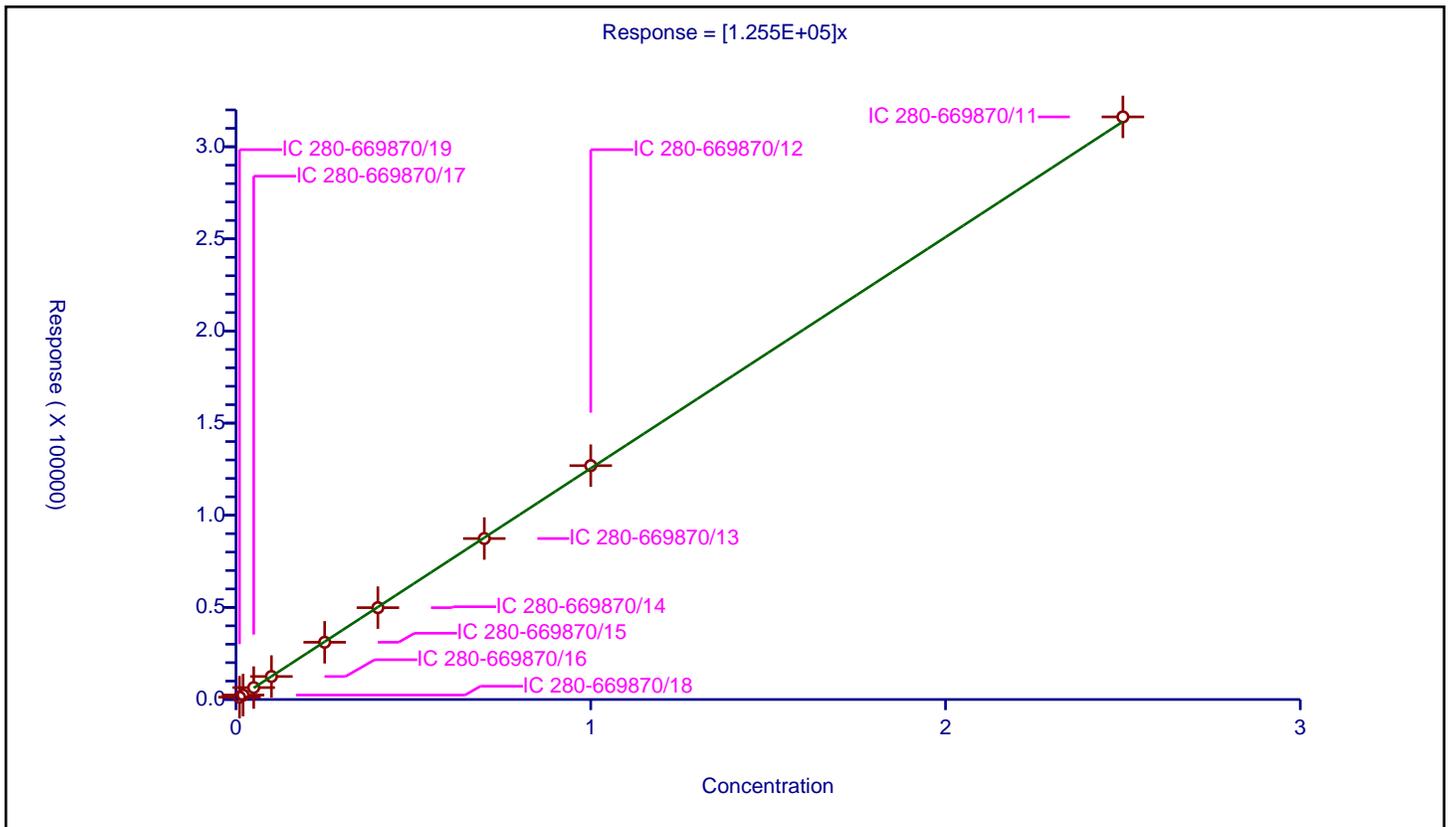
**/ o-Nitrotoluene**

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	1.255E+05

Error Coefficients	
Relative Standard Deviation:	2.0

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-669870/19	0.01	1273.0			127300.0	Y
2	IC 280-669870/18	0.02	2411.0			120550.0	Y
3	IC 280-669870/17	0.05	6473.0			129460.0	Y
4	IC 280-669870/16	0.1	12487.0			124870.0	Y
5	IC 280-669870/15	0.25	31059.0			124236.0	Y
6	IC 280-669870/14	0.4	49842.0			124605.0	Y
7	IC 280-669870/13	0.7	87357.0			124795.714286	Y
8	IC 280-669870/12	1.0	126917.0			126917.0	Y
9	IC 280-669870/11	2.5	316203.0			126481.2	Y



**Calibration**

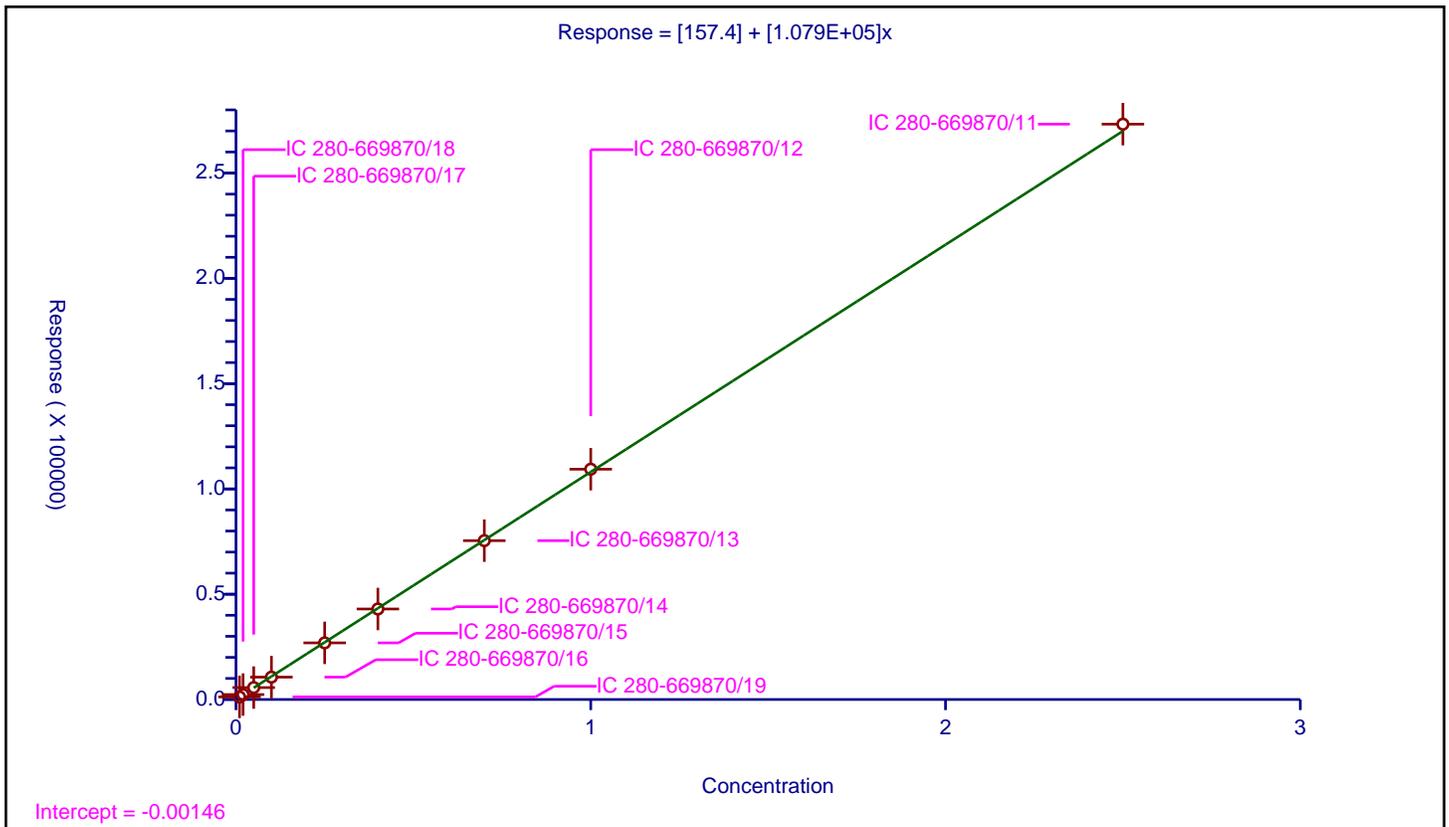
/ p-Nitrotoluene

Curve Type: Linear  
 Weighting: Conc\_Sq  
 Origin: None  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	157.4
Slope:	1.079E+05

Error Coefficients	
Relative Standard Deviation:	1.7

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-669870/19	0.01	1229.0			122900.0	Y
2	IC 280-669870/18	0.02	2343.0			117150.0	Y
3	IC 280-669870/17	0.05	5661.0			113220.0	Y
4	IC 280-669870/16	0.1	10624.0			106240.0	Y
5	IC 280-669870/15	0.25	26896.0			107584.0	Y
6	IC 280-669870/14	0.4	42988.0			107470.0	Y
7	IC 280-669870/13	0.7	75434.0			107762.857143	Y
8	IC 280-669870/12	1.0	109373.0			109373.0	Y
9	IC 280-669870/11	2.5	273226.0			109290.4	Y



**Calibration**

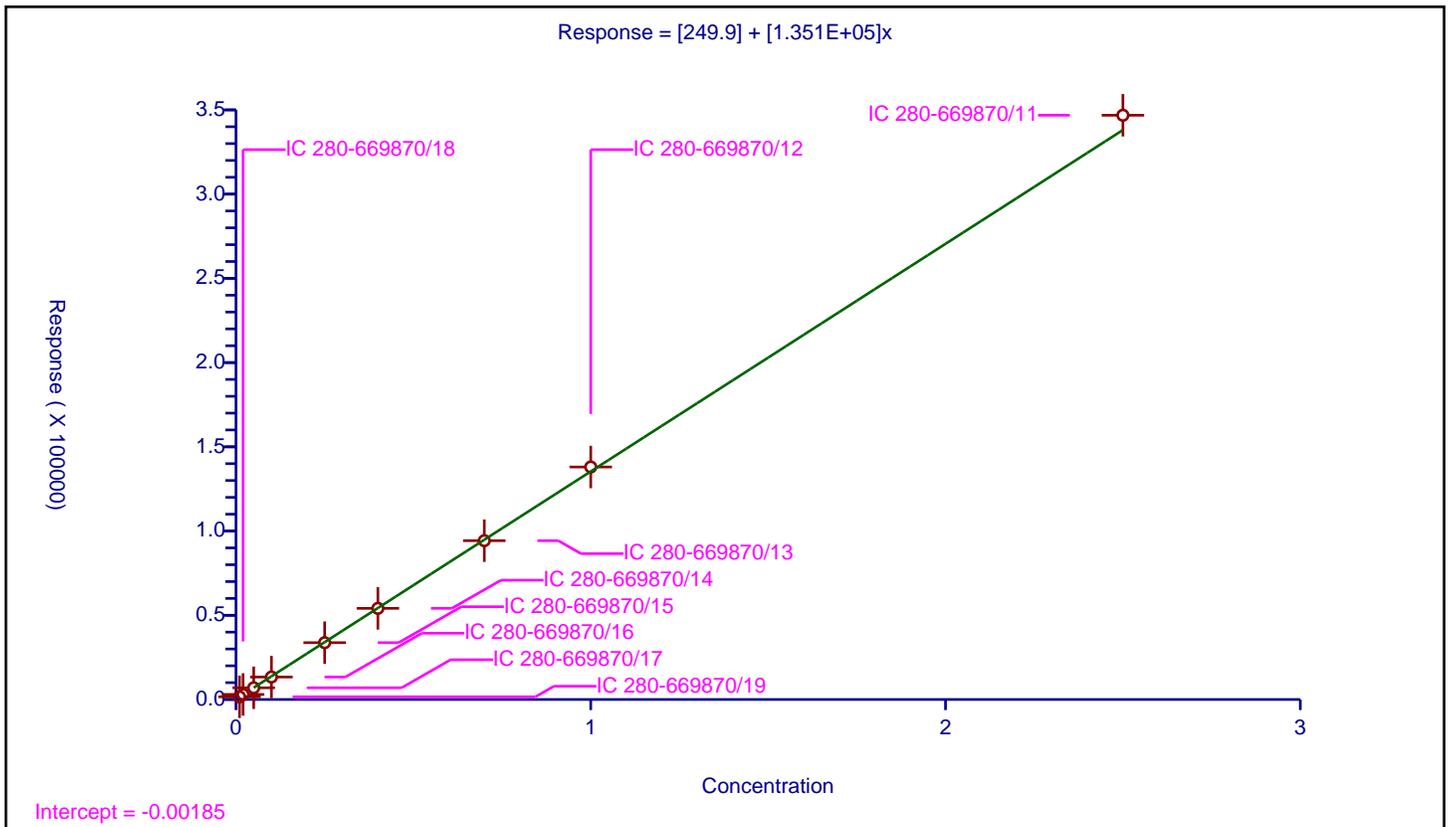
/ m-Nitrotoluene

Curve Type: Linear  
 Weighting: Conc\_Sq  
 Origin: None  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	249.9
Slope:	1.351E+05

Error Coefficients	
Relative Standard Deviation:	1.9

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-669870/19	0.01	1598.0			159800.0	Y
2	IC 280-669870/18	0.02	2992.0			149600.0	Y
3	IC 280-669870/17	0.05	6947.0			138940.0	Y
4	IC 280-669870/16	0.1	13345.0			133450.0	Y
5	IC 280-669870/15	0.25	33732.0			134928.0	Y
6	IC 280-669870/14	0.4	54100.0			135250.0	Y
7	IC 280-669870/13	0.7	94270.0			134671.428571	Y
8	IC 280-669870/12	1.0	138022.0			138022.0	Y
9	IC 280-669870/11	2.5	346817.0			138726.8	Y



**Calibration**

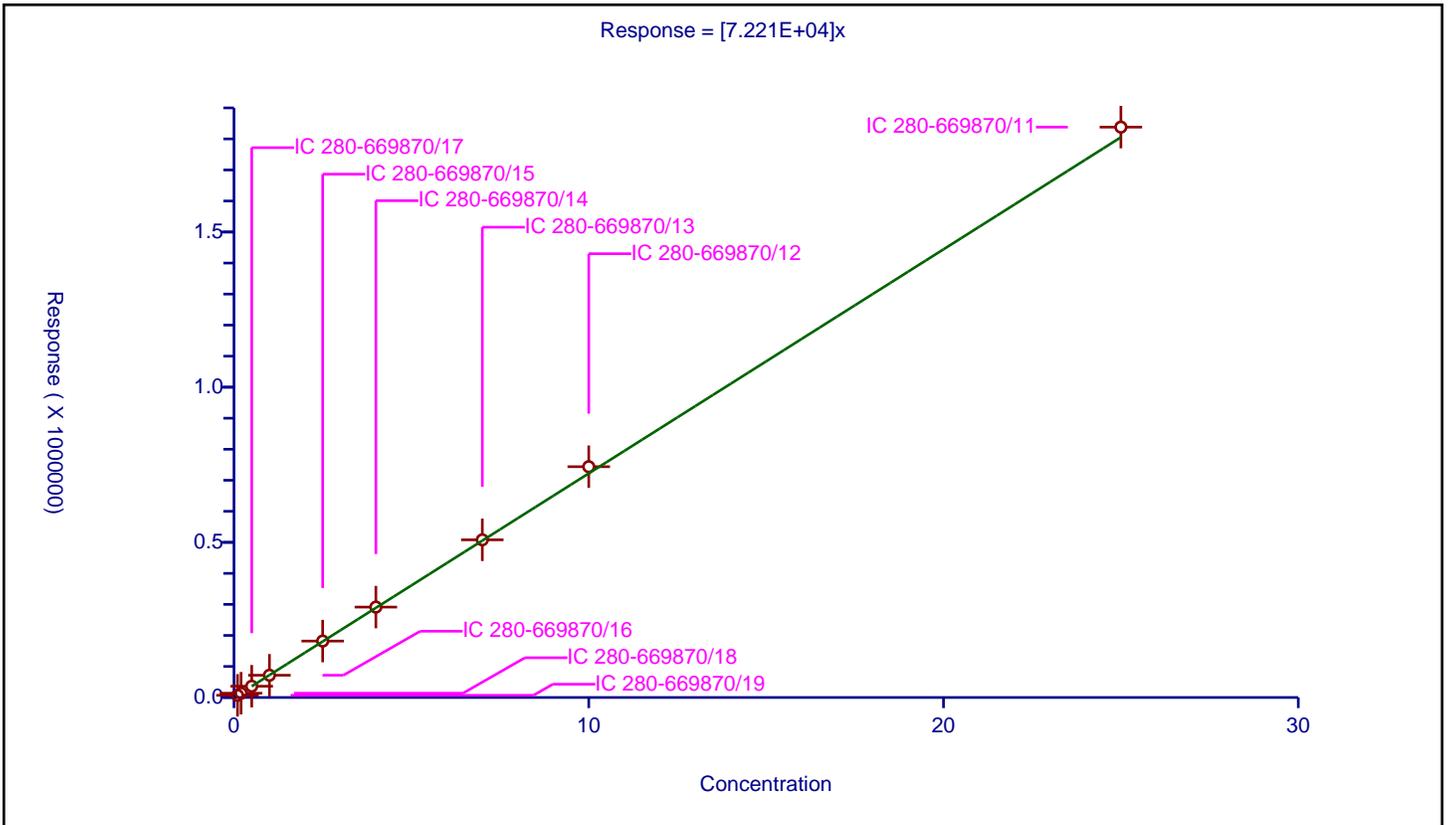
/ PETN

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	7.221E+04

Error Coefficients	
Relative Standard Deviation:	2.3

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-669870/19	0.1	7053.0			70530.0	Y
2	IC 280-669870/18	0.2	13772.0			68860.0	Y
3	IC 280-669870/17	0.5	36348.0			72696.0	Y
4	IC 280-669870/16	1.0	71766.0			71766.0	Y
5	IC 280-669870/15	2.5	181859.0			72743.6	Y
6	IC 280-669870/14	4.0	291336.0			72834.0	Y
7	IC 280-669870/13	7.0	508089.0			72584.142857	Y
8	IC 280-669870/12	10.0	743747.0			74374.7	Y
9	IC 280-669870/11	25.0	1838063.0			73522.52	Y



FORM VI  
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA  
RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-197532-2 Analy Batch No.: 663590

SDG No.: \_\_\_\_\_

Instrument ID: CHHPLC\_X5 GC Column: Luna-phenyl ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/10/2024 20:22 Calibration End Date: 08/11/2024 01:01 Calibration ID: 96518

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-663590/18	08100018.D
Level 2	IC 280-663590/17	08100017.D
Level 3	IC 280-663590/16	08100016.D
Level 4	IC 280-663590/15	08100015.D
Level 5	IC 280-663590/14	08100014.D
Level 6	IC 280-663590/13	08100013.D
Level 7	IC 280-663590/12	08100012.D
Level 8	IC 280-663590/11	08100011.D
Level 9	IC 280-663590/10	08100010.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	6.324	6.336	6.325	6.327	6.324	6.334	6.325	6.309	6.272		6.174 - 6.474	6.320
Picric acid	7.864	7.870	7.865	7.861	7.810	7.827	7.785	7.756	7.625		7.660 - 7.960	7.807
RDX	8.457	8.470	8.459	8.461	8.437	8.467	8.445	8.436	8.379		8.287 - 8.587	8.446
Nitrobenzene	11.004	11.016	11.012	11.014	10.983	11.020	10.999	10.982	10.945		10.833 - 11.133	10.997
3,5-Dinitroaniline	13.511	13.516	13.512	13.514	13.470	13.520	13.492	13.476	13.438		13.320 - 13.620	13.494
1,3-Dinitrobenzene	13.851	13.863	13.858	13.861	13.823	13.874	13.845	13.829	13.798		13.673 - 13.973	13.845
Nitroglycerin	14.524	14.529	14.525	14.527	14.477	14.540	14.512	14.496	14.472		14.327 - 14.627	14.511
2-Nitrotoluene	15.031	15.036	15.038	15.041	14.990	15.054	15.025	15.016	14.985		14.840 - 15.140	15.024
4-Nitrotoluene	15.284	15.276	15.272	15.274	15.223	15.287	15.259	15.249	15.212		15.073 - 15.373	15.260
4-Amino-2,6-dinitrotoluene	15.611	15.616	15.612	15.614	15.557	15.627	15.592	15.589	15.552		15.407 - 15.707	15.597
3-Nitrotoluene	16.091	16.096	16.092	16.094	16.043	16.114	16.079	16.076	16.045		15.893 - 16.193	16.081
2-Amino-4,6-dinitrotoluene	16.364	16.363	16.358	16.361	16.310	16.374	16.339	16.336	16.292		16.160 - 16.460	16.344
1,3,5-Trinitrobenzene	16.577	16.576	16.572	16.574	16.537	16.600	16.559	16.556	16.525		16.387 - 16.687	16.564
2,6-Dinitrotoluene	17.691	17.703	17.705	17.707	17.657	17.727	17.685	17.689	17.652		17.507 - 17.807	17.691
2,4-Dinitrotoluene	18.131	18.136	18.138	18.141	18.090	18.160	18.119	18.122	18.085		17.940 - 18.240	18.125
Tetryl	21.151	21.150	21.159	21.154	21.097	21.174	21.125	21.136	21.105		20.947 - 21.247	21.139
2,4,6-Trinitrotoluene	22.017	22.023	22.025	22.027	21.977	22.047	22.012	22.009	21.985		21.827 - 22.127	22.014
PETN	23.537	23.516	23.532	23.521	23.457	23.534	23.505	23.503	23.492		23.307 - 23.607	23.511
1,2-Dinitrobenzene	11.831	11.843	11.832	11.834	11.797	11.840	11.819	11.802	11.765		11.647 - 11.947	11.818

FORM VI  
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA  
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-197532-2 Analy Batch No.: 663590  
 SDG No.: \_\_\_\_\_  
 Instrument ID: CHHPLC\_X5 GC Column: Luna-phenyl ID: 4.6(mm) Heated Purge: (Y/N) N  
 Calibration Start Date: 08/10/2024 20:22 Calibration End Date: 08/11/2024 01:01 Calibration ID: 96518

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-663590/18	08100018.D
Level 2	IC 280-663590/17	08100017.D
Level 3	IC 280-663590/16	08100016.D
Level 4	IC 280-663590/15	08100015.D
Level 5	IC 280-663590/14	08100014.D
Level 6	IC 280-663590/13	08100013.D
Level 7	IC 280-663590/12	08100012.D
Level 8	IC 280-663590/11	08100011.D
Level 9	IC 280-663590/10	08100010.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	167100 187892 178359	198350 179333	182040 175713	178880 175376	Ave		180338.06 2			4.9		20.0				
Picric acid	156400 152484 150086	145900 148028	151340 146489	151030 146979	Ave		149859.40 8			2.3		20.0				
RDX	277300 214188 206076	242600 206623	218540 202049	213350 202487	Ave		220356.85 2			11.2		20.0				
Nitrobenzene	375500 387368 379398	372600 375673	381820 371520	378560 369980	Ave		376935.38 9			1.5		20.0				
3,5-Dinitroaniline	450800 452192 432321	457900 436468	439520 428406	435660 429142	Lin2	207.99101 1	435892.15 3						1.0000			0.9900
1,3-Dinitrobenzene	605900 601876 589502	577050 583780	583600 572897	578310 574265	Ave		585242.23 8			2.0		20.0				
Nitroglycerin	142060 132493 125422	120080 127644	130950 123552	127672 123497	Ave		128152.22 1			5.1		20.0				
2-Nitrotoluene	234000 239776 236821	236900 236095	238440 233080	234990 232656	Ave		235861.97 8			1.0		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.: 280-197532-2 Analy Batch No.: 663590

SDG No.: \_\_\_\_\_

Instrument ID: CHHPLC\_X5 GC Column: Luna-phenyl ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/10/2024 20:22 Calibration End Date: 08/11/2024 01:01 Calibration ID: 96518

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								
4-Nitrotoluene	203700 219364 216000	207400 212670	216340 209859	209940 209764	Ave		211670.68 6			2.3		20.0				
4-Amino-2,6-dinitrotoluene	278700 287232 280327	272750 278370	286900 271741	278250 273020	Ave		278587.80 3			2.0		20.0				
3-Nitrotoluene	254700 265552 256553	254050 257968	266720 252994	259990 255490	Ave		258224.06 5			1.9		20.0				
2-Amino-4,6-dinitrotoluene	397200 404268 381848	389200 392835	388980 385583	386520 378245	Ave		389408.80 6			2.0		20.0				
1,3,5-Trinitrobenzene	418500 431928 436338	415750 420285	433580 411416	427420 418932	Ave		423794.25 7			2.1		20.0				
2,6-Dinitrotoluene	306500 287840 274880	307200 275720	290420 269370	279620 270535	Ave		284676.15 6			5.1		20.0				
2,4-Dinitrotoluene	593900 574708 554930	600600 555490	593380 543620	554870 545089	Ave		568509.62 2			4.0		20.0				
Tetryl	243000 301688 292584	243550 290473	314500 284443	292970 286831	Ave		283337.55 1			8.6		20.0				
2,4,6-Trinitrotoluene	408200 423736 411163	443700 410750	418720 403344	423050 403353	Ave		416224.05 4			3.1		20.0				
PETN	135550 140865 135829	136830 135773	134630 133598	135423 133762	Ave		135806.61 8			1.6		20.0				
1,2-Dinitrobenzene	258500 275348 260959	252650 261225	272100 257476	267380 256759	Ave		262488.50 2			2.9		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.: 280-197532-2 Analy Batch No.: 663590

SDG No.: \_\_\_\_\_

Instrument ID: CHHPLC\_X5 GC Column: Luna-pheny ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/10/2024 20:22 Calibration End Date: 08/11/2024 01:01 Calibration ID: 96518

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-663590/18	08100018.D
Level 2	IC 280-663590/17	08100017.D
Level 3	IC 280-663590/16	08100016.D
Level 4	IC 280-663590/15	08100015.D
Level 5	IC 280-663590/14	08100014.D
Level 6	IC 280-663590/13	08100013.D
Level 7	IC 280-663590/12	08100012.D
Level 8	IC 280-663590/11	08100011.D
Level 9	IC 280-663590/10	08100010.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
		LVL 6	LVL 7	LVL 8	LVL 9		LVL 6	LVL 7	LVL 8	LVL 9	
HMX	Ave	1671 71733	3967 122999	9102 175376	17888 445898	46973	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
Picric acid	Ave	1564 59211	2918 102542	7567 146979	15103 375214	38121	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
RDX	Ave	2773 82649	4852 141434	10927 202487	21335 515189	53547	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
Nitrobenzene	Ave	3755 150269	7452 260064	19091 369980	37856 948495	96842	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
3,5-Dinitroaniline	Lin2	4508 174587	9158 299884	21976 429142	43566 1080802	113048	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
1,3-Dinitrobenzene	Ave	6059 233512	11541 401028	29180 574265	57831 1473755	150469	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
Nitroglycerin	Ave	14206 510574	24016 864867	65475 1234967	127672 3135554	331233	0.100 4.00	0.200 7.00	0.500 10.0	1.00 25.0	2.50
2-Nitrotoluene	Ave	2340 94438	4738 163156	11922 232656	23499 592052	59944	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
4-Nitrotoluene	Ave	2037 85068	4148 146901	10817 209764	20994 539999	54841	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
4-Amino-2,6-dinitrotoluene	Ave	2787 111348	5455 190219	14345 273020	27825 700817	71808	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
3-Nitrotoluene	Ave	2547 103187	5081 177096	13336 255490	25999 641382	66388	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
2-Amino-4,6-dinitrotoluene	Ave	3972 157134	7784 269908	19449 378245	38652 954621	101067	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
1,3,5-Trinitrobenzene	Ave	4185 168114	8315 287991	21679 418932	42742 1090844	107982	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
2,6-Dinitrotoluene	Ave	3065 110288	6144 188559	14521 270535	27962 687201	71960	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
2,4-Dinitrotoluene	Ave	5939	12012	29669	55487	143677	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.: 280-197532-2 Analy Batch No.: 663590

SDG No.: \_\_\_\_\_

Instrument ID: CHHPLC\_X5 GC Column: Luna-pheny ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/10/2024 20:22 Calibration End Date: 08/11/2024 01:01 Calibration ID: 96518

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
		222196	380534	545089	1387324		0.400	0.700	1.00	2.50	
Tetryl	Ave	2430	4871	15725	29297	75422	0.0100	0.0200	0.0500	0.100	0.250
		116189	199110	286831	731459		0.400	0.700	1.00	2.50	
2,4,6-Trinitrotoluene	Ave	4082	8874	20936	42305	105934	0.0100	0.0200	0.0500	0.100	0.250
		164300	282341	403353	1027908		0.400	0.700	1.00	2.50	
PETN	Ave	13555	27366	67315	135423	352162	0.100	0.200	0.500	1.00	2.50
		543090	935188	1337623	3395717		4.00	7.00	10.0	25.0	
1,2-Dinitrobenzene	Ave	2585	5053	13605	26738	68837	0.0100	0.0200	0.0500	0.100	0.250
		104490	180233	256759	652397		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\_X5\20240810-136368.b\08100010.D  
 Lims ID: IC INT 9  
 Client ID:  
 Sample Type: IC Calib Level: 9  
 Inject. Date: 10-Aug-2024 20:22:02 ALS Bottle#: 10 Worklist Smp#: 10  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: IC INT 9  
 Operator ID: JZ Instrument ID: CHHPLC\_X5  
 Sublist: chrom-8330\_X5\_Luna\*sub7  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\8330\_X5\_Luna.m  
 Limit Group: GCSV - 8330  
 Last Update: 13-Aug-2024 15:40:38 Calib Date: 11-Aug-2024 06:16:04  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100027.D  
 Column 1 : Luna-Phenyl hexyl ( 4.60 mm) Det: LC mwd1A, 254 nm  
 Process Host: CTX1604

First Level Reviewer: LV5D Date: 13-Aug-2024 13:45:58

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
5 HMX	1	6.272	6.324	-0.052	445898	2.50	2.47	
7 2,4,6-Trinitrophenol	1	7.625	7.810	-0.185	375214	2.50	2.50	a
8 RDX	1	8.379	8.437	-0.058	515189	2.50	2.34	
9 Nitrobenzene	1	10.945	10.983	-0.038	948495	2.50	2.52	
\$ 10 1,2-Dinitrobenzene	1	11.765	11.797	-0.032	652397	2.50	2.49	
11 3,5-Dinitroaniline	1	13.438	13.470	-0.032	1080802	2.50	2.48	
12 1,3-Dinitrobenzene	1	13.798	13.823	-0.025	1473755	2.50	2.52	
13 Nitroglycerin	2	14.472	14.477	-0.005	3135554	25.0	24.5	
14 o-Nitrotoluene	1	14.985	14.990	-0.005	592052	2.50	2.51	
16 p-Nitrotoluene	1	15.212	15.223	-0.011	539999	2.50	2.55	
17 4-Amino-2,6-dinitrotoluene	1	15.552	15.557	-0.005	700817	2.50	2.52	
18 m-Nitrotoluene	1	16.045	16.043	0.002	641382	2.50	2.48	
19 2-Amino-4,6-dinitrotoluene	1	16.292	16.310	-0.018	954621	2.50	2.45	
20 1,3,5-Trinitrobenzene	1	16.525	16.537	-0.012	1090844	2.50	2.57	
21 2,6-Dinitrotoluene	1	17.652	17.657	-0.005	687201	2.50	2.41	
22 2,4-Dinitrotoluene	1	18.085	18.090	-0.005	1387324	2.50	2.44	
23 Tetryl	1	21.105	21.097	0.008	731459	2.50	2.58	M
24 2,4,6-Trinitrotoluene	1	21.985	21.977	0.008	1027908	2.50	2.47	M
25 PETN	2	23.492	23.457	0.035	3395717	25.0	25.0	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

8330IntermStk\_00082

Amount Added: 250.00

Units: uL

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100010.D

Injection Date: 10-Aug-2024 20:22:02

Instrument ID: CHHPLC\_X5

Operator ID: JZ

Lims ID: IC INT 9

Worklist Smp#: 10

Client ID:

Injection Vol: 100.0 ul

Dil. Factor: 1.0000

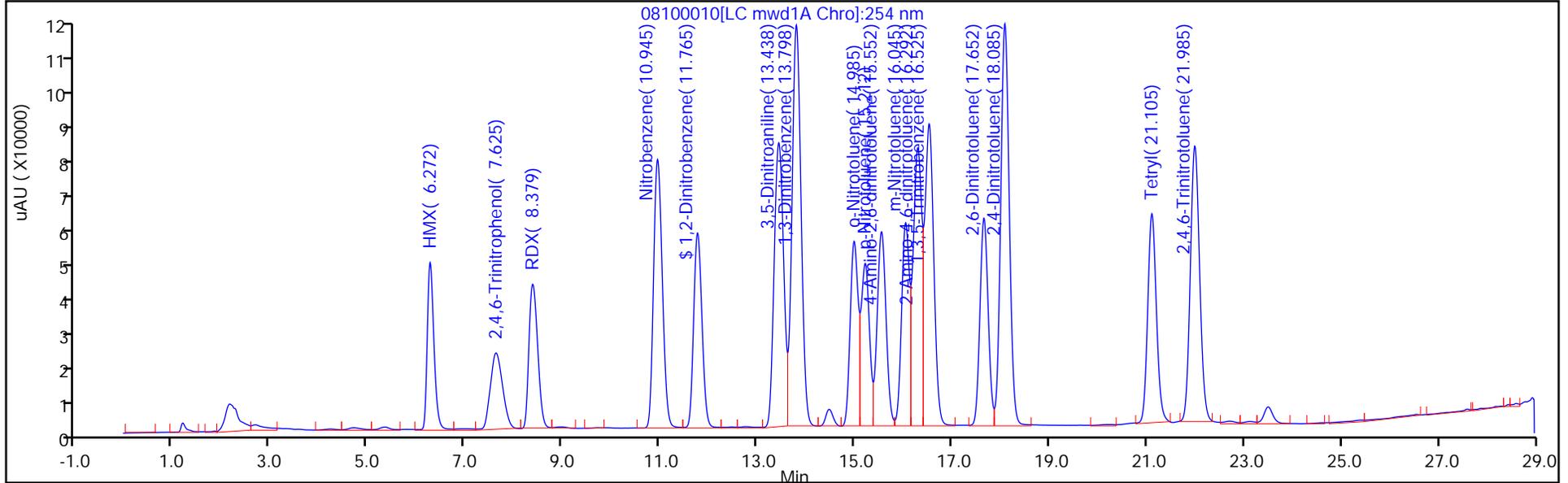
ALS Bottle#: 10

Method: 8330\_X5\_Luna

Limit Group: GCSV - 8330

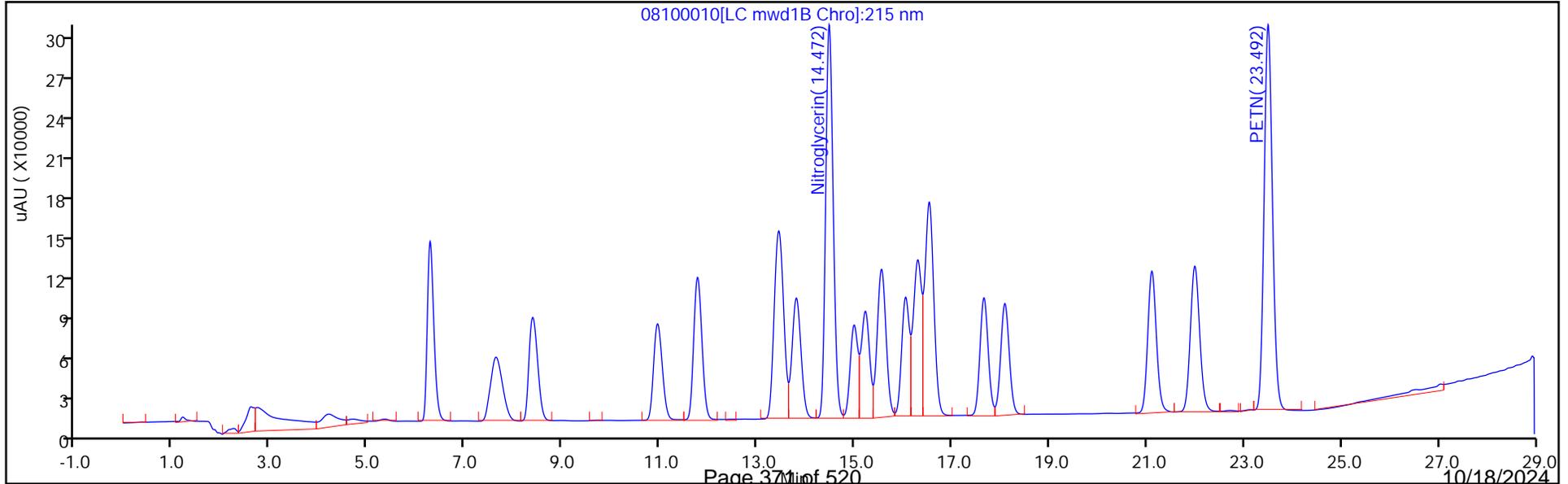
Column: Luna-Phenyl hexyl ( 4.60 mm)

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

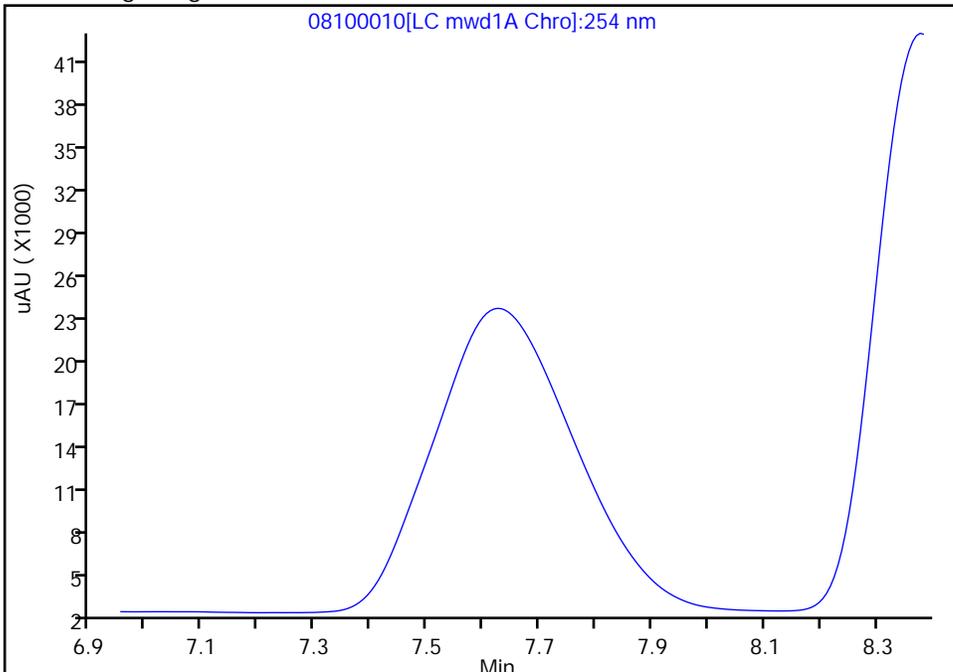
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Injection Date: 10-Aug-2024 20:22:02 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 9  
Client ID:  
Operator ID: JZ ALS Bottle#: 10 Worklist Smp#: 10  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

7,2,4,6-Trinitrophenol, CAS: 88-89-1

Signal: 1

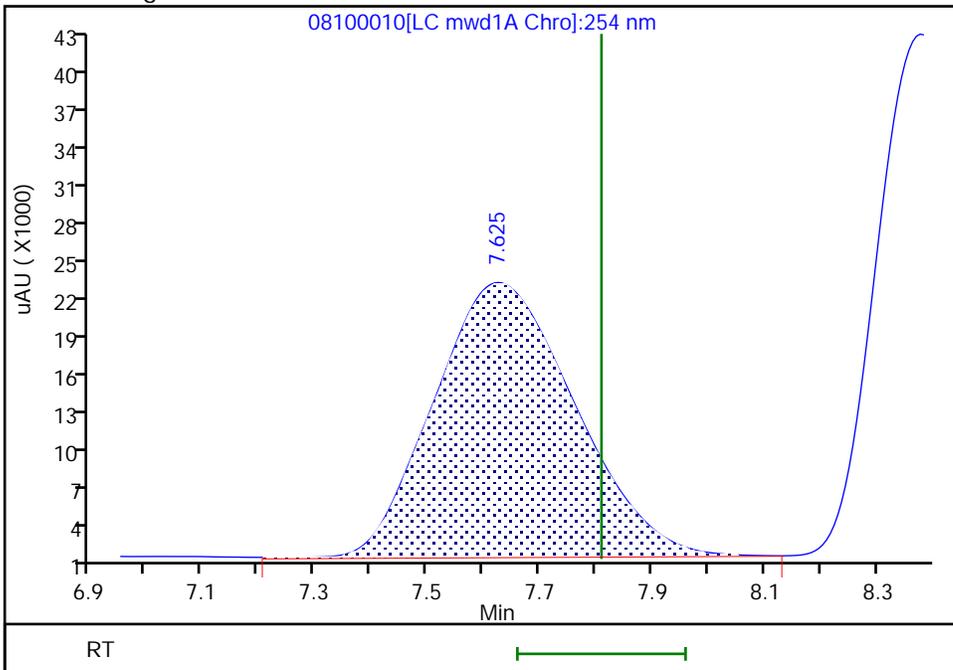
Not Detected  
Expected RT: 7.81

Processing Integration Results



RT: 7.63  
Area: 375214  
Amount: 2.503773  
Amount Units: ug/ml

Manual Integration Results



Reviewer: LV5D, 13-Aug-2024 13:45:56 -06:00:00 (UTC)

Audit Action: Assigned Compound ID

Audit Reason: Peak assignment corrected

Eurofins Denver

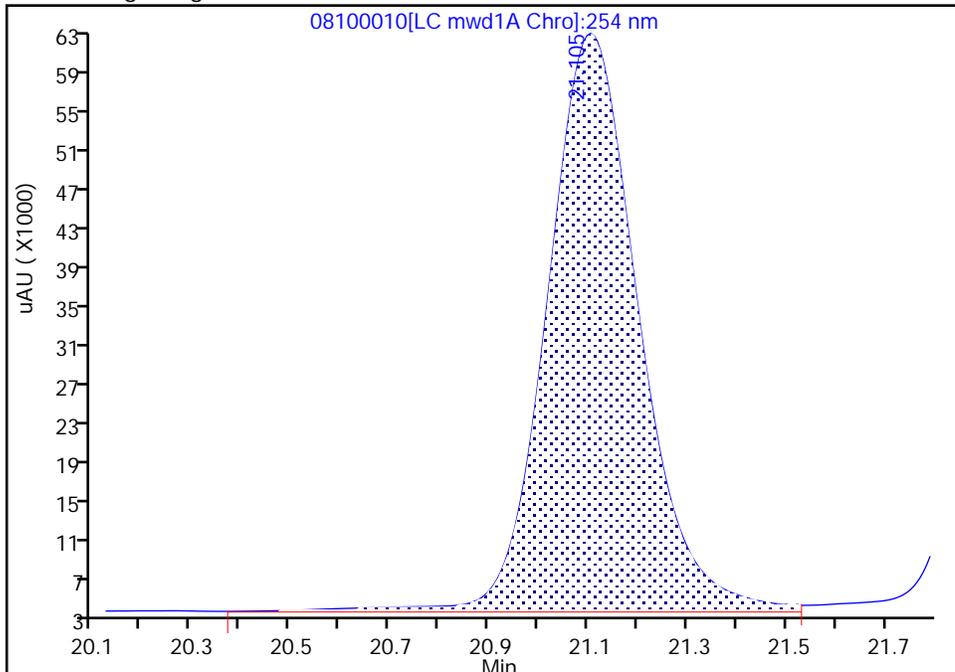
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100010.D  
Injection Date: 10-Aug-2024 20:22:02 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 9  
Client ID:  
Operator ID: JZ ALS Bottle#: 10 Worklist Smp#: 10  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

23 Tetryl, CAS: 479-45-8

Signal: 1

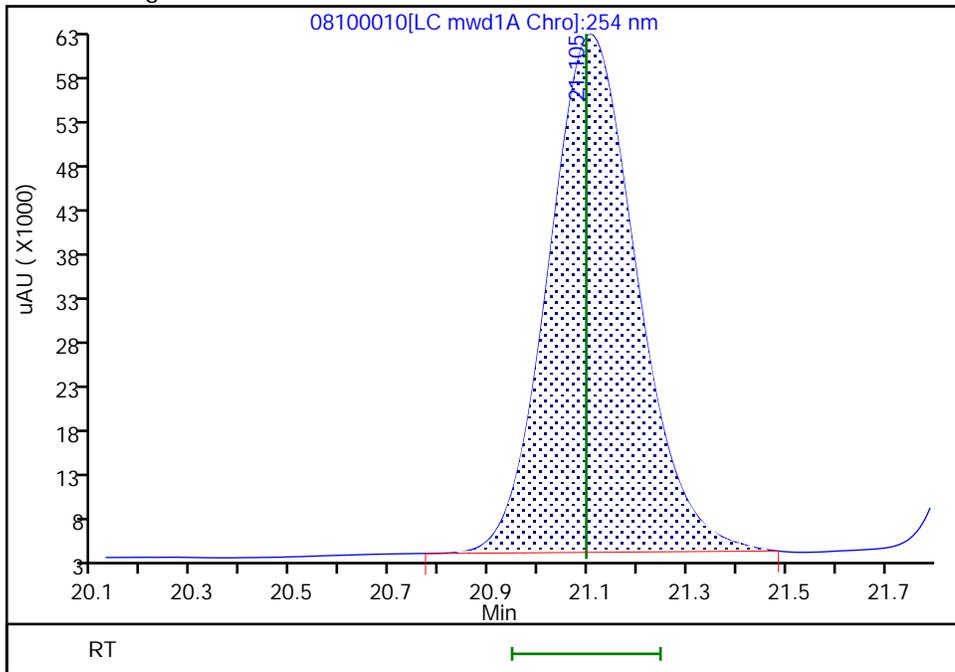
RT: 21.11  
Area: 772503  
Amount: 2.511632  
Amount Units: ug/ml

Processing Integration Results



RT: 21.11  
Area: 731459  
Amount: 2.581582  
Amount Units: ug/ml

Manual Integration Results



Reviewer: LV5D, 13-Aug-2024 15:16:52 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Denver

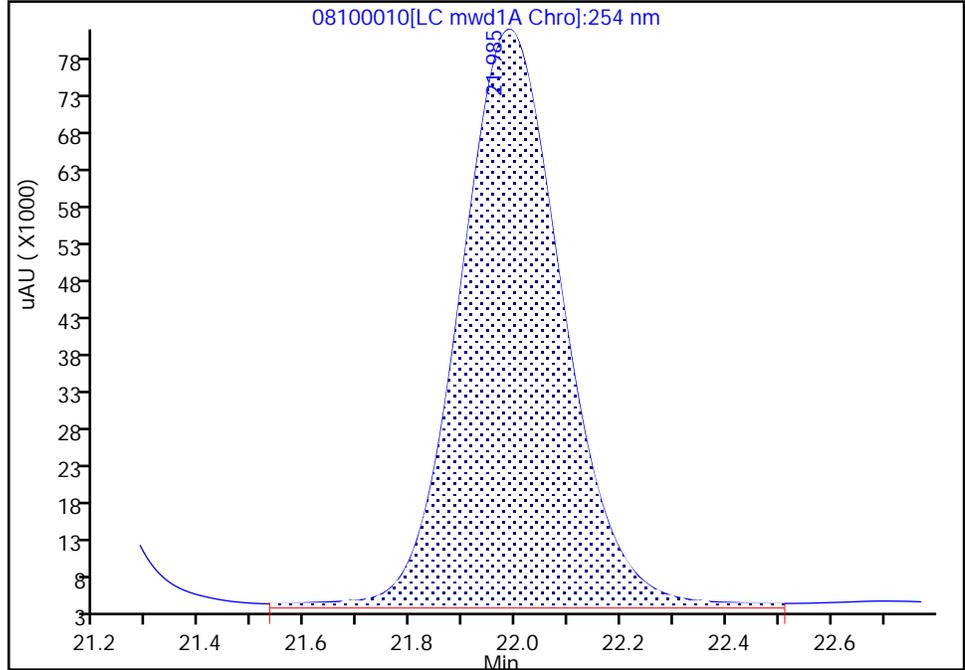
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100010.D  
Injection Date: 10-Aug-2024 20:22:02 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 9  
Client ID:  
Operator ID: JZ ALS Bottle#: 10 Worklist Smp#: 10  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

24 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

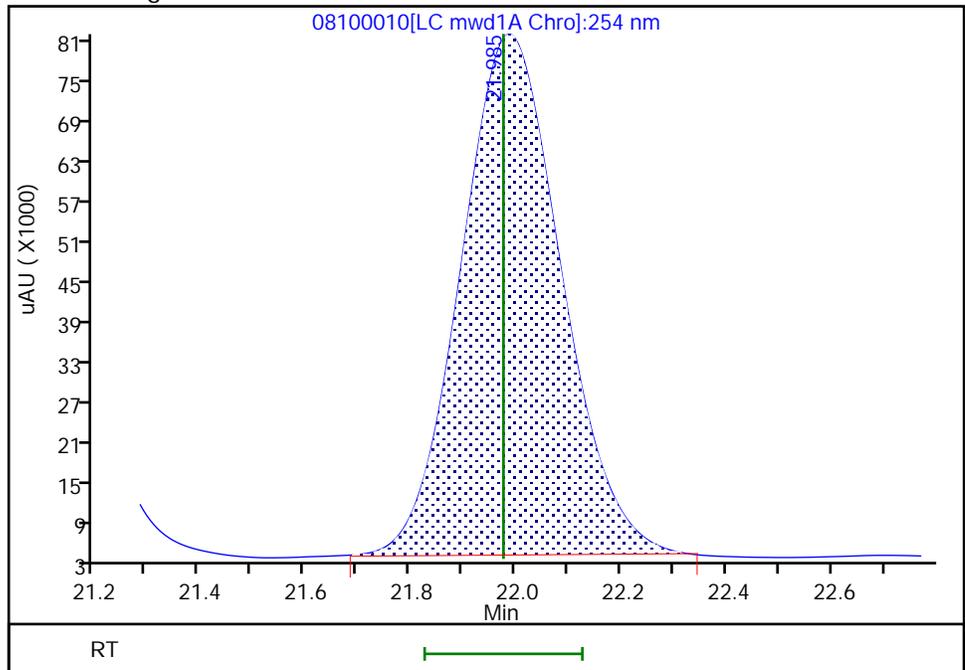
RT: 21.99  
Area: 1083310  
Amount: 2.337258  
Amount Units: ug/ml

Processing Integration Results



RT: 21.99  
Area: 1027908  
Amount: 2.469603  
Amount Units: ug/ml

Manual Integration Results



Reviewer: LV5D, 13-Aug-2024 15:11:03 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Denver  
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100011.D  
 Lims ID: IC INT 8  
 Client ID:  
 Sample Type: IC Calib Level: 8  
 Inject. Date: 10-Aug-2024 20:57:00 ALS Bottle#: 11 Worklist Smp#: 11  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: IC INT 8  
 Operator ID: JZ Instrument ID: CHHPLC\_X5  
 Sublist: chrom-8330\_X5\_Luna\*sub7  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\8330\_X5\_Luna.m  
 Limit Group: GCSV - 8330  
 Last Update: 13-Aug-2024 15:40:38 Calib Date: 11-Aug-2024 06:16:04  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100027.D  
 Column 1 : Luna-Phenyl hexyl ( 4.60 mm) Det: LC mwd1A, 254 nm  
 Process Host: CTX1604

First Level Reviewer: LV5D Date: 13-Aug-2024 15:11:33

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
5 HMX	1	6.309	6.324	-0.015	175376	1.00	0.9725	
7 2,4,6-Trinitrophenol	1	7.756	7.810	-0.054	146979	1.00	0.9808	a
8 RDX	1	8.436	8.437	-0.001	202487	1.00	0.9189	
9 Nitrobenzene	1	10.982	10.983	-0.001	369980	1.00	0.9815	
\$ 10 1,2-Dinitrobenzene	1	11.802	11.797	0.005	256759	1.00	0.9782	
11 3,5-Dinitroaniline	1	13.476	13.470	0.006	429142	1.00	0.9840	
12 1,3-Dinitrobenzene	1	13.829	13.823	0.006	574265	1.00	0.9812	
13 Nitroglycerin	2	14.496	14.477	0.019	1234967	10.0	9.64	
14 o-Nitrotoluene	1	15.016	14.990	0.026	232656	1.00	0.9864	
16 p-Nitrotoluene	1	15.249	15.223	0.026	209764	1.00	0.99	
17 4-Amino-2,6-dinitrotoluene	1	15.589	15.557	0.032	273020	1.00	0.9800	
18 m-Nitrotoluene	1	16.076	16.043	0.033	255490	1.00	0.9894	
19 2-Amino-4,6-dinitrotoluene	1	16.336	16.310	0.026	378245	1.00	0.9713	
20 1,3,5-Trinitrobenzene	1	16.556	16.537	0.019	418932	1.00	0.9885	
21 2,6-Dinitrotoluene	1	17.689	17.657	0.032	270535	1.00	0.9503	
22 2,4-Dinitrotoluene	1	18.122	18.090	0.032	545089	1.00	0.9588	
23 Tetryl	1	21.136	21.097	0.039	286831	1.00	1.01	M
24 2,4,6-Trinitrotoluene	1	22.009	21.977	0.032	403353	1.00	0.9691	M
25 PETN	2	23.503	23.457	0.046	1337623	10.0	9.85	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

8330IntermStk\_00082

Amount Added: 100.00

Units: uL

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100011.D

Injection Date: 10-Aug-2024 20:57:00

Instrument ID: CHHPLC\_X5

Operator ID: JZ

Lims ID: IC INT 8

Worklist Smp#: 11

Client ID:

Injection Vol: 100.0 ul

Dil. Factor: 1.0000

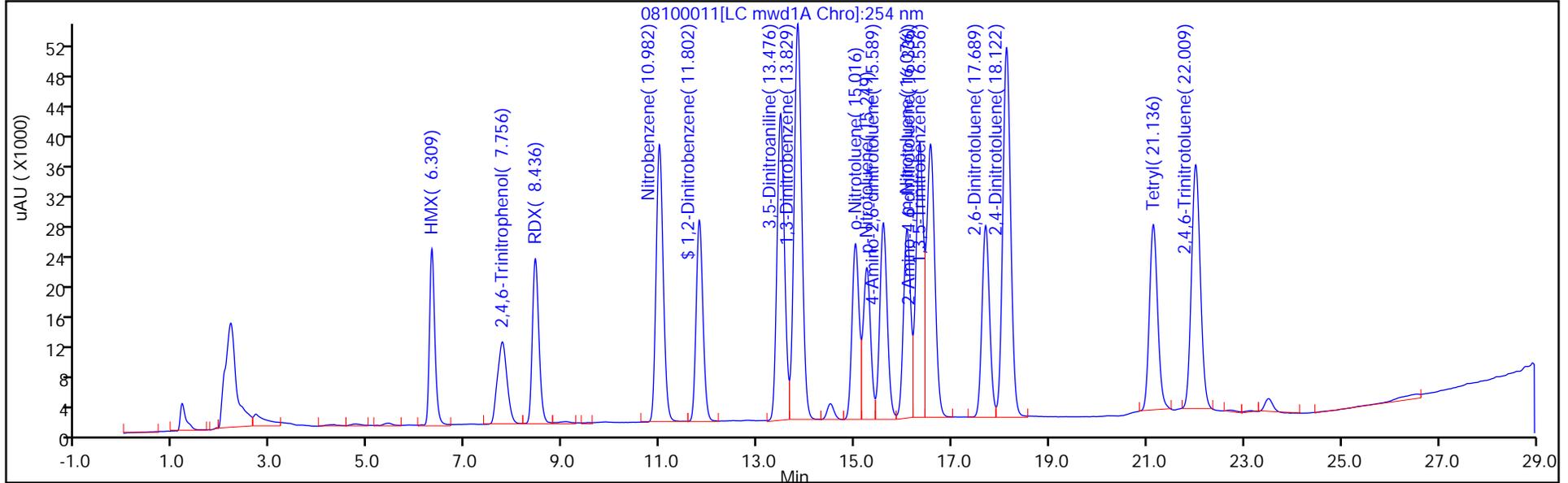
ALS Bottle#: 11

Method: 8330\_X5\_Luna

Limit Group: GCSV - 8330

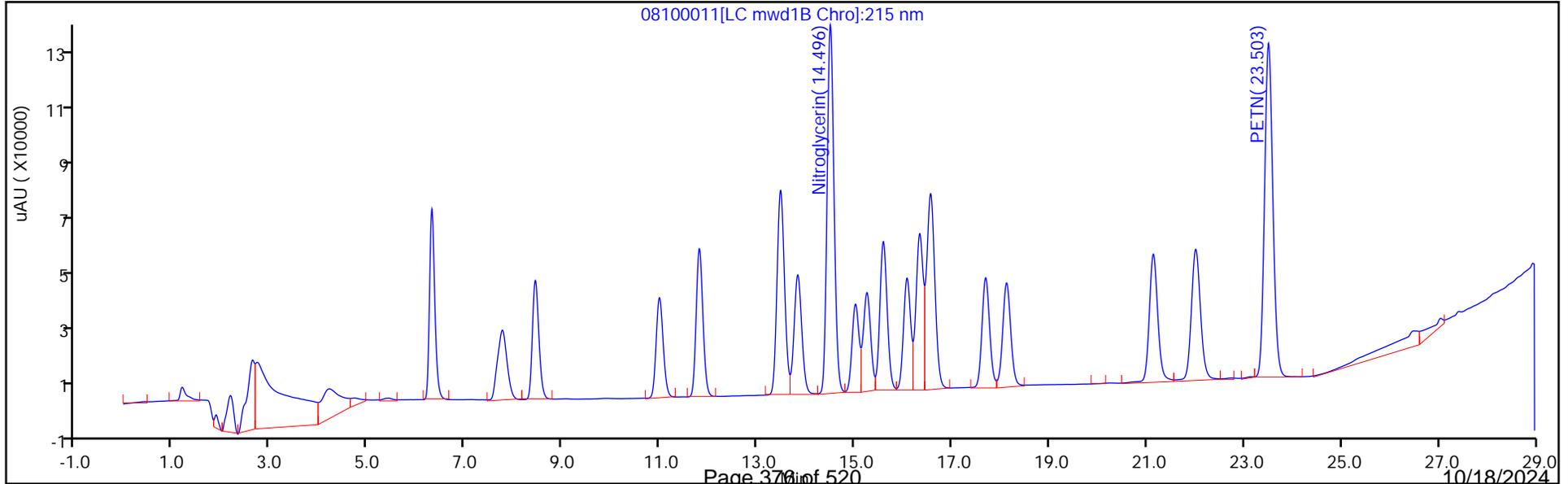
Column: Luna-Phenyl hexyl ( 4.60 mm)

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

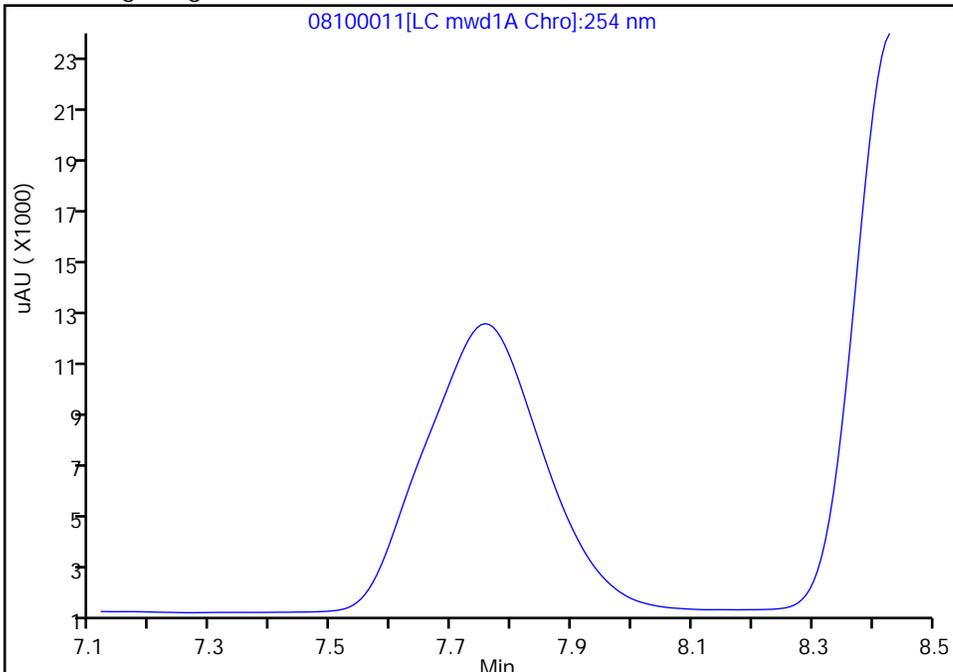
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100011.D  
Injection Date: 10-Aug-2024 20:57:00 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 8  
Client ID:  
Operator ID: JZ ALS Bottle#: 11 Worklist Smp#: 11  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

7 2,4,6-Trinitrophenol, CAS: 88-89-1

Signal: 1

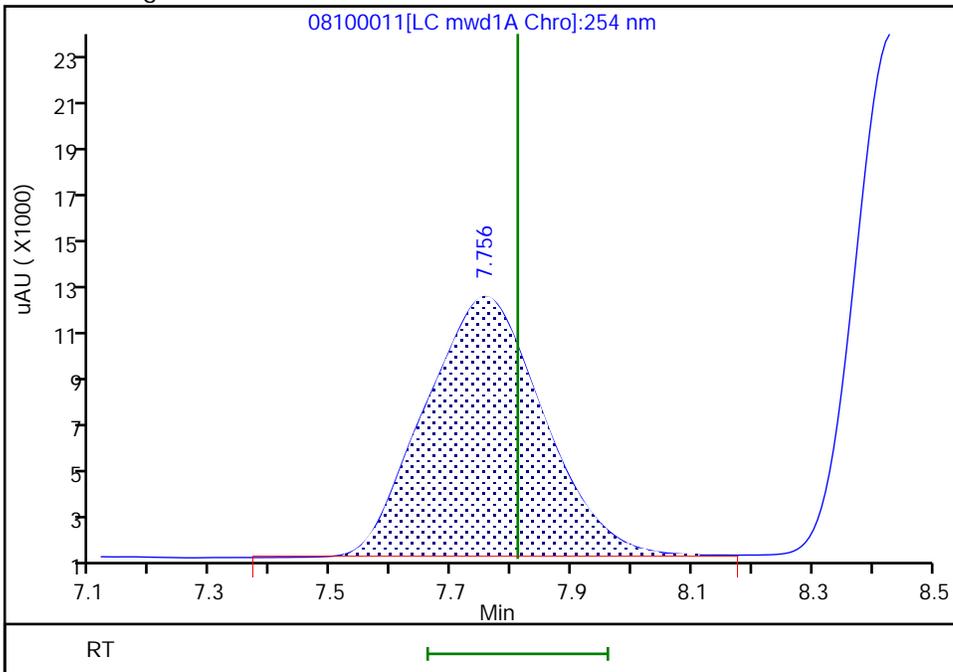
Not Detected  
Expected RT: 7.81

Processing Integration Results



Manual Integration Results

RT: 7.76  
Area: 146979  
Amount: 0.980779  
Amount Units: ug/ml



Reviewer: LV5D, 13-Aug-2024 15:11:18 -06:00:00 (UTC)

Audit Action: Assigned Compound ID

Audit Reason: Baseline Smoothing

Eurofins Denver

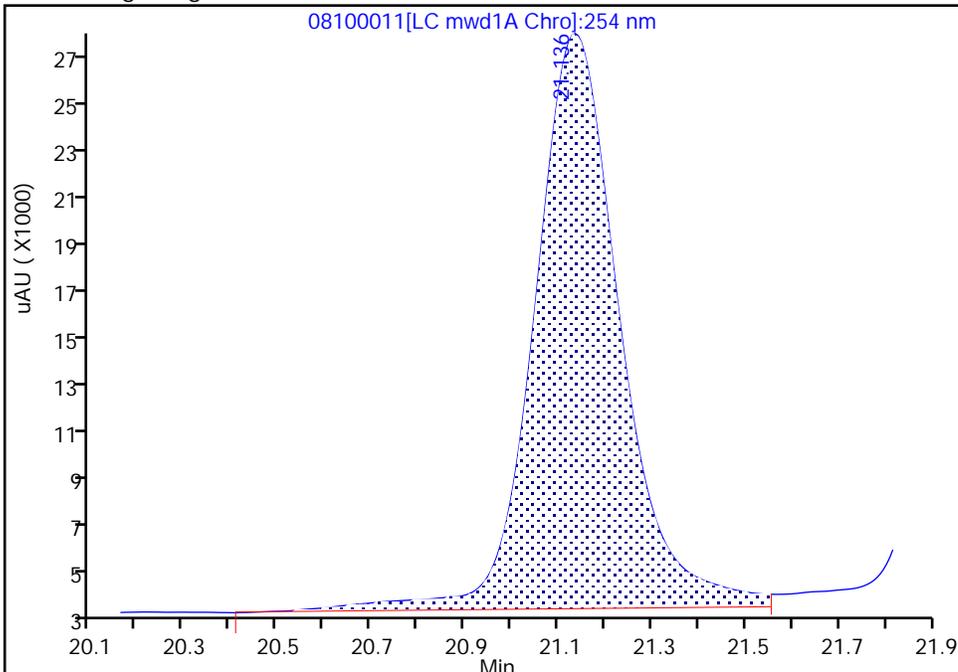
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100011.D  
Injection Date: 10-Aug-2024 20:57:00 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 8  
Client ID:  
Operator ID: JZ ALS Bottle#: 11 Worklist Smp#: 11  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

23 Tetryl, CAS: 479-45-8

Signal: 1

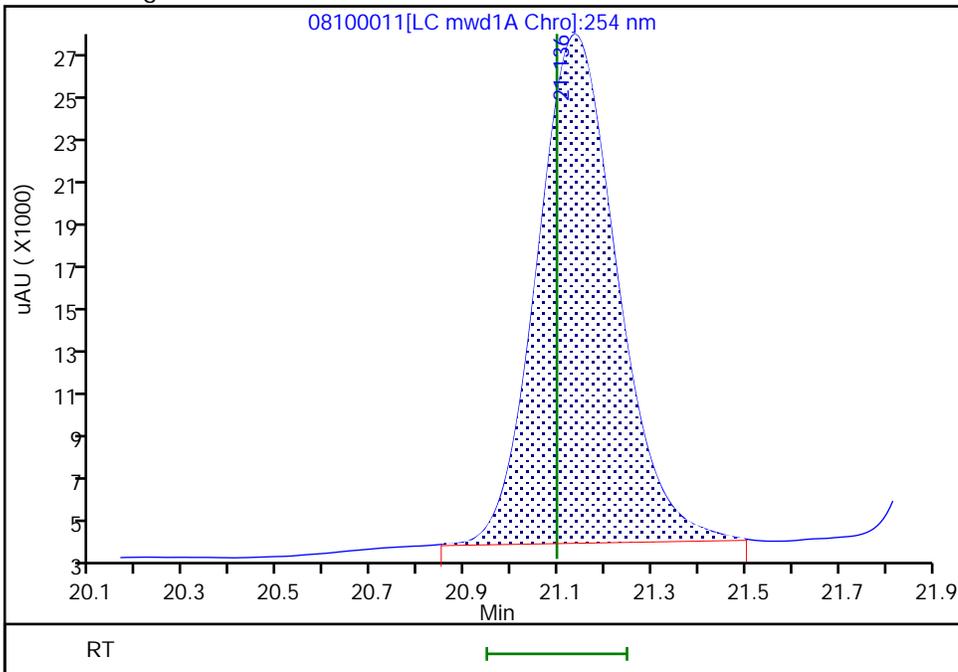
RT: 21.14  
Area: 316106  
Amount: 0.999552  
Amount Units: ug/ml

Processing Integration Results



RT: 21.14  
Area: 286831  
Amount: 1.012330  
Amount Units: ug/ml

Manual Integration Results



Reviewer: LV5D, 13-Aug-2024 15:16:56 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Denver

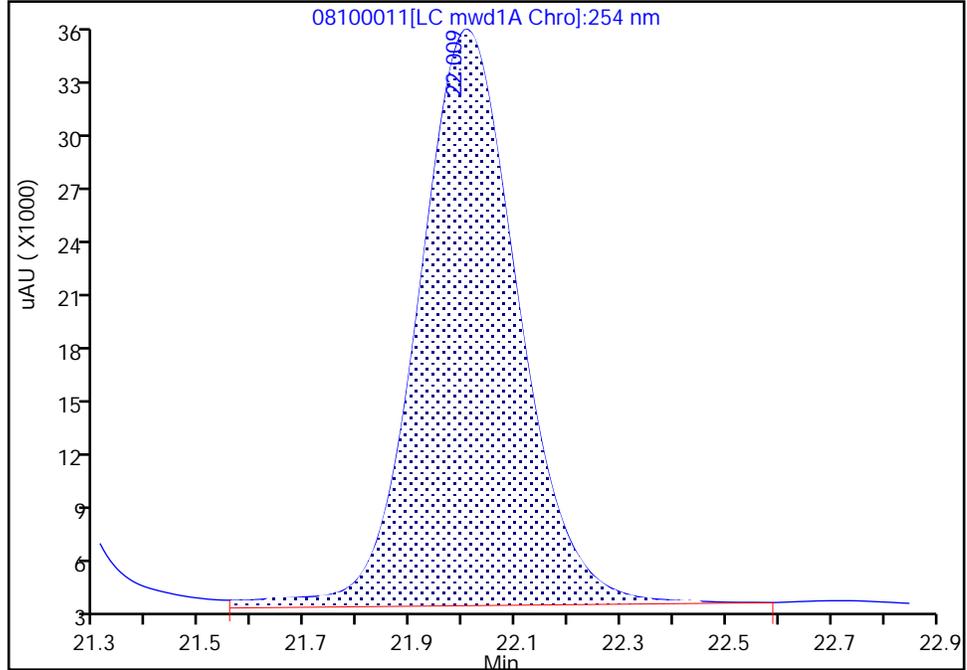
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100011.D  
Injection Date: 10-Aug-2024 20:57:00 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 8  
Client ID:  
Operator ID: JZ ALS Bottle#: 11 Worklist Smp#: 11  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

24 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

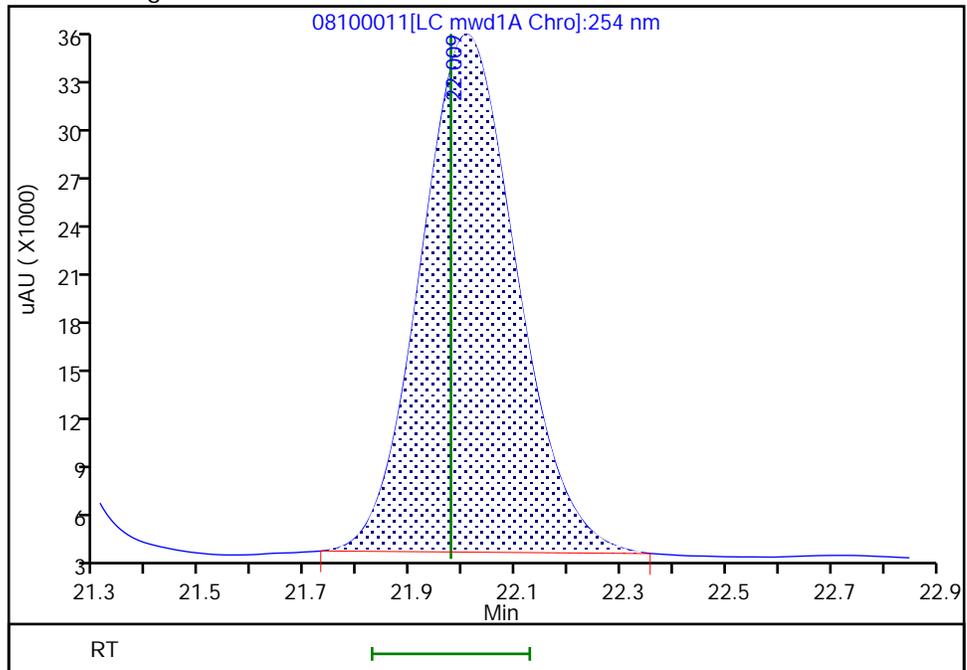
RT: 22.01  
Area: 428577  
Amount: 0.902485  
Amount Units: ug/ml

Processing Integration Results



RT: 22.01  
Area: 403353  
Amount: 0.969077  
Amount Units: ug/ml

Manual Integration Results



Reviewer: LV5D, 13-Aug-2024 15:11:31 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Denver  
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100012.D  
 Lims ID: IC INT 7  
 Client ID:  
 Sample Type: IC Calib Level: 7  
 Inject. Date: 10-Aug-2024 21:31:57 ALS Bottle#: 12 Worklist Smp#: 12  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: IC INT 7  
 Operator ID: JZ Instrument ID: CHHPLC\_X5  
 Sublist: chrom-8330\_X5\_Luna\*sub7  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\8330\_X5\_Luna.m  
 Limit Group: GCSV - 8330  
 Last Update: 13-Aug-2024 15:40:39 Calib Date: 11-Aug-2024 06:16:04  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100027.D  
 Column 1 : Luna-Phenyl hexyl ( 4.60 mm) Det: LC mwd1A, 254 nm  
 Process Host: CTX1604

First Level Reviewer: LV5D Date: 13-Aug-2024 15:11:47

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
5 HMX	1	6.325	6.324	0.001	122999	0.7000	0.6820	
7 2,4,6-Trinitrophenol	1	7.785	7.810	-0.025	102542	0.7000	0.6843	a
8 RDX	1	8.445	8.437	0.008	141434	0.7000	0.6418	
9 Nitrobenzene	1	10.999	10.983	0.016	260064	0.7000	0.6899	
\$ 10 1,2-Dinitrobenzene	1	11.819	11.797	0.022	180233	0.7000	0.6866	
11 3,5-Dinitroaniline	1	13.492	13.470	0.022	299884	0.7000	0.6875	
12 1,3-Dinitrobenzene	1	13.845	13.823	0.022	401028	0.7000	0.6852	
13 Nitroglycerin	2	14.512	14.477	0.035	864867	7.00	6.75	
14 o-Nitrotoluene	1	15.025	14.990	0.035	163156	0.7000	0.6917	
16 p-Nitrotoluene	1	15.259	15.223	0.036	146901	0.7000	0.6940	
17 4-Amino-2,6-dinitrotoluene	1	15.592	15.557	0.035	190219	0.7000	0.6828	
18 m-Nitrotoluene	1	16.079	16.043	0.036	177096	0.7000	0.6858	
19 2-Amino-4,6-dinitrotoluene	1	16.339	16.310	0.029	269908	0.7000	0.6931	
20 1,3,5-Trinitrobenzene	1	16.559	16.537	0.022	287991	0.7000	0.6796	
21 2,6-Dinitrotoluene	1	17.685	17.657	0.028	188559	0.7000	0.6624	
22 2,4-Dinitrotoluene	1	18.119	18.090	0.029	380534	0.7000	0.6694	
23 Tetryl	1	21.125	21.097	0.028	199110	0.7000	0.7027	M
24 2,4,6-Trinitrotoluene	1	22.012	21.977	0.035	282341	0.7000	0.6783	M
25 PETN	2	23.505	23.457	0.048	935188	7.00	6.89	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

8330IntermStk\_00082

Amount Added: 70.00

Units: uL

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100012.D

Injection Date: 10-Aug-2024 21:31:57

Instrument ID: CHHPLC\_X5

Operator ID: JZ

Lims ID: IC INT 7

Worklist Smp#: 12

Client ID:

Injection Vol: 100.0 ul

Dil. Factor: 1.0000

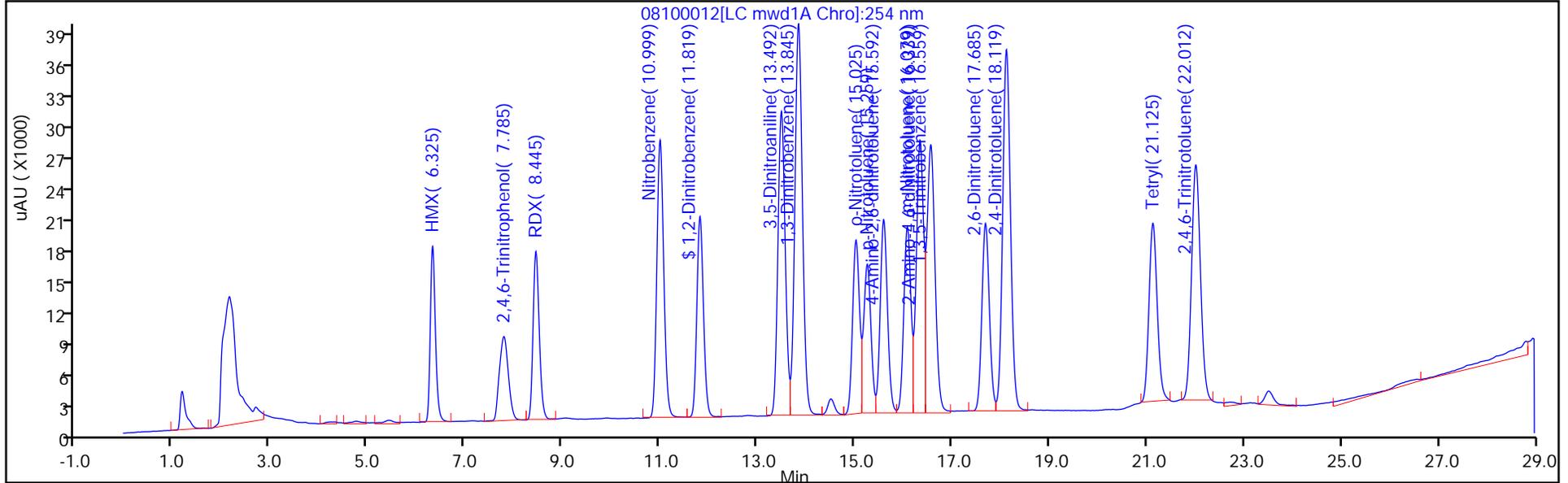
ALS Bottle#: 12

Method: 8330\_X5\_Luna

Limit Group: GCSV - 8330

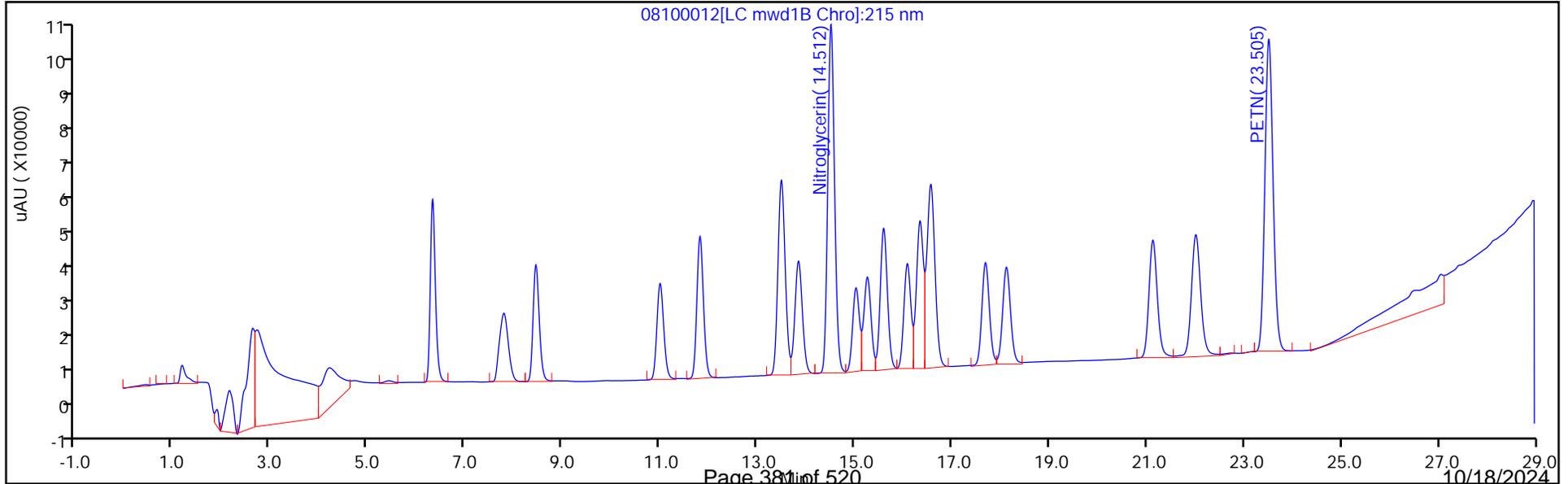
Column: Luna-Phenyl hexyl ( 4.60 mm)

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

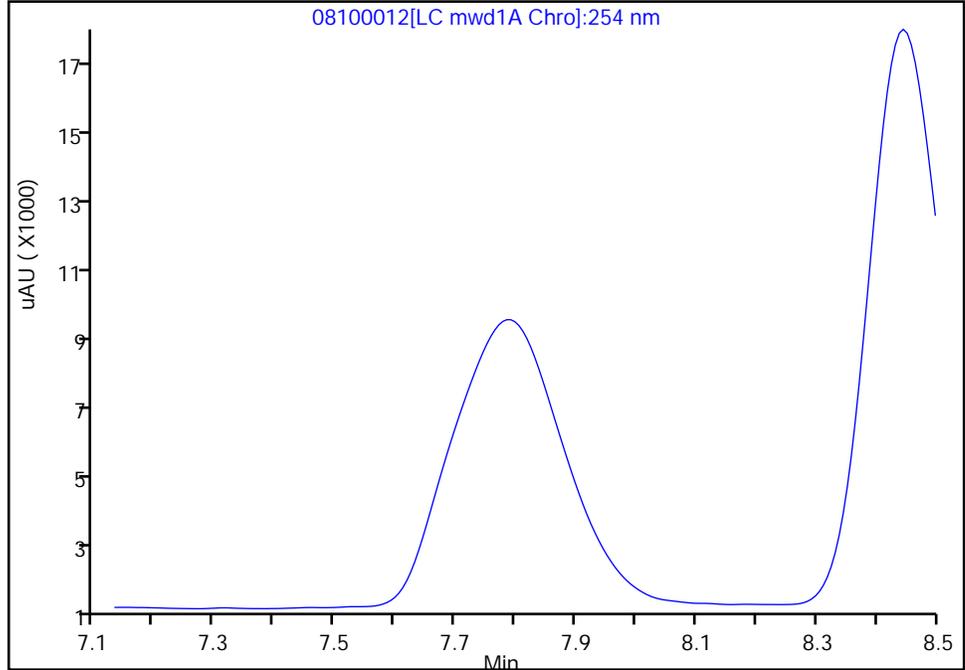
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100012.D  
Injection Date: 10-Aug-2024 21:31:57 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 7  
Client ID:  
Operator ID: JZ ALS Bottle#: 12 Worklist Smp#: 12  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

7 2,4,6-Trinitrophenol, CAS: 88-89-1

Signal: 1

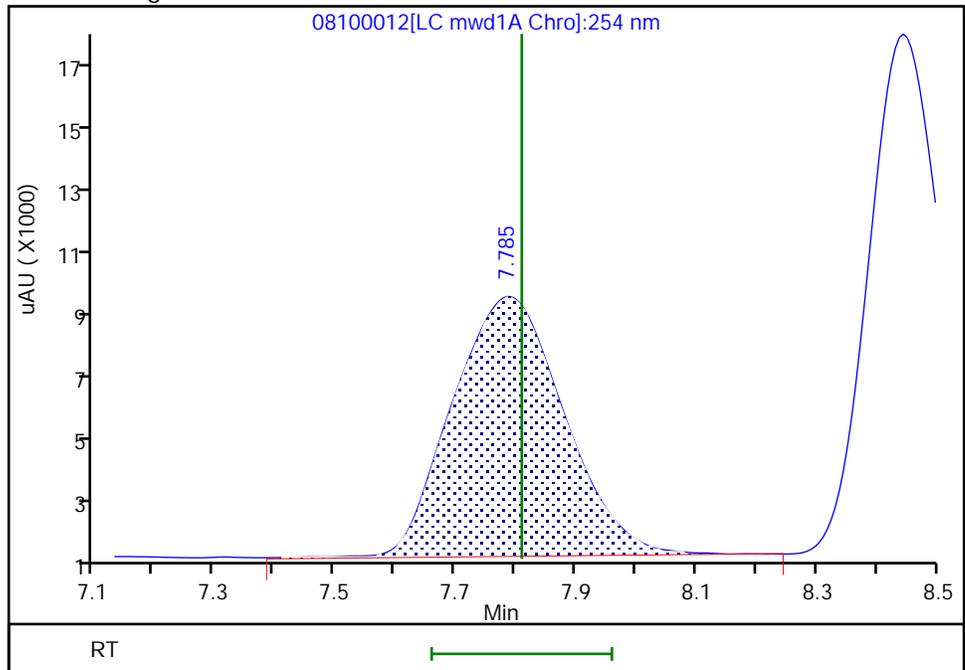
Not Detected  
Expected RT: 7.81

Processing Integration Results



RT: 7.79  
Area: 102542  
Amount: 0.684255  
Amount Units: ug/ml

Manual Integration Results



Reviewer: LV5D, 13-Aug-2024 15:11:46 -06:00:00 (UTC)

Audit Action: Assigned Compound ID

Audit Reason: Baseline Smoothing

Eurofins Denver

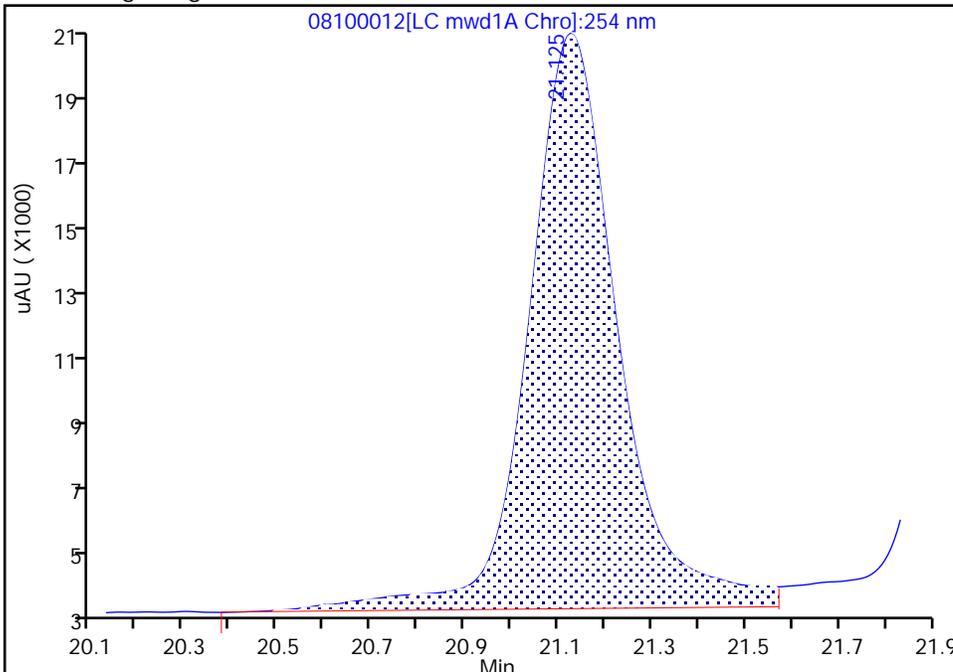
Data File:	\\chromfs\Denver\ChromData\CHHPLC_X5\20240810-136368.b\08100012.D		
Injection Date:	10-Aug-2024 21:31:57	Instrument ID:	CHHPLC_X5
Lims ID:	IC INT 7		
Client ID:			
Operator ID:	JZ	ALS Bottle#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330
Column:	Luna-Phenyl hexyl ( 4.60 mm)	Detector:	LC mwd1A, 254 nm
		Worklist Smp#:	12

23 Tetryl, CAS: 479-45-8

Signal: 1

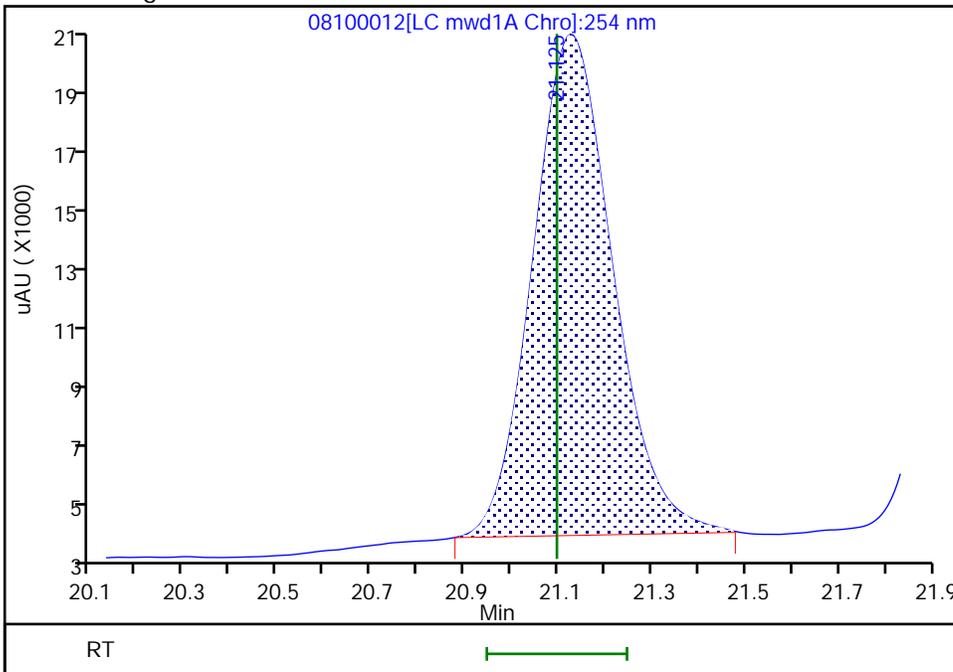
RT: 21.13  
 Area: 234580  
 Amount: 0.728938  
 Amount Units: ug/ml

Processing Integration Results



RT: 21.13  
 Area: 199110  
 Amount: 0.702731  
 Amount Units: ug/ml

Manual Integration Results



Reviewer: LV5D, 13-Aug-2024 15:11:39 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Denver

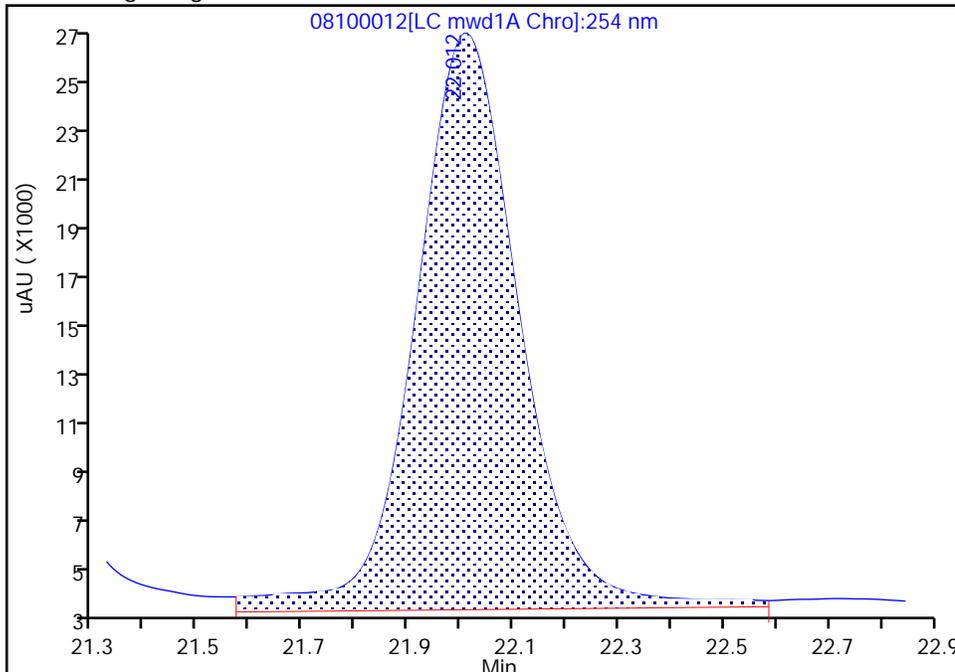
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100012.D  
Injection Date: 10-Aug-2024 21:31:57 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 7  
Client ID:  
Operator ID: JZ ALS Bottle#: 12 Worklist Smp#: 12  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

24 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

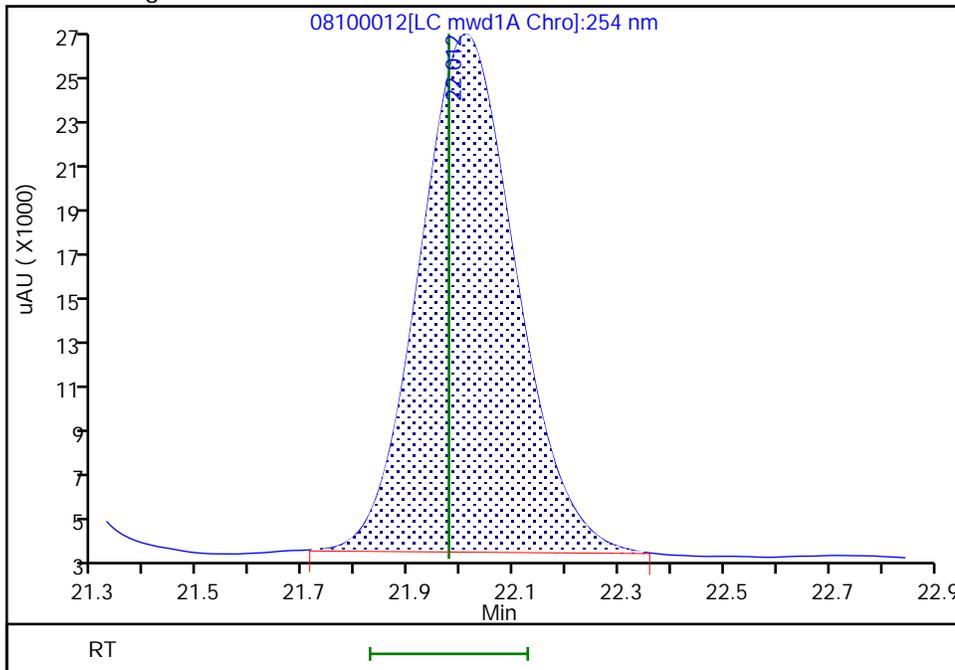
RT: 22.01  
Area: 317355  
Amount: 0.661382  
Amount Units: ug/ml

Processing Integration Results



RT: 22.01  
Area: 282341  
Amount: 0.678339  
Amount Units: ug/ml

Manual Integration Results



Reviewer: LV5D, 13-Aug-2024 15:11:37 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Denver  
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100013.D  
 Lims ID: IC INT 6  
 Client ID:  
 Sample Type: IC Calib Level: 6  
 Inject. Date: 10-Aug-2024 22:06:53 ALS Bottle#: 13 Worklist Smp#: 13  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: IC INT 6  
 Operator ID: JZ Instrument ID: CHHPLC\_X5  
 Sublist: chrom-8330\_X5\_Luna\*sub7  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\8330\_X5\_Luna.m  
 Limit Group: GCSV - 8330  
 Last Update: 13-Aug-2024 15:40:40 Calib Date: 11-Aug-2024 06:16:04  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100027.D  
 Column 1 : Luna-Phenyl hexyl ( 4.60 mm) Det: LC mwd1A, 254 nm  
 Process Host: CTX1604

First Level Reviewer: LV5D Date: 13-Aug-2024 15:12:08

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
5 HMX	1	6.334	6.324	0.010	71733	0.4000	0.3978	
7 2,4,6-Trinitrophenol	1	7.827	7.810	0.017	59211	0.4000	0.3951	a
8 RDX	1	8.467	8.437	0.030	82649	0.4000	0.3751	
9 Nitrobenzene	1	11.020	10.983	0.037	150269	0.4000	0.3987	
\$ 10 1,2-Dinitrobenzene	1	11.840	11.797	0.043	104490	0.4000	0.3981	
11 3,5-Dinitroaniline	1	13.520	13.470	0.050	174587	0.4000	0.4001	
12 1,3-Dinitrobenzene	1	13.874	13.823	0.051	233512	0.4000	0.3990	
13 Nitroglycerin	2	14.540	14.477	0.063	510574	4.00	3.98	
14 o-Nitrotoluene	1	15.054	14.990	0.064	94438	0.4000	0.4004	
16 p-Nitrotoluene	1	15.287	15.223	0.064	85068	0.4000	0.4019	
17 4-Amino-2,6-dinitrotoluene	1	15.627	15.557	0.070	111348	0.4000	0.3997	
18 m-Nitrotoluene	1	16.114	16.043	0.071	103187	0.4000	0.3996	
19 2-Amino-4,6-dinitrotoluene	1	16.374	16.310	0.064	157134	0.4000	0.4035	
20 1,3,5-Trinitrobenzene	1	16.600	16.537	0.063	168114	0.4000	0.3967	
21 2,6-Dinitrotoluene	1	17.727	17.657	0.070	110288	0.4000	0.3874	
22 2,4-Dinitrotoluene	1	18.160	18.090	0.070	222196	0.4000	0.3908	
23 Tetryl	1	21.174	21.097	0.077	116189	0.4000	0.4101	M
24 2,4,6-Trinitrotoluene	1	22.047	21.977	0.070	164300	0.4000	0.3947	M
25 PETN	2	23.534	23.457	0.077	543090	4.00	4.00	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

8330IntermStk\_00082

Amount Added: 40.00

Units: uL

Report Date: 13-Aug-2024 15:40:40

Chrom Revision: 2.3 16-Jul-2024 14:17:34

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100013.D

Injection Date: 10-Aug-2024 22:06:53

Instrument ID: CHHPLC\_X5

Operator ID: JZ

Lims ID: IC INT 6

Worklist Smp#: 13

Client ID:

Injection Vol: 100.0 ul

Dil. Factor: 1.0000

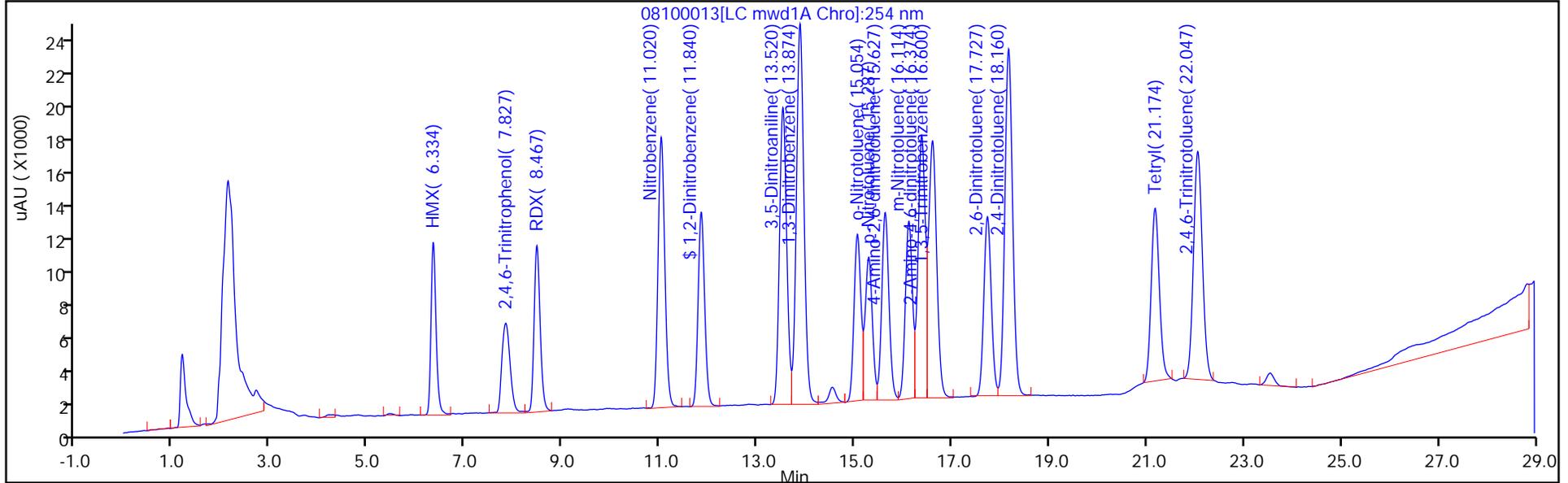
ALS Bottle#: 13

Method: 8330\_X5\_Luna

Limit Group: GCSV - 8330

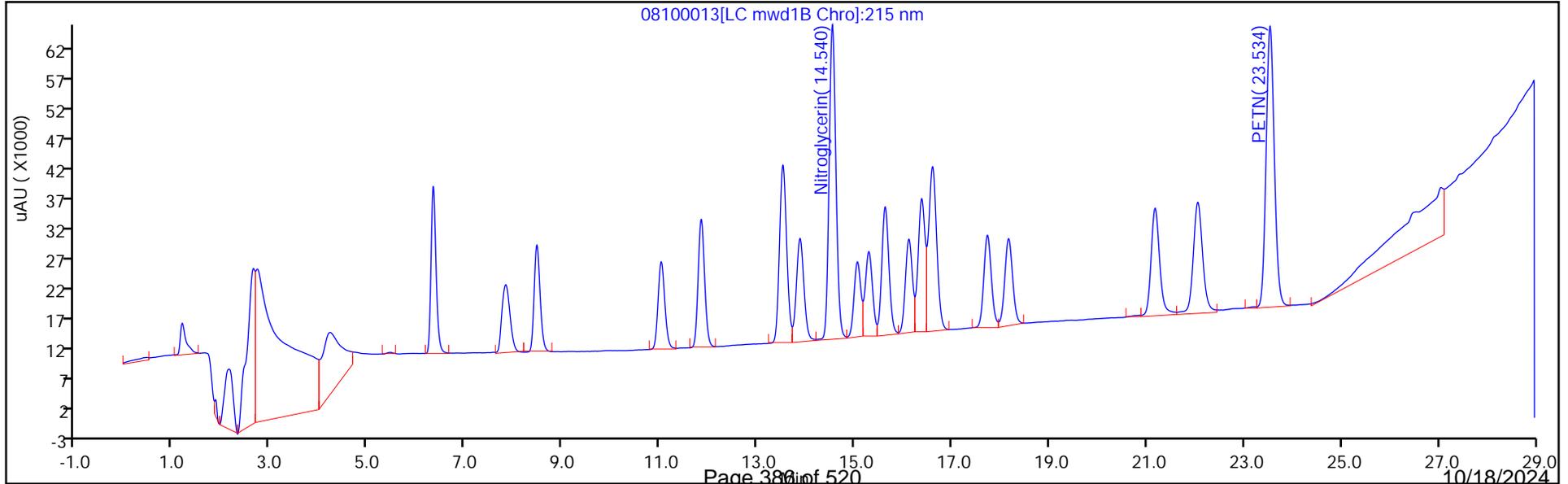
Column: Luna-Phenyl hexyl ( 4.60 mm)

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

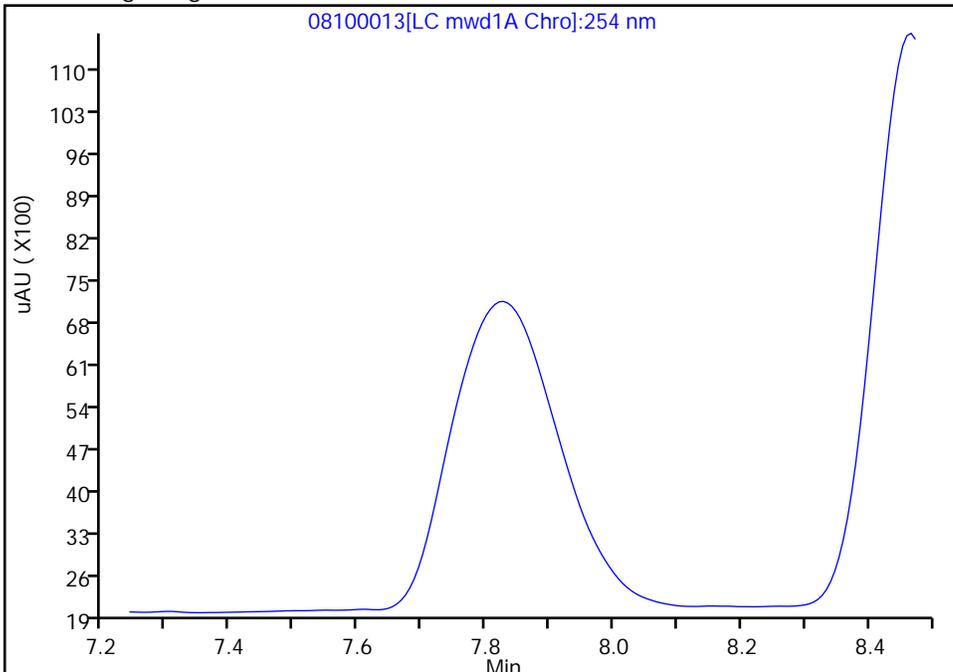
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100013.D  
Injection Date: 10-Aug-2024 22:06:53 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 6  
Client ID:  
Operator ID: JZ ALS Bottle#: 13 Worklist Smp#: 13  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

7 2,4,6-Trinitrophenol, CAS: 88-89-1

Signal: 1

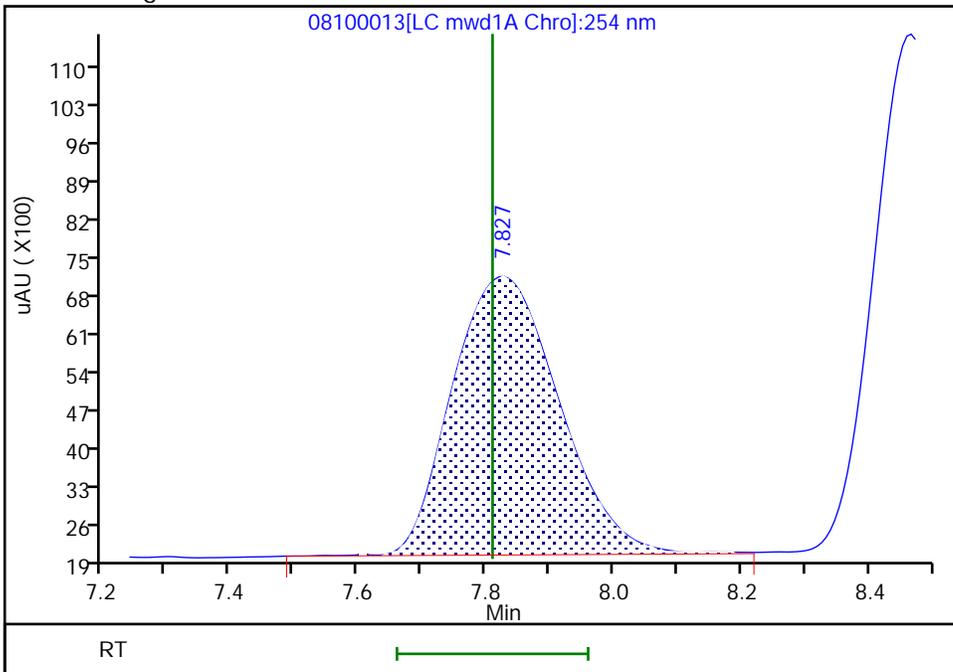
Not Detected  
Expected RT: 7.81

Processing Integration Results



RT: 7.83  
Area: 59211  
Amount: 0.395110  
Amount Units: ug/ml

Manual Integration Results



Eurofins Denver

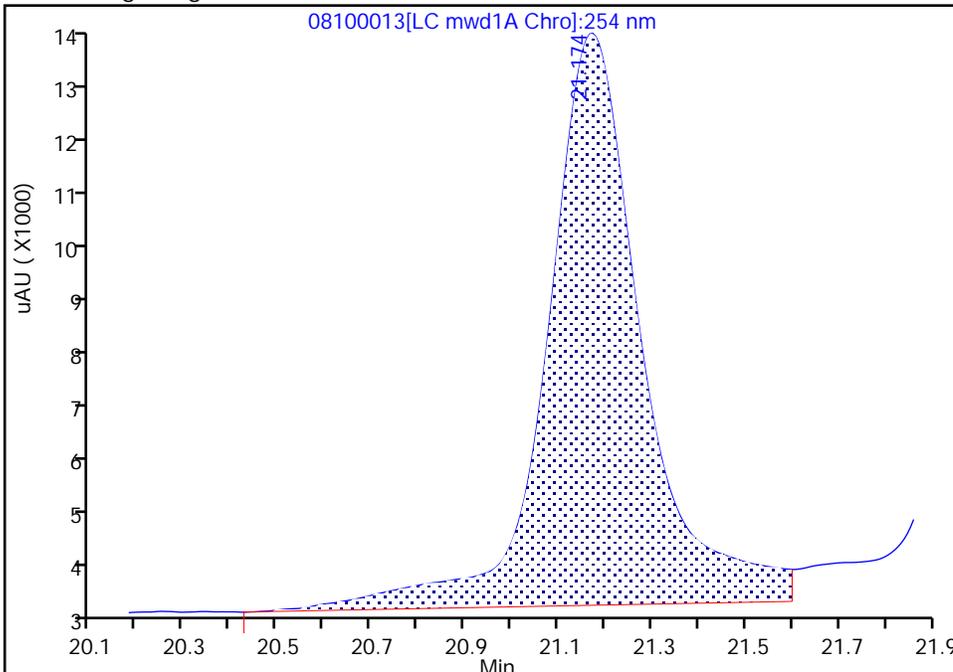
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100013.D  
Injection Date: 10-Aug-2024 22:06:53 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 6  
Client ID:  
Operator ID: JZ ALS Bottle#: 13 Worklist Smp#: 13  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

23 Tetryl, CAS: 479-45-8

Signal: 1

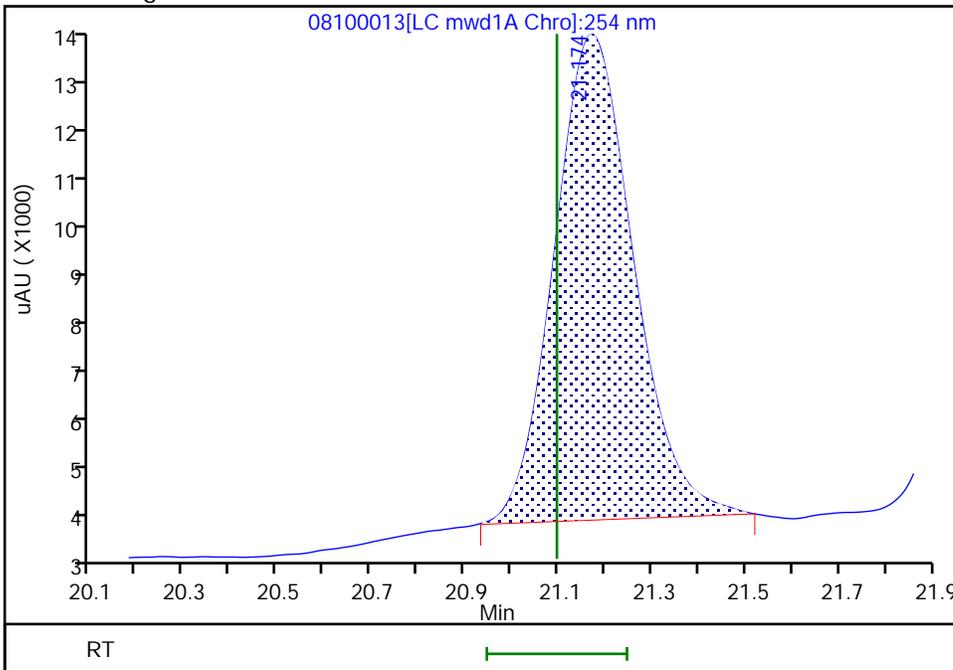
Processing Integration Results

RT: 21.17  
Area: 149013  
Amount: 0.434317  
Amount Units: ug/ml



Manual Integration Results

RT: 21.17  
Area: 116189  
Amount: 0.410073  
Amount Units: ug/ml



Reviewer: LV5D, 13-Aug-2024 15:12:03 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Denver

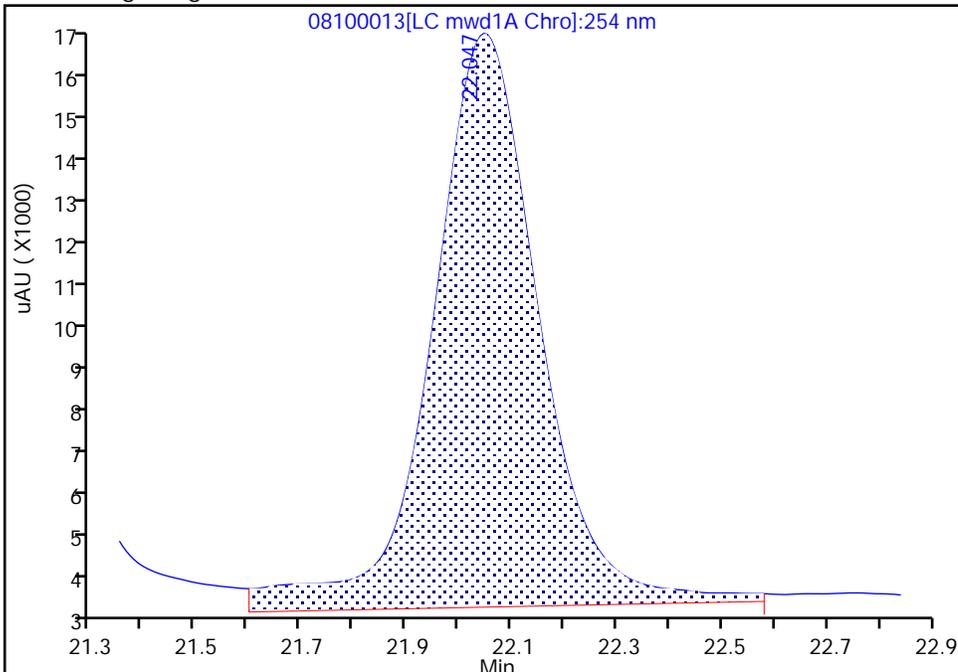
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Injection Date: 10-Aug-2024 22:06:53 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 6  
Client ID:  
Operator ID: JZ ALS Bottle#: 13 Worklist Smp#: 13  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

24 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

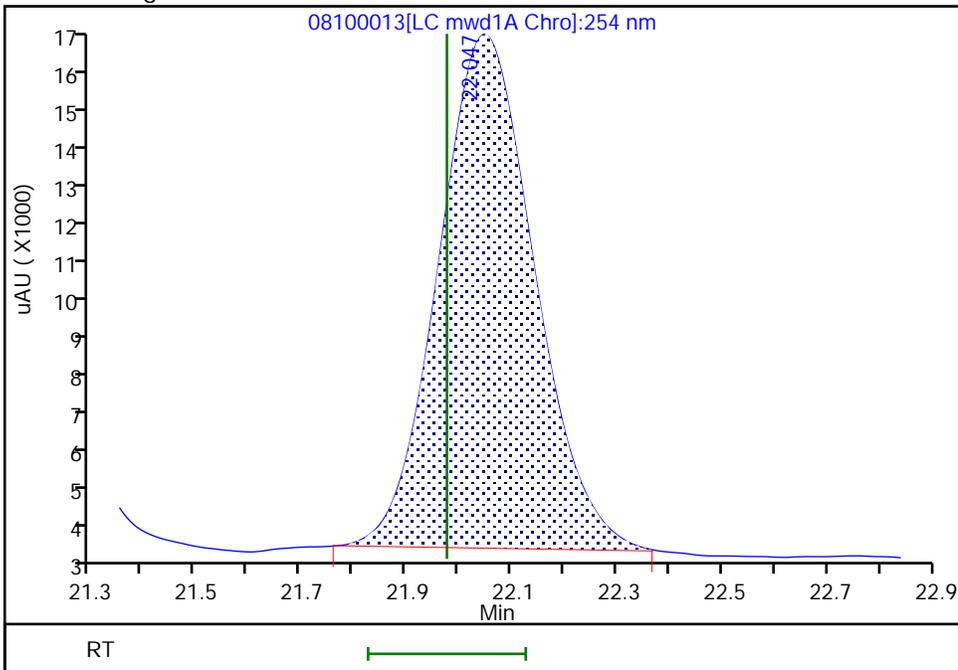
Processing Integration Results

RT: 22.05  
Area: 193878  
Amount: 0.391557  
Amount Units: ug/ml



Manual Integration Results

RT: 22.05  
Area: 164300  
Amount: 0.394739  
Amount Units: ug/ml



Reviewer: LV5D, 13-Aug-2024 15:12:06 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Denver  
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100014.D  
 Lims ID: IC INT 5  
 Client ID:  
 Sample Type: IC Calib Level: 5  
 Inject. Date: 10-Aug-2024 22:41:52 ALS Bottle#: 14 Worklist Smp#: 14  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: IC INT 5  
 Operator ID: JZ Instrument ID: CHHPLC\_X5  
 Sublist: chrom-8330\_X5\_Luna\*sub7  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\8330\_X5\_Luna.m  
 Limit Group: GCSV - 8330  
 Last Update: 13-Aug-2024 15:40:41 Calib Date: 11-Aug-2024 06:16:04  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100027.D  
 Column 1 : Luna-Phenyl hexyl ( 4.60 mm) Det: LC mwd1A, 254 nm  
 Process Host: CTX1604

First Level Reviewer: LV5D Date: 13-Aug-2024 15:12:24

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
5 HMX	1	6.324	6.324	0.000	46973	0.2500	0.2605	
7 2,4,6-Trinitrophenol	1	7.810	7.810	0.000	38121	0.2500	0.2544	a
8 RDX	1	8.437	8.437	0.000	53547	0.2500	0.2430	
9 Nitrobenzene	1	10.983	10.983	0.000	96842	0.2500	0.2569	
\$ 10 1,2-Dinitrobenzene	1	11.797	11.797	0.000	68837	0.2500	0.2622	
11 3,5-Dinitroaniline	1	13.470	13.470	0.000	113048	0.2500	0.2589	
12 1,3-Dinitrobenzene	1	13.823	13.823	0.000	150469	0.2500	0.2571	
13 Nitroglycerin	2	14.477	14.477	0.000	331233	2.50	2.58	
14 o-Nitrotoluene	1	14.990	14.990	0.000	59944	0.2500	0.2541	
16 p-Nitrotoluene	1	15.223	15.223	0.000	54841	0.2500	0.2591	
17 4-Amino-2,6-dinitrotoluene	1	15.557	15.557	0.000	71808	0.2500	0.2578	
18 m-Nitrotoluene	1	16.043	16.043	0.000	66388	0.2500	0.2571	
19 2-Amino-4,6-dinitrotoluene	1	16.310	16.310	0.000	101067	0.2500	0.2595	
20 1,3,5-Trinitrobenzene	1	16.537	16.537	0.000	107982	0.2500	0.2548	
21 2,6-Dinitrotoluene	1	17.657	17.657	0.000	71960	0.2500	0.2528	
22 2,4-Dinitrotoluene	1	18.090	18.090	0.000	143677	0.2500	0.2527	
23 Tetryl	1	21.097	21.097	0.000	75422	0.2500	0.2662	M
24 2,4,6-Trinitrotoluene	1	21.977	21.977	0.000	105934	0.2500	0.2545	M
25 PETN	2	23.457	23.457	0.000	352162	2.50	2.59	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

8330IntermStk\_00082

Amount Added: 25.00

Units: uL

Report Date: 13-Aug-2024 15:40:41

Chrom Revision: 2.3 16-Jul-2024 14:17:34

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100014.D

Injection Date: 10-Aug-2024 22:41:52

Instrument ID: CHHPLC\_X5

Operator ID: JZ

Lims ID: IC INT 5

Worklist Smp#: 14

Client ID:

Injection Vol: 100.0 ul

Dil. Factor: 1.0000

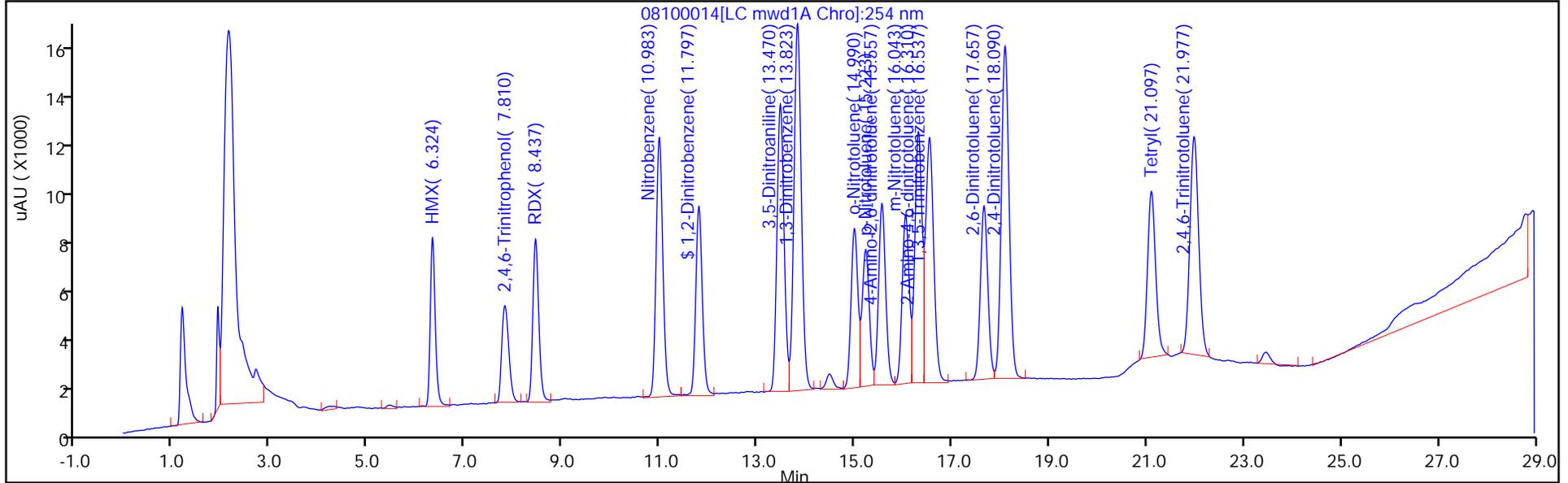
ALS Bottle#: 14

Method: 8330\_X5\_Luna

Limit Group: GCSV - 8330

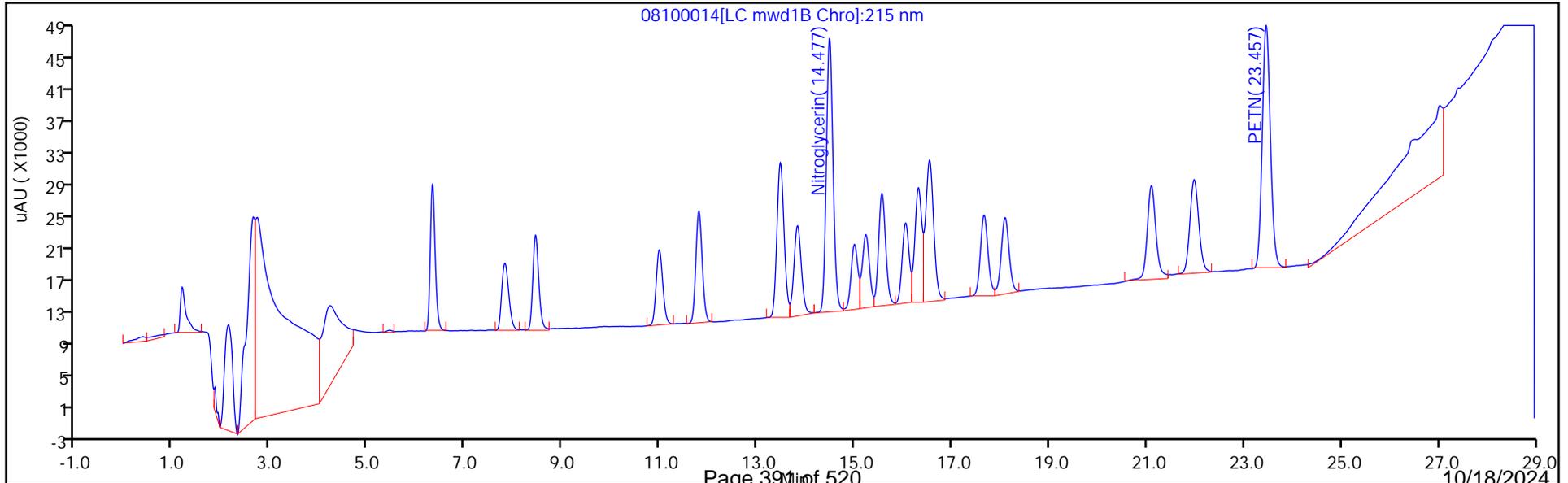
Column: Luna-Phenyl hexyl ( 4.60 mm)

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

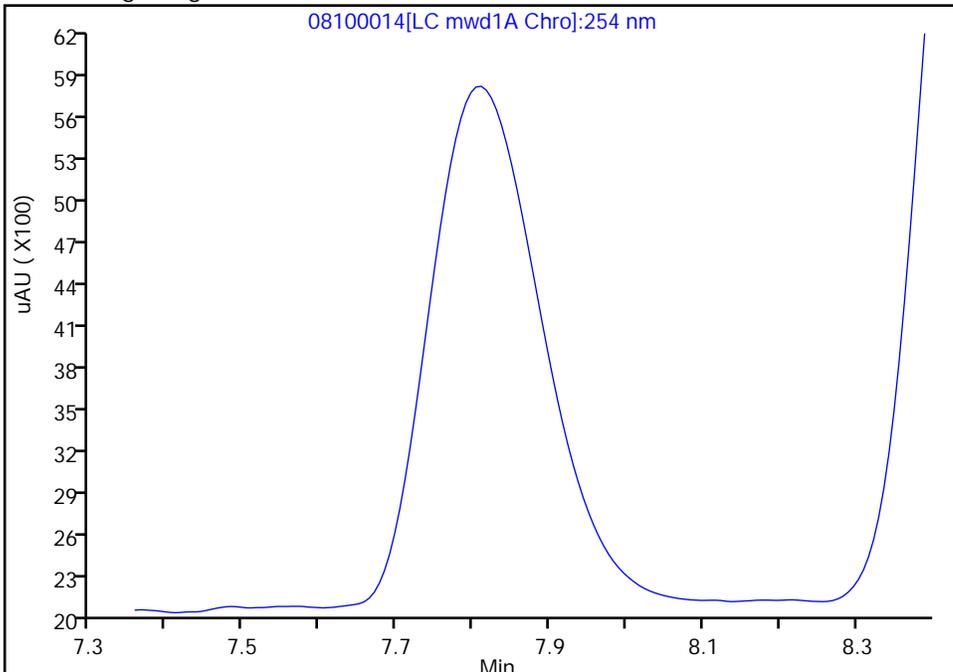
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100014.D  
Injection Date: 10-Aug-2024 22:41:52 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 5  
Client ID:  
Operator ID: JZ ALS Bottle#: 14 Worklist Smp#: 14  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

7 2,4,6-Trinitrophenol, CAS: 88-89-1

Signal: 1

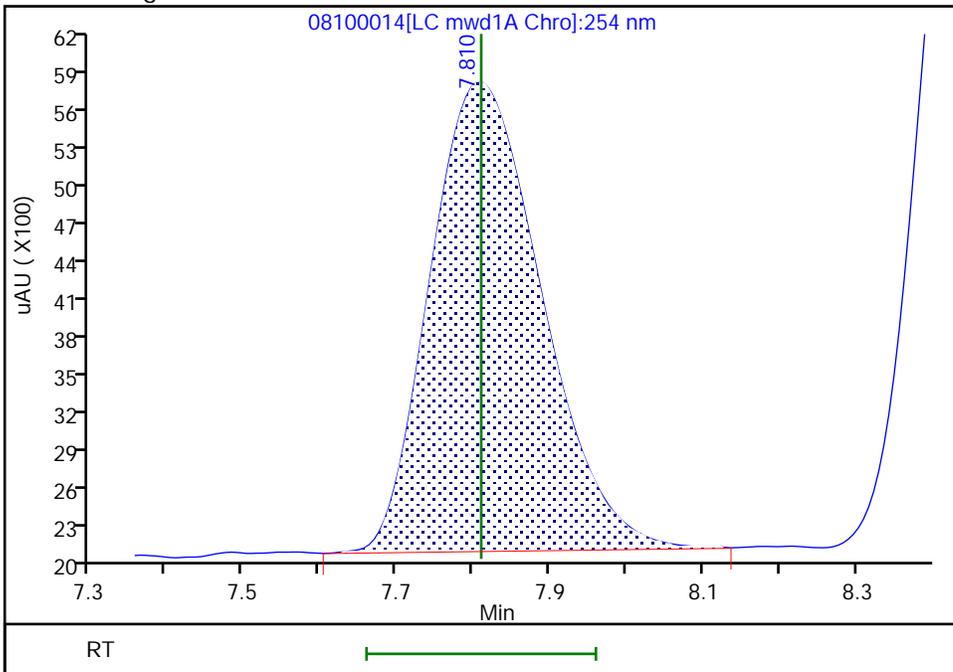
Processing Integration Results

Not Detected  
Expected RT: 7.81



Manual Integration Results

RT: 7.81  
Area: 38121  
Amount: 0.254378  
Amount Units: ug/ml



Eurofins Denver

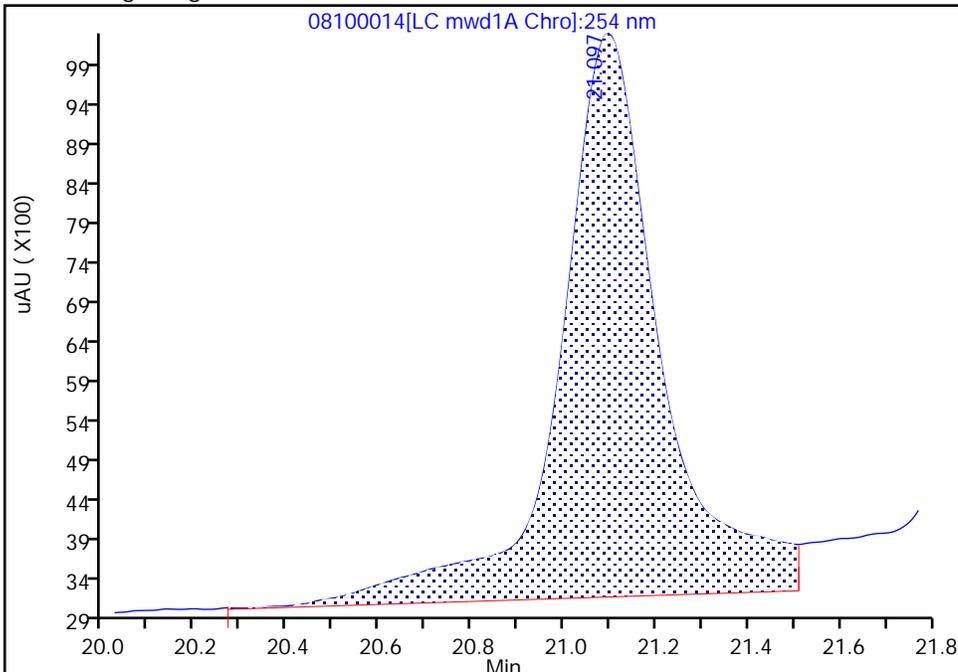
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100014.D  
Injection Date: 10-Aug-2024 22:41:52 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 5  
Client ID:  
Operator ID: JZ ALS Bottle#: 14 Worklist Smp#: 14  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

23 Tetryl, CAS: 479-45-8

Signal: 1

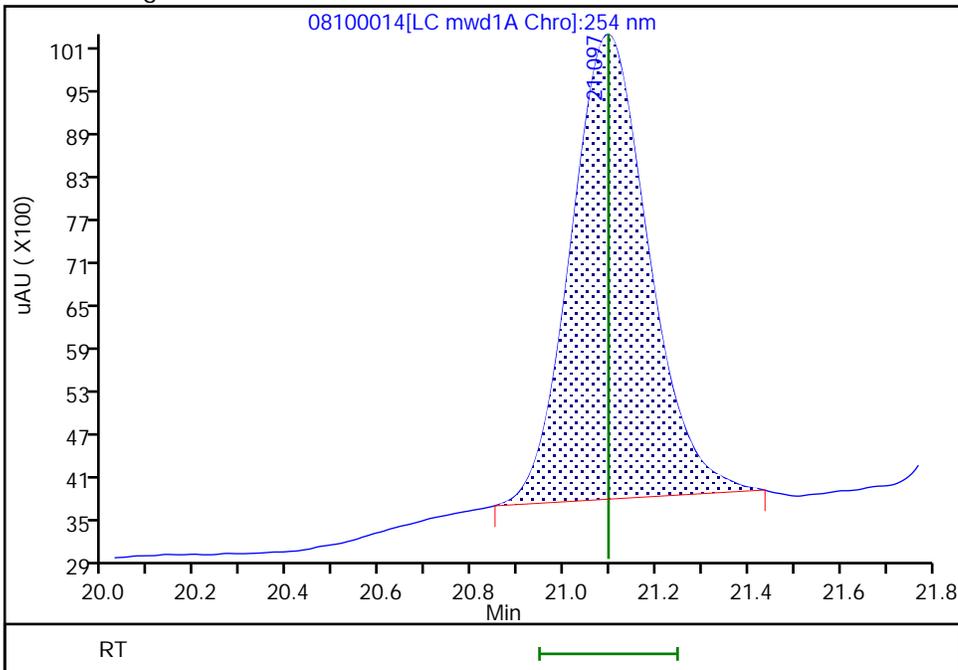
Processing Integration Results

RT: 21.10  
Area: 107445  
Amount: 0.289154  
Amount Units: ug/ml



Manual Integration Results

RT: 21.10  
Area: 75422  
Amount: 0.266191  
Amount Units: ug/ml



Reviewer: LV5D, 13-Aug-2024 15:12:15 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Denver

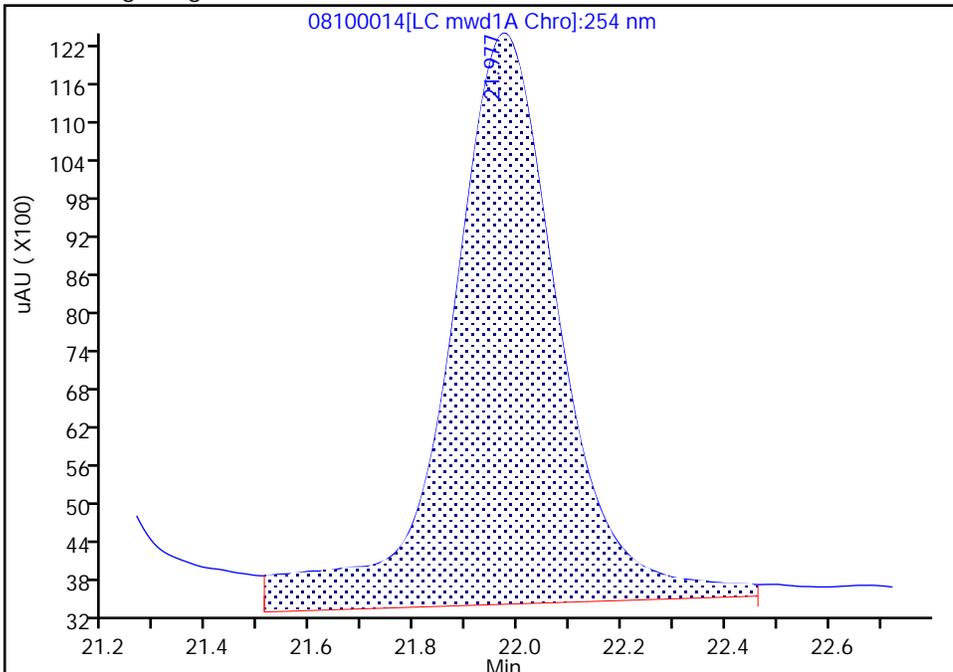
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Injection Date: 10-Aug-2024 22:41:52 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 5  
Client ID:  
Operator ID: JZ ALS Bottle#: 14 Worklist Smp#: 14  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

24 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

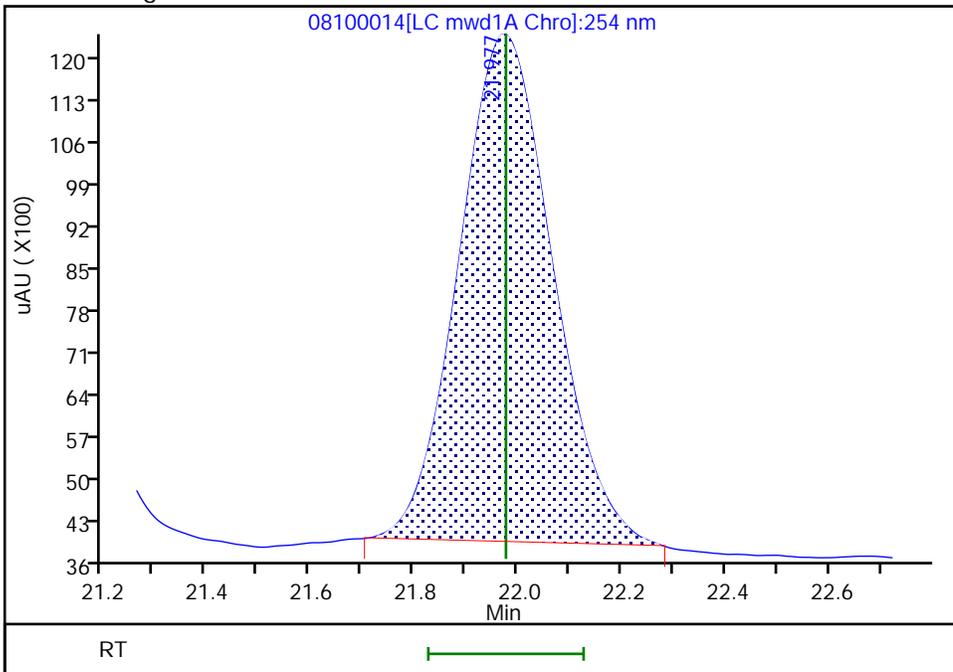
RT: 21.98  
Area: 134446  
Amount: 0.262596  
Amount Units: ug/ml

Processing Integration Results



RT: 21.98  
Area: 105934  
Amount: 0.254512  
Amount Units: ug/ml

Manual Integration Results



Reviewer: LV5D, 13-Aug-2024 15:12:13 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Denver  
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100015.D  
 Lims ID: IC INT 4  
 Client ID:  
 Sample Type: IC Calib Level: 4  
 Inject. Date: 10-Aug-2024 23:16:47 ALS Bottle#: 15 Worklist Smp#: 15  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: IC INT 4  
 Operator ID: JZ Instrument ID: CHHPLC\_X5  
 Sublist: chrom-8330\_X5\_Luna\*sub7  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\8330\_X5\_Luna.m  
 Limit Group: GCSV - 8330  
 Last Update: 13-Aug-2024 15:40:41 Calib Date: 11-Aug-2024 06:16:04  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100027.D  
 Column 1 : Luna-Phenyl hexyl ( 4.60 mm) Det: LC mwd1A, 254 nm  
 Process Host: CTX1604

First Level Reviewer: LV5D Date: 13-Aug-2024 15:12:40

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
5 HMX	1	6.327	6.324	0.003	17888	0.1000	0.0992	
7 2,4,6-Trinitrophenol	1	7.861	7.810	0.051	15103	0.1000	0.1008	a
8 RDX	1	8.461	8.437	0.024	21335	0.1000	0.0968	
9 Nitrobenzene	1	11.014	10.983	0.031	37856	0.1000	0.1004	
\$ 10 1,2-Dinitrobenzene	1	11.834	11.797	0.037	26738	0.1000	0.1019	
11 3,5-Dinitroaniline	1	13.514	13.470	0.044	43566	0.1000	0.0995	
12 1,3-Dinitrobenzene	1	13.861	13.823	0.038	57831	0.1000	0.0988	
13 Nitroglycerin	2	14.527	14.477	0.050	127672	1.00	1.00	
14 o-Nitrotoluene	1	15.041	14.990	0.051	23499	0.1000	0.0996	
16 p-Nitrotoluene	1	15.274	15.223	0.051	20994	0.1000	0.0992	
17 4-Amino-2,6-dinitrotoluene	1	15.614	15.557	0.057	27825	0.1000	0.0999	
18 m-Nitrotoluene	1	16.094	16.043	0.051	25999	0.1000	0.1007	
19 2-Amino-4,6-dinitrotoluene	1	16.361	16.310	0.051	38652	0.1000	0.0993	
20 1,3,5-Trinitrobenzene	1	16.574	16.537	0.037	42742	0.1000	0.1009	
21 2,6-Dinitrotoluene	1	17.707	17.657	0.050	27962	0.1000	0.0982	
22 2,4-Dinitrotoluene	1	18.141	18.090	0.051	55487	0.1000	0.0976	
23 Tetryl	1	21.154	21.097	0.057	29297	0.1000	0.1034	M
24 2,4,6-Trinitrotoluene	1	22.027	21.977	0.050	42305	0.1000	0.1016	M
25 PETN	2	23.521	23.457	0.064	135423	1.00	1.00	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

8330IntermStk\_00082

Amount Added: 10.00

Units: uL

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100015.D

Injection Date: 10-Aug-2024 23:16:47

Instrument ID: CHHPLC\_X5

Operator ID: JZ

Lims ID: IC INT 4

Worklist Smp#: 15

Client ID:

Injection Vol: 100.0 ul

Dil. Factor: 1.0000

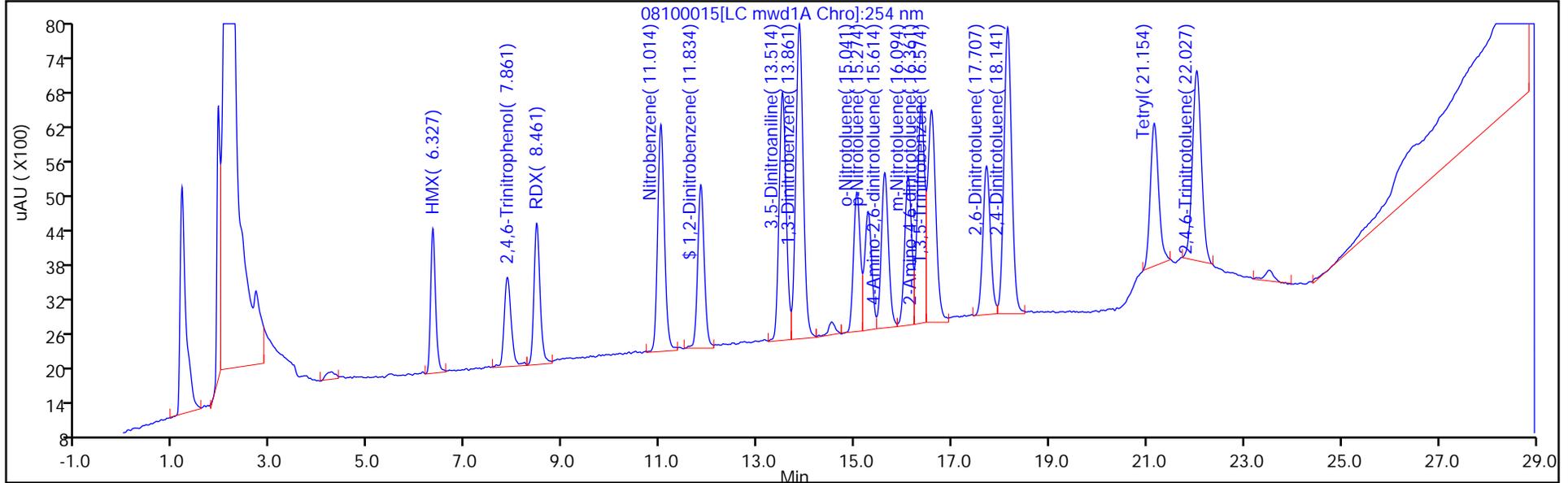
ALS Bottle#: 15

Method: 8330\_X5\_Luna

Limit Group: GCSV - 8330

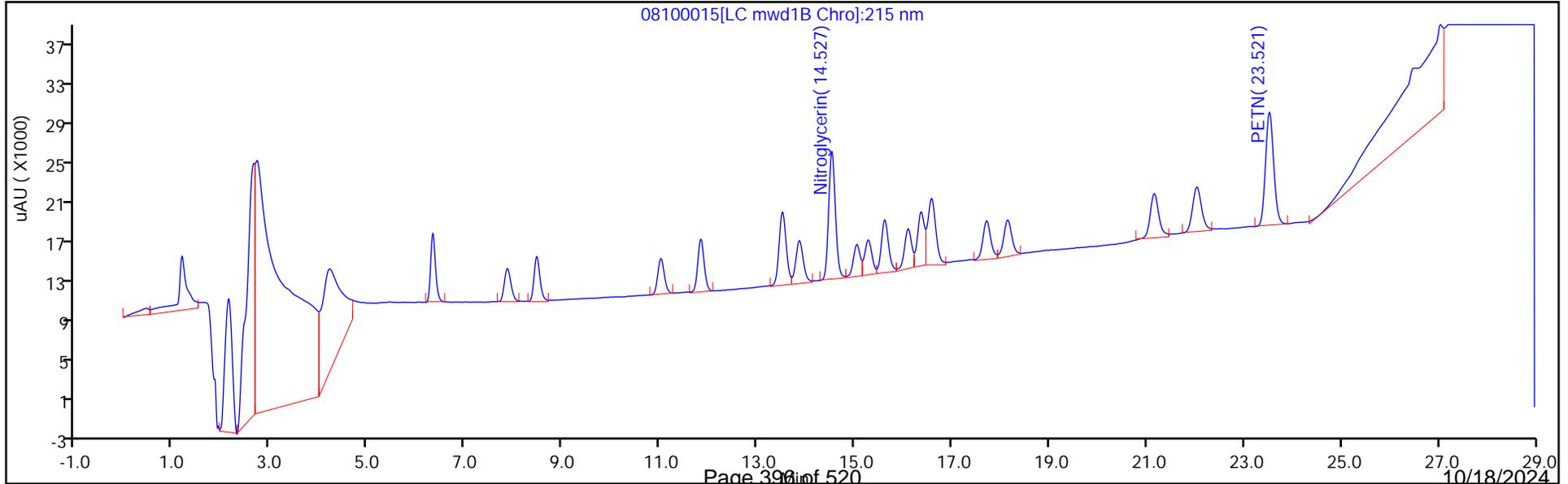
Column: Luna-Phenyl hexyl ( 4.60 mm)

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

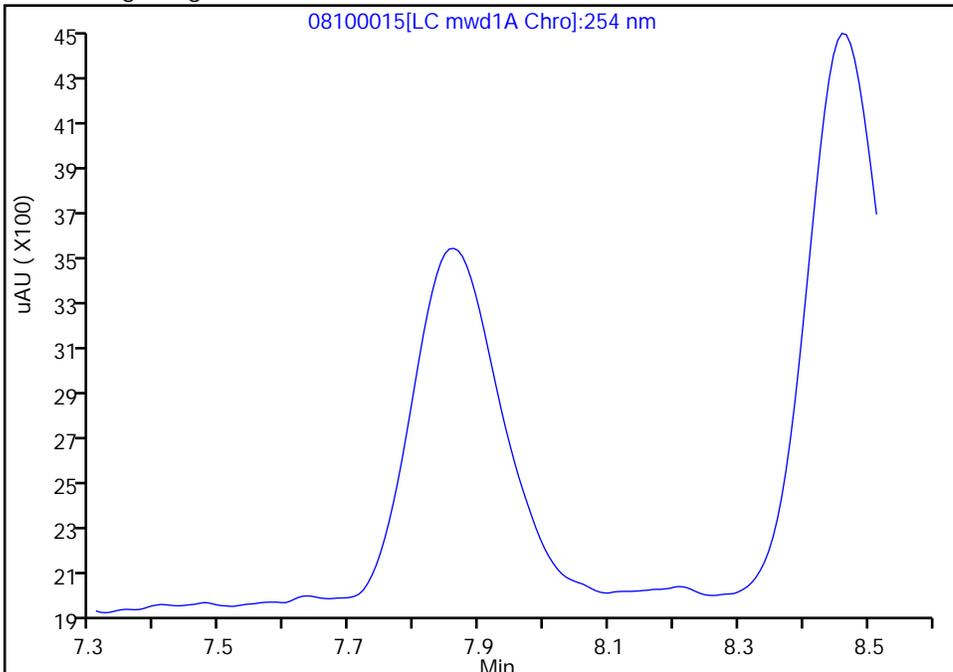
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100015.D  
Injection Date: 10-Aug-2024 23:16:47 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 4  
Client ID:  
Operator ID: JZ ALS Bottle#: 15 Worklist Smp#: 15  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

7 2,4,6-Trinitrophenol, CAS: 88-89-1

Signal: 1

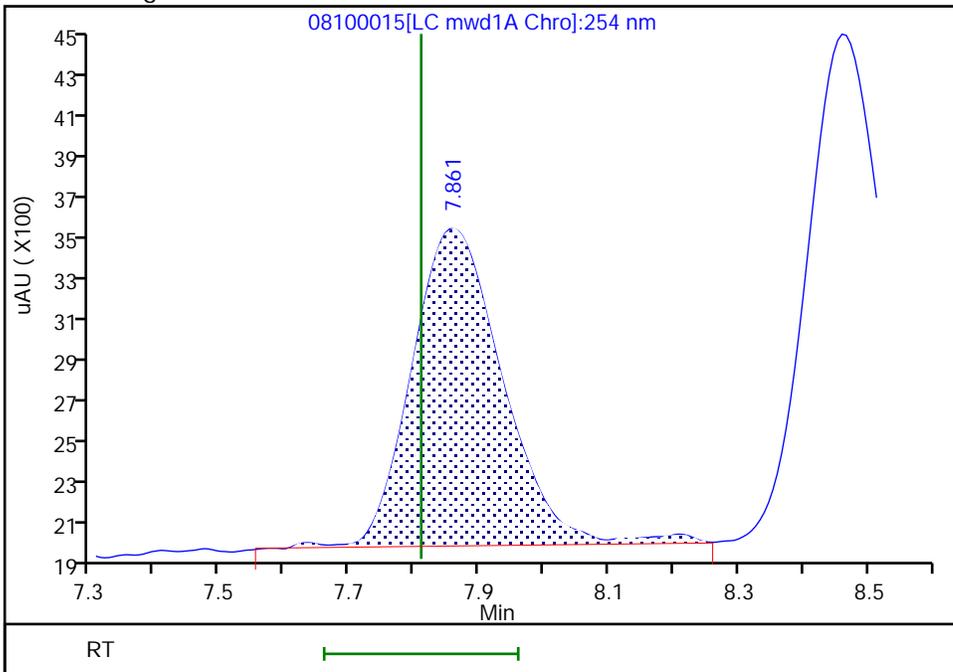
Processing Integration Results

Not Detected  
Expected RT: 7.81



Manual Integration Results

RT: 7.86  
Area: 15103  
Amount: 0.100781  
Amount Units: ug/ml



Eurofins Denver

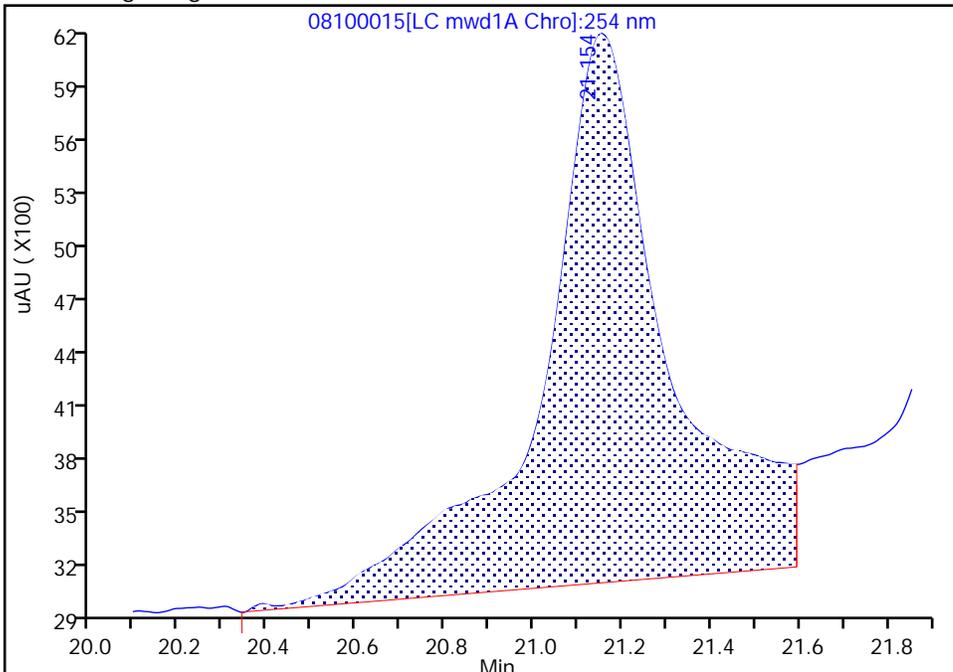
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100015.D  
Injection Date: 10-Aug-2024 23:16:47 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 4  
Client ID:  
Operator ID: JZ ALS Bottle#: 15 Worklist Smp#: 15  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

23 Tetryl, CAS: 479-45-8

Signal: 1

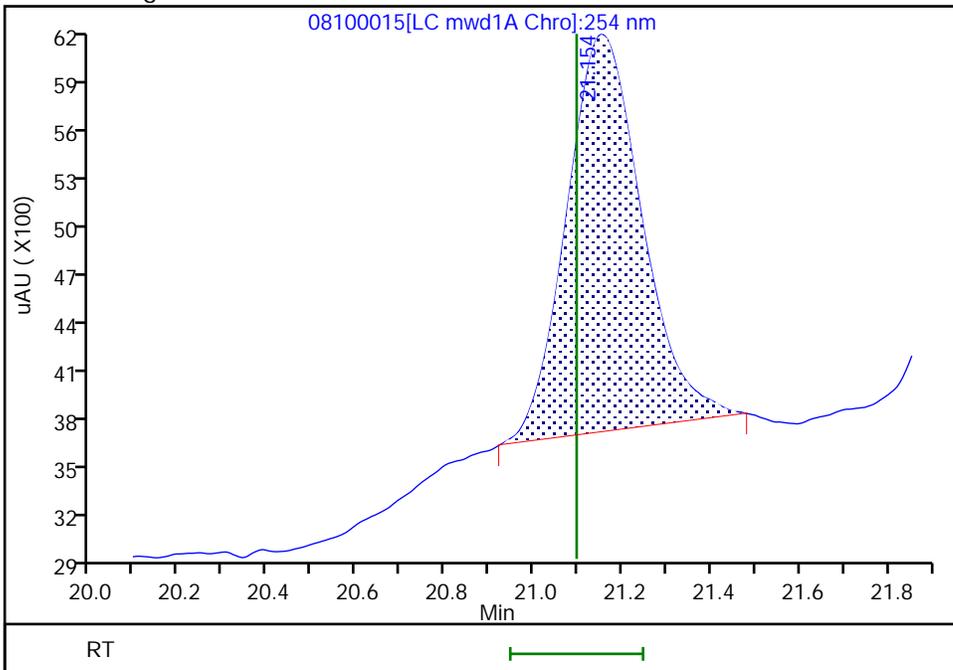
Processing Integration Results

RT: 21.15  
Area: 62706  
Amount: 0.151929  
Amount Units: ug/ml



Manual Integration Results

RT: 21.15  
Area: 29297  
Amount: 0.103400  
Amount Units: ug/ml



Reviewer: LV5D, 13-Aug-2024 15:12:36 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Denver

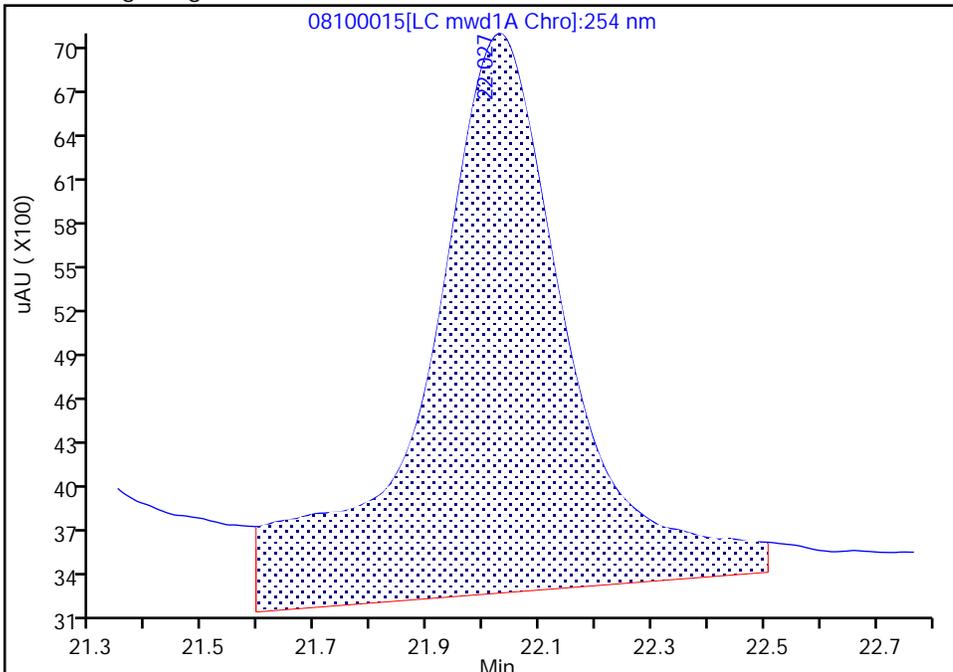
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100015.D  
Injection Date: 10-Aug-2024 23:16:47 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 4  
Client ID:  
Operator ID: JZ ALS Bottle#: 15 Worklist Smp#: 15  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

24 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

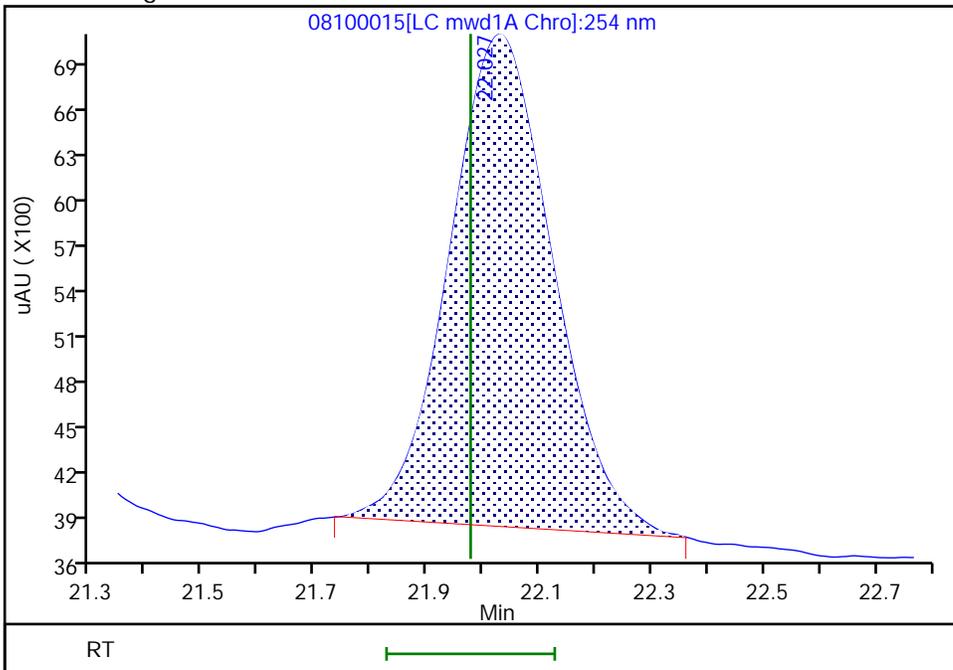
RT: 22.03  
Area: 67590  
Amount: 0.110097  
Amount Units: ug/ml

Processing Integration Results



RT: 22.03  
Area: 42305  
Amount: 0.101640  
Amount Units: ug/ml

Manual Integration Results



Reviewer: LV5D, 13-Aug-2024 15:12:38 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Denver  
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100016.D  
 Lims ID: IC INT 3  
 Client ID:  
 Sample Type: IC Calib Level: 3  
 Inject. Date: 10-Aug-2024 23:51:43 ALS Bottle#: 16 Worklist Smp#: 16  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: IC INT 3  
 Operator ID: JZ Instrument ID: CHHPLC\_X5  
 Sublist: chrom-8330\_X5\_Luna\*sub7  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\8330\_X5\_Luna.m  
 Limit Group: GCSV - 8330  
 Last Update: 13-Aug-2024 15:40:42 Calib Date: 11-Aug-2024 06:16:04  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100027.D  
 Column 1 : Luna-Phenyl hexyl ( 4.60 mm) Det: LC mwd1A, 254 nm  
 Process Host: CTX1604

First Level Reviewer: LV5D Date: 13-Aug-2024 15:12:55

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
5 HMX	1	6.325	6.324	0.001	9102	0.0500	0.0505	
7 2,4,6-Trinitrophenol	1	7.865	7.810	0.055	7567	0.0500	0.0505	a
8 RDX	1	8.459	8.437	0.022	10927	0.0500	0.0496	
9 Nitrobenzene	1	11.012	10.983	0.029	19091	0.0500	0.0506	
\$ 10 1,2-Dinitrobenzene	1	11.832	11.797	0.035	13605	0.0500	0.0518	
11 3,5-Dinitroaniline	1	13.512	13.470	0.042	21976	0.0500	0.0499	
12 1,3-Dinitrobenzene	1	13.858	13.823	0.035	29180	0.0500	0.0499	
13 Nitroglycerin	2	14.525	14.477	0.048	65475	0.5000	0.5109	
14 o-Nitrotoluene	1	15.038	14.990	0.048	11922	0.0500	0.0505	
16 p-Nitrotoluene	1	15.272	15.223	0.049	10817	0.0500	0.0511	
17 4-Amino-2,6-dinitrotoluene	1	15.612	15.557	0.055	14345	0.0500	0.0515	
18 m-Nitrotoluene	1	16.092	16.043	0.049	13336	0.0500	0.0516	
19 2-Amino-4,6-dinitrotoluene	1	16.358	16.310	0.048	19449	0.0500	0.0499	
20 1,3,5-Trinitrobenzene	1	16.572	16.537	0.035	21679	0.0500	0.0512	
21 2,6-Dinitrotoluene	1	17.705	17.657	0.048	14521	0.0500	0.0510	
22 2,4-Dinitrotoluene	1	18.138	18.090	0.048	29669	0.0500	0.0522	
23 Tetryl	1	21.159	21.097	0.062	15725	0.0500	0.0555	M
24 2,4,6-Trinitrotoluene	1	22.025	21.977	0.048	20936	0.0500	0.0503	M
25 PETN	2	23.532	23.457	0.075	67315	0.5000	0.4957	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

8330IntermStk\_00082

Amount Added: 5.00

Units: uL

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100016.D

Injection Date: 10-Aug-2024 23:51:43

Instrument ID: CHHPLC\_X5

Operator ID: JZ

Lims ID: IC INT 3

Worklist Smp#: 16

Client ID:

Injection Vol: 100.0 ul

Dil. Factor: 1.0000

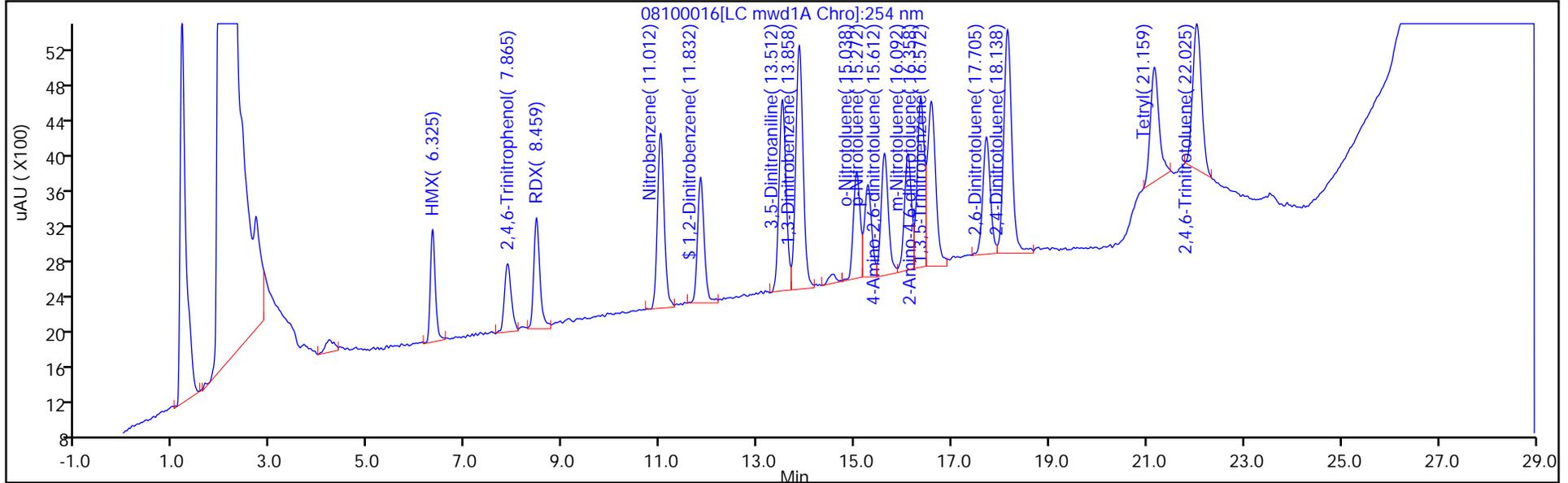
ALS Bottle#: 16

Method: 8330\_X5\_Luna

Limit Group: GCSV - 8330

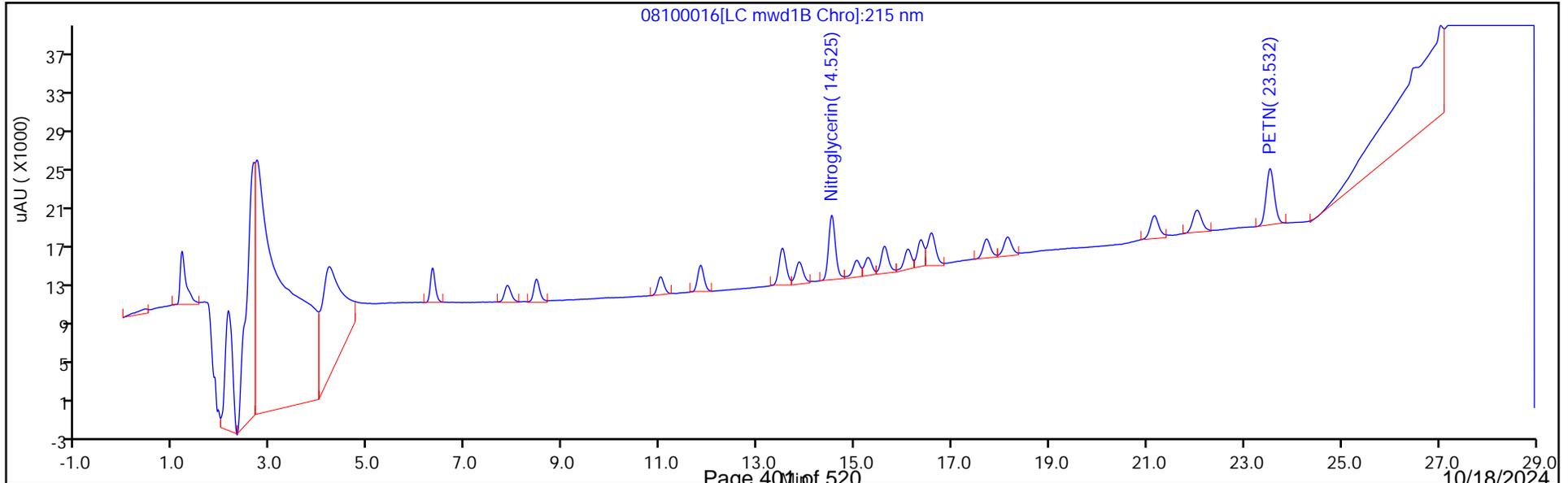
Column: Luna-Phenyl hexyl ( 4.60 mm)

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

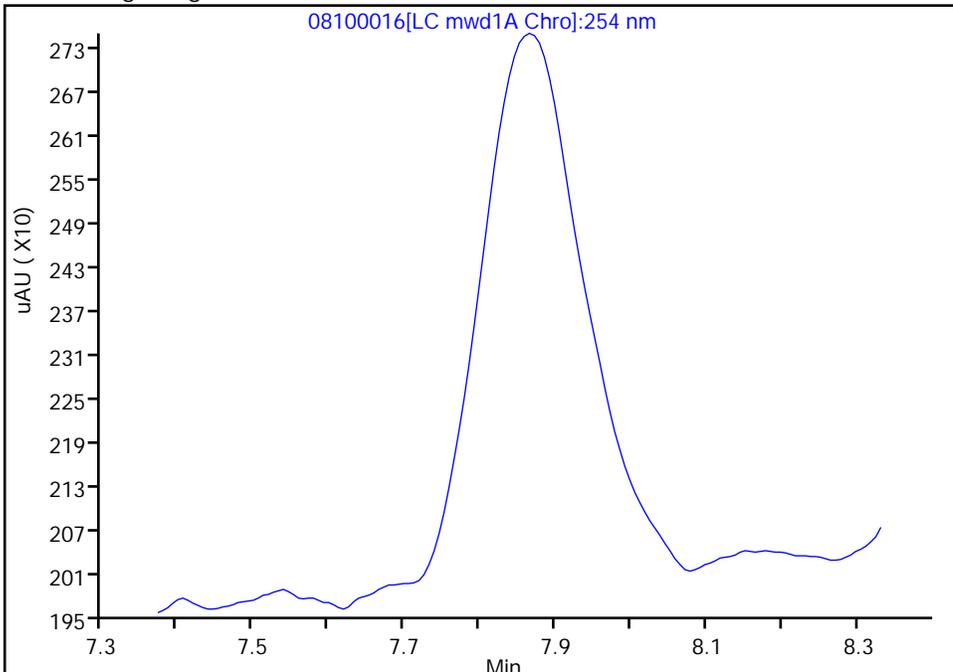
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100016.D  
Injection Date: 10-Aug-2024 23:51:43 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 3  
Client ID:  
Operator ID: JZ ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

7 2,4,6-Trinitrophenol, CAS: 88-89-1

Signal: 1

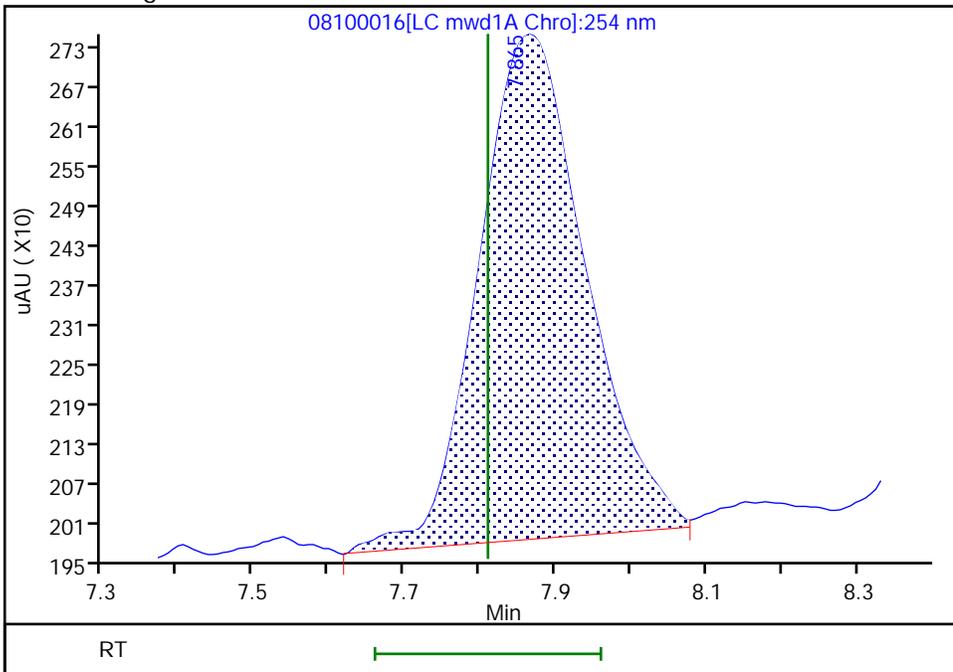
Processing Integration Results

Not Detected  
Expected RT: 7.81



Manual Integration Results

RT: 7.87  
Area: 7567  
Amount: 0.050494  
Amount Units: ug/ml



Eurofins Denver

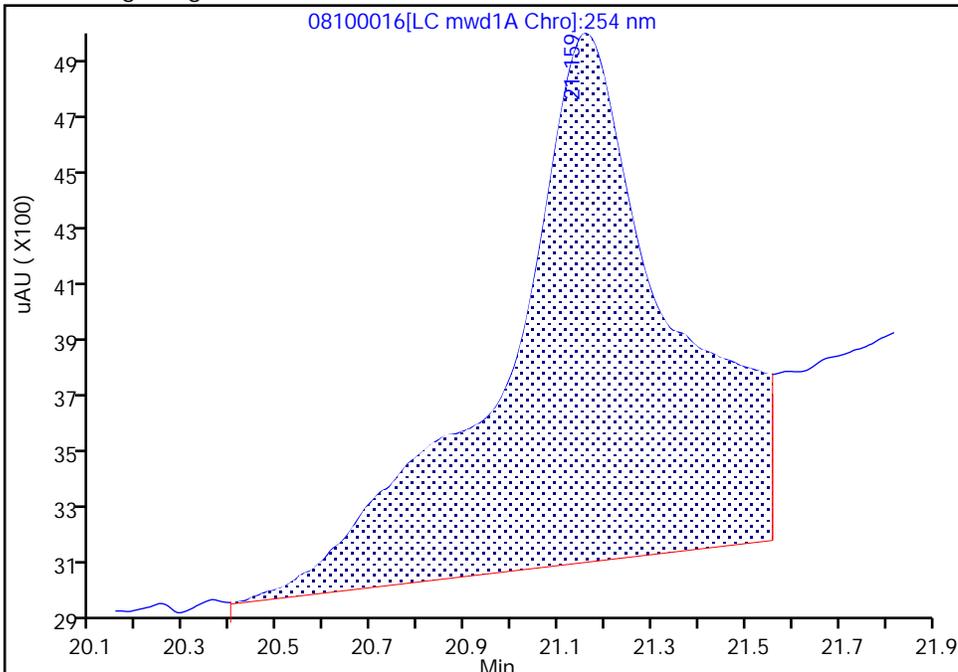
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100016.D  
Injection Date: 10-Aug-2024 23:51:43 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 3  
Client ID:  
Operator ID: JZ ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

23 Tetryl, CAS: 479-45-8

Signal: 1

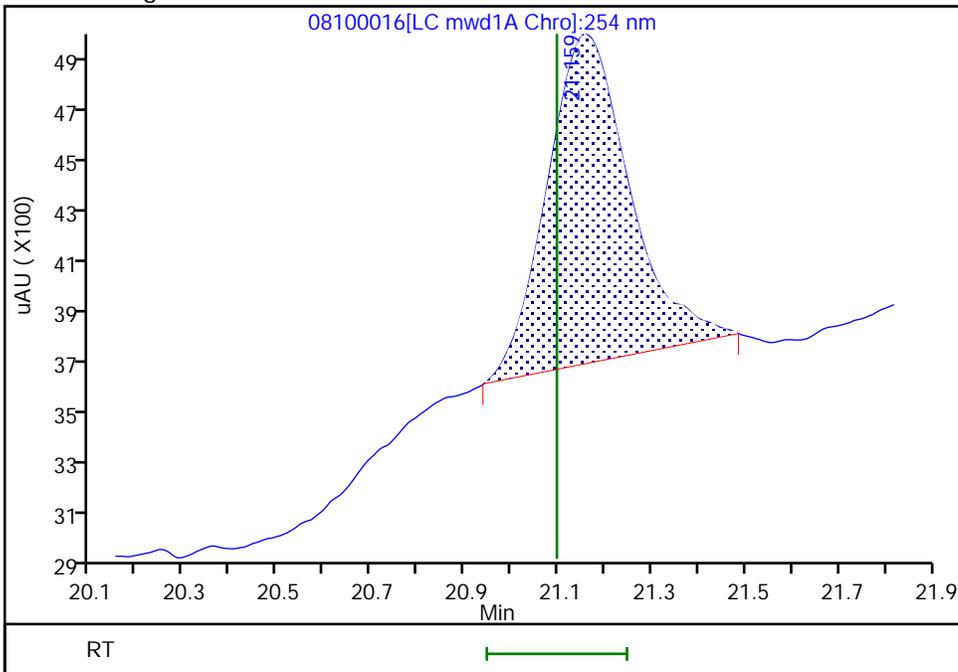
Processing Integration Results

RT: 21.16  
Area: 45404  
Amount: 0.053183  
Amount Units: ug/ml



Manual Integration Results

RT: 21.16  
Area: 15725  
Amount: 0.055499  
Amount Units: ug/ml



Reviewer: LV5D, 13-Aug-2024 15:12:47 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Denver

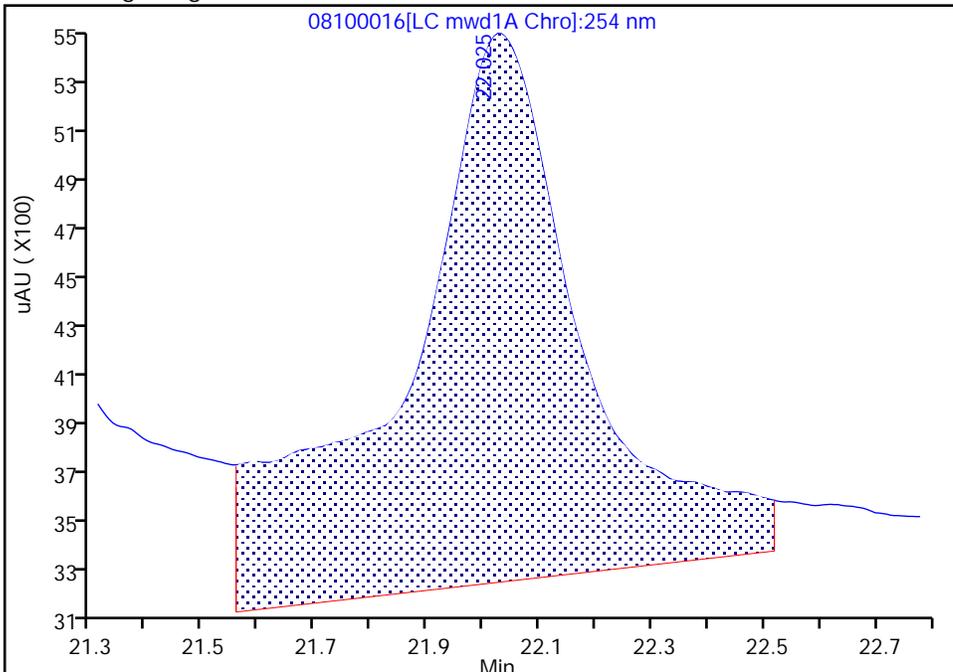
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100016.D  
Injection Date: 10-Aug-2024 23:51:43 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 3  
Client ID:  
Operator ID: JZ ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

24 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

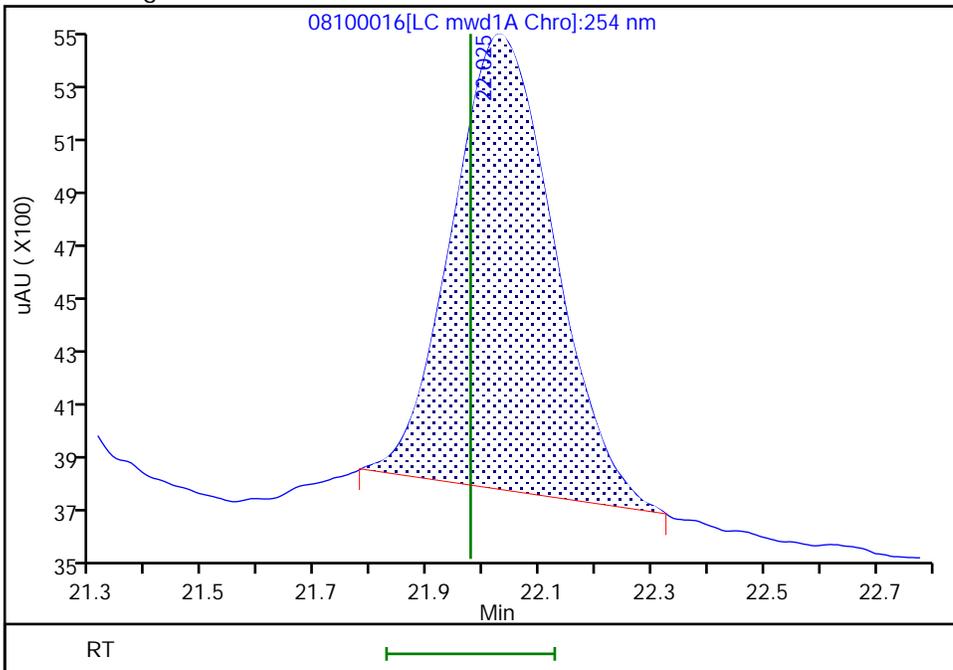
Processing Integration Results

RT: 22.03  
Area: 47856  
Amount: 0.066877  
Amount Units: ug/ml



Manual Integration Results

RT: 22.03  
Area: 20936  
Amount: 0.050300  
Amount Units: ug/ml



Reviewer: LV5D, 13-Aug-2024 15:12:45 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Denver  
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100017.D  
 Lims ID: IC INT 2  
 Client ID:  
 Sample Type: IC Calib Level: 2  
 Inject. Date: 11-Aug-2024 00:26:39 ALS Bottle#: 17 Worklist Smp#: 17  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: IC INT 2  
 Operator ID: JZ Instrument ID: CHHPLC\_X5  
 Sublist: chrom-8330\_X5\_Luna\*sub7  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\8330\_X5\_Luna.m  
 Limit Group: GCSV - 8330  
 Last Update: 13-Aug-2024 15:40:43 Calib Date: 11-Aug-2024 06:16:04  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100027.D  
 Column 1 : Luna-Phenyl hexyl ( 4.60 mm) Det: LC mwd1A, 254 nm  
 Process Host: CTX1604

First Level Reviewer: LV5D Date: 13-Aug-2024 15:14:38

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
5 HMX	1	6.336	6.324	0.012	3967	0.0200	0.0220	
7 2,4,6-Trinitrophenol	1	7.870	7.810	0.060	2918	0.0200	0.0195	a
8 RDX	1	8.470	8.437	0.033	4852	0.0200	0.0220	
9 Nitrobenzene	1	11.016	10.983	0.033	7452	0.0200	0.0198	M
\$ 10 1,2-Dinitrobenzene	1	11.843	11.797	0.046	5053	0.0200	0.0193	M
11 3,5-Dinitroaniline	1	13.516	13.470	0.046	9158	0.0200	0.0205	M
12 1,3-Dinitrobenzene	1	13.863	13.823	0.040	11541	0.0200	0.0197	M
13 Nitroglycerin	2	14.529	14.477	0.052	24016	0.2000	0.1874	M
14 o-Nitrotoluene	1	15.036	14.990	0.046	4738	0.0200	0.0201	M
16 p-Nitrotoluene	1	15.276	15.223	0.053	4148	0.0200	0.0196	M
17 4-Amino-2,6-dinitrotoluene	1	15.616	15.557	0.059	5455	0.0200	0.0196	M
18 m-Nitrotoluene	1	16.096	16.043	0.053	5081	0.0200	0.0197	M
19 2-Amino-4,6-dinitrotoluene	1	16.363	16.310	0.053	7784	0.0200	0.0200	M
20 1,3,5-Trinitrobenzene	1	16.576	16.537	0.039	8315	0.0200	0.0196	M
21 2,6-Dinitrotoluene	1	17.703	17.657	0.046	6144	0.0200	0.0216	
22 2,4-Dinitrotoluene	1	18.136	18.090	0.046	12012	0.0200	0.0211	
23 Tetryl	1	21.150	21.097	0.053	4871	0.0200	0.0172	M
24 2,4,6-Trinitrotoluene	1	22.023	21.977	0.046	8874	0.0200	0.0213	M
25 PETN	2	23.516	23.457	0.059	27366	0.2000	0.2015	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

8330IntermStk\_00082

Amount Added: 2.00

Units: uL

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100017.D

Injection Date: 11-Aug-2024 00:26:39

Instrument ID: CHHPLC\_X5

Operator ID: JZ

Lims ID: IC INT 2

Worklist Smp#: 17

Client ID:

Injection Vol: 100.0 ul

Dil. Factor: 1.0000

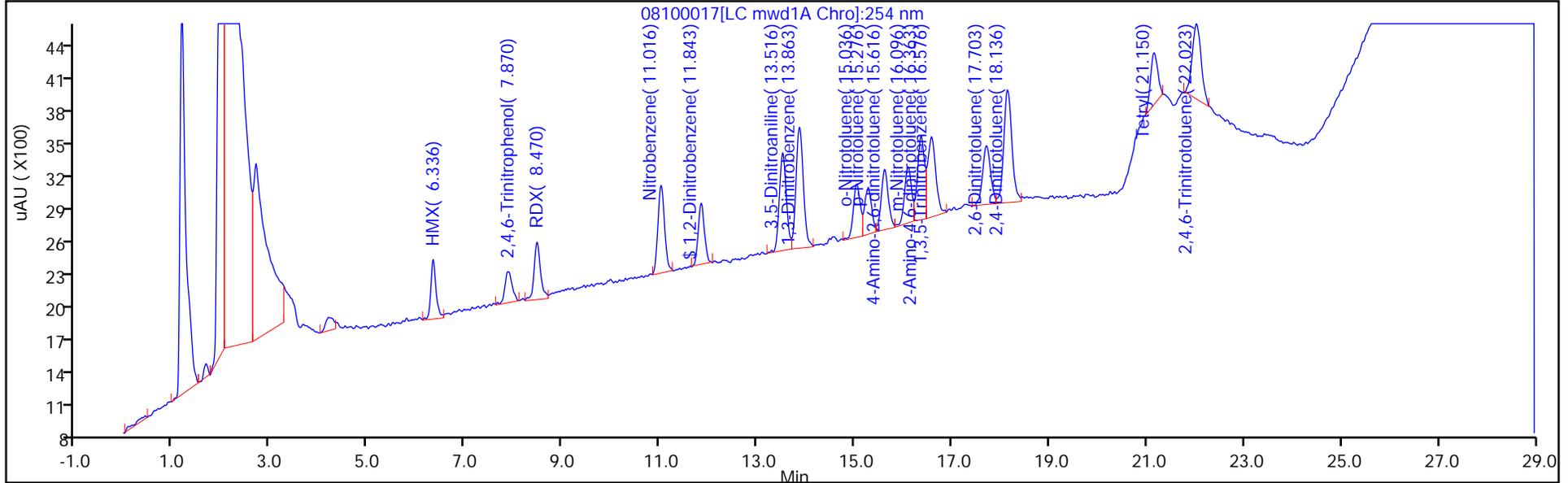
ALS Bottle#: 17

Method: 8330\_X5\_Luna

Limit Group: GCSV - 8330

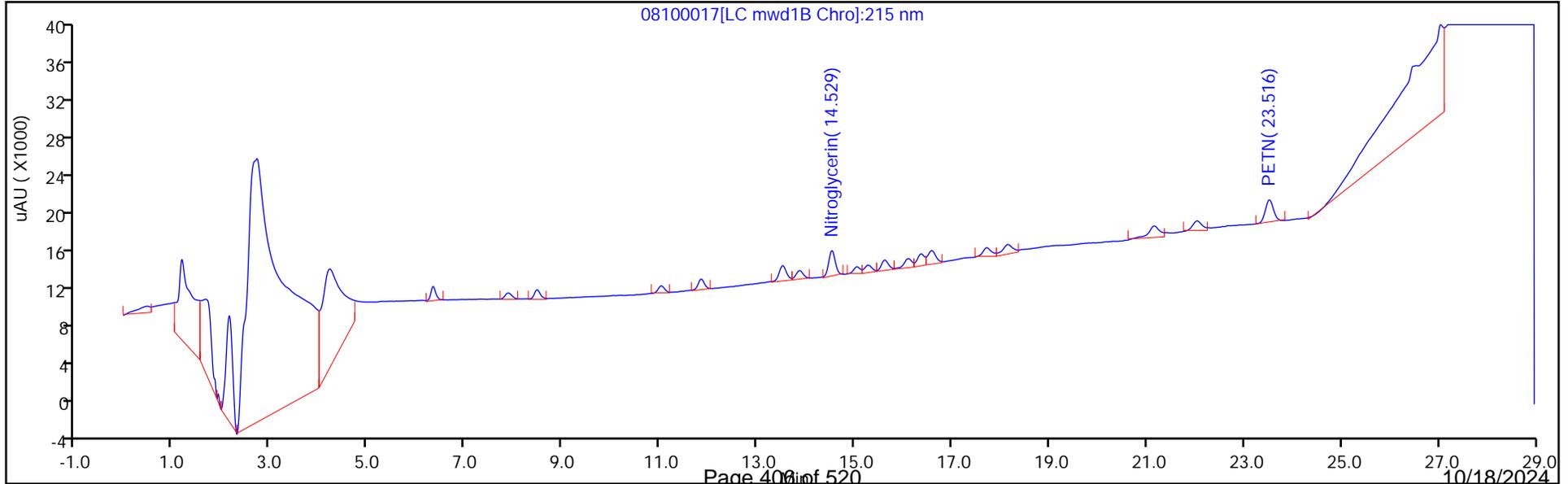
Column: Luna-Phenyl hexyl ( 4.60 mm)

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

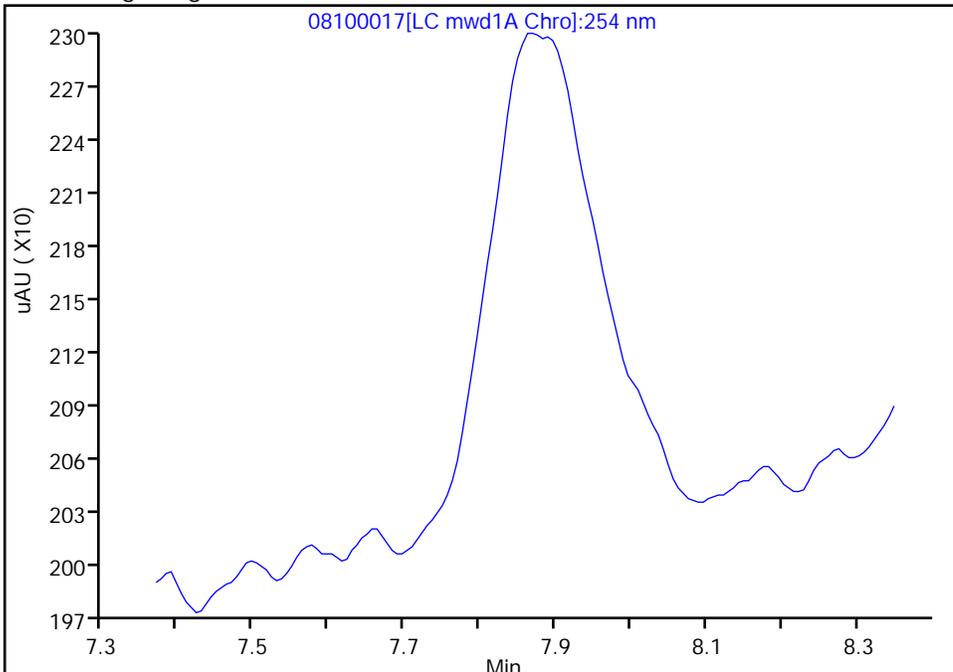
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100017.D  
Injection Date: 11-Aug-2024 00:26:39 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 2  
Client ID:  
Operator ID: JZ ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

7 2,4,6-Trinitrophenol, CAS: 88-89-1

Signal: 1

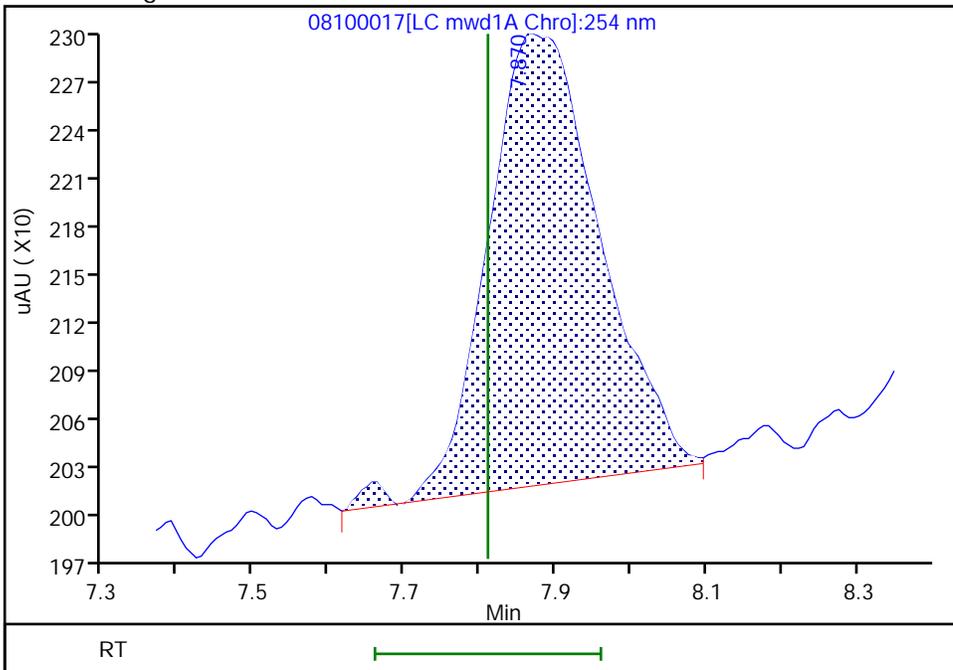
Not Detected  
Expected RT: 7.81

Processing Integration Results



Manual Integration Results

RT: 7.87  
Area: 2918  
Amount: 0.019472  
Amount Units: ug/ml



Eurofins Denver

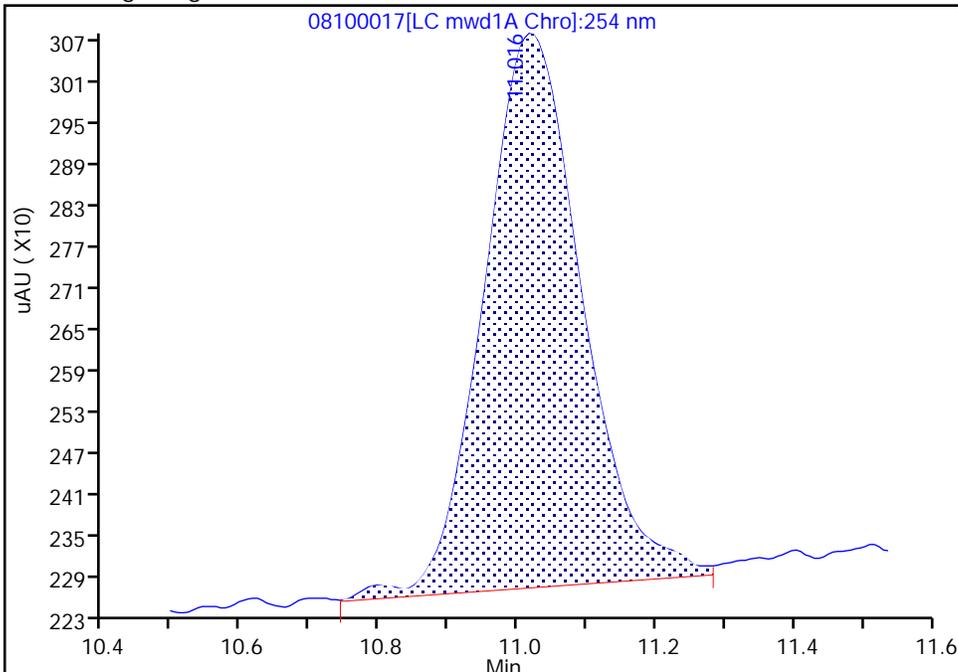
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100017.D  
Injection Date: 11-Aug-2024 00:26:39 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 2  
Client ID:  
Operator ID: JZ ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

9 Nitrobenzene, CAS: 98-95-3

Signal: 1

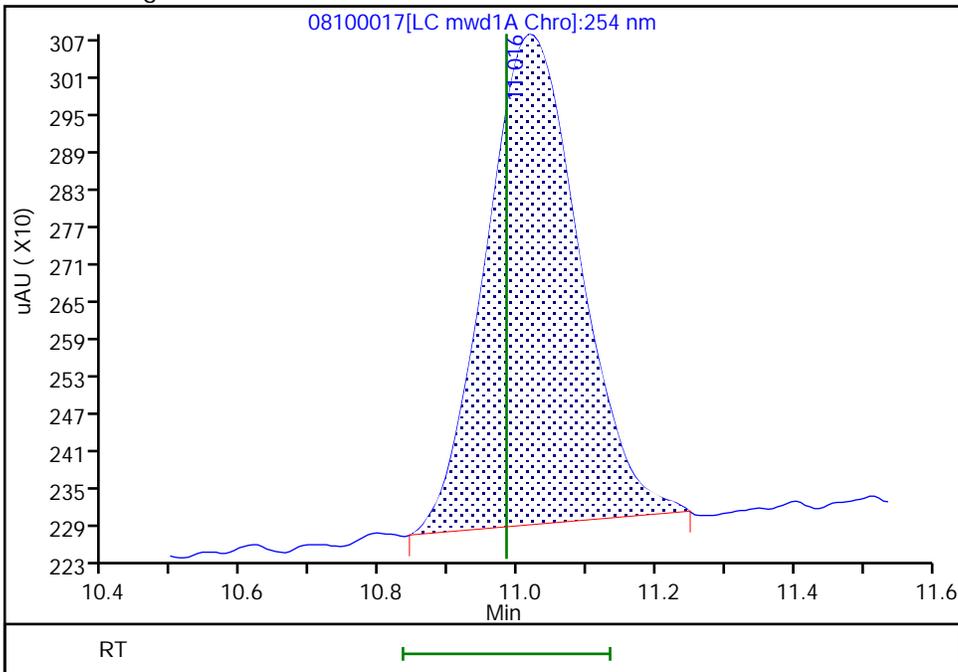
RT: 11.02  
Area: 7978  
Amount: 0.020754  
Amount Units: ug/ml

Processing Integration Results



RT: 11.02  
Area: 7452  
Amount: 0.019770  
Amount Units: ug/ml

Manual Integration Results



Reviewer: LV5D, 13-Aug-2024 15:13:28 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Denver

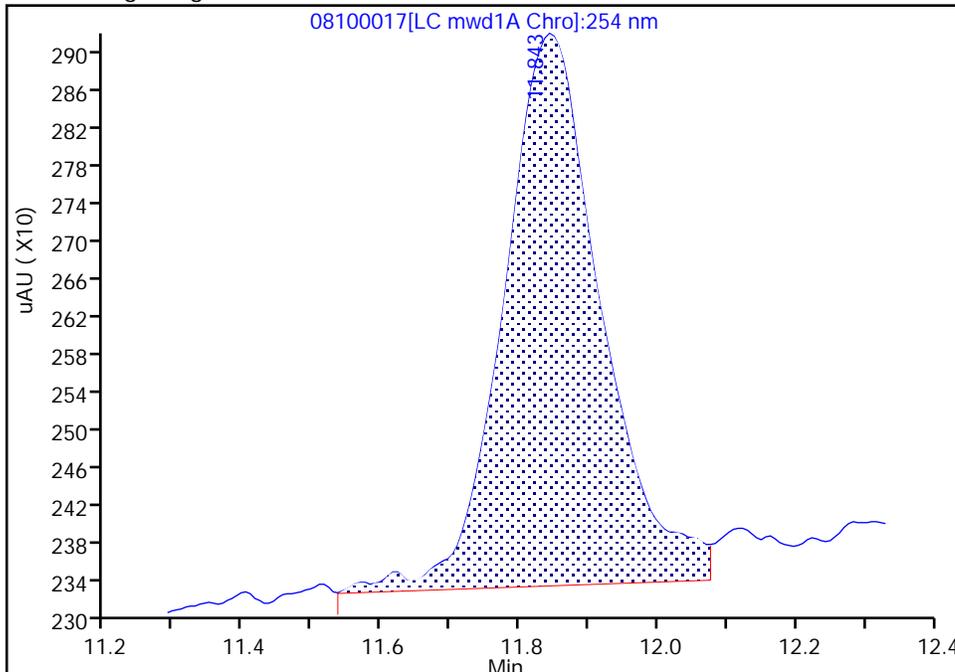
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100017.D  
Injection Date: 11-Aug-2024 00:26:39 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 2  
Client ID:  
Operator ID: JZ ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

\$ 10 1,2-Dinitrobenzene, CAS: 528-29-0

Signal: 1

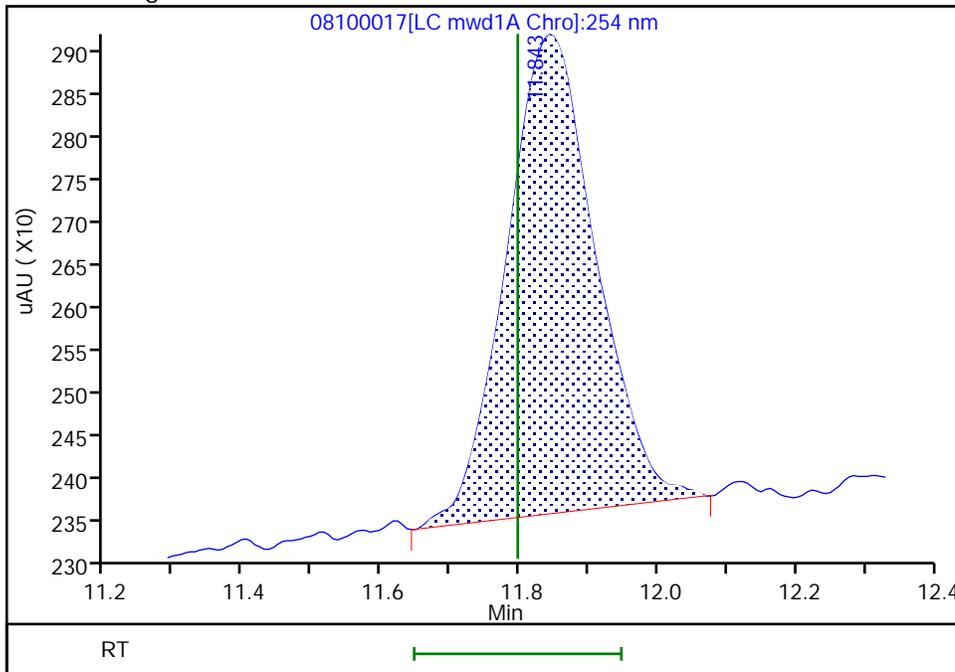
RT: 11.84  
Area: 5737  
Amount: 0.020889  
Amount Units: ug/ml

Processing Integration Results



RT: 11.84  
Area: 5053  
Amount: 0.019250  
Amount Units: ug/ml

Manual Integration Results



Reviewer: LV5D, 13-Aug-2024 15:13:24 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Denver

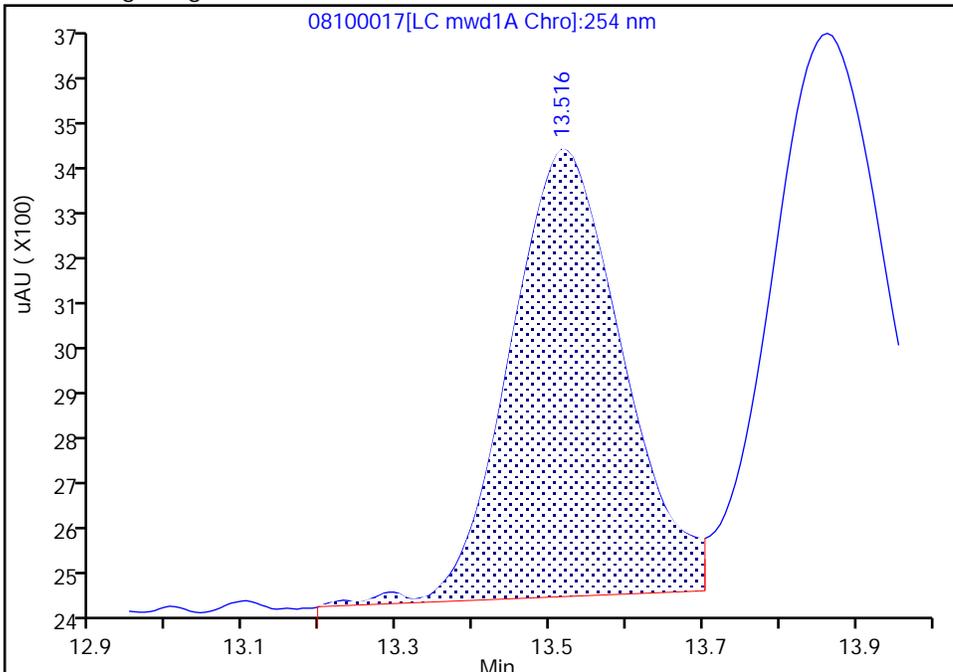
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100017.D  
Injection Date: 11-Aug-2024 00:26:39 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 2  
Client ID:  
Operator ID: JZ ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

11 3,5-Dinitroaniline, CAS: 618-87-1

Signal: 1

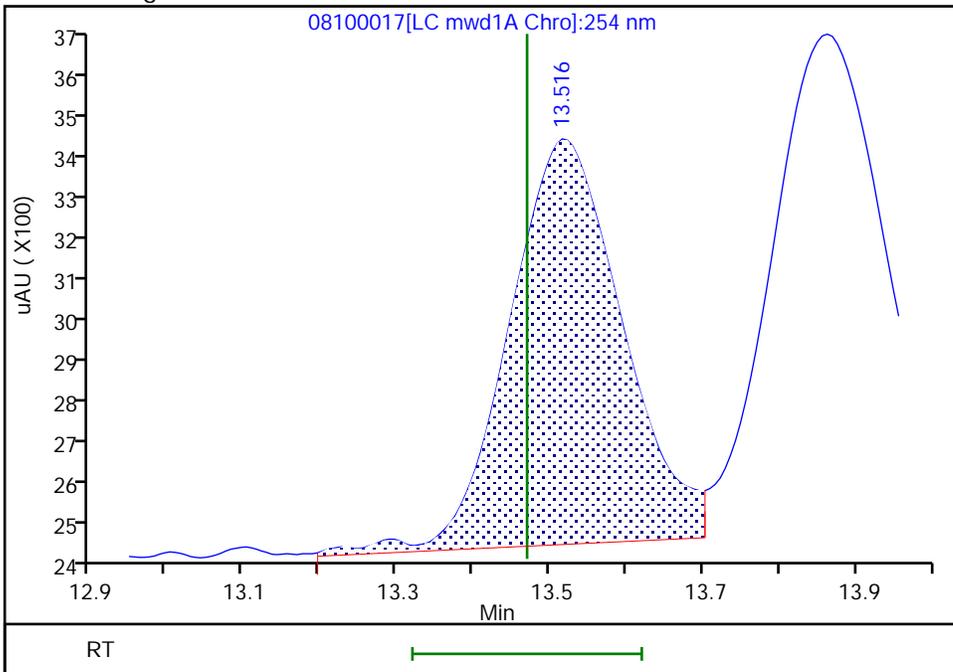
RT: 13.52  
Area: 9142  
Amount: 0.020297  
Amount Units: ug/ml

Processing Integration Results



RT: 13.52  
Area: 9158  
Amount: 0.020533  
Amount Units: ug/ml

Manual Integration Results



Reviewer: LV5D, 13-Aug-2024 15:13:13 -06:00:00 (UTC)

Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Denver

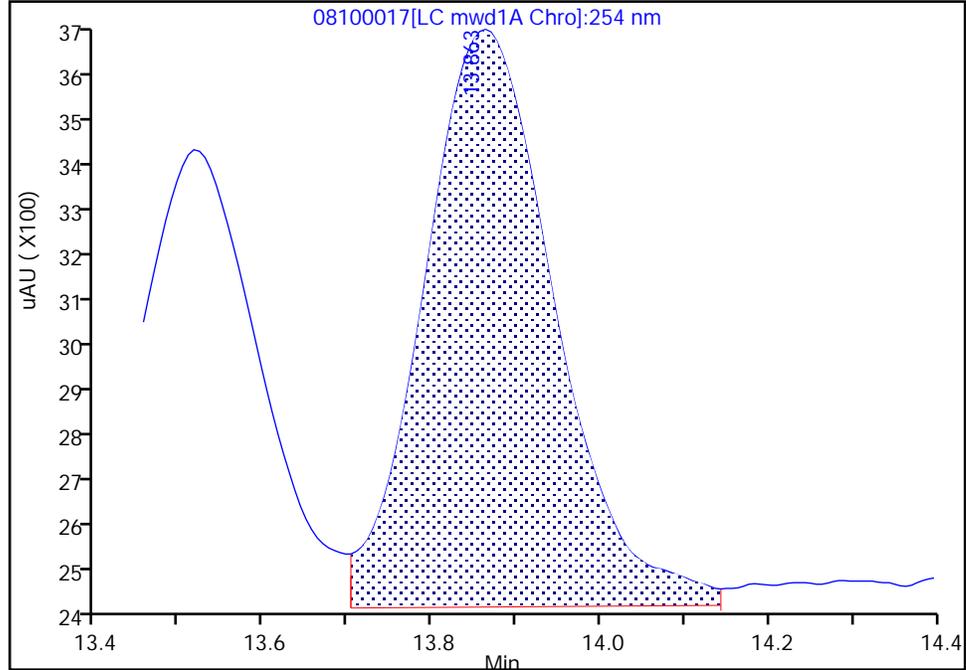
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100017.D  
Injection Date: 11-Aug-2024 00:26:39 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 2  
Client ID:  
Operator ID: JZ ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

12 1,3-Dinitrobenzene, CAS: 99-65-0

Signal: 1

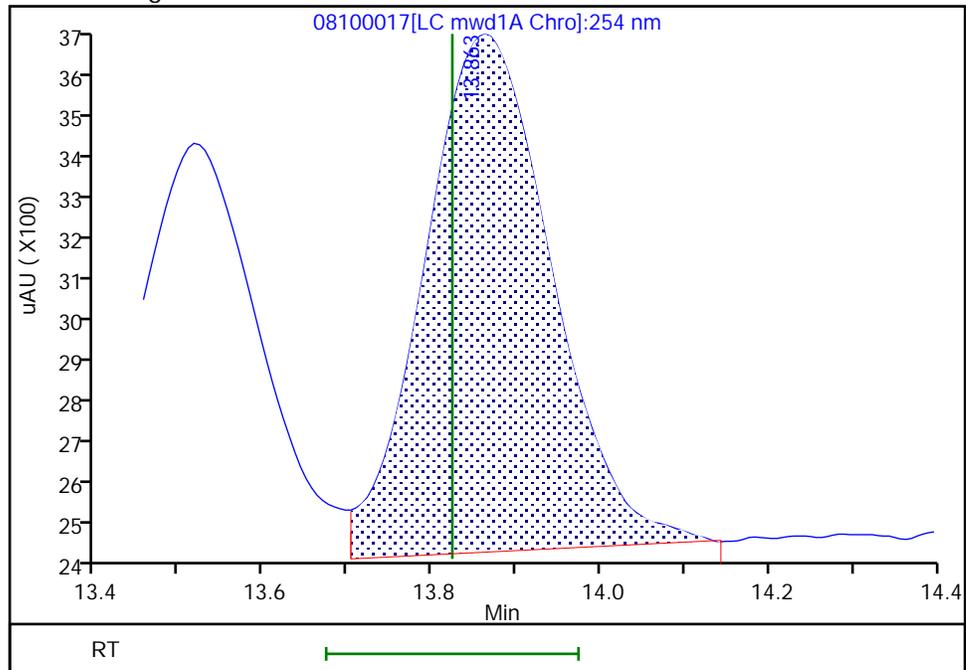
RT: 13.86  
Area: 12029  
Amount: 0.020297  
Amount Units: ug/ml

Processing Integration Results



RT: 13.86  
Area: 11541  
Amount: 0.019720  
Amount Units: ug/ml

Manual Integration Results



Reviewer: LV5D, 13-Aug-2024 15:13:13 -06:00:00 (UTC)

Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Denver

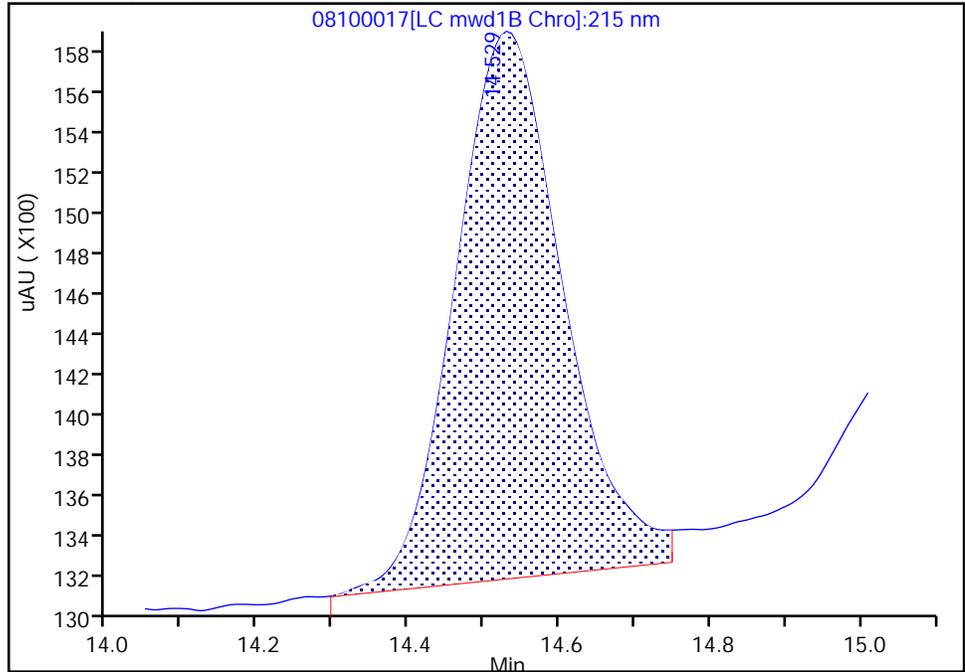
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100017.D  
Injection Date: 11-Aug-2024 00:26:39 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 2  
Client ID:  
Operator ID: JZ ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1B, 215 nm

13 Nitroglycerin, CAS: 55-63-0

Signal: 1

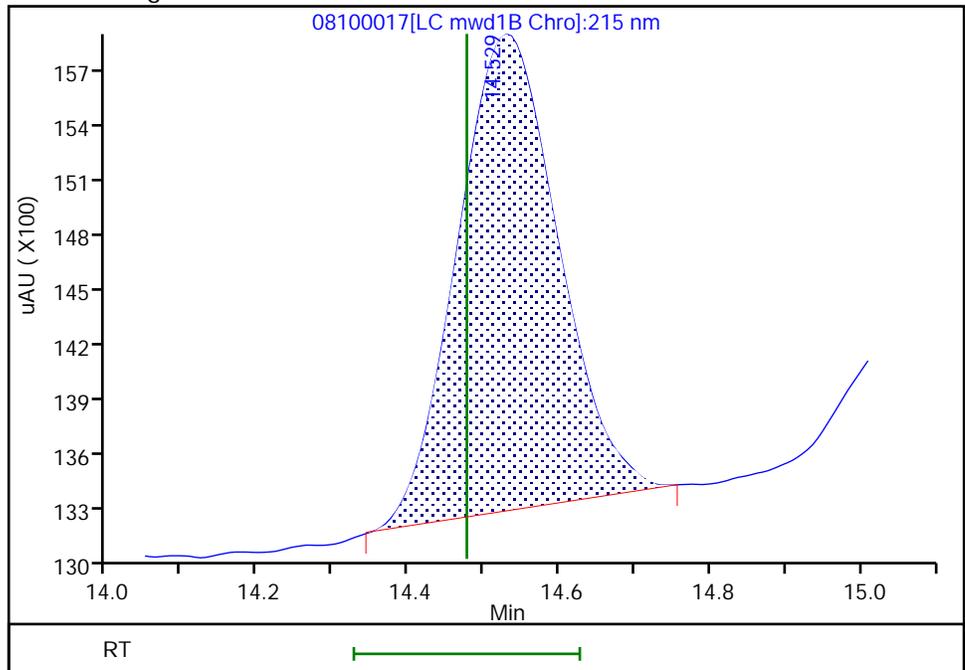
Processing Integration Results

RT: 14.53  
Area: 26510  
Amount: 0.204651  
Amount Units: ug/ml



Manual Integration Results

RT: 14.53  
Area: 24016  
Amount: 0.187402  
Amount Units: ug/ml



Reviewer: LV5D, 13-Aug-2024 15:13:06 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Denver

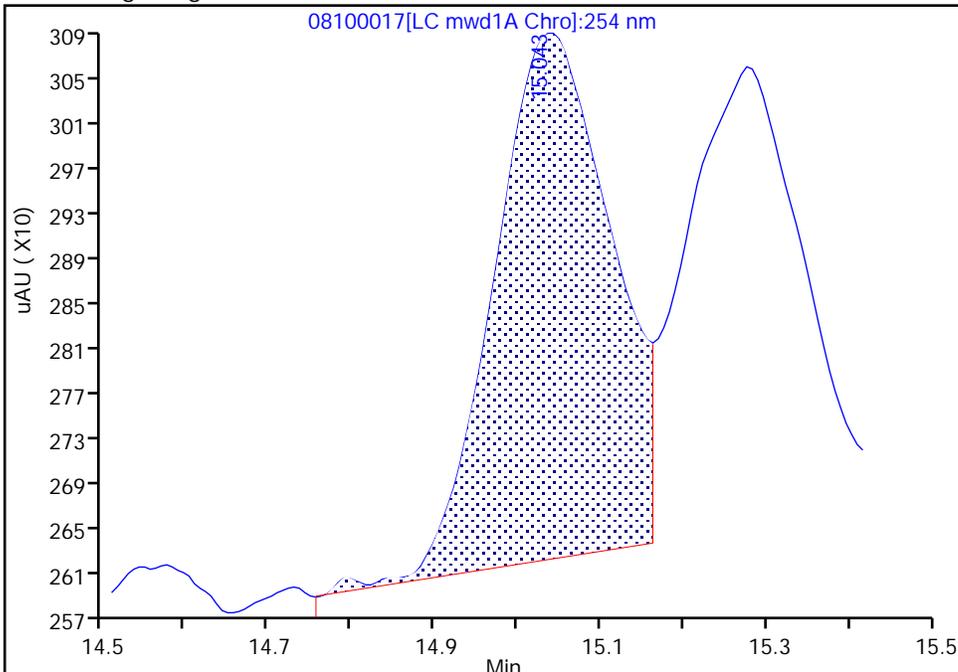
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100017.D  
Injection Date: 11-Aug-2024 00:26:39 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 2  
Client ID:  
Operator ID: JZ ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

14 o-Nitrotoluene, CAS: 88-72-2

Signal: 1

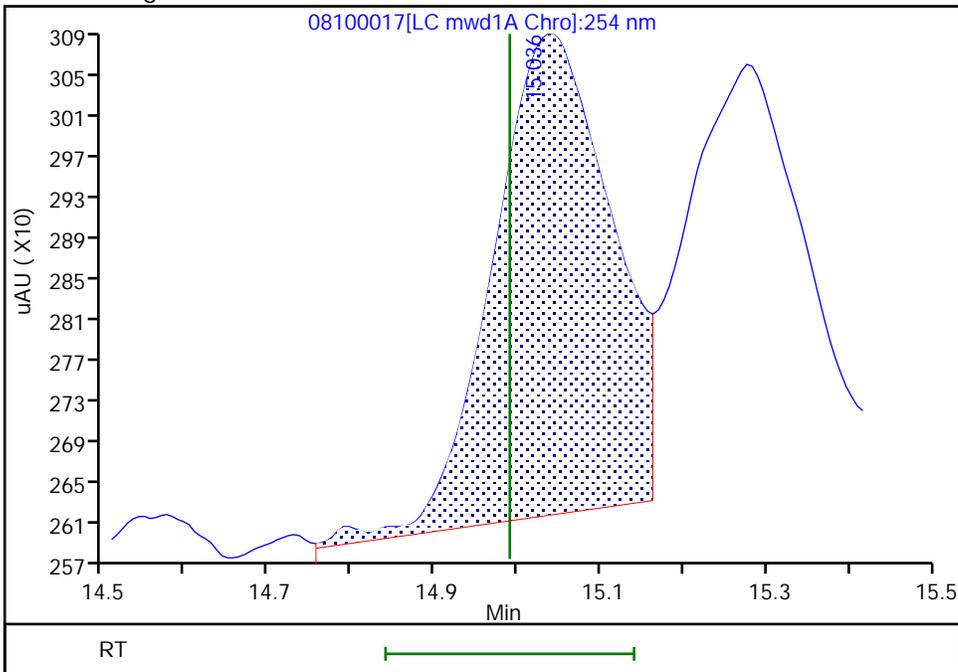
RT: 15.04  
Area: 4641  
Amount: 0.019753  
Amount Units: ug/ml

Processing Integration Results



RT: 15.04  
Area: 4738  
Amount: 0.020088  
Amount Units: ug/ml

Manual Integration Results



Reviewer: LV5D, 13-Aug-2024 15:13:11 -06:00:00 (UTC)

Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Denver

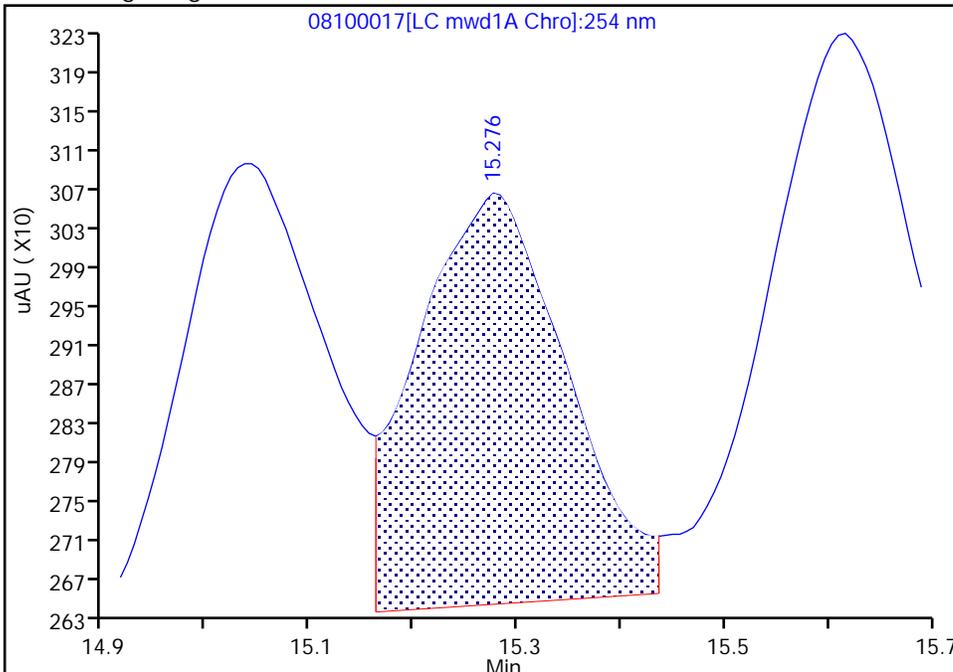
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100017.D  
Injection Date: 11-Aug-2024 00:26:39 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 2  
Client ID:  
Operator ID: JZ ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

16 p-Nitrotoluene, CAS: 99-99-0

Signal: 1

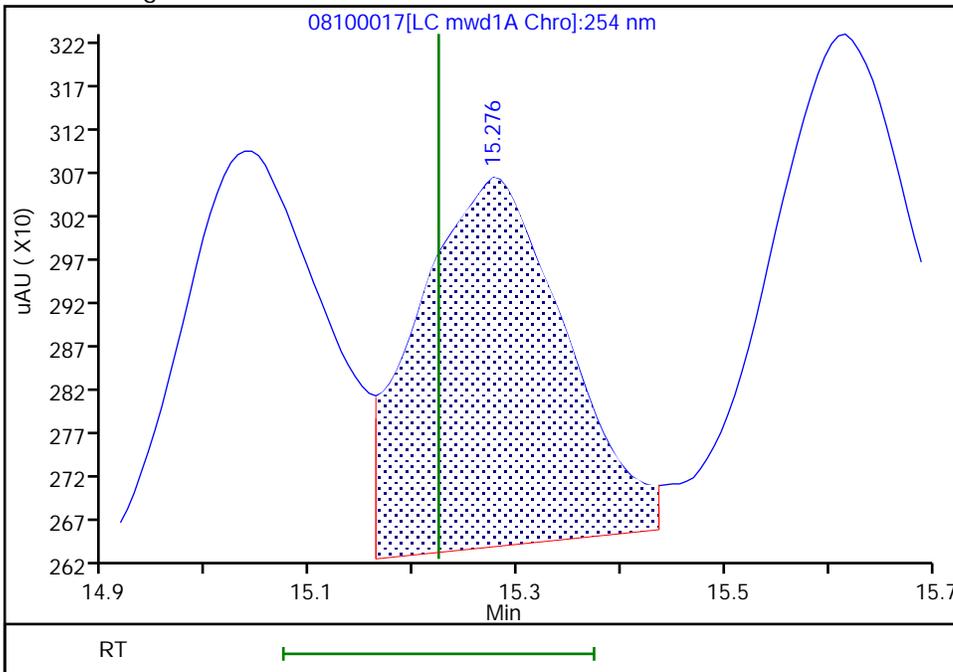
RT: 15.28  
Area: 4181  
Amount: 0.019726  
Amount Units: ug/ml

Processing Integration Results



RT: 15.28  
Area: 4148  
Amount: 0.019596  
Amount Units: ug/ml

Manual Integration Results



Reviewer: LV5D, 13-Aug-2024 15:13:11 -06:00:00 (UTC)

Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Denver

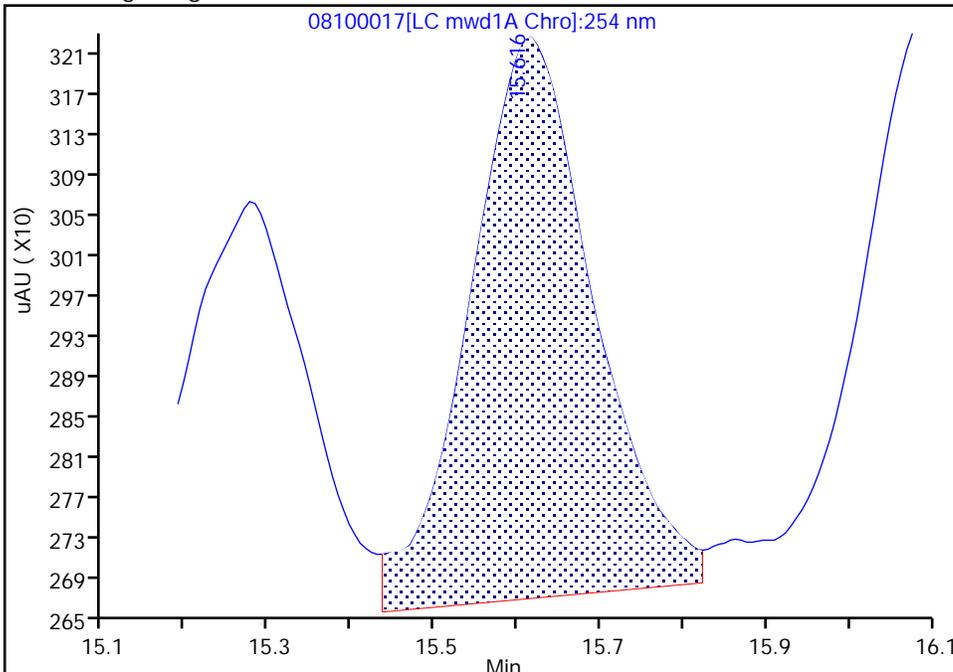
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100017.D  
Injection Date: 11-Aug-2024 00:26:39 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 2  
Client ID:  
Operator ID: JZ ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

17 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

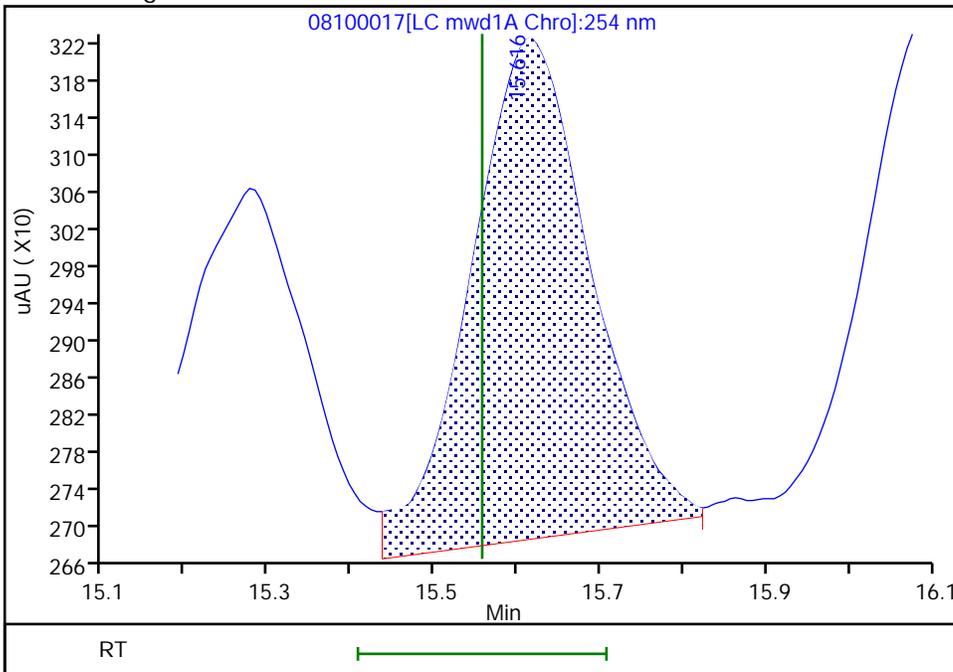
RT: 15.62  
Area: 5814  
Amount: 0.019929  
Amount Units: ug/ml

Processing Integration Results



RT: 15.62  
Area: 5455  
Amount: 0.019581  
Amount Units: ug/ml

Manual Integration Results



Reviewer: LV5D, 13-Aug-2024 15:13:11 -06:00:00 (UTC)

Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Denver

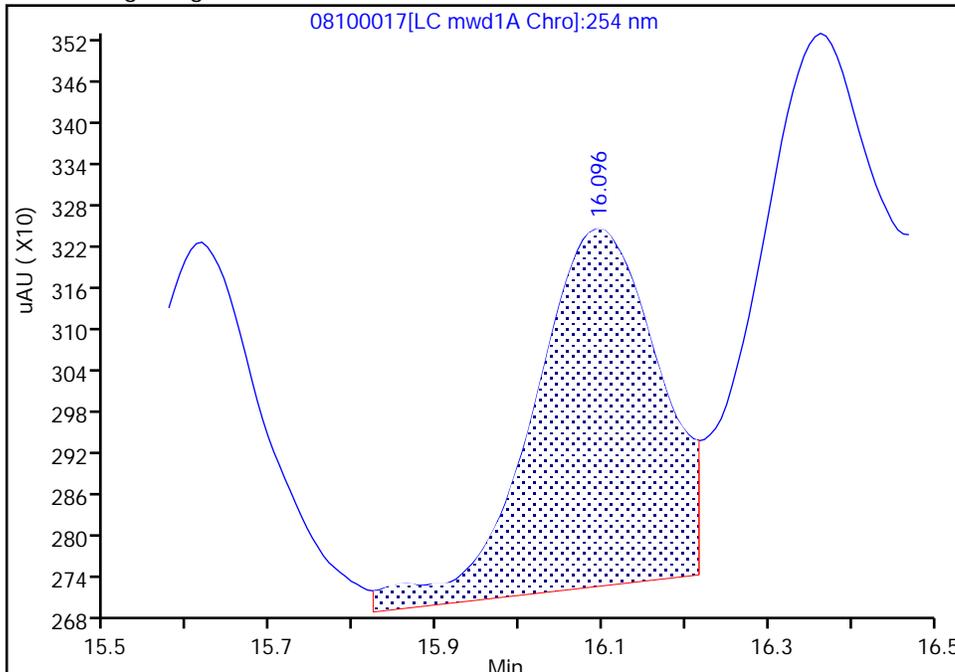
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100017.D  
Injection Date: 11-Aug-2024 00:26:39 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 2  
Client ID:  
Operator ID: JZ ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

18 m-Nitrotoluene, CAS: 99-08-1

Signal: 1

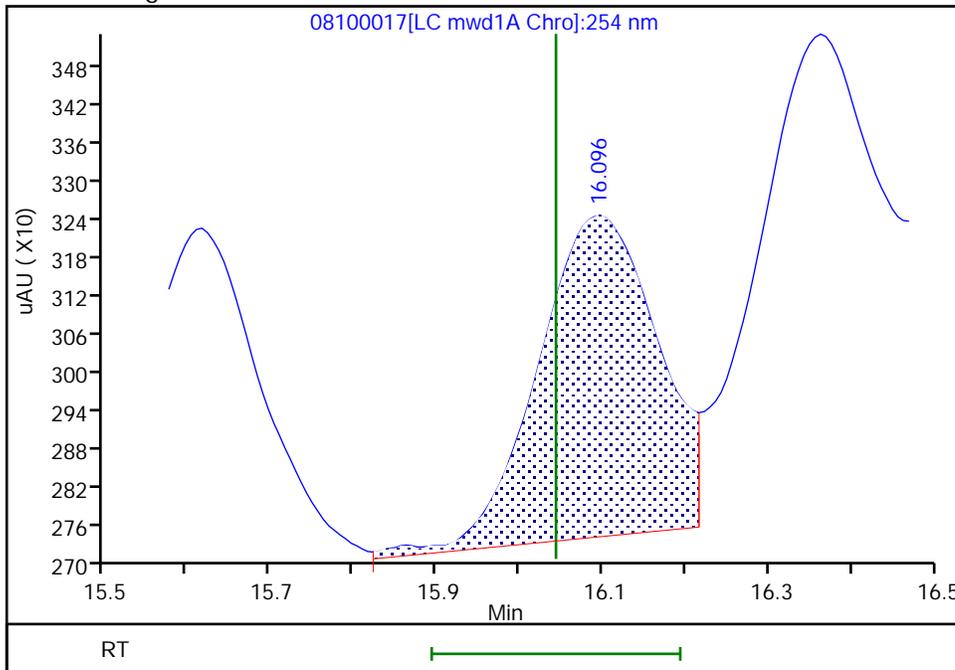
RT: 16.10  
Area: 5506  
Amount: 0.020883  
Amount Units: ug/ml

Processing Integration Results



RT: 16.10  
Area: 5081  
Amount: 0.019677  
Amount Units: ug/ml

Manual Integration Results



Reviewer: LV5D, 13-Aug-2024 15:13:11 -06:00:00 (UTC)

Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Denver

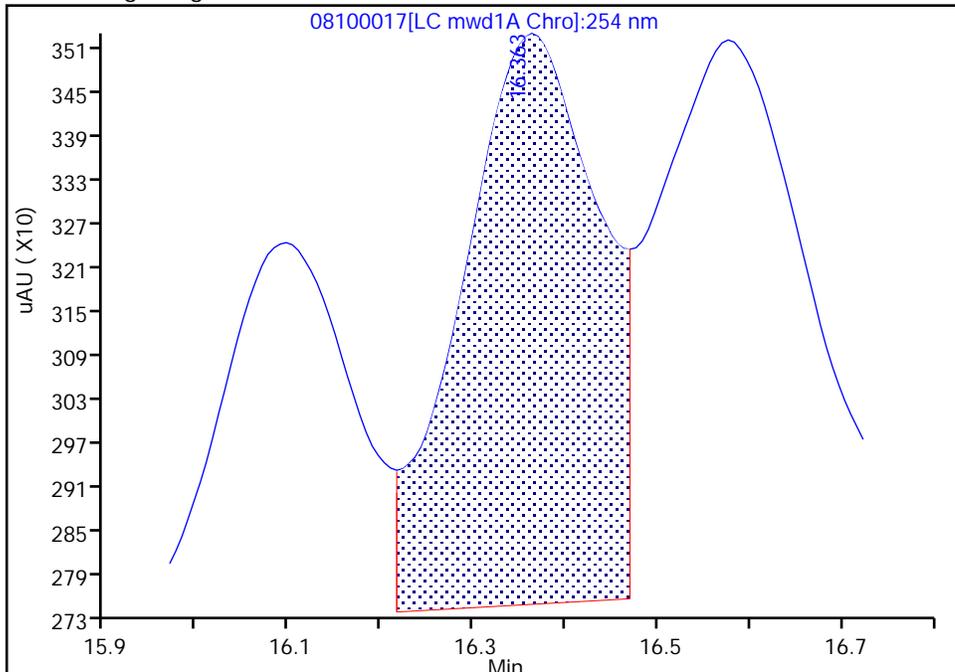
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100017.D  
Injection Date: 11-Aug-2024 00:26:39 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 2  
Client ID:  
Operator ID: JZ ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

19 2-Amino-4,6-dinitrotoluene, CAS: 35572-78-2

Signal: 1

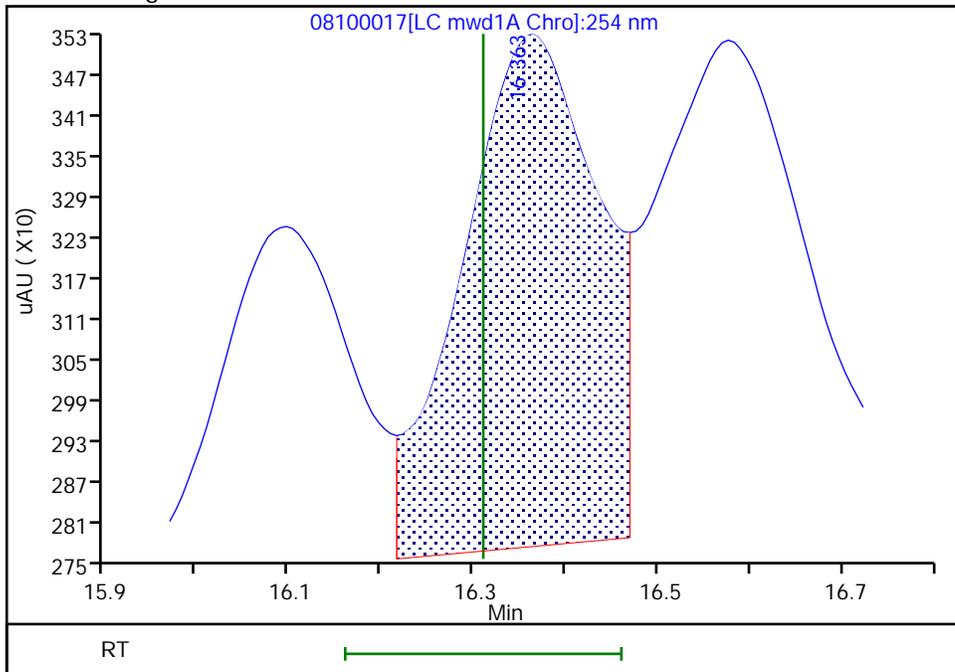
RT: 16.36  
Area: 8065  
Amount: 0.020539  
Amount Units: ug/ml

Processing Integration Results



RT: 16.36  
Area: 7784  
Amount: 0.019989  
Amount Units: ug/ml

Manual Integration Results



Reviewer: LV5D, 13-Aug-2024 15:13:11 -06:00:00 (UTC)

Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Denver

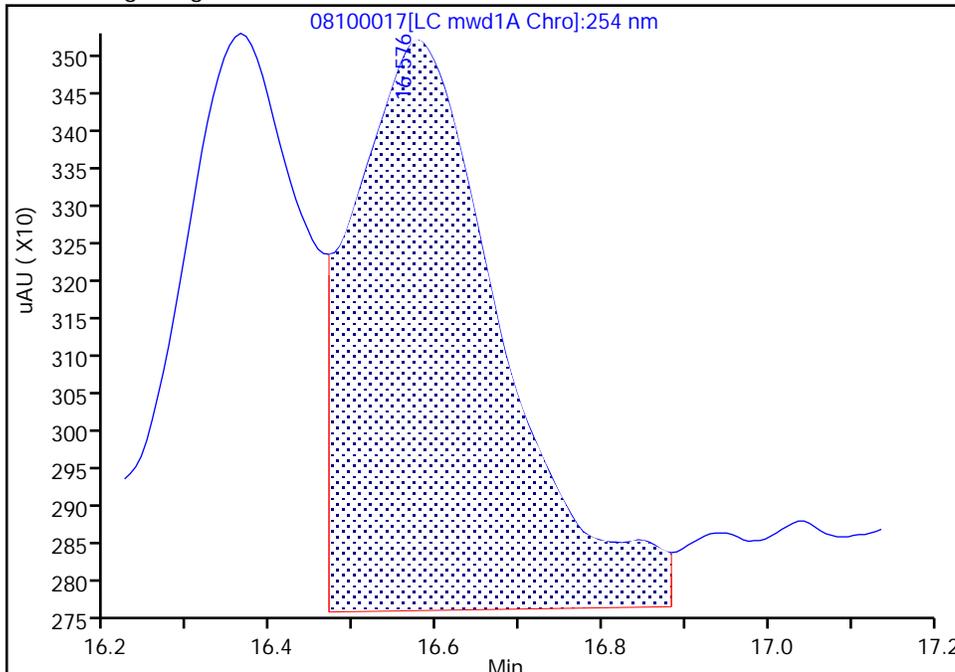
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100017.D  
Injection Date: 11-Aug-2024 00:26:39 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 2  
Client ID:  
Operator ID: JZ ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

20 1,3,5-Trinitrobenzene, CAS: 99-35-4

Signal: 1

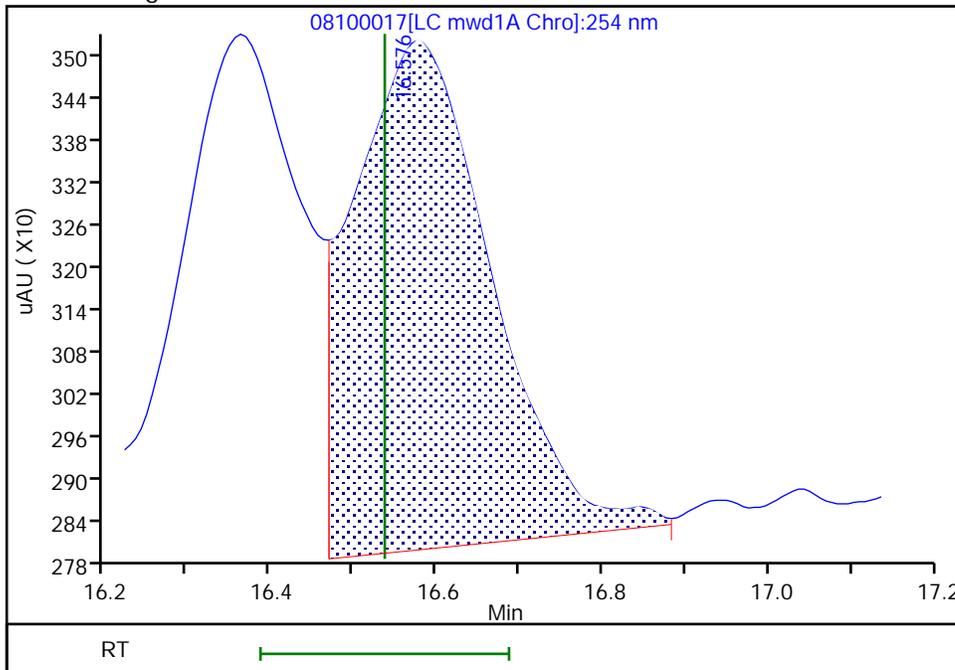
RT: 16.58  
Area: 9419  
Amount: 0.021531  
Amount Units: ug/ml

Processing Integration Results



RT: 16.58  
Area: 8315  
Amount: 0.019620  
Amount Units: ug/ml

Manual Integration Results



Reviewer: LV5D, 13-Aug-2024 15:13:11 -06:00:00 (UTC)

Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Denver

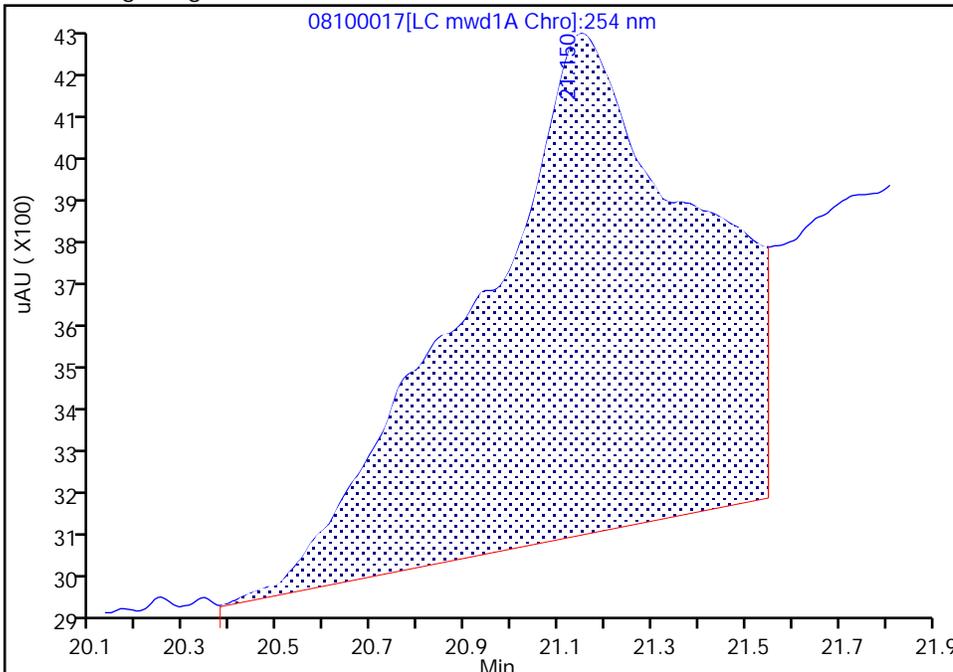
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100017.D  
Injection Date: 11-Aug-2024 00:26:39 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 2  
Client ID:  
Operator ID: JZ ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

23 Tetryl, CAS: 479-45-8

Signal: 1

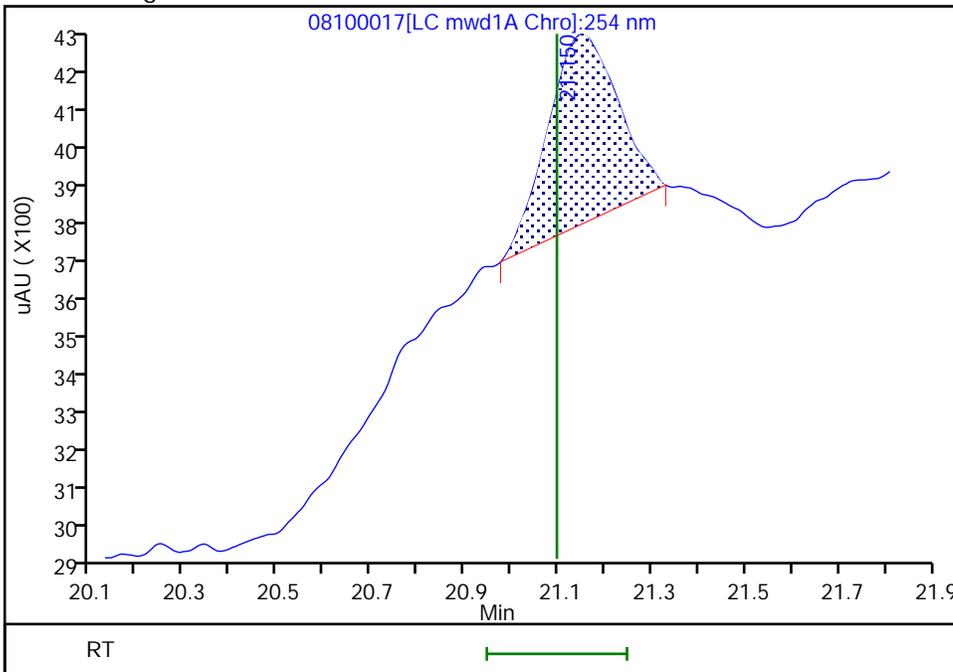
Processing Integration Results

RT: 21.15  
Area: 36766  
Amount: 0.046671  
Amount Units: ug/ml



Manual Integration Results

RT: 21.15  
Area: 4871  
Amount: 0.017192  
Amount Units: ug/ml



Reviewer: LV5D, 13-Aug-2024 15:14:37 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Denver

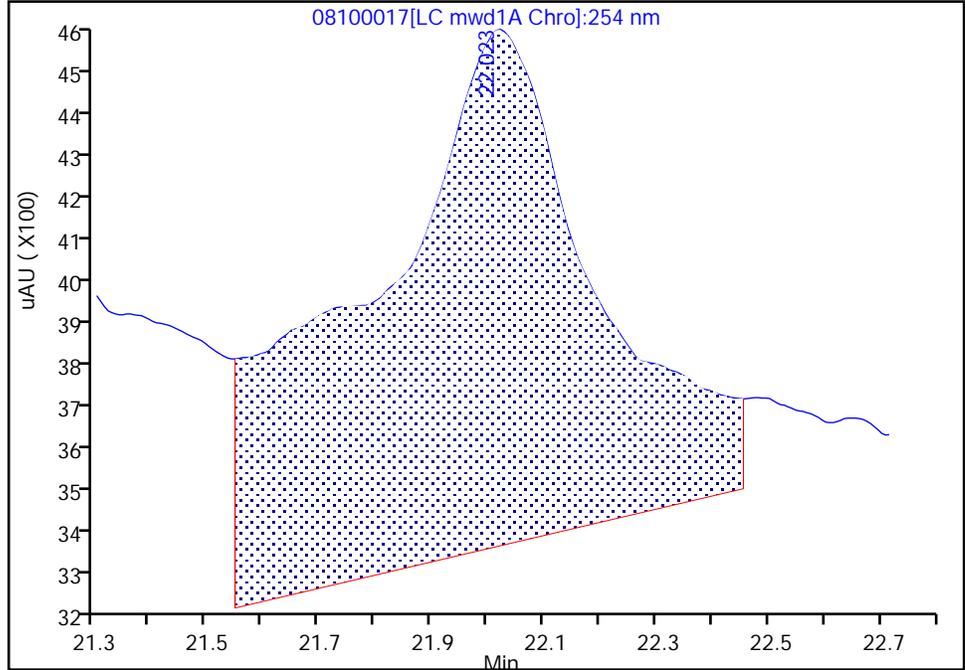
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100017.D  
Injection Date: 11-Aug-2024 00:26:39 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 2  
Client ID:  
Operator ID: JZ ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

24 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

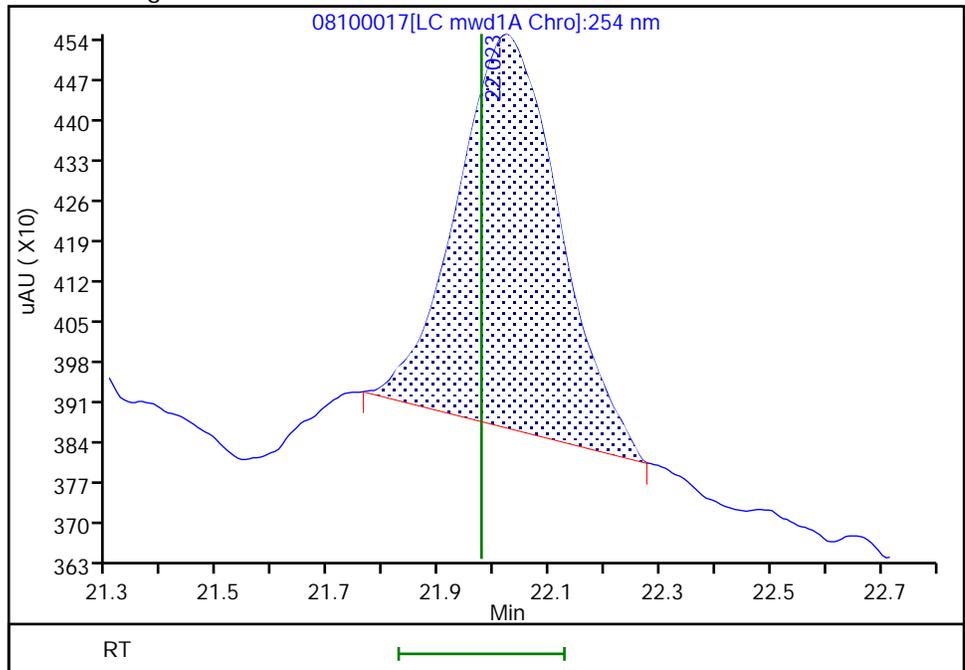
RT: 22.02  
Area: 34096  
Amount: 0.035925  
Amount Units: ug/ml

Processing Integration Results



RT: 22.02  
Area: 8874  
Amount: 0.021320  
Amount Units: ug/ml

Manual Integration Results



Reviewer: LV5D, 13-Aug-2024 15:14:33 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Denver  
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100018.D  
 Lims ID: IC INT 1  
 Client ID:  
 Sample Type: IC Calib Level: 1  
 Inject. Date: 11-Aug-2024 01:01:34 ALS Bottle#: 18 Worklist Smp#: 18  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: IC INT 1  
 Operator ID: JZ Instrument ID: CHHPLC\_X5  
 Sublist: chrom-8330\_X5\_Luna\*sub7  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\8330\_X5\_Luna.m  
 Limit Group: GCSV - 8330  
 Last Update: 13-Aug-2024 15:40:44 Calib Date: 11-Aug-2024 06:16:04  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100027.D  
 Column 1 : Luna-Phenyl hexyl ( 4.60 mm) Det: LC mwd1A, 254 nm  
 Process Host: CTX1604

First Level Reviewer: LV5D Date: 13-Aug-2024 15:15:36

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
5 HMX	1	6.324	6.324	0.000	1671	0.0100	0.009266	M
7 2,4,6-Trinitrophenol	1	7.864	7.810	0.054	1564	0.0100	0.0104	a
8 RDX	1	8.457	8.437	0.020	2773	0.0100	0.0126	
9 Nitrobenzene	1	11.004	10.983	0.021	3755	0.0100	0.0100	M
\$ 10 1,2-Dinitrobenzene	1	11.831	11.797	0.034	2585	0.0100	0.009848	M
11 3,5-Dinitroaniline	1	13.511	13.470	0.041	4508	0.0100	0.009865	M
12 1,3-Dinitrobenzene	1	13.851	13.823	0.028	6059	0.0100	0.0104	M
13 Nitroglycerin	2	14.524	14.477	0.047	14206	0.1000	0.1109	
14 o-Nitrotoluene	1	15.031	14.990	0.041	2340	0.0100	0.0099	M
16 p-Nitrotoluene	1	15.284	15.223	0.061	2037	0.0100	0.009623	M
17 4-Amino-2,6-dinitrotoluene	1	15.611	15.557	0.054	2787	0.0100	0.0100	M
18 m-Nitrotoluene	1	16.091	16.043	0.048	2547	0.0100	0.009864	M
19 2-Amino-4,6-dinitrotoluene	1	16.364	16.310	0.054	3972	0.0100	0.0102	M
20 1,3,5-Trinitrobenzene	1	16.577	16.537	0.040	4185	0.0100	0.009875	M
21 2,6-Dinitrotoluene	1	17.691	17.657	0.034	3065	0.0100	0.0108	M
22 2,4-Dinitrotoluene	1	18.131	18.090	0.041	5939	0.0100	0.0104	M
23 Tetryl	1	21.151	21.097	0.054	2430	0.0100	0.008576	M
24 2,4,6-Trinitrotoluene	1	22.017	21.977	0.040	4082	0.0100	0.009807	M
25 PETN	2	23.537	23.457	0.080	13555	0.1000	0.0998	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

8330IntermStk\_00082

Amount Added: 1.00

Units: uL

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100018.D

Injection Date: 11-Aug-2024 01:01:34

Instrument ID: CHHPLC\_X5

Operator ID: JZ

Lims ID: IC INT 1

Worklist Smp#: 18

Client ID:

Injection Vol: 100.0 ul

Dil. Factor: 1.0000

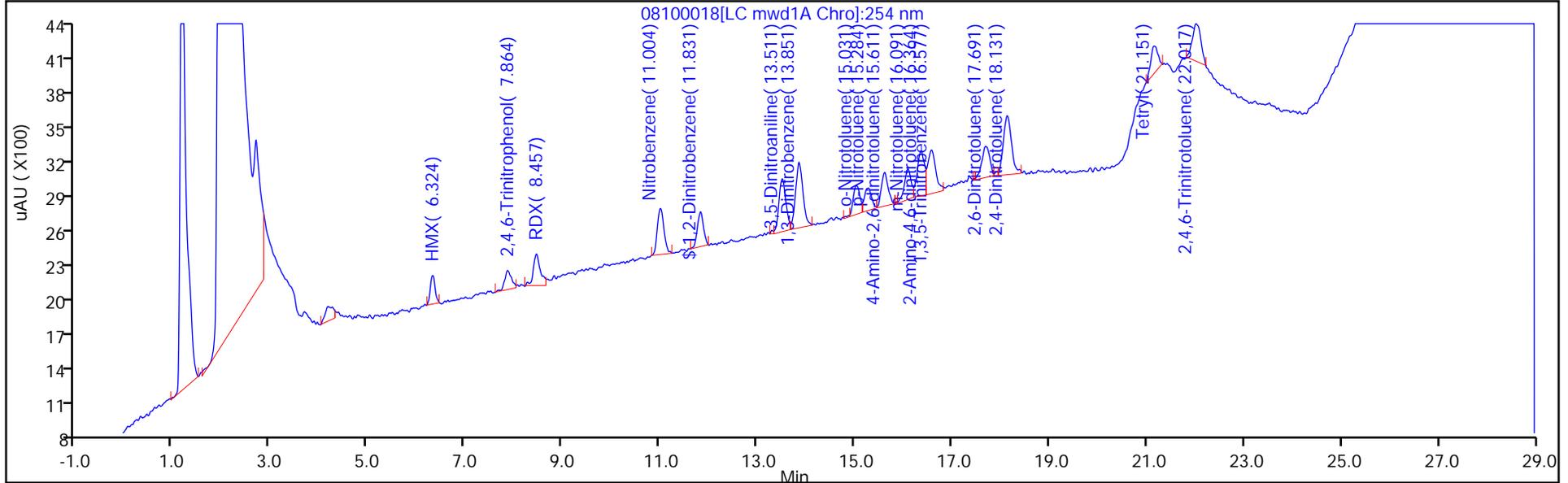
ALS Bottle#: 18

Method: 8330\_X5\_Luna

Limit Group: GCSV - 8330

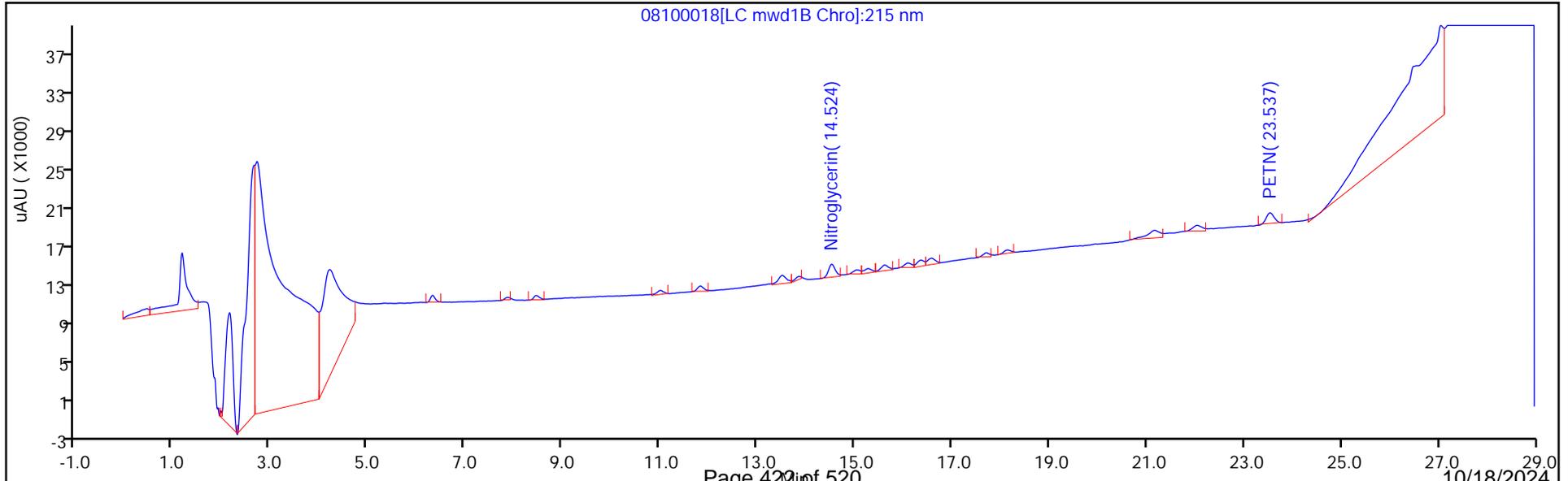
Column: Luna-Phenyl hexyl ( 4.60 mm)

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

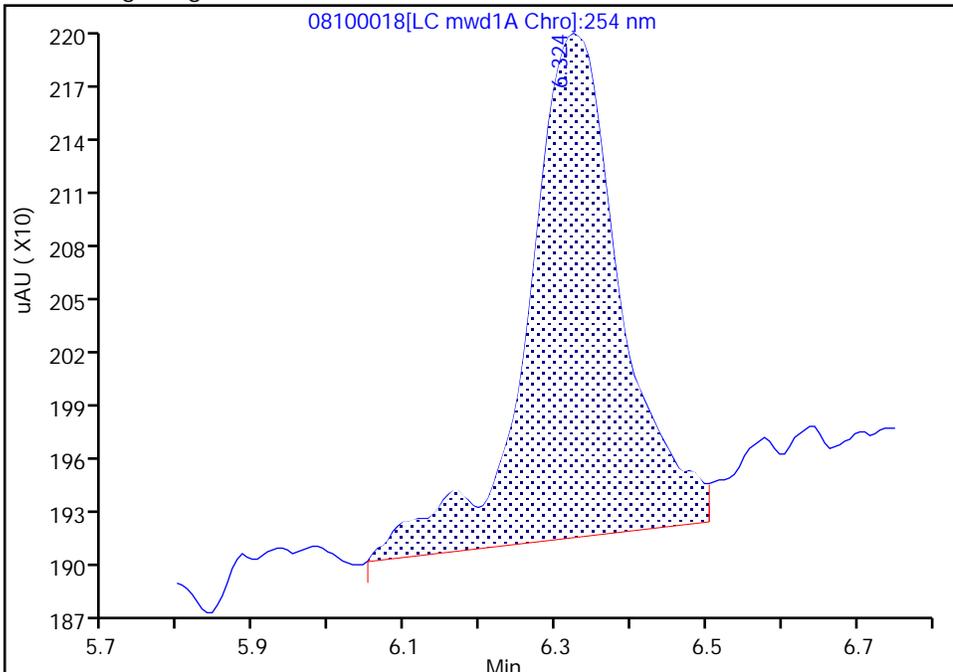
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100018.D  
Injection Date: 11-Aug-2024 01:01:34 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 1  
Client ID:  
Operator ID: JZ ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

5 HMX, CAS: 2691-41-0

Signal: 1

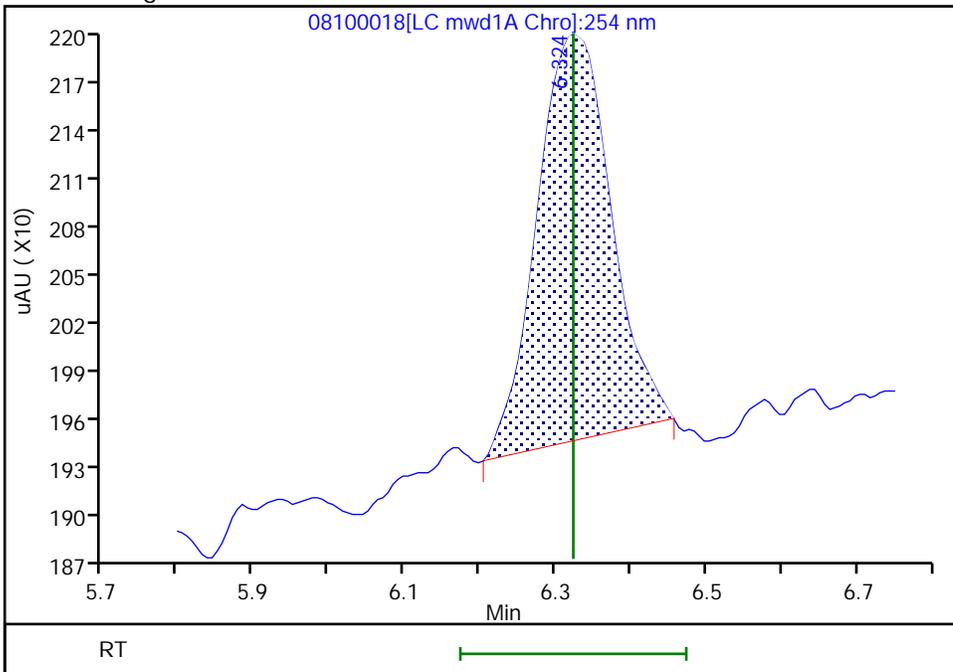
RT: 6.32  
Area: 2379  
Amount: 0.010242  
Amount Units: ug/ml

Processing Integration Results



RT: 6.32  
Area: 1671  
Amount: 0.009266  
Amount Units: ug/ml

Manual Integration Results



Reviewer: LV5D, 13-Aug-2024 15:15:33 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Denver

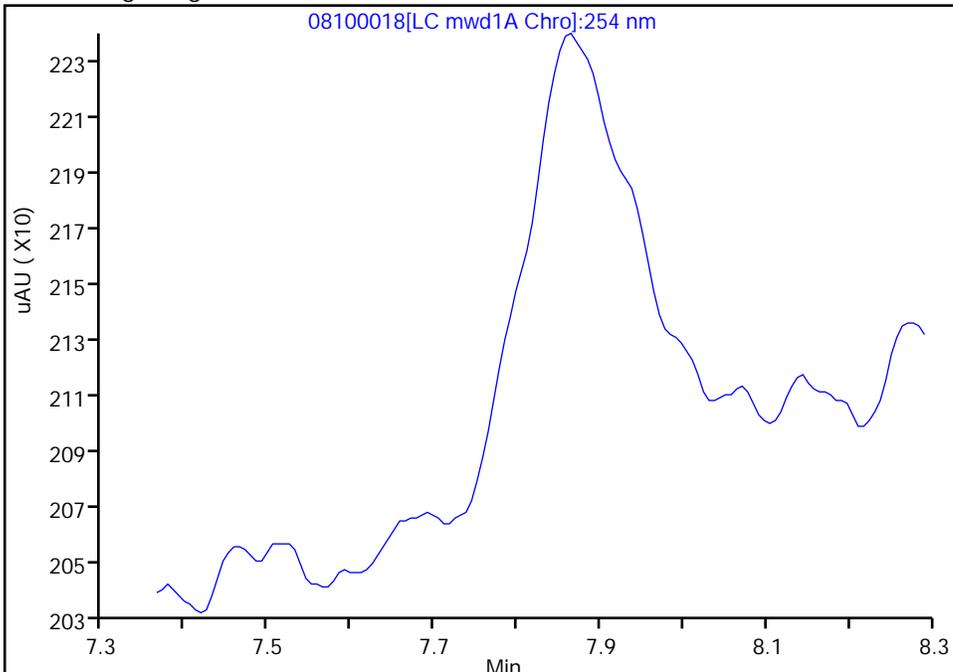
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100018.D  
Injection Date: 11-Aug-2024 01:01:34 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 1  
Client ID:  
Operator ID: JZ ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

7 2,4,6-Trinitrophenol, CAS: 88-89-1

Signal: 1

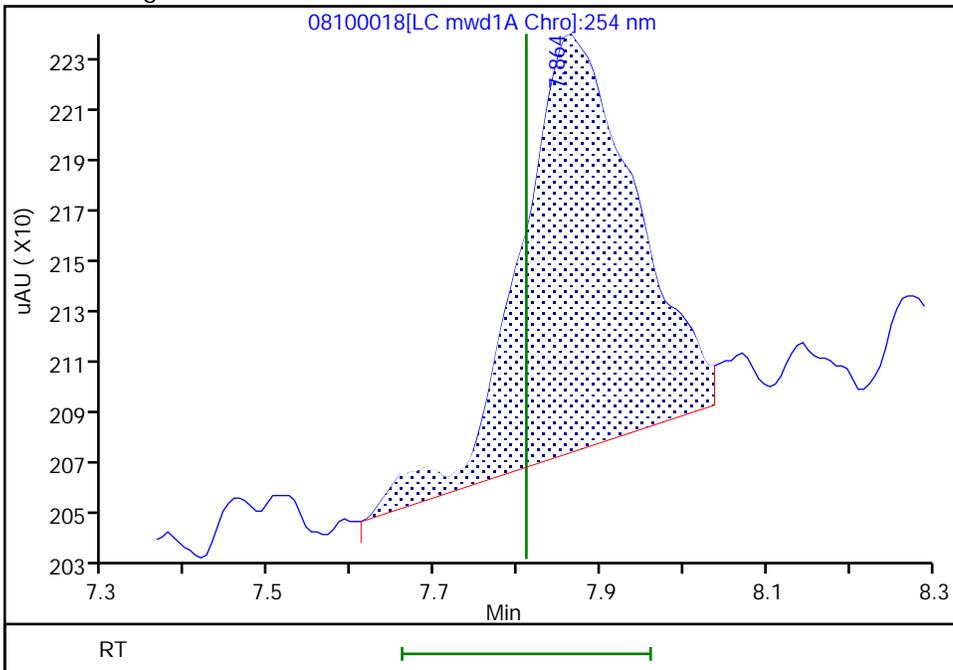
Processing Integration Results

Not Detected  
Expected RT: 7.81



Manual Integration Results

RT: 7.86  
Area: 1564  
Amount: 0.010436  
Amount Units: ug/ml



Reviewer: LV5D, 13-Aug-2024 15:14:51 -06:00:00 (UTC)

Audit Action: Assigned Compound ID

Audit Reason: Baseline Smoothing

Eurofins Denver

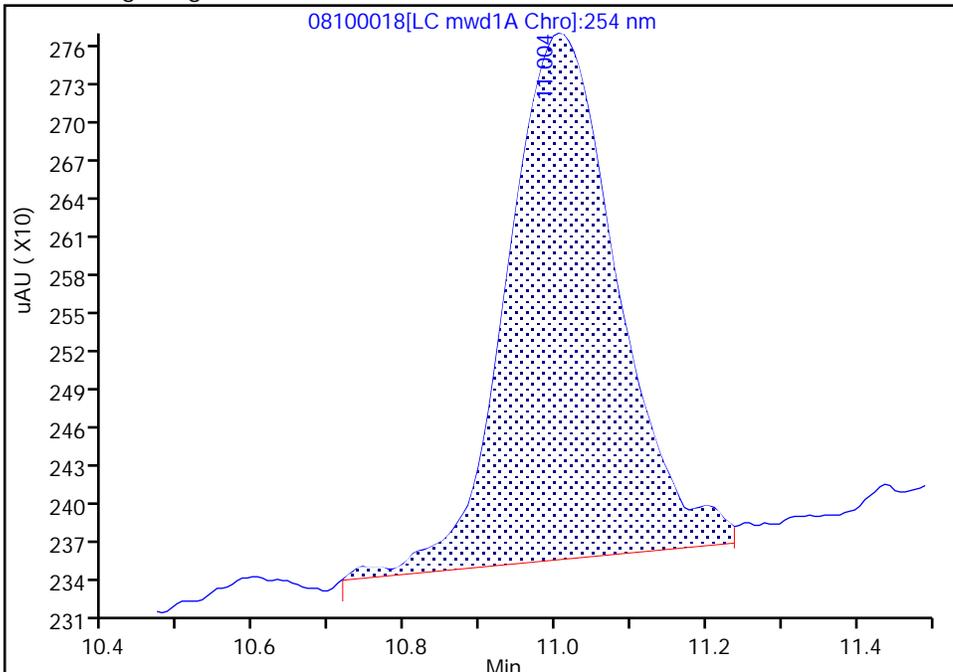
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100018.D  
Injection Date: 11-Aug-2024 01:01:34 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 1  
Client ID:  
Operator ID: JZ ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

9 Nitrobenzene, CAS: 98-95-3

Signal: 1

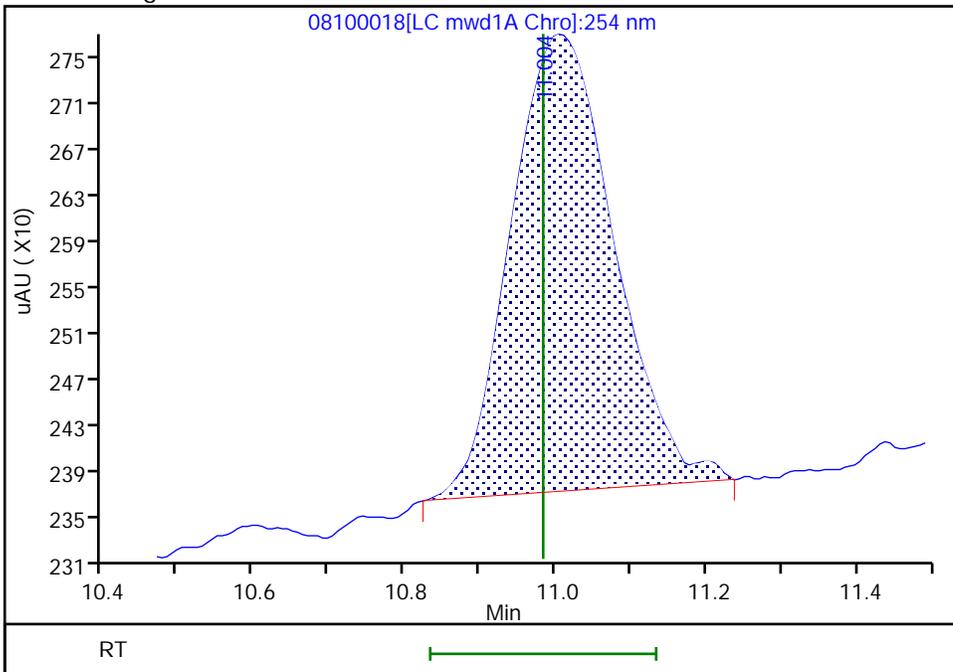
RT: 11.00  
Area: 4164  
Amount: 0.010915  
Amount Units: ug/ml

Processing Integration Results



RT: 11.00  
Area: 3755  
Amount: 0.009962  
Amount Units: ug/ml

Manual Integration Results



Reviewer: LV5D, 13-Aug-2024 15:15:28 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Denver

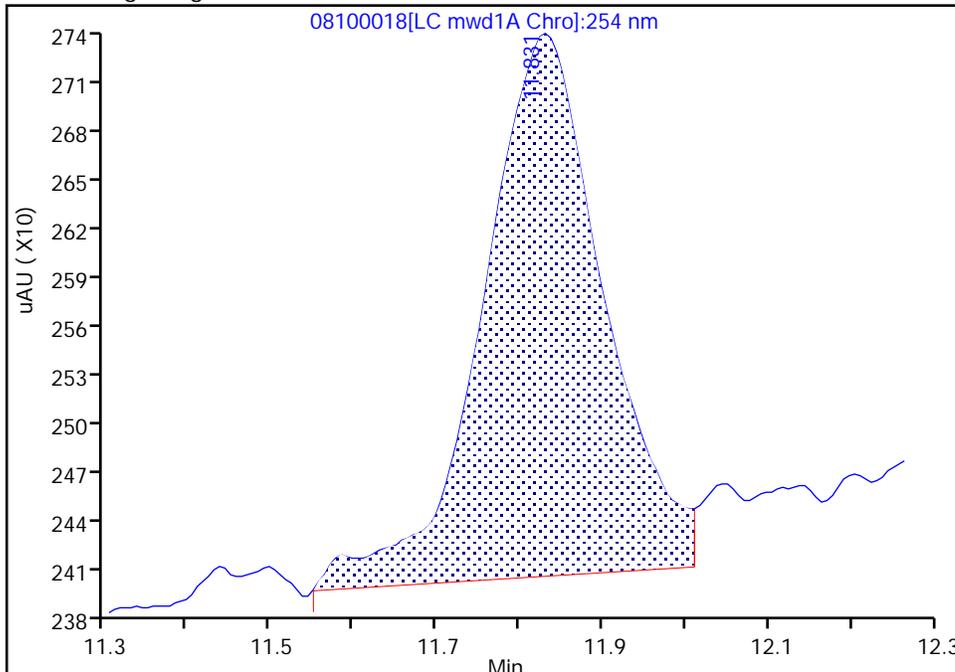
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100018.D  
Injection Date: 11-Aug-2024 01:01:34 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 1  
Client ID:  
Operator ID: JZ ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

\$ 10 1,2-Dinitrobenzene, CAS: 528-29-0

Signal: 1

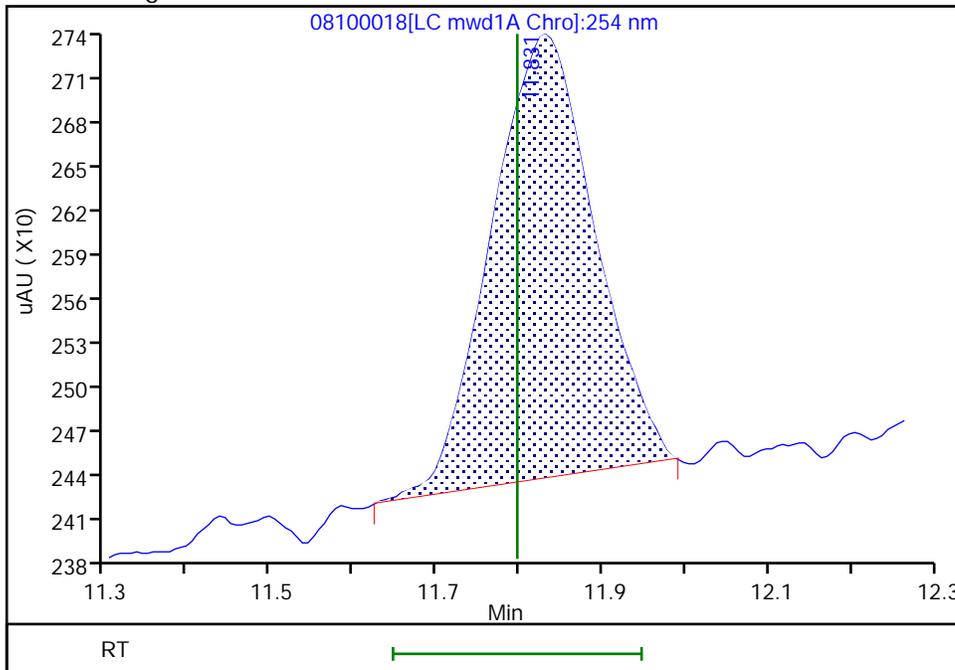
RT: 11.83  
Area: 3337  
Amount: 0.012321  
Amount Units: ug/ml

Processing Integration Results



RT: 11.83  
Area: 2585  
Amount: 0.009848  
Amount Units: ug/ml

Manual Integration Results



Reviewer: LV5D, 13-Aug-2024 15:15:26 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Denver

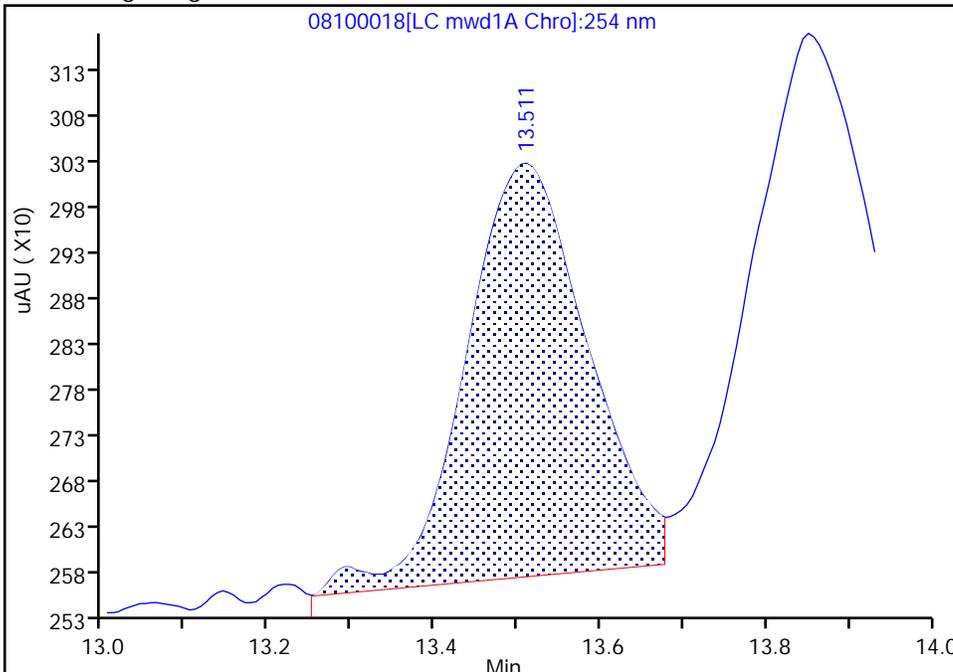
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100018.D  
Injection Date: 11-Aug-2024 01:01:34 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 1  
Client ID:  
Operator ID: JZ ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

11 3,5-Dinitroaniline, CAS: 618-87-1

Signal: 1

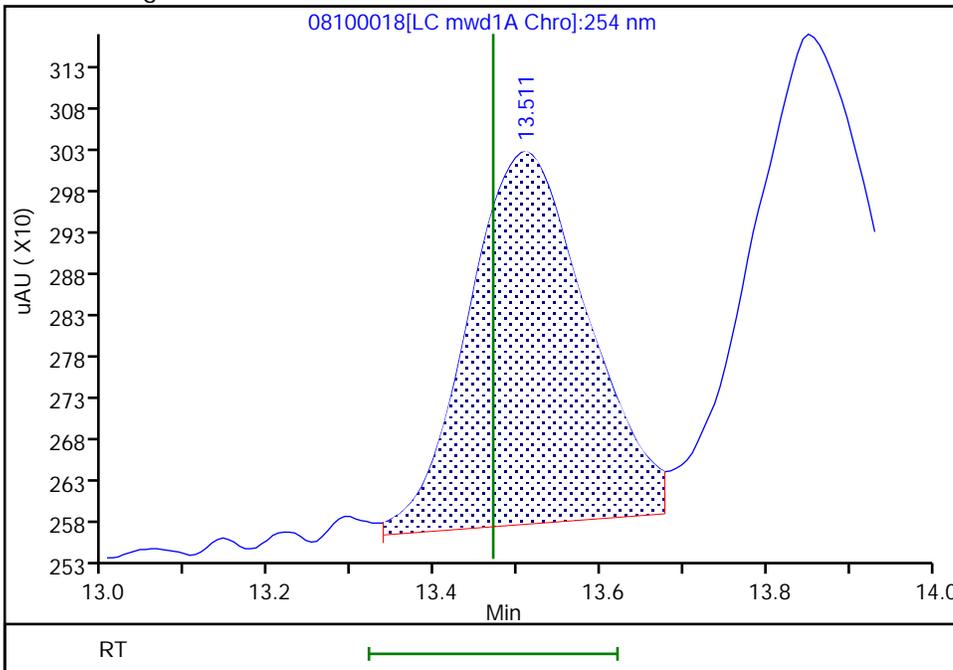
RT: 13.51  
Area: 4632  
Amount: 0.009921  
Amount Units: ug/ml

Processing Integration Results



RT: 13.51  
Area: 4508  
Amount: 0.009865  
Amount Units: ug/ml

Manual Integration Results



Reviewer: LV5D, 13-Aug-2024 15:15:22 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak

Audit Reason: Baseline Smoothing

Eurofins Denver

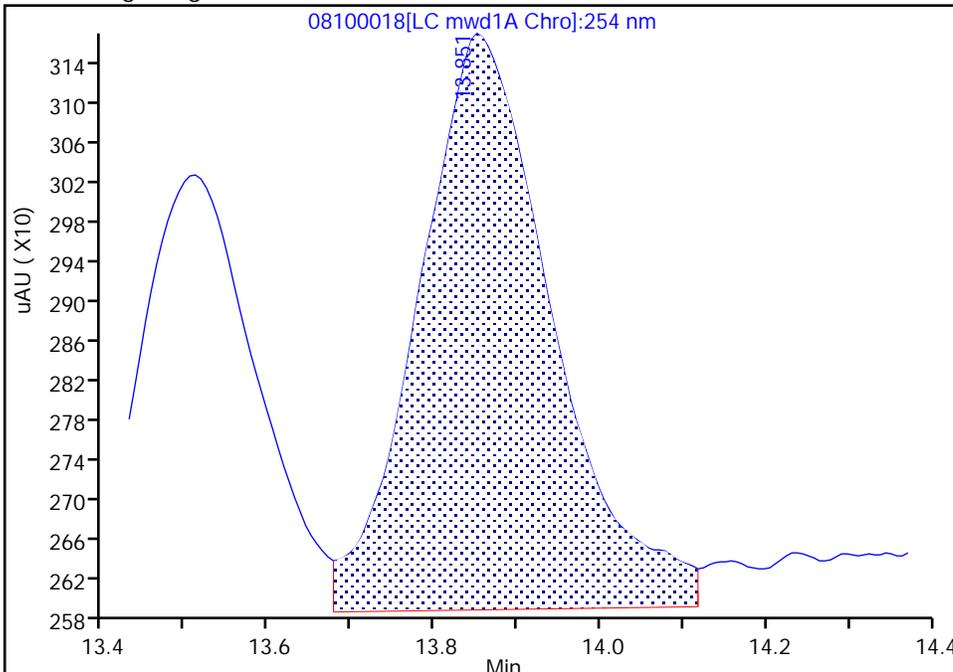
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100018.D  
Injection Date: 11-Aug-2024 01:01:34 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 1  
Client ID:  
Operator ID: JZ ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

12 1,3-Dinitrobenzene, CAS: 99-65-0

Signal: 1

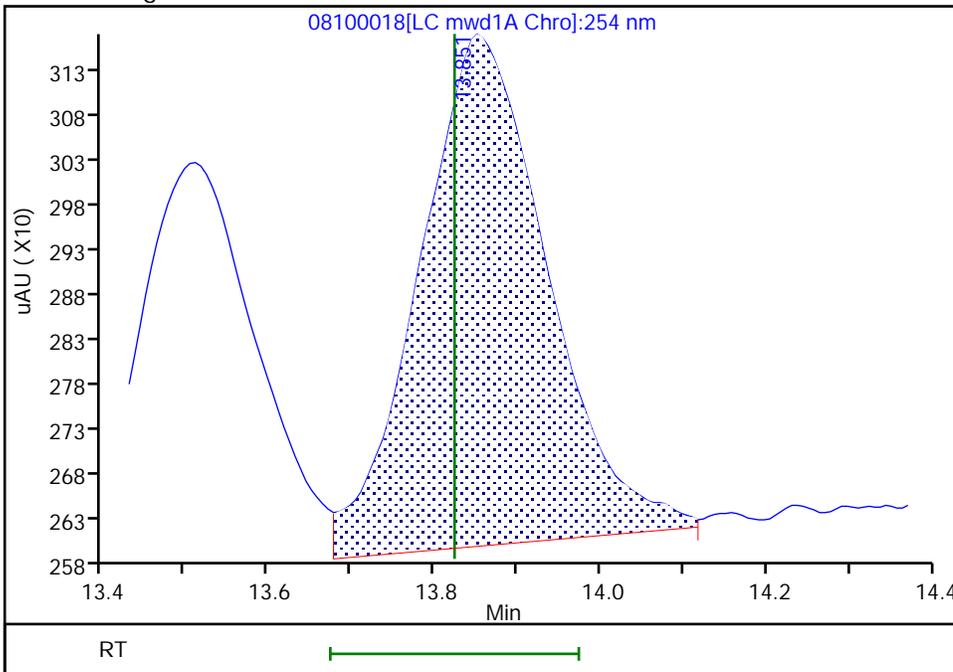
RT: 13.85  
Area: 6481  
Amount: 0.010986  
Amount Units: ug/ml

Processing Integration Results



RT: 13.85  
Area: 6059  
Amount: 0.010353  
Amount Units: ug/ml

Manual Integration Results



Reviewer: LV5D, 13-Aug-2024 15:15:19 -06:00:00 (UTC)

Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Denver

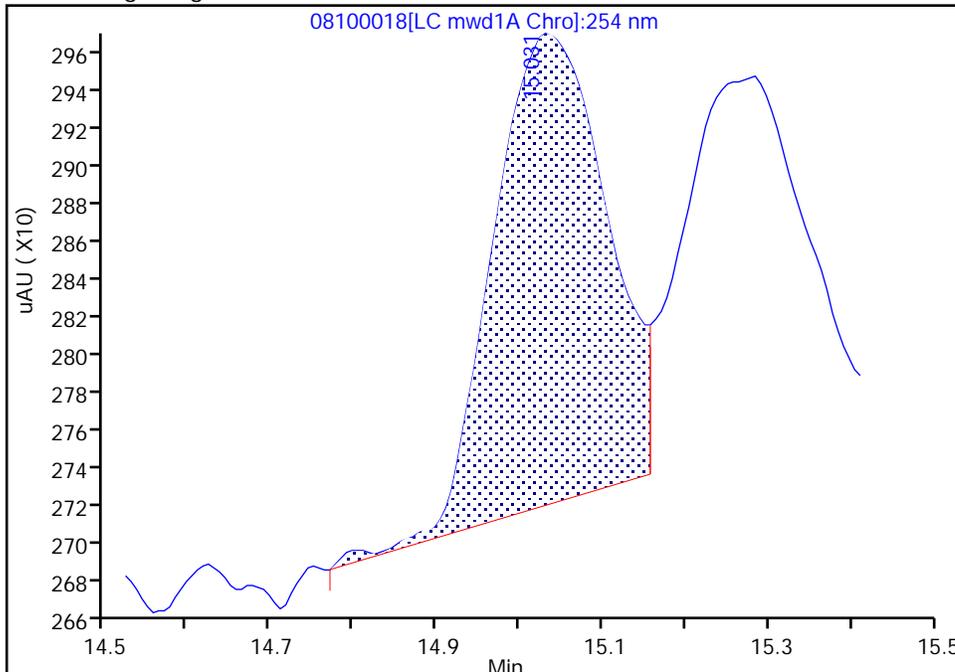
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100018.D  
Injection Date: 11-Aug-2024 01:01:34 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 1  
Client ID:  
Operator ID: JZ ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

14 o-Nitrotoluene, CAS: 88-72-2

Signal: 1

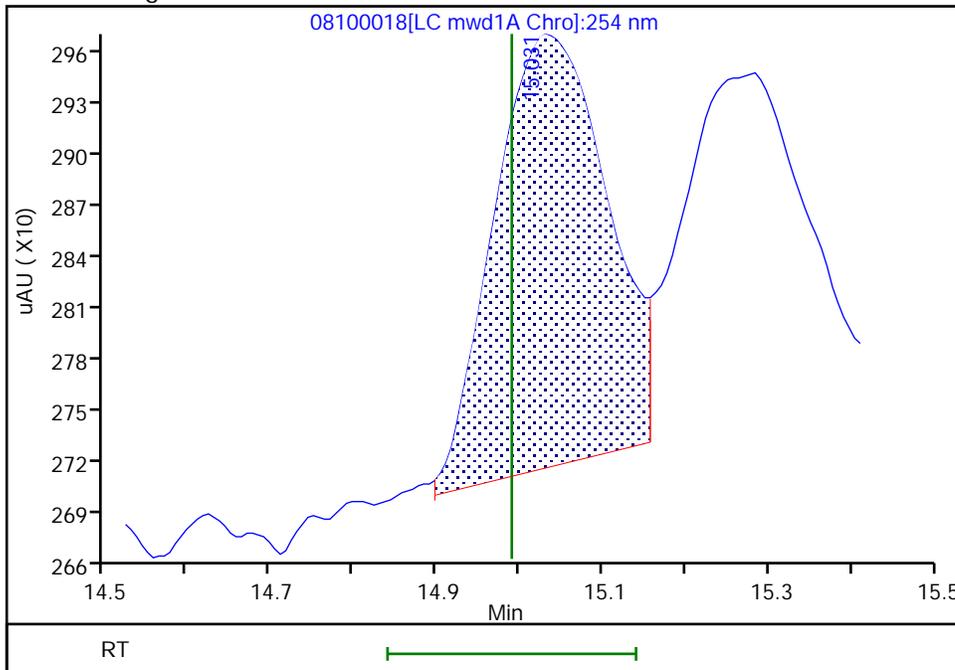
RT: 15.03  
Area: 2307  
Amount: 0.009796  
Amount Units: ug/ml

Processing Integration Results



RT: 15.03  
Area: 2340  
Amount: 0.009921  
Amount Units: ug/ml

Manual Integration Results



Reviewer: LV5D, 13-Aug-2024 15:15:05 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak

Audit Reason: Baseline Smoothing

Eurofins Denver

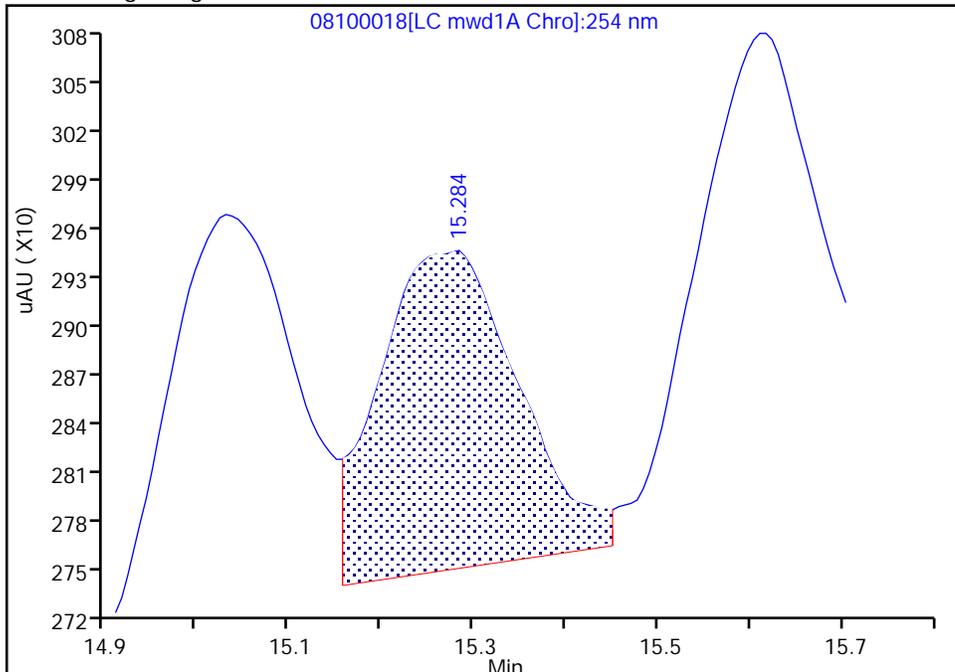
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100018.D  
Injection Date: 11-Aug-2024 01:01:34 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 1  
Client ID:  
Operator ID: JZ ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

16 p-Nitrotoluene, CAS: 99-99-0

Signal: 1

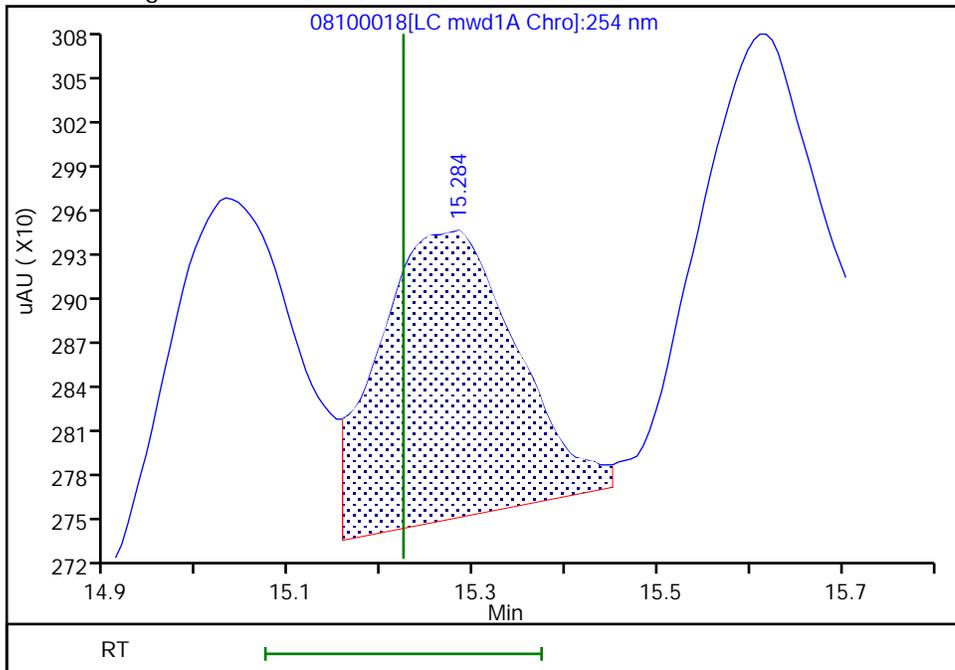
RT: 15.28  
Area: 2046  
Amount: 0.009661  
Amount Units: ug/ml

Processing Integration Results



RT: 15.28  
Area: 2037  
Amount: 0.009623  
Amount Units: ug/ml

Manual Integration Results



Reviewer: LV5D, 13-Aug-2024 15:15:01 -06:00:00 (UTC)

Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Denver

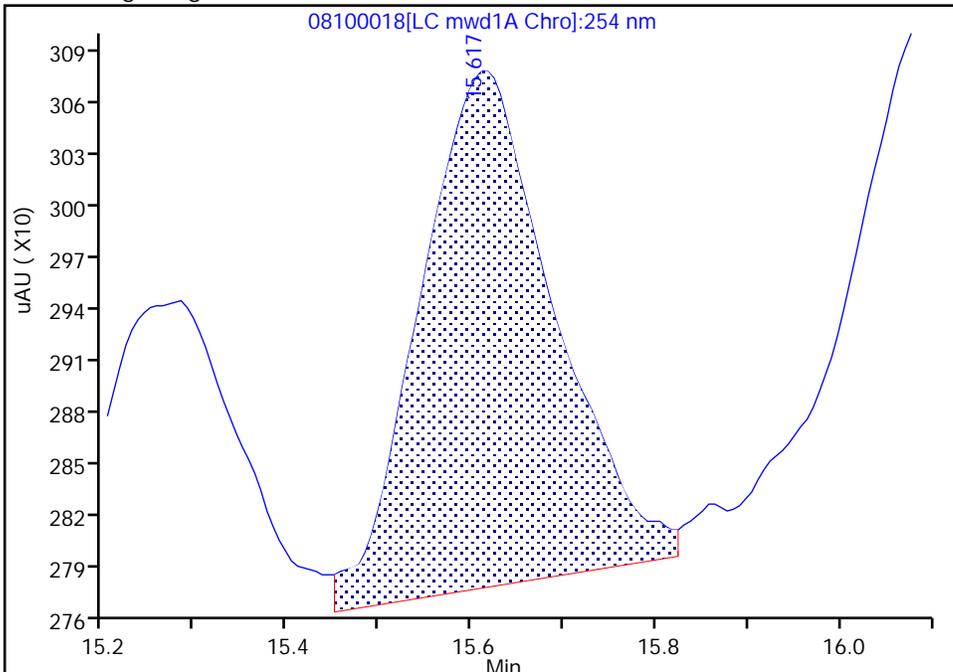
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100018.D  
Injection Date: 11-Aug-2024 01:01:34 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 1  
Client ID:  
Operator ID: JZ ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

17 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

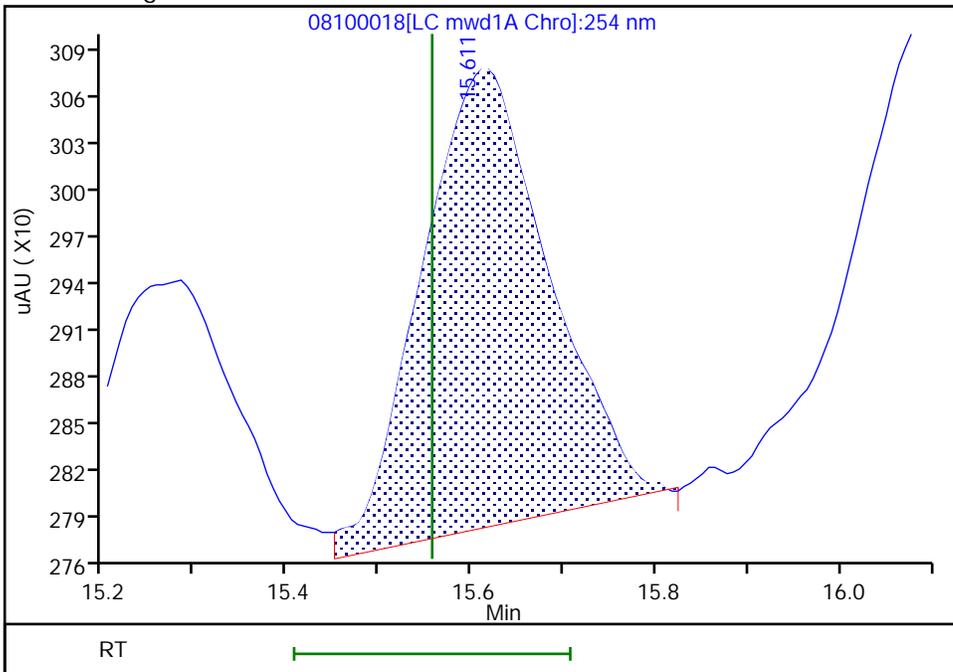
RT: 15.62  
Area: 3055  
Amount: 0.010228  
Amount Units: ug/ml

Processing Integration Results



RT: 15.61  
Area: 2787  
Amount: 0.010004  
Amount Units: ug/ml

Manual Integration Results



Reviewer: LV5D, 13-Aug-2024 15:15:01 -06:00:00 (UTC)

Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Denver

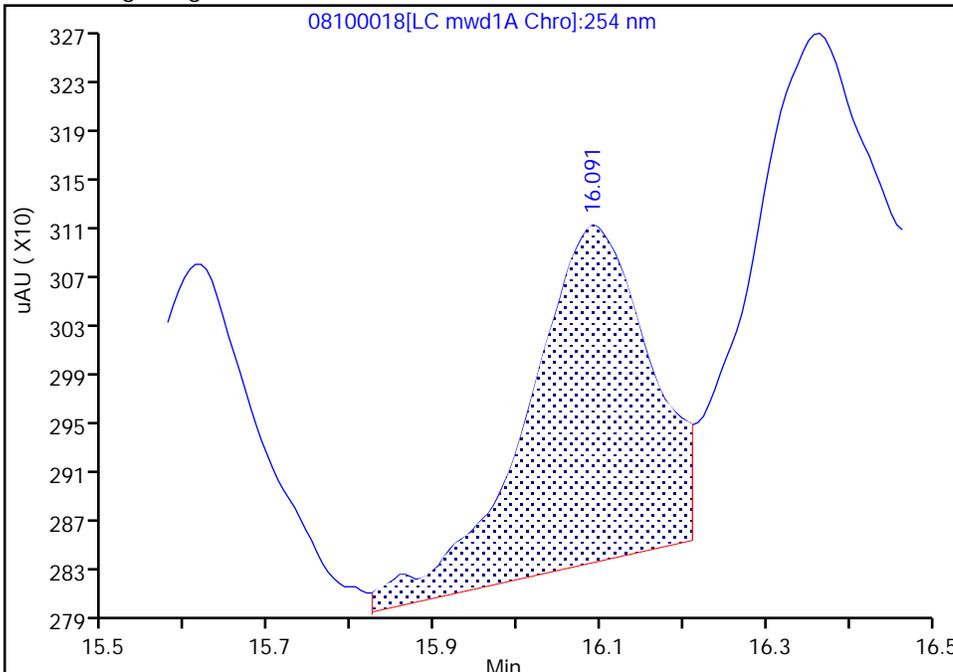
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100018.D  
Injection Date: 11-Aug-2024 01:01:34 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 1  
Client ID:  
Operator ID: JZ ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

18 m-Nitrotoluene, CAS: 99-08-1

Signal: 1

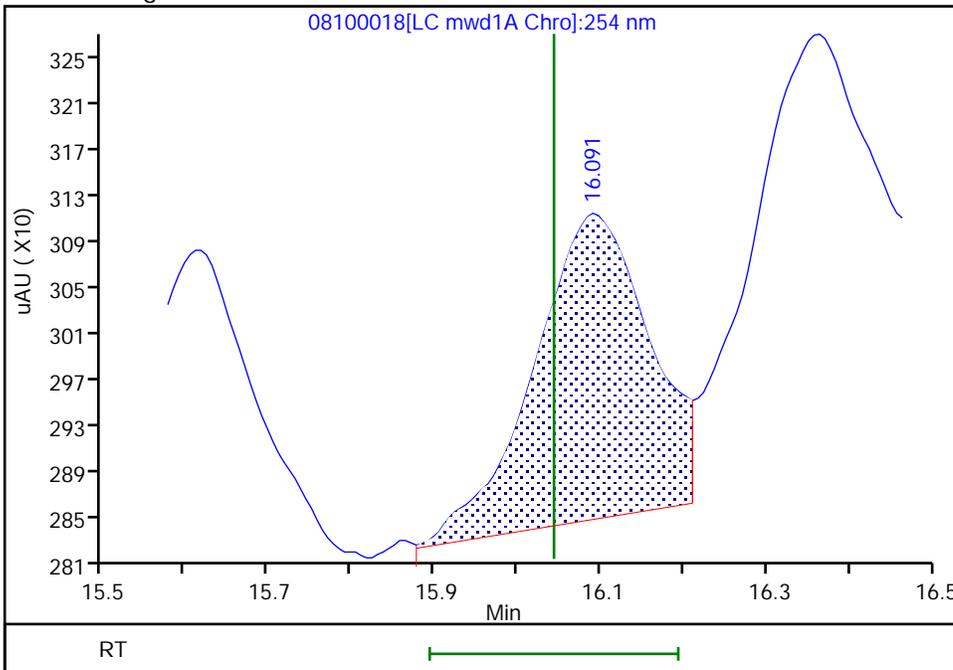
RT: 16.09  
Area: 2824  
Amount: 0.010807  
Amount Units: ug/ml

Processing Integration Results



RT: 16.09  
Area: 2547  
Amount: 0.009864  
Amount Units: ug/ml

Manual Integration Results



Reviewer: LV5D, 13-Aug-2024 15:15:04 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak

Audit Reason: Baseline Smoothing

Eurofins Denver

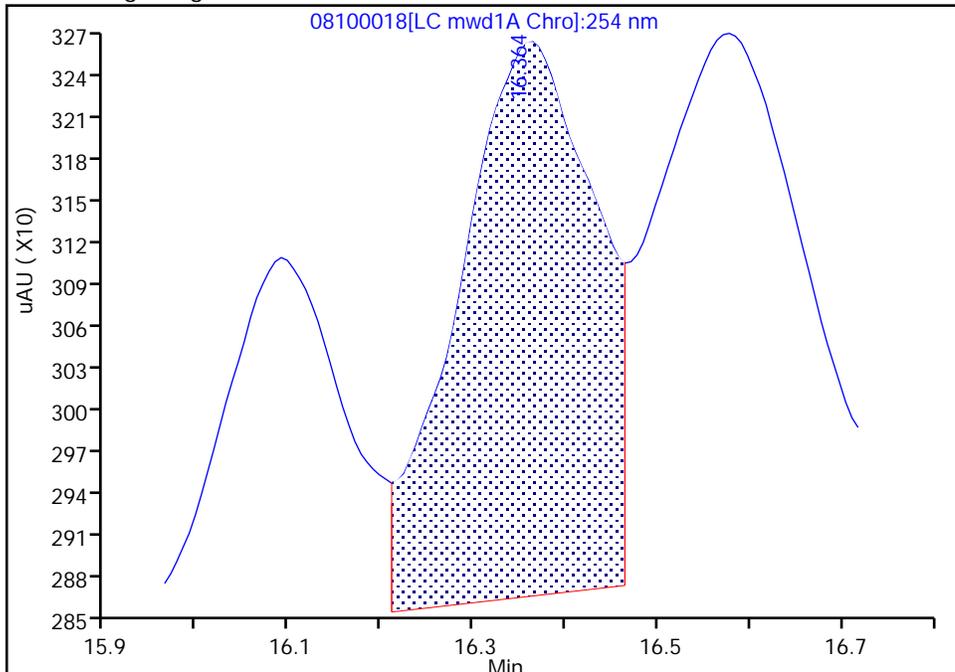
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100018.D  
Injection Date: 11-Aug-2024 01:01:34 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 1  
Client ID:  
Operator ID: JZ ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

19 2-Amino-4,6-dinitrotoluene, CAS: 35572-78-2

Signal: 1

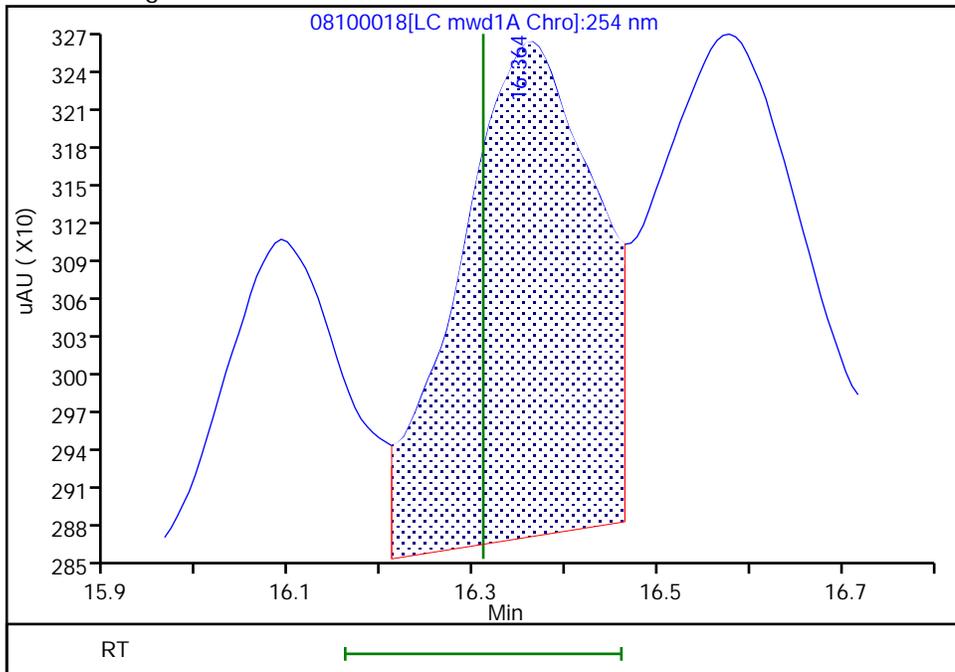
RT: 16.36  
Area: 4124  
Amount: 0.010545  
Amount Units: ug/ml

Processing Integration Results



RT: 16.36  
Area: 3972  
Amount: 0.010200  
Amount Units: ug/ml

Manual Integration Results



Reviewer: LV5D, 13-Aug-2024 15:15:01 -06:00:00 (UTC)

Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Denver

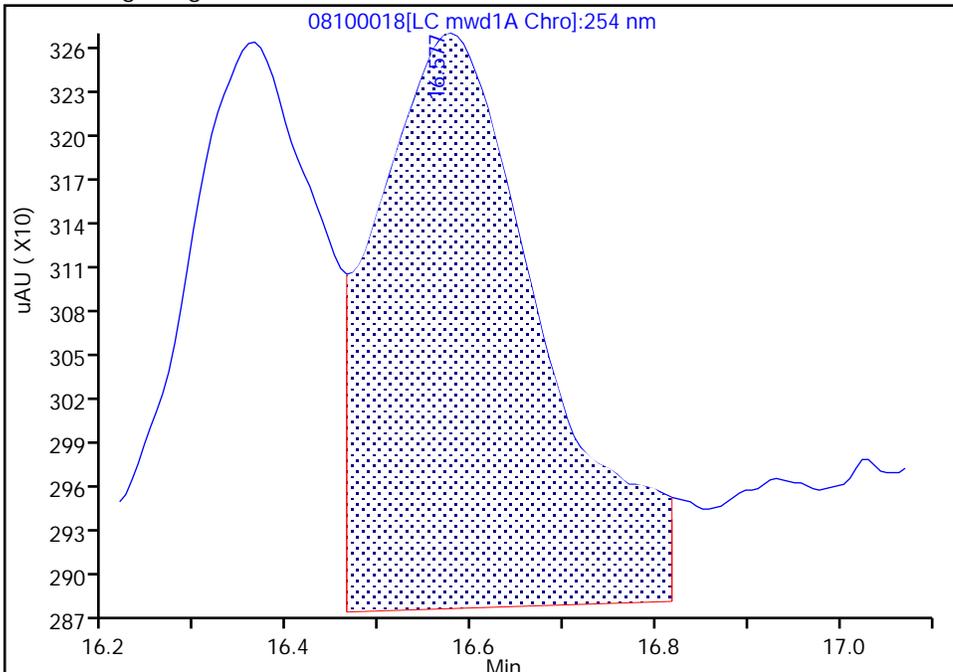
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100018.D  
Injection Date: 11-Aug-2024 01:01:34 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 1  
Client ID:  
Operator ID: JZ ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

20 1,3,5-Trinitrobenzene, CAS: 99-35-4

Signal: 1

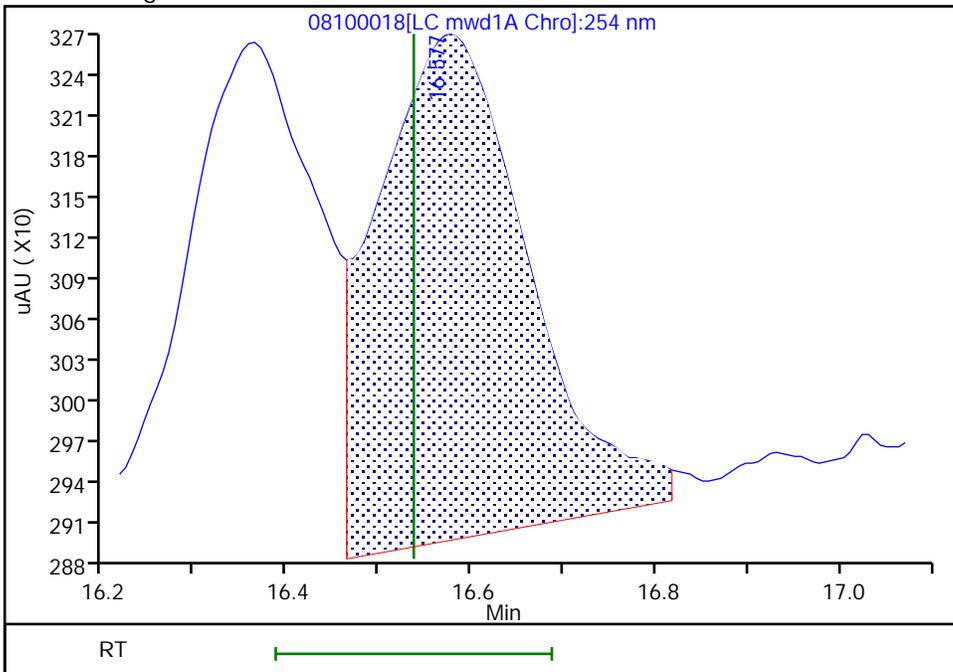
RT: 16.58  
Area: 4863  
Amount: 0.011274  
Amount Units: ug/ml

Processing Integration Results



RT: 16.58  
Area: 4185  
Amount: 0.009875  
Amount Units: ug/ml

Manual Integration Results



Reviewer: LV5D, 13-Aug-2024 15:15:01 -06:00:00 (UTC)

Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Denver

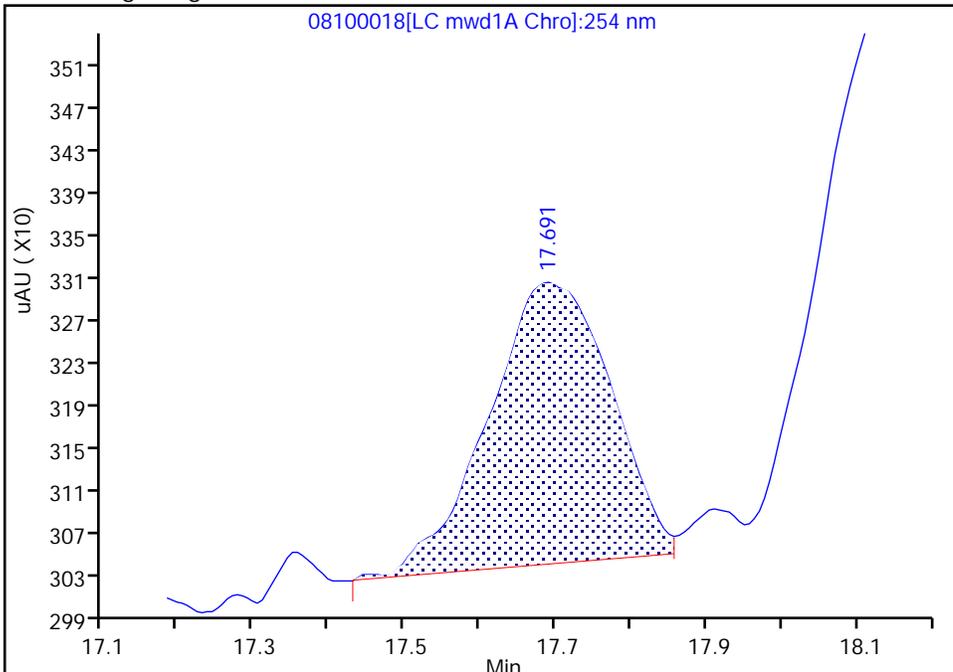
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100018.D  
Injection Date: 11-Aug-2024 01:01:34 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 1  
Client ID:  
Operator ID: JZ ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

21 2,6-Dinitrotoluene, CAS: 606-20-2

Signal: 1

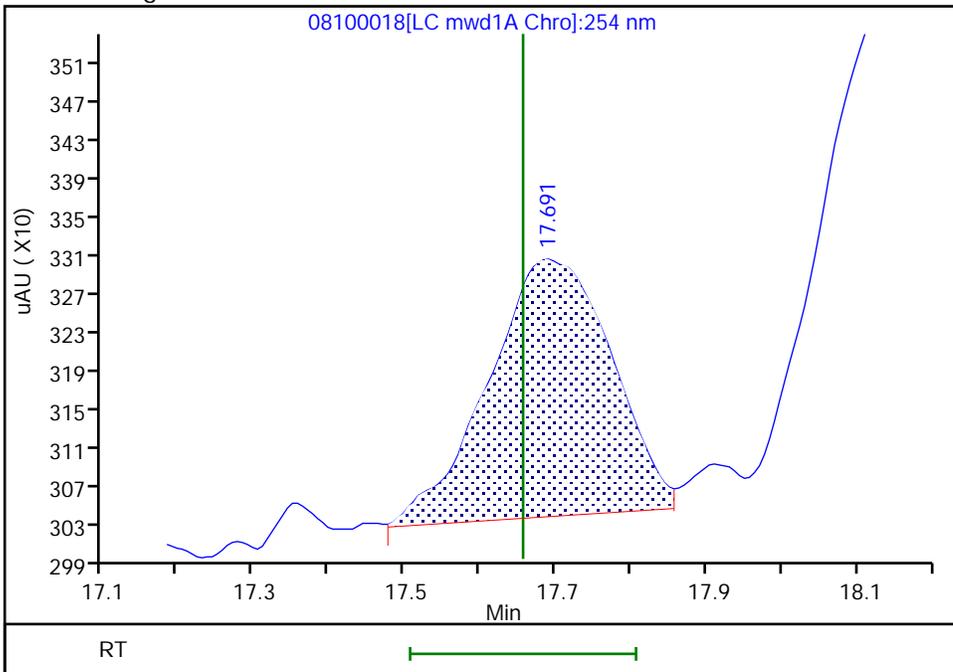
RT: 17.69  
Area: 3008  
Amount: 0.009700  
Amount Units: ug/ml

Processing Integration Results



RT: 17.69  
Area: 3065  
Amount: 0.010767  
Amount Units: ug/ml

Manual Integration Results



Reviewer: LV5D, 13-Aug-2024 15:15:11 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak

Audit Reason: Baseline Smoothing

Eurofins Denver

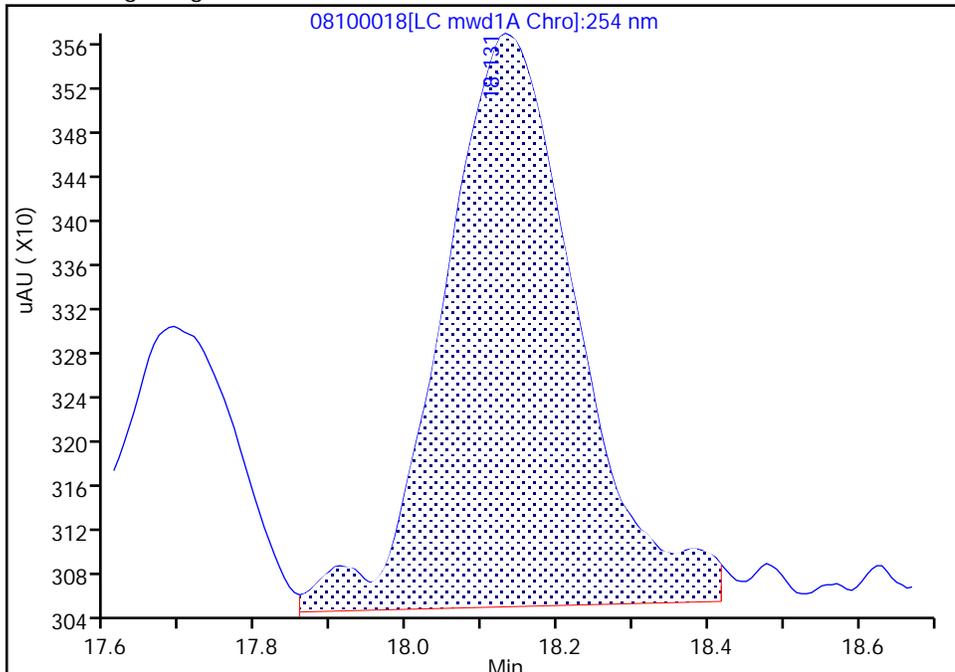
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100018.D  
Injection Date: 11-Aug-2024 01:01:34 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 1  
Client ID:  
Operator ID: JZ ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

22 2,4-Dinitrotoluene, CAS: 121-14-2

Signal: 1

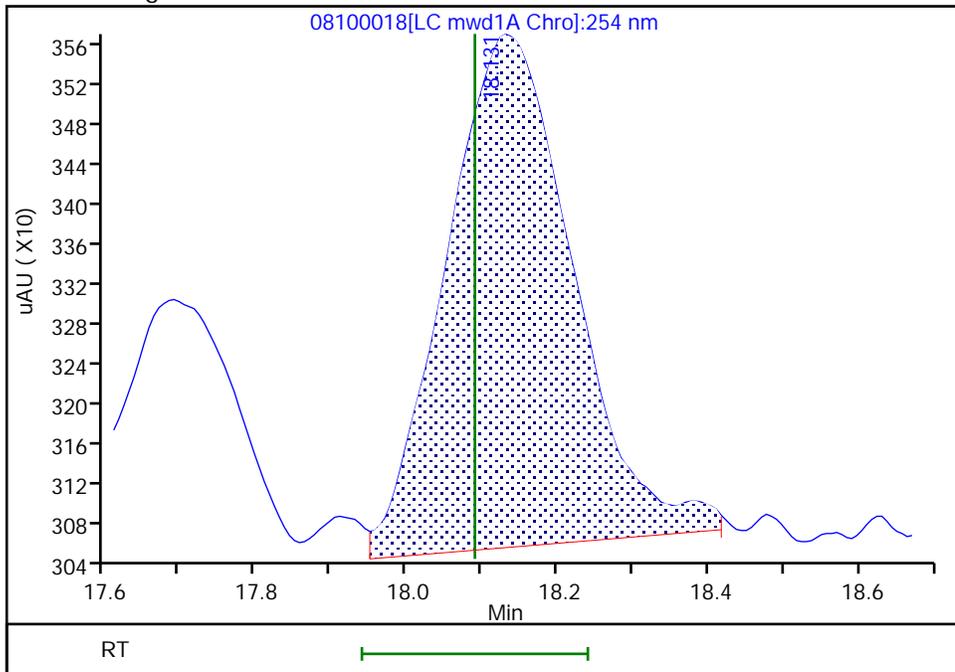
RT: 18.13  
Area: 6357  
Amount: 0.011091  
Amount Units: ug/ml

Processing Integration Results



RT: 18.13  
Area: 5939  
Amount: 0.010447  
Amount Units: ug/ml

Manual Integration Results



Reviewer: LV5D, 13-Aug-2024 15:15:13 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak

Audit Reason: Baseline Smoothing

Eurofins Denver

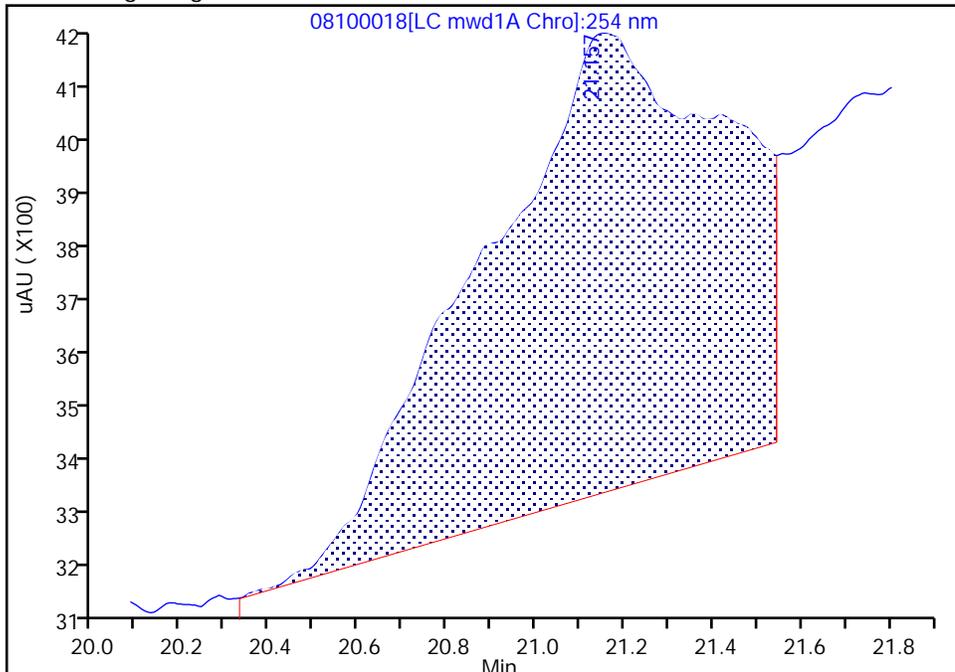
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100018.D  
Injection Date: 11-Aug-2024 01:01:34 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 1  
Client ID:  
Operator ID: JZ ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

23 Tetryl, CAS: 479-45-8

Signal: 1

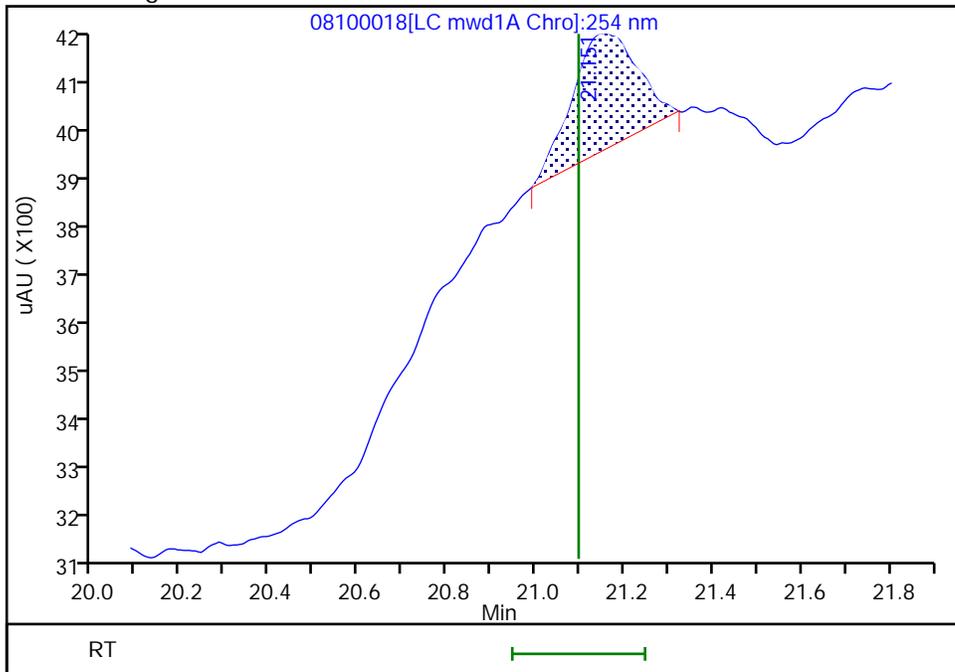
RT: 21.16  
Area: 31890  
Amount: 0.052229  
Amount Units: ug/ml

Processing Integration Results



RT: 21.15  
Area: 2430  
Amount: 0.008576  
Amount Units: ug/ml

Manual Integration Results



Reviewer: LV5D, 13-Aug-2024 15:14:42 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Denver

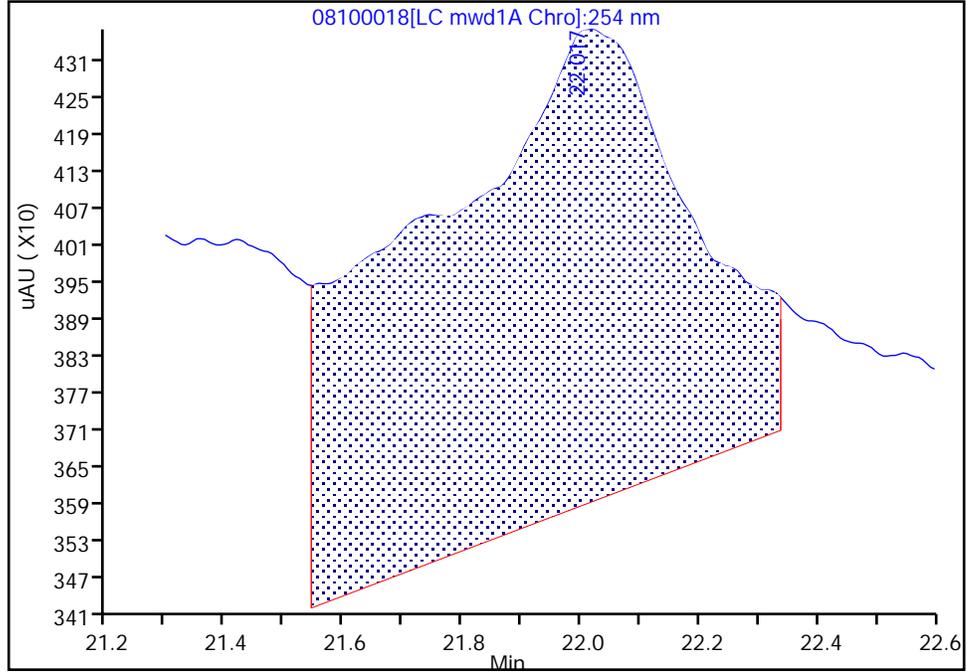
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100018.D  
Injection Date: 11-Aug-2024 01:01:34 Instrument ID: CHHPLC\_X5  
Lims ID: IC INT 1  
Client ID:  
Operator ID: JZ ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

24 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

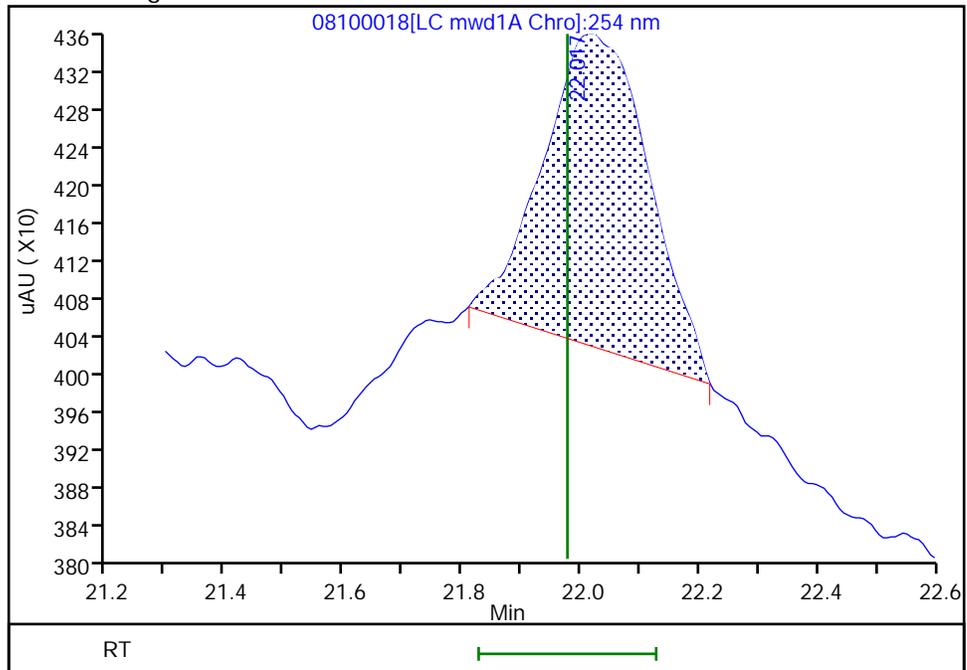
RT: 22.02  
Area: 25478  
Amount: 0.025910  
Amount Units: ug/ml

Processing Integration Results



RT: 22.02  
Area: 4082  
Amount: 0.009807  
Amount Units: ug/ml

Manual Integration Results



Reviewer: LV5D, 13-Aug-2024 15:14:45 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Calibration

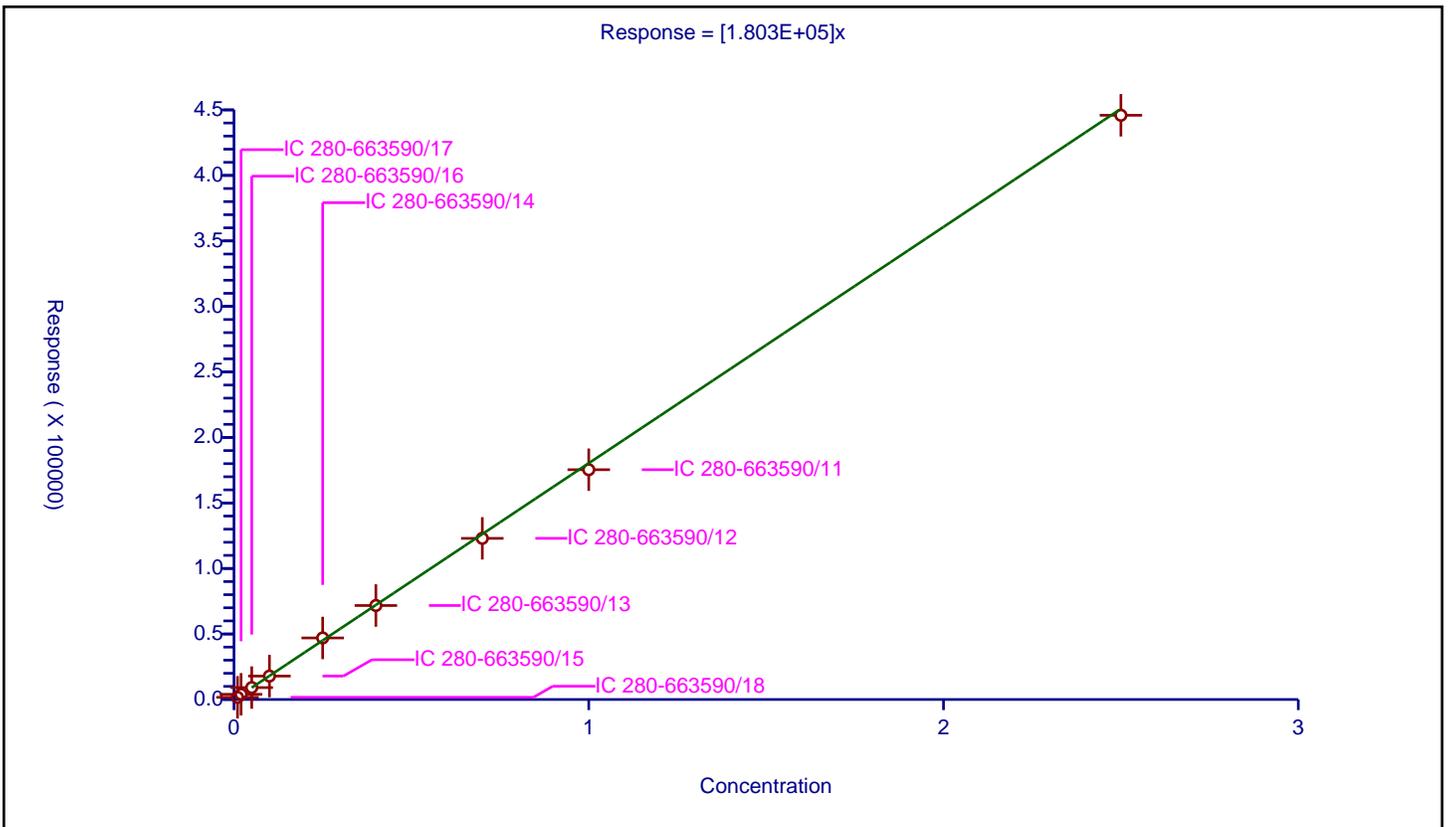
/ HMX

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	1.803E+05

Error Coefficients	
Relative Standard Deviation:	4.9

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-663590/18	0.01	1671.0			167100.0	Y
2	IC 280-663590/17	0.02	3967.0			198350.0	Y
3	IC 280-663590/16	0.05	9102.0			182040.0	Y
4	IC 280-663590/15	0.1	17888.0			178880.0	Y
5	IC 280-663590/14	0.25	46973.0			187892.0	Y
6	IC 280-663590/13	0.4	71733.0			179332.5	Y
7	IC 280-663590/12	0.7	122999.0			175712.857143	Y
8	IC 280-663590/11	1.0	175376.0			175376.0	Y
9	IC 280-663590/10	2.5	445898.0			178359.2	Y



**Calibration**

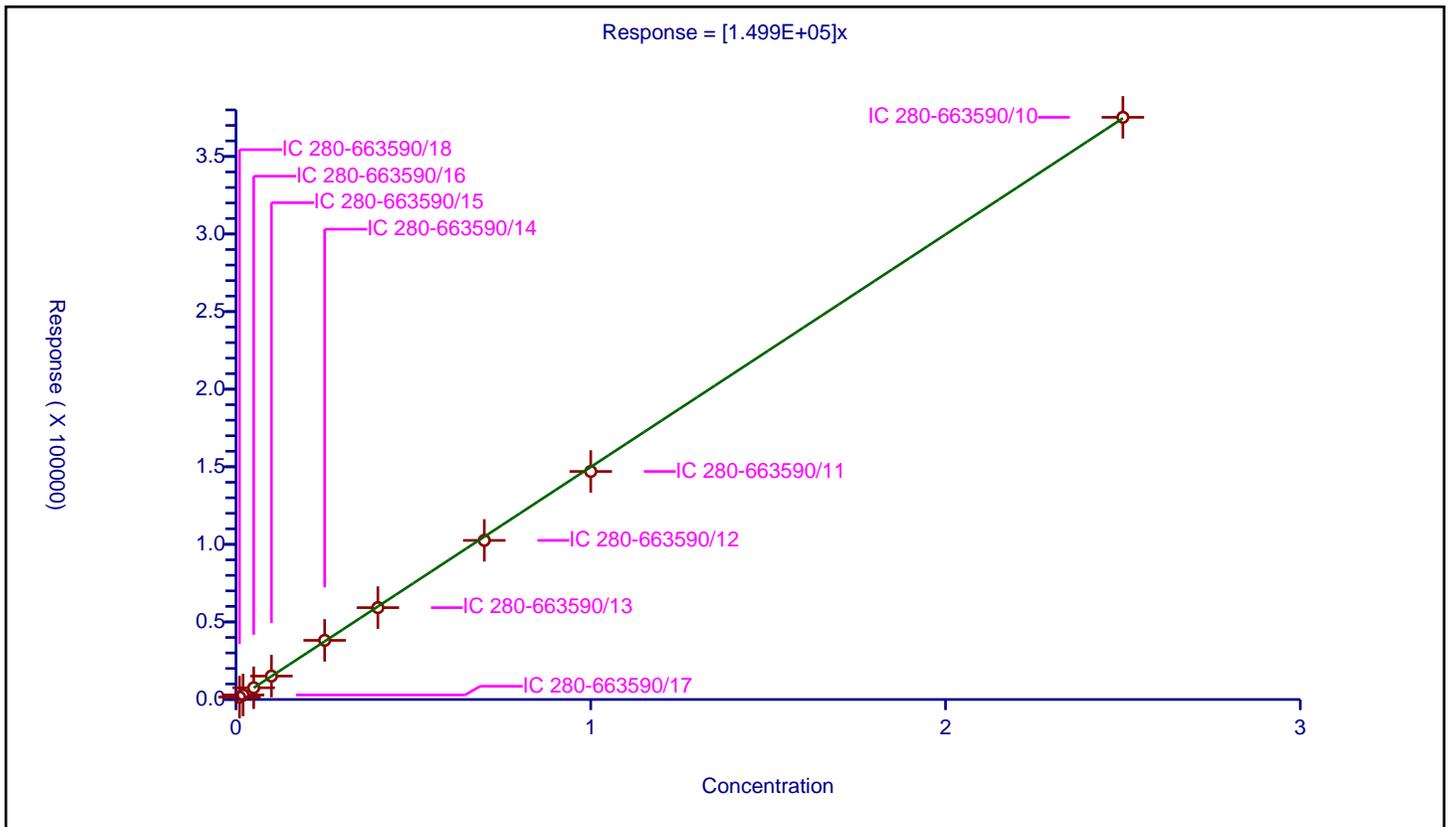
**/ 2,4,6-Trinitrophenol**

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	1.499E+05

Error Coefficients	
Relative Standard Deviation:	2.3

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-663590/18	0.01	1564.0			156400.0	Y
2	IC 280-663590/17	0.02	2918.0			145900.0	Y
3	IC 280-663590/16	0.05	7567.0			151340.0	Y
4	IC 280-663590/15	0.1	15103.0			151030.0	Y
5	IC 280-663590/14	0.25	38121.0			152484.0	Y
6	IC 280-663590/13	0.4	59211.0			148027.5	Y
7	IC 280-663590/12	0.7	102542.0			146488.571429	Y
8	IC 280-663590/11	1.0	146979.0			146979.0	Y
9	IC 280-663590/10	2.5	375214.0			150085.6	Y



Calibration

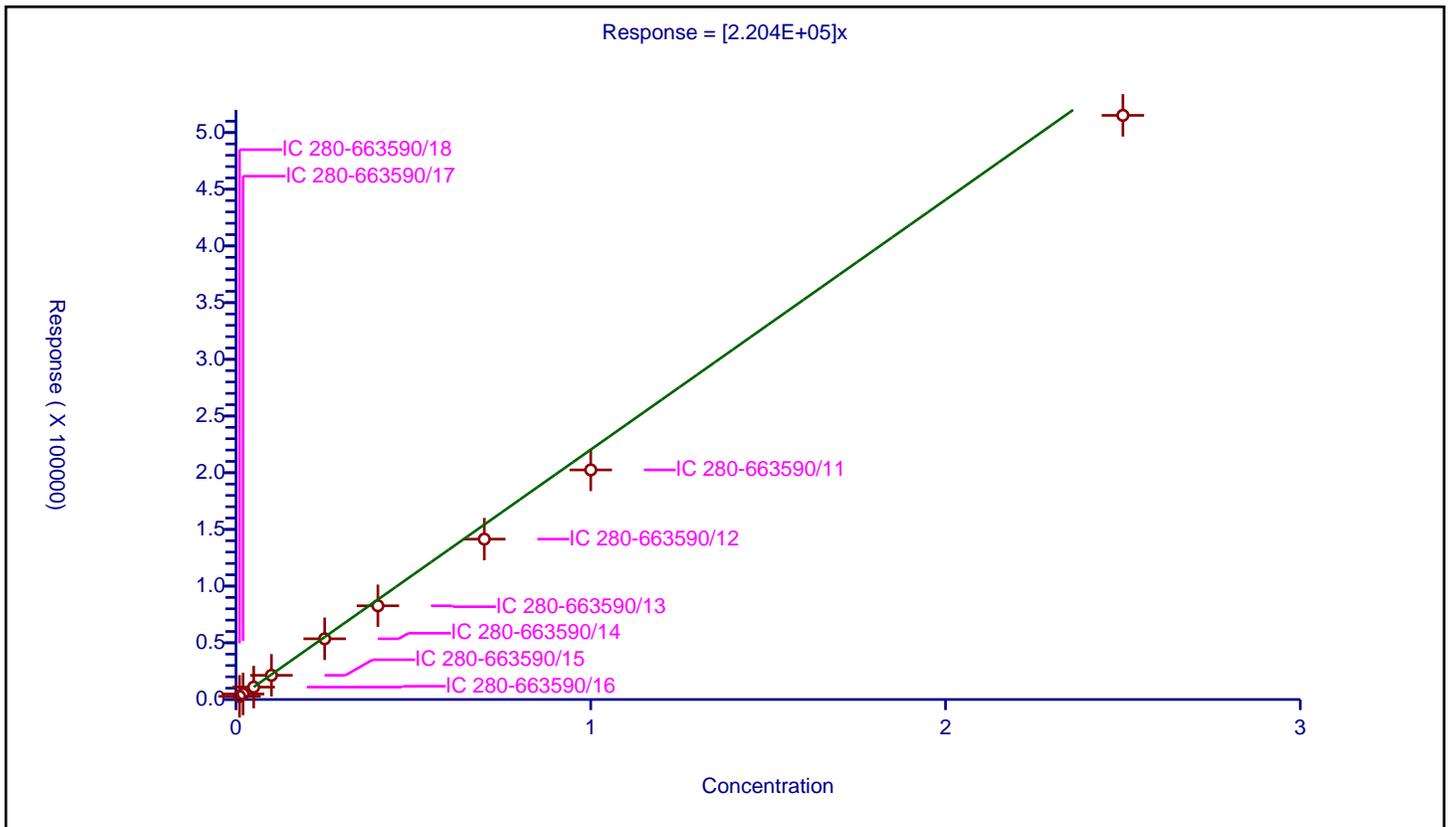
/ RDX

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	2.204E+05

Error Coefficients	
Relative Standard Deviation:	11.2

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-663590/18	0.01	2773.0			277300.0	Y
2	IC 280-663590/17	0.02	4852.0			242600.0	Y
3	IC 280-663590/16	0.05	10927.0			218540.0	Y
4	IC 280-663590/15	0.1	21335.0			213350.0	Y
5	IC 280-663590/14	0.25	53547.0			214188.0	Y
6	IC 280-663590/13	0.4	82649.0			206622.5	Y
7	IC 280-663590/12	0.7	141434.0			202048.571429	Y
8	IC 280-663590/11	1.0	202487.0			202487.0	Y
9	IC 280-663590/10	2.5	515189.0			206075.6	Y



**Calibration**

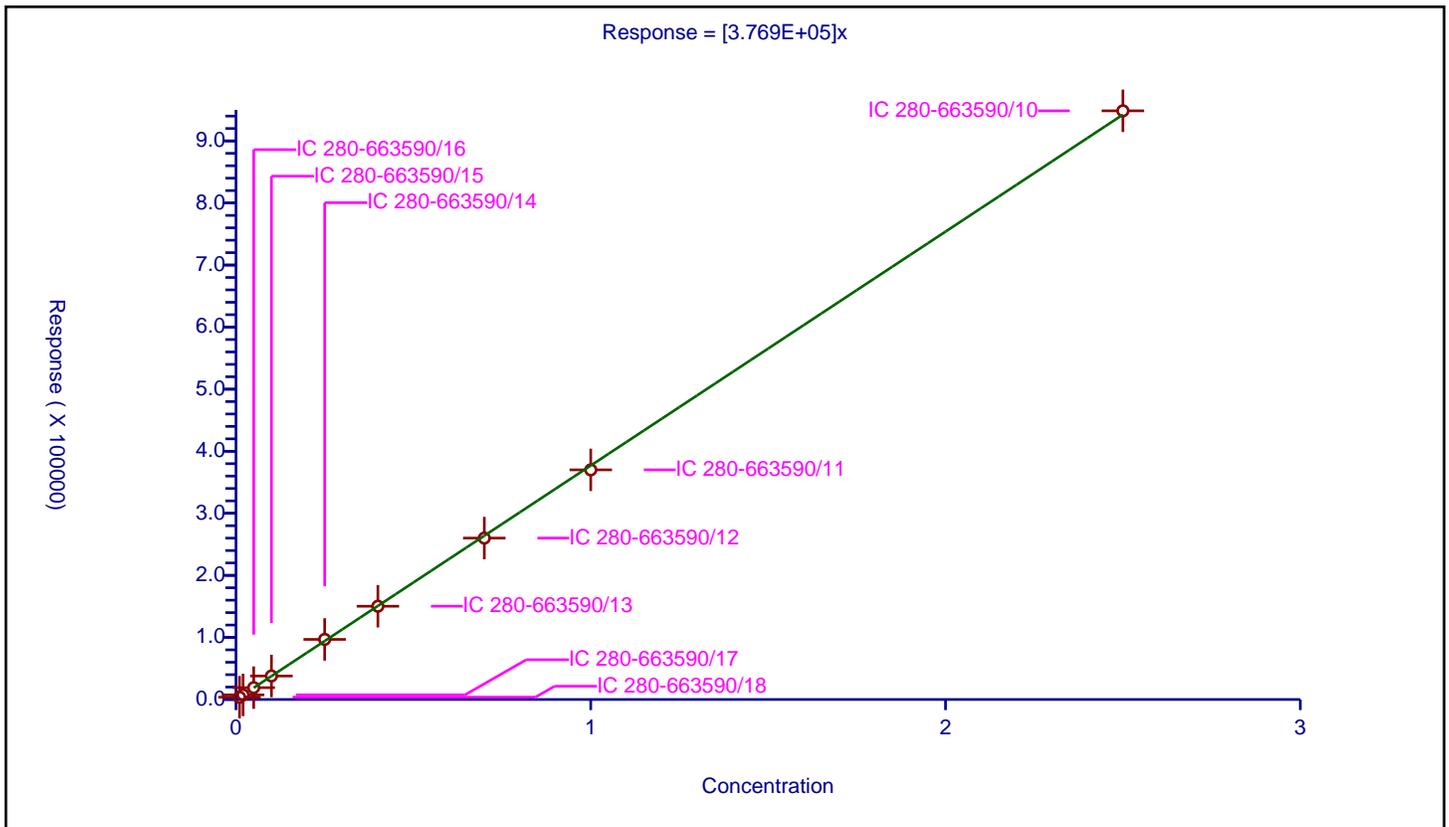
**/ Nitrobenzene**

**Curve Type:** Average  
**Weighting:** Conc\_Sq  
**Origin:** Force  
**Dependency:** Response  
**Calib Mode:** ESTD  
**Response Base:** AREA  
**RF Rounding:** 0

Curve Coefficients	
Intercept:	0
Slope:	3.769E+05

Error Coefficients	
Relative Standard Deviation:	1.5

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-663590/18	0.01	3755.0			375500.0	Y
2	IC 280-663590/17	0.02	7452.0			372600.0	Y
3	IC 280-663590/16	0.05	19091.0			381820.0	Y
4	IC 280-663590/15	0.1	37856.0			378560.0	Y
5	IC 280-663590/14	0.25	96842.0			387368.0	Y
6	IC 280-663590/13	0.4	150269.0			375672.5	Y
7	IC 280-663590/12	0.7	260064.0			371520.0	Y
8	IC 280-663590/11	1.0	369980.0			369980.0	Y
9	IC 280-663590/10	2.5	948495.0			379398.0	Y



**Calibration**

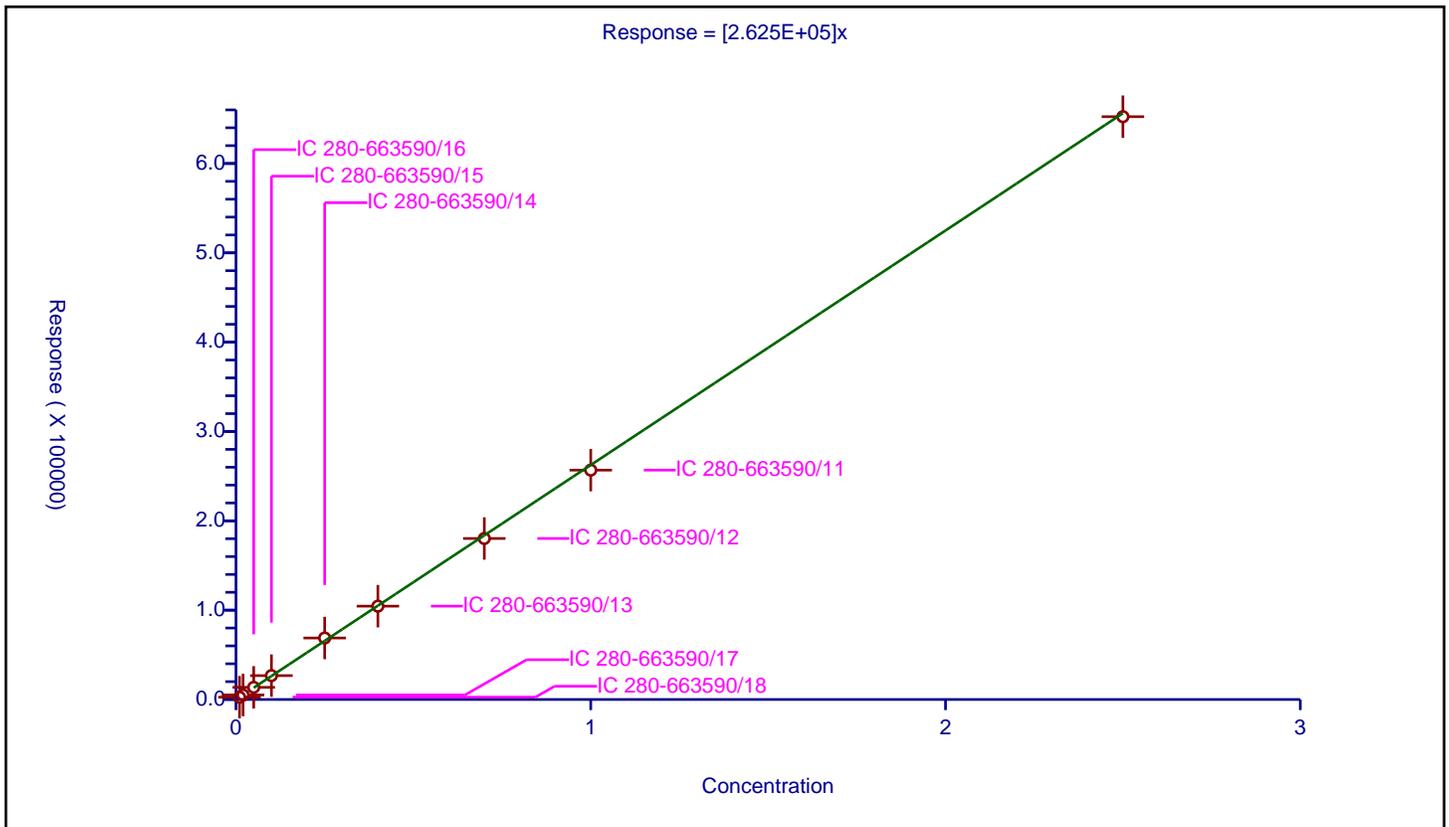
/ 1,2-Dinitrobenzene

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	2.625E+05

Error Coefficients	
Relative Standard Deviation:	2.9

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-663590/18	0.01	2585.0			258500.0	Y
2	IC 280-663590/17	0.02	5053.0			252650.0	Y
3	IC 280-663590/16	0.05	13605.0			272100.0	Y
4	IC 280-663590/15	0.1	26738.0			267380.0	Y
5	IC 280-663590/14	0.25	68837.0			275348.0	Y
6	IC 280-663590/13	0.4	104490.0			261225.0	Y
7	IC 280-663590/12	0.7	180233.0			257475.714286	Y
8	IC 280-663590/11	1.0	256759.0			256759.0	Y
9	IC 280-663590/10	2.5	652397.0			260958.8	Y



Calibration

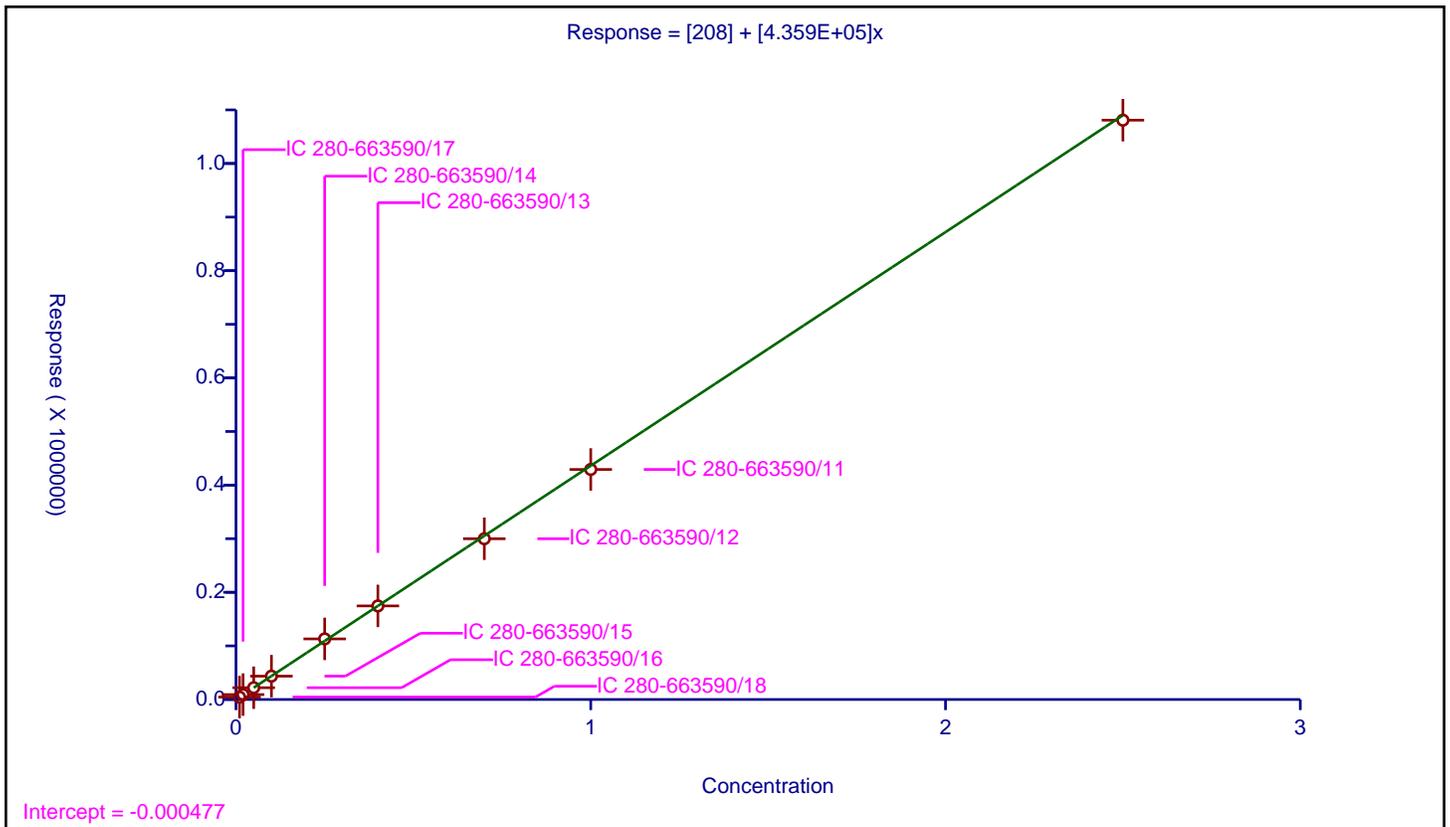
/ 3,5-Dinitroaniline

Curve Type: Linear  
 Weighting: Conc\_Sq  
 Origin: None  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	208
Slope:	4.359E+05

Error Coefficients	
Relative Standard Deviation:	2.0

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-663590/18	0.01	4508.0			450800.0	Y
2	IC 280-663590/17	0.02	9158.0			457900.0	Y
3	IC 280-663590/16	0.05	21976.0			439520.0	Y
4	IC 280-663590/15	0.1	43566.0			435660.0	Y
5	IC 280-663590/14	0.25	113048.0			452192.0	Y
6	IC 280-663590/13	0.4	174587.0			436467.5	Y
7	IC 280-663590/12	0.7	299884.0			428405.714286	Y
8	IC 280-663590/11	1.0	429142.0			429142.0	Y
9	IC 280-663590/10	2.5	1080802.0			432320.8	Y



**Calibration**

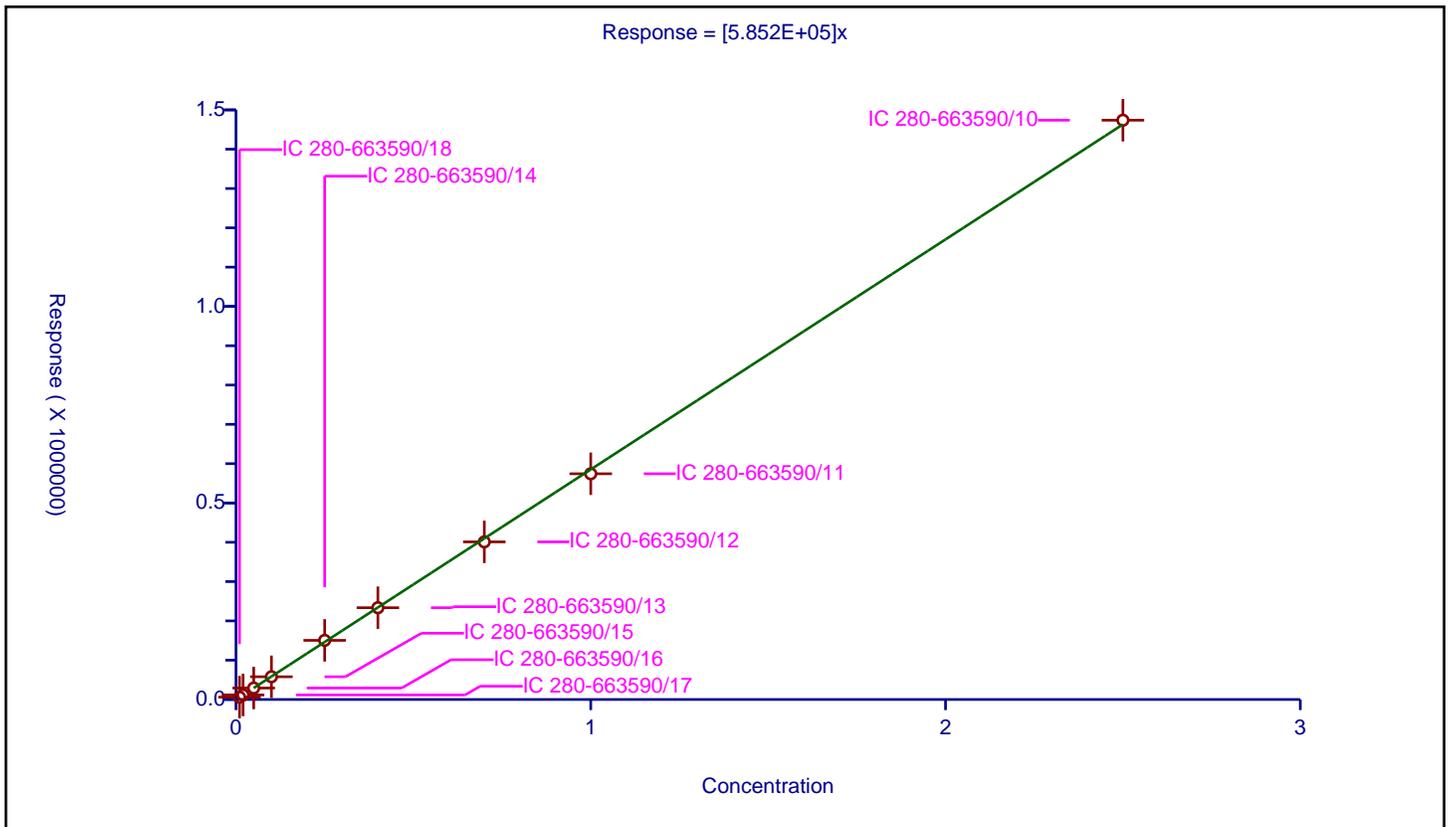
/ 1,3-Dinitrobenzene

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	5.852E+05

Error Coefficients	
Relative Standard Deviation:	2.0

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-663590/18	0.01	6059.0			605900.0	Y
2	IC 280-663590/17	0.02	11541.0			577050.0	Y
3	IC 280-663590/16	0.05	29180.0			583600.0	Y
4	IC 280-663590/15	0.1	57831.0			578310.0	Y
5	IC 280-663590/14	0.25	150469.0			601876.0	Y
6	IC 280-663590/13	0.4	233512.0			583780.0	Y
7	IC 280-663590/12	0.7	401028.0			572897.142857	Y
8	IC 280-663590/11	1.0	574265.0			574265.0	Y
9	IC 280-663590/10	2.5	1473755.0			589502.0	Y



**Calibration**

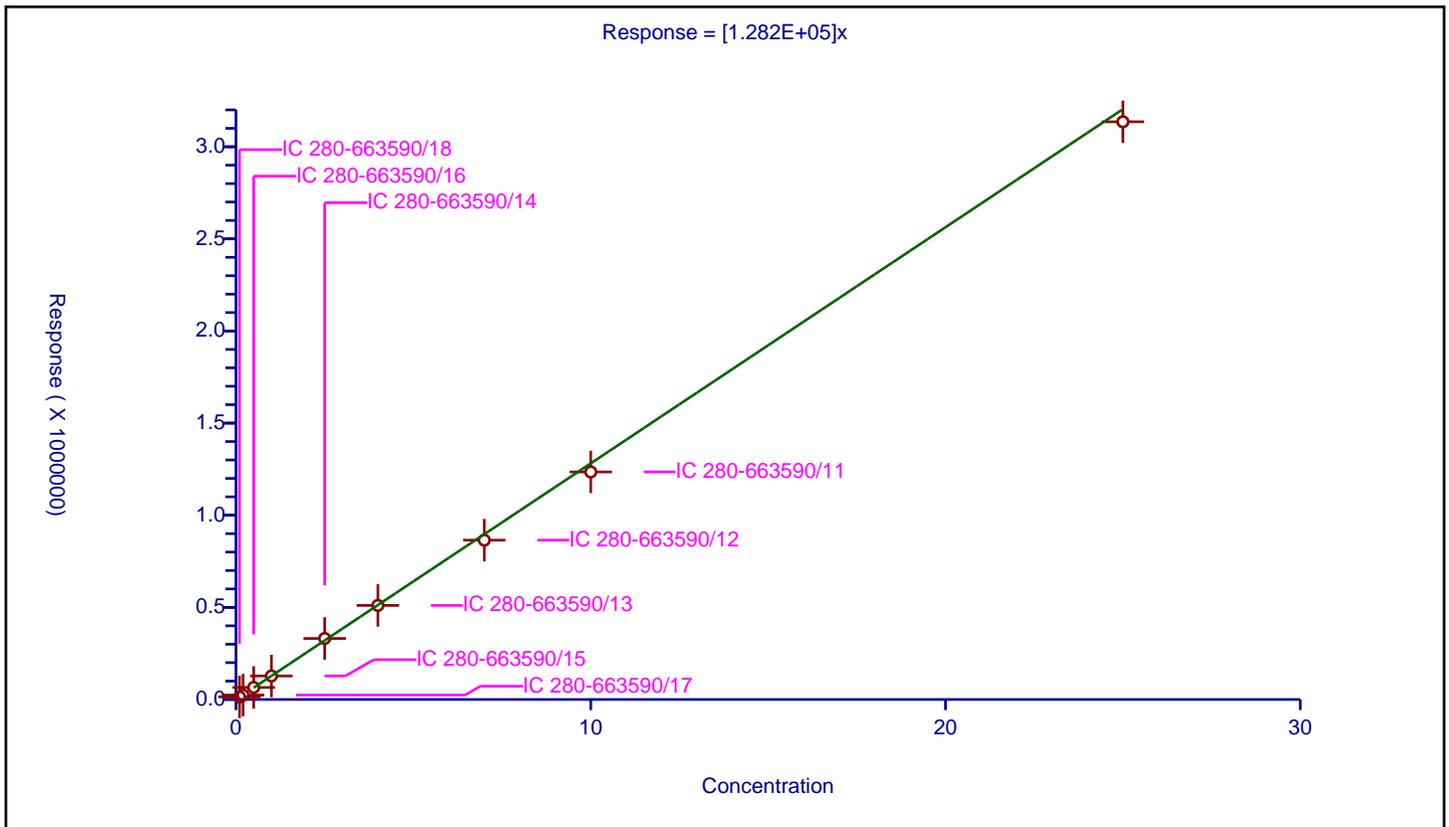
/ Nitroglycerin

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	1.282E+05

Error Coefficients	
Relative Standard Deviation:	5.1

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-663590/18	0.1	14206.0			142060.0	Y
2	IC 280-663590/17	0.2	24016.0			120080.0	Y
3	IC 280-663590/16	0.5	65475.0			130950.0	Y
4	IC 280-663590/15	1.0	127672.0			127672.0	Y
5	IC 280-663590/14	2.5	331233.0			132493.2	Y
6	IC 280-663590/13	4.0	510574.0			127643.5	Y
7	IC 280-663590/12	7.0	864867.0			123552.428571	Y
8	IC 280-663590/11	10.0	1234967.0			123496.7	Y
9	IC 280-663590/10	25.0	3135554.0			125422.16	Y



**Calibration**

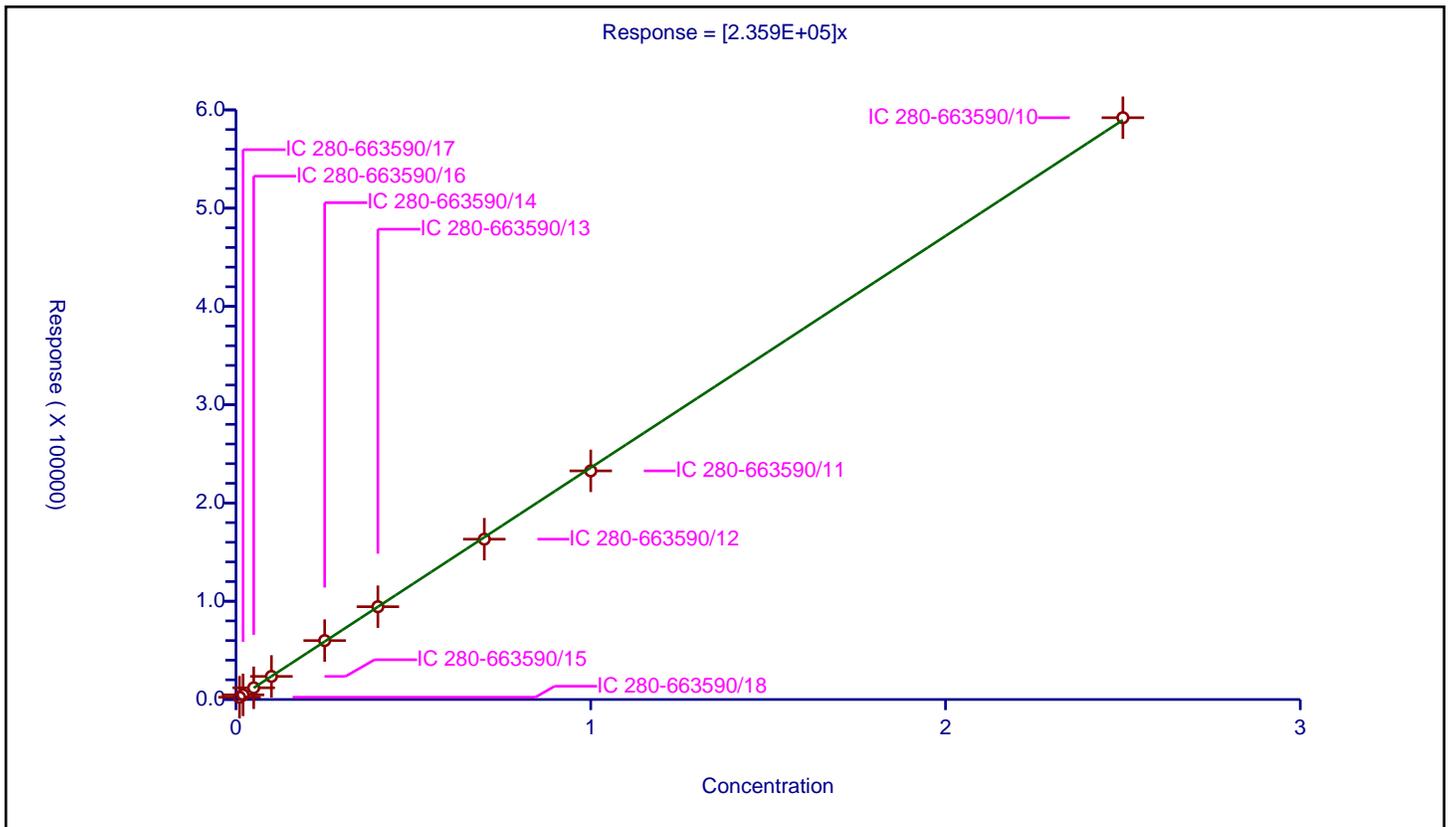
**/ o-Nitrotoluene**

**Curve Type:** Average  
**Weighting:** Conc\_Sq  
**Origin:** Force  
**Dependency:** Response  
**Calib Mode:** ESTD  
**Response Base:** AREA  
**RF Rounding:** 0

Curve Coefficients	
Intercept:	0
Slope:	2.359E+05

Error Coefficients	
Relative Standard Deviation:	1.0

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-663590/18	0.01	2340.0			234000.0	Y
2	IC 280-663590/17	0.02	4738.0			236900.0	Y
3	IC 280-663590/16	0.05	11922.0			238440.0	Y
4	IC 280-663590/15	0.1	23499.0			234990.0	Y
5	IC 280-663590/14	0.25	59944.0			239776.0	Y
6	IC 280-663590/13	0.4	94438.0			236095.0	Y
7	IC 280-663590/12	0.7	163156.0			233080.0	Y
8	IC 280-663590/11	1.0	232656.0			232656.0	Y
9	IC 280-663590/10	2.5	592052.0			236820.8	Y



**Calibration**

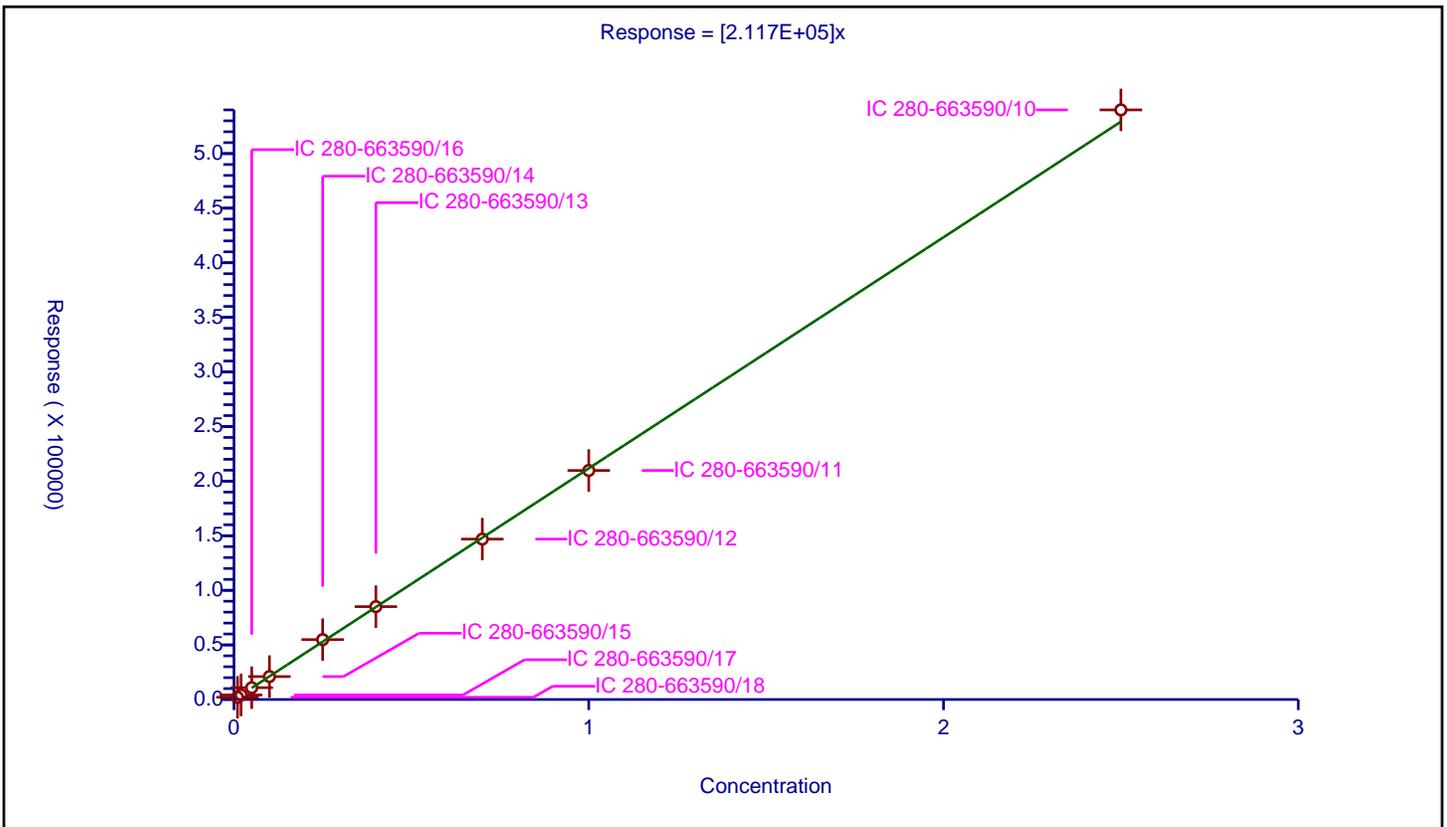
/ p-Nitrotoluene

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	2.117E+05

Error Coefficients	
Relative Standard Deviation:	2.3

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-663590/18	0.01	2037.0			203700.0	Y
2	IC 280-663590/17	0.02	4148.0			207400.0	Y
3	IC 280-663590/16	0.05	10817.0			216340.0	Y
4	IC 280-663590/15	0.1	20994.0			209940.0	Y
5	IC 280-663590/14	0.25	54841.0			219364.0	Y
6	IC 280-663590/13	0.4	85068.0			212670.0	Y
7	IC 280-663590/12	0.7	146901.0			209858.571429	Y
8	IC 280-663590/11	1.0	209764.0			209764.0	Y
9	IC 280-663590/10	2.5	539999.0			215999.6	Y



Calibration

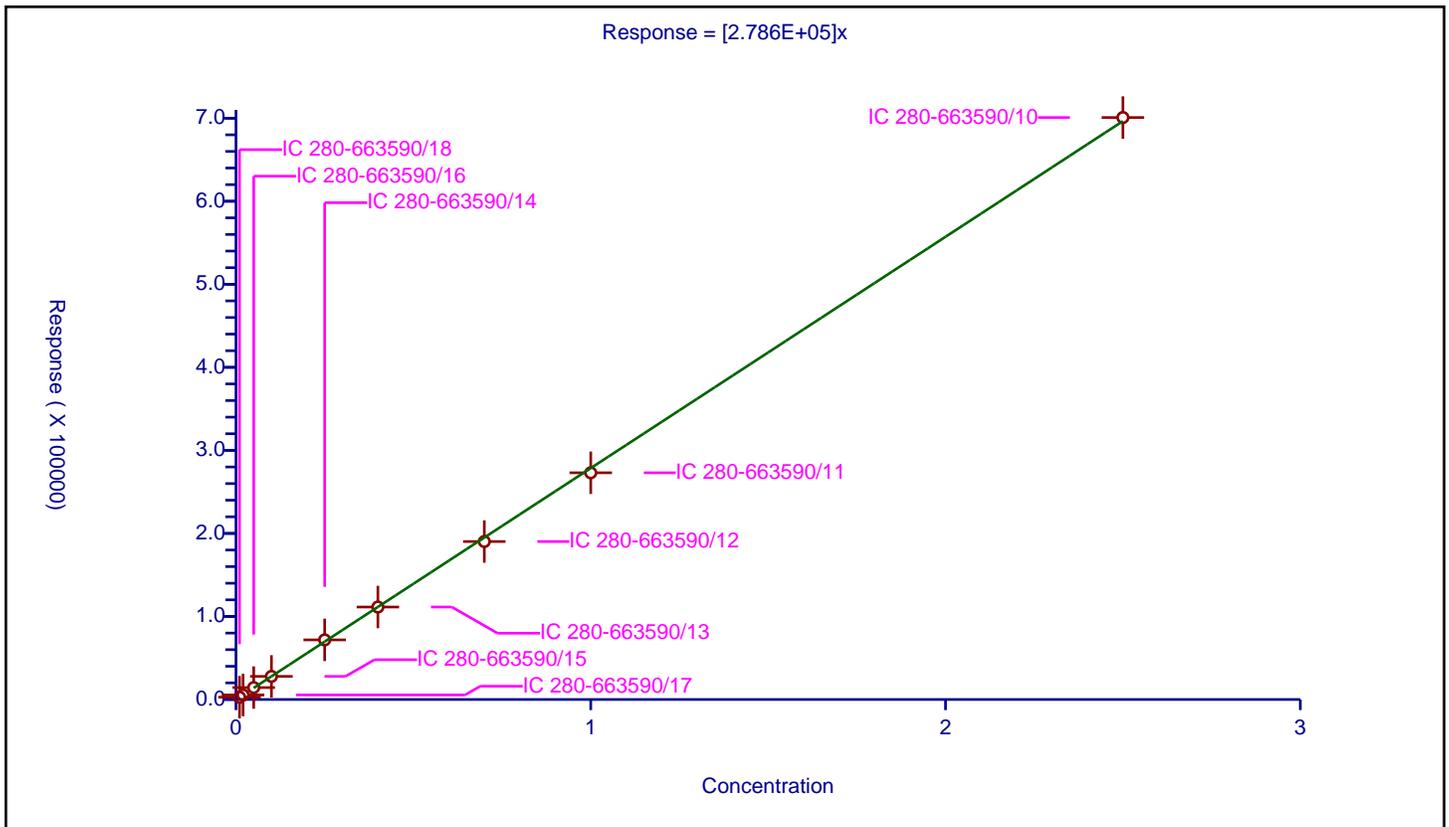
/ 4-Amino-2,6-dinitrotoluene

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	2.786E+05

Error Coefficients	
Relative Standard Deviation:	2.0

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-663590/18	0.01	2787.0			278700.0	Y
2	IC 280-663590/17	0.02	5455.0			272750.0	Y
3	IC 280-663590/16	0.05	14345.0			286900.0	Y
4	IC 280-663590/15	0.1	27825.0			278250.0	Y
5	IC 280-663590/14	0.25	71808.0			287232.0	Y
6	IC 280-663590/13	0.4	111348.0			278370.0	Y
7	IC 280-663590/12	0.7	190219.0			271741.428571	Y
8	IC 280-663590/11	1.0	273020.0			273020.0	Y
9	IC 280-663590/10	2.5	700817.0			280326.8	Y



**Calibration**

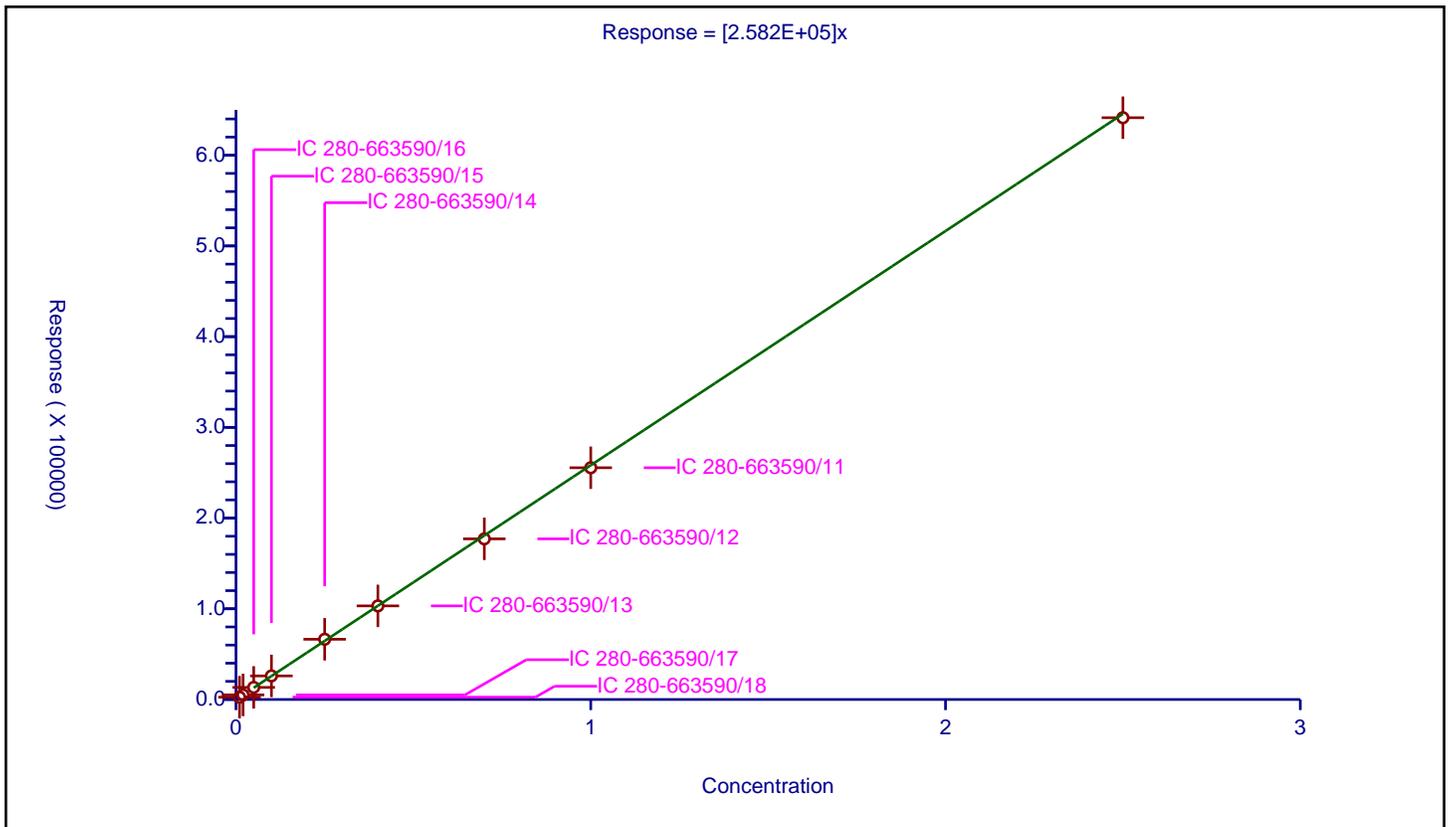
/ m-Nitrotoluene

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	2.582E+05

Error Coefficients	
Relative Standard Deviation:	1.9

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-663590/18	0.01	2547.0			254700.0	Y
2	IC 280-663590/17	0.02	5081.0			254050.0	Y
3	IC 280-663590/16	0.05	13336.0			266720.0	Y
4	IC 280-663590/15	0.1	25999.0			259990.0	Y
5	IC 280-663590/14	0.25	66388.0			265552.0	Y
6	IC 280-663590/13	0.4	103187.0			257967.5	Y
7	IC 280-663590/12	0.7	177096.0			252994.285714	Y
8	IC 280-663590/11	1.0	255490.0			255490.0	Y
9	IC 280-663590/10	2.5	641382.0			256552.8	Y



Calibration

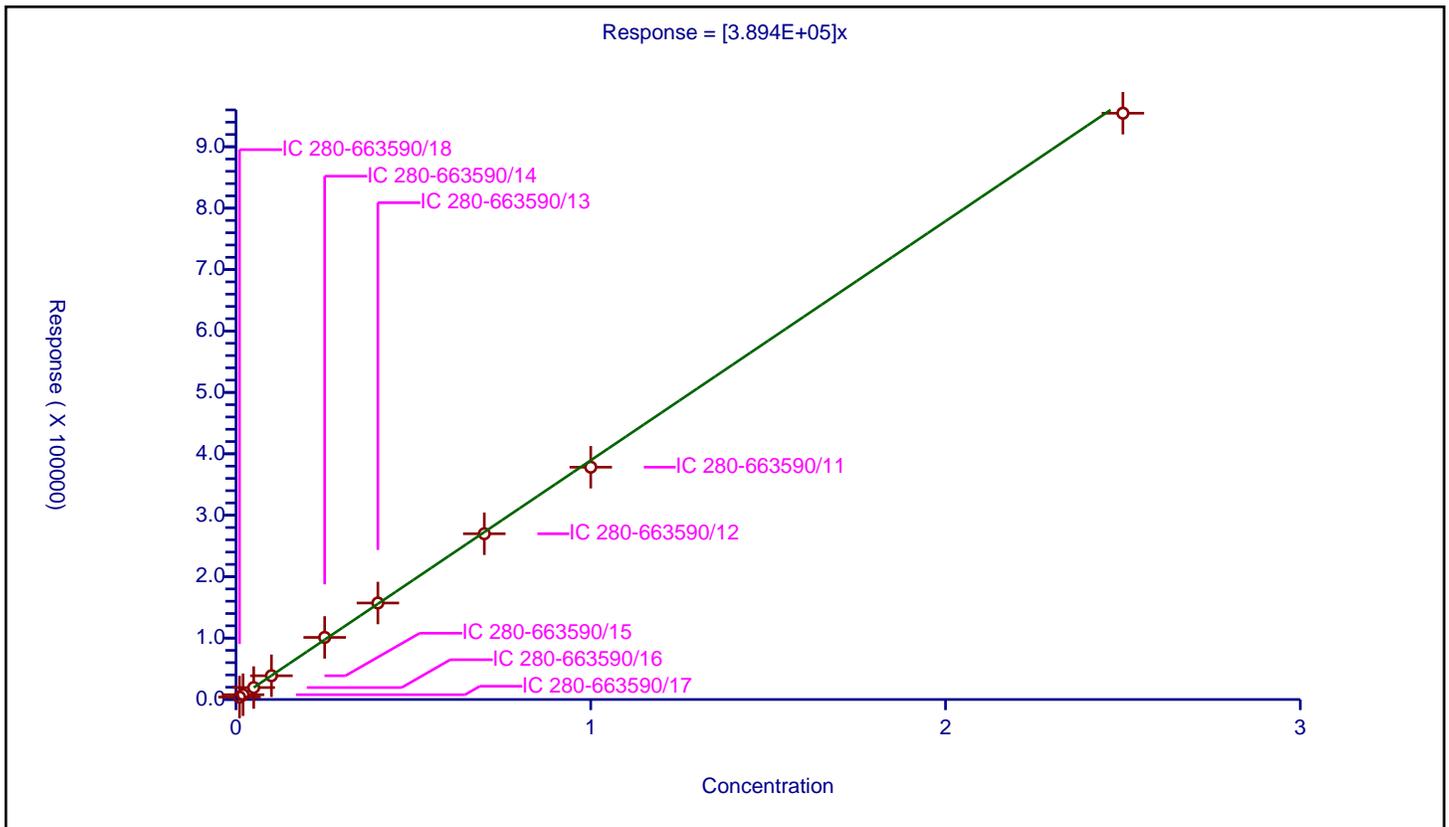
/ 2-Amino-4,6-dinitrotoluene

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	3.894E+05

Error Coefficients	
Relative Standard Deviation:	2.0

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-663590/18	0.01	3972.0			397200.0	Y
2	IC 280-663590/17	0.02	7784.0			389200.0	Y
3	IC 280-663590/16	0.05	19449.0			388980.0	Y
4	IC 280-663590/15	0.1	38652.0			386520.0	Y
5	IC 280-663590/14	0.25	101067.0			404268.0	Y
6	IC 280-663590/13	0.4	157134.0			392835.0	Y
7	IC 280-663590/12	0.7	269908.0			385582.857143	Y
8	IC 280-663590/11	1.0	378245.0			378245.0	Y
9	IC 280-663590/10	2.5	954621.0			381848.4	Y



Calibration

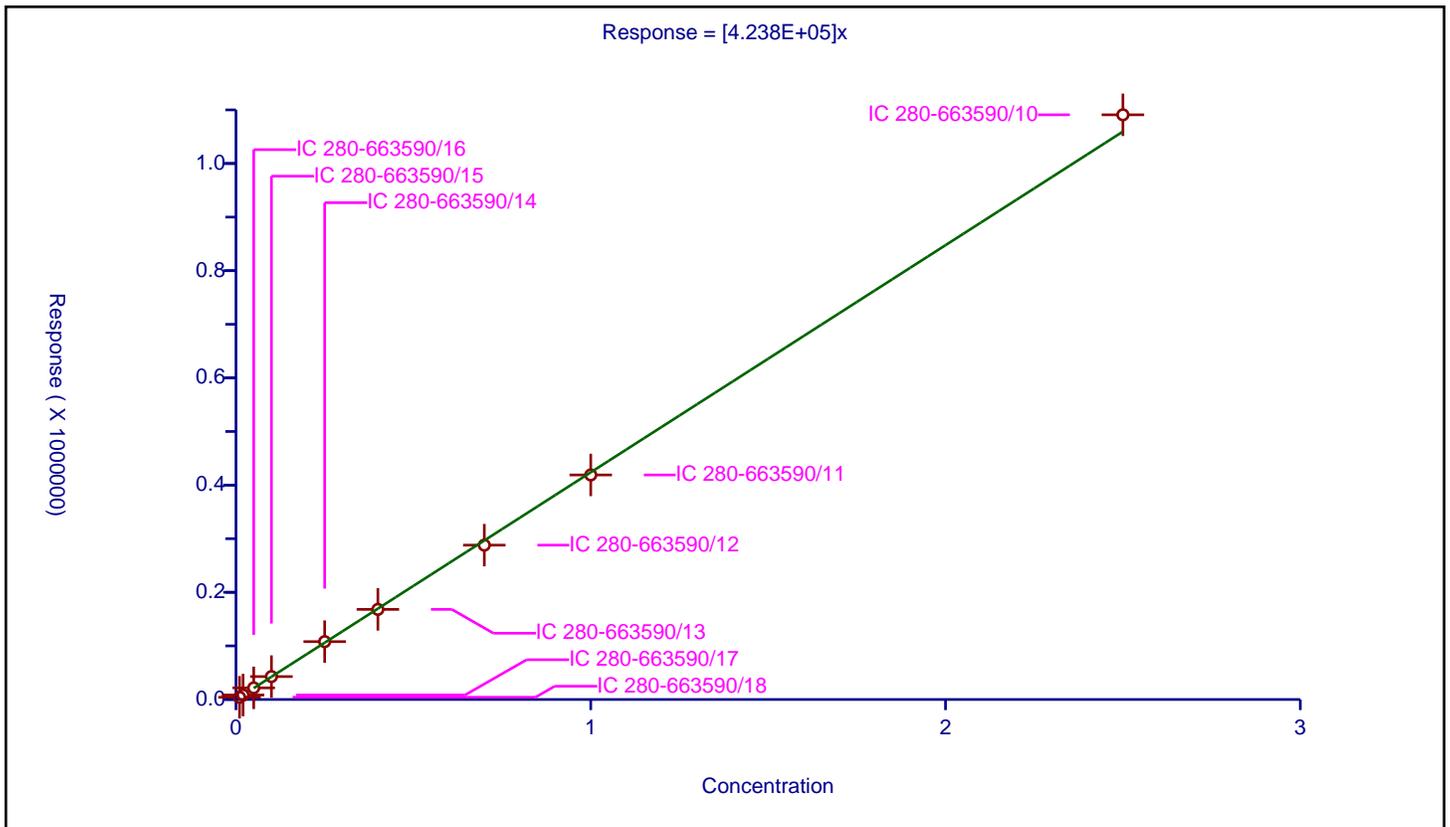
/ 1,3,5-Trinitrobenzene

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	4.238E+05

Error Coefficients	
Relative Standard Deviation:	2.1

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-663590/18	0.01	4185.0			418500.0	Y
2	IC 280-663590/17	0.02	8315.0			415750.0	Y
3	IC 280-663590/16	0.05	21679.0			433580.0	Y
4	IC 280-663590/15	0.1	42742.0			427420.0	Y
5	IC 280-663590/14	0.25	107982.0			431928.0	Y
6	IC 280-663590/13	0.4	168114.0			420285.0	Y
7	IC 280-663590/12	0.7	287991.0			411415.714286	Y
8	IC 280-663590/11	1.0	418932.0			418932.0	Y
9	IC 280-663590/10	2.5	1090844.0			436337.6	Y



Calibration

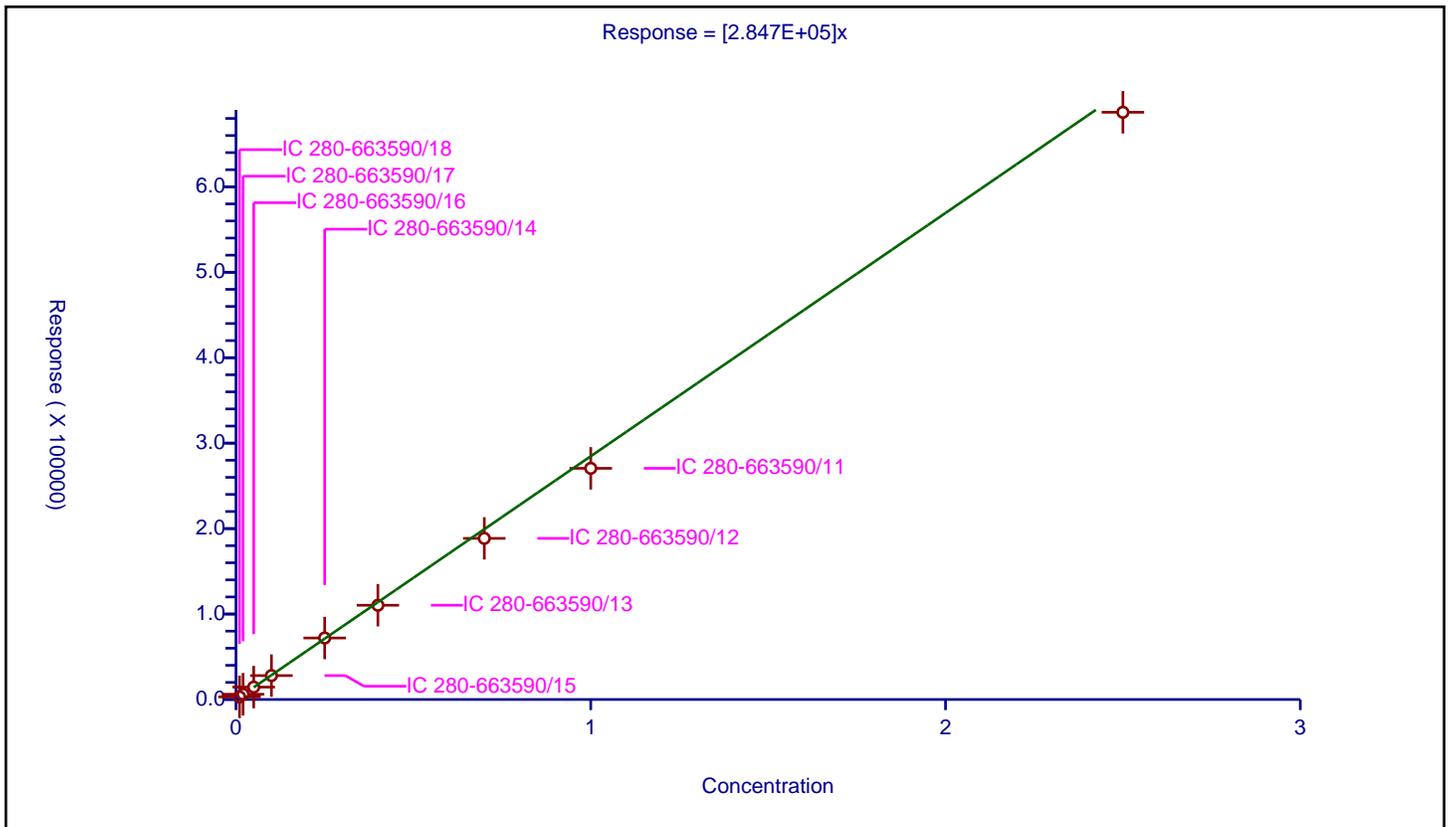
/ 2,6-Dinitrotoluene

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	2.847E+05

Error Coefficients	
Relative Standard Deviation:	5.1

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-663590/18	0.01	3065.0			306500.0	Y
2	IC 280-663590/17	0.02	6144.0			307200.0	Y
3	IC 280-663590/16	0.05	14521.0			290420.0	Y
4	IC 280-663590/15	0.1	27962.0			279620.0	Y
5	IC 280-663590/14	0.25	71960.0			287840.0	Y
6	IC 280-663590/13	0.4	110288.0			275720.0	Y
7	IC 280-663590/12	0.7	188559.0			269370.0	Y
8	IC 280-663590/11	1.0	270535.0			270535.0	Y
9	IC 280-663590/10	2.5	687201.0			274880.4	Y



Calibration

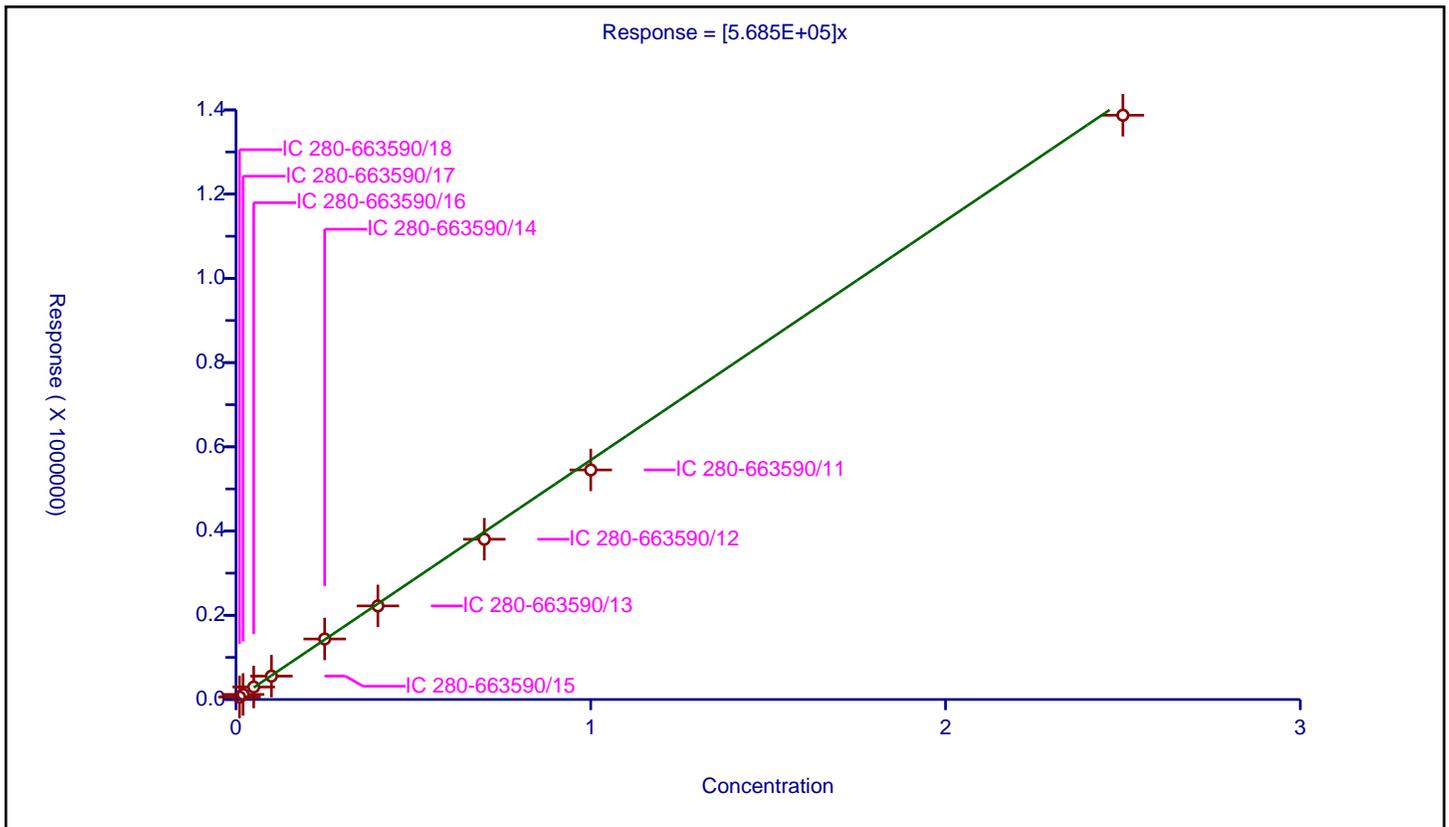
/ 2,4-Dinitrotoluene

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	5.685E+05

Error Coefficients	
Relative Standard Deviation:	4.0

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-663590/18	0.01	5939.0			593900.0	Y
2	IC 280-663590/17	0.02	12012.0			600600.0	Y
3	IC 280-663590/16	0.05	29669.0			593380.0	Y
4	IC 280-663590/15	0.1	55487.0			554870.0	Y
5	IC 280-663590/14	0.25	143677.0			574708.0	Y
6	IC 280-663590/13	0.4	222196.0			555490.0	Y
7	IC 280-663590/12	0.7	380534.0			543620.0	Y
8	IC 280-663590/11	1.0	545089.0			545089.0	Y
9	IC 280-663590/10	2.5	1387324.0			554929.6	Y



Calibration

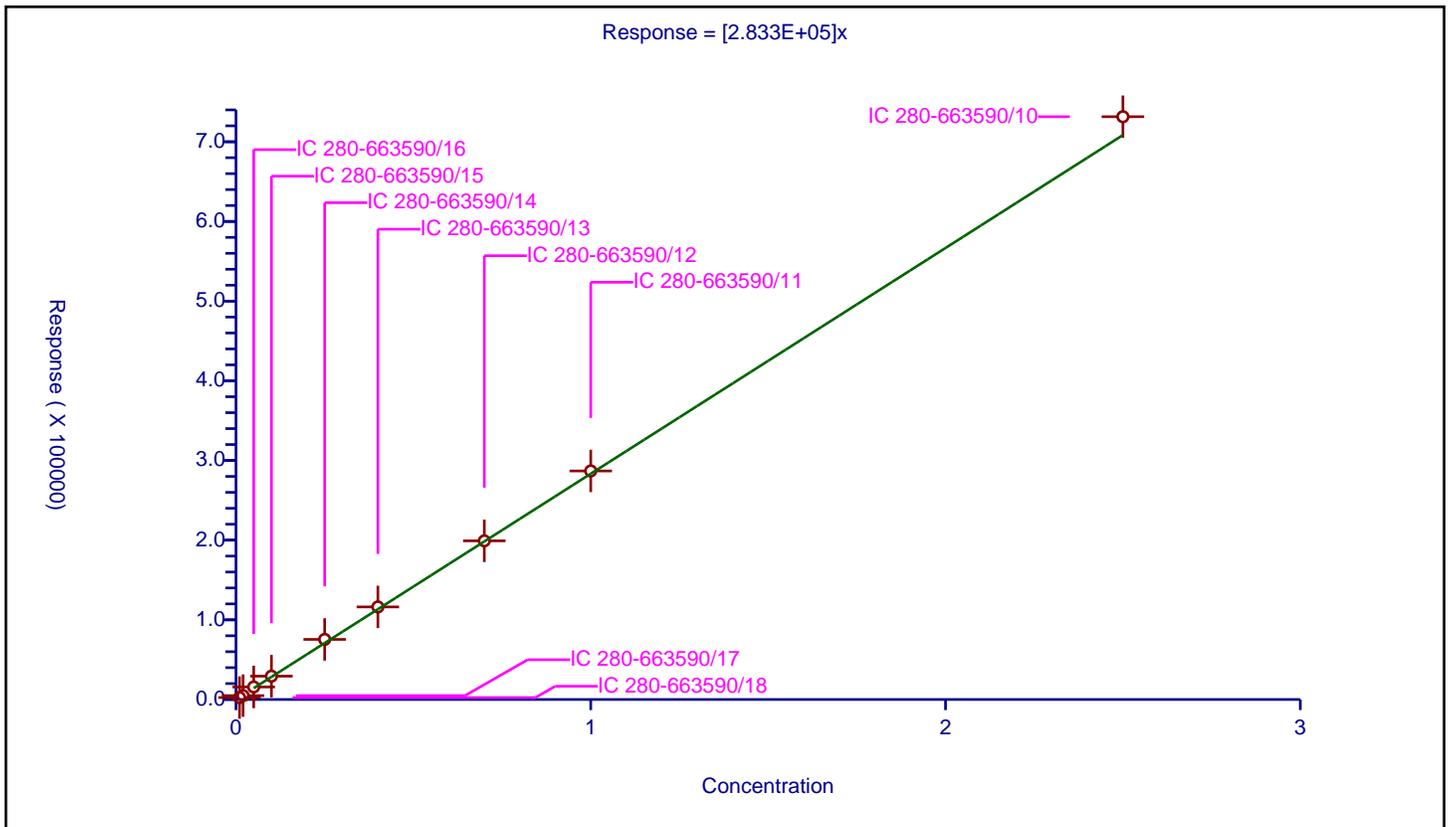
/ Tetryl

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	2.833E+05

Error Coefficients	
Relative Standard Deviation:	8.6

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-663590/18	0.01	2430.0			243000.0	Y
2	IC 280-663590/17	0.02	4871.0			243550.0	Y
3	IC 280-663590/16	0.05	15725.0			314500.0	Y
4	IC 280-663590/15	0.1	29297.0			292970.0	Y
5	IC 280-663590/14	0.25	75422.0			301688.0	Y
6	IC 280-663590/13	0.4	116189.0			290472.5	Y
7	IC 280-663590/12	0.7	199110.0			284442.857143	Y
8	IC 280-663590/11	1.0	286831.0			286831.0	Y
9	IC 280-663590/10	2.5	731459.0			292583.6	Y



**Calibration**

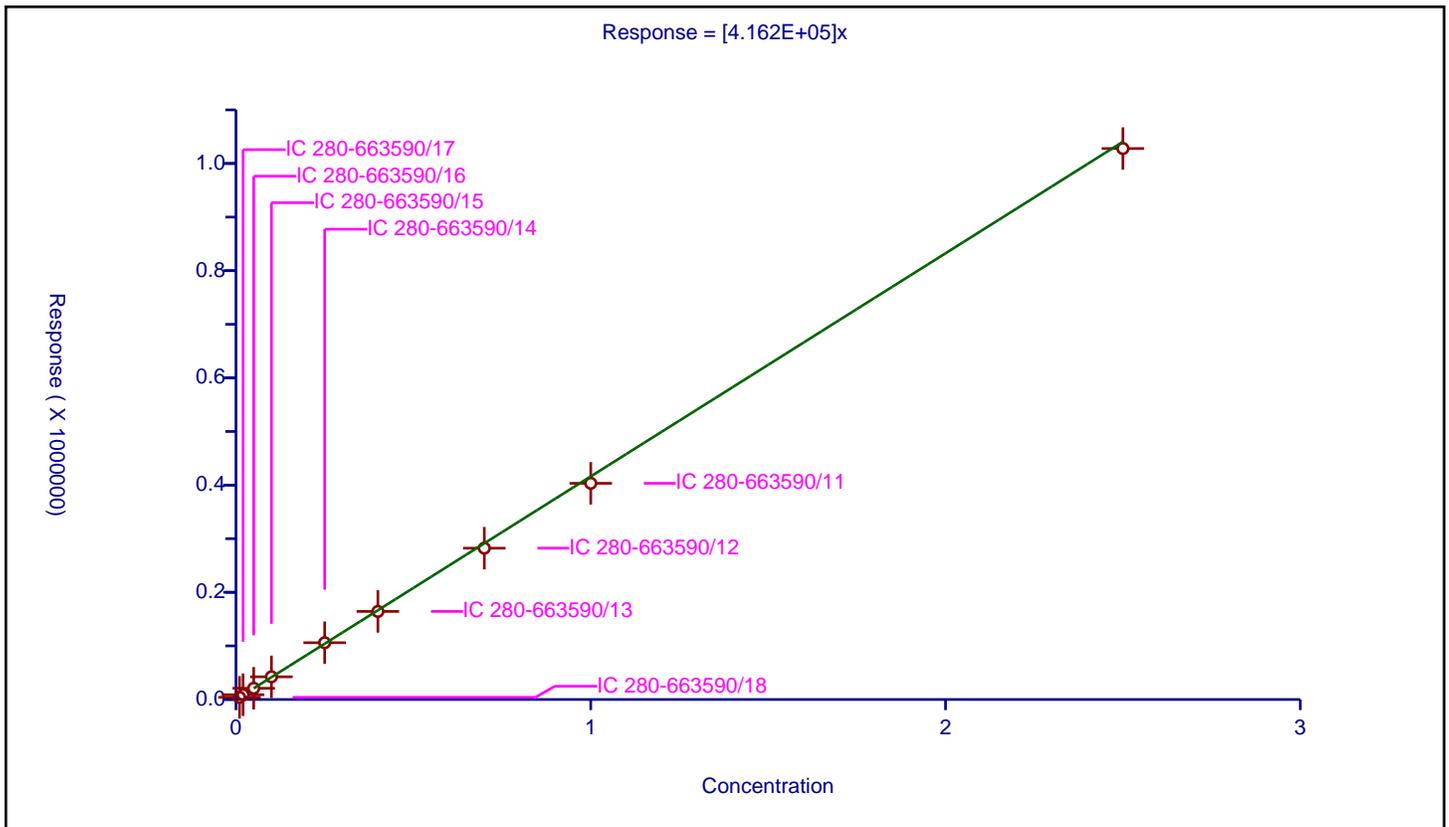
**/ 2,4,6-Trinitrotoluene**

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	4.162E+05

Error Coefficients	
Relative Standard Deviation:	3.1

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-663590/18	0.01	4082.0			408200.0	Y
2	IC 280-663590/17	0.02	8874.0			443700.0	Y
3	IC 280-663590/16	0.05	20936.0			418720.0	Y
4	IC 280-663590/15	0.1	42305.0			423050.0	Y
5	IC 280-663590/14	0.25	105934.0			423736.0	Y
6	IC 280-663590/13	0.4	164300.0			410750.0	Y
7	IC 280-663590/12	0.7	282341.0			403344.285714	Y
8	IC 280-663590/11	1.0	403353.0			403353.0	Y
9	IC 280-663590/10	2.5	1027908.0			411163.2	Y



**Calibration**

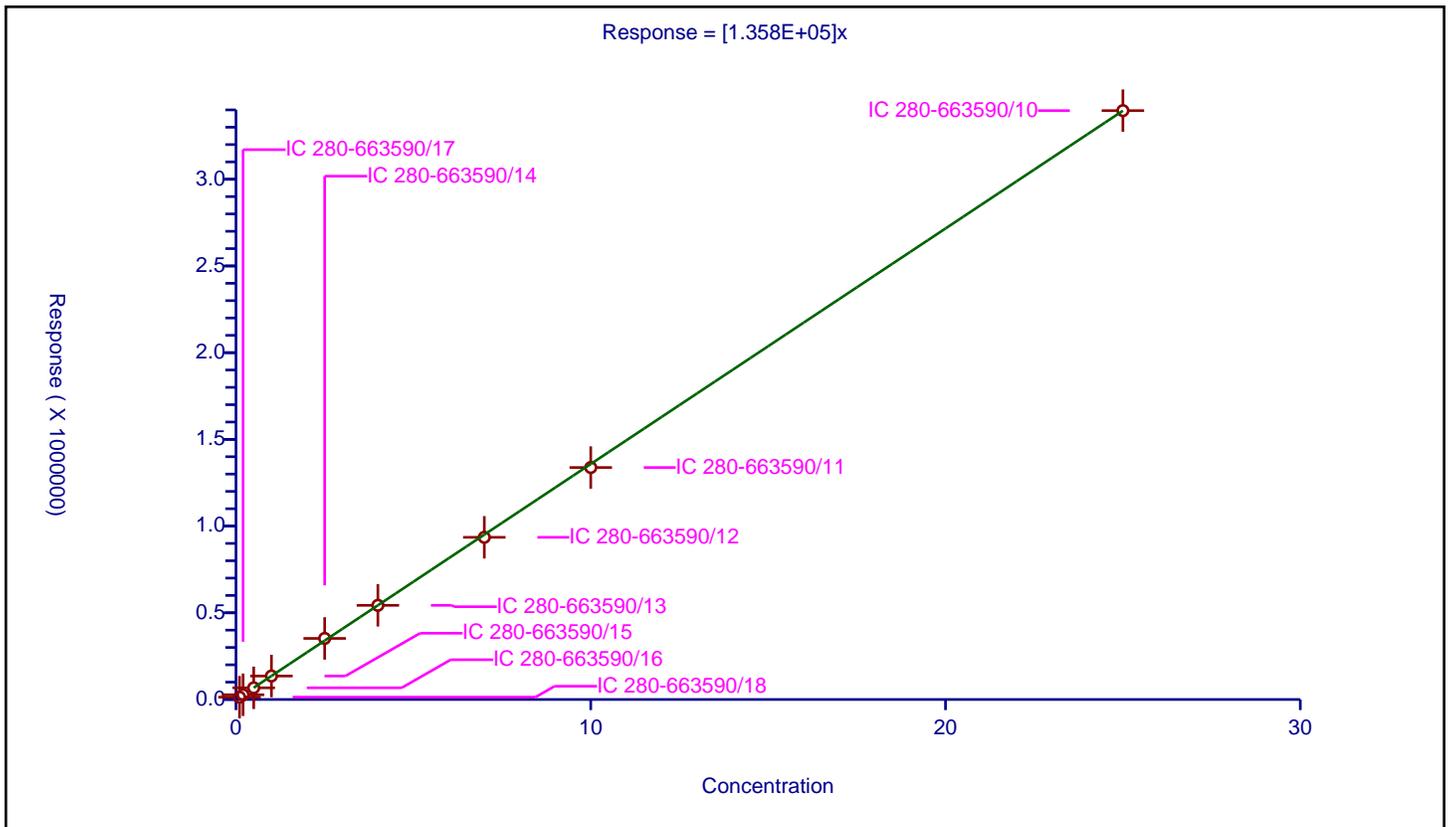
/ PETN

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: ESTD  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	1.358E+05

Error Coefficients	
Relative Standard Deviation:	1.6

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-663590/18	0.1	13555.0			135550.0	Y
2	IC 280-663590/17	0.2	27366.0			136830.0	Y
3	IC 280-663590/16	0.5	67315.0			134630.0	Y
4	IC 280-663590/15	1.0	135423.0			135423.0	Y
5	IC 280-663590/14	2.5	352162.0			140864.8	Y
6	IC 280-663590/13	4.0	543090.0			135772.5	Y
7	IC 280-663590/12	7.0	935188.0			133598.285714	Y
8	IC 280-663590/11	10.0	1337623.0			133762.3	Y
9	IC 280-663590/10	25.0	3395717.0			135828.68	Y



FORM VII  
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-197532-2  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 280-669870/20 Calibration Date: 10/04/2024 20:16  
 Instrument ID: CHHPLC\_X3 Calib Start Date: 10/04/2024 16:59  
 GC Column: UltraCarb5uODS ID: 4.60 (mm) Calib End Date: 10/04/2024 19:55  
 Lab File ID: 10040020.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
TNX	Ave	203078	184574		456	502	-9.1	20.0
HMX	Ave	96653	94070		487	500	-2.7	20.0
DNX	Ave	146042	146310		501	501	0.2	20.0
MNX	Ave	132934	127743		561	584	-3.9	20.0
RDX	Lin2		108094		514	500	2.8	20.0
Picric acid	Ave	75427	86634		574	500	14.9	20.0
1,3,5-Trinitrobenzene	Ave	217350	245010		564	500	12.7	20.0
1,3-Dinitrobenzene	Ave	298232	321326		539	500	7.7	20.0
Nitrobenzene	Ave	195178	208278		534	500	6.7	20.0
3,5-Dinitroaniline	Lin2		247186		530	500	6.1	20.0
Tetryl	Lin2		185704		543	500	8.6	20.0
Nitroglycerin	Lin2		69773		5419	5000	8.4	20.0
2,4,6-Trinitrotoluene	Ave	217298	224058		516	500	3.1	20.0
4-Amino-2,6-dinitrotoluene	Lin2		158314		546	500	9.3	20.0
2-Amino-4,6-dinitrotoluene	Ave	204531	216724		530	500	6.0	20.0
2,6-Dinitrotoluene	Lin2		149116		530	500	6.0	20.0
2,4-Dinitrotoluene	Ave	291812	309686		531	500	6.1	20.0
2-Nitrotoluene	Ave	125468	130908		522	500	4.3	20.0
4-Nitrotoluene	Lin2		114438		529	500	5.8	20.0
3-Nitrotoluene	Lin2		143934		531	500	6.2	20.0
PETN	Ave	72212	79177		5482	5000	9.6	20.0
1,2-Dinitrobenzene	Ave	130410	128386		492	500	-1.6	20.0

FORM VII  
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-197532-2  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 280-669870/20 Calibration Date: 10/04/2024 20:16  
 Instrument ID: CHHPLC\_X3 Calib Start Date: 10/04/2024 16:59  
 GC Column: UltraCarb5uODS ID: 4.60 (mm) Calib End Date: 10/04/2024 19:55  
 Lab File ID: 10040020.D

Analyte	RT	RT WINDOW	
		FROM	TO
TNX	6.43	6.34	6.54
HMX	6.57	6.43	6.73
DNX	6.75	6.65	6.85
MNX	7.15	7.00	7.30
RDX	7.50	7.36	7.66
Picric acid	7.91	7.79	8.09
1,3,5-Trinitrobenzene	8.47	8.33	8.63
1,3-Dinitrobenzene	9.03	8.89	9.19
Nitrobenzene	9.35	9.21	9.51
3,5-Dinitroaniline	9.55	9.41	9.71
Tetryl	9.67	9.53	9.83
Nitroglycerin	10.11	9.97	10.27
2,4,6-Trinitrotoluene	10.47	10.38	10.58
4-Amino-2,6-dinitrotoluene	10.62	10.54	10.74
2-Amino-4,6-dinitrotoluene	10.85	10.76	10.96
2,6-Dinitrotoluene	10.99	10.90	11.10
2,4-Dinitrotoluene	11.13	11.05	11.25
2-Nitrotoluene	11.83	11.70	12.00
4-Nitrotoluene	12.19	12.07	12.37
3-Nitrotoluene	12.70	12.57	12.87
PETN	13.77	13.65	13.95
1,2-Dinitrobenzene	8.37	8.23	8.53

Eurofins Denver  
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\10040020.D  
 Lims ID: ICV INT/DMT  
 Client ID:  
 Sample Type: ICV  
 Inject. Date: 04-Oct-2024 20:16:59 ALS Bottle#: 20 Worklist Smp#: 20  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: ICV INT/DMT  
 Operator ID: JZ Instrument ID: CHHPLC\_X3  
 Sublist:

Method: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\8330\_X3.m  
 Limit Group: GCSV - 8330  
 Last Update: 08-Oct-2024 13:50:35 Calib Date: 04-Oct-2024 19:55:02  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\10040019.D  
 Column 1 : UltraCarb5uODS (20) ( 4.60 mm) Det: LC DAD1B, 254 nm  
 Process Host: CTX1654

First Level Reviewer: LV5D Date: 08-Oct-2024 13:12:02

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
3 TNX	1	6.434	6.437	-0.003	92564	0.5015	0.4558	
4 HMX	1	6.574	6.577	-0.003	47035	0.5000	0.4866	
6 DNx	1	6.747	6.751	-0.004	73228	0.5005	0.5014	
7 MNx	1	7.154	7.151	0.003	74538	0.5835	0.5607	
8 RDX	1	7.501	7.511	-0.010	54047	0.5000	0.5139	
9 2,4,6-Trinitrophenol	1	7.914	7.937	-0.023	43317	0.5000	0.5743	
\$ 10 1,2-Dinitrobenzene	1	8.367	8.377	-0.010	64193	0.5000	0.4922	
11 1,3,5-Trinitrobenzene	1	8.474	8.477	-0.003	122505	0.5000	0.5636	
12 1,3-Dinitrobenzene	1	9.034	9.037	-0.003	160663	0.5000	0.5387	
13 Nitrobenzene	1	9.347	9.357	-0.010	104139	0.5000	0.5336	
14 3,5-Dinitroaniline	1	9.554	9.564	-0.010	123593	0.5000	0.5303	
15 Tetryl	1	9.674	9.684	-0.010	92852	0.5000	0.5428	M
16 Nitroglycerin	2	10.114	10.124	-0.010	348863	5.00	5.42	M
17 2,4,6-Trinitrotoluene	1	10.467	10.477	-0.010	112029	0.5000	0.5156	
18 4-Amino-2,6-dinitrotoluene	1	10.620	10.637	-0.017	79157	0.5000	0.5464	
19 2-Amino-4,6-dinitrotoluene	1	10.847	10.864	-0.017	108362	0.5000	0.5298	
20 2,6-Dinitrotoluene	1	10.987	11.004	-0.017	74558	0.5000	0.5301	
21 2,4-Dinitrotoluene	1	11.134	11.150	-0.016	154843	0.5000	0.5306	
22 o-Nitrotoluene	1	11.827	11.850	-0.023	65454	0.5000	0.5217	
23 p-Nitrotoluene	1	12.194	12.217	-0.023	57219	0.5000	0.5288	
24 m-Nitrotoluene	1	12.700	12.724	-0.024	71967	0.5000	0.5308	
25 PETN	2	13.767	13.797	-0.030	395884	5.00	5.48	
26 Ammonium Picrate	1		0.000			ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

8330Surrogate_00159	Amount Added: 50.00	Units: uL
8330 LCS_00137	Amount Added: 50.00	Units: uL
8330_OP_DMT_00030	Amount Added: 50.00	Units: uL

Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040020.d

Injection Date: 04-Oct-2024 20:16:59

Instrument ID: CHHPLC\_X3

Operator ID: JZ

Lims ID: ICV INT/DMT

Worklist Smp#: 20

Client ID:

Injection Vol: 100.0 ul

Dil. Factor: 1.0000

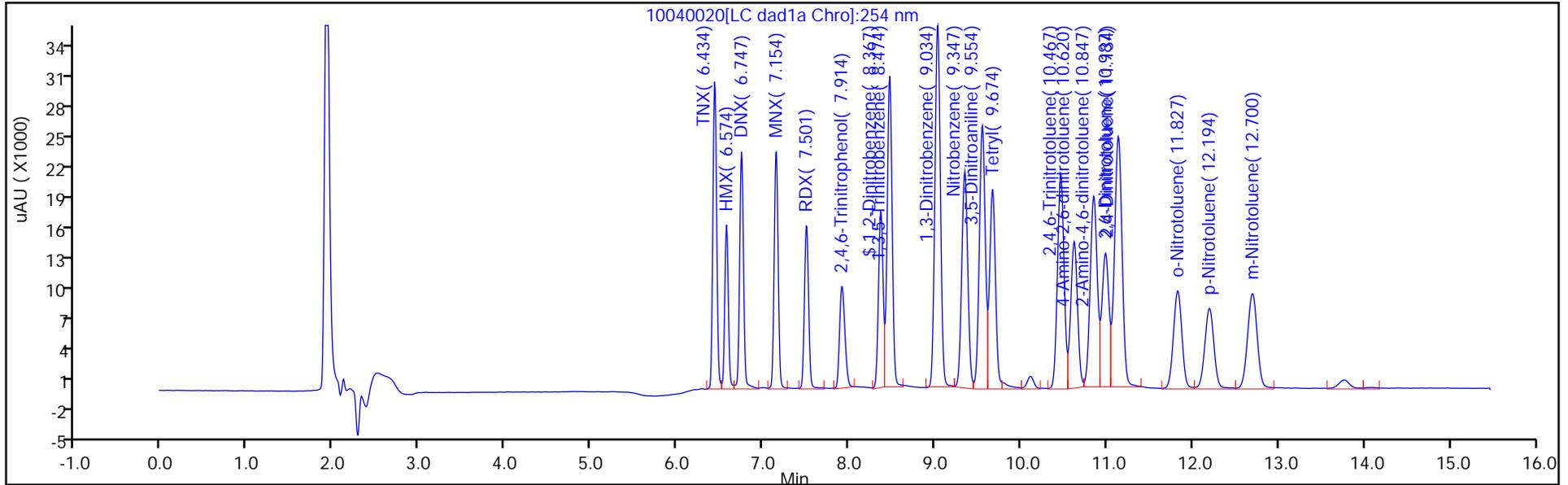
ALS Bottle#: 20

Method: 8330\_X3

Limit Group: GCSV - 8330

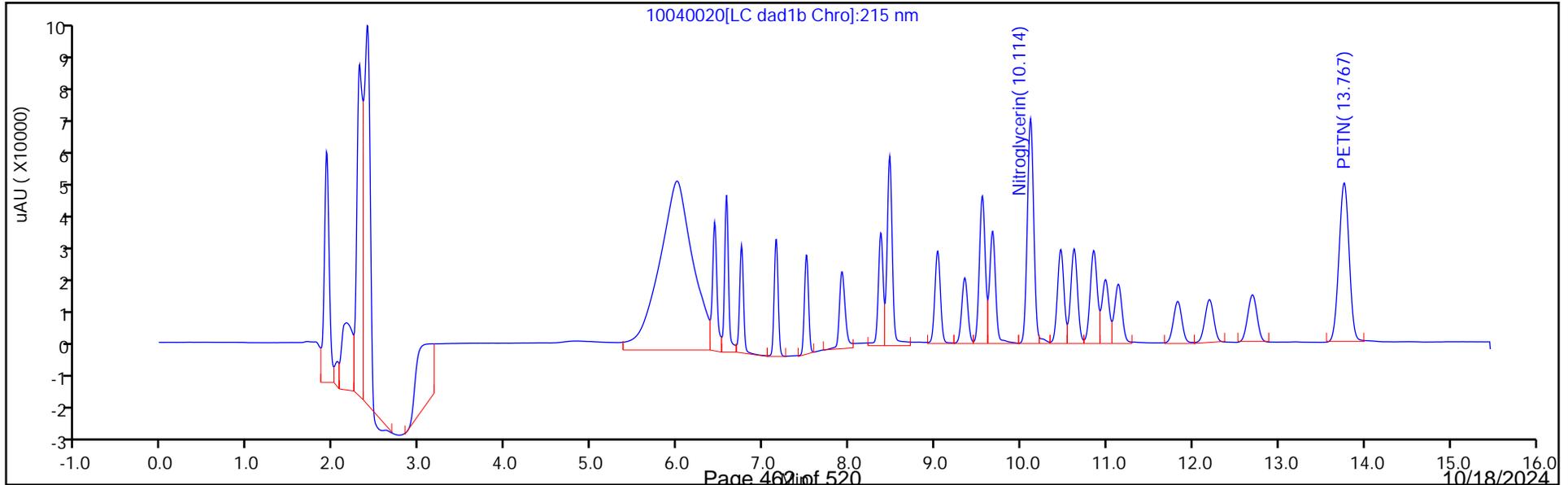
Column: UltraCarb5uODS (20) ( 4.60 mm)

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



Eurofins Denver

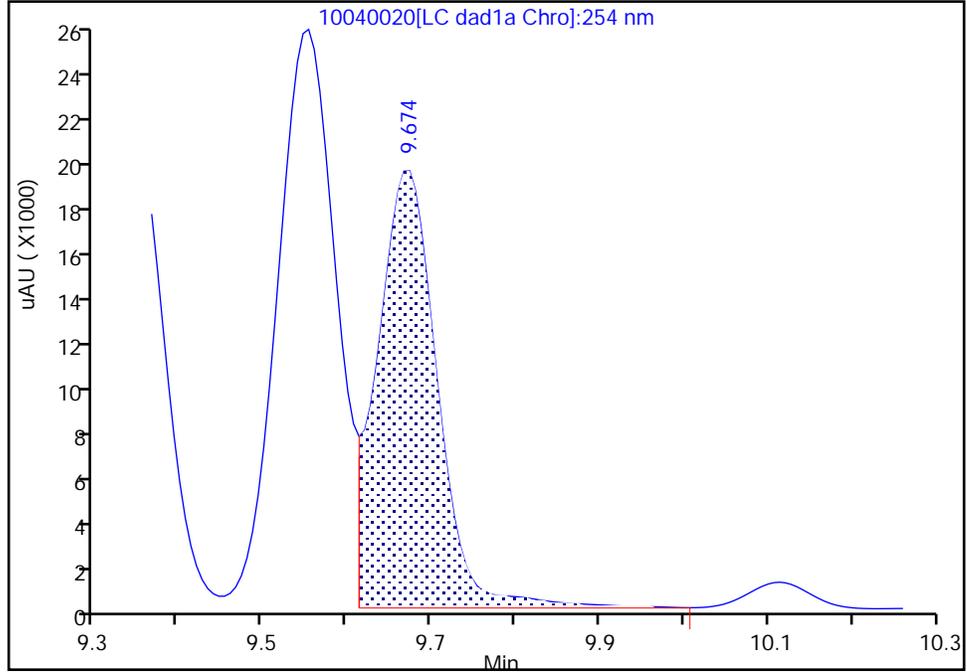
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040020.d  
Injection Date: 04-Oct-2024 20:16:59 Instrument ID: CHHPLC\_X3  
Lims ID: ICV INT/DMT  
Client ID:  
Operator ID: JZ ALS Bottle#: 20 Worklist Smp#: 20  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

15 Tetryl, CAS: 479-45-8

Signal: 1

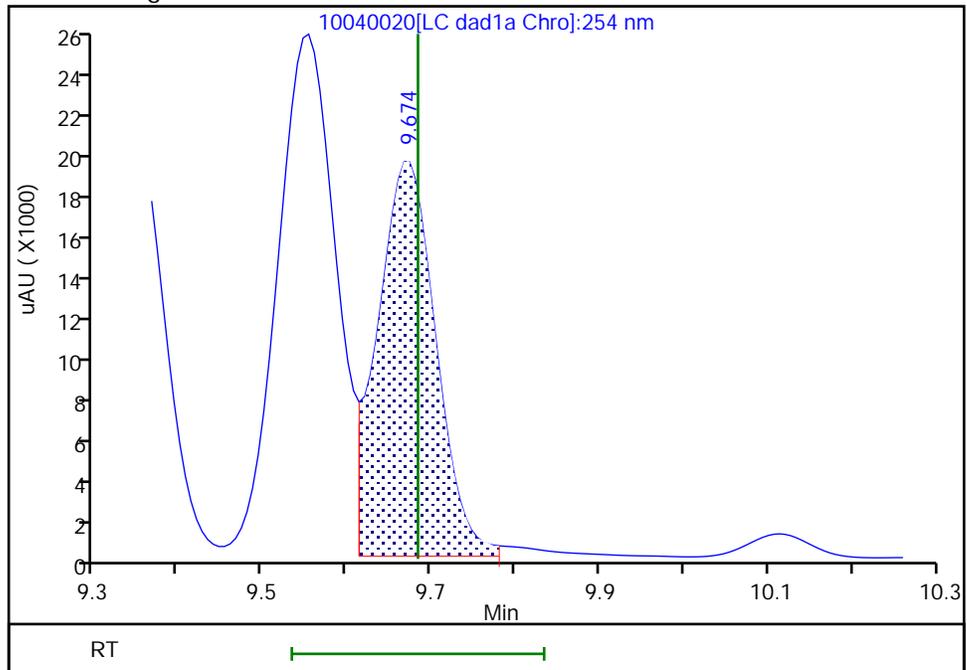
RT: 9.67  
Area: 95739  
Amount: 0.567120  
Amount Units: ug/mL

Processing Integration Results



RT: 9.67  
Area: 92852  
Amount: 0.542780  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:11:49 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak

Audit Reason: Baseline

Eurofins Denver

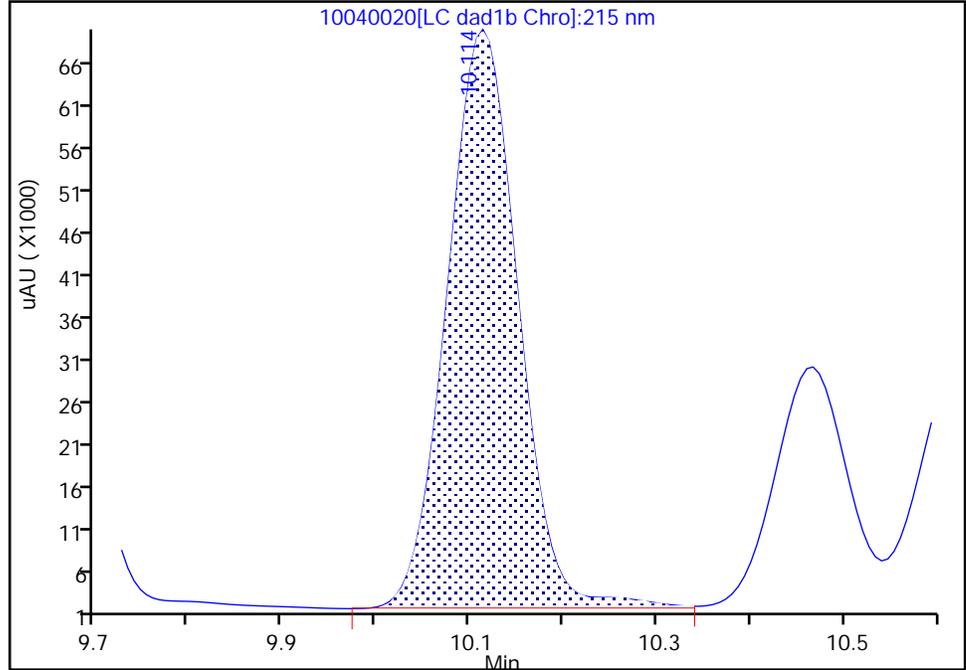
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241004-138284.b\10040020.d  
Injection Date: 04-Oct-2024 20:16:59 Instrument ID: CHHPLC\_X3  
Lims ID: ICV INT/DMT  
Client ID:  
Operator ID: JZ ALS Bottle#: 20 Worklist Smp#: 20  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1C, 215 nm

16 Nitroglycerin, CAS: 55-63-0

Signal: 1

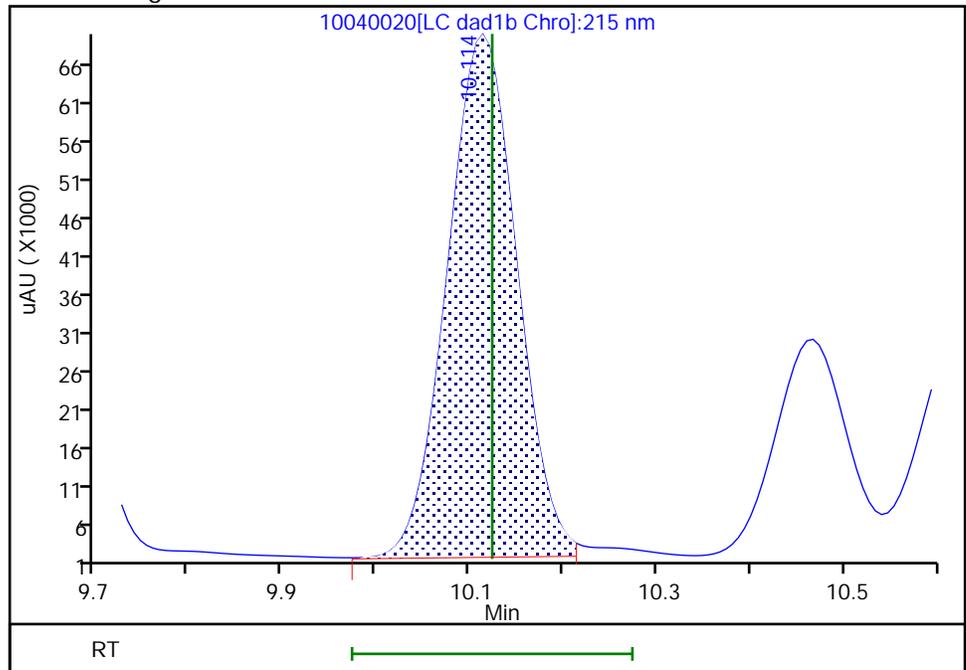
RT: 10.11  
Area: 355382  
Amount: 5.587098  
Amount Units: ug/mL

Processing Integration Results



RT: 10.11  
Area: 348863  
Amount: 5.418687  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 08-Oct-2024 13:11:57 -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.: 280-197532-2  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 280-670390/7 Calibration Date: 10/09/2024 19:27  
 Instrument ID: CHHPLC\_X3 Calib Start Date: 10/04/2024 16:59  
 GC Column: UltraCarb5uODS ID: 4.60 (mm) Calib End Date: 10/04/2024 19:55  
 Lab File ID: 10090007.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	96653	91096		236	250	-5.7	20.0
RDX	Lin2		105736		251	250	0.2	20.0
Picric acid	Ave	75427	74756		248	250	-0.9	20.0
1,3,5-Trinitrobenzene	Ave	217350	216008		249	250	-0.6	20.0
1,3-Dinitrobenzene	Ave	298232	295508		248	250	-0.9	20.0
Nitrobenzene	Ave	195178	191636		246	250	-1.8	20.0
3,5-Dinitroaniline	Lin2		232688		250	250	-0.0	20.0
Tetryl	Lin2		163588		240	250	-4.2	20.0
Nitroglycerin	Lin2		65263		2538	2500	1.5	20.0
2,4,6-Trinitrotoluene	Ave	217298	214004		246	250	-1.5	20.0
4-Amino-2,6-dinitrotoluene	Lin2		141812		242	250	-3.1	20.0
2-Amino-4,6-dinitrotoluene	Ave	204531	200436		245	250	-2.0	20.0
2,6-Dinitrotoluene	Lin2		138192		245	250	-2.0	20.0
2,4-Dinitrotoluene	Ave	291812	286020		245	250	-2.0	20.0
2-Nitrotoluene	Ave	125468	123980		247	250	-1.2	20.0
4-Nitrotoluene	Lin2		105860		244	250	-2.5	20.0
3-Nitrotoluene	Lin2		135020		248	250	-0.8	20.0
PETN	Ave	72212	73571		2547	2500	1.9	20.0
1,2-Dinitrobenzene	Ave	130410	129508		248	250	-0.7	20.0

FORM VII  
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-197532-2  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 280-670390/7 Calibration Date: 10/09/2024 19:27  
 Instrument ID: CHHPLC\_X3 Calib Start Date: 10/04/2024 16:59  
 GC Column: UltraCarb5uODS ID: 4.60 (mm) Calib End Date: 10/04/2024 19:55  
 Lab File ID: 10090007.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.58	6.43	6.73
RDX	7.51	7.36	7.66
Picric acid	7.91	7.76	8.06
1,3,5-Trinitrobenzene	8.49	8.34	8.64
1,3-Dinitrobenzene	9.05	8.90	9.20
Nitrobenzene	9.37	9.22	9.52
3,5-Dinitroaniline	9.57	9.42	9.72
Tetryl	9.69	9.54	9.84
Nitroglycerin	10.14	9.99	10.29
2,4,6-Trinitrotoluene	10.49	10.39	10.59
4-Amino-2,6-dinitrotoluene	10.65	10.55	10.75
2-Amino-4,6-dinitrotoluene	10.89	10.79	10.99
2,6-Dinitrotoluene	11.02	10.92	11.12
2,4-Dinitrotoluene	11.17	11.07	11.27
2-Nitrotoluene	11.87	11.72	12.02
4-Nitrotoluene	12.25	12.10	12.40
3-Nitrotoluene	12.75	12.60	12.90
PETN	13.84	13.69	13.99
1,2-Dinitrobenzene	8.38	8.23	8.53

Eurofins Denver  
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241009-138424.b\10090007.D  
 Lims ID: CCV INT  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 09-Oct-2024 19:27:15 ALS Bottle#: 7 Worklist Smp#: 7  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: CCV INT  
 Operator ID: JZ Instrument ID: CHHPLC\_X3  
 Sublist: chrom-8330\_X3\*sub26  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X\20241009-138424.b\8330\_X3.m  
 Limit Group: GCSV - 8330  
 Last Update: 10-Oct-2024 12:47:17 Calib Date: 04-Oct-2024 19:55:02  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\10040019.D  
 Column 1 : UltraCarb5uODS (20) ( 4.60 mm) Det: LC DAD1B, 254 nm  
 Process Host: CTX1665

First Level Reviewer: LV5D Date: 09-Oct-2024 19:50:31

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
4 HMX	1	6.580	6.580	0.000	22774	0.2500	0.2356	M
8 RDX	1	7.513	7.513	0.000	26434	0.2500	0.2505	
9 2,4,6-Trinitrophenol	1	7.913	7.913	0.000	18689	0.2500	0.2478	
\$ 10 1,2-Dinitrobenzene	1	8.380	8.380	0.000	32377	0.2500	0.2483	
11 1,3,5-Trinitrobenzene	1	8.487	8.487	0.000	54002	0.2500	0.2485	
12 1,3-Dinitrobenzene	1	9.047	9.047	0.000	73877	0.2500	0.2477	
13 Nitrobenzene	1	9.366	9.366	0.000	47909	0.2500	0.2455	
14 3,5-Dinitroaniline	1	9.573	9.573	0.000	58172	0.2500	0.2498	
15 Tetryl	1	9.693	9.693	0.000	40897	0.2500	0.2395	
16 Nitroglycerin	2	10.140	10.140	0.000	163158	2.50	2.54	
17 2,4,6-Trinitrotoluene	1	10.493	10.493	0.000	53501	0.2500	0.2462	
18 4-Amino-2,6-dinitrotoluene	1	10.653	10.653	0.000	35453	0.2500	0.2423	
19 2-Amino-4,6-dinitrotoluene	1	10.886	10.886	0.000	50109	0.2500	0.2450	
20 2,6-Dinitrotoluene	1	11.020	11.020	0.000	34548	0.2500	0.2449	
21 2,4-Dinitrotoluene	1	11.173	11.173	0.000	71505	0.2500	0.2450	
22 o-Nitrotoluene	1	11.873	11.873	0.000	30995	0.2500	0.2470	
23 p-Nitrotoluene	1	12.246	12.246	0.000	26465	0.2500	0.2438	
24 m-Nitrotoluene	1	12.753	12.753	0.000	33755	0.2500	0.2480	
25 PETN	2	13.840	13.840	0.000	183927	2.50	2.55	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

8330IntermStk\_00083

Amount Added: 25.00

Units: uL

Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc\_x\20241009-138424.b\10090007.d

Injection Date: 09-Oct-2024 19:27:15

Instrument ID: CHHPLC\_X3

Operator ID: JZ

Lims ID: CCV INT

Worklist Smp#: 7

Client ID:

Injection Vol: 100.0 ul

Dil. Factor: 1.0000

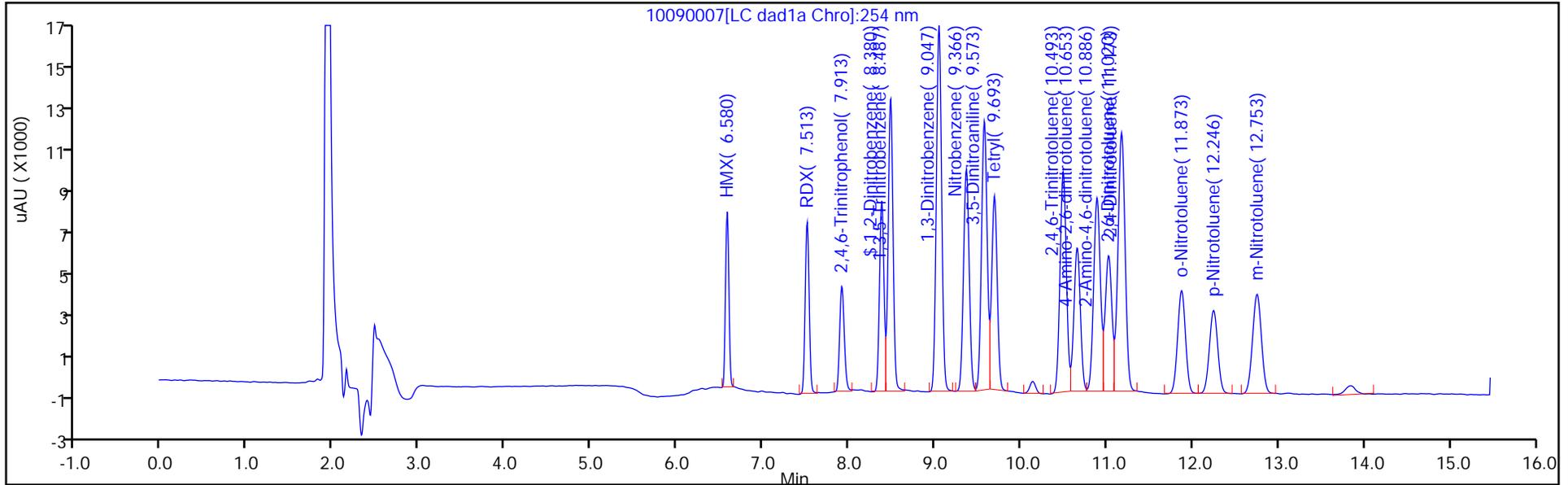
ALS Bottle#: 7

Method: 8330\_X3

Limit Group: GCSV - 8330

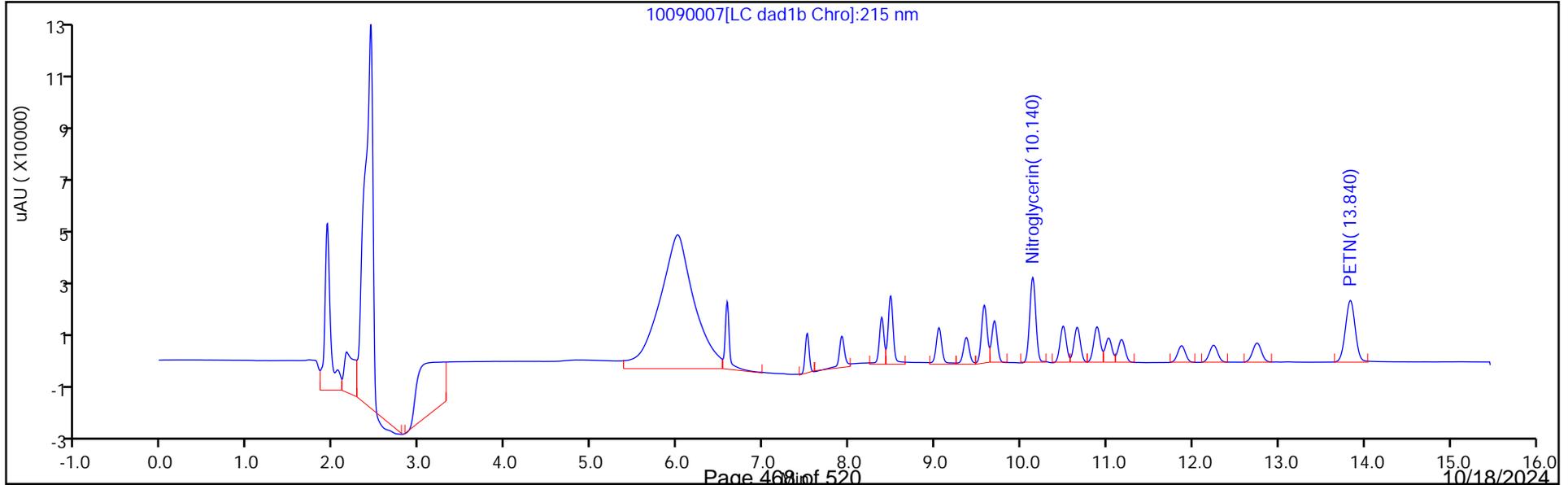
Column: UltraCarb5uODS (20) ( 4.60 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: UltraCarb5uODS (20) ( 4.60 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins Denver

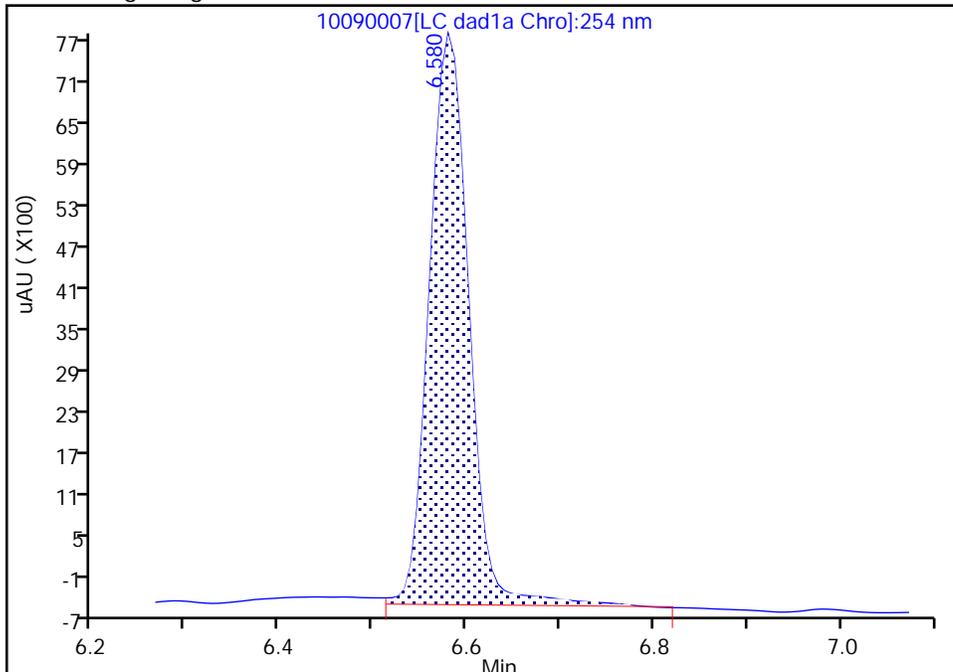
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241009-138424.b\10090007.d  
Injection Date: 09-Oct-2024 19:27:15 Instrument ID: CHHPLC\_X3  
Lims ID: CCV INT  
Client ID:  
Operator ID: JZ ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

4 HMX, CAS: 2691-41-0

Signal: 1

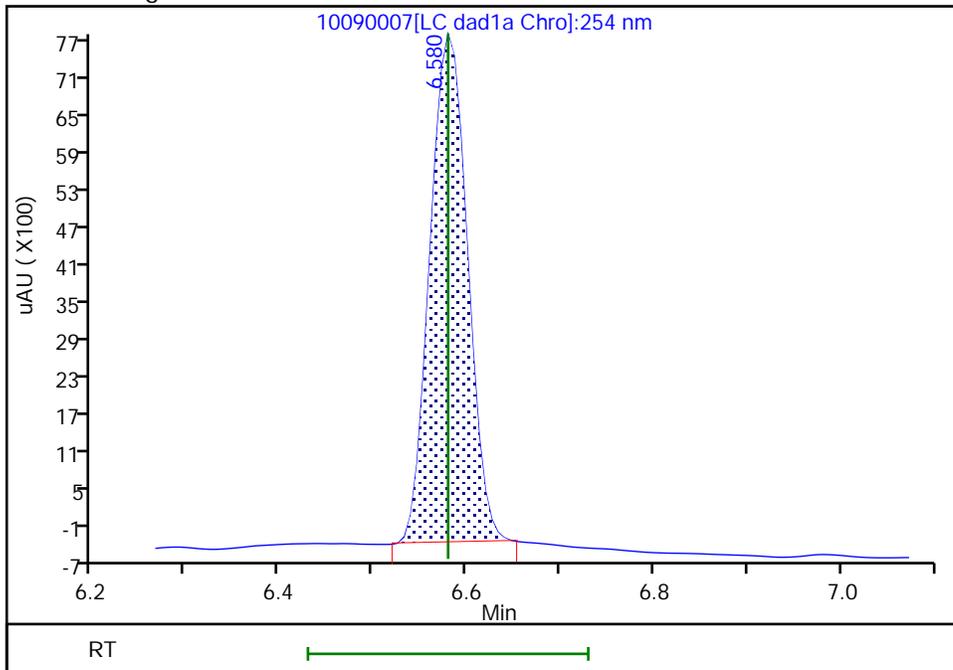
RT: 6.58  
Area: 24343  
Amount: 0.251860  
Amount Units: ug/mL

Processing Integration Results



RT: 6.58  
Area: 22774  
Amount: 0.235627  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 09-Oct-2024 19:50:58 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII  
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-197532-2  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 280-670390/21 Calibration Date: 10/09/2024 23:28  
 Instrument ID: CHHPLC\_X3 Calib Start Date: 10/04/2024 16:59  
 GC Column: UltraCarb5uODS ID: 4.60 (mm) Calib End Date: 10/04/2024 19:55  
 Lab File ID: 10090021.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	96653	91932		238	250	-4.9	20.0
RDX	Lin2		105716		251	250	0.2	20.0
Picric acid	Ave	75427	75612		251	250	0.2	20.0
1,3,5-Trinitrobenzene	Ave	217350	215840		248	250	-0.7	20.0
1,3-Dinitrobenzene	Ave	298232	296436		249	250	-0.6	20.0
Nitrobenzene	Ave	195178	189596		243	250	-2.9	20.0
3,5-Dinitroaniline	Lin2		232412		250	250	-0.2	20.0
Tetryl	Lin2		163872		240	250	-4.1	20.0
Nitroglycerin	Lin2		65526		2548	2500	1.9	20.0
2,4,6-Trinitrotoluene	Ave	217298	215360		248	250	-0.9	20.0
4-Amino-2,6-dinitrotoluene	Lin2		146464		250	250	0.2	20.0
2-Amino-4,6-dinitrotoluene	Ave	204531	200952		246	250	-1.8	20.0
2,6-Dinitrotoluene	Lin2		144648		256	250	2.6	20.0
2,4-Dinitrotoluene	Ave	291812	285512		245	250	-2.2	20.0
2-Nitrotoluene	Ave	125468	123580		246	250	-1.5	20.0
4-Nitrotoluene	Lin2		105992		244	250	-2.4	20.0
3-Nitrotoluene	Lin2		135352		249	250	-0.6	20.0
PETN	Ave	72212	73206		2534	2500	1.4	20.0
1,2-Dinitrobenzene	Ave	130410	131740		253	250	1.0	20.0

FORM VII  
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-197532-2  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 280-670390/21 Calibration Date: 10/09/2024 23:28  
 Instrument ID: CHHPLC\_X3 Calib Start Date: 10/04/2024 16:59  
 GC Column: UltraCarb5uODS ID: 4.60 (mm) Calib End Date: 10/04/2024 19:55  
 Lab File ID: 10090021.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.58	6.43	6.73
RDX	7.50	7.36	7.66
Picric acid	7.91	7.76	8.06
1,3,5-Trinitrobenzene	8.48	8.34	8.64
1,3-Dinitrobenzene	9.04	8.90	9.20
Nitrobenzene	9.36	9.22	9.52
3,5-Dinitroaniline	9.57	9.42	9.72
Tetryl	9.69	9.54	9.84
Nitroglycerin	10.14	9.99	10.29
2,4,6-Trinitrotoluene	10.49	10.39	10.59
4-Amino-2,6-dinitrotoluene	10.65	10.55	10.75
2-Amino-4,6-dinitrotoluene	10.88	10.79	10.99
2,6-Dinitrotoluene	11.02	10.92	11.12
2,4-Dinitrotoluene	11.16	11.07	11.27
2-Nitrotoluene	11.86	11.72	12.02
4-Nitrotoluene	12.22	12.10	12.40
3-Nitrotoluene	12.73	12.60	12.90
PETN	13.80	13.69	13.99
1,2-Dinitrobenzene	8.38	8.23	8.53

Eurofins Denver  
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241009-138424.b\10090021.D  
 Lims ID: CCV INT  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 09-Oct-2024 23:28:40 ALS Bottle#: 7 Worklist Smp#: 21  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: CCV INT  
 Operator ID: JZ Instrument ID: CHHPLC\_X3  
 Sublist: chrom-8330\_X3\*sub26  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X\20241009-138424.b\8330\_X3.m  
 Limit Group: GCSV - 8330  
 Last Update: 10-Oct-2024 12:47:31 Calib Date: 04-Oct-2024 19:55:02  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\10040019.D  
 Column 1 : UltraCarb5uODS (20) ( 4.60 mm) Det: LC DAD1B, 254 nm  
 Process Host: CTX1665

First Level Reviewer: LV5D Date: 10-Oct-2024 12:10:31

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
4 HMX	1	6.578	6.580	-0.002	22983	0.2500	0.2378	M
8 RDX	1	7.504	7.513	-0.009	26429	0.2500	0.2505	
9 2,4,6-Trinitrophenol	1	7.911	7.913	-0.002	18903	0.2500	0.2506	
\$ 10 1,2-Dinitrobenzene	1	8.378	8.380	-0.002	32935	0.2500	0.2526	
11 1,3,5-Trinitrobenzene	1	8.478	8.487	-0.009	53960	0.2500	0.2483	
12 1,3-Dinitrobenzene	1	9.044	9.047	-0.003	74109	0.2500	0.2485	
13 Nitrobenzene	1	9.364	9.366	-0.002	47399	0.2500	0.2429	
14 3,5-Dinitroaniline	1	9.571	9.573	-0.002	58103	0.2500	0.2495	
15 Tetryl	1	9.691	9.693	-0.002	40968	0.2500	0.2399	
16 Nitroglycerin	2	10.137	10.140	-0.003	163815	2.50	2.55	
17 2,4,6-Trinitrotoluene	1	10.491	10.493	-0.002	53840	0.2500	0.2478	
18 4-Amino-2,6-dinitrotoluene	1	10.651	10.653	-0.002	36616	0.2500	0.2504	
19 2-Amino-4,6-dinitrotoluene	1	10.884	10.886	-0.002	50238	0.2500	0.2456	
20 2,6-Dinitrotoluene	1	11.017	11.020	-0.003	36162	0.2500	0.2564	
21 2,4-Dinitrotoluene	1	11.164	11.173	-0.009	71378	0.2500	0.2446	
22 o-Nitrotoluene	1	11.857	11.873	-0.016	30895	0.2500	0.2462	
23 p-Nitrotoluene	1	12.224	12.246	-0.022	26498	0.2500	0.2441	
24 m-Nitrotoluene	1	12.731	12.753	-0.022	33838	0.2500	0.2486	
25 PETN	2	13.797	13.840	-0.043	183014	2.50	2.53	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

8330IntermStk\_00083

Amount Added: 25.00

Units: uL

Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc\_x\20241009-138424.b\10090021.d

Injection Date: 09-Oct-2024 23:28:40

Instrument ID: CHHPLC\_X3

Operator ID: JZ

Lims ID: CCV INT

Worklist Smp#: 21

Client ID:

Injection Vol: 100.0 ul

Dil. Factor: 1.0000

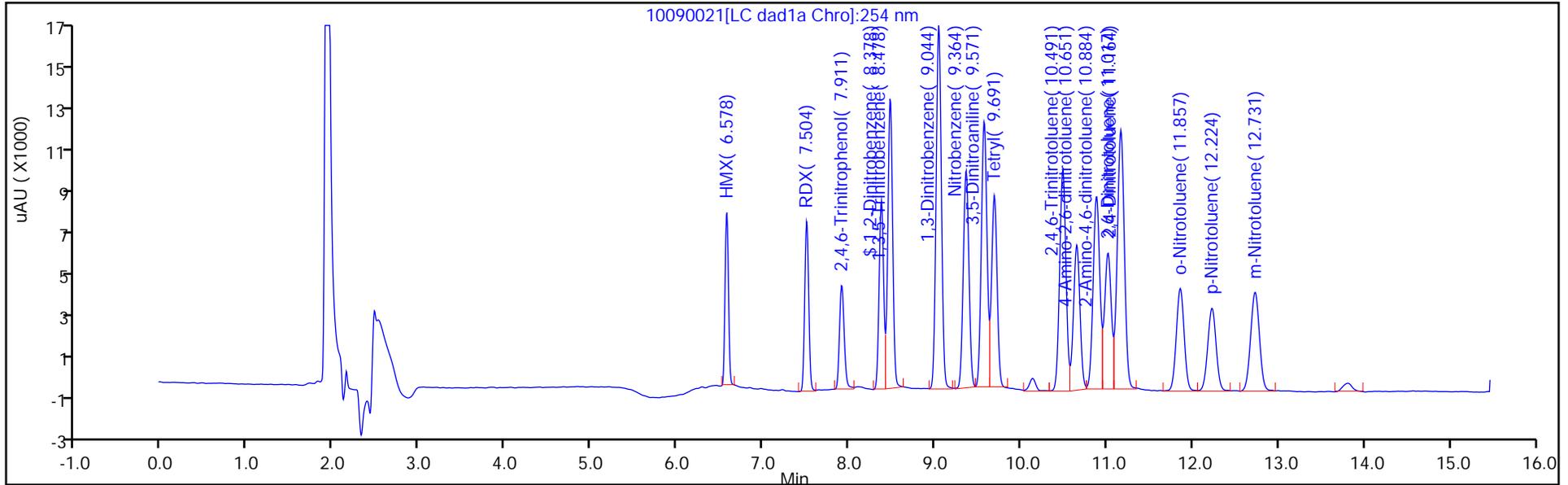
ALS Bottle#: 7

Method: 8330\_X3

Limit Group: GCSV - 8330

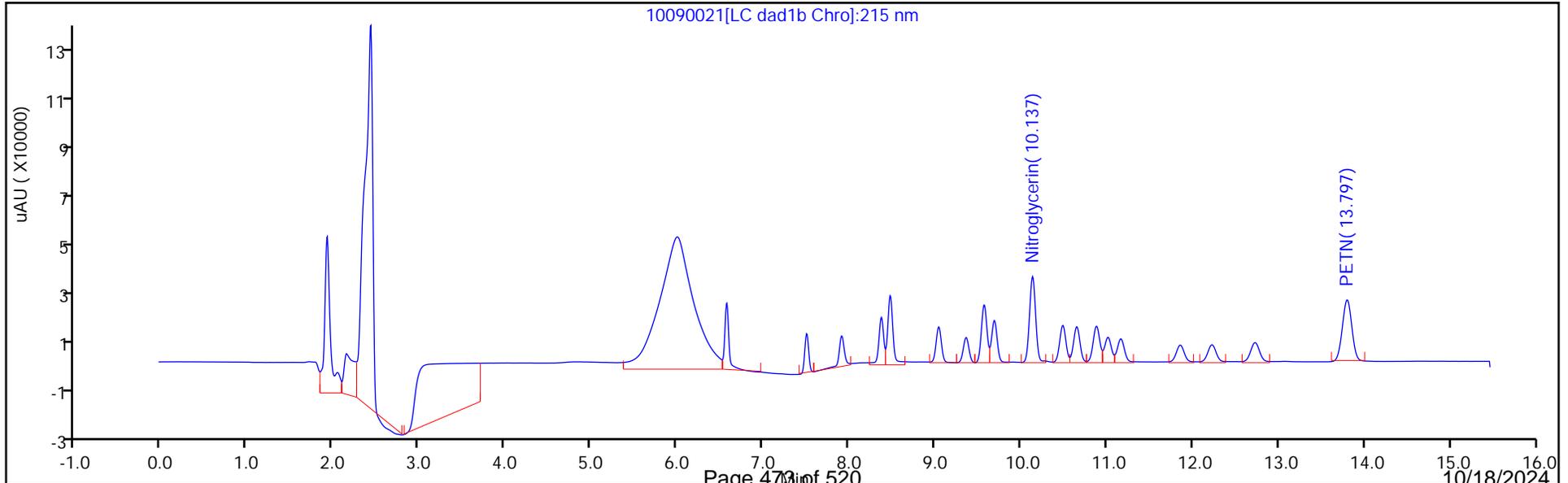
Column: UltraCarb5uODS (20) ( 4.60 mm)

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



Eurofins Denver

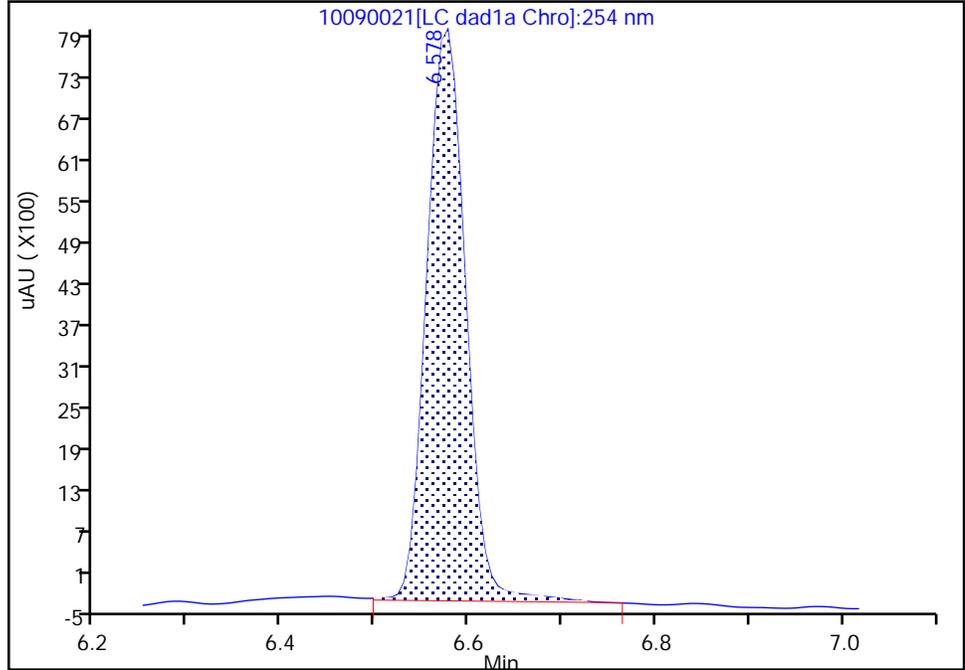
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241009-138424.b\10090021.d  
Injection Date: 09-Oct-2024 23:28:40 Instrument ID: CHHPLC\_X3  
Lims ID: CCV INT  
Client ID:  
Operator ID: JZ ALS Bottle#: 7 Worklist Smp#: 21  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 Limit Group: GCSV - 8330  
Column: UltraCarb5uODS (20) ( 4.60 mm) Detector: LC DAD1B, 254 nm

4 HMX, CAS: 2691-41-0

Signal: 1

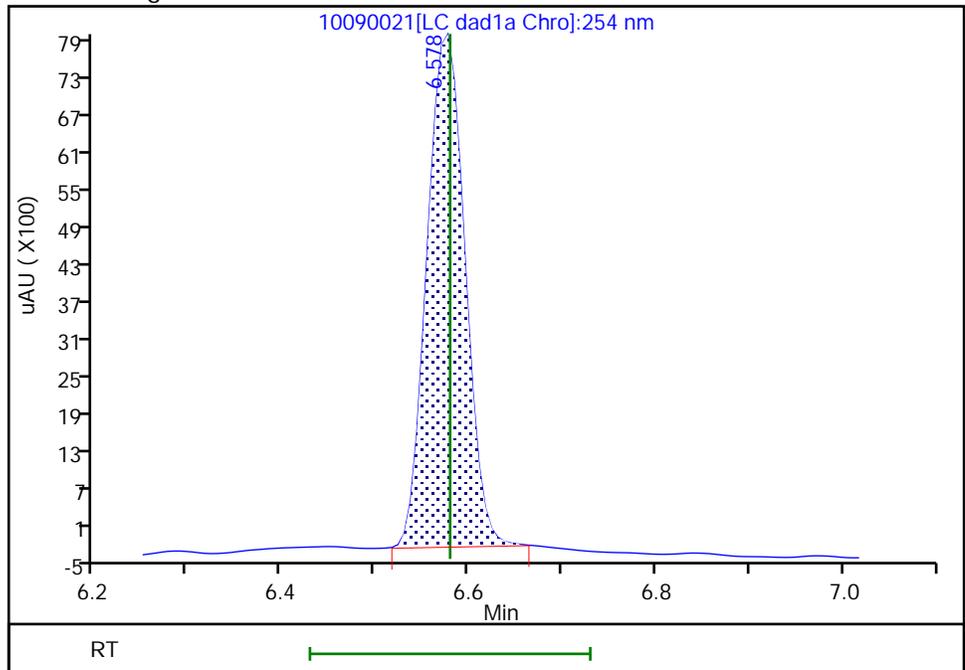
RT: 6.58  
Area: 23990  
Amount: 0.248208  
Amount Units: ug/mL

Processing Integration Results



RT: 6.58  
Area: 22983  
Amount: 0.237789  
Amount Units: ug/mL

Manual Integration Results



Reviewer: LV5D, 10-Oct-2024 12:10:30 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII  
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-197532-2  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 280-663590/19 Calibration Date: 08/11/2024 01:36  
 Instrument ID: CHHPLC\_X5 Calib Start Date: 08/10/2024 20:22  
 GC Column: Luna-phenylhex ID: 4.60 (mm) Calib End Date: 08/11/2024 01:01  
 Lab File ID: 08100019.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	180338	168968		469	500	-6.3	20.0
Picric acid	Ave	149859	166618		556	500	11.2	20.0
RDX	Ave	220357	203186		461	500	-7.8	20.0
Nitrobenzene	Ave	376935	397300		527	500	5.4	20.0
3,5-Dinitroaniline	Lin2		456342		523	500	4.6	20.0
1,3-Dinitrobenzene	Ave	585242	609262		521	500	4.1	20.0
Nitroglycerin	Ave	128152	132206		5158	5000	3.2	20.0
2-Nitrotoluene	Ave	235862	244000		517	500	3.5	20.0
4-Nitrotoluene	Ave	211671	217406		514	500	2.7	20.0
4-Amino-2,6-dinitrotoluene	Ave	278588	293012		526	500	5.2	20.0
3-Nitrotoluene	Ave	258224	265526		514	500	2.8	20.0
2-Amino-4,6-dinitrotoluene	Ave	389409	396736		509	500	1.9	20.0
1,3,5-Trinitrobenzene	Ave	423794	469618		554	500	10.8	20.0
2,6-Dinitrotoluene	Ave	284676	280972		494	500	-1.3	20.0
2,4-Dinitrotoluene	Ave	568510	561942		494	500	-1.2	20.0
Tetryl	Ave	283338	335136		591	500	18.3	20.0
2,4,6-Trinitrotoluene	Ave	416224	416670		501	500	0.1	20.0
PETN	Ave	135807	144523		5321	5000	6.4	20.0
1,2-Dinitrobenzene	Ave	262489	279208		532	500	6.4	20.0

FORM VII  
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-197532-2  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 280-663590/19 Calibration Date: 08/11/2024 01:36  
 Instrument ID: CHHPLC\_X5 Calib Start Date: 08/10/2024 20:22  
 GC Column: Luna-phenylhex ID: 4.60 (mm) Calib End Date: 08/11/2024 01:01  
 Lab File ID: 08100019.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.32	6.17	6.47
Picric acid	7.78	7.66	7.96
RDX	8.44	8.29	8.59
Nitrobenzene	10.99	10.83	11.13
3,5-Dinitroaniline	13.48	13.32	13.62
1,3-Dinitrobenzene	13.84	13.67	13.97
Nitroglycerin	14.51	14.33	14.63
2-Nitrotoluene	15.02	14.84	15.14
4-Nitrotoluene	15.25	15.07	15.37
4-Amino-2,6-dinitrotoluene	15.59	15.41	15.71
3-Nitrotoluene	16.08	15.89	16.19
2-Amino-4,6-dinitrotoluene	16.34	16.16	16.46
1,3,5-Trinitrobenzene	16.56	16.39	16.69
2,6-Dinitrotoluene	17.69	17.51	17.81
2,4-Dinitrotoluene	18.12	17.94	18.24
Tetryl	21.14	20.95	21.25
2,4,6-Trinitrotoluene	22.01	21.83	22.13
PETN	23.51	23.31	23.61
1,2-Dinitrobenzene	11.82	11.65	11.95

Eurofins Denver  
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100019.D  
 Lims ID: ICV INT  
 Client ID:  
 Sample Type: ICV  
 Inject. Date: 11-Aug-2024 01:36:30 ALS Bottle#: 19 Worklist Smp#: 19  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: ICV INT  
 Operator ID: JZ Instrument ID: CHHPLC\_X5  
 Sublist:

Method: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\8330\_X5\_Luna.m  
 Limit Group: GCSV - 8330  
 Last Update: 13-Aug-2024 15:55:09 Calib Date: 11-Aug-2024 01:01:34  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100018.D  
 Column 1 : Luna-Phenyl hexyl ( 4.60 mm) Det: LC mwd1A, 254 nm  
 Process Host: CTX1604

First Level Reviewer: LV5D Date: 13-Aug-2024 15:15:57

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
5 HMX	1	6.316	6.324	-0.008	84484	0.5000	0.4685	
7 2,4,6-Trinitrophenol	1	7.776	7.810	-0.034	83309	0.5000	0.5559	
8 RDX	1	8.443	8.437	0.006	101593	0.5000	0.4610	
9 Nitrobenzene	1	10.989	10.983	0.006	198650	0.5000	0.5270	
\$ 10 1,2-Dinitrobenzene	1	11.816	11.797	0.019	139604	0.5000	0.5318	
11 3,5-Dinitroaniline	1	13.483	13.470	0.013	228171	0.5000	0.5230	
12 1,3-Dinitrobenzene	1	13.836	13.823	0.013	304631	0.5000	0.5205	
13 Nitroglycerin	2	14.509	14.477	0.032	661029	5.00	5.16	
14 o-Nitrotoluene	1	15.023	14.990	0.033	122000	0.5000	0.5173	
16 p-Nitrotoluene	1	15.249	15.223	0.026	108703	0.5000	0.5135	
17 4-Amino-2,6-dinitrotoluene	1	15.589	15.557	0.032	146506	0.5000	0.5259	
18 m-Nitrotoluene	1	16.076	16.043	0.033	132763	0.5000	0.5141	
19 2-Amino-4,6-dinitrotoluene	1	16.336	16.310	0.026	198368	0.5000	0.5094	
20 1,3,5-Trinitrobenzene	1	16.563	16.537	0.026	234809	0.5000	0.5541	
21 2,6-Dinitrotoluene	1	17.689	17.657	0.032	140486	0.5000	0.4935	
22 2,4-Dinitrotoluene	1	18.123	18.090	0.033	280971	0.5000	0.4942	
23 Tetryl	1	21.136	21.097	0.039	167568	0.5000	0.5914	M
24 2,4,6-Trinitrotoluene	1	22.010	21.977	0.033	208335	0.5000	0.5005	M
25 PETN	2	23.510	23.457	0.053	722615	5.00	5.32	
26 Ammonium Picrate	1		0.000			ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

**Reagents:**

8330Surrogate\_00158

Amount Added: 50.00

Units: uL

8330 LCS\_00136

Amount Added: 50.00

Units: uL

Report Date: 13-Aug-2024 15:55:15

Chrom Revision: 2.3 16-Jul-2024 14:17:34

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100019.D

Injection Date: 11-Aug-2024 01:36:30

Instrument ID: CHHPLC\_X5

Operator ID: JZ

Lims ID: ICV INT

Worklist Smp#: 19

Client ID:

Injection Vol: 100.0 ul

Dil. Factor: 1.0000

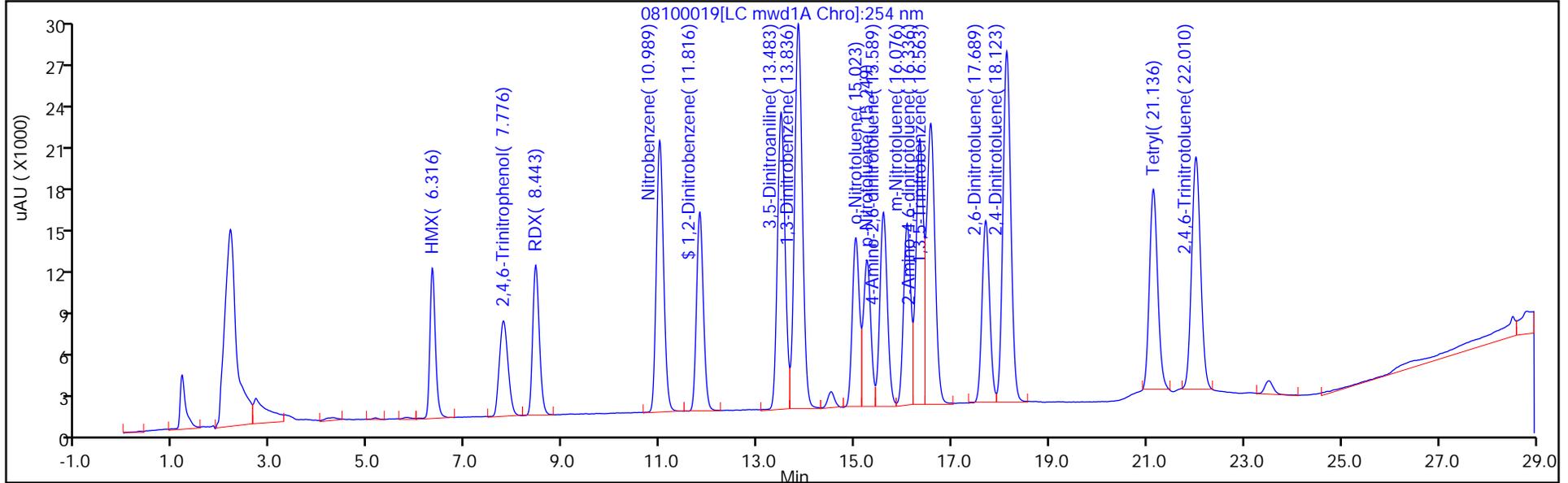
ALS Bottle#: 19

Method: 8330\_X5\_Luna

Limit Group: GCSV - 8330

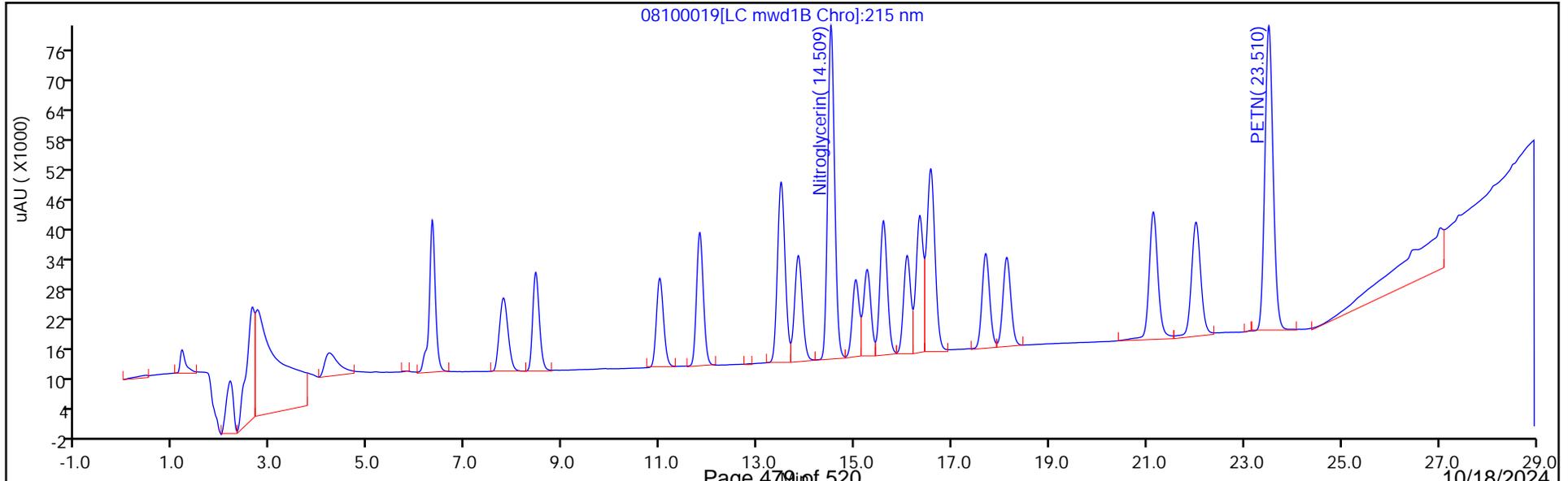
Column: Luna-Phenyl hexyl ( 4.60 mm)

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

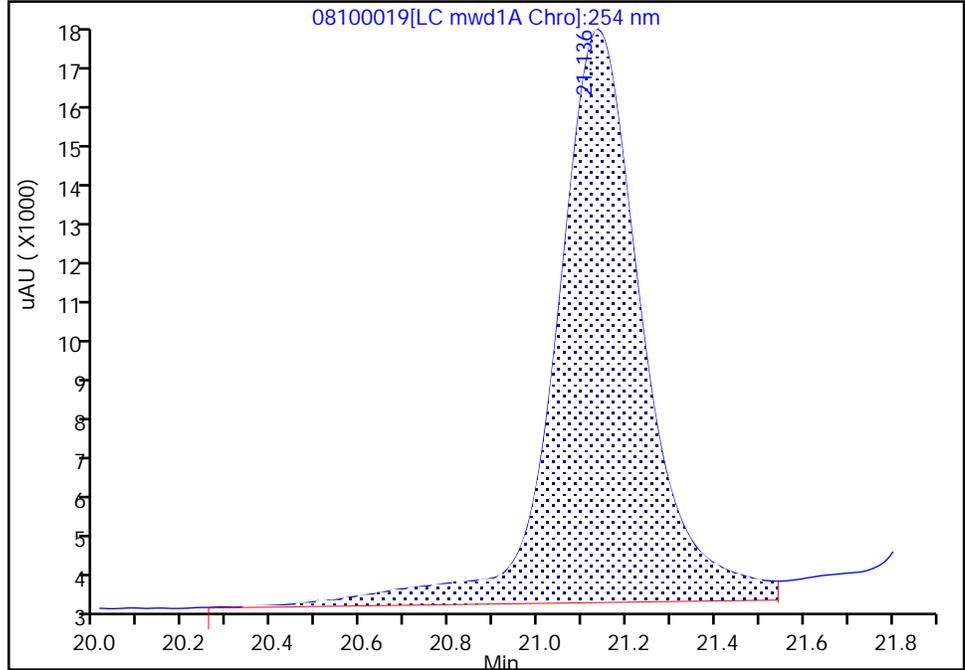
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100019.D  
Injection Date: 11-Aug-2024 01:36:30 Instrument ID: CHHPLC\_X5  
Lims ID: ICV INT  
Client ID:  
Operator ID: JZ ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

23 Tetryl, CAS: 479-45-8

Signal: 1

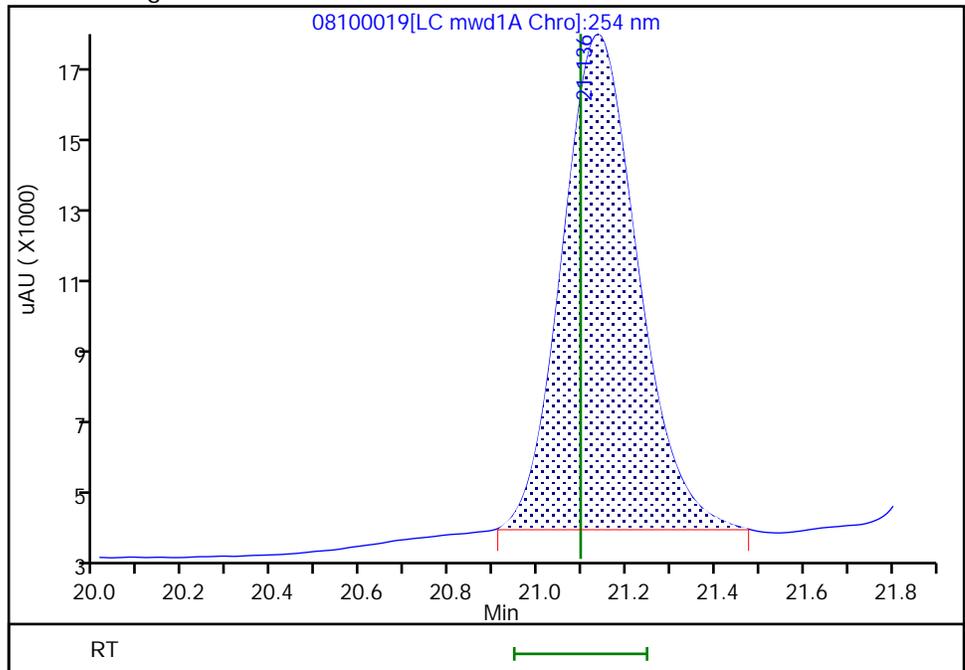
Processing Integration Results

RT: 21.14  
Area: 201204  
Amount: 0.710356  
Amount Units: ug/ml



Manual Integration Results

RT: 21.14  
Area: 167568  
Amount: 0.591408  
Amount Units: ug/ml



Reviewer: LV5D, 13-Aug-2024 15:17:38 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Denver

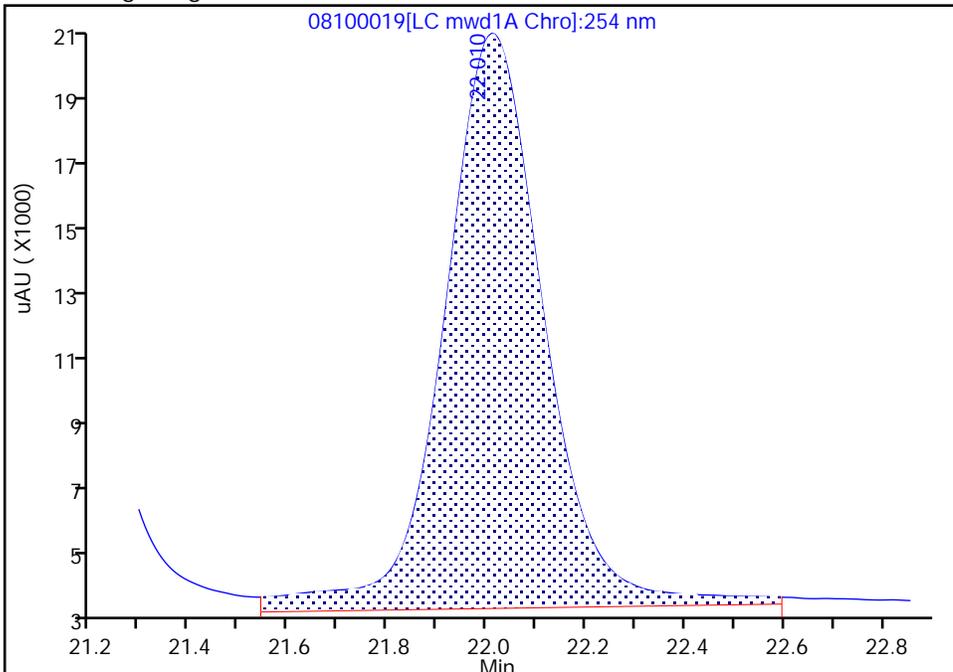
Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100019.D  
Injection Date: 11-Aug-2024 01:36:30 Instrument ID: CHHPLC\_X5  
Lims ID: ICV INT  
Client ID:  
Operator ID: JZ ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X5\_Luna Limit Group: GCSV - 8330  
Column: Luna-Phenyl hexyl ( 4.60 mm) Detector: LC mwd1A, 254 nm

24 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

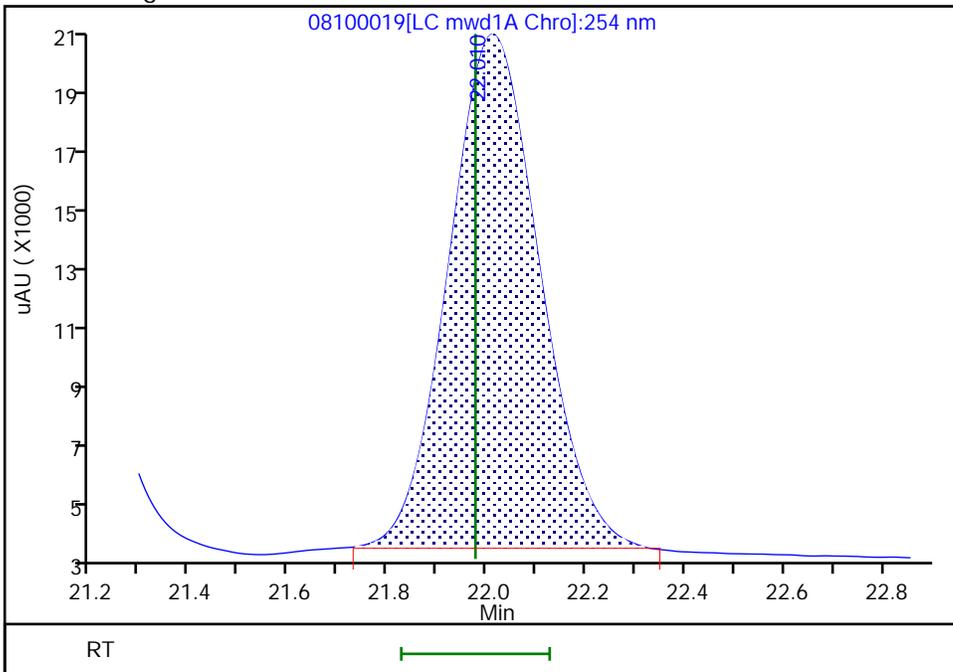
Processing Integration Results

RT: 22.01  
Area: 238659  
Amount: 0.575375  
Amount Units: ug/ml



Manual Integration Results

RT: 22.01  
Area: 208335  
Amount: 0.500536  
Amount Units: ug/ml



Reviewer: LV5D, 13-Aug-2024 15:17:42 -06:00:00 (UTC)

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

FORM VII  
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-197532-2  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 280-670528/7 Calibration Date: 10/10/2024 17:18  
 Instrument ID: CHHPLC\_X5 Calib Start Date: 08/10/2024 20:22  
 GC Column: Luna-phenylhex ID: 4.60 (mm) Calib End Date: 08/11/2024 01:01  
 Lab File ID: 10100007.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	180338	177904		247	250	-1.3	20.0
Picric acid	Ave	149859	145964		244	250	-2.6	20.0
RDX	Ave	220357	206140		234	250	-6.5	20.0
Nitrobenzene	Ave	376935	377964		251	250	0.3	20.0
3,5-Dinitroaniline	Lin2		445436		255	250	2.0	20.0
1,3-Dinitrobenzene	Ave	585242	578764		247	250	-1.1	20.0
Nitroglycerin	Ave	128152	125728		2453	2500	-1.9	20.0
2-Nitrotoluene	Ave	235862	237356		252	250	0.6	20.0
4-Nitrotoluene	Ave	211671	214764		254	250	1.5	20.0
4-Amino-2,6-dinitrotoluene	Ave	278588	280820		252	250	0.8	20.0
3-Nitrotoluene	Ave	258224	245928		238	250	-4.8	20.0
2-Amino-4,6-dinitrotoluene	Ave	389409	394596		253	250	1.3	20.0
1,3,5-Trinitrobenzene	Ave	423794	430284		254	250	1.5	20.0
2,6-Dinitrotoluene	Ave	284676	271132		238	250	-4.8	20.0
2,4-Dinitrotoluene	Ave	568510	549048		241	250	-3.4	20.0
Tetryl	Ave	283338	316692		279	250	11.8	20.0
2,4,6-Trinitrotoluene	Ave	416224	417152		251	250	0.2	20.0
PETN	Ave	135807	139966		2577	2500	3.1	20.0
1,2-Dinitrobenzene	Ave	262489	261000		249	250	-0.6	20.0

FORM VII  
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-197532-2  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 280-670528/7 Calibration Date: 10/10/2024 17:18  
 Instrument ID: CHHPLC\_X5 Calib Start Date: 08/10/2024 20:22  
 GC Column: Luna-phenylhex ID: 4.60 (mm) Calib End Date: 08/11/2024 01:01  
 Lab File ID: 10100007.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.29	6.14	6.44
Picric acid	7.85	7.70	8.00
RDX	8.39	8.24	8.54
Nitrobenzene	10.95	10.80	11.10
3,5-Dinitroaniline	13.42	13.27	13.57
1,3-Dinitrobenzene	13.78	13.63	13.93
Nitroglycerin	14.42	14.27	14.57
2-Nitrotoluene	14.96	14.81	15.11
4-Nitrotoluene	15.19	15.04	15.34
4-Amino-2,6-dinitrotoluene	15.51	15.36	15.66
3-Nitrotoluene	16.01	15.86	16.16
2-Amino-4,6-dinitrotoluene	16.25	16.10	16.40
1,3,5-Trinitrobenzene	16.47	16.32	16.62
2,6-Dinitrotoluene	17.61	17.46	17.76
2,4-Dinitrotoluene	18.03	17.88	18.18
Tetryl	21.01	20.86	21.16
2,4,6-Trinitrotoluene	21.90	21.75	22.05
PETN	23.35	23.20	23.50
1,2-Dinitrobenzene	11.77	11.62	11.92

Eurofins Denver  
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20241010-138456.b\10100007.D  
 Lims ID: CCV  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 10-Oct-2024 17:18:36 ALS Bottle#: 7 Worklist Smp#: 7  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: CCV  
 Operator ID: JZ Instrument ID: CHHPLC\_X5  
 Sublist: chrom-8330\_X5\_Luna\*sub7  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X5\20241010-138456.b\8330\_X5\_Luna.m  
 Limit Group: GCSV - 8330  
 Last Update: 11-Oct-2024 15:56:55 Calib Date: 11-Aug-2024 06:16:04  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100027.D  
 Column 1 : Luna-Phenyl hexyl ( 4.60 mm) Det: LC mwd1A, 254 nm  
 Process Host: CTX1619

First Level Reviewer: LV5D Date: 10-Oct-2024 18:14:03

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
5 HMX	1	6.287	6.287	0.000	44476	0.2500	0.2466	
7 2,4,6-Trinitrophenol	1	7.847	7.847	0.000	36491	0.2500	0.2435	
8 RDX	1	8.393	8.393	0.000	51535	0.2500	0.2339	
9 Nitrobenzene	1	10.953	10.953	0.000	94491	0.2500	0.2507	
\$ 10 1,2-Dinitrobenzene	1	11.767	11.767	0.000	65250	0.2500	0.2486	
11 3,5-Dinitroaniline	1	13.420	13.420	0.000	111359	0.2500	0.2550	
12 1,3-Dinitrobenzene	1	13.780	13.780	0.000	144691	0.2500	0.2472	
13 Nitroglycerin	2	14.420	14.420	0.000	314321	2.50	2.45	
14 o-Nitrotoluene	1	14.960	14.960	0.000	59339	0.2500	0.2516	
16 p-Nitrotoluene	1	15.187	15.187	0.000	53691	0.2500	0.2537	
17 4-Amino-2,6-dinitrotoluene	1	15.513	15.513	0.000	70205	0.2500	0.2520	
18 m-Nitrotoluene	1	16.007	16.007	0.000	61482	0.2500	0.2381	
19 2-Amino-4,6-dinitrotoluene	1	16.247	16.247	0.000	98649	0.2500	0.2533	
20 1,3,5-Trinitrobenzene	1	16.473	16.473	0.000	107571	0.2500	0.2538	
21 2,6-Dinitrotoluene	1	17.607	17.607	0.000	67783	0.2500	0.2381	
22 2,4-Dinitrotoluene	1	18.033	18.033	0.000	137262	0.2500	0.2414	
23 Tetryl	1	21.013	21.013	0.000	79173	0.2500	0.2794	
24 2,4,6-Trinitrotoluene	1	21.900	21.900	0.000	104288	0.2500	0.2506	
25 PETN	2	23.353	23.353	0.000	349915	2.50	2.58	

QC Flag Legend

Processing Flags

Reagents:

8330IntermStk\_00082 Amount Added: 25.00 Units: uL

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20241010-138456.b\10100007.D

Injection Date: 10-Oct-2024 17:18:36

Instrument ID: CHHPLC\_X5

Operator ID: JZ

Lims ID: CCV

Worklist Smp#: 7

Client ID:

Injection Vol: 100.0 ul

Dil. Factor: 1.0000

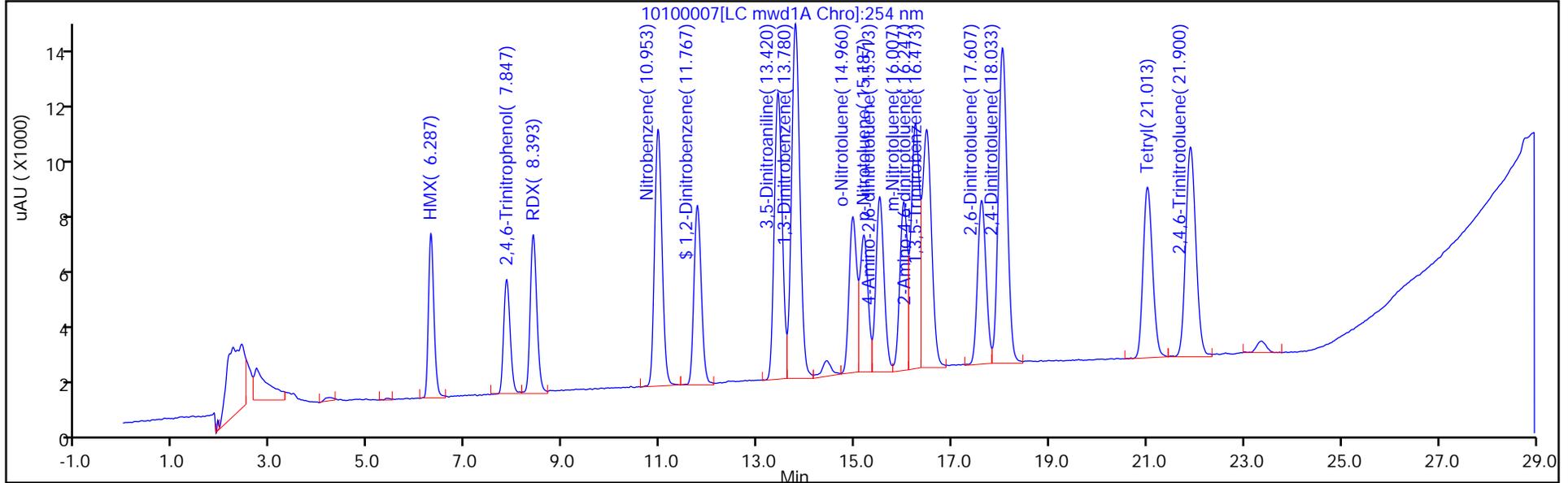
ALS Bottle#: 7

Method: 8330\_X5\_Luna

Limit Group: GCSV - 8330

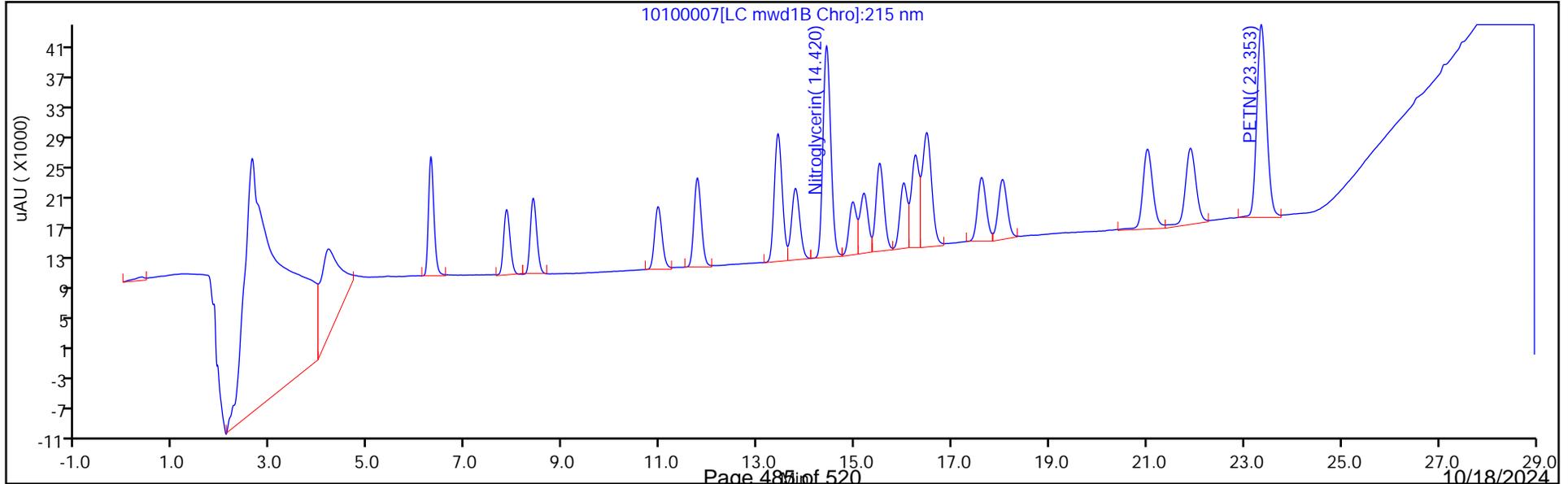
Column: Luna-Phenyl hexyl ( 4.60 mm)

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



FORM VII  
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-197532-2  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 280-670528/20 Calibration Date: 10/10/2024 21:58  
 Instrument ID: CHHPLC\_X5 Calib Start Date: 08/10/2024 20:22  
 GC Column: Luna-phenylhex ID: 4.60 (mm) Calib End Date: 08/11/2024 01:01  
 Lab File ID: 10100020.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	180338	179312		249	250	-0.6	20.0
Picric acid	Ave	149859	145324		242	250	-3.0	20.0
RDX	Ave	220357	205436		233	250	-6.8	20.0
Nitrobenzene	Ave	376935	369404		245	250	-2.0	20.0
3,5-Dinitroaniline	Lin2		445484		255	250	2.0	20.0
1,3-Dinitrobenzene	Ave	585242	578388		247	250	-1.2	20.0
Nitroglycerin	Ave	128152	126052		2459	2500	-1.6	20.0
2-Nitrotoluene	Ave	235862	231632		246	250	-1.8	20.0
4-Nitrotoluene	Ave	211671	215420		254	250	1.8	20.0
4-Amino-2,6-dinitrotoluene	Ave	278588	279020		250	250	0.2	20.0
3-Nitrotoluene	Ave	258224	244648		237	250	-5.3	20.0
2-Amino-4,6-dinitrotoluene	Ave	389409	395080		254	250	1.5	20.0
1,3,5-Trinitrobenzene	Ave	423794	428768		253	250	1.2	20.0
2,6-Dinitrotoluene	Ave	284676	270720		238	250	-4.9	20.0
2,4-Dinitrotoluene	Ave	568510	548780		241	250	-3.5	20.0
Tetryl	Ave	283338	321152		283	250	13.3	20.0
2,4,6-Trinitrotoluene	Ave	416224	421080		253	250	1.2	20.0
PETN	Ave	135807	138030		2541	2500	1.6	20.0
1,2-Dinitrobenzene	Ave	262489	258996		247	250	-1.3	20.0

FORM VII  
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-197532-2  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 280-670528/20 Calibration Date: 10/10/2024 21:58  
 Instrument ID: CHHPLC\_X5 Calib Start Date: 08/10/2024 20:22  
 GC Column: Luna-phenylhex ID: 4.60 (mm) Calib End Date: 08/11/2024 01:01  
 Lab File ID: 10100020.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.28	6.14	6.44
Picric acid	7.79	7.70	8.00
RDX	8.39	8.24	8.54
Nitrobenzene	10.96	10.80	11.10
3,5-Dinitroaniline	13.42	13.27	13.57
1,3-Dinitrobenzene	13.78	13.63	13.93
Nitroglycerin	14.42	14.27	14.57
2-Nitrotoluene	14.96	14.81	15.11
4-Nitrotoluene	15.19	15.04	15.34
4-Amino-2,6-dinitrotoluene	15.52	15.36	15.66
3-Nitrotoluene	16.02	15.86	16.16
2-Amino-4,6-dinitrotoluene	16.26	16.10	16.40
1,3,5-Trinitrobenzene	16.48	16.32	16.62
2,6-Dinitrotoluene	17.62	17.46	17.76
2,4-Dinitrotoluene	18.04	17.88	18.18
Tetryl	21.03	20.86	21.16
2,4,6-Trinitrotoluene	21.92	21.75	22.05
PETN	23.38	23.20	23.50
1,2-Dinitrobenzene	11.77	11.62	11.92

Eurofins Denver  
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20241010-138456.b\10100020.D  
 Lims ID: CCV  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 10-Oct-2024 21:58:16 ALS Bottle#: 7 Worklist Smp#: 20  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: CCV  
 Operator ID: JZ Instrument ID: CHHPLC\_X5  
 Sublist: chrom-8330\_X5\_Luna\*sub7  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X5\20241010-138456.b\8330\_X5\_Luna.m  
 Limit Group: GCSV - 8330  
 Last Update: 11-Oct-2024 15:57:02 Calib Date: 11-Aug-2024 06:16:04  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20240810-136368.b\08100027.D  
 Column 1 : Luna-Phenyl hexyl ( 4.60 mm) Det: LC mwd1A, 254 nm  
 Process Host: CTX1619

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
5 HMX	1	6.282	6.287	-0.005	44828	0.2500	0.2486	
7 2,4,6-Trinitrophenol	1	7.789	7.847	-0.058	36331	0.2500	0.2424	
8 RDX	1	8.389	8.393	-0.004	51359	0.2500	0.2331	
9 Nitrobenzene	1	10.955	10.953	0.002	92351	0.2500	0.2450	
\$ 10 1,2-Dinitrobenzene	1	11.768	11.767	0.001	64749	0.2500	0.2467	
11 3,5-Dinitroaniline	1	13.422	13.420	0.002	111371	0.2500	0.2550	
12 1,3-Dinitrobenzene	1	13.782	13.780	0.002	144597	0.2500	0.2471	
13 Nitroglycerin	2	14.422	14.420	0.002	315129	2.50	2.46	
14 o-Nitrotoluene	1	14.962	14.960	0.002	57908	0.2500	0.2455	
16 p-Nitrotoluene	1	15.188	15.187	0.001	53855	0.2500	0.2544	
17 4-Amino-2,6-dinitrotoluene	1	15.522	15.513	0.009	69755	0.2500	0.2504	
18 m-Nitrotoluene	1	16.015	16.007	0.008	61162	0.2500	0.2369	
19 2-Amino-4,6-dinitrotoluene	1	16.255	16.247	0.008	98770	0.2500	0.2536	
20 1,3,5-Trinitrobenzene	1	16.482	16.473	0.009	107192	0.2500	0.2529	
21 2,6-Dinitrotoluene	1	17.615	17.607	0.008	67680	0.2500	0.2377	
22 2,4-Dinitrotoluene	1	18.042	18.033	0.009	137195	0.2500	0.2413	
23 Tetryl	1	21.029	21.013	0.016	80288	0.2500	0.2834	
24 2,4,6-Trinitrotoluene	1	21.915	21.900	0.015	105270	0.2500	0.2529	
25 PETN	2	23.375	23.353	0.022	345076	2.50	2.54	

Reagents:

8330IntermStk\_00082 Amount Added: 25.00 Units: uL

Eurofins Denver

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X5\20241010-138456.b\10100020.D

Injection Date: 10-Oct-2024 21:58:16

Instrument ID: CHHPLC\_X5

Operator ID: JZ

Lims ID: CCV

Worklist Smp#: 20

Client ID:

Injection Vol: 100.0 ul

Dil. Factor: 1.0000

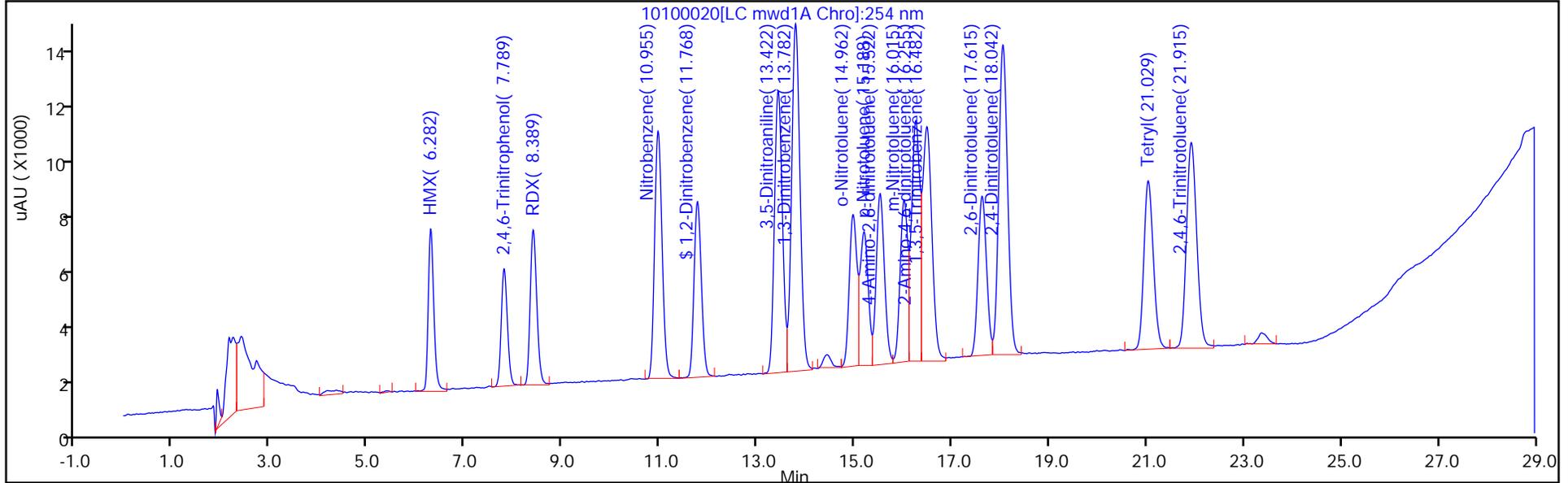
ALS Bottle#: 7

Method: 8330\_X5\_Luna

Limit Group: GCSV - 8330

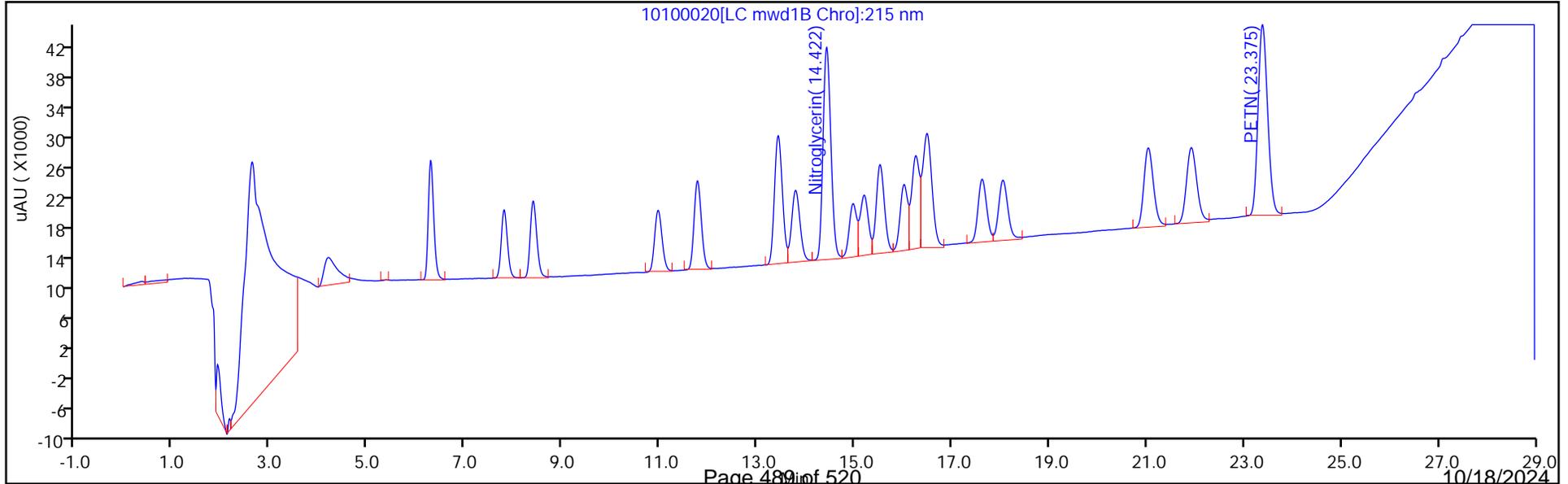
Column: Luna-Phenyl hexyl ( 4.60 mm)

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



FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>Eurofins Denver</u>	Job No.: <u>280-197532-2</u>
SDG No.: _____	
Client Sample ID: _____	Lab Sample ID: <u>MB 280-670048/1-A</u>
Matrix: <u>Water</u>	Lab File ID: <u>10090011.D</u>
Analysis Method: <u>8330B</u>	Date Collected: _____
Extraction Method: <u>3535</u>	Date Extracted: <u>10/08/2024 13:10</u>
Sample wt/vol: <u>500(mL)</u>	Date Analyzed: <u>10/09/2024 19:49</u>
Con. Extract Vol.: <u>5(mL)</u>	Dilution Factor: <u>1</u>
Injection Volume: <u>100(uL)</u>	GC Column: <u>UltraCarb5uODS</u> ID: <u>4.6(mm)</u>
% Moisture: _____ % Solids: _____	GPC Cleanup: (Y/N) <u>N</u>
Cleanup Factor: _____	
Analysis Batch No.: <u>670390</u>	Units: <u>ug/L</u>
Preparation Batch No.: <u>670048</u>	Instrument ID: <u>CHHPLC_X3</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
99-35-4	1,3,5-Trinitrobenzene	ND		0.210	0.0841
99-65-0	1,3-Dinitrobenzene	ND		0.110	0.0369
118-96-7	2,4,6-Trinitrotoluene	ND		0.110	0.0450
121-14-2	2,4-Dinitrotoluene	ND		0.100	0.0274
606-20-2	2,6-Dinitrotoluene	ND		0.100	0.0401
35572-78-2	2-Amino-4,6-dinitrotoluene	ND		0.110	0.0507
88-72-2	2-Nitrotoluene	ND		0.210	0.0855
99-08-1	3-Nitrotoluene	ND		0.400	0.195
19406-51-0	4-Amino-2,6-dinitrotoluene	ND		0.150	0.0577
99-99-0	4-Nitrotoluene	ND		0.410	0.100
2691-41-0	HMX	ND		0.210	0.0876
98-95-3	Nitrobenzene	ND		0.210	0.0910
55-63-0	Nitroglycerin	ND		2.10	0.921
78-11-5	PETN	ND		1.10	0.447
121-82-4	RDX	ND		0.210	0.0515
479-45-8	Tetryl	ND		0.110	0.0318

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	84		83-119

Eurofins Denver  
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241009-138424.b\10090011.D  
 Lims ID: MB 280-670048/1-A  
 Client ID:  
 Sample Type: MB  
 Inject. Date: 09-Oct-2024 19:49:18 ALS Bottle#: 11 Worklist Smp#: 11  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: MB 280-670048/1-A  
 Operator ID: JZ Instrument ID: CHHPLC\_X3  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X\20241009-138424.b\8330\_X3.m  
 Limit Group: GCSV - 8330  
 Last Update: 10-Oct-2024 13:10:49 Calib Date: 04-Oct-2024 19:55:02  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\10040019.D  
 Column 1 : UltraCarb5uODS (20) ( 4.60 mm) Det: LC DAD1B, 254 nm  
 Process Host: CTX1665

First Level Reviewer: LV5D Date: 10-Oct-2024 13:10:49

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		6.407				ND	
3 TNX	1		6.448				ND	
4 HMX	1		6.580				ND	
5 2,4-diamino-6-nitrotoluene	1		6.582				ND	
6 DNX	1		6.762				ND	
7 MNX	1		7.162				ND	
8 RDX	1		7.513				ND	
9 2,4,6-Trinitrophenol	1		7.913				ND	
\$ 10 1,2-Dinitrobenzene	1	8.386	8.380	0.006	21919	0.2000	0.1681	M
11 1,3,5-Trinitrobenzene	1		8.487				ND	MU
12 1,3-Dinitrobenzene	1		9.047				ND	
13 Nitrobenzene	1		9.366				ND	
14 3,5-Dinitroaniline	1		9.573				ND	
15 Tetryl	1		9.693				ND	
16 Nitroglycerin	2		10.140				ND	
17 2,4,6-Trinitrotoluene	1		10.493				ND	
18 4-Amino-2,6-dinitrotoluene	1		10.653				ND	
19 2-Amino-4,6-dinitrotoluene	1		10.886				ND	
20 2,6-Dinitrotoluene	1		11.020				ND	
21 2,4-Dinitrotoluene	1		11.173				ND	
22 o-Nitrotoluene	1		11.873				ND	
23 p-Nitrotoluene	1		12.246				ND	
24 m-Nitrotoluene	1		12.753				ND	
25 PETN	2		13.840				ND	
26 Ammonium Picrate	1		0.000				ND	

QC Flag Legend  
Processing Flags

Review Flags

M - Manually Integrated

U - Marked Undetected

Eurofins Denver  
Recovery Report

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241009-138424.b\10090011.D  
 Lims ID: MB 280-670048/1-A  
 Client ID:  
 Sample Type: MB  
 Inject. Date: 09-Oct-2024 19:49:18 ALS Bottle#: 11 Worklist Smp#: 11  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: MB 280-670048/1-A  
 Operator ID: JZ Instrument ID: CHHPLC\_X3  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X\20241009-138424.b\8330\_X3.m  
 Limit Group: GCSV - 8330  
 Last Update: 10-Oct-2024 13:10:49 Calib Date: 04-Oct-2024 19:55:02  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\10040019.D  
 Column 1 : UltraCarb5uODS (20) ( 4.60 mm) Det: LC DAD1B, 254 nm  
 Process Host: CTX1665

First Level Reviewer: LV5D Date: 10-Oct-2024 13:10:49

Compound	Amount Added	Amount Recovered	% Rec.
\$ 10 1,2-Dinitrobenzene	0.2000	0.1681	84.04

Eurofins Denver

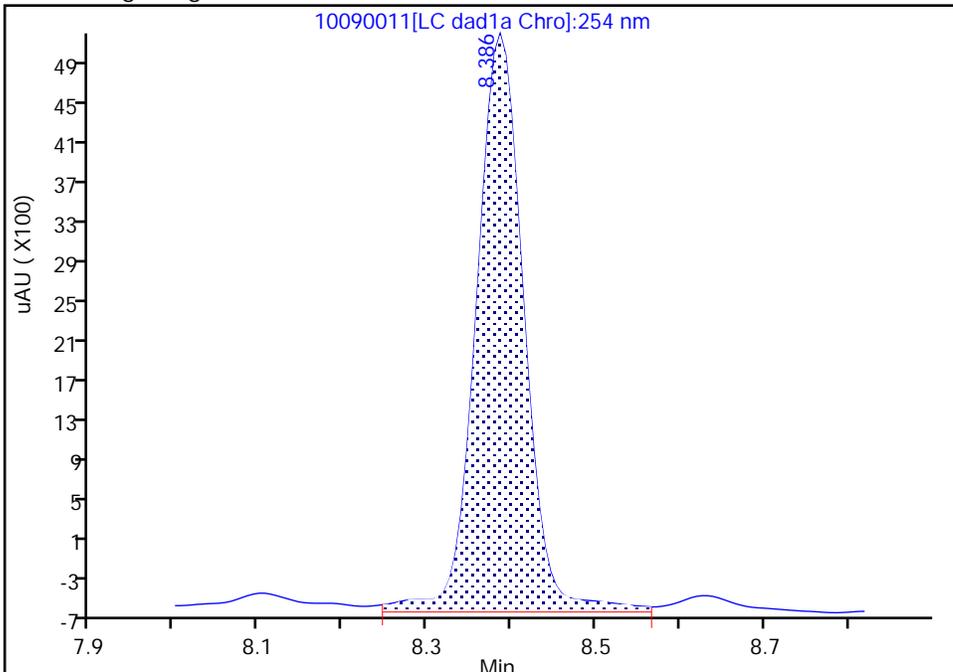
Data File: \\chromfs\denver\chromdata\chhplc\_x\20241009-138424.b\10090011.d  
Injection Date: 09-Oct-2024 19:49:18 Instrument ID: CHHPLC\_X3  
Lims ID: MB 280-670048/1-A  
Client ID:  
Operator ID: JZ ALS Bottle#: 11 Worklist Smp#: 11  
Injection Vol: 100.0 ul Dil. Factor: 1.0000  
Method: 8330\_X3 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

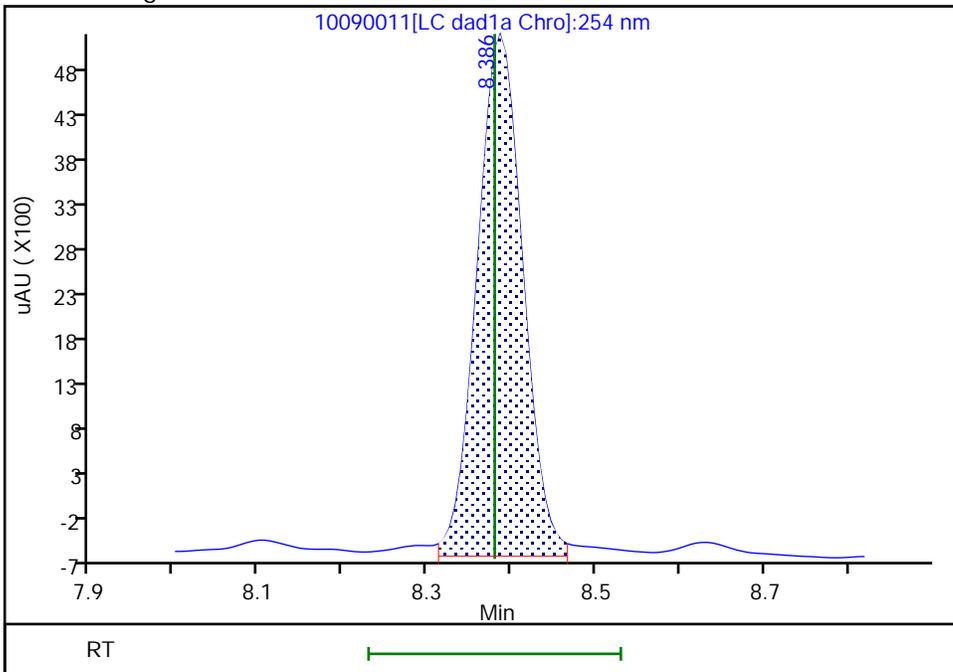
Processing Integration Results

RT: 8.39  
Area: 22006  
Amount: 0.168745  
Amount Units: ug/mL



Manual Integration Results

RT: 8.39  
Area: 21919  
Amount: 0.168078  
Amount Units: ug/mL



Reviewer: LV5D, 10-Oct-2024 13:10:44 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak

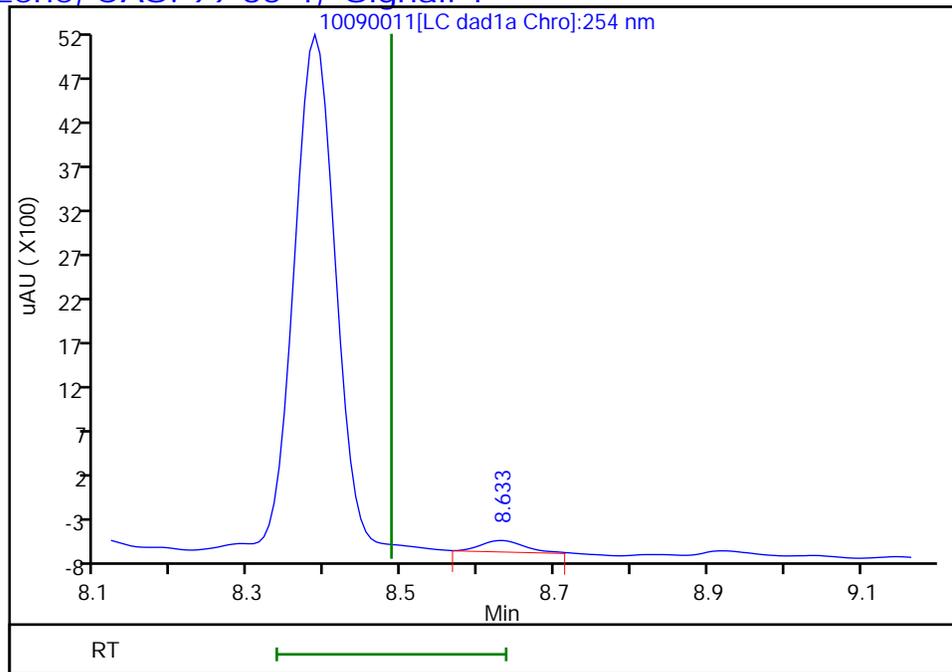
Audit Reason: Baseline

Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc\_x\20241009-138424.b\10090011.d  
Injection Date: 09-Oct-2024 19:49:18 Instrument ID: CHHPLC\_X3  
Lims ID: MB 280-670048/1-A  
Client ID:  
Operator ID: JZ 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

11 1,3,5-Trinitrobenzene, CAS: 99-35-4, Signal: 1

RT: 8.63  
Response: 492  
Amount: 0.002264



Reviewer: LV5D, 10-Oct-2024 13:10:49

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver Job No.: 280-197532-2  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 280-670048/2-A  
 Matrix: Water Lab File ID: 10090012.D  
 Analysis Method: 8330B Date Collected: \_\_\_\_\_  
 Extraction Method: 3535 Date Extracted: 10/08/2024 13:10  
 Sample wt/vol: 500(mL) Date Analyzed: 10/09/2024 20:11  
 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.: 670390 Units: ug/L  
 Preparation Batch No.: 670048 Instrument ID: CHHPLC\_X3

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
99-35-4	1,3,5-Trinitrobenzene	1.988		0.210	0.0841
99-65-0	1,3-Dinitrobenzene	1.834		0.110	0.0369
118-96-7	2,4,6-Trinitrotoluene	1.745		0.110	0.0450
121-14-2	2,4-Dinitrotoluene	1.675		0.100	0.0274
606-20-2	2,6-Dinitrotoluene	1.760		0.100	0.0401
35572-78-2	2-Amino-4,6-dinitrotoluene	1.711		0.110	0.0507
88-72-2	2-Nitrotoluene	1.372	*-	0.210	0.0855
99-08-1	3-Nitrotoluene	1.369	*-	0.400	0.195
19406-51-0	4-Amino-2,6-dinitrotoluene	1.716		0.150	0.0577
99-99-0	4-Nitrotoluene	1.412		0.410	0.100
2691-41-0	HMX	1.729		0.210	0.0876
98-95-3	Nitrobenzene	1.600		0.210	0.0910
55-63-0	Nitroglycerin	21.18		2.10	0.921
78-11-5	PETN	19.92		1.10	0.447
121-82-4	RDX	1.909		0.210	0.0515
479-45-8	Tetryl	1.862		0.110	0.0318

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	87		83-119

Eurofins Denver  
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241009-138424.b\10090012.D  
 Lims ID: LCS 280-670048/2-A  
 Client ID:  
 Sample Type: LCS  
 Inject. Date: 09-Oct-2024 20:11:15 ALS Bottle#: 12 Worklist Smp#: 12  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: LCS 280-670048/2-A  
 Operator ID: JZ Instrument ID: CHHPLC\_X3  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X\20241009-138424.b\8330\_X3.m  
 Limit Group: GCSV - 8330  
 Last Update: 10-Oct-2024 12:47:17 Calib Date: 04-Oct-2024 19:55:02  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\10040019.D  
 Column 1 : UltraCarb5uODS (20) ( 4.60 mm) Det: LC DAD1B, 254 nm  
 Process Host: CTX1665

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
4 HMX	1	6.577	6.580	-0.003	16712	0.2000	0.1729	
8 RDX	1	7.517	7.513	0.004	20184	0.2000	0.1909	
9 2,4,6-Trinitrophenol	1	7.910	7.913	-0.003	16584	0.2000	0.2199	
\$ 10 1,2-Dinitrobenzene	1	8.384	8.380	0.004	22631	0.2000	0.1735	
11 1,3,5-Trinitrobenzene	1	8.484	8.487	-0.003	43204	0.2000	0.1988	
12 1,3-Dinitrobenzene	1	9.044	9.047	-0.003	54685	0.2000	0.1834	
13 Nitrobenzene	1	9.364	9.366	-0.002	31236	0.2000	0.1600	
14 3,5-Dinitroaniline	1	9.577	9.573	0.004	40414	0.2000	0.1736	
15 Tetryl	1	9.697	9.693	0.004	31770	0.2000	0.1862	
16 Nitroglycerin	2	10.137	10.140	-0.003	136128	2.00	2.12	
17 2,4,6-Trinitrotoluene	1	10.497	10.493	0.004	37915	0.2000	0.1745	
18 4-Amino-2,6-dinitrotoluene	1	10.657	10.653	0.004	25284	0.2000	0.1716	
19 2-Amino-4,6-dinitrotoluene	1	10.890	10.886	0.004	35001	0.2000	0.1711	
20 2,6-Dinitrotoluene	1	11.024	11.020	0.004	24871	0.2000	0.1760	
21 2,4-Dinitrotoluene	1	11.170	11.173	-0.003	48866	0.2000	0.1675	
22 o-Nitrotoluene	1	11.870	11.873	-0.003	17219	0.2000	0.1372	
23 p-Nitrotoluene	1	12.244	12.246	-0.002	15391	0.2000	0.1412	
24 m-Nitrotoluene	1	12.744	12.753	-0.009	18754	0.2000	0.1369	
25 PETN	2	13.824	13.840	-0.016	143847	2.00	1.99	
26 Ammonium Picrate	1		0.000			ND	ND	

## QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc\_x\20241009-138424.b\10090012.d

Injection Date: 09-Oct-2024 20:11:15

Instrument ID: CHHPLC\_X3

Operator ID: JZ

Lims ID: LCS 280-670048/2-A

Worklist Smp#: 12

Client ID:

Injection Vol: 100.0 ul

Dil. Factor: 1.0000

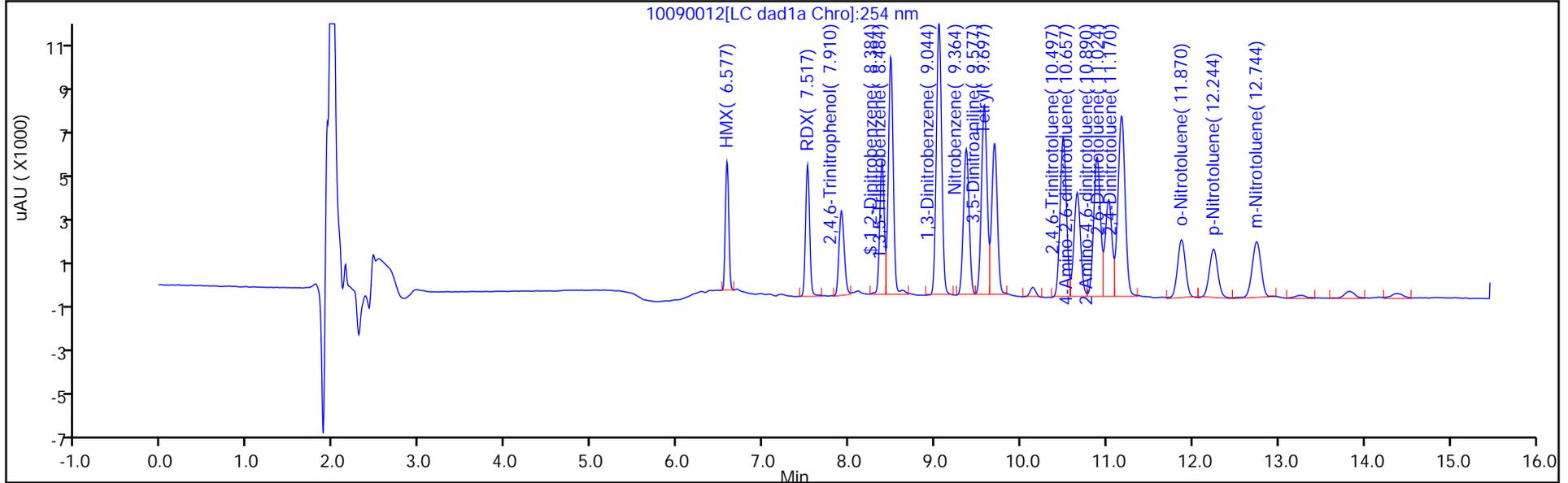
ALS Bottle#: 12

Method: 8330\_X3

Limit Group: GCSV - 8330

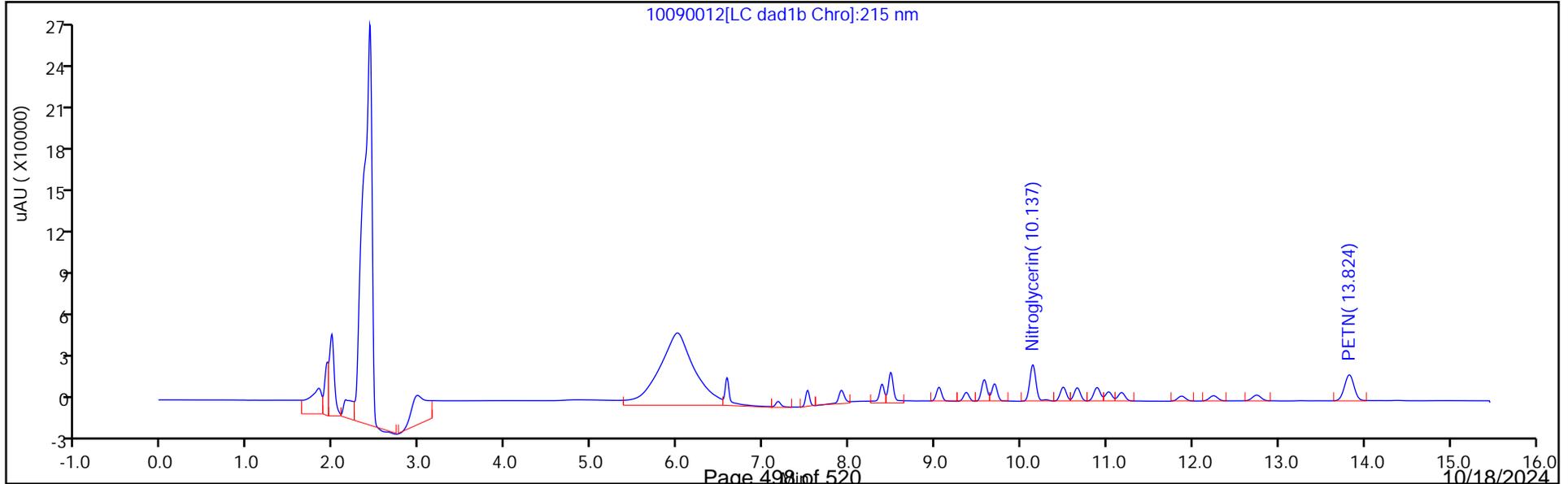
Column: UltraCarb5uODS (20) ( 4.60 mm)

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\20241009-138424.b\10090012.D  
 Lims ID: LCS 280-670048/2-A  
 Client ID:  
 Sample Type: LCS  
 Inject. Date: 09-Oct-2024 20:11:15 ALS Bottle#: 12 Worklist Smp#: 12  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: LCS 280-670048/2-A  
 Operator ID: JZ Instrument ID: CHHPLC\_X3  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X\20241009-138424.b\8330\_X3.m  
 Limit Group: GCSV - 8330  
 Last Update: 10-Oct-2024 12:47:17 Calib Date: 04-Oct-2024 19:55:02  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\10040019.D  
 Column 1 : UltraCarb5uODS (20) ( 4.60 mm) Det: LC DAD1B, 254 nm  
 Process Host: CTX1665

Compound	Amount Added	Amount Recovered	% Rec.
\$ 10 1,2-Dinitrobenzene	0.2000	0.1735	86.77

FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>Eurofins Denver</u>	Job No.: <u>280-197532-2</u>
SDG No.: _____	
Client Sample ID: _____	Lab Sample ID: <u>LCSD 280-670048/3-A</u>
Matrix: <u>Water</u>	Lab File ID: <u>10090013.D</u>
Analysis Method: <u>8330B</u>	Date Collected: _____
Extraction Method: <u>3535</u>	Date Extracted: <u>10/08/2024 13:10</u>
Sample wt/vol: <u>500 (mL)</u>	Date Analyzed: <u>10/09/2024 20:33</u>
Con. Extract Vol.: <u>5 (mL)</u>	Dilution Factor: <u>1</u>
Injection Volume: <u>100 (uL)</u>	GC Column: <u>UltraCarb5uODS</u> ID: <u>4.6 (mm)</u>
% Moisture: _____ % Solids: _____	GPC Cleanup: (Y/N) <u>N</u>
Cleanup Factor: _____	
Analysis Batch No.: <u>670390</u>	Units: <u>ug/L</u>
Preparation Batch No.: <u>670048</u>	Instrument ID: <u>CHHPLC_X3</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
99-35-4	1,3,5-Trinitrobenzene	2.005		0.210	0.0841
99-65-0	1,3-Dinitrobenzene	1.864		0.110	0.0369
118-96-7	2,4,6-Trinitrotoluene	1.786		0.110	0.0450
121-14-2	2,4-Dinitrotoluene	1.713		0.100	0.0274
606-20-2	2,6-Dinitrotoluene	1.734		0.100	0.0401
35572-78-2	2-Amino-4,6-dinitrotoluene	1.761		0.110	0.0507
88-72-2	2-Nitrotoluene	1.427		0.210	0.0855
99-08-1	3-Nitrotoluene	1.440	*-	0.400	0.195
19406-51-0	4-Amino-2,6-dinitrotoluene	1.733		0.150	0.0577
99-99-0	4-Nitrotoluene	1.462		0.410	0.100
2691-41-0	HMX	1.746		0.210	0.0876
98-95-3	Nitrobenzene	1.640		0.210	0.0910
55-63-0	Nitroglycerin	21.18		2.10	0.921
78-11-5	PETN	20.23		1.10	0.447
121-82-4	RDX	1.911		0.210	0.0515
479-45-8	Tetryl	1.861		0.110	0.0318

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	82	S1-	83-119

Eurofins Denver  
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241009-138424.b\10090013.D  
 Lims ID: LCSD 280-670048/3-A  
 Client ID:  
 Sample Type: LCSD  
 Inject. Date: 09-Oct-2024 20:33:11 ALS Bottle#: 13 Worklist Smp#: 13  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: LCSD 280-670048/3-A  
 Operator ID: JZ Instrument ID: CHHPLC\_X3  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X\20241009-138424.b\8330\_X3.m  
 Limit Group: GCSV - 8330  
 Last Update: 10-Oct-2024 12:47:17 Calib Date: 04-Oct-2024 19:55:02  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\10040019.D  
 Column 1 : UltraCarb5uODS (20) ( 4.60 mm) Det: LC DAD1B, 254 nm  
 Process Host: CTX1665

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
4 HMX	1	6.580	6.580	0.000	16880	0.2000	0.1746	
8 RDX	1	7.513	7.513	0.000	20205	0.2000	0.1911	
9 2,4,6-Trinitrophenol	1	7.913	7.913	0.000	16618	0.2000	0.2203	
\$ 10 1,2-Dinitrobenzene	1	8.386	8.380	0.006	21323	0.2000	0.1635	
11 1,3,5-Trinitrobenzene	1	8.486	8.487	-0.001	43587	0.2000	0.2005	
12 1,3-Dinitrobenzene	1	9.046	9.047	-0.001	55602	0.2000	0.1864	
13 Nitrobenzene	1	9.366	9.366	0.000	32005	0.2000	0.1640	
14 3,5-Dinitroaniline	1	9.573	9.573	0.000	41304	0.2000	0.1775	
15 Tetryl	1	9.693	9.693	0.000	31758	0.2000	0.1861	
16 Nitroglycerin	2	10.140	10.140	0.000	136112	2.00	2.12	
17 2,4,6-Trinitrotoluene	1	10.493	10.493	0.000	38806	0.2000	0.1786	
18 4-Amino-2,6-dinitrotoluene	1	10.653	10.653	0.000	25533	0.2000	0.1733	
19 2-Amino-4,6-dinitrotoluene	1	10.886	10.886	0.000	36019	0.2000	0.1761	
20 2,6-Dinitrotoluene	1	11.020	11.020	0.000	24513	0.2000	0.1734	
21 2,4-Dinitrotoluene	1	11.173	11.173	0.000	49990	0.2000	0.1713	
22 o-Nitrotoluene	1	11.873	11.873	0.000	17909	0.2000	0.1427	
23 p-Nitrotoluene	1	12.240	12.246	-0.006	15931	0.2000	0.1462	
24 m-Nitrotoluene	1	12.746	12.753	-0.007	19708	0.2000	0.1440	
25 PETN	2	13.840	13.840	0.000	146096	2.00	2.02	
26 Ammonium Picrate	1		0.000			ND	ND	

## QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Report Date: 10-Oct-2024 12:47:21

Chrom Revision: 2.3 24-Sep-2024 15:19:46

Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc\_x\20241009-138424.b\10090013.d

Injection Date: 09-Oct-2024 20:33:11

Instrument ID: CHHPLC\_X3

Operator ID: JZ

Lims ID: LCSD 280-670048/3-A

Worklist Smp#: 13

Client ID:

Injection Vol: 100.0 ul

Dil. Factor: 1.0000

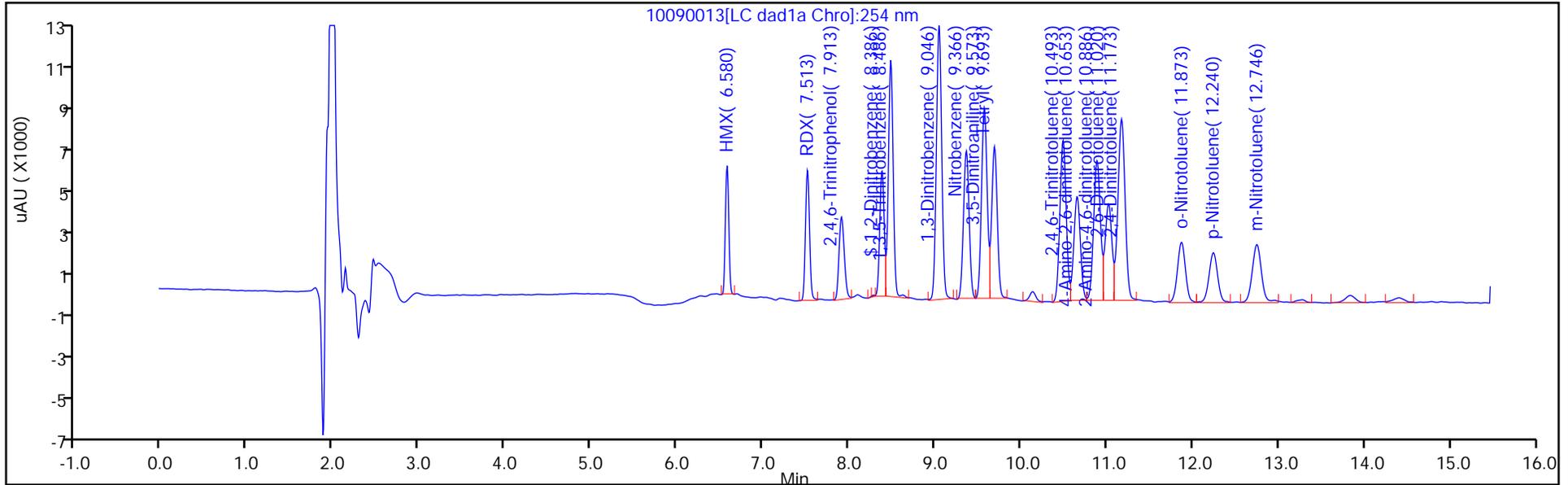
ALS Bottle#: 13

Method: 8330\_X3

Limit Group: GCSV - 8330

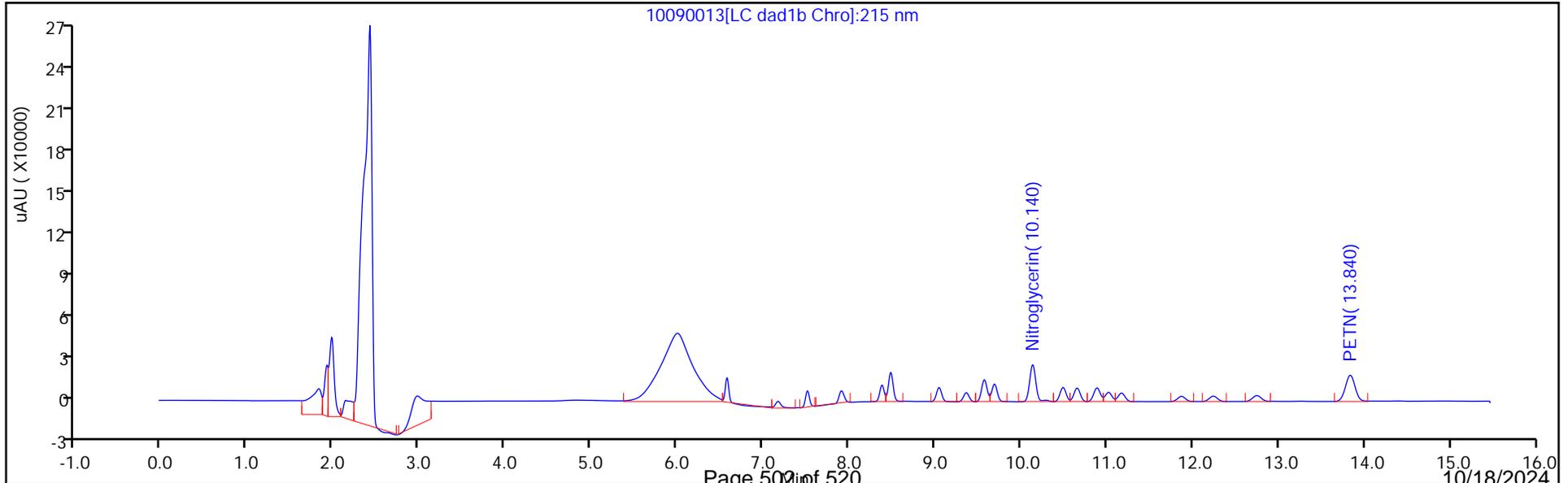
Column: UltraCarb5uODS (20) ( 4.60 mm)

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



Eurofins Denver  
Recovery Report

Data File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241009-138424.b\10090013.D  
 Lims ID: LCSD 280-670048/3-A  
 Client ID:  
 Sample Type: LCSD  
 Inject. Date: 09-Oct-2024 20:33:11 ALS Bottle#: 13 Worklist Smp#: 13  
 Injection Vol: 100.0 ul Dil. Factor: 1.0000  
 Sample Info: LCSD 280-670048/3-A  
 Operator ID: JZ Instrument ID: CHHPLC\_X3  
 Method: \\chromfs\Denver\ChromData\CHHPLC\_X\20241009-138424.b\8330\_X3.m  
 Limit Group: GCSV - 8330  
 Last Update: 10-Oct-2024 12:47:17 Calib Date: 04-Oct-2024 19:55:02  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Denver\ChromData\CHHPLC\_X\20241004-138284.b\10040019.D  
 Column 1 : UltraCarb5uODS (20) ( 4.60 mm) Det: LC DAD1B, 254 nm  
 Process Host: CTX1665

Compound	Amount Added	Amount Recovered	% Rec.
\$ 10 1,2-Dinitrobenzene	0.2000	0.1635	81.75

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-197532-2

SDG No.: \_\_\_\_\_

Instrument ID: CHHPLC\_X5 Start Date: 08/10/2024 20:22

Analysis Batch Number: 663590 End Date: 08/11/2024 06:50

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 280-663590/10		08/10/2024 20:22	1	08100010.D	Luna-phenylhex 4.6 (mm)
IC 280-663590/11		08/10/2024 20:57	1	08100011.D	Luna-phenylhex 4.6 (mm)
IC 280-663590/12		08/10/2024 21:31	1	08100012.D	Luna-phenylhex 4.6 (mm)
IC 280-663590/13		08/10/2024 22:06	1	08100013.D	Luna-phenylhex 4.6 (mm)
IC 280-663590/14		08/10/2024 22:41	1	08100014.D	Luna-phenylhex 4.6 (mm)
IC 280-663590/15		08/10/2024 23:16	1	08100015.D	Luna-phenylhex 4.6 (mm)
IC 280-663590/16		08/10/2024 23:51	1	08100016.D	Luna-phenylhex 4.6 (mm)
IC 280-663590/17		08/11/2024 00:26	1	08100017.D	Luna-phenylhex 4.6 (mm)
IC 280-663590/18		08/11/2024 01:01	1	08100018.D	Luna-phenylhex 4.6 (mm)
ICV 280-663590/19		08/11/2024 01:36	1	08100019.D	Luna-phenylhex 4.6 (mm)
IC 280-663590/20		08/11/2024 02:11	1		Luna-phenylhex 4.6 (mm)
IC 280-663590/21		08/11/2024 02:46	1		Luna-phenylhex 4.6 (mm)
IC 280-663590/22		08/11/2024 03:21	1		Luna-phenylhex 4.6 (mm)
IC 280-663590/23		08/11/2024 03:56	1		Luna-phenylhex 4.6 (mm)
IC 280-663590/24		08/11/2024 04:31	1		Luna-phenylhex 4.6 (mm)
IC 280-663590/25		08/11/2024 05:06	1		Luna-phenylhex 4.6 (mm)
IC 280-663590/26		08/11/2024 05:41	1		Luna-phenylhex 4.6 (mm)
IC 280-663590/27		08/11/2024 06:16	1		Luna-phenylhex 4.6 (mm)
ICV 280-663590/28		08/11/2024 06:50	1		Luna-phenylhex 4.6 (mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-197532-2

SDG No.: \_\_\_\_\_

Instrument ID: CHHPLC\_X3 Start Date: 10/04/2024 16:59

Analysis Batch Number: 669870 End Date: 10/04/2024 20:16

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 280-669870/11		10/04/2024 16:59	1	10040011.D	UltraCarb5uODS 4.6(mm)
IC 280-669870/12		10/04/2024 17:21	1	10040012.D	UltraCarb5uODS 4.6(mm)
IC 280-669870/13		10/04/2024 17:43	1	10040013.D	UltraCarb5uODS 4.6(mm)
IC 280-669870/14		10/04/2024 18:05	1	10040014.D	UltraCarb5uODS 4.6(mm)
IC 280-669870/15		10/04/2024 18:27	1	10040015.D	UltraCarb5uODS 4.6(mm)
IC 280-669870/16		10/04/2024 18:49	1	10040016.D	UltraCarb5uODS 4.6(mm)
IC 280-669870/17		10/04/2024 19:11	1	10040017.D	UltraCarb5uODS 4.6(mm)
IC 280-669870/18		10/04/2024 19:33	1	10040018.D	UltraCarb5uODS 4.6(mm)
IC 280-669870/19		10/04/2024 19:55	1	10040019.D	UltraCarb5uODS 4.6(mm)
ICV 280-669870/20		10/04/2024 20:16	1	10040020.D	UltraCarb5uODS 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-197532-2

SDG No.: \_\_\_\_\_

Instrument ID: CHHPLC\_X3 Start Date: 10/09/2024 19:27

Analysis Batch Number: 670390 End Date: 10/10/2024 04:35

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 280-670390/7		10/09/2024 19:27	1	10090007.D	UltraCarb5uODS 4.6 (mm)
MB 280-670048/1-A		10/09/2024 19:49	1	10090011.D	UltraCarb5uODS 4.6 (mm)
LCS 280-670048/2-A		10/09/2024 20:11	1	10090012.D	UltraCarb5uODS 4.6 (mm)
LCSD 280-670048/3-A		10/09/2024 20:33	1	10090013.D	UltraCarb5uODS 4.6 (mm)
280-197532-1	LL1mw-090-240901-GW	10/09/2024 20:55	1	10090014.D	UltraCarb5uODS 4.6 (mm)
280-197532-2	LL1mw-080-240901-GW	10/09/2024 21:17	1	10090015.D	UltraCarb5uODS 4.6 (mm)
280-197532-3	LL2mw-059-240901-GW	10/09/2024 21:38	1	10090016.D	UltraCarb5uODS 4.6 (mm)
280-197532-4	LL1mw-081-240901-GW	10/09/2024 22:00	1	10090017.D	UltraCarb5uODS 4.6 (mm)
280-197532-5	FWGmw-010-240901-GW	10/09/2024 22:22	1	10090018.D	UltraCarb5uODS 4.6 (mm)
280-197532-6	FWGmw-011-240901-GW	10/09/2024 22:44	1	10090019.D	UltraCarb5uODS 4.6 (mm)
ZZZZZ (Client)		10/09/2024 23:06	1		UltraCarb5uODS 4.6 (mm)
CCV 280-670390/21		10/09/2024 23:28	1	10090021.D	UltraCarb5uODS 4.6 (mm)
ZZZZZ (Client)		10/09/2024 23:50	1		UltraCarb5uODS 4.6 (mm)
ZZZZZ (Client)		10/10/2024 00:12	1		UltraCarb5uODS 4.6 (mm)
ZZZZZ (Client)		10/10/2024 00:34	1		UltraCarb5uODS 4.6 (mm)
ZZZZZ (Client)		10/10/2024 00:56	1		UltraCarb5uODS 4.6 (mm)
ZZZZZ (Client)		10/10/2024 01:18	1		UltraCarb5uODS 4.6 (mm)
ZZZZZ (Client)		10/10/2024 01:40	1		UltraCarb5uODS 4.6 (mm)
ZZZZZ (Client)		10/10/2024 02:02	1		UltraCarb5uODS 4.6 (mm)
ZZZZZ (Client)		10/10/2024 02:24	1		UltraCarb5uODS 4.6 (mm)
ZZZZZ (Client)		10/10/2024 02:46	1		UltraCarb5uODS 4.6 (mm)
ZZZZZ (Client)		10/10/2024 03:08	1		UltraCarb5uODS 4.6 (mm)
CCV 280-670390/32		10/10/2024 03:30	1		UltraCarb5uODS 4.6 (mm)
ZZZZZ (Client)		10/10/2024 03:52	1		UltraCarb5uODS 4.6 (mm)
ZZZZZ (Client)		10/10/2024 04:13	1		UltraCarb5uODS 4.6 (mm)
CCV 280-670390/35		10/10/2024 04:35	1		UltraCarb5uODS 4.6 (mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-197532-2

SDG No.: \_\_\_\_\_

Instrument ID: CHHPLC\_X5 Start Date: 10/10/2024 17:18

Analysis Batch Number: 670528 End Date: 10/11/2024 02:37

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 280-670528/7		10/10/2024 17:18	1	10100007.D	Luna-phenylhex 4.6(mm)
ZZZZZ (QC)		10/10/2024 17:53	1		Luna-phenylhex 4.6(mm)
ZZZZZ (QC)		10/10/2024 18:28	1		Luna-phenylhex 4.6(mm)
ZZZZZ (QC)		10/10/2024 19:03	1		Luna-phenylhex 4.6(mm)
280-197532-2	LL1mw-080-240901-GW	10/10/2024 20:13	1	10100014.D	Luna-phenylhex 4.6(mm)
280-197532-3	LL2mw-059-240901-GW	10/10/2024 20:48	1	10100015.D	Luna-phenylhex 4.6(mm)
280-197532-6	FWGmw-011-240901-GW	10/10/2024 21:23	1	10100018.D	Luna-phenylhex 4.6(mm)
CCV 280-670528/20		10/10/2024 21:58	1	10100020.D	Luna-phenylhex 4.6(mm)
ZZZZZ (Client)		10/10/2024 22:33	1		Luna-phenylhex 4.6(mm)
ZZZZZ (Client)		10/10/2024 23:08	1		Luna-phenylhex 4.6(mm)
ZZZZZ (Client)		10/10/2024 23:43	1		Luna-phenylhex 4.6(mm)
ZZZZZ (Client)		10/11/2024 00:18	1		Luna-phenylhex 4.6(mm)
ZZZZZ (Client)		10/11/2024 00:52	1		Luna-phenylhex 4.6(mm)
ZZZZZ (Client)		10/11/2024 01:27	1		Luna-phenylhex 4.6(mm)
ZZZZZ (Client)		10/11/2024 02:02	1		Luna-phenylhex 4.6(mm)
CCV 280-670528/31		10/11/2024 02:37	1		Luna-phenylhex 4.6(mm)

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-197532-2

SDG No.: \_\_\_\_\_

Batch Number: 663590 Batch Start Date: 08/10/24 20:22 Batch Analyst: Zhang, Jian

Batch Method: 8330B Batch End Date: \_\_\_\_\_

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	FinalAmount	8330 LCS 00136	8330IntermStk 00082	8330Surrogate 00158		
IC 280-663590/10		8330B			1 mL		250 uL			
IC 280-663590/11		8330B			1 mL		100 uL			
IC 280-663590/12		8330B			1 mL		70 uL			
IC 280-663590/13		8330B			1 mL		40 uL			
IC 280-663590/14		8330B			1 mL		25 uL			
IC 280-663590/15		8330B			1 mL		10 uL			
IC 280-663590/16		8330B			1 mL		5 uL			
IC 280-663590/17		8330B			1 mL		2 uL			
IC 280-663590/18		8330B			1 mL		1 uL			
ICV 280-663590/19		8330B			1 mL	50 uL		50 uL		

Batch Notes	
Reagent Water ID	N.ELGA 8/10/24
Methanol ID	64110
Vial Lot Number	231260007
Diluting Solvent ID	8330ACidH2O_00007
Batch Comment	8330BufferStk_00017, Acetic Acid_00171

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.: 280-197532-2

SDG No.: \_\_\_\_\_

Batch Number: 669870 Batch Start Date: 10/04/24 16:59 Batch Analyst: Zhang, Jian

Batch Method: 8330B Batch End Date: \_\_\_\_\_

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	FinalAmount	8330 DMT 00018	8330 LCS 00137	8330 OP DMT 00030	8330IntermStk 00083	8330Surrogate 00159
IC 280-669870/11		8330B			1 mL	125 uL			250 uL	
IC 280-669870/12		8330B			1 mL	50 uL			100 uL	
IC 280-669870/13		8330B			1 mL	35 uL			70 uL	
IC 280-669870/14		8330B			1 mL	20 uL			40 uL	
IC 280-669870/15		8330B			1 mL	12.5 uL			25 uL	
IC 280-669870/16		8330B			1 mL	5 uL			10 uL	
IC 280-669870/17		8330B			1 mL	2.5 uL			5 uL	
IC 280-669870/18		8330B			1 mL	1 uL			2 uL	
IC 280-669870/19		8330B			1 mL	0.5 uL			1 uL	
ICV 280-669870/20		8330B			1 mL		50 uL	50 uL		50 uL

Batch Notes	
Reagent Water ID	N.ELGA 10/4/24
Methanol ID	64208
Vial Lot Number	2402678
Diluting Solvent ID	8330ACIDH2O00008
Batch Comment	8330BUFFERSTK00018,ACETICACID00171

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.: 280-197532-2

SDG No.: \_\_\_\_\_

Batch Number: 670048 Batch Start Date: 10/08/24 13:10 Batch Analyst: Alwes, Ashley A

Batch Method: 3535 Batch End Date: 10/08/24 15:50

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	8330 LCS 00137	8330Surrogate 00159
MB 280-670048/1		3535, 8330B					500 mL	5 mL		0.1 mL
LCS 280-670048/2		3535, 8330B					500 mL	5 mL	0.1 mL	0.1 mL
LCSD 280-670048/3		3535, 8330B					500 mL	5 mL	0.1 mL	0.1 mL
280-197532-A-1	LL1mw-090-24090 1-GW	3535, 8330B	Water	T	742.4 g	283.9 g	458.5 mL	5 mL		0.1 mL
280-197532-A-2	LL1mw-080-24090 1-GW	3535, 8330B	Water	T	736.3 g	284.6 g	451.7 mL	5 mL		0.1 mL
280-197532-A-3	LL2mw-059-24090 1-GW	3535, 8330B	Water	T	744.1 g	281.5 g	462.6 mL	5 mL		0.1 mL
280-197532-A-4	LL1mw-081-24090 1-GW	3535, 8330B	Water	T	750.2 g	284.2 g	466 mL	5 mL		0.1 mL
280-197532-A-5	FWGmw-010-24090 1-GW	3535, 8330B	Water	T	714.0 g	280.6 g	433.4 mL	5 mL		0.1 mL
280-197532-A-6	FWGmw-011-24090 1-GW	3535, 8330B	Water	T	748.5 g	282.4 g	466.1 mL	5 mL		0.1 mL

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-197532-2

SDG No.: \_\_\_\_\_

Batch Number: 670048 Batch Start Date: 10/08/24 13:10 Batch Analyst: Alwes, Ashley A

Batch Method: 3535 Batch End Date: 10/08/24 15:50

Batch Notes	
First Start time	10/08/2024 13:25
First End time	10/08/2024 15:21
SPE Cartridge Type	Sep-Pak Porapak Rdx
SPE Cartridge Lot ID	005534026A
Balance ID	24350888
Balance is Level? (Y/N)	yes
Manifold ID	Manifold: A/B
QC Bottle Lot ID	0202401I
Pipette/Syringe/Dispenser ID	Doddy/DOD/Pugsley
Solvent Name	Calcium Chloride in Water
Solvent Lot #	CaCl2_Sol_00094
Rinse Solvent Name	Acetonitrile
Rinse Solvent Lot	Acetonitrile_00091
Acid Name	0.2% AAinACN
Acid ID	0.2% AAinACN_00007
Analyst ID - Spike Analyst	AA
Analyst ID - Spike Witness Analyst	Reviewer: DL
Batch Comment	DV-OP-0017, NaCl Baked_00035 (Fisher)

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

COC No.: RVAAP-447TA  
Date: 10/17/24

Page 6 of 6



280-197532 Chain of Custody

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 Fall 2024 Job/P.O. No.: P010216426 Sampler (Signature) <i>[Signature]</i>		Laboratory Name: TA- Denver Address: 4955 Yarrow Street Arvada, CO 80002 Phone: 303-736-0107 Contact: Patrick McEntee	
Laboratory No Sample ID Site Type Depth Date Time Matrix	LL1mw-090-240901-GW 13 10/17/24 0855 W	Requested Parameters Total Number of Containers Temperature Blank Exploives (6)(A)	OBSERVATIONS, COMMENTS SPECIAL INSTRUCTIONS 2 2 2
Relinquished by Signature <i>[Signature]</i> Printed Name Leidos Company	Date 10/17/24 Time 1800	Received by Signature <i>[Signature]</i> Printed Name Ben Jester Company EETDEN	Notes: A. Cool, 4C B. HCl, pH<2, Cool, 4C C. HNO3, pH<2, Cool, 4C D. NaOH, pH>12, Cool, 4C Total Number of Containers: 2 Notes: 1. SW 8260B 2. SW 8270D 3. SW 8270D SIM 4. SW 8082A 5. SW 8081B 6. SW 8330 7. SW 6010/6020/7470 8. SW 9012B 9. SW 9034 10. SW 9056/9056A 11. SW 6860 12. EPA 353.2 13. SW 7196 14. SM2320B
Relinquished by Signature Printed Name Leidos Company	Date 10/17/24 Time 09:10	Received by Signature Printed Name EETDEN Company	Shipment Method: Courier 818082603709 Temperature Blank Lab: Leidos 8866 Commons Drive Twinsburg, OH 44087 (330) 405-5802

White Laboratory Pink Project Manager Yellow Project QAO Goldenrod Field Project Manager

1.8 IR TUI CP+O.1



Chain of Custody Record

COC No.: RVAAP-447-TA  
Date: 10/18/24

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 Fall 2024 Job/P.O. No.: P010216426 Sampler (Signature) <i>Melissa Cingol</i> (Printed Name) <u>Melissa Cingol</u>		Laboratory Name: TA- Denver Address: 4955 Yarrow Street Arvada, CO 80002 Phone: 303-736-0107 Contact: Patrick McEntee				
Laboratory No.	Sample ID	Site Type	Depth	Date	Time	Matrix
	LLLmw-080-240901-GW			10/17/24	1800	W
Requested Parameters Exploives (6)(A) 2 Sulfide (9)(F) Nitrate/Nitrite/Sulfate (10)(A) Alkalinity (14)(A) TOC (13)(E) Temperature Blank Total Number of Containers 2						
OBSERVATIONS, COMMENTS SPECIAL INSTRUCTIONS						
Shipment Method: Courier						

Relinquished by <i>Charles Spurr</i> Signature Charles Spurr Printed Name Leidos Company	Date 10/18/24 Time 1800	Received by <i>Ben Jester</i> Signature Ben Jester Printed Name EET DEN Company	Date 10/18/24 Time 09:10	Notes: Total Number of Containers: 2 A. Cool, 4C B. HCl, pH<2, Cool, 4C C. HNO3, pH<2, Cool, 4C D. NaOH, pH>12, Cool 4C Notes: 1. SW 8260B 2. SW 8270D 3. SW 8270D SIM 4. SW 8082A 5. SW 8081B 6. SW 8330 7. SW 6010/6020/7470 8. SW 9012B 9. SW 9034 10. SW 9056/9056A 11. SW 6860 12. EPA 353.2 13. SW 7196 14. SM2320B
Relinquished by Signature Printed Name Leidos Company	Date Time	Received by Signature Printed Name Company	Date Time	Temperature Blank Lab: Leidos 8866 Commons Drive Twinsburg, OH 44087 (330) 405-5802

White Laboratory      Pink Project Manager      Yellow Project OAO      Goldenrod Field Project Manager









ORIGIN ID: SKYA

SHIP DATE: 02OCT24  
ACTWGT: 45.00 LB  
CAD: /SSF02541  
DIMS: 24x14x13 IN

Part # 1562974355 BRDPA EXP 07/25

0 SAMPLE RECEIVING  
EUROFINS ENVIR TESTING  
4955 YARROW STREET

ARVADA CO 80002

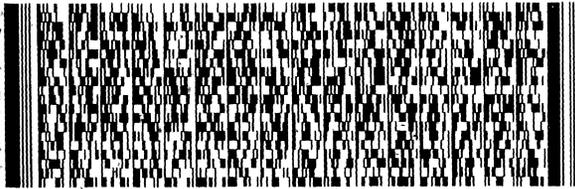
(US)

(303) 736-0100

REF:

HU:

DEPT:



FedEx  
Express



AN208L10P20E427

THU - 03 OCT 10:30A  
PRIORITY OVERNIGHT

TRK# 8180 8260 3709  
0667

**NX LAAA**

80002  
CO-US DEN



280-197532 Waybill

# Login Sample Receipt Checklist

Client: Leidos, Inc.

Job Number: 280-197532-2

**Login Number: 197532**  
**List Number: 1**  
**Creator: Roehsner, Karen P**

**List Source: Eurofins Denver**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	