Prepared By: **AECOM Technical Services, Inc.**

Prepared For: **U.S. Army Corps of Engineers**

Subject: **Arroyo Sweep Completion Report**

Site: **Unnamed Arroyo Exiting Hazardous Waste Management Unit**

Date: **September 2025**

1.0 INTRODUCTION

The purpose of this Technical Memorandum is to document the field activities and results of the munitions and explosives of concern (MEC) and material potentially presenting an explosive hazard (MPPEH) "sweep" operations completed within the arroyo downgradient of the 209A Gate (immediately outside of the Inner Fence) at the Fort Wingate Depot Activity (FWDA) as shown on **Figure 1**. The sweep included the removal of MEC regardless of size and any munitions debris (MD) with dimensions of 1.5 inches by 3 inches or larger. The fieldwork was completed in accordance with the Arroyo Sweep Work Plan Technical Memorandum (AECOM Technical Services, Inc. [AECOM] 2024). The overall approach, field procedures, MEC recovery results, soil sampling activities and results, and risk screening results and conclusions are presented in the sections below.

2.0 ARROYO SWEEP APPROACH

The arroyo sweep was implemented as an analog detector-aided survey and removal operation (i.e., "mag and dig" or "mag, flag, and dig" approach), so no digital geophysical mapping (DGM) instrumentation was used. Unexploded Ordnance (UXO) Technicians manually located and removed MEC and MD using Schonstedt 52Cx ferrous metal detectors (or equivalent) and White's XLT all-metals detectors (or equivalent). MEC and MD were removed from the surface and subsurface by manually digging anomalies in accordance with Engineer Manual (EM) 385-1-97, Explosives Safety & Health Requirements Manual, Change 1 (USACE 2013) to depth of detection. Because MEC has historically been identified at depths up to 12 feet below ground surface (bgs) within Parcel 3, the analog detectors utilized may not have been able to identify MEC (especially smaller MEC items) at depths greater than 18 inches (i.e., the maximum depth at which MEC was recovered) as further discussed in **Section 3.0**.

The sweep began immediately outside of the inner fence at the 209A gate and continued downgradient (to the north) for approximately 4 miles. The New Mexico Environment Department (NMED) Approval with Modifications, Arroyo Sweep Work Plan letter, Comment 2, required the sweep to continue further if MEC was recovered within ¼ mile (i.e., 1,320 feet) of the end location of the sweep. The last MEC item recovered was located 1,395 feet from the north end of the sweep. Therefore, the sweep concluded after four miles. The sweep area included the arroyo bottom and banks up to the apparent high-water line. The sweep extent and MEC findings are shown on **Figure 2**.

Instrument Test Strip

An instrument test strip (ITS) established for ongoing removal actions at other FWDA sites was used to verify detector functionality for the sweep activities completed within the arroyo. The ITS included six industry standard objects (ISOs) buried along a linear path as follows:

- Three small ISOs (i.e., 4-inch X 1-inch) were buried at approximate depths of 2 inches, 4 inches, and 6 inches respectively. Two were buried in an orientation that was horizontal to the ground surface and the third was buried vertically.

- Two medium ISOs (i.e., 8-inch X 2-inch) were buried at approximate depths of 6 inches and 10 inches. Both were buried horizontal to the ground surface.

- One large ISO (i.e., 12-inch X 4-inch) was buried at an approximate depth of 18 inches with an orientation that was horizontal to the ground surface.

The ITS was swept with each metal detector at the beginning of sweep activities each day to demonstrate that the detectors were effectively detecting the buried items. If an instrument was found to be functioning improperly during this test, it was removed from service immediately and replaced with a functioning instrument.

MEC and MPPEH Sweep Procedures

The sweep team consisted of six UXO Technician IIs (UXOTIIs) and one UXO Technician III (UXOTIII) team leader. The sweep team established 5-foot-wide sweep lanes within the arroyo using flagging and pin flags. During the sweep, the UXO technicians swept their instruments through their respective lanes in a tight forward pattern, following the contours of the terrain in order to maintain complete areal coverage. All MEC, regardless of size, and munitions-related surface and subsurface targets identified with dimensions of 1.5 inches by 3 inches or larger were removed from the sweep area.

Subsurface anomalies identified with the handheld detectors were manually excavated in accordance with EM 385-1-97 until no metallic signal remained. UXO technicians dug to the side of each anomaly to determine its depth before digging over the anomaly. Once an item was recovered, it was visually inspected, identified, and assessed for explosive hazards by a UXOTII and the UXOTIII. Target anomaly locations were re-checked after initially removing any materials to verify that each identified anomaly was completely resolved and not masking another adjacent anomaly. Once the subsurface anomaly locations were resolved, the soil that was removed to expose the anomaly was placed back into the hole. If the anomaly was MEC, it was documented with global positioning system (GPS) coordinates, characterized, and managed in accordance with the procedures described in EM 385-1-97, Change 1 (USACE 2013).

MPPEH Inspection

All suspected MPPEH was first inspected by the UXO Sweep Team. A UXOTII conducted a 100 percent inspection and a UXOTIII conducted a 100 percent re-inspection to determine if the item was material documented as explosive hazard (MDEH) or material documented as safe (MDAS) and did not contain an explosive hazard. Items designated as MDEH underwent explosive demolition operations. MDAS was kept in sealed and locked containers in a holding area until final disposition. These processes are further detailed in the subsections below.

MEC Encountered

The MEC identification process started when an anomaly was exposed. Once the anomaly was identified as MPPEH or MEC, the UXOTII who exposed the item contacted the UXOTIII, who verified that the suspect item was indeed MEC. Once the item was confirmed as MEC, it was marked with a pin flag and the Senior UXO Supervisor (SUXOS) and UXO Safety Officer evaluated whether the MEC item was acceptable to move or not. MEC items confirmed as acceptable to move were transported to and stored in an Earth Covered Magazine (ECM) in B Block for later destruction at the Corrective Action Management Unit (CAMU). Items confirmed as unacceptable to move were blown-in-place (BIP).

After a BIP was completed, any metallic debris associated with the demolition activity was removed from the BIP location and the surrounding area. A composite soil sample was collected from each post BIP location and analyzed for explosives by EPA Method 8330B as discussed in **Section 4.0**.

Prior to disposal, the location of each identified MEC item and all relevant information was recorded with a Trimble Juno global positioning system (GPS) with 2-meter accuracy. Data recorded for each MEC location included:

- Type of item, including nomenclature if possible
- GPS coordinates
- Depth below ground surface
- Digital photograph and disposition

MDAS Disposition

MDAS was flashed in a sealed, propane fueled unit. The purpose of flashing MDAS is a "polishing" step to verify decomposition of any explosive residues. Flashing MDAS was requested by the Army specifically for MDAS recovered from the HWMU and adjacent kickout areas and is not utilized for other MEC removal activities at FWDA. The MDAS was placed in baskets and the baskets were placed into the flashing unit. Although not required for the MDAS recovered from arroyo sweep operations, the flashing unit heated the MDAS to a temperature of 650° F for 10 minutes. Once the flashing cycle was complete the baskets were removed and allowed to cool.

The flashed MDAS was secured in a locked roll-off container until final disposition. The container was clearly labeled on the outside with the following information: Unique identification starting with USACE/Fort Wingate Depot Activity/AECOM/0001/Seal's unique identification number. The seal was attached in a manner so that the container could not be opened without damaging the seal.

The SUXOS certified that the MDAS was free of explosive hazards and the United States Army Corps of Engineers (USACE) Ordnance and Explosives Safety Specialist (OESS) verified the MPPEH inspection process had been followed. A Form 1348-1A, Issue Release/Receipt Document, was completed to document the description of the container and the certification documentation. Form 1348-1A included the names of the SUXOS and UXO Quality Control Supervisor, organization, signatures, contractor's home office, and the field office phone number(s) of the individuals certifying and verifying the debris as free of explosive hazards. The following details were also included on the Form:

- Basic material content (e.g., steel or mixed metals)
- Estimated weight
- Unique identification of the container and seal being turned over
- Location where MDAS was obtained

The following certifications were also included on Form 1348-1A.

- "This certifies that the material listed has been 100 percent properly inspected and, to the best of our knowledge and belief, is free of explosive hazards, engine fluids, illuminating dials and other visible liquid (HTRW) materials."
- "This certifies that the material listed has been 100 percent inspected and, to the best of our knowledge and belief, are inert and/or free of explosives or related materials."

A chain of custody was maintained, final disposition of the certified MDAS was documented, and the certified and verified materials were released to the smelter/recycler (i.e., W. Silver Recycling and Arcelor Mittal).

MEC Disposal Operations

All MEC encountered during sweep activities were properly disposed. MEC disposal operations were supervised by the SUXOS and coordinated with the OESS. MEC disposal operations were conducted in accordance with the procedures outlined in EM 385-1-97, Explosives Safety and Health Requirements Manual, Change 1 (USACE 2013). Transportation of donor explosives was conducted in accordance with applicable sections of 49 Code of Federal Regulations Part 397. All appropriate notifications were made by the SUXOS prior to each MEC disposal operation.

Minimum separation distances (MSDs) were established and maintained during completion of MEC disposal operations. Physical control of the disposal operations was accomplished by blocking access roads to the demolition location. During disposal preparation, all non-essential

personnel were relocated outside the applicable MSD, and all essential personnel were moved to a designated safe location prior to initiating the disposal shot.

Donor explosives were initiated by a radio-firing device, non-electric shock tube detonators, or electric blasting caps. Donor explosives, consisting of jet perforators or boosters, were obtained through an explosives vendor (e.g., Tripwire South) and were stored in two ECMs.

Demolition operations were completed in accordance with Technical Manual 60A-1-1-31, "Explosive Ordnance Disposal Procedures: General Information on EOD Disposal Procedures" and are generally described from the Arroyo Sweep Work Plan Technical Memorandum (AECOM 2024) below:

- Once the demolition charges were primed and set and all personnel had returned to the firing point, a head count was taken.
- Safety signals were used in accordance with EM 385-1-1, Safety and Health Requirements Manual.
- If there was no response from the verbal notification, the charge was initiated.
- After the detonation, a 5-minute wait time was observed.
- After the 5-minute wait time, the Demolition Team Leader and one other UXO Technician proceeded to the shot location. One person completed a thorough search of the shot location hole and immediate area to verify complete demolition. The second person remained at a safe distance to render assistance, if required.
- After complete demolition was verified, the SUXOS notified all personnel with an audible "all clear" and opened access roads as appropriate.

3.0 MEC ITEMS RECOVERED

A total of 193 MEC items were identified at 187 locations during the arroyo sweep (i.e., multiple items were identified at several locations as shown in **Table 1**). Eight of the MEC items were verified as unacceptable to move during the MPPEH inspection process and were, therefore, BIP using the MEC disposal operations discussed above. The remaining 185 MEC items were transported to ECMs for later disposal at the CAMU. **Table 1** presents information on each MEC find including date found, quantity, nomenclature, disposition, depth, and location coordinates. As shown in **Table 1**, the MEC items recovered were typically removed from the surface to shallow depths of 12 inches or less. The deepest MEC items recovered included two 75mm M89 Smoke items removed from 18 inches bgs. **Figure 2** shows the location of each MEC find and each location where an identified MEC item required BIP MEC disposal procedures.

As discussed in **Section 2.0**, because MEC has historically been identified at depths up to 12 feet bgs within Parcel 3 (although such depths are not specifically suspected within the arroyo), the analog detectors utilized for sweep operations may not have been able to fully identify all subsurface MEC items from the arroyo sweep area. This would be especially true for smaller MEC items buried at depths greater than 18 inches bgs (i.e., the maximum depth at which MEC

was recovered). As a result, while all MEC was likely removed from the surface and near surface of the arroyo sweep area, the potential for a remnant subsurface MEC hazard cannot be completely discounted for the area. As a result, additional land use controls (e.g., to limit subsurface activities) may still be warranted within the arroyo area.

4.0 SOIL SAMPLING ANALYTICAL RESULTS

All soil sample analyses were performed by Agriculture & Priority Pollutants Laboratories, Inc. (APPL) in Clovis, California or Eurofins Scientific in Denver, Colorado. The laboratory was changed from APPL to Eurofins because, toward the end of sample collection activities, APPL did not have the capacity to analyze the samples with the requested quick turnaround time needed. Like APPL, Eurofins Denver is a Department of Defense Environmental Laboratory Accreditation Program certified laboratory. The locations of each soil sample collected and analyzed during sweep operations are presented on **Figure 3**. The soil sampling analytical results are summarized in **Table 2** and full laboratory and data validation reports are included in **Attachment A**.

For risk-based screening purposes, **Tables 2** and **3** present residential screening values including NMED Residential Soil Screening Levels (SSLs) (NMED 2022) and United States Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) (USEPA 2024), as well as the associated endpoint concentrations (cancer or noncancer) in relation to the analytical results for each explosives constituent detected. Limits of Quantitation, Limits of Detection, and Detection Limits were reviewed by the AECOM chemist to verify that they were below the screening values. The soil sampling results were compared to the screening levels based on the following:

- **NMED Residential SSLs**: The most current values were obtained at the time of sampling from the NMED Risk Assessment Guidance for Site Investigations and Remediation (htpps://www.env.nm.gov/hazardous-waste/guidance-documents/) (NMED 2022). The lower of the values for the cancer and noncancer endpoints was selected.

- **USEPA Residential RSLs**: If an NMED SSL did not exist for a constituent, the USEPA RSL was utilized. Values were obtained from the most current RSL Residential Soil Table (TR=1E-06, HQ=1.0) on the USEPA RSLs Generic Tables database (https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables) (USEPA 2024) that was available at the time the samples were collected. USEPA RSLs based on a carcinogenic endpoint were adjusted by a factor of 10 to achieve the target cancer risk of 1E-05 (per 2019 NMED guidance).

Composite soil samples were collected from the eight MEC BIP locations shown on **Figures 2** and **3**. Each composite sample was comprised of 12 subsamples collected from the impacted surface soils observed within and adjacent to the disposal crater remaining after each MEC BIP. Six subsamples were collected from within the crater and 6 subsamples were collected from the surface soils immediately surrounding each crater. The subsamples were composited into a

single sample for that MEC BIP location, placed into 8-ounce sample jars, and were shipped to APPL for explosives analysis (i.e., by Method 8330B).

As highlighted in **Table 2**, 2,4,6-Trinitrotoluene (TNT) was detected above the residential SSL noncancer endpoint of 36 milligrams per kilogram (mg/kg) in sample P2-ARROYO-0005 at a concentration of 38 mg/kg. In Sample P2-ARROYO-005-002, 2,4,6-TNT was detected above the residential SSL noncancer endpoint of 36 mg/kg and the residential SSL cancer endpoint of 211 mg/kg at a concentration of 830 mg/kg. These screening criteria exceedances are further addressed in **Section 5**. All other soil samples were below their respective residential cancer and noncancer SSLs.

5.0 SOIL SAMPLE RISK SCREEN

Risk screening results for each soil sample are presented in **Table 3** and the results are summarized in the subsections below.

Target Risk Levels

NMED SSLs are based on 1.0E-05 (1 in 100,000) target excess cancer risk or a target hazard quotient of 1.0 for noncarcinogens (NMED 2022). If an analyte exceeded NMED SSLs, then additional evaluation was completed as described below in *Risk Refinement*.

Potentially Exposed Populations

NMED guidance provides screening criteria for three types of populations: residential, commercial/industrial, and construction workers. The residential screening values are generally the most conservative; therefore, residential screening values were used to evaluate potential risks from the post-BIP samples.

Preliminary Screening Exposure Concentrations

Concentrations were evaluated on a sample-by-sample basis. Therefore, the preliminary screening exposure concentration was the concentration of each chemical detected in a specific sample.

Calculation of Cumulative Human Health Risk

NMED guidance (NMED 2022) indicates that potential cumulative risks and hazards should also be considered in the screening evaluation to conclude whether further evaluation may be necessary. Therefore, consistent with the guidance, screening was performed by comparing maximum chemical concentrations detected with NMED SSLs. NMED has published SSLs for the residential scenario. In the absence of NMED SSLs, USEPA RSLs were selected (carcinogenic RSLs were adjusted to a risk of 1.0E-05 per NMED guidance, consistent with

NMED SSLs). The specific NMED SSLs and USEPA RSLs used to evaluate each sample are identified in the footnotes of **Table 3**.

As shown in **Table 3**, following completion of the initial cumulative human health risk assessment, sample P2-ARROYO-0005 showed potential hazards greater than the target hazard of 1.0 and/or an excess cancer risk greater than the target risk of 1.0E-05.

Risk Refinement

With the exception of Sample P2-ARROYO-0005 and P2-ARROYO-005-002, risks less than the NMED target level of 1.0E-05 and hazard indices less than the NMED target level of 1.0 indicated that concentrations at the post-BIP soil sample locations were unlikely to result in adverse health impacts. Initial composite Sample P2-ARROYO-0005 was collected from an approximate 12 foot diameter sampling unit where potentially explosives-impacted soils were suspected surrounding the detonation crater where a 4-lb M83 Frag Bomb MEC item was BIP.

Because 2,4,6-TNT was detected in sample P2-ARROYO-0005 above the residential SSL noncancer endpoint and had cumulative hazards greater than 1.0, approximately 3 inches of soil was removed from the demolition crater and a 13-foot area that encompassed the 12-foot diameter BIP sample location (**Figure 4**). After the initial 3 inches of surface soils were removed from the BIP-impacted area, a second soil sample (P2-ARROYO-005-002) was collected and analyzed for explosives by EPA Method 8033B. These results were again compared to the NMED Residential SSLs and USEPA Residential RSLs as appropriate. As shown in **Tables 2** and **3**, the 2,4,6-TNT sample result for this resampled location (P2-ARROYO-005-002) was also above the residential SSL noncancer and cancer endpoints, had a cancer risk greater than 1.0E-05, and had cumulative hazards greater than 1.0.

Because 2,4,6-TNT was again detected in sample P2-ARROYO-005-002 above the NMED screening criteria, an additional 6 inches of soil was removed from an again expanded 15-foot diameter area surrounding the BIP location. As shown on **Figure 4**, before the third soil sample was collected, the initial soil removal area was ultimately excavated to a total depth of 9 inches bgs and the expanded circular area surrounding the initial soil removal area was excavated to 6 inches bgs. After the soils were removed from this expanded soil removal area, a third soil sample (P2-ARROYO-005-003) was collected and analyzed for explosives by EPA Method 8033B. As shown in **Tables 2** and **3**, the 2,4,6-TNT and other explosive analytical results for this again resampled location were all nondetect (i.e., below their respective residential cancer and noncancer SSLs). Based on the circular areas shown on **Figure 4** and the approximate 3-inch and 6-inch layers of surface soils sequentially removed from these areas (i.e., 9 inches total within the initial 12-foot diameter sample location), it is estimated that approximately 4.5 cubic yards of soil were ultimately excavated and removed from the area surrounding composite Samples P2-ARROYO-0005, P2-ARROYO-005-002, and final "clean" sample P2-ARROYO-005-003. The initial soils that were excavated and removed from this BIP location were disposed of with the contaminated soil stockpiles at the HWMU. When contaminated soil hauling operations ceased at the HWMU, the remaining contaminated soils from the arroyo BIP location were

containerized and disposed at the Northwest New Mexico Regional Solid Waste Landfill. A copy of this manifest is included as **Attachment B**.

6.0 SUMMARY

The arroyo sweep was completed in August and September 2024, after completion of the HWMU removal action activities. The sweep was completed starting immediately outside of the HWMU, near the 209A gate, and extended downgradient, to the north, approximately 4 miles.

A total of 193 MEC items were identified during the arroyo sweep, eight of the MEC items were determined to be unacceptable to move and were BIP. The remaining MEC were taken to ECMs for later disposal at the CAMU. The locations of MEC recovered are shown on **Figure 2** and the details of each MEC find are presented in **Table 1**. As detailed in **Section 3.0**, due to depth limitations of the analog detectors utilized for sweep operations and the historical potential for MEC to be present to depths up to 12 feet bgs within Parcel 3 (although not specifically anticipated within the arroyo area), the possibility of encountering remnant subsurface MEC cannot be completely discounted following the completion of sweep operations. Based on this, land use controls (e.g., restrictions on digging) may still be warranted for the arroyo area.

A composite soil sample was collected from each of the eight BIP locations and analyzed for explosives by EPA Method 8033B. 2,4,6-TNT was detected in two subsequent samples (i.e., P2-ARROYO-0005 and P2-ARROYO-005-002) at concentrations that exceeded the respective residential SSL and cumulative hazard index. The surface soil was removed from this BIP location following both screening level exceedances and containerized for offsite disposal. The location was ultimately resampled a third time to demonstrate that all of the 2,4,6-TNT impacted soils were effectively removed from that BIP location.

7.0 REFERENCES

AECOM. 2024. Final Inner Fence Report, HWMU, Parcel 3, Fort Wingate Depot Activity, McKinley County, New Mexico. July.

AECOM. 2024. Technical Memorandum. Arroyo Sweep Work Plan. July 22.

NMED. 2022. Risk Assessment Guidance for Site Investigations and Remediation. June 9. (URL: https://www.env.nm.gov/hazardous-waste/guidance-documents/). (Also includes 10 updates in November 2022).

United States Army Corps of Engineers (USACE). 2013. EM 385-1-97. Explosives - Safety 17 and Health Requirements Manual (Errata 1 through 6 dated June and July 2009, April 18, 2010, and May 2013, and Change 1 dated June 2013).

USEPA. 2024. Regional Screening Levels (RSLs) - Generic Tables. November 31. (https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables).

Tables

TABLE 1
MEC LOG
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

Date Found	Qty	AnomalyType	Nomenclature	Disposition	Depth_in	X_Coord	Y_Coord	CoordSystem
8/22/2024	1	MEC	4 lb M83 Frag Bomb	BIP	0	2488676.512	1616856.414	NAD83 State Plane NM West feet
8/22/2024	1	MEC	AN-M120 Fuze	Removed	0	2488673.28	1616861.958	NAD83 State Plane NM West feet
8/22/2024	1	MEC	AN-M110 Fuze	BIP	0	2488651.94	1616875.476	NAD83 State Plane NM West feet
8/22/2024	1	MEC	M52 PD Fuze	Removed	0	2488654.025	1616871.757	NAD83 State Plane NM West feet
8/22/2024	2	MEC	M503A1 PD Fuze	Removed	0	2488653.318	1616880.197	NAD83 State Plane NM West feet
8/22/2024	1	MEC	M64 PD Fuze	Removed	0	2488631.409	1616904.578	NAD83 State Plane NM West feet
8/22/2024	1	MEC	81 mm M57 WP Filled - full item	Removed	0	2488626.066	1616907.049	NAD83 State Plane NM West feet
8/22/2024	1	MEC	40 mm Mk II Mod 0	Removed	0	2488616.234	1616947.954	NAD83 State Plane NM West feet
8/22/2024	1	MEC	40 mm Mk II Mod 0	Removed	0	2488597.46	1616984.385	NAD83 State Plane NM West feet
8/22/2024	1	MEC	M52 PD Fuze	Removed	0	2488641.245	1617047.435	NAD83 State Plane NM West feet
8/22/2024	1	MEC	AN-M120 Fuze	Removed	0	2488689.494	1617057.625	NAD83 State Plane NM West feet
8/22/2024	1	MEC	AN-M110 Fuze	Removed	0	2488649.105	1616919.787	NAD83 State Plane NM West feet
8/26/2024	1	MEC	AN-M120 Fuze	Removed	4	2493717.182	1633687.653	NAD83 State Plane NM West feet
8/27/2024	1	MEC	AN-M120 Fuze	Removed	2	2492730.181	1632627.856	NAD83 State Plane NM West feet
8/27/2024	1	MEC	AN-M120 Fuze	Removed	0	2492515.749	1632435.763	NAD83 State Plane NM West feet
8/27/2024	1	MEC	AN-M120 Fuze	Removed	0	2491961.41	1631922.497	NAD83 State Plane NM West feet
8/27/2024	1	MEC	AN-M120 Fuze	Removed	3	2491860.495	1631798.617	NAD83 State Plane NM West feet
8/28/2024	1	MEC	AN-M120 Fuze	Removed	4	2491565.842	1631459.253	NAD83 State Plane NM West feet
8/28/2024	1	MEC	AN-M120 Fuze	Removed	2	2491290.715	1631312.482	NAD83 State Plane NM West feet
8/28/2024	1	MEC	AN-M120 Fuze	Removed	2	2491564.33	1631456.232	NAD83 State Plane NM West feet
8/28/2024	1	MEC	AN-M120 Fuze	Removed	2	2491256.369	1631148.099	NAD83 State Plane NM West feet
8/28/2024	1	MEC	M503A1 PD Fuze	Removed	1	2490940.34	1630994.252	NAD83 State Plane NM West feet
8/28/2024	1	MEC	M503A1 PD Fuze	Removed	2	2490880.773	1630935.389	NAD83 State Plane NM West feet
8/28/2024	1	MEC	M503A1 PD Fuze	Removed	0	2490876.098	1630902.604	NAD83 State Plane NM West feet
8/29/2024	1	MEC	AN-M120 Fuze	Removed	0	2490713.684	1630200.56	NAD83 State Plane NM West feet
8/29/2024	1	MEC	AN-M120 Fuze	Removed	2	2490680.739	1630013.052	NAD83 State Plane NM West feet
8/29/2024	1	MEC	AN-M120 Fuze	Removed	2	2490712.895	1630125.823	NAD83 State Plane NM West feet
8/30/2024	1	MEC	M53 PD Fuze	Removed	0	2492653.311	1625499.402	NAD83 State Plane NM West feet
8/30/2024	1	MEC	M53 PD Fuze	Removed	2	2492648.494	1625505.324	NAD83 State Plane NM West feet
8/30/2024	1	MEC	AN-M120 Fuze	Removed	1	2492646.048	1625478.285	NAD83 State Plane NM West feet
9/2/2024	1	MEC	AN-M120 Fuze	Removed	2	2492627.893	1625523.989	NAD83 State Plane NM West feet
9/2/2024	1	MEC	AN-M120 Fuze	Removed	3	2492573.522	1625635.013	NAD83 State Plane NM West feet
9/2/2024	1	MEC	AN-M120 Fuze	Removed	1	2492532.141	1625712.629	NAD83 State Plane NM West feet
9/2/2024	1	MEC	AN-M120 Fuze	Removed	2	2492530.638	1625717.13	NAD83 State Plane NM West feet
9/2/2024	1	MEC	AN-M120 Fuze	Removed	1	2492524.84	1625737.318	NAD83 State Plane NM West feet
9/3/2024	1	MEC	AN-M120 Fuze	Removed	2	2492396.911	1625873.247	NAD83 State Plane NM West feet

TABLE 1
MEC LOG
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

Date Found	Qty	AnomalyType	Nomenclature	Disposition	Depth_in	X_Coord	Y_Coord	CoordSystem
9/3/2024	1	MEC	AN-M120 Fuze	Removed	0	2492393.364	1625870.241	NAD83 State Plane NM West feet
9/3/2024	1	MEC	AN-M120 Fuze	Removed	1	2492455.964	1625802.348	NAD83 State Plane NM West feet
9/3/2024	1	MEC	AN-M120 Fuze	Removed	1	2492402.294	1625857.188	NAD83 State Plane NM West feet
9/3/2024	1	MEC	M53 PD Fuze	Removed	1	2492303.968	1625951.571	NAD83 State Plane NM West feet
9/3/2024	1	MEC	M53 PD Fuze	Removed	2	2492171.907	1625877.015	NAD83 State Plane NM West feet
9/3/2024	1	MEC	AN-M120 Fuze	Removed	0	2492052.316	1626075.854	NAD83 State Plane NM West feet
9/3/2024	1	MEC	M53 PD Fuze	Removed	2	2492104.297	1625983.169	NAD83 State Plane NM West feet
9/3/2024	1	MEC	AN-M120 Fuze	Removed	0	2492053.12	1626146.587	NAD83 State Plane NM West feet
9/4/2024	1	MEC	AN-M120 Fuze	Removed	4	2492073.539	1626035.464	NAD83 State Plane NM West feet
9/4/2024	1	MEC	M53 PD Fuze	Removed	2	2492072.7	1626042.448	NAD83 State Plane NM West feet
9/4/2024	1	MEC	M53 PD Fuze	Removed	2	2492053.248	1626074.451	NAD83 State Plane NM West feet
9/5/2024	1	MEC	AN-M120 Fuze	Removed	5	2491978.177	1626816.103	NAD83 State Plane NM West feet
9/5/2024	1	MEC	AN-M120 Fuze	Removed	2	2491997.467	1626776.092	NAD83 State Plane NM West feet
9/6/2024	1	MEC	AN-M120 Fuze	Removed	2	2491364.452	1627711.604	NAD83 State Plane NM West feet
9/6/2024	1	MEC	M52 PD Fuze	Removed	1	2491488.936	1627455.028	NAD83 State Plane NM West feet
9/6/2024	1	MEC	AN-M120 Fuze	Removed	1	2491405.447	1627762.121	NAD83 State Plane NM West feet
9/7/2024	1	MEC	M52 PD Fuze	Removed	7	2491329.282	1627864.886	NAD83 State Plane NM West feet
9/7/2024	1	MEC	M56 PD Fuze	Removed	2	2488663.462	1617065.459	NAD83 State Plane NM West feet
9/7/2024	1	MEC	M52 PD Fuze	Removed	0	2488807.824	1617141.115	NAD83 State Plane NM West feet
9/7/2024	1	MEC	M71 PD Fuze	Removed	0	2488804.638	1617152.544	NAD83 State Plane NM West feet
9/7/2024	1	MEC	M503 PD Fuze	Removed	0	2488824.636	1617277.24	NAD83 State Plane NM West feet
9/7/2024	1	MEC	M503 PD Fuze	Removed	0	2488875.115	1617676.093	NAD83 State Plane NM West feet
9/9/2024	1	MEC	M149 PD Fuze	Removed	5	2488694.798	1616803.425	NAD83 State Plane NM West feet
9/9/2024	1	MEC	M503 PD Fuze	Removed	6	2488686.401	1616815.14	NAD83 State Plane NM West feet
9/9/2024	2	MEC	75 mm M89 Smoke	Removed	18	2488695.788	1616808.029	NAD83 State Plane NM West feet
9/10/2024	1	MEC	M503 PD Fuze	Removed	7	2488688.394	1616814.76	NAD83 State Plane NM West feet
9/10/2024	1	MEC	75 mm M89 Smoke	Removed	9	2488688.965	1616822.884	NAD83 State Plane NM West feet
9/10/2024	1	MEC	M503 PD Fuze	Removed	2	2488687.275	1616812.585	NAD83 State Plane NM West feet
9/10/2024	1	MEC	75 mm M89 Smoke	Removed	9	2488688.602	1616814.639	NAD83 State Plane NM West feet
9/10/2024	1	MEC	75 mm M89 Smoke	Removed	18	2488685.375	1616839.657	NAD83 State Plane NM West feet
9/11/2024	1	MEC	AN-M120 Fuze	Removed	2	2492006.077	1623880.275	NAD83 State Plane NM West feet
9/11/2024	1	MEC	AN-M120 Fuze	Removed	2	2491869.686	1623628.907	NAD83 State Plane NM West feet
9/11/2024	1	MEC	AN-M120 Fuze	Removed	2	2488690.704	1616794.358	NAD83 State Plane NM West feet
9/11/2024	1	MEC	M503 PD Fuze	Removed	2	2488695.331	1616814.221	NAD83 State Plane NM West feet
9/11/2024	1	MEC	AN-M110 Fuze	Removed	3	2488693.832	1616816.839	NAD83 State Plane NM West feet
9/11/2024	1	MEC	AN-M120 Fuze	Removed	1	2488691.47	1616815.708	NAD83 State Plane NM West feet

TABLE 1
MEC LOG
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

Date Found	Qty	AnomalyType	Nomenclature	Disposition	Depth_in	X_Coord	Y_Coord	CoordSystem
9/12/2024	1	MEC	AN-M120 Fuze	Removed	2	2488695.629	1616817.979	NAD83 State Plane NM West feet
9/12/2024	2	MEC	75 mm M89 Smoke	Removed	8	2488698.011	1616817.898	NAD83 State Plane NM West feet
9/12/2024	1	MEC	4 lb M83 Frag Bomb	BIP	6	2488700.226	1616822.976	NAD83 State Plane NM West feet
9/12/2024	1	MEC	Mk 2 Fuze & Booster	Removed	2	2488681.031	1616844.002	NAD83 State Plane NM West feet
9/12/2024	1	MEC	M503 PD Fuze	Removed	3	2488655.67	1616809.015	NAD83 State Plane NM West feet
9/12/2024	1	MEC	AN-M120 Fuze	Removed	4	2488693.486	1617846.723	NAD83 State Plane NM West feet
9/12/2024	1	MEC	AN-M120 Fuze	Removed	4	2488675.316	1616844.531	NAD83 State Plane NM West feet
9/12/2024	1	MEC	M71 PD Fuze	Removed	4	2488681.827	1616850.485	NAD83 State Plane NM West feet
9/12/2024	1	MEC	M51 PDSQ Fuze with M21 Booster	Removed	2	2488677.129	1616814.184	NAD83 State Plane NM West feet
9/12/2024	1	MEC	4 lb M83 Frag Bomb	BIP	6	2488686.456	1616833.22	NAD83 State Plane NM West feet
9/12/2024	1	MEC	4 lb M83 Frag Bomb	Removed	4	2488670.732	1616830.069	NAD83 State Plane NM West feet
9/12/2024	1	MEC	AN-M120 Fuze	Removed	3	2488675.861	1616860.605	NAD83 State Plane NM West feet
9/12/2024	1	MEC	M53 PD Fuze	Removed	2	2488684.107	1616856.23	NAD83 State Plane NM West feet
9/12/2024	1	MEC	M149 PD Fuze	Removed	3	2488680.538	1616856.928	NAD83 State Plane NM West feet
9/17/2024	1	MEC	75 mm M89 Smoke	Removed	4	2488659.025	1616874.874	NAD83 State Plane NM West feet
9/17/2024	1	MEC	AN-M120 Fuze	Removed	4	2488681.349	1616820.338	NAD83 State Plane NM West feet
9/17/2024	1	MEC	M56 PD Fuze	Removed	4	2488658.515	1616829.599	NAD83 State Plane NM West feet
9/17/2024	1	MEC	4 lb M83 Frag Bomb	BIP	6	2488656.187	1616845.594	NAD83 State Plane NM West feet
9/17/2024	1	MEC	75 mm M89 Smoke	Removed	4	2488678.003	1616830.314	NAD83 State Plane NM West feet
9/17/2024	1	MEC	M56 PD Fuze	Removed	3	2488655.902	1616879.205	NAD83 State Plane NM West feet
9/17/2024	1	MEC	M71 PD Fuze	Removed	3	2488681.085	1616832.109	NAD83 State Plane NM West feet
9/17/2024	1	MEC	75 mm M89 Smoke	Removed	3	2488633.729	1616739.664	NAD83 State Plane NM West feet
9/18/2024	1	MEC	AN-M120 Fuze	Removed	4	2488682.392	1616839.077	NAD83 State Plane NM West feet
9/18/2024	2	MEC	M56 PD Fuze	Removed	3	2488684.557	1616845.429	NAD83 State Plane NM West feet
9/18/2024	1	MEC	75 mm M89 Smoke	Removed	4	2488657.132	1616884.051	NAD83 State Plane NM West feet
9/18/2024	1	MEC	M56 PD Fuze	Removed	2	2488647.231	1616882.674	NAD83 State Plane NM West feet
9/18/2024	1	MEC	M56 PD Fuze	Removed	5	2488677.108	1616848.947	NAD83 State Plane NM West feet
9/18/2024	1	MEC	75 mm M89 Smoke	Removed	5	2488655.598	1616878.541	NAD83 State Plane NM West feet
9/18/2024	1	MEC	AN-M120 Fuze	Removed	6	2488751.164	1616961.258	NAD83 State Plane NM West feet
9/18/2024	1	MEC	M56 PD Fuze	Removed	4	2488675.519	1616851.384	NAD83 State Plane NM West feet
9/18/2024	1	MEC	75 mm M89 Smoke	Removed	3	2488671.167	1616858.459	NAD83 State Plane NM West feet
9/18/2024	1	MEC	AN-M120 Fuze	Removed	4	2488651.147	1616895.623	NAD83 State Plane NM West feet
9/18/2024	1	MEC	M56 PD Fuze	Removed	4	2488656.215	1616877.444	NAD83 State Plane NM West feet
9/18/2024	1	MEC	AN-M120 Fuze	Removed	4	2488679.219	1616829.696	NAD83 State Plane NM West feet
9/18/2024	1	MEC	4 lb M83 Frag Bomb	Removed	8	2488681.874	1616830.221	NAD83 State Plane NM West feet
9/18/2024	1	MEC	M56 PD Fuze	Removed	4	2488653.897	1616878.161	NAD83 State Plane NM West feet
9/18/2024	1	MEC	M51 PDSQ Fuze with M21 Booster	Removed	3	2488683.626	1616833.181	NAD83 State Plane NM West feet

TABLE 1
MEC LOG
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

Date Found	Qty	AnomalyType	Nomenclature	Disposition	Depth_in	X_Coord	Y_Coord	CoordSystem
9/18/2024	1	MEC	M71 PD Fuze	Removed	4	2488675.657	1616853.749	NAD83 State Plane NM West feet
9/18/2024	1	MEC	M56 PD Fuze	Removed	2	2488677.672	1616841.174	NAD83 State Plane NM West feet
9/18/2024	1	MEC	AN-M120 Fuze	Removed	7	2488643.807	1616890.465	NAD83 State Plane NM West feet
9/18/2024	1	MEC	AN-M120 Fuze	Removed	5	2488674.665	1616841.38	NAD83 State Plane NM West feet
9/18/2024	1	MEC	M56 PD Fuze	Removed	4	2488647.352	1616890.437	NAD83 State Plane NM West feet
9/18/2024	1	MEC	M56 PD Fuze	Removed	2	2488669.161	1616868.485	NAD83 State Plane NM West feet
9/18/2024	1	MEC	M56 PD Fuze	Removed	0	2488665.164	1616864.024	NAD83 State Plane NM West feet
9/18/2024	1	MEC	M56 PD Fuze	Removed	3	2488670.73	1616840.989	NAD83 State Plane NM West feet
9/18/2024	1	MEC	M71 PD Fuze	Removed	4	2488675.117	1616842.105	NAD83 State Plane NM West feet
9/18/2024	1	MEC	Booster	Removed	5	2488681.9990	1616834.657	NAD83 State Plane NM West feet
9/18/2024	1	MEC	M503 PD Fuze	Removed	4	2488651.674	1616890.705	NAD83 State Plane NM West feet
9/19/2024	2	MEC	M503 PD Fuze	Removed	2	2488678.714	1616833.584	NAD83 State Plane NM West feet
9/19/2024	2	MEC	M503 PD Fuze	Removed	3	2488674.777	1616851.634	NAD83 State Plane NM West feet
9/19/2024	1	MEC	75 mm M89 Smoke	Removed	3	2488675.631	1616846.713	NAD83 State Plane NM West feet
9/19/2024	1	MEC	M56 PD Fuze	Removed	1	2488675.132	1616843.925	NAD83 State Plane NM West feet
9/19/2024	1	MEC	M149 PD Fuze	Removed	2	2488687.185	1616823.808	NAD83 State Plane NM West feet
9/19/2024	1	MEC	M503 PD Fuze	Removed	3	2488684.718	1616831.96	NAD83 State Plane NM West feet
9/19/2024	1	MEC	4 lb M83 Frag Bomb	BIP	2	2488700.579	1616799.921	NAD83 State Plane NM West feet
9/19/2024	1	MEC	75 mm M89 Smoke	Removed	2	2488675.133	1616832.764	NAD83 State Plane NM West feet
9/19/2024	1	MEC	M56 PD Fuze	Removed	2	2488675.899	1616835.488	NAD83 State Plane NM West feet
9/20/2024	1	MEC	M56 PD Fuze	Removed	2	2488686.679	1616831.337	NAD83 State Plane NM West feet
9/20/2024	1	MEC	AN-M120 Fuze	Removed	2	2488666.058	1616860.377	NAD83 State Plane NM West feet
9/20/2024	1	MEC	M56 PD Fuze	Removed	2	N/A	N/A	No coordinate data available
9/20/2024	1	MEC	M56 PD Fuze	Removed	1	2488663.561	1616846.019	NAD83 State Plane NM West feet
9/20/2024	1	MEC	AN-M120 Fuze	Removed	2	2488662.796	1616880.85	NAD83 State Plane NM West feet
9/20/2024	1	MEC	AN-M120 Fuze	Removed	2	2488659.429	1616862.13	NAD83 State Plane NM West feet
9/20/2024	1	MEC	AN-M120 Fuze	Removed	2	2488662.249	1616849.611	NAD83 State Plane NM West feet
9/20/2024	1	MEC	4 lb M83 Frag Bomb	BIP	1	2488667.243	1616859.582	NAD83 State Plane NM West feet
9/20/2024	1	MEC	AN-M120 Fuze	Removed	1	2490882.387	1621940.043	NAD83 State Plane NM West feet
9/23/2024	1	MEC	4 lb M83 Frag Bomb	Removed	11	2488676.503	1616836.514	NAD83 State Plane NM West feet
9/23/2024	1	MEC	M503 PD Fuze	Removed	5	2488650.918	1616848.246	NAD83 State Plane NM West feet
9/23/2024	1	MEC	M503 PD Fuze	Removed	4	2488668.373	1616855.568	NAD83 State Plane NM West feet
9/23/2024	1	MEC	M503 PD Fuze	Removed	2	2488655.943	1616865.678	NAD83 State Plane NM West feet
9/23/2024	1	MEC	M56 PD Fuze	Removed	13	2488659.239	1616868.076	NAD83 State Plane NM West feet
9/23/2024	1	MEC	M56 PD Fuze	Removed	9	2488650.62	1616870.572	NAD83 State Plane NM West feet
9/23/2024	1	MEC	M56 PD Fuze	Removed	13	2488668.147	1616875.773	NAD83 State Plane NM West feet
9/24/2024	1	MEC	AN-M120 Fuze	Removed	2	2488648.219	1616875.808	NAD83 State Plane NM West feet
9/24/2024	1	MEC	M56 PD Fuze	Removed	2	2488660.119	1616862.67	NAD83 State Plane NM West feet

TABLE 1
MEC LOG
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

Date Found	Qty	AnomalyType	Nomenclature	Disposition	Depth_in	X_Coord	Y_Coord	CoordSystem
9/24/2024	1	MEC	M71 PD Fuze	Removed	2	2488660.938	1616857.022	NAD83 State Plane NM West feet
9/24/2024	1	MEC	AN-M120 Fuze	Removed	3	2488641.035	1616871.497	NAD83 State Plane NM West feet
9/24/2024	1	MEC	75 mm M89 Smoke	Removed	3	2488635.66	1616858.658	NAD83 State Plane NM West feet
9/24/2024	1	MEC	M71 PD Fuze	Removed	2	2488675.612	1616863.031	NAD83 State Plane NM West feet
9/24/2024	1	MEC	20 mm HEI M210 (Projectile Only)	Removed	3	2488667.011	1616871.472	NAD83 State Plane NM West feet
9/24/2024	1	MEC	M503 PD Fuze	Removed	2	2488643.25	1616880.339	NAD83 State Plane NM West feet
9/24/2024	1	MEC	M56 PD Fuze	Removed	1	2488646.779	1616889.47	NAD83 State Plane NM West feet
9/24/2024	1	MEC	M71 PD Fuze	Removed	2	2488662.12	1616870.783	NAD83 State Plane NM West feet
9/24/2024	1	MEC	4 lb M83 Frag Bomb	Removed	2	2488651.627	1616862.363	NAD83 State Plane NM West feet
9/24/2024	1	MEC	M503 PD Fuze	Removed	4	2488648.336	1616879.265	NAD83 State Plane NM West feet
9/24/2024	1	MEC	75 mm M89 Smoke	Removed	3	2489304.404	1619647.761	NAD83 State Plane NM West feet
9/25/2024	1	MEC	M149 PD Fuze	Removed	2	2488615.118	1617009.724	NAD83 State Plane NM West feet
9/25/2024	1	MEC	75 mm M48	Removed	4	2488619.719	1617011.388	NAD83 State Plane NM West feet
9/25/2024	1	MEC	M56 PD Fuze	Removed	3	2488613.015	1616999.953	NAD83 State Plane NM West feet
9/25/2024	1	MEC	4 lb M83 Frag Bomb	Removed	2	2488615.741	1616979.507	NAD83 State Plane NM West feet
9/25/2024	1	MEC	M56 PD Fuze	Removed	5	2488635.287	1617039.897	NAD83 State Plane NM West feet
9/25/2024	1	MEC	75 mm M89 Smoke	Removed	11	2488654.031	1617051.942	NAD83 State Plane NM West feet
9/25/2024	1	MEC	75 mm M89 Smoke	Removed	6	2488635.868	1617026.788	NAD83 State Plane NM West feet
9/25/2024	1	MEC	4 lb M83 Frag Bomb	Removed	6	2488633.616	1617035.847	NAD83 State Plane NM West feet
9/26/2024	1	MEC	M149 PD Fuze	Removed	7	2488674.168	1617066.887	NAD83 State Plane NM West feet
9/26/2024	1	MEC	M71 PD Fuze	Removed	4	2488635.05	1617036.32	NAD83 State Plane NM West feet
9/26/2024	1	MEC	M71 PD Fuze	Removed	6	2488634.426	1617025.285	NAD83 State Plane NM West feet
9/26/2024	1	MEC	M56 PD Fuze	Removed	4	2488625.547	1616935.322	NAD83 State Plane NM West feet
9/26/2024	1	MEC	AN-M120 Fuze	Removed	5	2490150.8	1620736.045	NAD83 State Plane NM West feet
9/30/2024	1	MEC	M56 PD Fuze	Removed	9	2488655.676	1616877.022	NAD83 State Plane NM West feet
9/30/2024	1	MEC	M56 PD Fuze	Removed	7	2488688.908	1616823.249	NAD83 State Plane NM West feet
9/30/2024	1	MEC	M503 PD Fuze	Removed	10	2488683.336	1616834.155	NAD83 State Plane NM West feet
9/30/2024	1	MEC	AN-M120 Fuze	Removed	8	2488734.76	1617130.776	NAD83 State Plane NM West feet
9/30/2024	1	MEC	M56 PD Fuze	Removed	6	2488732.134	1617126.549	NAD83 State Plane NM West feet
9/30/2024	1	MEC	4 lb M83 Frag Bomb	Removed	10	2488807.302	1617131.713	NAD83 State Plane NM West feet
9/30/2024	1	MEC	M56 PD Fuze	Removed	6	2488809.055	1617161.063	NAD83 State Plane NM West feet
9/30/2024	1	MEC	M71 PD Fuze	Removed	7	2488812.248	1617169.228	NAD83 State Plane NM West feet
9/30/2024	1	MEC	M71 PD Fuze	Removed	5	2488826.223	1617188.409	NAD83 State Plane NM West feet
9/30/2024	1	MEC	AN-M120 Fuze	Removed	9	2488824.849	1617173.012	NAD83 State Plane NM West feet
9/30/2024	1	MEC	M71 PD Fuze	Removed	4	2488820.093	1617166.8	NAD83 State Plane NM West feet
10/1/2024	1	MEC	M56 PD Fuze	Removed	14	2488824.345	1617341.672	NAD83 State Plane NM West feet
10/1/2024	1	MEC	M56 PD Fuze	Removed	7	2488827.617	1617322.415	NAD83 State Plane NM West feet
10/1/2024	1	MEC	AN-M120 Fuze	Removed	6	2488824.039	1617303.333	NAD83 State Plane NM West feet

TABLE 1
MEC LOG
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

Date Found	Qty	AnomalyType	Nomenclature	Disposition	Depth_in	X_Coord	Y_Coord	CoordSystem
10/1/2024	1	MEC	M503 PD Fuze	Removed	2	2488826.332	1617396.803	NAD83 State Plane NM West feet
10/3/2024	1	MEC	4 lb M83 Frag Bomb	BIP	5	2489969.518	1620649.27	NAD83 State Plane NM West feet

TABLE 2
POST BIP SOIL SAMPLE ANALYTICAL RESULTS
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

FIELD ID DATE COLLECTED	CAS Number	Residential Value (cancer endpoint)	Residential Value (non-cancer endpoint)	Source	P3HWMU-ARYO-0001 September 2, 2024						P3HWMU-ARYO-0002 September 2, 2024						P2-ARROYO-0003 September 14, 2024						P2-ARROYO-0004 September 14, 2024					
					Result	LOQ	LOD	DL	Lab Qualifier	Validation Qualifier	Result	LOQ	LOD	DL	Lab Qualifier	Validation Qualifier	Result	LOQ	LOD	DL	Lab Qualifier	Validation Qualifier	Result	LOQ	LOD	DL	Lab Qualifier	Validation Qualifier
EXPLOSIVES (mg/kg)																												
1,3,5-Trinitrobenzene	99-35-4	NS	2200	RSL	0.074	0.5	0.074	0.013	U		0.074	0.5	0.074	0.013	U		0.074	0.5	0.074	0.013	U		0.074	0.5	0.074	0.013	U	
1,3-Dinitrobenzene	99-65-0	NS	6.3	RSL	0.074	0.5	0.074	0.022	U		0.074	0.5	0.074	0.022	U		0.074	0.5	0.074	0.022	U		0.074	0.5	0.074	0.022	U	
2,4,6-Trinitrotoluene	118-96-7	211	36	NMED	0.074	0.5	0.074	0.031	U		12	0.5	0.074	0.031			2.8	0.5	0.074	0.031			0.5	0.5	0.074	0.031		
2,4-Dinitrotoluene	121-14-2	17.1	123	NMED	0.074	0.5	0.074	0.028	U		0.074	0.5	0.074	0.028	U		0.074	0.5	0.074	0.028	U		0.074	0.5	0.074	0.028	U	
2,6-Dinitrotoluene	606-20-2	3.56	18.5	NMED	0.074	0.5	0.074	0.031	U		0.074	0.5	0.074	0.031	U		0.074	0.5	0.074	0.031	U		0.074	0.5	0.074	0.031	U	
2-Amino-4,6-dinitrotoluene	35572-78-2	NS	7.7	NMED	0.074	0.5	0.074	0.034	U		0.22	0.5	0.074	0.034	J		0.096	0.5	0.074	0.034	J		0.074	0.5	0.074	0.034	U	
2-Nitrotoluene	88-72-2	31.6	70.4	NMED	0.074	0.5	0.074	0.037	U		0.074	0.5	0.074	0.037	U		0.074	0.5	0.074	0.037	U		0.074	0.5	0.074	0.037	U	
3-Nitrotoluene	99-08-1	NS	6.16	NMED	0.074	0.5	0.074	0.037	U		0.074	0.5	0.074	0.037	U		0.074	0.5	0.074	0.037	U		0.074	0.5	0.074	0.037	U	
4-Amino-2,6-dinitrotoluene	19406-51-0	NS	7.64	NMED	0.074	0.5	0.074	0.034	U		0.35	0.5	0.074	0.034	J		0.074	0.5	0.074	0.034	U		0.074	0.5	0.074	0.034	U	
4-Nitrotoluene	99-99-0	333	247	NMED	0.074	0.5	0.074	0.037	U		0.074	0.5	0.074	0.037	U		0.074	0.5	0.074	0.037	U		0.074	0.5	0.074	0.037	U	
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	83.1	301	NMED	0.074	0.5	0.074	0.025	U		0.074	0.5	0.074	0.025	U		0.052	0.5	0.074	0.025	J		0.074	0.5	0.074	0.025	U	
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	NS	156	NMED	0.074	0.5	0.074	0.037	U		0.074	0.5	0.074	0.037	U		0.074	0.5	0.074	0.037	U		0.074	0.5	0.074	0.037	U	UJ
Nitrobenzene	98-95-3	60.4	131	NMED	0.074	0.5	0.074	0.028	U		0.074	0.5	0.074	0.028	U		0.074	0.5	0.074	0.028	U		0.074	0.5	0.074	0.028	U	
Nitroglycerine	55-63-0	313	6.16	NMED	0.15	0.5	0.15	0.061	U		0.15	0.5	0.15	0.061	U		0.15	0.5	0.15	0.061	U		0.15	0.5	0.15	0.06	U	
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	NS	3850	NMED	0.074	0.5	0.074	0.037	U		0.074	0.5	0.074	0.037	U		0.074	0.5	0.074	0.037	U		0.074	0.5	0.074	0.037	U	
Pentaerythritol tetranitrate (PETN)	78-11-5	1300	570	RSL	0.25	2.5	0.25	0.11	U		0.25	2.5	0.25	0.11	U		0.25	2.5	0.25	0.11	U		0.25	2.5	0.25	0.11	U	

Notes:
DL =Detection limit
J = Estimated
LOD = Limit of Detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NMED = New Mexico Environment Department Screening Levels (Latest update).
NS = No standard
RSL = Regional Screening Levels (Latest Update).
U = Nondetect
UJ = Estimated Nondetect
Shaded results exceed Residential Value

TABLE 2
POST BIP SOIL SAMPLE ANALYTICAL RESULTS
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

FIELD ID DATE COLLECTED	CAS Number	Residential Value (cancer endpoint)	Residential Value (non-cancer endpoint)	Source	P2-ARROYO-0005 September 21, 2024						P2-ARROYO-005-002 December 2, 2024						P2-ARROYO-005-003 December 16, 2024						P2-ARROYO-0006 September 21, 2024					
					Result	LOQ	LOD	DL	Lab Qualifier	Validation Qualifier	Result	LOQ	LOD	DL	Lab Qualifier	Validation Qualifier	Result	LOQ	LOD	DL	Lab Qualifier	Validation Qualifier	Result	LOQ	LOD	DL	Lab Qualifier	Validation Qualifier
EXPLOSIVES (mg/kg)																												
1,3,5-Trinitrobenzene	99-35-4	NS	2200	RSL	0.075	0.5	0.075	0.013	U		8.2	21	8.2	2.8	U		0.04	0.5	0.075	0.013	U		0.075	0.5	0.075	0.013	U	
1,3-Dinitrobenzene	99-65-0	NS	6.3	RSL	0.075	0.5	0.075	0.022	U		8.2	21	8.2	3.4	U		0.04	0.5	0.075	0.022	U		0.075	0.5	0.075	0.022	U	
2,4,6-Trinitrotoluene	118-96-7	211	36	NMED	38	0.5	0.075	0.031			830	21	14	6.3	D		0.069	0.5	0.075	0.031	U		0.79	0.5	0.075	0.031		
2,4-Dinitrotoluene	121-14-2	17.1	123	NMED	0.075	0.5	0.075	0.028	U		8.2	21	8.2	3	U		0.04	0.5	0.075	0.028	U		0.075	0.5	0.075	0.028	U	
2,6-Dinitrotoluene	606-20-2	3.56	18.5	NMED	0.075	0.5	0.075	0.031	U		8.2	21	8.2	3.9	U		0.04	0.5	0.075	0.031	U		0.075	0.5	0.075	0.031	U	
2-Amino-4,6-dinitrotoluene	35572-78-2	NS	7.7	NMED	0.075	0.5	0.075	0.034	U		14	21	14	6.8	U		0.069	0.5	0.075	0.034	U		0.075	0.5	0.075	0.034	U	
2-Nitrotoluene	88-72-2	31.6	70.4	NMED	0.075	0.5	0.075	0.037	U		21	41	21	9.7	U		0.099	0.5	0.075	0.037	U		0.075	0.5	0.075	0.037	U	
3-Nitrotoluene	99-08-1	NS	6.16	NMED	0.075	0.5	0.075	0.037	U		31	41	31	13	U		0.15	0.5	0.075	0.037	U		0.075	0.5	0.075	0.037	U	
4-Amino-2,6-dinitrotoluene	19406-51-0	NS	7.64	NMED	0.11	0.5	0.075	0.034	J		14	21	14	6.1	U		0.069	0.5	0.075	0.034	U		0.075	0.5	0.075	0.034	U	
4-Nitrotoluene	99-99-0	333	247	NMED	0.075	0.5	0.075	0.037	U		21	41	21	7.5	U		0.099	0.5	0.075	0.037	U		0.075	0.5	0.075	0.037	U	
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	83.1	301	NMED	0.075	0.5	0.075	0.025	U		21	41	21	8.8	U		0.099	0.5	0.075	0.025	U		0.075	0.5	0.075	0.025	U	
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	NS	156	NMED	0.075	0.5	0.075	0.037	U		21	41	21	9	U		0.099	0.5	0.075	0.037	U		0.075	0.5	0.075	0.037	U	
Nitrobenzene	98-95-3	60.4	131	NMED	0.075	0.5	0.075	0.028	U		41	62	41	17	U		0.2	0.5	0.075	0.028	U		0.075	0.5	0.075	0.028	U	
Nitroglycerine	55-63-0	313	6.16	NMED	0.15	0.5	0.15	0.061	U		140	410	140	44	U		0.69	0.5	0.15	0.061	U		0.15	0.5	0.15	0.061	U	
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	NS	3850	NMED	0.075	0.5	0.075	0.037	U		14	21	14	4.7	U		0.069	0.5	0.075	0.037	U		0.075	0.5	0.075	0.037	U	
Pentaerythritol tetranitrate (PETN)	78-11-5	1300	570	RSL	0.25	2.5	0.25	0.11	U		210	410	210	100	U		0.99	2.5	0.25	0.11	U		0.25	2.5	0.25	0.11	U	

Notes:
DL =Detection limit
J = Estimated
LOD = Limit of Detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NMED = New Mexico Environment Department Screening Levels (Latest update).
NS = No standard
RSL = Regional Screening Levels (Latest Update).
U = Nondetect
UJ = Estimated Nondetect
Shaded results exceed Residential Value

TABLE 2
POST BIP SOIL SAMPLE ANALYTICAL RESULTS
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

FIELD ID DATE COLLECTED	CAS Number	Residential Value (cancer endpoint)	Residential Value (non-cancer endpoint)	Source	P2-ARROYO-0007 September 21, 2024						P2ARROYO-0008 October 5, 2024					
					Result	LOQ	LOD	DL	Lab Qualifier	Validation Qualifier	Result	LOQ	LOD	DL	Lab Qualifier	Validation Qualifier
EXPLOSIVES (mg/kg)																
1,3,5-Trinitrobenzene	99-35-4	NS	2200	RSL	0.075	0.5	0.075	0.013	U		0.073	0.49	0.073	0.013	U	
1,3-Dinitrobenzene	99-65-0	NS	6.3	RSL	0.075	0.5	0.075	0.022	U		0.073	0.49	0.073	0.021	U	
2,4,6-Trinitrotoluene	118-96-7	211	36	NMED	0.74	0.5	0.075	0.031		J	0.66	0.49	0.073	0.03	MI5	
2,4-Dinitrotoluene	121-14-2	17.1	123	NMED	0.075	0.5	0.075	0.028	U		0.073	0.49	0.073	0.027	U	
2,6-Dinitrotoluene	606-20-2	3.56	18.5	NMED	0.075	0.5	0.075	0.031	U		0.1	0.49	0.073	0.03	MI5, J	
2-Amino-4,6-dinitrotoluene	35572-78-2	NS	7.7	NMED	0.075	0.5	0.075	0.034	U		0.073	0.49	0.073	0.033	U	
2-Nitrotoluene	88-72-2	31.6	70.4	NMED	0.075	0.5	0.075	0.037	U		0.073	0.49	0.073	0.036	U	
3-Nitrotoluene	99-08-1	NS	6.16	NMED	0.075	0.5	0.075	0.037	U		0.073	0.49	0.073	0.036	U	
4-Amino-2,6-dinitrotoluene	19406-51-0	NS	7.64	NMED	0.075	0.5	0.075	0.034	U		0.073	0.49	0.073	0.033	U	
4-Nitrotoluene	99-99-0	333	247	NMED	0.075	0.5	0.075	0.037	U		0.073	0.49	0.073	0.036	U	
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	83.1	301	NMED	0.075	0.5	0.075	0.025	U		0.073	0.49	0.073	0.024	U	
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	NS	156	NMED	0.075	0.5	0.075	0.037	U		0.073	0.49	0.073	0.036	U	UJ
Nitrobenzene	98-95-3	60.4	131	NMED	0.075	0.5	0.075	0.028	U		0.073	0.49	0.073	0.027	U	
Nitroglycerine	55-63-0	313	6.16	NMED	0.15	0.5	0.15	0.061	U		0.15	0.49	0.15	0.06	U	
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	NS	3850	NMED	0.075	0.5	0.075	0.037	U		0.073	0.49	0.073	0.036	U	
Pentaerythritol tetranitrate (PETN)	78-11-5	1300	570	RSL	0.25	2.5	0.25	0.11	U		0.24	2.4	0.24	0.11	U	

Notes:
DL =Detection limit
J = Estimated
LOD = Limit of Detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NMED = New Mexico Environment Department Screening Levels (Latest update).
NS = No standard
RSL = Regional Screening Levels (Latest Update).
U = Nondetect
UJ = Estimated Nondetect
Shaded results exceed Residential Value

TABLE 3
POST BIP SOIL SAMPLES RISK TABLES ARYO-0001
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

Chemical	CAS Number	Units	Final Result		Raw Data Result	Background Value (1)	Exceeds Background (Y/N)	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.074	U		NA	NA	NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.074	U		NA	NA	NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.074	U		NA	NA	211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.074	U		NA	NA	17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.074	U		NA	NA	3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.074	U		NA	NA	NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.074	U		NA	NA	31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.074	U		NA	NA	NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.074	U		NA	NA	NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.074	U		NA	NA	333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.074	U		NA	NA	83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.074	U		NA	NA	NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.074	U		NA	NA	60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		NA	NA	313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.074	U		NA	NA	NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		NA	NA	1,300	N	570	N	RSL		
											Cumulative Risk/Hazard		**0E+00**	**0.000**
											Exceeds Target Level		**N**	**N**

FOOTNOTES:
1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2024, May Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1
2) Chromium screening value is for Total Chromium.
mg/kg = milligrams per kilogram
N = No
NA = Not Applicable
NS = No Standard
U = not detected
Y = Yes

TABLE 3
POST BIP SOIL SAMPLES RISK TABLES ARYO-0002
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

Chemical	CAS Number	Units	Final Result		Raw Data Result	TEF	Background Value (1)	Exceeds Background (Y/N)	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)															
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.074	U			NA	NA	NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.074	U			NA	NA	NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	12				NA	NA	211	N	36	N	NMED	5.69E-07	3.33E-01
2,4-Dinitrotoluene	121-14-2	mg/kg	0.074	U			NA	NA	17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.074	U			NA	NA	3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.22	J			NA	NA	NS	NS	7.7	N	NMED		2.86E-02
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.074	U			NA	NA	31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.074	U			NA	NA	NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.35	J			NA	NA	NS	NS	7.64	N	NMED		4.58E-02
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.074	U			NA	NA	333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.074	U			NA	NA	83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.074	U			NA	NA	NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.074	U			NA	NA	60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			NA	NA	313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.074	U			NA	NA	NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			NA	NA	1,300	N	570	N	RSL		
													Cumulative Risk/Hazard	**6E-07**	**0.4**
													Exceeds Target Level	**N**	**N**

FOOTNOTES:
1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2024, May Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1
2) Chromium screening value is for Total Chromium.
J = estimated
mg/kg = milligrams per kilogram
N = No
NA = Not Applicable
NS = No Standard
U = not detected
Y = Yes

TABLE 3
POST BIP SOIL SAMPLES RISK TABLES ARYO-0003
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

Chemical	CAS Number	Units	Final Result		Raw Data Result	TEF	Background Value (1)	Exceeds Background (Y/N)	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)															
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.074	U			NA	NA	NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.074	U			NA	NA	NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	2.8				NA	NA	211	N	36	N	NMED	1.33E-07	7.78E-02
2,4-Dinitrotoluene	121-14-2	mg/kg	0.074	U			NA	NA	17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.074	U			NA	NA	3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.096	J			NA	NA	NS	NS	7.7	N	NMED		1.25E-02
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.074	U			NA	NA	31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.074	U			NA	NA	NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.074	U			NA	NA	NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.074	U			NA	NA	333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.052	J			NA	NA	83.1	N	301	N	NMED	6.26E-09	1.73E-04
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.074	U			NA	NA	NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.074	U			NA	NA	60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			NA	NA	313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.074	U			NA	NA	NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			NA	NA	1,300	N	570	N	RSL		
													Cumulative Risk/Hazard	**1E-07**	**0.09**
													Exceeds Target Level	**N**	**N**

FOOTNOTES:
1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2024, May Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1
J = estimated
mg/kg = milligrams per kilogram
N = No
NA = Not Applicable
NS = No Standard
U = not detected
Y = Yes

TABLE 3
POST BIP SOIL SAMPLES RISK TABLES ARYO-0004
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

Chemical	CAS Number	Units	Final Result		Raw Data Result	TEF	Background Value (1)	Exceeds Background (Y/N)	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)															
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.074	U			NA	NA	NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.074	U			NA	NA	NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.5				NA	NA	211	N	36	N	NMED	2.37E-08	1.39E-02
2,4-Dinitrotoluene	121-14-2	mg/kg	0.074	U			NA	NA	17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.074	U			NA	NA	3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.074	U			NA	NA	NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.074	U			NA	NA	31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.074	U			NA	NA	NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.074	U			NA	NA	NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.074	U			NA	NA	333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.074	U			NA	NA	83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.074	UJ			NA	NA	NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.074	U			NA	NA	60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			NA	NA	313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.074	U			NA	NA	NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			NA	NA	1,300	N	570	N	RSL		
													Cumulative Risk/Hazard	**2E-08**	**0.01**
													Exceeds Target Level	**N**	**N**

FOOTNOTES:
1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2024, May Update).
Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1
mg/kg = milligrams per kilogram
N = No
NA = Not Applicable
NS = No Standard
U = not detected
UJ = estimated nondetect
Y = Yes

TABLE 3
POST BIP SOIL SAMPLES RISK TABLES ARYO-0005
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

Chemical	CAS Number	Units	Final Result		Raw Data Result	Background Value (1)	Exceeds Background (Y/N)	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)														
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U		NA	NA	NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U		NA	NA	NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	38			NA	NA	211	N	36	Y	NMED	1.80E-06	1.06E+00
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U		NA	NA	17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U		NA	NA	3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U		NA	NA	NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U		NA	NA	31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U		NA	NA	NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.11	J		NA	NA	NS	NS	7.64	N	NMED		1.44E-02
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U		NA	NA	333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U		NA	NA	83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U		NA	NA	NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U		NA	NA	60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U		NA	NA	313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U		NA	NA	NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U		NA	NA	1,300	N	570	N	RSL		
											Cumulative Risk/Hazard		**2E-06**	**1.1**
											Exceeds Target Level		**N**	**Y**

FOOTNOTES:
1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2024, May Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1
J = estimated
mg/kg = milligrams per kilogram
N = No
NA = Not Applicable
NS = No Standard
U = not detected
Y = Yes

TABLE 3
POST BIP SOIL SAMPLES RISK TABLES ARYO-005-002
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

Chemical	CAS Number	Units	Final Result		Raw Data Result	TEF	Background Value (1)	Exceeds Background (Y/N)	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)															
1,3,5-Trinitrobenzene	99-35-4	mg/kg	8.2	U			NA	NA	NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	8.2	U			NA	NA	NS	NS	6.3	Y	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	830				NA	NA	211	Y	36	Y	NMED	3.93E-05	2.31E+01
2,4-Dinitrotoluene	121-14-2	mg/kg	8.2	U			NA	NA	17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	8.2	U			NA	NA	3.56	Y	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	14	U			NA	NA	NS	NS	7.7	Y	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	21	U			NA	NA	31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	31	U			NA	NA	NS	NS	6.16	Y	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	14	U			NA	NA	NS	NS	7.64	Y	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	21	U			NA	NA	333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	21	U			NA	NA	83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	21	U			NA	NA	NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	41	U			NA	NA	60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	140	U			NA	NA	313	N	6.16	Y	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	14	U			NA	NA	NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	210	U			NA	NA	1,300	N	570	N	RSL		
												Cumulative Risk/Hazard		**4E-05**	**23**
												Exceeds Target Level		**Y**	**Y**

FOOTNOTES:
1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2024, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1
N = No
NA = Not applicable
NS = No Standard
U = nondetect
Y = Yes

TABLE 3
POST BIP SOIL SAMPLES RISK TABLES ARYO-005-003
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

Chemical	CAS Number	Units	Final Result		Raw Data Result	TEF	Background Value (1)	Exceeds Background (Y/N)	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)															
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.04	U			NA	NA	NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.04	U			NA	NA	NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.069	U			NA	NA	211	N	36	N	NMED		
2,4-Dinitrotoluene	121-14-2	mg/kg	0.04	U			NA	NA	17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.04	U			NA	NA	3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.069	U			NA	NA	NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.099	U			NA	NA	31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.15	U			NA	NA	NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.069	U			NA	NA	NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.099	U			NA	NA	333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.099	U			NA	NA	83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.099	U			NA	NA	NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.2	U			NA	NA	60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.69	U			NA	NA	313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.069	U			NA	NA	NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.99	U			NA	NA	1,300	N	570	N	RSL		
												Cumulative Risk/Hazard		**0E+00**	**0**
												Exceeds Target Level		**N**	**N**

FOOTNOTES:
1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2024, November Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1
N = No
NA = Not applicable
NS = No Standard
U = nondetect
Y = Yes

TABLE 3
POST BIP SOIL SAMPLES RISK TABLES ARYO-0006
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

Chemical	CAS Number	Units	Final Result		Raw Data Result	TEF	Background Value (1)	Exceeds Background (Y/N)	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)															
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NA	NA	NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NA	NA	NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.79				NA	NA	211	N	36	N	NMED	3.74E-08	2.19E-02
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			NA	NA	17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			NA	NA	3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NA	NA	NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			NA	NA	31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NA	NA	NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NA	NA	NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			NA	NA	333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			NA	NA	83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NA	NA	NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			NA	NA	60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			NA	NA	313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NA	NA	NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			NA	NA	1,300	N	570	N	RSL		
													Cumulative Risk/Hazard	**4E-08**	**0.02**
													Exceeds Target Level	**N**	**N**

FOOTNOTES:
1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2024, May Update).
Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1
mg/kg = milligrams per kilogram
N = No
NA = Not Applicable
NS = No Standard
U = not detected
Y = Yes

TABLE 3
POST BIP SOIL SAMPLES RISK TABLES ARYO-0007
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

Chemical	CAS Number	Units	Final Result		Raw Data Result	TEF	Background Value (1)	Exceeds Background (Y/N)	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)															
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.075	U			NA	NA	NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.075	U			NA	NA	NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.74	J			NA	NA	211	N	36	N	NMED	3.51E-08	2.06E-02
2,4-Dinitrotoluene	121-14-2	mg/kg	0.075	U			NA	NA	17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.075	U			NA	NA	3.56	N	18.5	N	NMED		
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.075	U			NA	NA	NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.075	U			NA	NA	31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.075	U			NA	NA	NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.075	U			NA	NA	NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.075	U			NA	NA	333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.075	U			NA	NA	83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.075	U			NA	NA	NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.075	U			NA	NA	60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			NA	NA	313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.075	U			NA	NA	NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.25	U			NA	NA	1,300	N	570	N	RSL		
												Cumulative Risk/Hazard		**4E-08**	**0.02**
												Exceeds Target Level		**N**	**N**

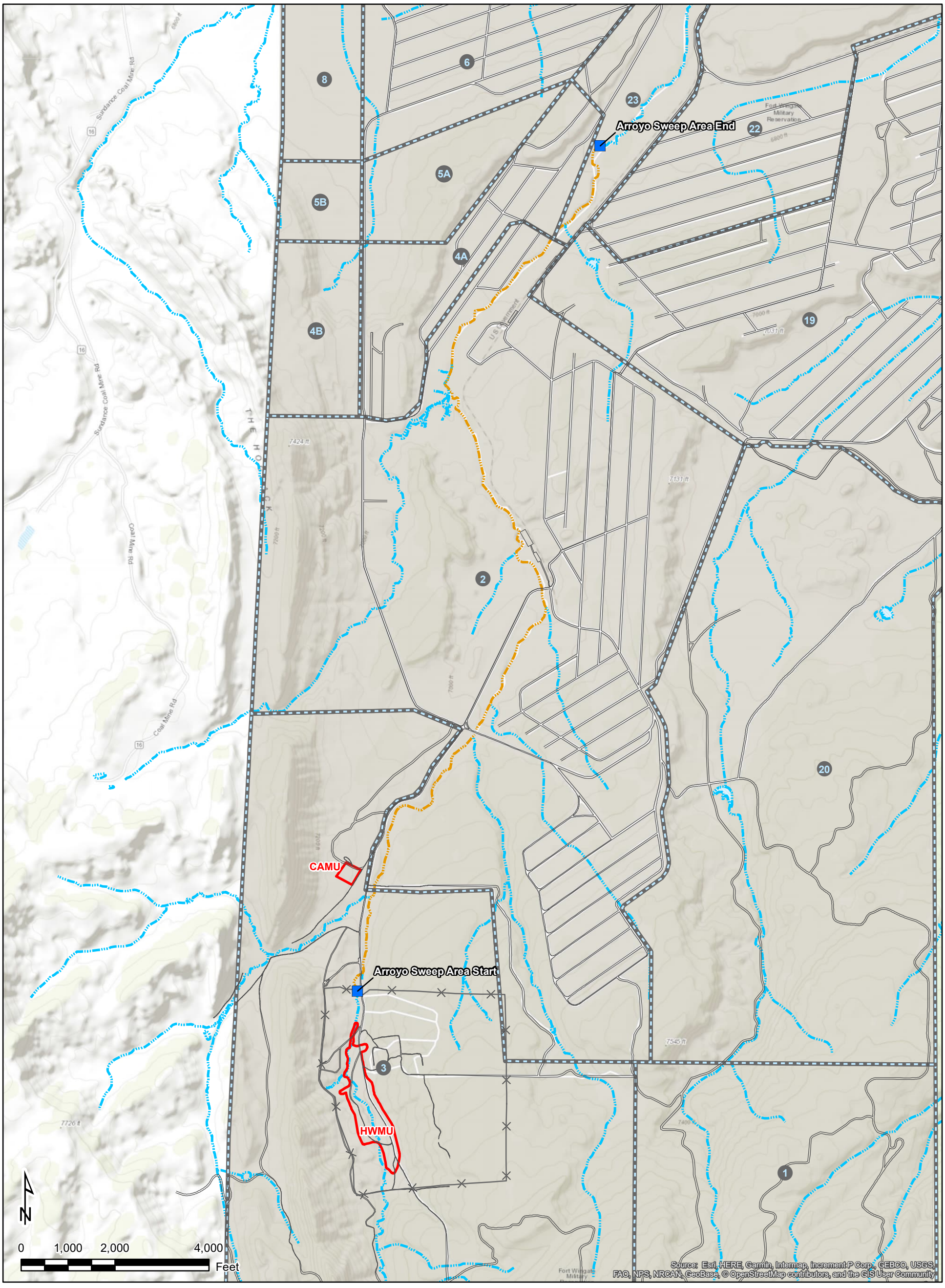
FOOTNOTES:
1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2024, May Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1
J = estimated
mg/kg = milligrams per kilogram
N = No
NA = Not Applicable
NS = No Standard
U = not detected
Y = Yes

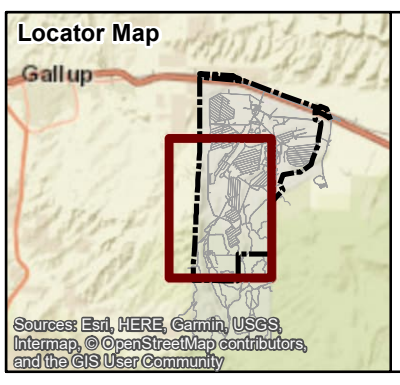
TABLE 3
POST BIP SOIL SAMPLES RISK TABLES ARYO-0008
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO

Chemical	CAS Number	Units	Final Result		Raw Data Result	TEF	Background Value (1)	Exceeds Background (Y/N)	Residential Value Cancer Endpoint	Exceeds Residential SSL (cancer) (Y/N)	Residential Value Noncancer Endpoint	Exceeds Residential SSL (noncancer) (Y/N)	Source (2)	Estimated Cancer Risk	Estimated Hazard Quotient
EXPLOSIVES (mg/kg)															
1,3,5-Trinitrobenzene	99-35-4	mg/kg	0.073	U			NA	NA	NS	NS	2,200	N	RSL		
1,3-Dinitrobenzene	99-65-0	mg/kg	0.073	U			NA	NA	NS	NS	6.3	N	RSL		
2,4,6-Trinitrotoluene	118-96-7	mg/kg	0.66				NA	NA	211	N	36	N	NMED	3.13E-08	1.83E-02
2,4-Dinitrotoluene	121-14-2	mg/kg	0.073	U			NA	NA	17.1	N	123	N	NMED		
2,6-Dinitrotoluene	606-20-2	mg/kg	0.1	J			NA	NA	3.56	N	18.5	N	NMED	2.81E-07	5.41E-03
2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	0.073	U			NA	NA	NS	NS	7.7	N	NMED		
2-Nitrotoluene (o-nitrotoluene)	88-72-2	mg/kg	0.073	U			NA	NA	31.6	N	70.4	N	NMED		
3-Nitrotoluene (m-nitrotoluene)	99-08-1	mg/kg	0.073	U			NA	NA	NS	NS	6.16	N	NMED		
4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	0.073	U			NA	NA	NS	NS	7.64	N	NMED		
4-Nitrotoluene (p-nitrotoluene)	99-99-0	mg/kg	0.073	U			NA	NA	333	N	247	N	NMED		
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	121-82-4	mg/kg	0.073	U			NA	NA	83.1	N	301	N	NMED		
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	479-45-8	mg/kg	0.073	UJ			NA	NA	NS	NS	156	N	NMED		
Nitrobenzene	98-95-3	mg/kg	0.073	U			NA	NA	60.4	N	131	N	NMED		
Nitroglycerine	55-63-0	mg/kg	0.15	U			NA	NA	313	N	6.16	N	NMED		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	mg/kg	0.073	U			NA	NA	NS	NS	3,850	N	NMED		
Pentaerythritol tetranitrate (PETN)	78-11-5	mg/kg	0.24	U			NA	NA	1,300	N	570	N	RSL		
												Cumulative Risk/Hazard		**3E-07**	**0.02**
												Exceeds Target Level		**N**	**N**

FOOTNOTES:
1) NMED = New Mexico Environment Department Screening Levels (NMED 2022, November update). Cancer Risk = 1E-05, Hazard Quotient 1; RSL = Regional Screening Levels (USEPA 2024, May Update). Cancer Risk Adjusted to = 1E-05, Hazard Quotient = 1
J = estimated
mg/kg = milligrams per kilogram
N = No
NA = Not Applicable
NS = No Standard
U = not detected
UJ = estimated nondetect
Y = Yes

Figures





Legend

- Installation Boundary
- Parcel Boundary
- HWMU/CAMU Boundary
- Security Fence
- Road
- Arroyo
- Arroyo Sweep Area
- Arroyo Sweep Extent

Arroyo Sweep Location
Fort Wingate Depot Activity
McKinley County, New Mexico

Drawn By:	Date:	
JZ	7/12/2024	**Figure 1**
Checked By:	Project No.	
JC	60517380	

O:\DCS\Projects\ENV\GIS\Fort_Wingate\Parcel_3\Figures\Arroyo_sweep\Fig1_sweep_loc.mxd

Area of Detail

0 150 300 600 Feet

Arroyo Sweep Area End

CAMU

Arroyo Sweep Area Start

HWMU

N

0 750 1,500 3,000 Feet

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Locator Map

Gallup

Sources: Esri, HERE, Garmin, USGS, Intermap, © OpenStreetMap contributors, and the GIS User Community

- Installation Boundary
- Parcel Boundary
- HWMU/CAMU Boundary
- Security Fence
- Road
- Arroyo
- Arroyo Sweep Area
- Arroyo Sweep Extent

Sweep Result

- MEC (BIP)
- MEC (CAMU Disposal)

Note: The arroyo sweep continued 0.26 miles downstream from the last recovered MEC item.

MEC Removed During Arroyo Sweep
Fort Wingate Depot Activity
McKinley County, New Mexico

Drawn By:	Date:	
JZ	1/6/2025	**Figure 2**
Checked By:	Project No.	
JC	60517380	

O:\DCS\Projects\ENV\GIS\Fort_Wingate\Parcel_3\Figures\Arroyo_sweep\Fig2_mec_results.mxd

P2ARROYO-0008

CAMU

P3HWMU-ARYO-0001

P2-ARROYO-0007

P3HWMU-ARYO-0002

P2-ARROYO-0005*

P2-ARROYO-005-002

P2-ARROYO-005-003

P2-ARROYO-0003

P2-ARROYO-0004

P2-ARROYO-0006

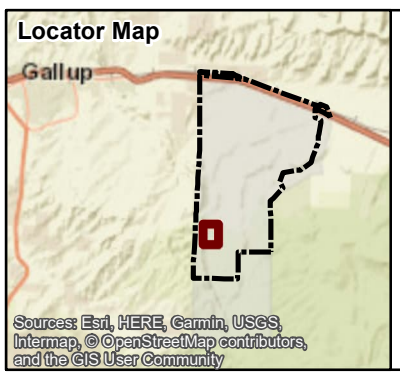
0 10 20 40 Feet

0 150 300 600 Feet

N

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Locator Map



Legend

- Installation Boundary
- HWMU/CAMU Boundary
- Security Fence
- Road
- Arroyo
- Arroyo Sweep Area
- DMM BIP Location

* **Note:** As shown on **Figure 4**, up to 9 inches of soil was removed from the surface within an approximate 15-foot diameter area surrounding composite sampling location P2ARROYO-0005 that was sampled "clean" after two sequential soil excavation and resampling efforts.

Post-BIP Soil Sample Locations
Fort Wingate Depot Activity
McKinley County, New Mexico

Drawn By:	Date:	
JZ	8/13/2025	**Figure 3**
Checked By:	Project No.	
JC	60517380	

O:\DCS\Projects\ENV\GIS\Fort_Wingate\Parcel_3\Figures\Arroyo_sweep\Fig3_BIPs.mxd

P3HWMU-ARYO-0001

P2-ARROYO-0007

P3HWMU-ARYO-0002

P2-ARROYO-0005
P2-ARROYO-005-002
P2-ARROYO-005-003

P2-ARROYO-0003

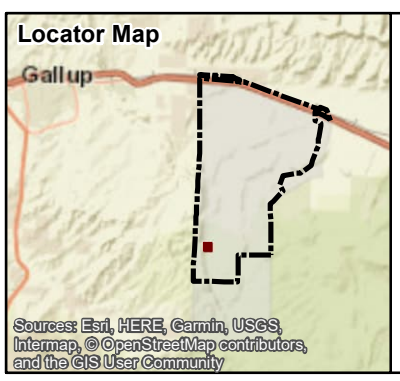
P2-ARROYO-0004

P2-ARROYO-0006

N

0 5 10 20
Feet

Locator Map



Legend

- Installation Boundary
- Security Fence
- Arroyo
- Arroyo Sweep Area
- DMM BIP Location
- Initial P2ARROYO-0005 Composite Sample Location
- Initial Soil Removal Area (9 inches)
- Second Soil Removal Area (6 inches)

Post-BIP Soil Removal
Fort Wingate Depot Activity
McKinley County, New Mexico

Drawn By:	Date:	
JZ	8/13/2025	**Figure 4**
Checked By:	Project No.	
JC	60517380	

O:\DCS\Projects\ENV\GIS\Fort_Wingate\Parcel_3\Figures\Arroyo_sweep\Fig4_soil_removal.mxd

Attachment A

A.1 Laboratory Data Reports

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

908 N. Temperance Ave., Clovis, CA 93611 - Phone 559-275-2175 - www.metirigroup.com

NELAP Certification Number: CA00046
DoD-ELAP Certification Number 4064.01
State Certification Number:

September 18, 2024

John Carson
AECOM Omaha
12120 Shamrock Plaza Suite 300
Omaha, NE 68154

RE: Wingate
24I0021

Enclosed are the results of analyses for samples received by our laboratory on 9/4/2024. If you have any questions concerning this report, please feel free to contact me.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness. These test results meet all requirements of NELAC and DoD QSM. Release of the hard copy has been authorized by the Laboratory Manager or designee, as verified by the following signature.

Sincerely,

Karen Volpendesta For Eric Ogden
Project Manager

eric.ogden@metirigroup.com

The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document.
No duplication of this report is allowed, except in its entirety.

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

AECOM Omaha	Project: Wingate	
12120 Shamrock Plaza Suite 300	Project Number: Wingate 60517380 Task 3	
Omaha, NE 68154	Project Manager: John Carson	Reported: 09/18/2024 10:46

Data Validatable Report

Samples in this Report

Lab ID	Sample	Matrix	Date Sampled	Date Received
24I0021-01	P3HWMU-ARYO-0001	Solid	09/02/2024 09:22	09/04/2024
24I0021-02	P3HWMU-ARYO-0002	Solid	09/02/2024 09:26	09/04/2024

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

AECOM Omaha	Project: Wingate	
12120 Shamrock Plaza Suite 300	Project Number: Wingate 60517380 Task 3	
Omaha, NE 68154	Project Manager: John Carson	Reported: 09/18/2024 10:46

Containers Received

Lab ID	Container Type	Count	Preservation Check
24I0021-01			
	8oz Jar Wmouth	1	
24I0021-02			
	8oz Jar Wmouth	1	

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

AECOM Omaha	Project: Wingate	
12120 Shamrock Plaza Suite 300	Project Number: Wingate 60517380 Task 3	
Omaha, NE 68154	Project Manager: John Carson	Reported: 09/18/2024 10:46

Sample Results

Sample: P3HWMU-ARYO-0001
24I0021-01 (Solid)

Liquid Chromatography

Analyte	Result /Qual	LOQ	LOD	DL	Units	Date Analyzed	DF	Method	Prep Batch
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.074 U	0.50	0.074	0.037	mg/kg	09/12/24	1	EPA 8330B	BDI0121
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.074 U	0.50	0.074	0.025	mg/kg	09/12/24	1	EPA 8330B	BDI0121
1,3,5-TRINITROBENZENE	0.074 U	0.50	0.074	0.013	mg/kg	09/12/24	1	EPA 8330B	BDI0121
1,3-DINITROBENZENE	0.074 U	0.50	0.074	0.022	mg/kg	09/12/24	1	EPA 8330B	BDI0121
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	0.074 U	0.50	0.074	0.037	mg/kg	09/12/24	1	EPA 8330B	BDI0121
NITROBENZENE	0.074 U	0.50	0.074	0.028	mg/kg	09/12/24	1	EPA 8330B	BDI0121
2,4,6-TRINITROTOLUENE	0.074 U	0.50	0.074	0.031	mg/kg	09/12/24	1	EPA 8330B	BDI0121
4-AMINO-2,6-DINITROTOLUENE	0.074 U	0.50	0.074	0.034	mg/kg	09/12/24	1	EPA 8330B	BDI0121
2-AMINO-4,6-DINITROTOLUENE	0.074 U	0.50	0.074	0.034	mg/kg	09/12/24	1	EPA 8330B	BDI0121
2,4-DINITROTOLUENE	0.074 U	0.50	0.074	0.028	mg/kg	09/12/24	1	EPA 8330B	BDI0121
2,6-DINITROTOLUENE	0.074 U	0.50	0.074	0.031	mg/kg	09/12/24	1	EPA 8330B	BDI0121
2-NITROTOLUENE	0.074 U	0.50	0.074	0.037	mg/kg	09/12/24	1	EPA 8330B	BDI0121
3-NITROTOLUENE	0.074 U	0.50	0.074	0.037	mg/kg	09/12/24	1	EPA 8330B	BDI0121
4-NITROTOLUENE	0.074 U	0.50	0.074	0.037	mg/kg	09/12/24	1	EPA 8330B	BDI0121
NITROGLYCERIN	0.15 U	0.50	0.15	0.061	mg/kg	09/12/24	1	EPA 8330B	BDI0121
PENTAERYTHRITOL TETRANITRATE	0.25 U	2.5	0.25	0.11	mg/kg	09/12/24	1	EPA 8330B	BDI0121
Surrogate: 1,2-DINITROBENZENE	*91.3%*		*78-119*			*09/12/24*	1	*EPA 8330B*	*BDI0121*

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

AECOM Omaha	Project: Wingate	
12120 Shamrock Plaza Suite 300	Project Number: Wingate 60517380 Task 3	
Omaha, NE 68154	Project Manager: John Carson	Reported: 09/18/2024 10:46

Sample Results

(Continued)

Sample: P3HWMU-ARYO-0002
24I0021-02 (Solid)

Liquid Chromatography

Analyte	Result	/Qual	LOQ	LOD	DL	Units	Date Analyzed	DF	Method	Prep Batch
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.074	U	0.50	0.074	0.037	mg/kg	09/12/24	1	EPA 8330B	BDI0121
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.074	U	0.50	0.074	0.025	mg/kg	09/12/24	1	EPA 8330B	BDI0121
1,3,5-TRINITROBENZENE	0.074	U	0.50	0.074	0.013	mg/kg	09/12/24	1	EPA 8330B	BDI0121
1,3-DINITROBENZENE	0.074	U	0.50	0.074	0.022	mg/kg	09/12/24	1	EPA 8330B	BDI0121
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	0.074	U	0.50	0.074	0.037	mg/kg	09/12/24	1	EPA 8330B	BDI0121
NITROBENZENE	0.074	U	0.50	0.074	0.028	mg/kg	09/12/24	1	EPA 8330B	BDI0121
2,4,6-TRINITROTOLUENE	12		0.50	0.074	0.031	mg/kg	09/12/24	1	EPA 8330B	BDI0121
4-AMINO-2,6-DINITROTOLUENE	0.35	J	0.50	0.074	0.034	mg/kg	09/12/24	1	EPA 8330B	BDI0121
2-AMINO-4,6-DINITROTOLUENE	0.22	J	0.50	0.074	0.034	mg/kg	09/12/24	1	EPA 8330B	BDI0121
2,4-DINITROTOLUENE	0.074	U	0.50	0.074	0.028	mg/kg	09/12/24	1	EPA 8330B	BDI0121
2,6-DINITROTOLUENE	0.074	U	0.50	0.074	0.031	mg/kg	09/12/24	1	EPA 8330B	BDI0121
2-NITROTOLUENE	0.074	U	0.50	0.074	0.037	mg/kg	09/12/24	1	EPA 8330B	BDI0121
3-NITROTOLUENE	0.074	U	0.50	0.074	0.037	mg/kg	09/12/24	1	EPA 8330B	BDI0121
4-NITROTOLUENE	0.074	U	0.50	0.074	0.037	mg/kg	09/12/24	1	EPA 8330B	BDI0121
NITROGLYCERIN	0.15	U	0.50	0.15	0.061	mg/kg	09/12/24	1	EPA 8330B	BDI0121
PENTAERYTHRITOL TETRANITRATE	0.25	U	2.5	0.25	0.11	mg/kg	09/12/24	1	EPA 8330B	BDI0121
Surrogate: 1,2-DINITROBENZENE	*101%*			*78-119*			*09/12/24*	1	*EPA 8330B*	*BDI0121*

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

AECOM Omaha	Project: Wingate	
12120 Shamrock Plaza Suite 300	Project Number: Wingate 60517380 Task 3	
Omaha, NE 68154	Project Manager: John Carson	Reported: 09/18/2024 10:46

Quality Control

Liquid Chromatography

Analyte	Result/Qual	LOQ	LOD	MDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Method: EPA 8330B										
Batch: BDI0121 - EPA 8330B										
	mg/kg									
Blank (BDI0121-BLK1)						Prepared: 09/07/24 13:13 Analyzed: 09/12/24 12:50				
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.074 U	0.50	0.074	0.037						
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.074 U	0.50	0.074	0.025						
1,3,5-TRINITROBENZENE	0.074 U	0.50	0.074	0.013						
1,3-DINITROBENZENE	0.074 U	0.50	0.074	0.022						
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	0.074 U	0.50	0.074	0.037						
NITROBENZENE	0.074 U	0.50	0.074	0.028						
2,4,6-TRINITROTOLUENE	0.074 U	0.50	0.074	0.031						
4-AMINO-2,6-DINITROTOLUENE	0.074 U	0.50	0.074	0.034						
2-AMINO-4,6-DINITROTOLUENE	0.074 U	0.50	0.074	0.034						
2,4-DINITROTOLUENE	0.074 U	0.50	0.074	0.028						
2,6-DINITROTOLUENE	0.074 U	0.50	0.074	0.031						
2-NITROTOLUENE	0.074 U	0.50	0.074	0.037						
3-NITROTOLUENE	0.074 U	0.50	0.074	0.037						
4-NITROTOLUENE	0.074 U	0.50	0.074	0.037						
NITROGLYCERIN	0.15 U	0.50	0.15	0.060						
PENTAERYTHRITOL TETRANITRATE	0.25 U	2.5	0.25	0.11						
Surrogates										
1,2-DINITROBENZENE	*2.02*				*1.98*		*102*	*78-119*		
	mg/kg									
LCS (BDI0121-BS1)						Prepared: 09/07/24 13:13 Analyzed: 09/12/24 13:33				
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	1.87				1.98		94.6	74-124		
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	1.91				1.98		96.6	67-129		
1,3,5-TRINITROBENZENE	1.86				1.98		93.8	80-116		
1,3-DINITROBENZENE	1.94				1.98		97.6	73-119		
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	1.49				1.98		75.4	68-135		
NITROBENZENE	1.93				1.98		97.5	67-129		
2,4,6-TRINITROTOLUENE	1.94				1.98		98.0	71-120		
4-AMINO-2,6-DINITROTOLUENE	1.91				1.98		96.2	64-127		
2-AMINO-4,6-DINITROTOLUENE	1.93				1.98		97.4	71-123		
2,4-DINITROTOLUENE	1.92				1.98		96.9	75-121		
2,6-DINITROTOLUENE	1.86				1.98		94.0	79-117		
2-NITROTOLUENE	1.92				1.98		96.8	70-124		
3-NITROTOLUENE	1.93				1.98		97.3	67-129		
4-NITROTOLUENE	1.90				1.98		95.8	71-124		
NITROGLYCERIN	1.96				1.98		99.0	73-124		
PENTAERYTHRITOL TETRANITRATE	2.06 J				1.98		104	72-128		
Surrogates										
1,2-DINITROBENZENE	*1.95*				*1.98*		*98.5*	*78-119*		

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

AECOM Omaha	Project: Wingate	
12120 Shamrock Plaza Suite 300	Project Number: Wingate 60517380 Task 3	
Omaha, NE 68154	Project Manager: John Carson	Reported: 09/18/2024 10:46

Quality Control
(Continued)

Liquid Chromatography (Continued)

Analyte	Result/Qual	LOQ	LOD	MDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
	mg/kg									
LCS Dup (BDI0121-BSD1)						Prepared: 09/07/24 13:13		Analyzed: 09/12/24 14:15		
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	1.89				1.99		95.4	74-124	1.07	20
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	1.94				1.99		97.5	67-129	1.15	20
1,3,5-TRINITROBENZENE	1.88				1.99		94.4	80-116	0.882	20
1,3-DINITROBENZENE	1.92				1.99		96.7	73-119	0.730	20
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	1.46				1.99		73.7	68-135	2.11	20
NITROBENZENE	1.94				1.99		97.9	67-129	0.624	20
2,4,6-TRINITROTOLUENE	1.96				1.99		98.9	71-120	1.06	20
4-AMINO-2,6-DINITROTOLUENE	1.92				1.99		96.9	64-127	0.919	20
2-AMINO-4,6-DINITROTOLUENE	1.95				1.99		98.1	71-123	0.957	20
2,4-DINITROTOLUENE	1.95				1.99		98.0	75-121	1.31	20
2,6-DINITROTOLUENE	1.90				1.99		95.6	79-117	1.85	20
2-NITROTOLUENE	1.93				1.99		97.3	70-124	0.718	20
3-NITROTOLUENE	1.95				1.99		98.4	67-129	1.35	20
4-NITROTOLUENE	1.93				1.99		96.9	71-124	1.34	20
NITROGLYCERIN	1.99				1.99		100	73-124	1.42	20
PENTAERYTHRITOL TETRANITRATE	2.17 J				1.99		109	72-128	5.31	20
Surrogates										
1,2-DINITROBENZENE	*2.01*				*1.99*		*101*	*78-119*		

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

AECOM Omaha	Project: Wingate	
12120 Shamrock Plaza Suite 300	Project Number: Wingate 60517380 Task 3	
Omaha, NE 68154	Project Manager: John Carson	Reported: 09/18/2024 10:46

Notes and Definitions

Item	Definition
J	Estimated value
MI2	Manual integration, non-target peak interference
U	Not detected
Dry	Sample results reported on a dry weight basis.
DF	Dilution Factor
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
*	Value outside control limits
RPD	Relative Percent Difference
%REC	Percent Recovery
Source	Sample that was matrix spiked or duplicated.

LOQ, Limit of Quantitation = Method Reporting Limit (MRL).

The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document.
No duplication of this report is allowed, except in its entirety.

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

WORK ORDER

24I0021

Printed: 09/18/2024 10:46 am

Project: **Wingate**
Project Number: **Wingate 60517380 Task 3**
Project Manager: **Eric Ogden**
PO Number: **1630628**

Report To:
AECOM Omaha
John Carson
12120 Shamrock Plaza Suite 300
Omaha, NE 68154
Phone: (402) 334-8181
Fax: (402) 334-1984

Invoice To:
AECOM Omaha
John Carson
12120 Shamrock Plaza Suite 300
Omaha, NE 68154
Phone: (402) 334-8181
Fax: (402) 334-1984

Date Received: 09/04/2024 10:00 AM
Date Due: 09/18/2024 (10.00 day TAT)

Logged In By: Christina Aguilar
Received By: Christina Aguilar

Analysis	Comments
24I0021-01 P3HWMU-ARYO-0001 [Solid] Sampled 9/2/2024 9:22:00AM	
8330B DOD	Wingate
24I0021-02 P3HWMU-ARYO-0002 [Solid] Sampled 9/2/2024 9:26:00AM	
8330B DOD	Wingate

24I0021 **Sample Receipt Log**

Default Cooler

Samples Received at: **5.0°C**

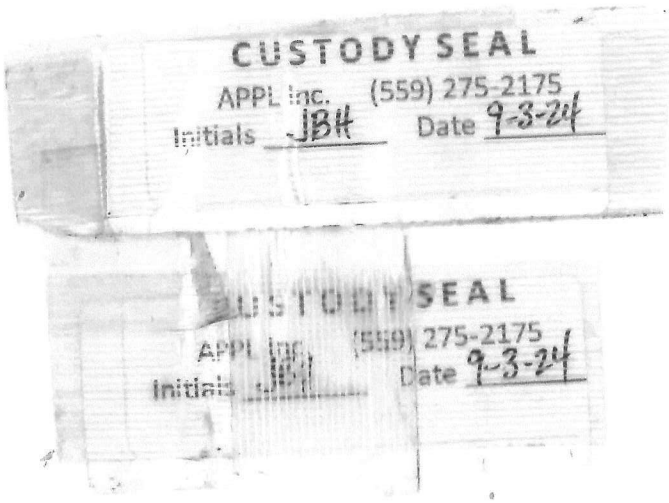
Custody Seals	Yes	Were all containers sealed in separate bags?	Yes
Containers Intact	Yes	Did all containers arrive in good condition?	Yes
COC/Labels Agree	Yes	Correct containers/preserv. for tests indicated?	Yes
Preservation Confirmed	Yes	Sufficient volume sent for tests requested?	Yes
Received On Ice	Yes	VOA vials for volatiles analysis of water are bubb	No
Was a chain of custody received?	Yes	Sufficient remaining holding time for analyses?	Yes
COCs complete/signed in the appropriate places?	Yes	pH of non-VOA preserved containers documented?	No
Sample labels complete? Sample ID, date/time, etc.	Yes	Unpreserved vials received for VOA analysis?	No
Did all container labels agree with COCs?	Yes	If "yes", are unpreserved VOA vials noted on Work	No

Project Name: Parcel 3 Closure and Corrective Action				Project #: 60517380 Task 3	AECOM 12120 Shamrock Plaza #100 Omaha NE 68154												AECOM
Sampler: Jeff Hayes				Project Mgr John C. Carson PE				Analytical Parameters									402.334.8181
Date	Time	Comp	Grab	ID	Matrix	# Containers	Cont Type	VOC's 8260B	SVOC's 8270D	PCB's 8082A	Explosives 8330B	Dioxins/Furans 8290	Perchlorates 6850	Metals 6010A.6020B.7471B	Nitrate 9056A	Cyanide 9014	NDMA 8270D SIM	PAGE 1 of 1
9/2/2024	9:22	X		P3HWMU-ARYO-0001	soil	1	8 oz jar				X							4C
				Note: South BIP														
9/2/2024	9:26	X		P3HWMU-ARYO-0002	soil	1	8 oz jar				X							4C
				Note: North BIP														
Relenquished By: *Jeffrey Hayes*								Fedex									AECOM Chemist:	
Received By:				Sept 03 2024 (TUES)				7783-2268-5071									Wanda Davis	
Relenquished By:				Ship Time: 1600				To: APPL Labs									302-465-1997	
Rcv'd for Lab by: C. Aguilar - Appl Inc.				1000 8/4/24 B5 -5°C				ATTN: Monica Garcia-Strickland 908 N. Temperance Ave Clovis CA 93611-8606									Brian Rothmeyer 303-619-6342	

NO. 141861

Table of Contents

C. Aguilar 1000 @ 9/4/24 RS - 5°C



HPLC

SAMPLE DATA

ANALYSIS DATA SHEET

P3HWMU-ARYO-0001

Laboratory:	APPL, LLC			Work Order:	24I0021
Client:	AECOM			Project:	Wingate 60517380 Task 3
Matrix:	Solid	Laboratory ID:	24I0021-01	File ID:	S2024-09-12-010
Sampled:	09/02/24 09:22	Prepared:	09/07/24 13:13	Analyzed:	09/12/24 16:23
Solids:		Preparation:	EPA 8330B	Dilution:	1
Initial/Final:	10.08 g / 80 mL			Instrument:	STATLER
Batch:	BDI0121	Sequence:	SD03767	Calibration:	2420012

COMPOUND	CONC. (mg/kg)	LOQ	LOD	DL	Q
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCIN	0.074 U	0.50	0.074	0.037	
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.074 U	0.50	0.074	0.025	
1,3,5-TRINITROBENZENE	0.074 U	0.50	0.074	0.013	
1,3-DINITROBENZENE	0.074 U	0.50	0.074	0.022	
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	0.074 U	0.50	0.074	0.037	
NITROBENZENE	0.074 U	0.50	0.074	0.028	
2,4,6-TRINITROTOLUENE	0.074 U	0.50	0.074	0.031	
4-AMINO-2,6-DINITROTOLUENE	0.074 U	0.50	0.074	0.034	
2-AMINO-4,6-DINITROTOLUENE	0.074 U	0.50	0.074	0.034	
2,4-DINITROTOLUENE	0.074 U	0.50	0.074	0.028	
2,6-DINITROTOLUENE	0.074 U	0.50	0.074	0.031	
2-NITROTOLUENE	0.074 U	0.50	0.074	0.037	
3-NITROTOLUENE	0.074 U	0.50	0.074	0.037	
4-NITROTOLUENE	0.074 U	0.50	0.074	0.037	
NITROGLYCERIN	0.15 U	0.50	0.15	0.061	
PENTAERYTHRITOL TETRANITRATE	0.25 U	2.5	0.25	0.11	

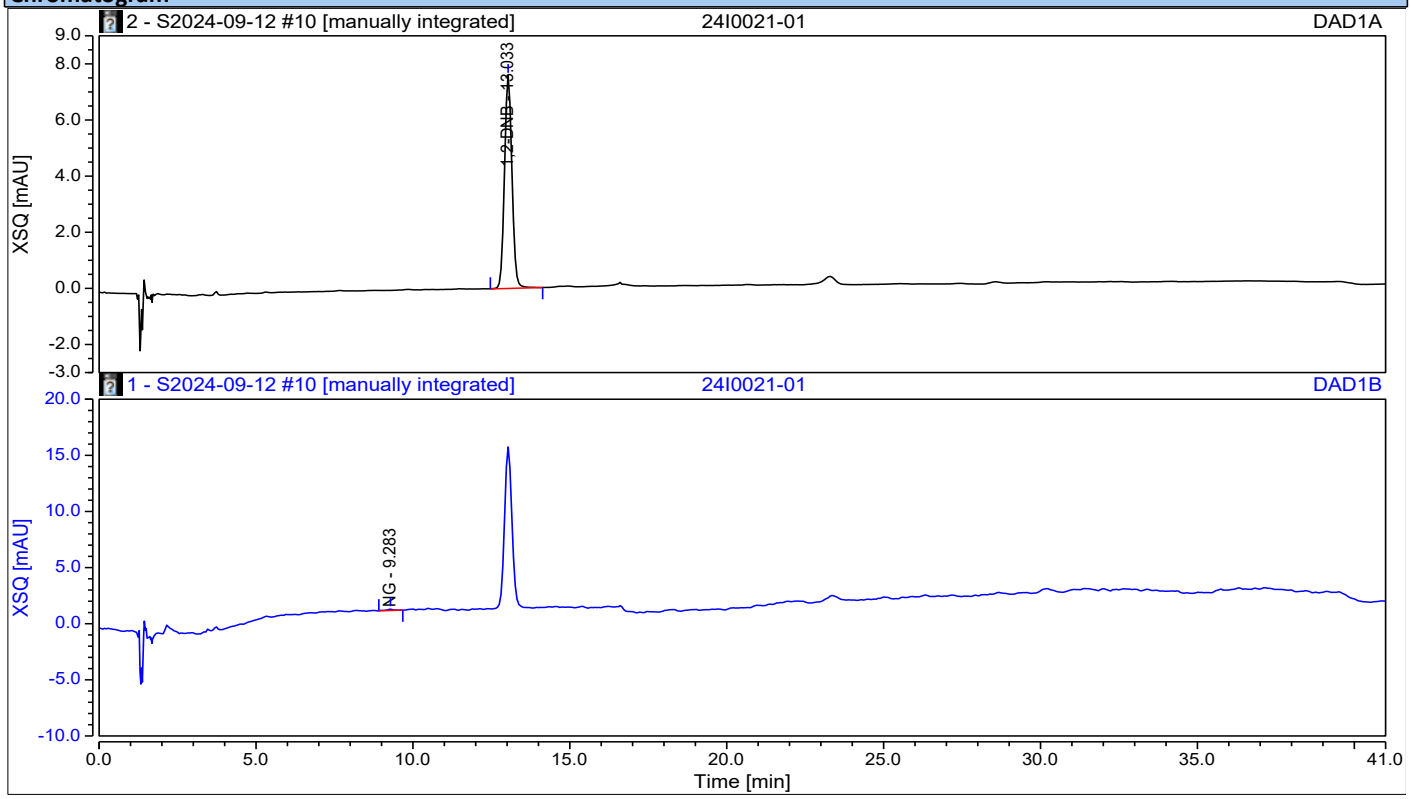
Instrument:
Sequence:S2024-09-12

Chromatogram and Results

Injection Details

Injection Name:	**24I0021-01**	*Instrument:*	**Statler**
Vial Number:	**10**	*Run Time (min):*	**41.00**
Injection Type:	**Unknown**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**12/Sep/2024 16:23**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**12/Aug/2024 08:22**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.283	0.0328	0.121	100.00	100.00	6.2046
n.a.	PETN	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	HMX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	RDX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3,5-DNA	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	NB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	1,2-DNB	13.033	2.0950	7.580	100.00	100.00	228.1280
n.a.	4-Am-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2-Am-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	1,3-DNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	4-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2,6-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	1,3,5-TNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2,4-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Tetryl	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2,4,6-TNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**2.128**	**7.701**	**200.000**	**200.000**	

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ANALYSIS DATA SHEET

P3HWMU-ARYO-0001

Laboratory:	APPL, LLC			Work Order:	24I0021
Client:	AECOM			Project:	Wingate 60517380 Task 3
Matrix:	Solid	Laboratory ID:	24I0021-01RE1	File ID:	W2024-09-12-010
Sampled:	09/02/24 09:22	Prepared:	09/07/24 13:13	Analyzed:	09/12/24 14:46
Solids:		Preparation:	EPA 8330B	Dilution:	1
Initial/Final:	10.08 g / 80 mL			Instrument:	Waldorf
Batch:	BDI0121	Sequence:	SD03770	Calibration:	2433019

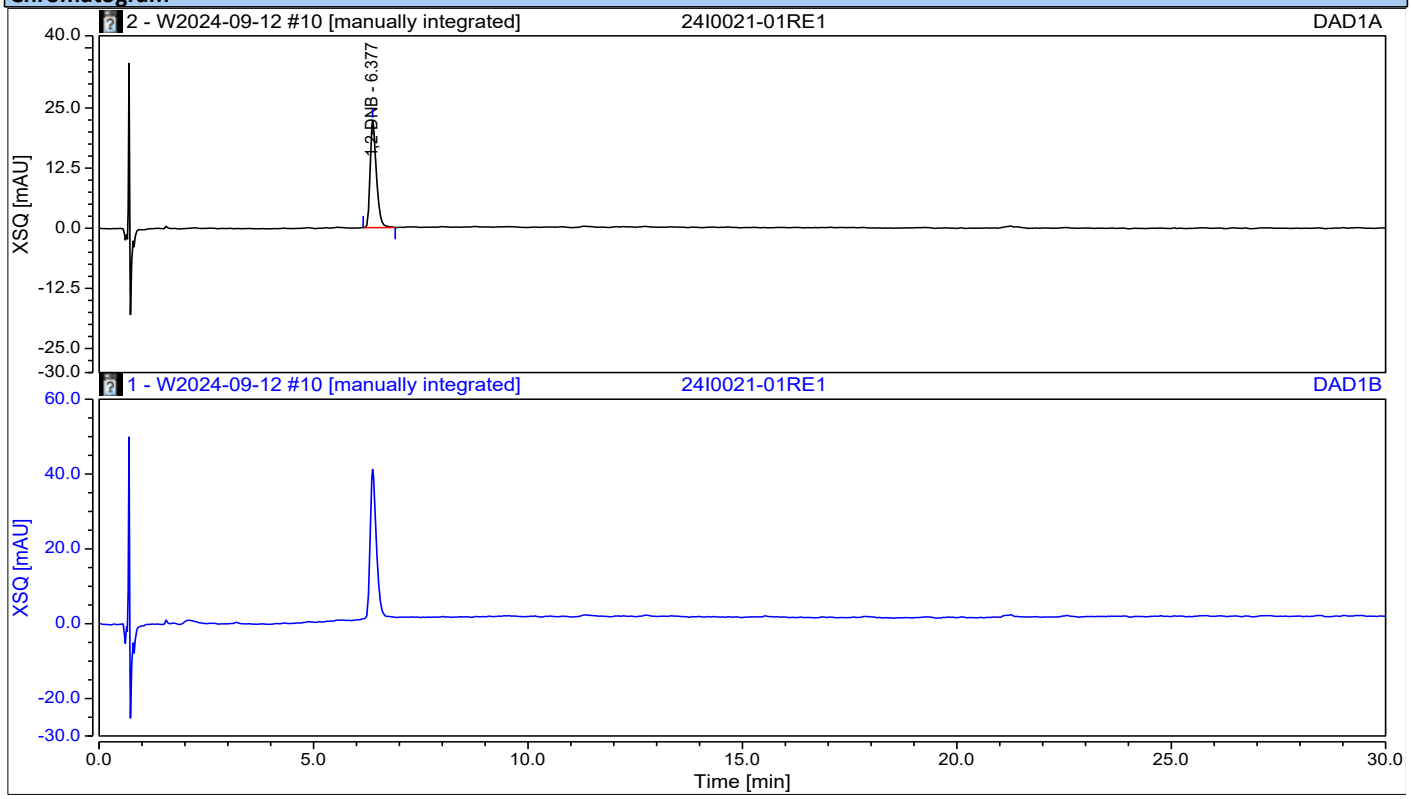
COMPOUND	CONC. (mg/kg)	LOQ	LOD	DL	Q
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCIN	0.074 U	0.50	0.074	0.037	
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.074 U	0.50	0.074	0.025	
1,3,5-TRINITROBENZENE	0.074 U	0.50	0.074	0.013	
1,3-DINITROBENZENE	0.074 U	0.50	0.074	0.022	
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	0.074 U	0.50	0.074	0.037	
NITROBENZENE	0.074 U	0.50	0.074	0.028	
2,4,6-TRINITROTOLUENE	0.074 U	0.50	0.074	0.031	
4-AMINO-2,6-DINITROTOLUENE	0.074 U	0.50	0.074	0.034	
2-AMINO-4,6-DINITROTOLUENE	0.074 U	0.50	0.074	0.034	
2,4-DINITROTOLUENE	0.074 U	0.50	0.074	0.028	
2,6-DINITROTOLUENE	0.074 U	0.50	0.074	0.031	
2-NITROTOLUENE	0.074 U	0.50	0.074	0.037	
3-NITROTOLUENE	0.074 U	0.50	0.074	0.037	
4-NITROTOLUENE	0.074 U	0.50	0.074	0.037	
NITROGLYCERIN	0.15 U	0.50	0.15	0.061	
PENTAERYTHRITOL TETRANITRATE	0.25 U	2.5	0.25	0.11	

Chromatogram and Results

Injection Details

Injection Name:	**24I0021-01RE1**	*Instrument:*	**Waldorf**
Vial Number:	**10**	*Run Time (min):*	**30.00**
Injection Type:	**Unknown**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**12/Sep/2024 14:46**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**13/Sep/2024 16:48**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
n.a.	NG	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	PETN	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	HMX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	RDX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	1,3,5-TNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	1,2-DNB	6.377	3.7106	22.256	100.00	100.00	231.6710
n.a.	1,3-DNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3,5-DNA	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	NB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Tetryl	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2,4,6-TNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2-Am-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	4-Am-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2,4-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2,6-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	4-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**3.711**	**22.256**	**100.000**	**100.000**	

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ANALYSIS DATA SHEET

P3HWMU-ARYO-0002

Laboratory:	APPL, LLC			Work Order:	24I0021
Client:	AECOM			Project:	Wingate 60517380 Task 3
Matrix:	Solid	Laboratory ID:	24I0021-02	File ID:	S2024-09-12-011
Sampled:	09/02/24 09:26	Prepared:	09/07/24 13:13	Analyzed:	09/12/24 17:06
Solids:		Preparation:	EPA 8330B	Dilution:	1
Initial/Final:	10.08 g / 80 mL			Instrument:	STATLER
Batch:	BDI0121	Sequence:	SD03767	Calibration:	2420012

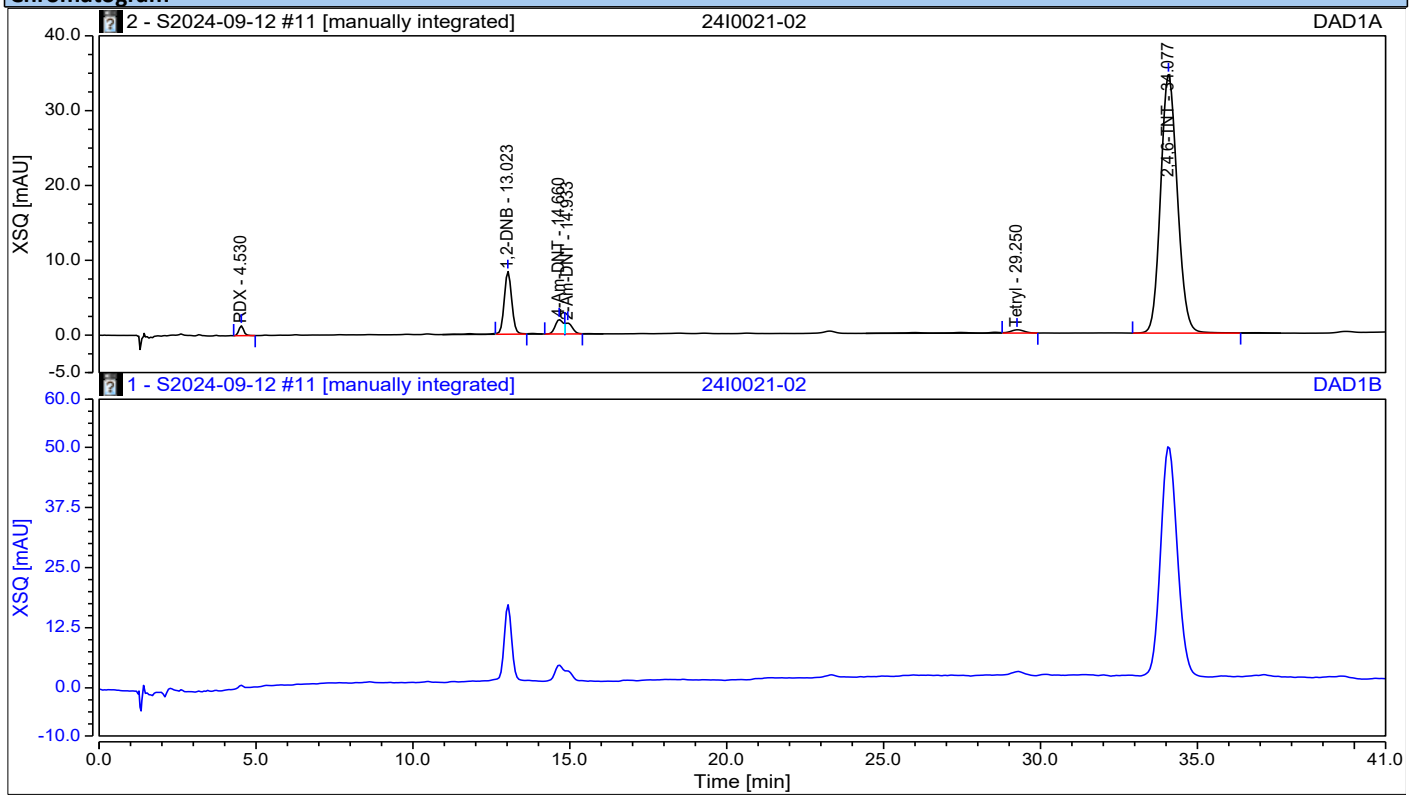
COMPOUND	CONC. (mg/kg)	LOQ	LOD	DL	Q
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCIN	0.074 U	0.50	0.074	0.037	
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.074 U	0.50	0.074	0.025	
1,3,5-TRINITROBENZENE	0.074 U	0.50	0.074	0.013	
1,3-DINITROBENZENE	0.074 U	0.50	0.074	0.022	
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	0.074 U	0.50	0.074	0.037	
NITROBENZENE	0.074 U	0.50	0.074	0.028	
2,4,6-TRINITROTOLUENE	12	0.50	0.074	0.031	
4-AMINO-2,6-DINITROTOLUENE	0.35 J	0.50	0.074	0.034	
2-AMINO-4,6-DINITROTOLUENE	0.22 J	0.50	0.074	0.034	
2,4-DINITROTOLUENE	0.074 U	0.50	0.074	0.028	
2,6-DINITROTOLUENE	0.074 U	0.50	0.074	0.031	
2-NITROTOLUENE	0.074 U	0.50	0.074	0.037	
3-NITROTOLUENE	0.074 U	0.50	0.074	0.037	
4-NITROTOLUENE	0.074 U	0.50	0.074	0.037	
NITROGLYCERIN	0.15 U	0.50	0.15	0.061	
PENTAERYTHRITOL TETRANITRATE	0.25 U	2.5	0.25	0.11	

Chromatogram and Results

Injection Details

Injection Name:	**24I0021-02**	*Instrument:*	**Statler**
Vial Number:	**11**	*Run Time (min):*	**41.00**
Injection Type:	**Unknown**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**12/Sep/2024 17:06**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**12/Aug/2024 08:22**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
n.a.	NG	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	PETN	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	HMX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	RDX	4.530	0.2393	1.316	0.95	2.74	24.7194
n.a.	3,5-DNA	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	NB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	1,2-DNB	13.023	2.3273	8.393	9.27	17.46	252.5932
3	4-Am-DNT	14.660	0.5766	1.925	2.30	4.00	44.3967
4	2-Am-DNT	14.933	0.3918	1.459	1.56	3.03	27.6937
n.a.	1,3-DNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	4-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2,6-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	1,3,5-TNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2,4-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5	Tetryl	29.250	0.2169	0.439	0.86	0.91	20.0331
6	2,4,6-TNT	34.077	21.3498	34.549	85.05	71.86	1520.8444
Total:			**25.102**	**48.081**	**100.000**	**100.000**	

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ANALYSIS DATA SHEET

P3HWMU-ARYO-0002

Laboratory:	APPL, LLC			Work Order:	24I0021
Client:	AECOM			Project:	Wingate 60517380 Task 3
Matrix:	Solid	Laboratory ID:	24I0021-02RE1	File ID:	W2024-09-12-011
Sampled:	09/02/24 09:26	Prepared:	09/07/24 13:13	Analyzed:	09/12/24 15:18
Solids:		Preparation:	EPA 8330B	Dilution:	1
Initial/Final:	10.08 g / 80 mL			Instrument:	Waldorf
Batch:	BDI0121	Sequence:	SD03770	Calibration:	2433019

COMPOUND	CONC. (mg/kg)	LOQ	LOD	DL	Q
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCIN	0.074 U	0.50	0.074	0.037	
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.074 U	0.50	0.074	0.025	
1,3,5-TRINITROBENZENE	0.074 U	0.50	0.074	0.013	
1,3-DINITROBENZENE	0.074 U	0.50	0.074	0.022	
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	0.074 U	0.50	0.074	0.037	
NITROBENZENE	0.074 U	0.50	0.074	0.028	
2,4,6-TRINITROTOLUENE	11	0.50	0.074	0.031	
4-AMINO-2,6-DINITROTOLUENE	0.36 J	0.50	0.074	0.034	
2-AMINO-4,6-DINITROTOLUENE	0.22 J	0.50	0.074	0.034	
2,4-DINITROTOLUENE	0.074 U	0.50	0.074	0.028	
2,6-DINITROTOLUENE	0.074 U	0.50	0.074	0.031	
2-NITROTOLUENE	0.074 U	0.50	0.074	0.037	
3-NITROTOLUENE	0.074 U	0.50	0.074	0.037	
4-NITROTOLUENE	0.074 U	0.50	0.074	0.037	
NITROGLYCERIN	0.15 U	0.50	0.15	0.061	
PENTAERYTHRITOL TETRANITRATE	0.25 U	2.5	0.25	0.11	

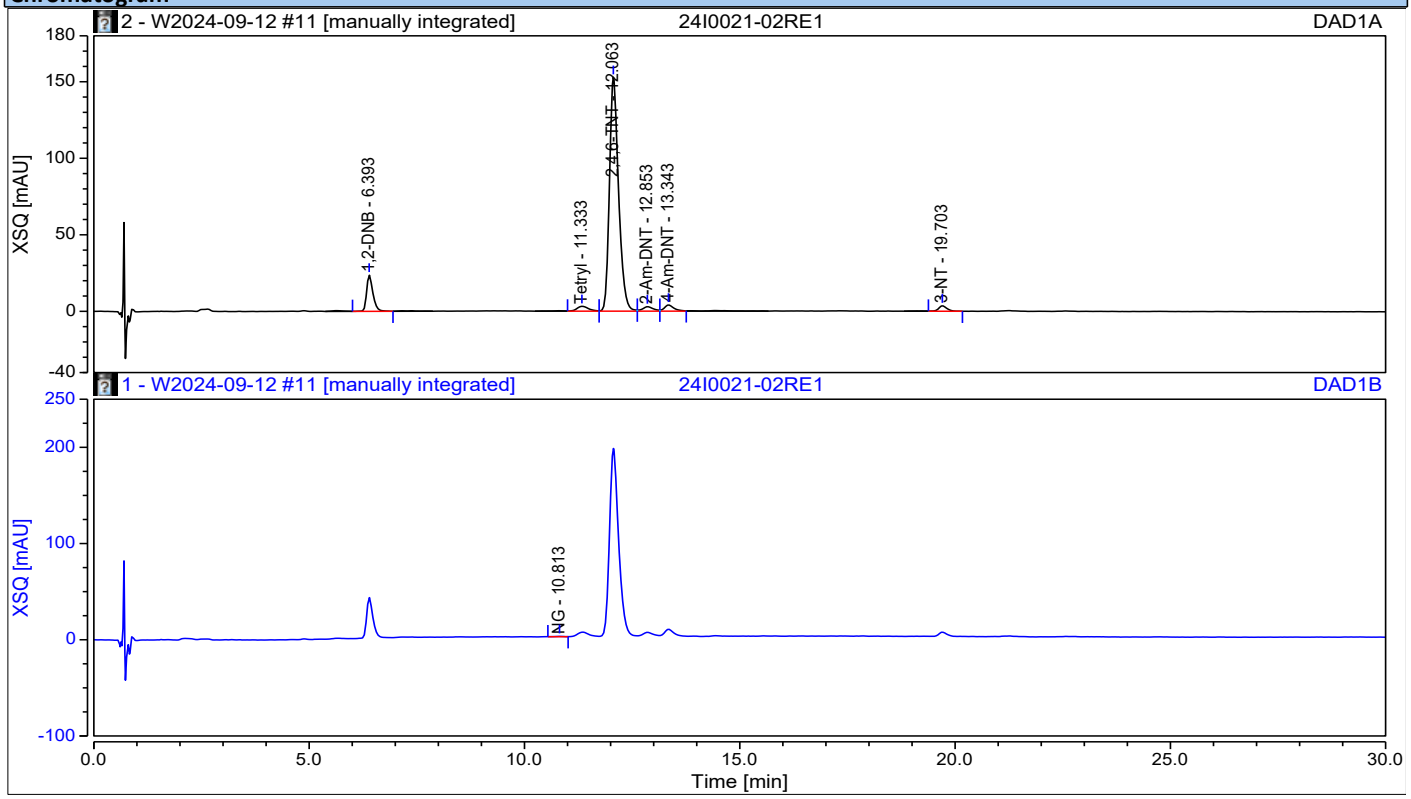
Instrument:
Sequence:W2024-09-12

Chromatogram and Results

Injection Details

Injection Name:	**24I0021-02RE1**	*Instrument:*	**Waldorf**
Vial Number:	**11**	*Run Time (min):*	**30.00**
Injection Type:	**Unknown**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**12/Sep/2024 15:18**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**13/Sep/2024 16:48**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.813	0.0797	0.412	100.00	100.00	12.8443
n.a.	PETN	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	HMX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	RDX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	1,3,5-TNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	1,2-DNB	6.393	4.0258	23.763	8.94	12.48	247.3545
n.a.	1,3-DNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3,5-DNA	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	NB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	Tetryl	11.333	0.9916	3.181	2.20	1.67	38.5456
3	2,4,6-TNT	12.063	37.3128	152.804	82.90	80.28	1402.4059
4	2-Am-DNT	12.853	0.8393	2.950	1.86	1.55	27.1564
5	4-Am-DNT	13.343	1.0424	4.054	2.32	2.13	45.7807
n.a.	2,4-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2,6-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	4-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
6	3-NT	19.703	0.7996	3.593	1.78	1.89	55.5906
Total:			**45.091**	**190.757**	**200.000**	**200.000**	

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Chromeleon 7.3.2.10759

QUALITY CONTROL

SURROGATE SUMMARY SHEET

EPA 8330B

Client: AECOM
Work Order: 24I0021
Project: Wingate 60517380 Task 3

Surrogate Compound	Spike level	% Recovery	Recovery Limits	Q
P3HWMU-ARYO-0001 (24I0021-01) mg/kg	Lab File ID: S2024-09-12-010			Analyzed: 09/12/24 16:23
1,2-DINITROBENZENE	1.98	91.3	78 - 119	
P3HWMU-ARYO-0001 (24I0021-01RE1) mg/kg	Lab File ID: W2024-09-12-010			Analyzed: 09/12/24 14:46
1,2-DINITROBENZENE	1.98	92.7	78 - 119	
P3HWMU-ARYO-0002 (24I0021-02) mg/kg	Lab File ID: S2024-09-12-011			Analyzed: 09/12/24 17:06
1,2-DINITROBENZENE	1.98	101	78 - 119	
P3HWMU-ARYO-0002 (24I0021-02RE1) mg/kg	Lab File ID: W2024-09-12-011			Analyzed: 09/12/24 15:18
1,2-DINITROBENZENE	1.98	98.9	78 - 119	
Blank (BDI0121-BLK1) mg/kg	Lab File ID: S2024-09-12-005			Analyzed: 09/12/24 12:50
1,2-DINITROBENZENE	1.98	102	78 - 119	
LCS (BDI0121-BS1) mg/kg	Lab File ID: S2024-09-12-006			Analyzed: 09/12/24 13:33
1,2-DINITROBENZENE	1.98	98.5	78 - 119	
LCS Dup (BDI0121-BSD1) mg/kg	Lab File ID: S2024-09-12-007			Analyzed: 09/12/24 14:15
1,2-DINITROBENZENE	1.99	101	78 - 119	

METHOD BLANK SUMMARY

EPA 8330B

Laboratory:	APPL, LLC	Work Order:	24I0021
Client:	AECOM	Project:	Wingate 60517380 Task 3
Blank ID:	BDI0121-BLK1	Batch:	BDI0121
Prepared:	09/07/2024 13:13		

Client Sample ID	Laboratory Sample ID	Lab File ID	Time Analyzed
LCS	BDI0121-BS1	S2024-09-12-006	13:33
LCS Dup	BDI0121-BSD1	S2024-09-12-007	14:15
P3HWMU-ARYO-0001	24I0021-01RE1	W2024-09-12-010	14:46
P3HWMU-ARYO-0002	24I0021-02RE1	W2024-09-12-011	15:18
P3HWMU-ARYO-0001	24I0021-01	S2024-09-12-010	16:23
P3HWMU-ARYO-0002	24I0021-02	S2024-09-12-011	17:06

ANALYSIS DATA SHEET

Blank

Laboratory:	APPL, LLC			Work Order:	24I0021
Client:	AECOM		Project:	Wingate 60517380 Task 3	
Matrix:	Solid	Laboratory ID:	BDI0121-BLK1	File ID:	S2024-09-12-005
Sampled:		Prepared:	09/07/24 13:13	Analyzed:	09/12/24 12:50
Solids:		Preparation:	EPA 8330B	Dilution:	1
Batch:	BDI0121	Sequence:	SD03767	Calibration:	2420012
Instrument:	STATLER				
Column:	1				

COMPOUND	CONC. (mg/kg)	LOQ	LOD	DL	Q
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.074 U	0.50	0.074	0.037	U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.074 U	0.50	0.074	0.025	U
1,3,5-TRINITROBENZENE	0.074 U	0.50	0.074	0.013	U
1,3-DINITROBENZENE	0.074 U	0.50	0.074	0.022	U
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	0.074 U	0.50	0.074	0.037	U
NITROBENZENE	0.074 U	0.50	0.074	0.028	U
2,4,6-TRINITROTOLUENE	0.074 U	0.50	0.074	0.031	U
4-AMINO-2,6-DINITROTOLUENE	0.074 U	0.50	0.074	0.034	U
2-AMINO-4,6-DINITROTOLUENE	0.074 U	0.50	0.074	0.034	U
2,4-DINITROTOLUENE	0.074 U	0.50	0.074	0.028	U
2,6-DINITROTOLUENE	0.074 U	0.50	0.074	0.031	U
2-NITROTOLUENE	0.074 U	0.50	0.074	0.037	U
3-NITROTOLUENE	0.074 U	0.50	0.074	0.037	U
4-NITROTOLUENE	0.074 U	0.50	0.074	0.037	U
NITROGLYCERIN	0.15 U	0.50	0.15	0.060	U
PENTAERYTHRITOL TETRANITRATE	0.25 U	2.5	0.25	0.11	U

LCS / LCS DUPLICATE RECOVERY

EPA 8330B

Laboratory:	APPL, LLC	Work Order:	24I0021
Client:	AECOM	Project:	Wingate 60517380 Task 3
Matrix:	Solid	Preparation:	EPA 8330B
Batch:	BDI0121	Laboratory ID:	BDI0121-BS1

ANALYTE	SPIKE ADDED (mg/kg)	LCS CONCENTRATION (mg/kg)	LCS % REC.	QC LIMITS REC.	INSTRUMENT
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZ OCINE	1.98	1.87	94.6	74 - 124	STATLER
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	1.98	1.91	96.6	67 - 129	STATLER
1,3,5-TRINITROBENZENE	1.98	1.86	93.8	80 - 116	STATLER
1,3-DINITROBENZENE	1.98	1.94	97.6	73 - 119	STATLER
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	1.98	1.49	75.4	68 - 135	STATLER
NITROBENZENE	1.98	1.93	97.5	67 - 129	STATLER
2,4,6-TRINITROTOLUENE	1.98	1.94	98.0	71 - 120	STATLER
4-AMINO-2,6-DINITROTOLUENE	1.98	1.91	96.2	64 - 127	STATLER
2-AMINO-4,6-DINITROTOLUENE	1.98	1.93	97.4	71 - 123	STATLER
2,4-DINITROTOLUENE	1.98	1.92	96.9	75 - 121	STATLER
2,6-DINITROTOLUENE	1.98	1.86	94.0	79 - 117	STATLER
2-NITROTOLUENE	1.98	1.92	96.8	70 - 124	STATLER
3-NITROTOLUENE	1.98	1.93	97.3	67 - 129	STATLER
4-NITROTOLUENE	1.98	1.90	95.8	71 - 124	STATLER
NITROGLYCERIN	1.98	1.96	99.0	73 - 124	STATLER
PENTAERYTHRITOL TETRANITRATE	1.98	2.06	104	72 - 128	STATLER

ANALYTE	SPIKE ADDED (mg/kg)	LCSD CONCENTRATION (mg/kg)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.	INSTRUMENT
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3, 5,7-TETRAZOCINE	1.99	1.89	95.4	1.07	20	74 - 124	STATLER
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRI AZINE	1.99	1.94	97.5	1.15	20	67 - 129	STATLER
1,3,5-TRINITROBENZENE	1.99	1.88	94.4	0.882	20	80 - 116	STATLER
1,3-DINITROBENZENE	1.99	1.92	96.7	0.730	20	73 - 119	STATLER
METHYL-2,4,6-TRINITROPHENYLNITR AMINE	1.99	1.46	73.7	2.11	20	68 - 135	STATLER
NITROBENZENE	1.99	1.94	97.9	0.624	20	67 - 129	STATLER
2,4,6-TRINITROTOLUENE	1.99	1.96	98.9	1.06	20	71 - 120	STATLER
4-AMINO-2,6-DINITROTOLUENE	1.99	1.92	96.9	0.919	20	64 - 127	STATLER
2-AMINO-4,6-DINITROTOLUENE	1.99	1.95	98.1	0.957	20	71 - 123	STATLER
2,4-DINITROTOLUENE	1.99	1.95	98.0	1.31	20	75 - 121	STATLER
2,6-DINITROTOLUENE	1.99	1.90	95.6	1.85	20	79 - 117	STATLER
2-NITROTOLUENE	1.99	1.93	97.3	0.718	20	70 - 124	STATLER

LCS / LCS DUPLICATE RECOVERY

EPA 8330B

Laboratory:	APPL, LLC	Work Order:	24I0021
Client:	AECOM	Project:	Wingate 60517380 Task 3
Matrix:	Solid	Preparation:	EPA 8330B
Batch:	BDI0121	Laboratory ID:	BDI0121-BSD1

ANALYTE	SPIKE ADDED (mg/kg)	LCSD CONCENTRATION (mg/kg)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.	INSTRUMENT
3-NITROTOLUENE	1.99	1.95	98.4	1.35	20	67 - 129	STATLER
4-NITROTOLUENE	1.99	1.93	96.9	1.34	20	71 - 124	STATLER
NITROGLYCERIN	1.99	1.99	100	1.42	20	73 - 124	STATLER
PENTAERYTHRITOL TETRANITRATE	1.99	2.17	109	5.31	20	72 - 128	STATLER

CALIBRATION SUMMARY

FORM VI
INITIAL CALIBRATION DATA SHEET

EPA 8330B

Client: AECOM Omaha SDG:

Project: Wingate

Calibration: 2420012 Instrument: STATLER

Units: ng/mL Calibration Date: 5/16/2024 8:00:34AM

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
OCTAHYDRO-1,3,5,7-TETRAN	5	0.064	50	0.06394	250	0.067944	1000	0.06311	2500	0.0599684	5000	0.0615168
HEXAHYDRO-1,3,5-TRINITRO-	5	0.053	50	0.05358	250	0.056952	1000	0.053042	2500	0.050546	5000	0.0522536
1,3,5-TRINITROBENZENE	5	0.0366	50	0.0354	250	0.03786	1000	0.034373	2500	0.0318652	5000	0.0316242
1,3-DINITROBENZENE	5	0.059	50	0.05914	250	0.063716	1000	0.05883	2500	0.055916	5000	0.0577246
METHYL-2,4,6-TRINITROPHEN	5	0.0188	50	0.02122	250	0.024476	1000	0.022759	2500	0.0217556	5000	0.0223722
NITROBENZENE	5	0.0486	50	0.04942	250	0.052832	1000	0.04947	2500	0.0474564	5000	0.049147
2,4,6-TRINITROTOLUENE	5	0.0224	50	0.02296	250	0.024564	1000	0.022706	2500	0.0215792	5000	0.0220238
4-AMINO-2,6-DINITROTOLUEN	5	0.0436	50	0.0433	250	0.046724	1000	0.04308	2500	0.0410716	5000	0.0425286
2-AMINO-4,6-DINITROTOLUEN	5	0.053	50	0.05262	250	0.056708	1000	0.052344	2500	0.049838	5000	0.0514514
2,4-DINITROTOLUENE	5	0.043	50	0.04362	250	0.04662	1000	0.043243	2500	0.0412316	5000	0.0423534
2,6-DINITROTOLUENE	5	0.0268	50	0.0261	250	0.028568	1000	0.026109	2500	0.0247176	5000	0.0255156
2-NITROTOLUENE	5	0.0244	50	0.02514	250	0.027492	1000	0.025186	2500	0.0239752	5000	0.024824
3-NITROTOLUENE	5	0.0272	50	0.0284	250	0.031092	1000	0.028476	2500	0.0270452	5000	0.0278466
4-NITROTOLUENE	5	0.0244	50	0.02504	250	0.02744	1000	0.025084	2500	0.0238528	5000	0.0246504
NITROGLYCERIN	5	0.0208	50	0.01822	250	0.02066	1000	0.019448	2500	0.0184748	5000	0.0190004
PENTAERYTHRITOL TETRAN	5	0.0112	50	0.01572	250	0.015316	1000	0.0139	2500	0.0132684	5000	0.0136546
3,5-DINITROANILINE	5	6.919999E-02	50	0.06886	250	0.073436	1000	0.068315	2500	0.0652432	5000	0.0674986
1,2-DINITROBENZENE	5	0.0324	50	0.03326	250	0.03596	1000	0.033181	2500	0.0316744	5000	0.0328218

FORM VI
INITIAL CALIBRATION DATA SHEET (Continued)
EPA 8330B

Laboratory: APPL, LLC
SDG:
Client: AECOM Omaha
Project: Wingate
Calibration: 2420012
Instrument: STATLER
Matrix: Solid
Calibration Date:: 5/16/2024 8:00:34AM

Compound	Mean RF	RF RSD	Slope/QR A	Intercept/QR B	QR C	LR r/QRCOD	LIMIT	Q	Type
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5	0.0634132	4.3					20		A
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIA	5.322893E-02	4.0					20		A
1,3,5-TRINITROBENZENE	0.0346204	7.3					20		A
1,3-DINITROBENZENE	5.905443E-02	4.4					20		A
METHYL-2,4,6-TRINITROPHENYLNITRAM	2.189713E-02	8.6					20		A
NITROBENZENE	4.948757E-02	3.6					20		A
2,4,6-TRINITROTOLUENE	0.0227055	4.6					20		A
4-AMINO-2,6-DINITROTOLUENE	4.338403E-02	4.3					20		A
2-AMINO-4,6-DINITROTOLUENE	5.266023E-02	4.3					20		A
2,4-DINITROTOLUENE	4.334467E-02	4.2					20		A
2,6-DINITROTOLUENE	0.0263017	5.0					20		A
2-NITROTOLUENE	2.516953E-02	4.9					20		A
3-NITROTOLUENE	0.0283433	5.2					20		A
4-NITROTOLUENE	2.507787E-02	5.0					20		A
NITROGLYCERIN	1.943387E-02	5.6					20		A
PENTAERYTHRITOL TETRANITRATE	1.384317E-02	11.7					20		A
3,5-DINITROANILINE	0.0687588	3.9					20		A
1,2-DINITROBENZENE	0.0332162	4.4					20		A

FORM VI
INITIAL CALIBRATION DATA SHEET

EPA 8330B

Client: AECOM Omaha SDG:

Project: Wingate

Calibration: 2433019 Instrument: Waldorf

Units: ng/mL Calibration Date: 8/14/2024 7:00:39AM

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
OCTAHYDRO-1,3,5,7-TETRAN	50	0.21292	5	0.223	250	0.213052	1000	0.199345	2500	0.1965452	5000	0.1837282
HEXAHYDRO-1,3,5-TRINITRO-	50	0.12522	5	0.1098	250	0.125968	1000	0.119806	2500	0.1214784	5000	0.1217222
1,3,5-TRINITROBENZENE	50	0.16268	5	0.1758	250	0.225936	1000	0.215112	2500	0.2172088	5000	0.2112352
1,3-DINITROBENZENE	50	0.209	5	0.1724	250	0.207284	1000	0.197927	2500	0.203082	5000	0.203591
METHYL-2,4,6-TRINITROPHEN	50	0.02714	5	0.02	250	0.08428	1000	0.080923	2500	0.0818764	5000	0.0827446
NITROBENZENE	50	0.09828	5	0.1018	250	0.094684	1000	9.103701E-02	2500	0.0934724	5000	0.094661
2,4,6-TRINITROTOLUENE	50	0.10988	5	0.1174	250	0.110516	1000	0.106445	2500	0.107976	5000	0.1093008
4-AMINO-2,6-DINITROTOLUEN	50	0.0939	5	0.079	250	0.093164	1000	0.08897	2500	0.0890572	5000	0.088395
2-AMINO-4,6-DINITROTOLUEN	50	0.11182	5	0.1264	250	0.110476	1000	0.106232	2500	0.107664	5000	0.1089574
2,4-DINITROTOLUENE	50	0.1472	5	0.14	250	0.145948	1000	0.140704	2500	0.1433952	5000	0.1455596
2,6-DINITROTOLUENE	50	0.08632	5	0.0802	250	0.085104	1000	0.081707	2500	0.0830956	5000	0.0843304
2-NITROTOLUENE	50	0.07604	5	0.0718	250	0.075564	1000	0.072876	2500	0.0745532	5000	0.0755984
3-NITROTOLUENE	50	0.06692	5	0.0624	250	0.065368	1000	0.062566	2500	0.063998	5000	0.0648774
4-NITROTOLUENE	50	0.07056	5	0.07	250	0.068556	1000	0.066077	2500	0.0676304	5000	0.068439
NITROGLYCERIN	50	0.03554	5	0.039	250	0.033144	1000	0.031947	2500	0.0320652	5000	0.032095
PENTAERYTHRITOL TETRAN	50	0.02234	5	0.0324	250	0.023504	1000	0.021852	2500	0.022	5000	0.0222216
3,5-DINITROANILINE	50	0.1665	5	0.1652	250	0.167668	1000	0.159604	2500	0.1619584	5000	0.1625648
1,2-DINITROBENZENE	50	0.09874	5	8.679999E-02	250	0.0966	1000	0.092219	2500	0.0948104	5000	9.653401E-02

FORM VI
INITIAL CALIBRATION DATA SHEET (Continued)
EPA 8330B

Laboratory: APPL, LLC
SDG:
Client: AECOM Omaha
Project: Wingate
Calibration: 2433019
Instrument: Waldorf
Matrix: Solid
Calibration Date:: 8/14/2024 7:00:39AM

Compound	Mean RF	RF RSD	Slope/QR A	Intercept/QR B	QR C	LR r/QRCOD	LIMIT	Q	Type
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5	0.2047651	6.9	0.1844759	8.343725		0.999	0.99		L
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIA	0.1206658	4.8	0.121661	-0.1350462		1.000	0.99		L
1,3,5-TRINITROBENZENE	0.2013287	12.7	0.2118969	2.342456		1.000	0.99		L
1,3-DINITROBENZENE	0.1988807	6.8	0.2035938	-0.9872698		1.000	0.99		L
METHYL-2,4,6-TRINITROPHENYLNITRAM	6.282733E-02	48.6	8.287572E-02	-1.309462		1.000	0.99		L
NITROBENZENE	9.565573E-02	4.0	9.457388E-02	-0.9343362		1.000	0.99		L
2,4,6-TRINITROTOLUENE	0.110253	3.4	0.1091691	-0.7724482		1.000	0.99		L
4-AMINO-2,6-DINITROTOLUENE	0.0887477	6.0	8.837785E-02	0.6336673		1.000	0.99		L
2-AMINO-4,6-DINITROTOLUENE	0.1119249	6.6	0.1088101	-0.675287		1.000	0.99		L
2,4-DINITROTOLUENE	0.1438011	2.1	0.1453786	-1.420227		1.000	0.99		L
2,6-DINITROTOLUENE	0.0834595	2.7	8.421144E-02	-0.7317825		1.000	0.99		L
2-NITROTOLUENE	7.440527E-02	2.3	7.552527E-02	-0.782835		1.000	0.99		L
3-NITROTOLUENE	0.0643549	2.7	6.480184E-02	-0.6053692		1.000	0.99		L
4-NITROTOLUENE	6.854373E-02	2.4	6.837814E-02	-0.6174189		1.000	0.99		L
NITROGLYCERIN	0.0339652	8.3	3.206295E-02	8.812892E-02		1.000	0.99		L
PENTAERYTHRITOL TETRANITRATE	2.405293E-02	17.2	2.217662E-02	-2.502045E-02		1.000	0.99		L
3,5-DINITROANILINE	0.1639159	1.9	0.16246	-0.3447061		1.000	0.99		L
1,2-DINITROBENZENE	0.0942839	4.5	9.640318E-02	-1.232338		1.000	0.99		L

INITIAL CALIBRATION STANDARDS

EPA 8330B

Laboratory:	APPL, LLC	Work Order:	24I0021
Client:	AECOM	Project:	Wingate 60517380 Task 3
Sequence:	SD01815	Instrument:	STATLER
Calibration:	2420012		

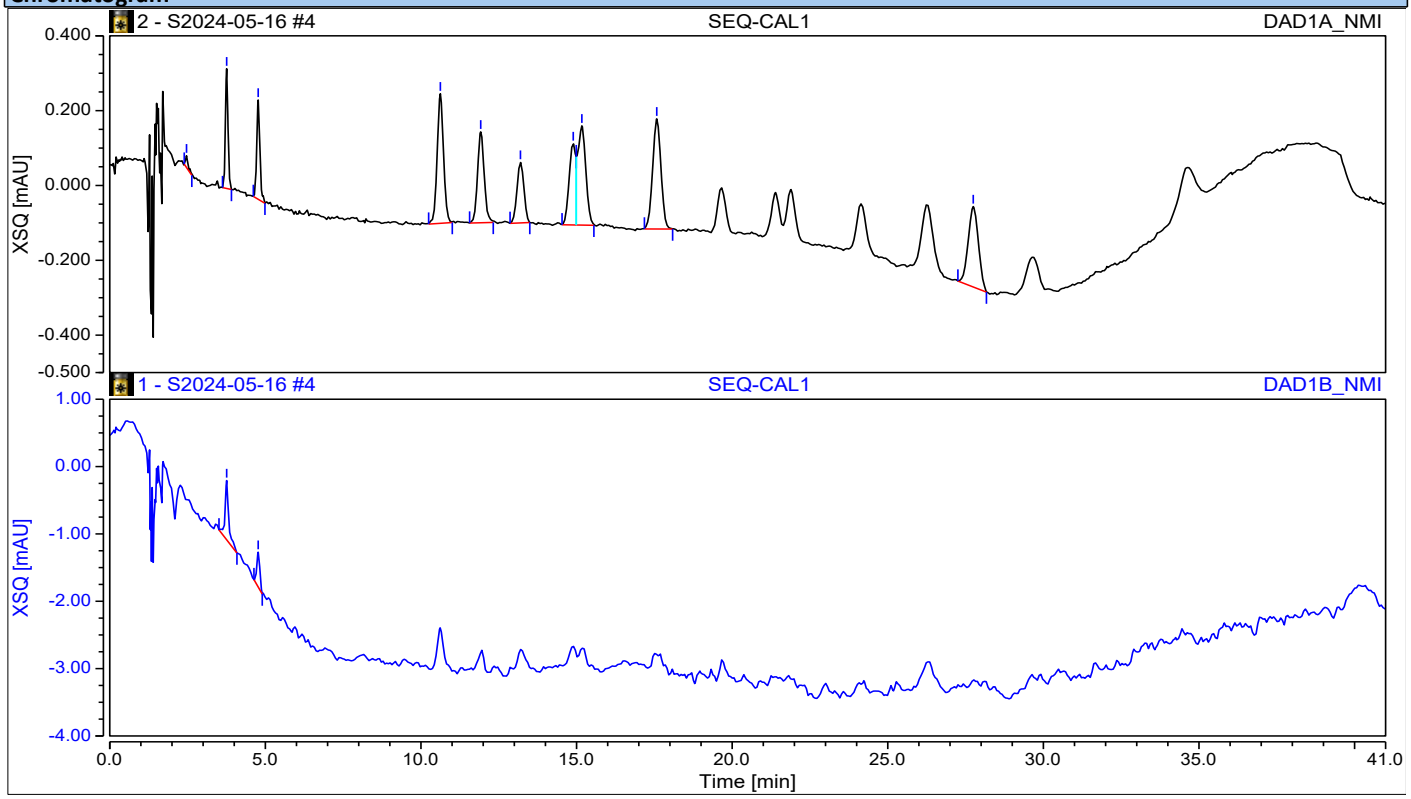
Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
24E0457	8330 - Cal 1 0.005ug/mL 05/16/24	SD01815-CAL1	S2024-05-16-004	05/16/24 14:47
24E0458	8330 - Cal 2 0.05ug/mL 05/16/24	SD01815-CAL2	S2024-05-16-005	05/16/24 15:29
24E0459	8330 - Cal 3 0.25ug/mL 05/16/24	SD01815-CAL3	S2024-05-16-006	05/16/24 16:12
24E0460	8330 - Cal 4 1.0ug/mL 05/16/24	SD01815-CAL4	S2024-05-16-007	05/16/24 16:54
24E0462	8330 - Cal 5 2.5ug/mL 05/16/24	SD01815-CAL5	S2024-05-16-008	05/16/24 17:37
24E0463	8330 - Cal 6 5.0ug/mL 05/16/24	SD01815-CAL6	S2024-05-16-009	05/16/24 18:19
24E0466	8330 - SCV 1.0ug/mL 05/16/24	SD01815-SCV1	S2024-05-16-010	05/16/24 19:02

Original Chromatogram

Injection Details

Injection Name:	**SEQ-CAL1**	*Instrument:*	**Statler**
Vial Number:	**4**	*Run Time (min):*	**41.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**16/May/2024 14:47**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**20/May/2024 12:45**	*Operator:*	**AOP**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.447	0.0228	0.104	79.87	64.73	5.3344
2	PETN	22.537	0.0057	0.056	20.13	35.27	4.0727
1	HMX	3.757	0.0305	0.320	3.35	9.90	5.0468
2	RDX	4.770	0.0312	0.265	3.43	8.21	4.9848
3	3,5-DNA	10.623	0.0819	0.346	9.00	10.71	5.0358
4	NB	11.920	0.0603	0.243	6.63	7.51	4.9098
5	1,2-DNB	13.197	0.0419	0.162	4.60	5.02	4.8881
6	4-Am-DNT	14.893	0.0525	0.218	5.76	6.73	5.0163
7	2-Am-DNT	15.170	0.0794	0.265	8.73	8.21	5.0375
8	1,3-DNB	17.577	0.0913	0.295	10.04	9.11	4.9887
9	2-NT	19.653	0.0375	0.122	4.12	3.78	4.8507
10	4-NT	21.393	0.0385	0.122	4.23	3.79	4.8814
11	3-NT	21.890	0.0422	0.136	4.64	4.21	4.7999
12	2,6-DNT	24.147	0.0490	0.134	5.39	4.13	5.0838
13	1,3,5-TNB	26.250	0.0816	0.183	8.96	5.66	5.2855
14	2,4-DNT	27.747	0.0823	0.215	9.04	6.65	4.9610
15	Tetryl	29.650	0.0423	0.094	4.65	2.91	4.3025
16	2,4,6-TNT	34.630	0.0676	0.112	7.43	3.47	4.9436
Total:			**0.939**	**3.394**	**200.000**	**200.000**	

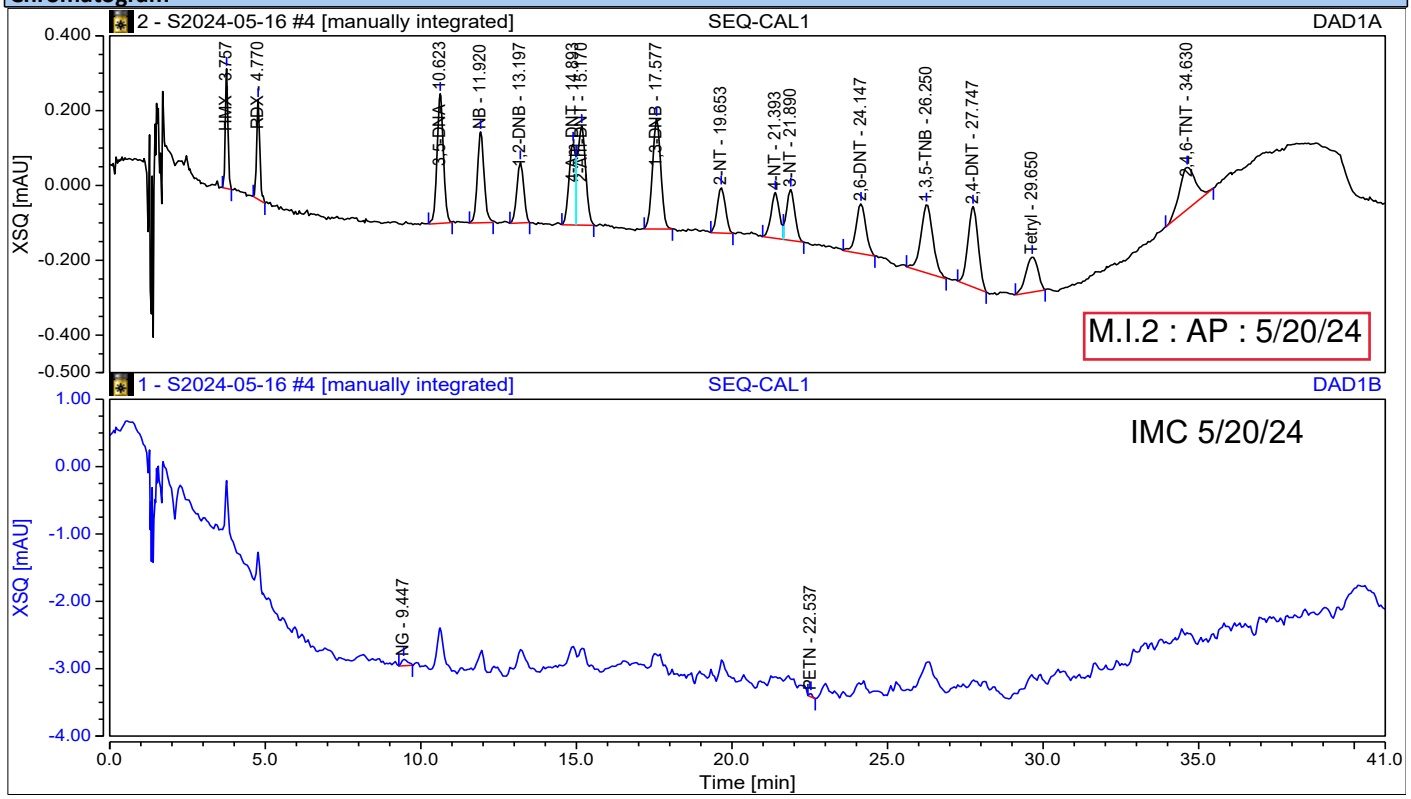
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Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL1**	*Instrument:*	**Statler**
Vial Number:	**4**	*Run Time (min):*	**41.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**16/May/2024 14:47**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**20/May/2024 12:45**	*Operator:*	**AOP**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.447	0.0228	0.104	79.87	64.73	5.3344
2	PETN	22.537	0.0057	0.056	20.13	35.27	4.0727
1	HMX	3.757	0.0305	0.320	3.35	9.90	5.0468
2	RDX	4.770	0.0312	0.265	3.43	8.21	4.9848
3	3,5-DNA	10.623	0.0819	0.346	9.00	10.71	5.0358
4	NB	11.920	0.0603	0.243	6.63	7.51	4.9098
5	1,2-DNB	13.197	0.0419	0.162	4.60	5.02	4.8881
6	4-Am-DNT	14.893	0.0525	0.218	5.76	6.73	5.0163
7	2-Am-DNT	15.170	0.0794	0.265	8.73	8.21	5.0375
8	1,3-DNB	17.577	0.0913	0.295	10.04	9.11	4.9887
9	2-NT	19.653	0.0375	0.122	4.12	3.78	4.8507
10	4-NT	21.393	0.0385	0.122	4.23	3.79	4.8814
11	3-NT	21.890	0.0422	0.136	4.64	4.21	4.7999
12	2,6-DNT	24.147	0.0490	0.134	5.39	4.13	5.0838
13	1,3,5-TNB	26.250	0.0816	0.183	8.96	5.66	5.2855
14	2,4-DNT	27.747	0.0823	0.215	9.04	6.65	4.9610
15	Tetryl	29.650	0.0423	0.094	4.65	2.91	4.3025
16	2,4,6-TNT	34.630	0.0676	0.112	7.43	3.47	4.9436
Total:			**0.939**	**3.394**	**200.000**	**200.000**	

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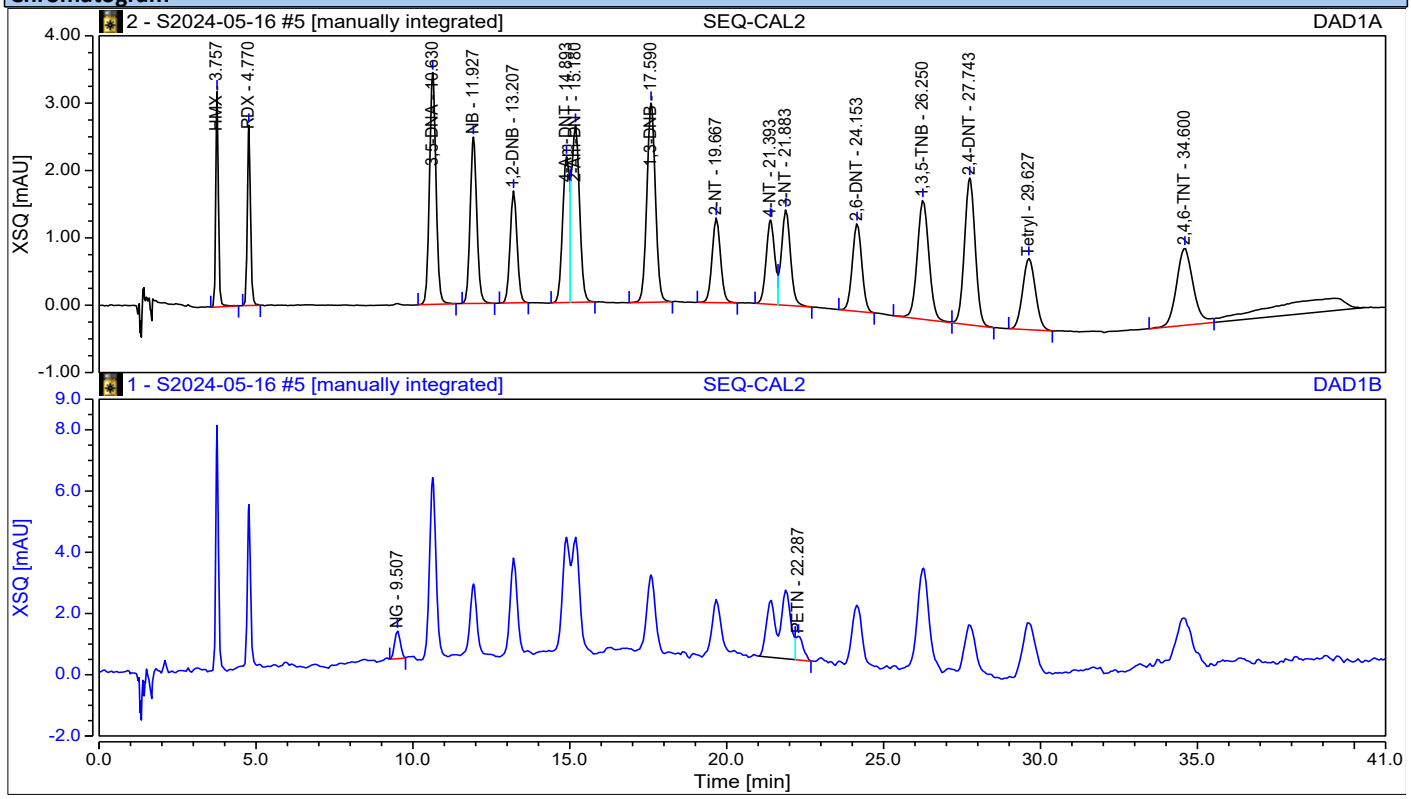
Instrument:
Sequence:S2024-05-16

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL2**	*Instrument:*	**Statler**
Vial Number:	**5**	*Run Time (min):*	**41.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**16/May/2024 15:29**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**20/May/2024 12:45**	*Operator:*	**AOP**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.507	0.1944	0.911	47.17	53.69	46.9197
2	PETN	22.287	0.2178	0.786	52.83	46.31	56.7233
1	HMX	3.757	0.3089	3.197	3.32	9.81	50.4089
2	RDX	4.770	0.3120	2.679	3.36	8.22	50.3188
3	3,5-DNA	10.630	0.8221	3.443	8.85	10.56	50.0608
4	NB	11.927	0.6068	2.471	6.53	7.58	49.9262
5	1,2-DNB	13.207	0.4275	1.663	4.60	5.10	50.0350
6	4-Am-DNT	14.893	0.5503	2.165	5.92	6.64	49.9156
7	2-Am-DNT	15.180	0.7722	2.631	8.31	8.07	49.9529
8	1,3-DNB	17.590	0.9331	2.957	10.04	9.07	50.0928
9	2-NT	19.667	0.3944	1.257	4.24	3.86	49.9356
10	4-NT	21.393	0.3964	1.252	4.26	3.84	49.8940
11	3-NT	21.883	0.4752	1.420	5.11	4.36	50.1099
12	2,6-DNT	24.153	0.4600	1.305	4.95	4.00	49.6430
13	1,3,5-TNB	26.250	0.7631	1.770	8.21	5.43	51.1360
14	2,4-DNT	27.743	0.8664	2.181	9.32	6.69	50.3218
15	Tetryl	29.627	0.5012	1.061	5.39	3.25	48.4251
16	2,4,6-TNT	34.600	0.7041	1.148	7.58	3.52	50.5477
Total:			**9.706**	**34.298**	**200.000**	**200.000**	

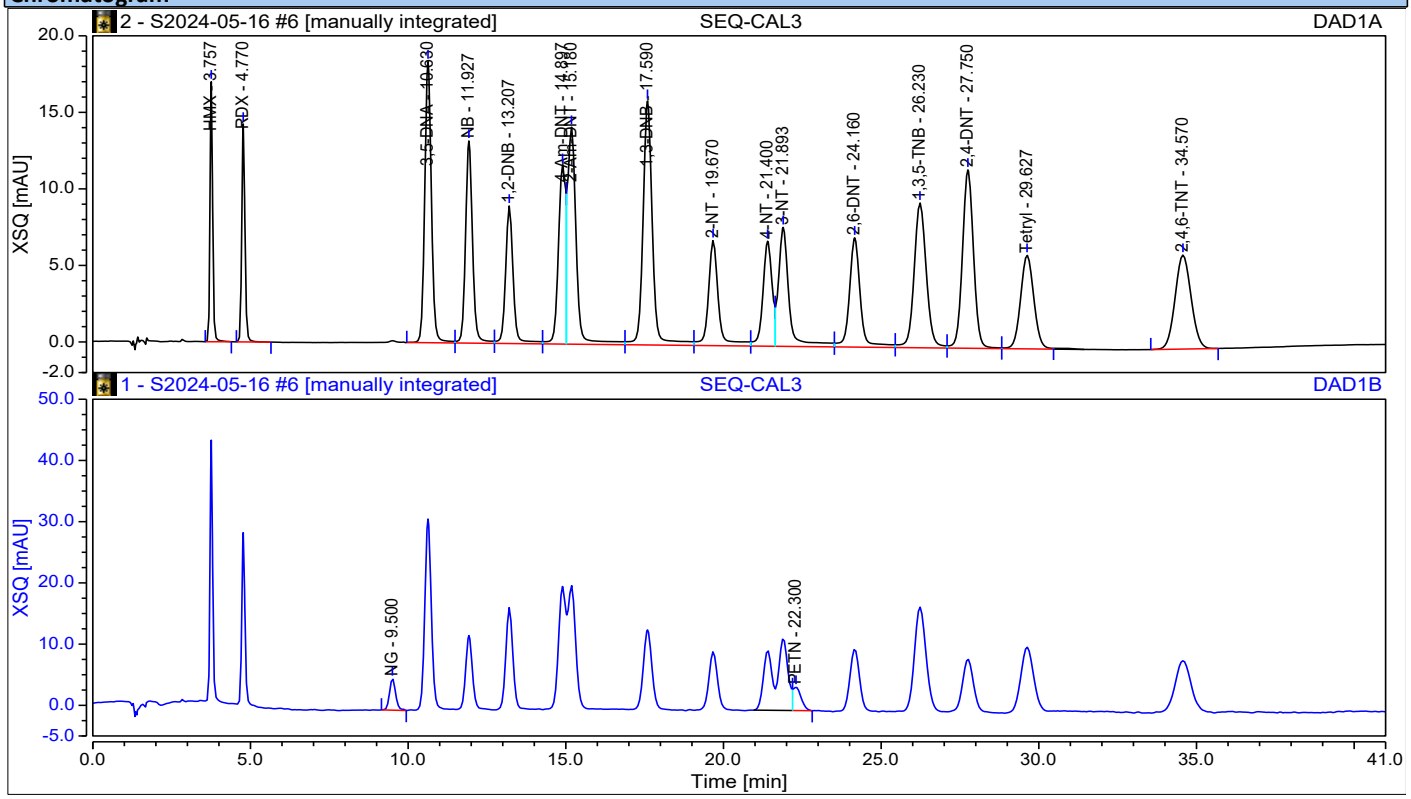
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Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL3**	*Instrument:*	**Statler**
Vial Number:	**6**	*Run Time (min):*	**41.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**16/May/2024 16:12**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**20/May/2024 12:45**	*Operator:*	**AOP**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.500	1.1723	5.165	50.88	57.43	265.9566
2	PETN	22.300	1.1316	3.829	49.12	42.57	276.3165
1	HMX	3.757	1.6276	16.986	3.07	9.67	267.8606
2	RDX	4.770	1.6675	14.238	3.15	8.11	267.4163
3	3,5-DNA	10.630	4.4581	18.359	8.42	10.46	266.9772
4	NB	11.927	3.3732	13.208	6.37	7.52	266.9131
5	1,2-DNB	13.207	2.5153	8.990	4.75	5.12	270.5373
6	4-Am-DNT	14.897	3.0688	11.681	5.80	6.65	269.3519
7	2-Am-DNT	15.180	4.4804	14.177	8.46	8.07	269.1593
8	1,3-DNB	17.590	5.4798	15.929	10.35	9.07	269.7932
9	2-NT	19.670	2.5362	6.873	4.79	3.91	273.0403
10	4-NT	21.400	2.2982	6.860	4.34	3.91	273.3563
11	3-NT	21.893	3.0047	7.773	5.68	4.43	274.2004
12	2,6-DNT	24.160	2.8516	7.142	5.39	4.07	271.6604
13	1,3,5-TNB	26.230	4.2420	9.465	8.01	5.39	273.3941
14	2,4-DNT	27.750	4.7444	11.655	8.96	6.64	268.8725
15	Tetryl	29.627	2.9688	6.119	5.61	3.48	279.3670
16	2,4,6-TNT	34.570	3.6167	6.141	6.83	3.50	270.3428
Total:			**55.237**	**184.592**	**200.000**	**200.000**	

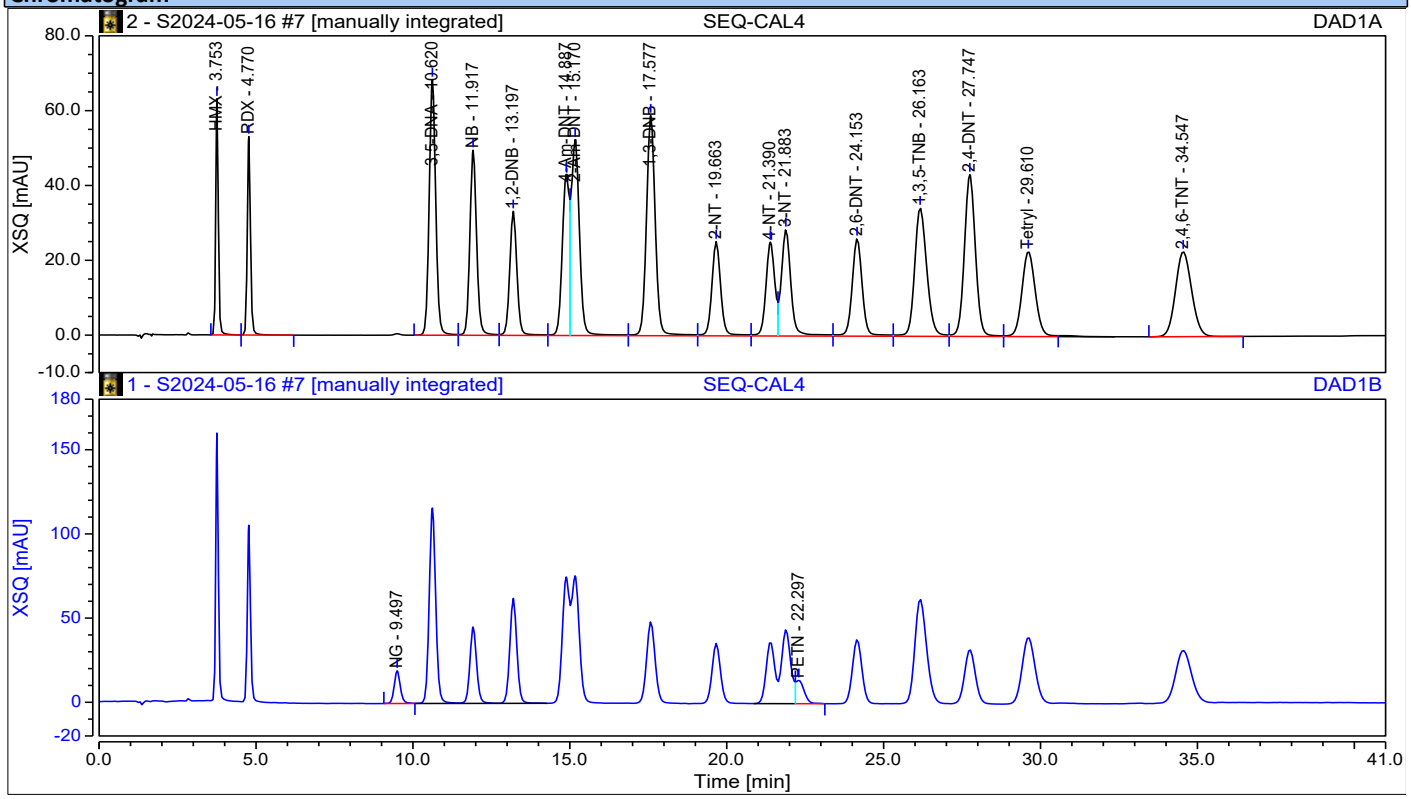
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Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL4**	*Instrument:*	**Statler**
Vial Number:	**7**	*Run Time (min):*	**41.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**16/May/2024 16:54**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**20/May/2024 12:45**	*Operator:*	**AOP**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.497	4.4300	19.448	50.84	58.32	1001.3514
2	PETN	22.297	4.2832	13.900	49.16	41.68	1003.0095
1	HMX	3.753	6.0536	63.110	3.19	9.72	995.2325
2	RDX	4.770	6.2501	53.042	3.29	8.17	996.2347
3	3,5-DNA	10.620	16.4023	68.315	8.63	10.52	993.4117
4	NB	11.917	12.3812	49.470	6.52	7.62	999.6964
5	1,2-DNB	13.197	8.8507	33.181	4.66	5.11	998.5531
6	4-Am-DNT	14.887	11.0928	43.080	5.84	6.63	993.3480
7	2-Am-DNT	15.170	15.7772	52.344	8.30	8.06	993.7785
8	1,3-DNB	17.577	19.1681	58.830	10.09	9.06	996.4402
9	2-NT	19.663	8.3052	25.186	4.37	3.88	1000.4835
10	4-NT	21.390	8.1467	25.084	4.29	3.86	999.5856
11	3-NT	21.883	10.0874	28.476	5.31	4.39	1004.5562
12	2,6-DNT	24.153	9.7621	26.109	5.14	4.02	993.0677
13	1,3,5-TNB	26.163	15.4203	34.373	8.12	5.29	992.8145
14	2,4-DNT	27.747	17.6031	43.243	9.26	6.66	997.6072
15	Tetryl	29.610	11.1836	22.759	5.89	3.51	1039.0014
16	2,4,6-TNT	34.547	13.5246	22.706	7.12	3.50	999.5417
Total:			**198.722**	**682.657**	**200.000**	**200.000**	

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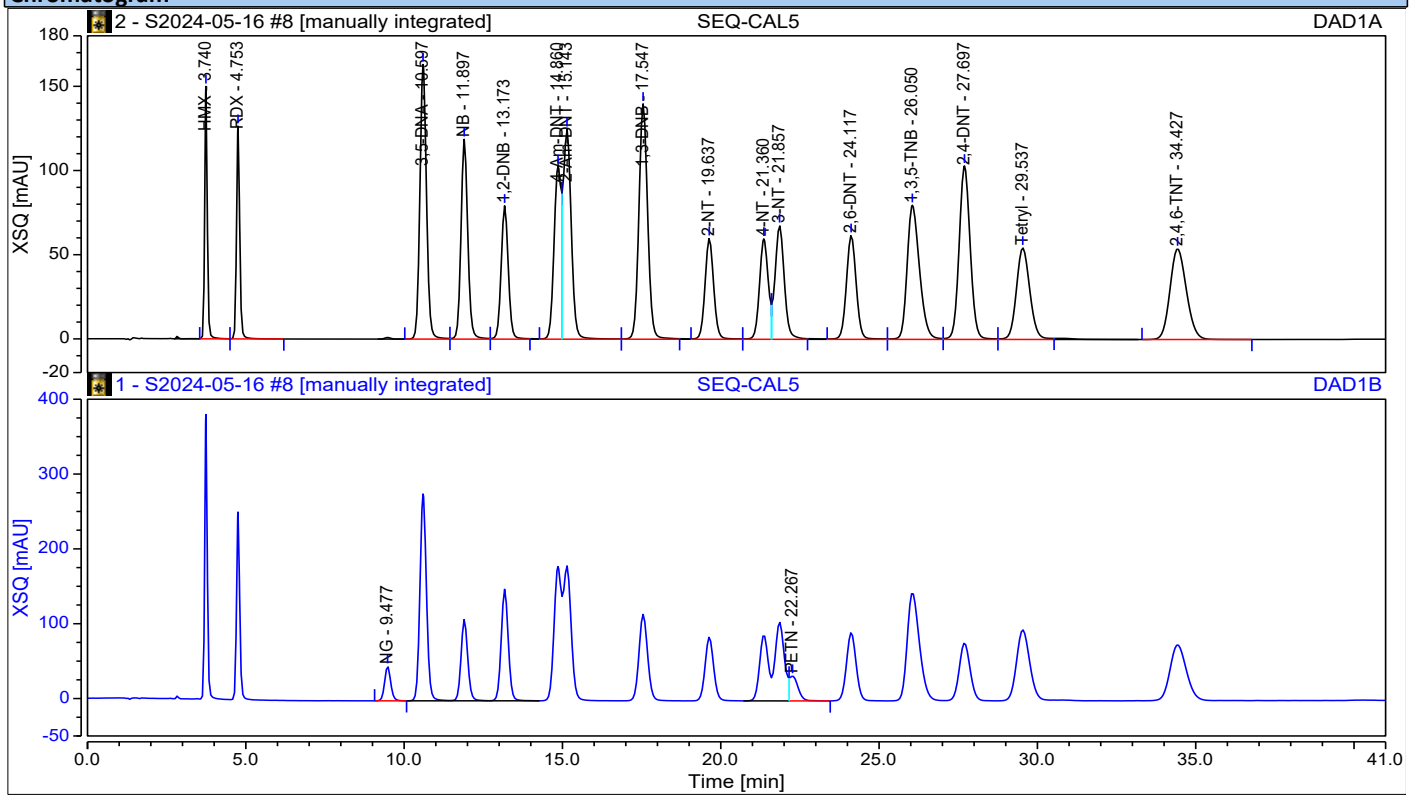
Instrument:
Sequence:S2024-05-16

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL5**	*Instrument:*	**Statler**
Vial Number:	**8**	*Run Time (min):*	**41.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**16/May/2024 17:37**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**20/May/2024 12:45**	*Operator:*	**AOP**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.477	10.3759	46.187	49.94	58.20	2378.1084
2	PETN	22.267	10.3998	33.171	50.06	41.80	2393.5753
1	HMX	3.740	14.3985	149.921	3.22	9.71	2364.2139
2	RDX	4.753	14.9296	126.365	3.34	8.18	2373.3611
3	3,5-DNA	10.597	39.1748	163.108	8.75	10.56	2371.8718
4	NB	11.897	29.5893	118.641	6.61	7.68	2397.5017
5	1,2-DNB	13.173	20.8405	79.186	4.66	5.13	2383.0597
6	4-Am-DNT	14.860	26.2869	102.679	5.87	6.65	2367.5950
7	2-Am-DNT	15.143	37.2330	124.595	8.32	8.07	2365.4949
8	1,3-DNB	17.547	44.8446	139.790	10.02	9.05	2367.7000
9	2-NT	19.637	19.0826	59.938	4.26	3.88	2381.0002
10	4-NT	21.360	19.0589	59.632	4.26	3.86	2376.3037
11	3-NT	21.857	23.0537	67.613	5.15	4.38	2385.2514
12	2,6-DNT	24.117	22.2453	61.794	4.97	4.00	2350.3760
13	1,3,5-TNB	26.050	36.0478	79.663	8.05	5.16	2300.9529
14	2,4-DNT	27.697	41.7212	103.079	9.32	6.67	2377.9869
15	Tetryl	29.537	26.7206	54.389	5.97	3.52	2482.9674
16	2,4,6-TNT	34.427	32.3706	53.948	7.23	3.49	2374.7789
Total:			**468.374**	**1623.699**	**200.000**	**200.000**	

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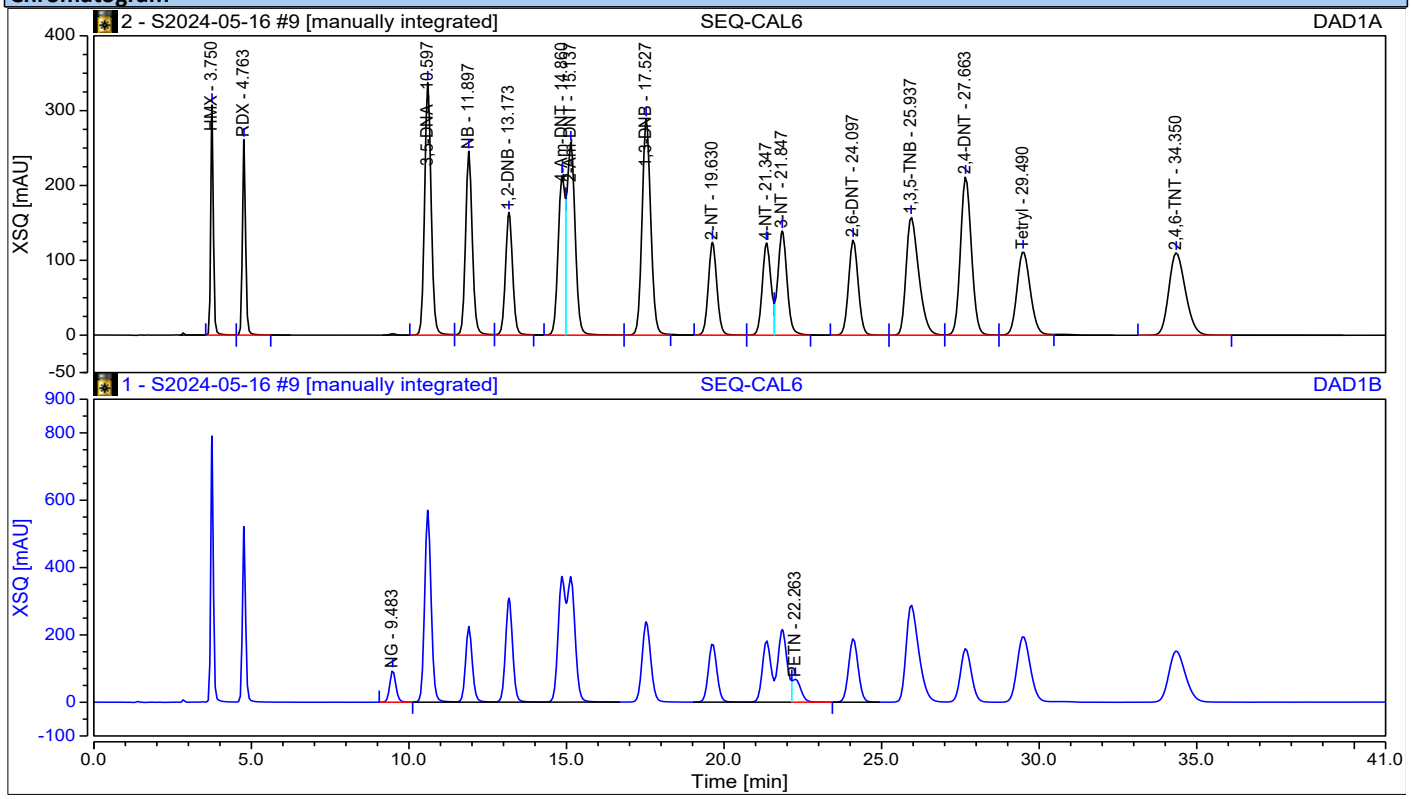
Instrument:
Sequence:S2024-05-16

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL6**	*Instrument:*	**Statler**
Vial Number:	**9**	*Run Time (min):*	**40.99**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**16/May/2024 18:19**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**20/May/2024 12:45**	*Operator:*	**AOP**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.483	21.4347	95.002	49.76	58.19	4891.4881
2	PETN	22.263	21.6391	68.273	50.24	41.81	4926.4705
1	HMX	3.750	29.6499	307.584	3.22	9.67	4850.5215
2	RDX	4.763	30.8321	261.268	3.34	8.21	4907.0923
3	3,5-DNA	10.597	81.1175	337.493	8.80	10.61	4907.7296
4	NB	11.897	61.2435	245.735	6.64	7.73	4965.8322
5	1,2-DNB	13.173	43.1247	164.109	4.68	5.16	4938.7717
6	4-Am-DNT	14.860	54.0054	212.643	5.86	6.69	4903.1501
7	2-Am-DNT	15.137	77.1684	257.257	8.37	8.09	4884.1271
8	1,3-DNB	17.527	92.3933	288.623	10.02	9.07	4888.5651
9	2-NT	19.630	39.1922	124.120	4.25	3.90	4930.5666
10	4-NT	21.347	39.1550	123.252	4.25	3.87	4911.5317
11	3-NT	21.847	47.4873	139.233	5.15	4.38	4911.8275
12	2,6-DNT	24.097	45.2755	127.578	4.91	4.01	4852.5564
13	1,3,5-TNB	25.937	73.6972	158.121	7.99	4.97	4567.0762
14	2,4-DNT	27.663	85.6744	211.767	9.29	6.66	4885.3942
15	Tetryl	29.490	54.8813	111.861	5.95	3.52	5106.6986
16	2,4,6-TNT	34.350	67.3248	110.119	7.30	3.46	4847.4640
Total:			**965.296**	**3344.037**	**200.000**	**200.000**	

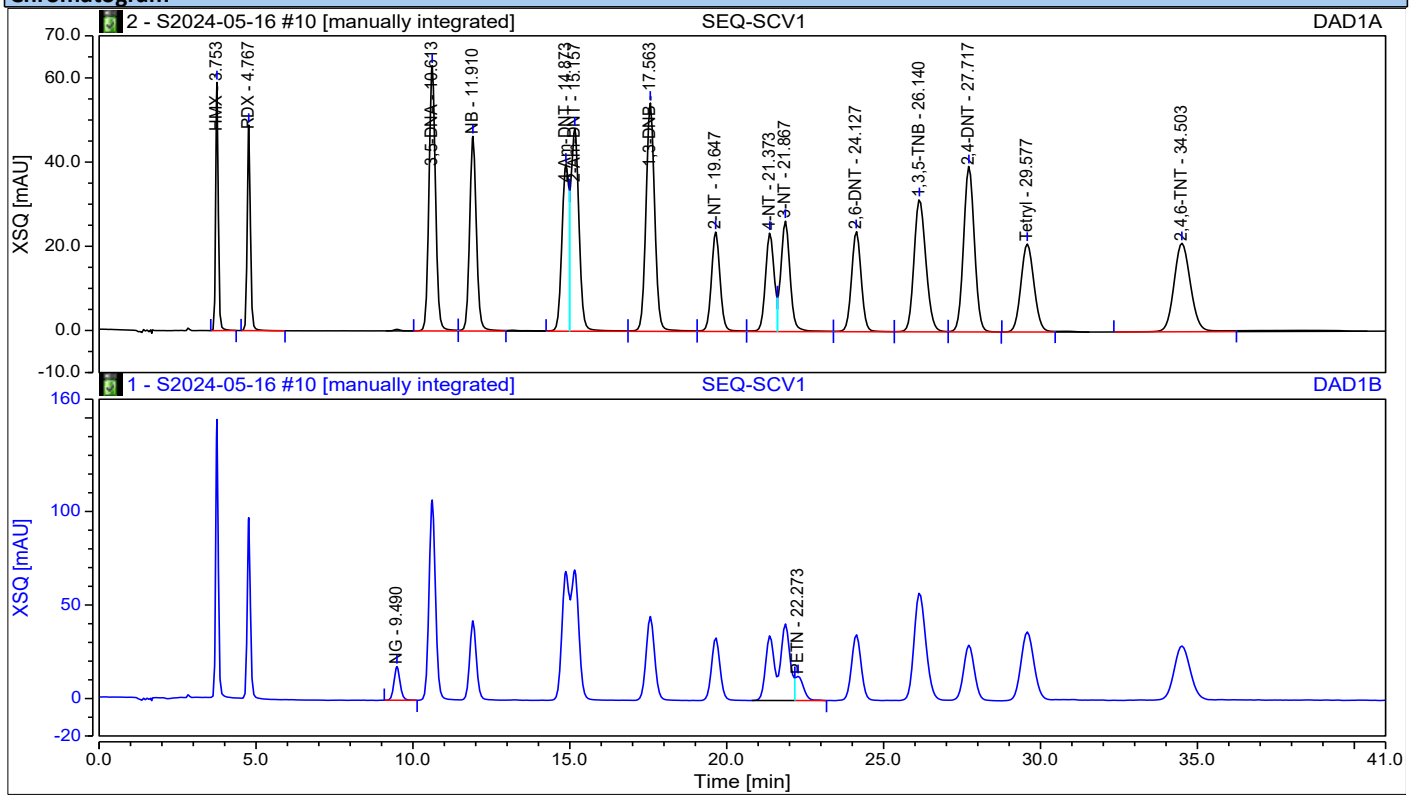
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Chromatogram and Results

Injection Details

Injection Name:	**SEQ-SCV1**	*Instrument:*	**Statler**
Vial Number:	**10**	*Run Time (min):*	**41.00**
Injection Type:	**Check Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**16/May/2024 19:02**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**20/May/2024 12:45**	*Operator:*	**AOP**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.490	4.0584	18.007	50.59	58.19	927.1362
2	PETN	22.273	3.9641	12.939	49.41	41.81	933.6693
1	HMX	3.753	5.6311	58.972	3.40	10.36	929.9663
2	RDX	4.767	5.7392	48.836	3.47	8.58	917.2299
3	3,5-DNA	10.613	15.1639	62.997	9.16	11.07	916.0896
4	NB	11.910	11.6164	46.247	7.02	8.13	934.5691
n.a.	1,2-DNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5	4-Am-DNT	14.873	10.1469	39.533	6.13	6.95	911.5561
6	2-Am-DNT	15.157	14.4393	48.126	8.72	8.46	913.6993
7	1,3-DNB	17.563	17.5167	54.294	10.58	9.54	919.6039
8	2-NT	19.647	7.5740	23.620	4.57	4.15	938.2778
9	4-NT	21.373	7.5586	23.431	4.57	4.12	933.7185
10	3-NT	21.867	9.0161	26.282	5.45	4.62	927.1626
11	2,6-DNT	24.127	8.5641	23.864	5.17	4.19	907.6933
12	1,3,5-TNB	26.140	13.8143	31.494	8.34	5.54	909.6672
13	2,4-DNT	27.717	15.7654	39.342	9.52	6.91	907.6164
14	Tetryl	29.577	10.1061	20.916	6.10	3.68	954.8727
15	2,4,6-TNT	34.503	12.9242	21.040	7.81	3.70	926.1715
Total:			**173.599**	**599.941**	**200.000**	**200.000**	

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INITIAL CALIBRATION STANDARDS

EPA 8330B

Laboratory:	APPL, LLC	Work Order:	24I0021
Client:	AECOM	Project:	Wingate 60517380 Task 3
Sequence:	SD03246	Instrument:	Waldorf
Calibration:	2433019		

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
24H0397	8330 - Cal 1 0.005ug/mL 08/14/24	SD03246-CAL1	W2024-08-14-017	08/14/24 17:32
24H0398	8330 - Cal 2 0.05ug/mL 08/14/24	SD03246-CAL2	W2024-08-14-018	08/14/24 18:03
24H0399	8330 - Cal 3 0.25ug/mL 08/14/24	SD03246-CAL3	W2024-08-14-019	08/14/24 18:35
24H0400	8330 - Cal 4 1.0ug/mL 08/14/24	SD03246-CAL4	W2024-08-14-020	08/14/24 19:06
24H0401	8330 - Cal 5 2.5ug/mL 08/14/24	SD03246-CAL5	W2024-08-14-021	08/14/24 19:38
24H0402	8330 - Cal 6 5.0ug/mL 08/14/24	SD03246-CAL6	W2024-08-14-022	08/14/24 20:09
24H0403	8330 - SCV 1.0ug/mL 08/14/24	SD03246-SCV1	W2024-08-14-023	08/14/24 20:41

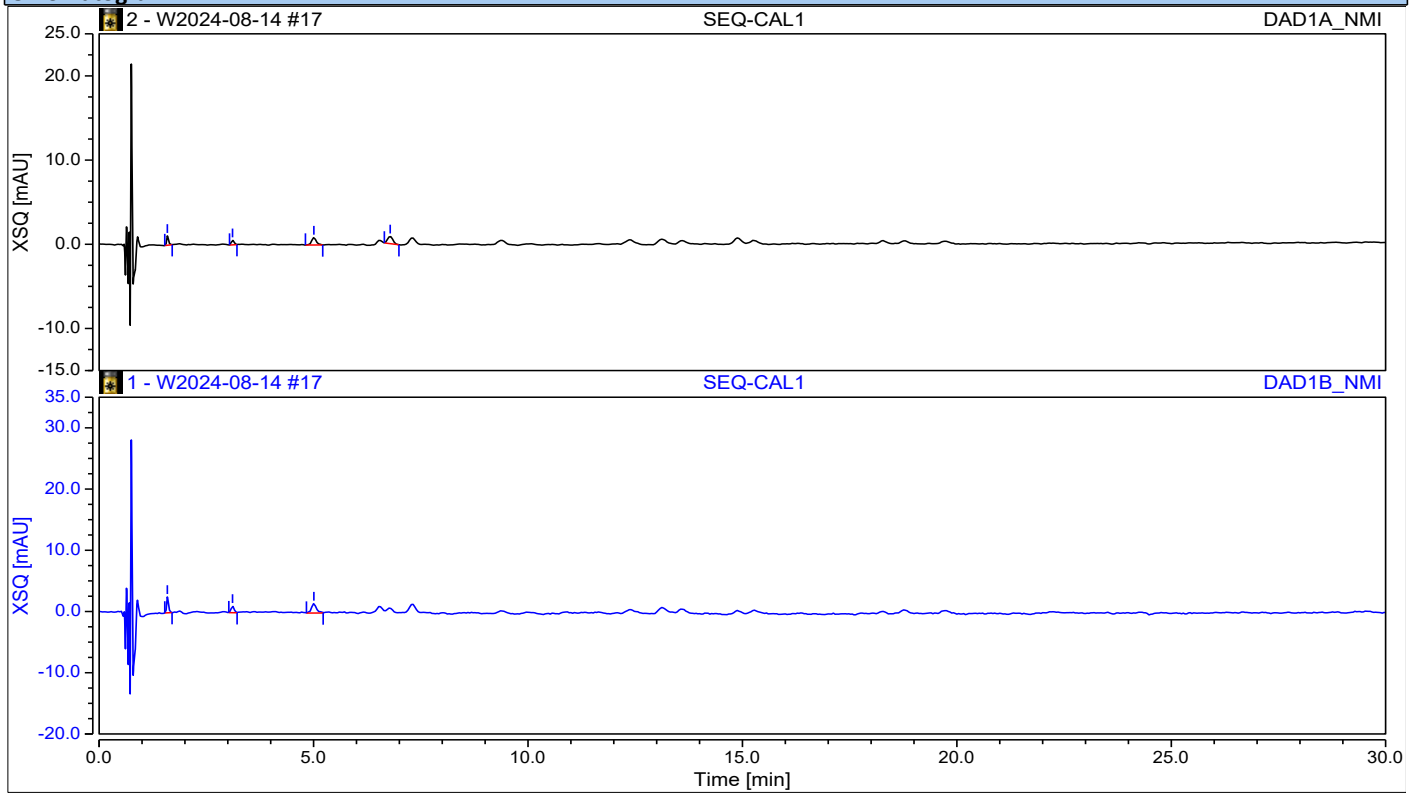
Instrument:
Sequence:W2024-08-14

Original Chromatogram

Injection Details

Injection Name:	**SEQ-CAL1**	*Instrument:*	**Waldorf**
Vial Number:	**17**	*Run Time (min):*	**30.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**14/Aug/2024 17:32**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**15/Aug/2024 14:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.927	0.0366	0.195	58.55	54.66	3.3385
2	PETN	22.233	0.0259	0.162	41.45	45.34	8.4312
1	HMX	1.590	0.0571	1.115	4.13	12.37	n.a.
2	RDX	3.110	0.0430	0.549	3.11	6.09	5.6192
3	1,3,5-TNB	5.007	0.1130	0.879	8.16	9.76	n.a.
4	1,2-DNB	6.533	0.0522	0.434	3.77	4.82	17.2890
5	1,3-DNB	6.787	0.1229	0.862	8.88	9.56	9.0831
6	3,5-DNA	7.297	0.1353	0.826	9.78	9.16	7.2055
7	NB	9.383	0.0965	0.509	6.97	5.64	15.2579
8	Tetryl	11.650	0.0178	0.100	1.29	1.11	17.0100
9	2,4,6-TNT	12.377	0.1352	0.587	9.77	6.52	12.4543
10	2-Am-DNT	13.120	0.1445	0.632	10.44	7.01	12.0146
11	4-Am-DNT	13.583	0.0705	0.395	5.10	4.38	n.a.
12	2,4-DNT	14.887	0.1293	0.700	9.34	7.77	14.5865
13	2,6-DNT	15.247	0.0741	0.401	5.35	4.45	13.4510
14	2-NT	18.277	0.0601	0.359	4.35	3.99	15.1215
15	4-NT	18.783	0.0598	0.350	4.32	3.89	14.1551
16	3-NT	19.727	0.0725	0.312	5.24	3.47	14.1590
Total:			**1.446**	**9.369**	**200.000**	**200.000**	

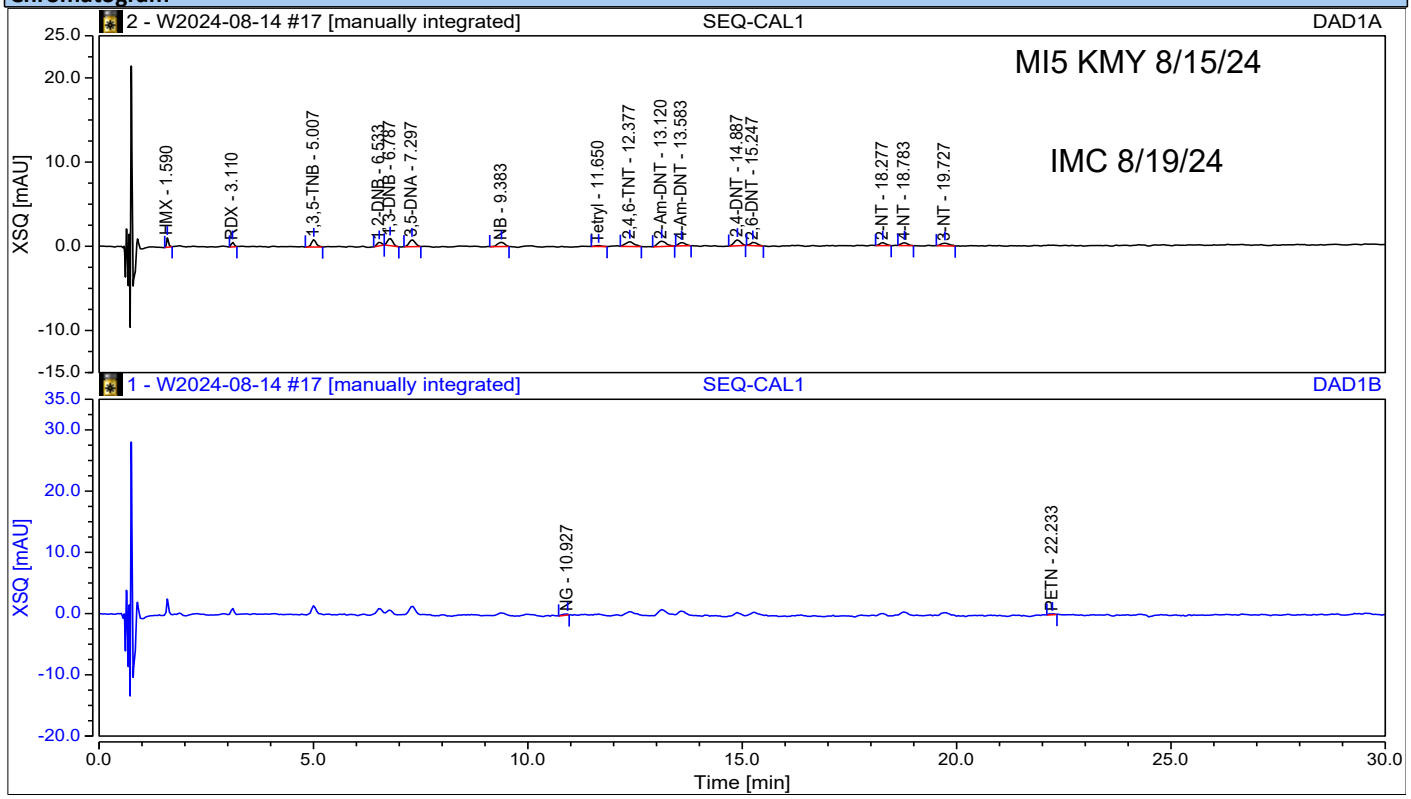
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Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL1**	*Instrument:*	**Waldorf**
Vial Number:	**17**	*Run Time (min):*	**30.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**14/Aug/2024 17:32**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**15/Aug/2024 14:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.927	0.0366	0.195	58.55	54.66	3.3385
2	PETN	22.233	0.0259	0.162	41.45	45.34	8.4312
1	HMX	1.590	0.0571	1.115	4.13	12.37	n.a.
2	RDX	3.110	0.0430	0.549	3.11	6.09	5.6192
3	1,3,5-TNB	5.007	0.1130	0.879	8.16	9.76	n.a.
4	1,2-DNB	6.533	0.0522	0.434	3.77	4.82	17.2890
5	1,3-DNB	6.787	0.1229	0.862	8.88	9.56	9.0831
6	3,5-DNA	7.297	0.1353	0.826	9.78	9.16	7.2055
7	NB	9.383	0.0965	0.509	6.97	5.64	15.2579
8	Tetryl	11.650	0.0178	0.100	1.29	1.11	17.0100
9	2,4,6-TNT	12.377	0.1352	0.587	9.77	6.52	12.4543
10	2-Am-DNT	13.120	0.1445	0.632	10.44	7.01	12.0146
11	4-Am-DNT	13.583	0.0705	0.395	5.10	4.38	n.a.
12	2,4-DNT	14.887	0.1293	0.700	9.34	7.77	14.5865
13	2,6-DNT	15.247	0.0741	0.401	5.35	4.45	13.4510
14	2-NT	18.277	0.0601	0.359	4.35	3.99	15.1215
15	4-NT	18.783	0.0598	0.350	4.32	3.89	14.1551
16	3-NT	19.727	0.0725	0.312	5.24	3.47	14.1590
Total:			**1.446**	**9.369**	**200.000**	**200.000**	

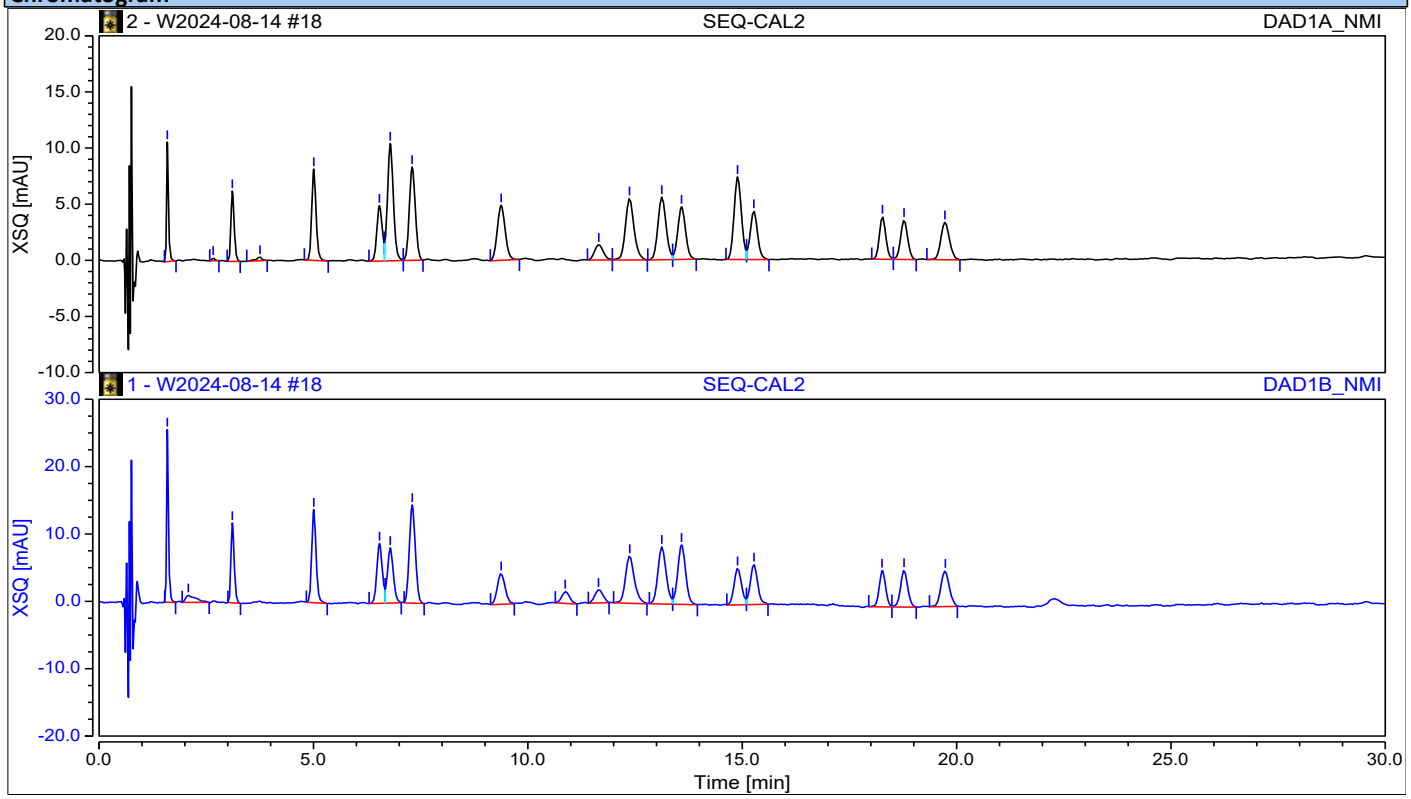
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Original Chromatogram

Injection Details

Injection Name:	**SEQ-CAL2**	*Instrument:*	**Waldorf**
Vial Number:	**18**	*Run Time (min):*	**30.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**14/Aug/2024 18:03**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**15/Aug/2024 14:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.870	0.3740	1.777	51.33	61.40	52.6688
2	PETN	22.263	0.3545	1.117	48.67	38.60	51.4974
1	HMX	1.590	0.5346	10.646	3.52	11.43	12.4781
2	RDX	3.107	0.5487	6.261	3.61	6.72	52.5737
3	1,3,5-TNB	5.007	0.9596	8.134	6.32	8.73	27.3315
4	1,2-DNB	6.537	0.7238	4.937	4.77	5.30	63.9938
5	1,3-DNB	6.790	1.6717	10.450	11.01	11.22	56.1759
6	3,5-DNA	7.300	1.3604	8.325	8.96	8.94	53.3630
7	NB	9.377	1.0502	4.914	6.92	5.27	61.8352
8	Tetryl	11.653	0.3263	1.357	2.15	1.46	32.1754
9	2,4,6-TNT	12.370	1.2943	5.494	8.53	5.90	57.4010
10	2-Am-DNT	13.123	1.2429	5.591	8.19	6.00	57.5879
11	4-Am-DNT	13.583	0.9908	4.695	6.53	5.04	45.9507
12	2,4-DNT	14.890	1.4776	7.360	9.73	7.90	60.3941
13	2,6-DNT	15.270	0.8644	4.316	5.69	4.63	59.9438
14	2-NT	18.270	0.6677	3.802	4.40	4.08	60.7078
15	4-NT	18.773	0.6784	3.528	4.47	3.79	60.6226
16	3-NT	19.727	0.7879	3.346	5.19	3.59	60.9732
Total:			**15.908**	**96.048**	**200.000**	**200.000**	

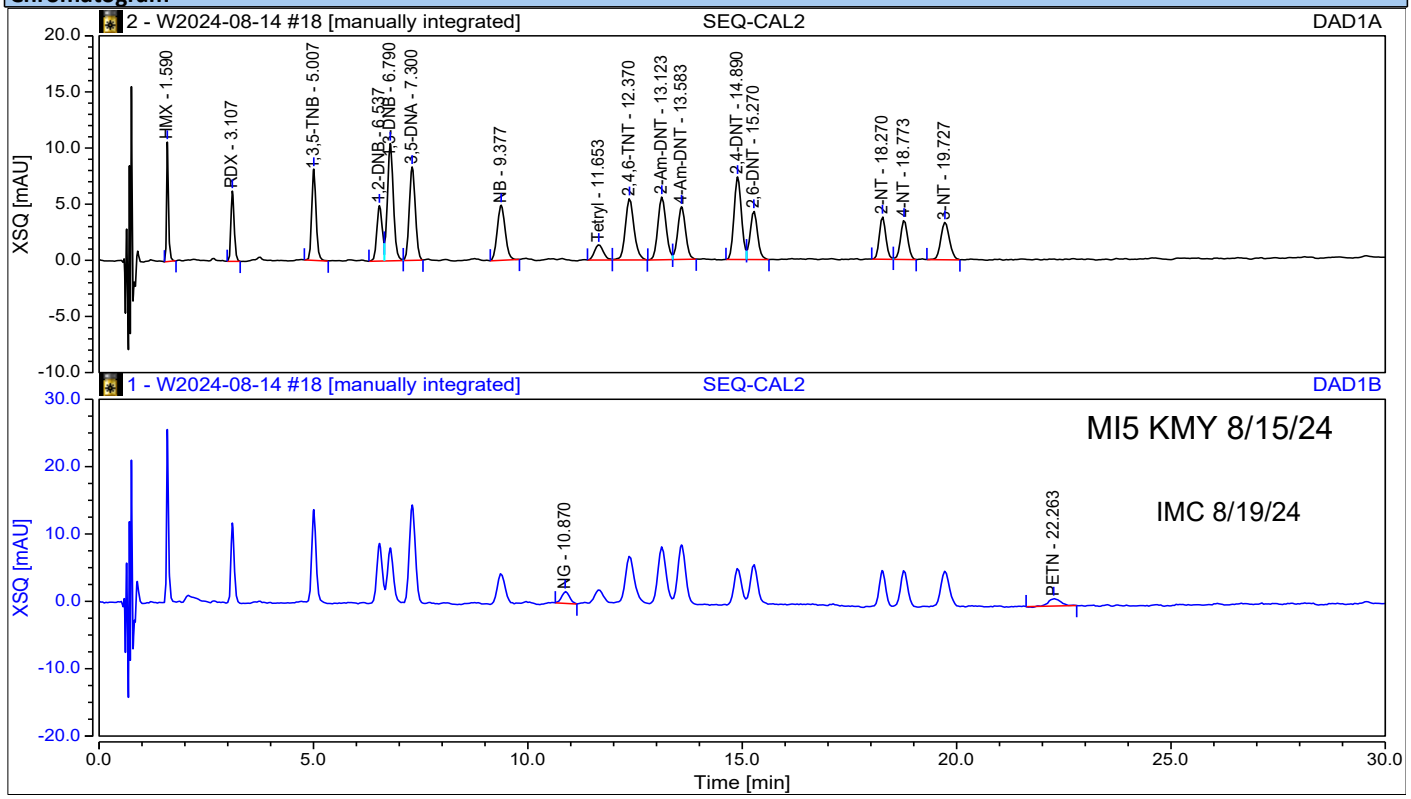
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Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL2**	*Instrument:*	**Waldorf**
Vial Number:	**18**	*Run Time (min):*	**30.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**14/Aug/2024 18:03**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**15/Aug/2024 14:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.870	0.3740	1.777	51.33	61.40	52.6688
2	PETN	22.263	0.3545	1.117	48.67	38.60	51.4974
1	HMX	1.590	0.5346	10.646	3.52	11.43	12.4781
2	RDX	3.107	0.5487	6.261	3.61	6.72	52.5737
3	1,3,5-TNB	5.007	0.9596	8.134	6.32	8.73	27.3315
4	1,2-DNB	6.537	0.7238	4.937	4.77	5.30	63.9938
5	1,3-DNB	6.790	1.6717	10.450	11.01	11.22	56.1759
6	3,5-DNA	7.300	1.3604	8.325	8.96	8.94	53.3630
7	NB	9.377	1.0502	4.914	6.92	5.27	61.8352
8	Tetryl	11.653	0.3263	1.357	2.15	1.46	32.1754
9	2,4,6-TNT	12.370	1.2943	5.494	8.53	5.90	57.4010
10	2-Am-DNT	13.123	1.2429	5.591	8.19	6.00	57.5879
11	4-Am-DNT	13.583	0.9908	4.695	6.53	5.04	45.9507
12	2,4-DNT	14.890	1.4776	7.360	9.73	7.90	60.3941
13	2,6-DNT	15.270	0.8644	4.316	5.69	4.63	59.9438
14	2-NT	18.270	0.6677	3.802	4.40	4.08	60.7078
15	4-NT	18.773	0.6784	3.528	4.47	3.79	60.6226
16	3-NT	19.727	0.7879	3.346	5.19	3.59	60.9732
Total:			**15.908**	**96.048**	**200.000**	**200.000**	

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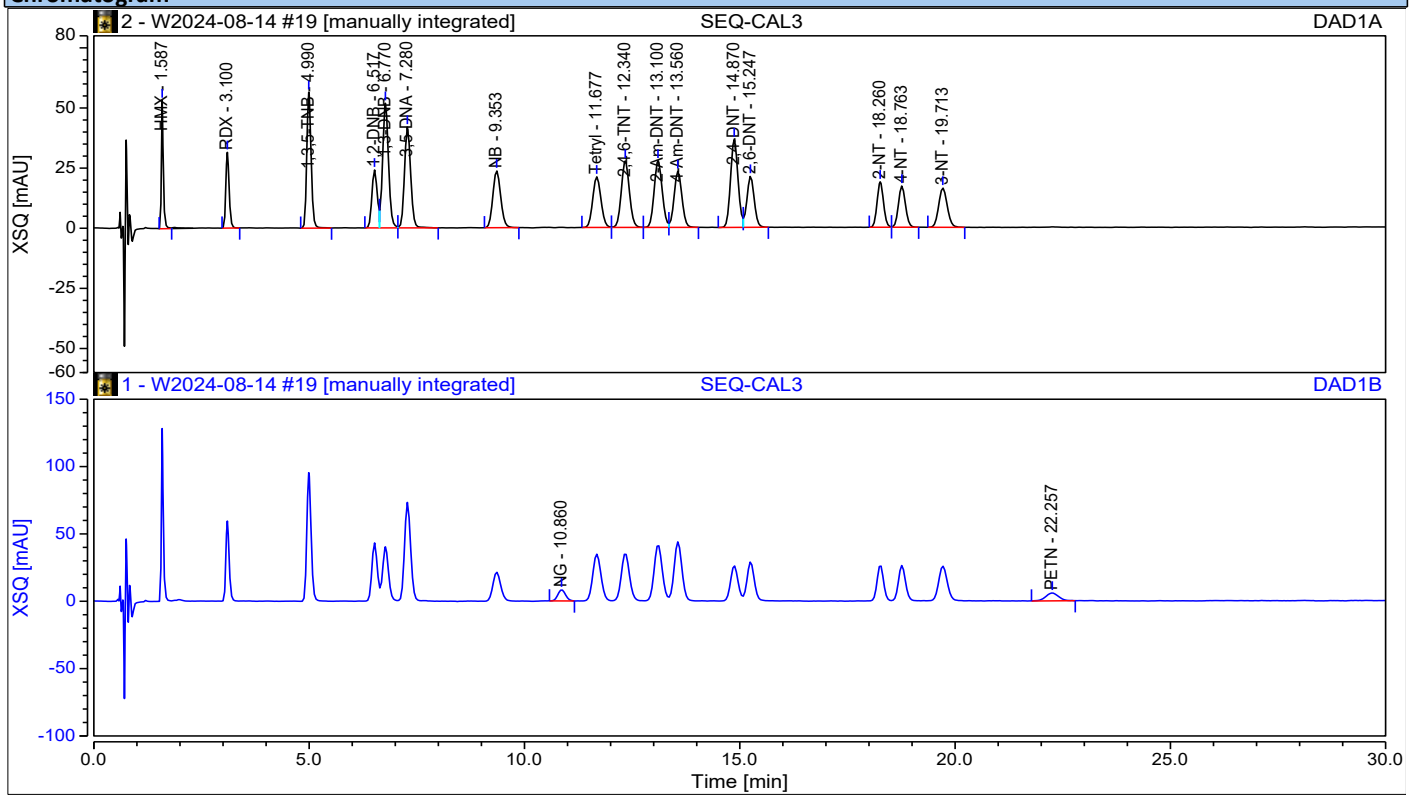
Instrument:
Sequence:W2024-08-14

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL3**	*Instrument:*	**Waldorf**
Vial Number:	**19**	*Run Time (min):*	**30.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**14/Aug/2024 18:35**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**15/Aug/2024 14:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.860	1.7189	8.286	45.74	58.51	255.6858
2	PETN	22.257	2.0395	5.876	54.26	41.49	266.0856
1	HMX	1.587	2.7161	53.263	3.42	10.81	243.4984
2	RDX	3.100	2.7617	31.492	3.48	6.39	259.9634
3	1,3,5-TNB	4.990	6.5708	56.484	8.28	11.47	255.5077
4	1,2-DNB	6.517	3.4795	24.150	4.39	4.90	263.2961
5	1,3-DNB	6.770	8.2270	51.821	10.37	10.52	259.3827
6	3,5-DNA	7.280	7.0229	41.917	8.85	8.51	260.1398
7	NB	9.353	5.0264	23.671	6.34	4.81	260.1731
8	Tetryl	11.677	4.6857	21.070	5.91	4.28	270.0324
9	2,4,6-TNT	12.340	6.0386	27.629	7.61	5.61	260.1610
10	2-Am-DNT	13.100	6.0302	27.619	7.60	5.61	260.0341
11	4-Am-DNT	13.560	4.9085	23.291	6.19	4.73	256.3657
12	2,4-DNT	14.870	7.3634	36.487	9.28	7.41	260.7468
13	2,6-DNT	15.247	4.1755	21.276	5.26	4.32	261.3397
14	2-NT	18.260	3.2741	18.891	4.13	3.84	260.4861
15	4-NT	18.763	3.2626	17.139	4.11	3.48	259.6764
16	3-NT	19.713	3.7937	16.342	4.78	3.32	261.5261
Total:			**83.095**	**506.704**	**200.000**	**200.000**	

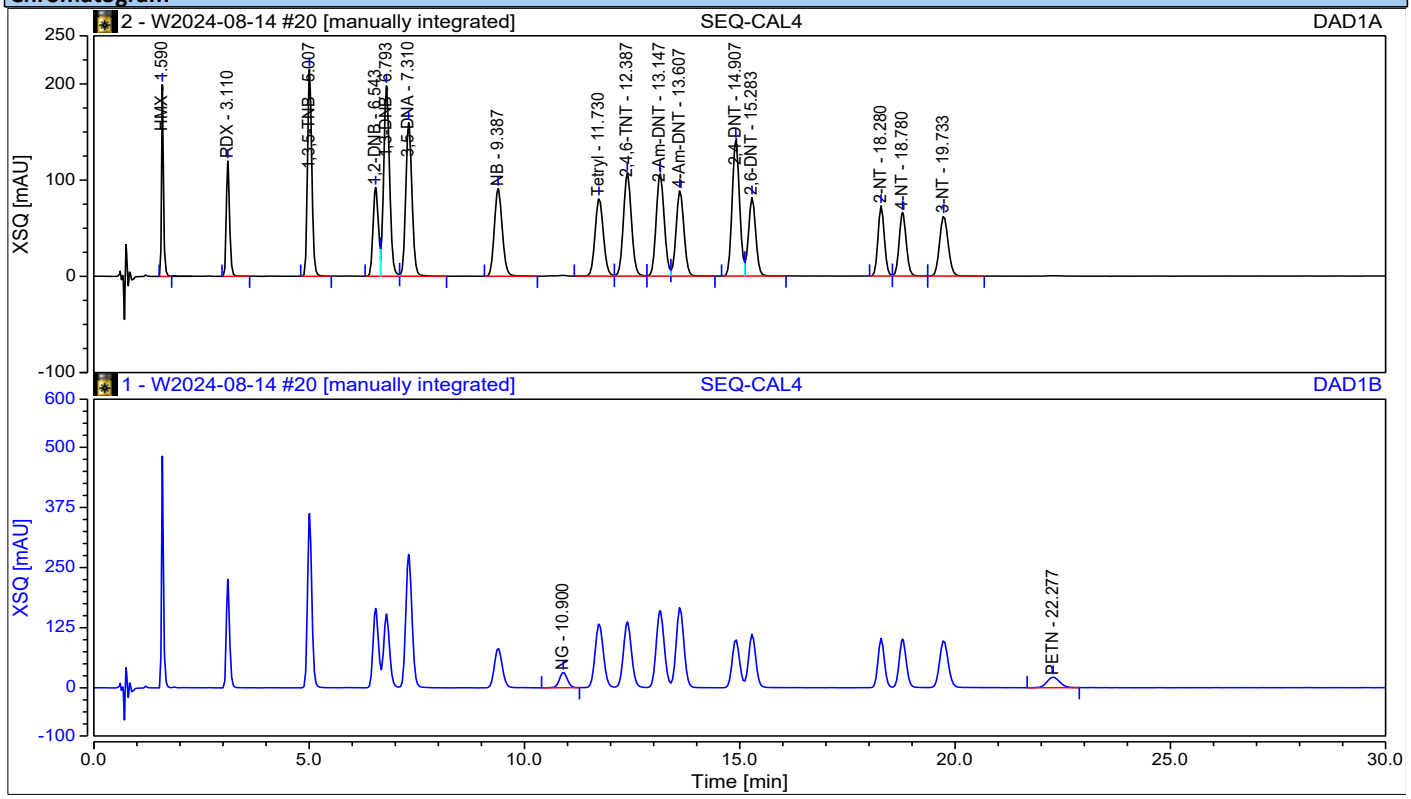
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Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL4**	*Instrument:*	**Waldorf**
Vial Number:	**20**	*Run Time (min):*	**30.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**14/Aug/2024 19:06**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**15/Aug/2024 14:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.900	6.9167	31.947	47.71	59.38	993.6356
2	PETN	22.277	7.5803	21.852	52.29	40.62	986.4985
1	HMX	1.590	10.1154	199.345	3.33	10.59	1035.3704
2	RDX	3.110	10.5583	119.806	3.48	6.37	985.8594
3	1,3,5-TNB	5.007	24.8796	215.112	8.19	11.43	1004.1168
4	1,2-DNB	6.543	13.2740	92.219	4.37	4.90	969.3762
5	1,3-DNB	6.793	31.4477	197.927	10.35	10.52	977.0128
6	3,5-DNA	7.310	26.7775	159.604	8.81	8.48	984.5408
7	NB	9.387	19.5185	91.037	6.42	4.84	972.4846
8	Tetryl	11.730	18.1614	80.923	5.98	4.30	992.2396
9	2,4,6-TNT	12.387	23.2429	106.445	7.65	5.66	982.1185
10	2-Am-DNT	13.147	23.1172	106.232	7.61	5.65	982.5122
11	4-Am-DNT	13.607	18.7805	88.970	6.18	4.73	999.5352
12	2,4-DNT	14.907	28.1321	140.704	9.26	7.48	977.6157
13	2,6-DNT	15.283	16.0322	81.707	5.28	4.34	978.9497
14	2-NT	18.280	12.6036	72.876	4.15	3.87	975.2896
15	4-NT	18.780	12.6028	66.077	4.15	3.51	975.3726
16	3-NT	19.733	14.5691	62.566	4.80	3.33	974.8362
Total:			**318.310**	**1935.347**	**200.000**	**200.000**	

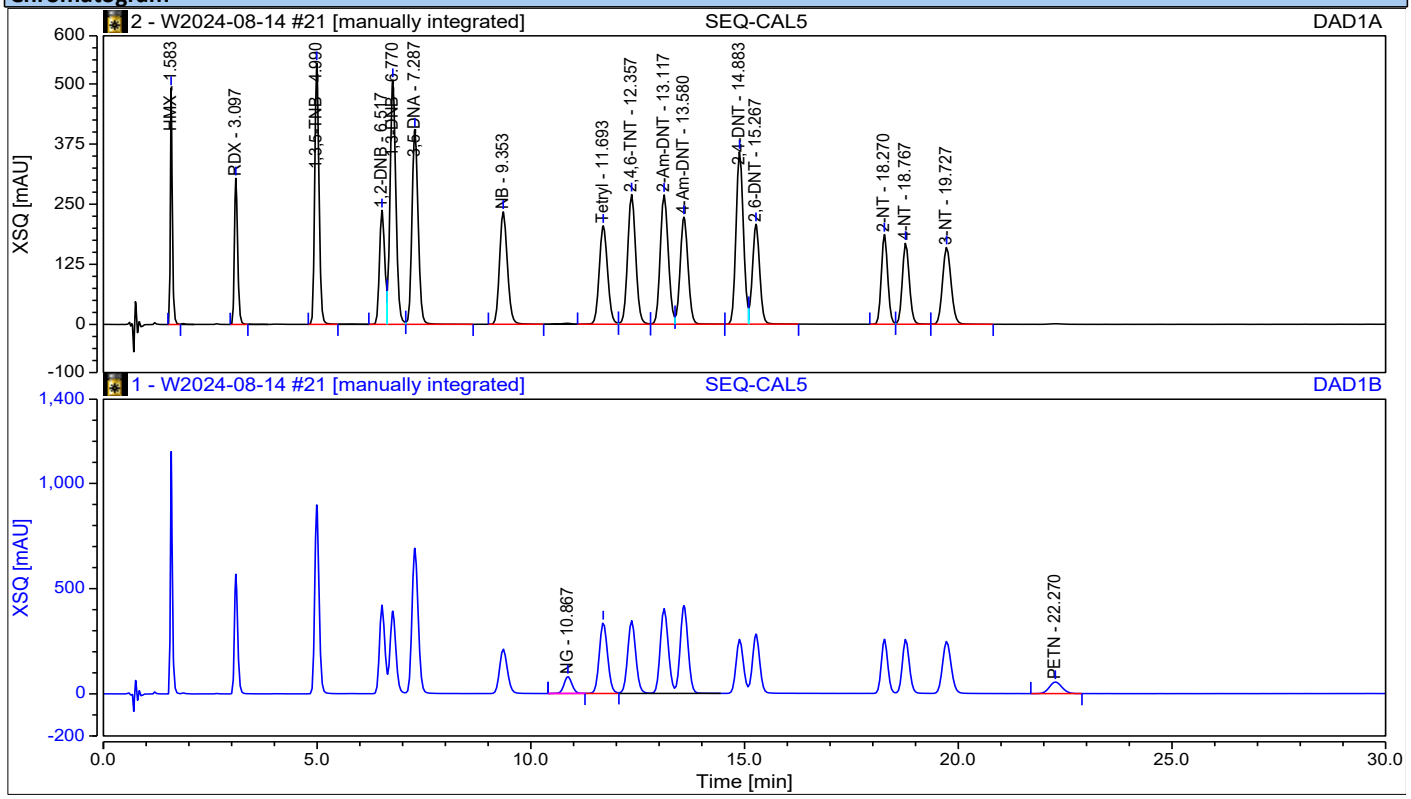
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Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL5**	*Instrument:*	**Waldorf**
Vial Number:	**21**	*Run Time (min):*	**30.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**14/Aug/2024 19:38**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**15/Aug/2024 14:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.867	17.2199	80.163	15.25	16.97	2497.4155
3	PETN	22.270	18.8964	55.000	16.74	11.65	2481.2192
1	HMX	1.583	25.0547	491.363	3.24	10.30	2618.3334
2	RDX	3.097	26.7264	303.696	3.46	6.37	2497.3613
3	1,3,5-TNB	4.990	62.7770	543.022	8.13	11.39	2551.6180
4	1,2-DNB	6.517	33.8741	237.026	4.38	4.97	2471.4745
5	1,3-DNB	6.770	79.9158	507.705	10.34	10.64	2498.5661
6	3,5-DNA	7.287	67.8554	404.896	8.78	8.49	2494.4038
7	NB	9.353	49.8467	233.681	6.45	4.90	2480.7668
8	Tetryl	11.693	46.2909	204.691	5.99	4.29	2485.6517
9	2,4,6-TNT	12.357	59.1642	269.940	7.66	5.66	2479.7568
10	2-Am-DNT	13.117	58.9543	269.160	7.63	5.64	2479.8766
11	4-Am-DNT	13.580	47.4922	222.643	6.15	4.67	2512.0488
12	2,4-DNT	14.883	71.7986	358.488	9.29	7.52	2475.6619
13	2,6-DNT	15.267	40.9522	207.739	5.30	4.36	2475.5612
14	2-NT	18.270	32.3174	186.383	4.18	3.91	2478.1888
15	4-NT	18.767	32.2296	169.076	4.17	3.54	2481.6939
16	3-NT	19.727	37.3456	159.995	4.83	3.35	2478.3358
Total:			**808.712**	**4904.669**	**131.988**	**128.619**	

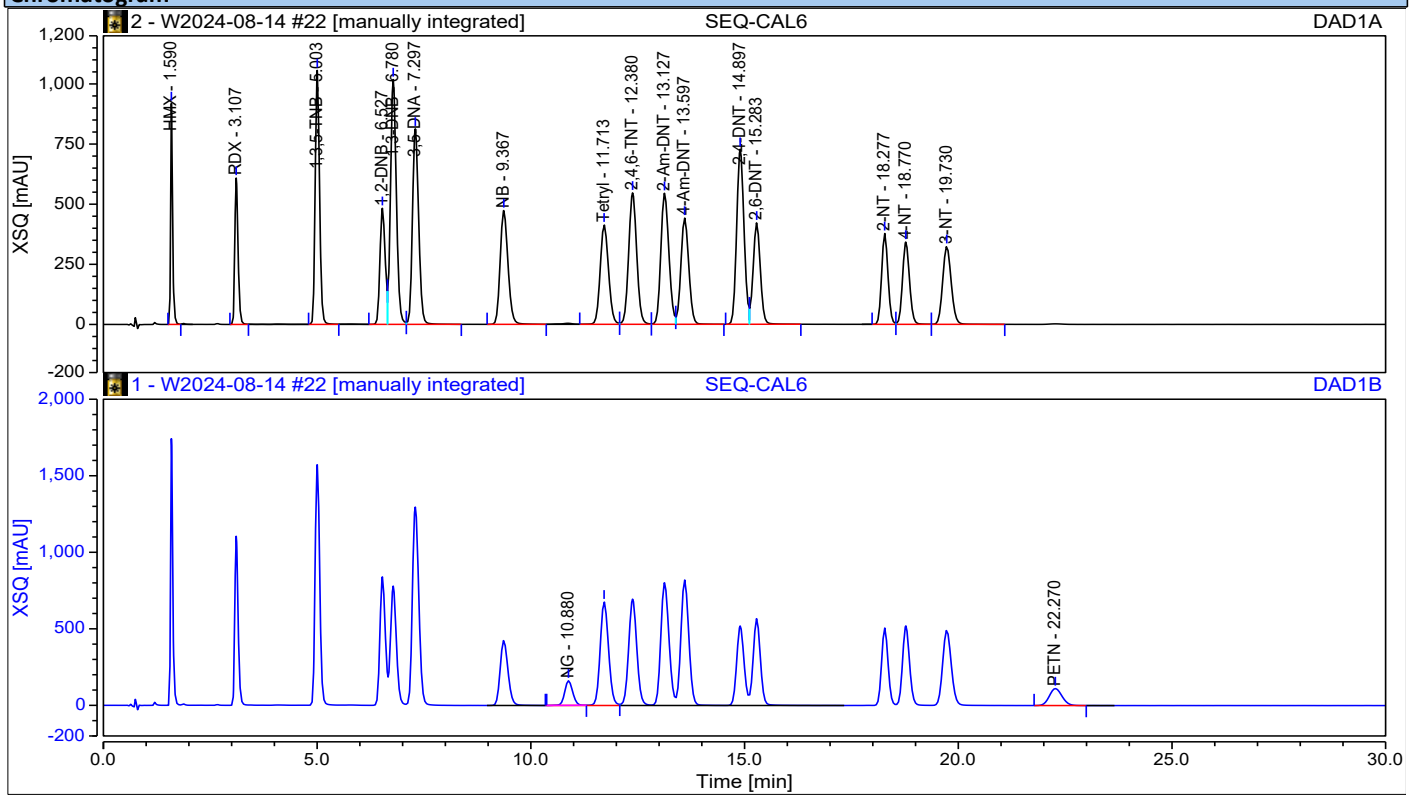
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Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL6**	*Instrument:*	**Waldorf**
Vial Number:	**22**	*Run Time (min):*	**30.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**14/Aug/2024 20:09**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**15/Aug/2024 14:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.880	34.5446	160.475	15.15	16.91	5002.2558
3	PETN	22.270	38.3771	111.108	16.83	11.71	5011.2680
1	HMX	1.590	47.9812	918.641	3.09	9.66	4934.5037
2	RDX	3.107	53.6803	608.611	3.46	6.40	5003.6229
3	1,3,5-TNB	5.003	123.8677	1056.176	7.98	11.10	4973.3308
4	1,2-DNB	6.527	68.4562	482.670	4.41	5.07	5019.5705
5	1,3-DNB	6.780	160.9872	1017.955	10.37	10.70	5004.7794
6	3,5-DNA	7.297	136.3503	812.824	8.78	8.55	5005.3471
7	NB	9.367	100.6515	473.305	6.48	4.98	5014.4824
8	Tetryl	11.713	93.6395	413.723	6.03	4.35	5007.8909
9	2,4,6-TNT	12.380	119.5108	546.504	7.70	5.75	5013.1084
10	2-Am-DNT	13.127	118.9946	544.787	7.67	5.73	5012.9746
11	4-Am-DNT	13.597	94.8642	441.975	6.11	4.65	4993.7985
12	2,4-DNT	14.897	145.0643	727.798	9.35	7.65	5015.9951
13	2,6-DNT	15.283	82.5719	421.652	5.32	4.43	5015.7546
14	2-NT	18.277	65.2669	377.992	4.20	3.97	5015.2062
15	4-NT	18.770	64.9673	342.195	4.19	3.60	5013.4793
16	3-NT	19.730	75.3108	324.387	4.85	3.41	5015.1697
Total:			**1625.086**	**9782.776**	**131.987**	**128.623**	

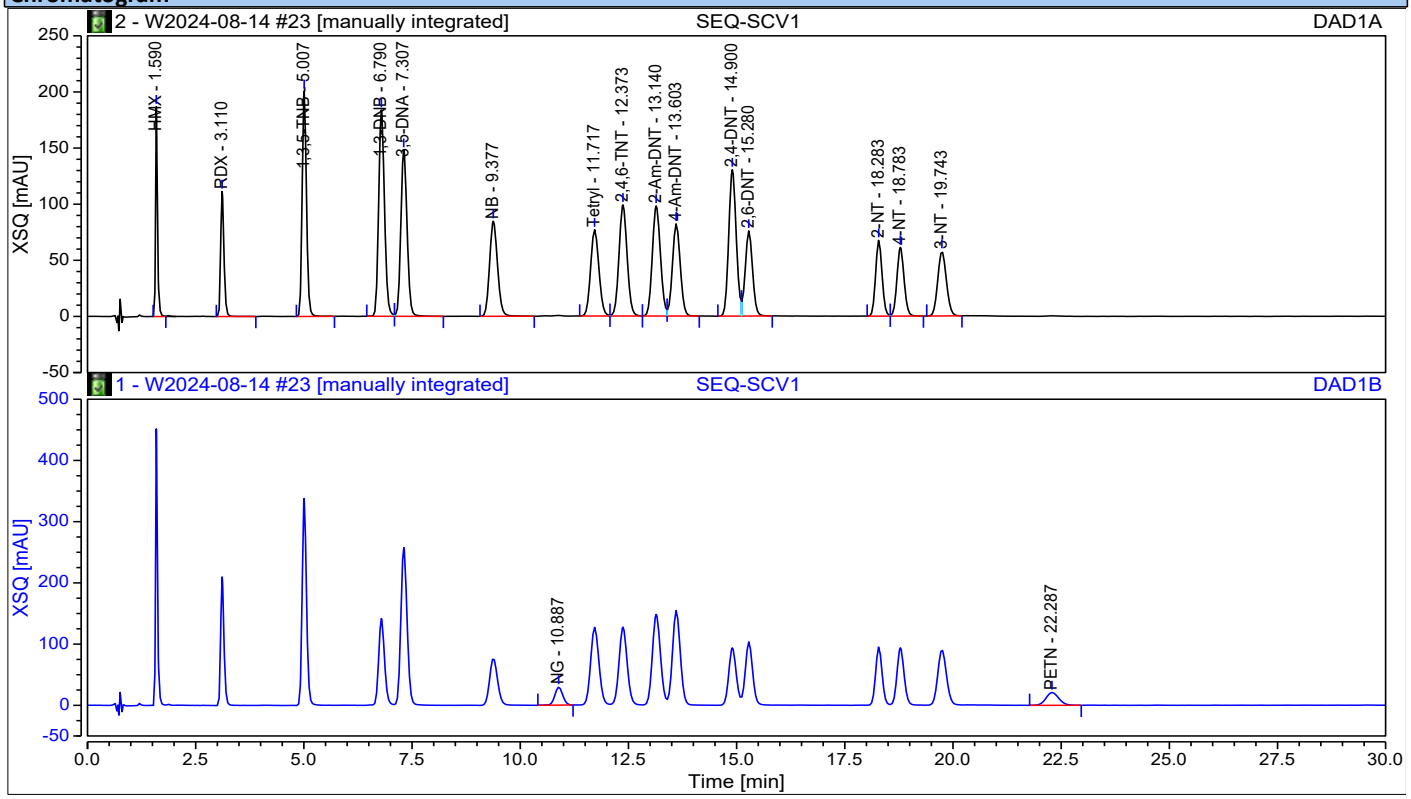
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Chromatogram and Results

Injection Details

Injection Name:	**SEQ-SCV1**	*Instrument:*	**Waldorf**
Vial Number:	**23**	*Run Time (min):*	**30.00**
Injection Type:	**Check Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**14/Aug/2024 20:41**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**15/Aug/2024 14:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.887	6.2756	29.356	46.35	58.44	912.8172
2	PETN	22.287	7.2647	20.872	53.65	41.56	942.3183
1	HMX	1.590	9.4529	186.929	3.51	11.23	968.0682
2	RDX	3.110	9.8687	111.416	3.66	6.69	916.9026
3	1,3,5-TNB	5.007	23.2163	200.583	8.61	12.05	935.5536
n.a.	1,2-DNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	1,3-DNB	6.790	28.7410	183.800	10.66	11.04	907.6263
5	3,5-DNA	7.307	24.7841	148.044	9.19	8.89	913.3849
6	NB	9.377	18.1168	84.699	6.72	5.09	905.4681
7	Tetryl	11.717	17.1791	76.891	6.37	4.62	943.5852
8	2,4,6-TNT	12.373	21.5870	99.044	8.01	5.95	914.3301
9	2-Am-DNT	13.140	21.4178	98.076	7.94	5.89	907.5602
10	4-Am-DNT	13.603	17.3442	82.195	6.43	4.94	922.8750
11	2,4-DNT	14.900	26.1790	130.449	9.71	7.84	907.0745
12	2,6-DNT	15.280	14.8995	75.834	5.53	4.56	909.2090
13	2-NT	18.283	11.7446	67.639	4.36	4.06	905.9516
14	4-NT	18.783	11.6819	61.255	4.33	3.68	904.8650
15	3-NT	19.743	13.3645	57.678	4.96	3.47	899.4097
Total:			**283.118**	**1714.762**	**200.000**	**200.000**	

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SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8330B

Laboratory:	APPL, LLC		
Client:	AECOM	Project:	Wingate 60517380 Task 3
Instrument ID:	STATLER	Calibration:	2420012
Lab File ID:	S2024-05-16-010	Calibration Date:	05/16/24 08:00
Sequence:	SD01815	Injection Date:	05/16/24
Lab Sample ID:	SD01815-SCV1	Injection Time:	19:02

		CONC. (ng/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	AVG	1000	930	0.0634132	0.058972		-7.0	20
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	AVG	1000	917	5.322893E-02	0.048836		-8.3	20
1,3,5-TRINITROBENZENE	AVG	1000	910	0.0346204	0.031494		-9.0	20
1,3-DINITROBENZENE	AVG	1000	920	5.905443E-02	0.054294		-8.1	20
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	AVG	1000	955	2.189713E-02	0.020916		-4.5	20
NITROBENZENE	AVG	1000	935	4.948757E-02	0.046247		-6.5	20
2,4,6-TRINITROTOLUENE	AVG	1000	926	0.0227055	0.02104		-7.3	20
4-AMINO-2,6-DINITROTOLUENE	AVG	1000	912	4.338403E-02	0.039533		-8.9	20
2-AMINO-4,6-DINITROTOLUENE	AVG	1000	914	5.266023E-02	0.048126		-8.6	20
2,4-DINITROTOLUENE	AVG	1000	908	4.334467E-02	0.039342		-9.2	20
2,6-DINITROTOLUENE	AVG	1000	908	0.0263017	0.023864		-9.3	20
2-NITROTOLUENE	AVG	1000	938	2.516953E-02	0.02362		-6.2	20
3-NITROTOLUENE	AVG	1000	927	0.0283433	0.026282		-7.3	20
4-NITROTOLUENE	AVG	1000	934	2.507787E-02	0.023431		-6.6	20
NITROGLYCERIN	AVG	1000	927	1.943387E-02	0.018007		-7.3	20
PENTAERYTHRITOL TETRANITRATE	AVG	1000	934	1.384317E-02	0.012939		-6.5	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

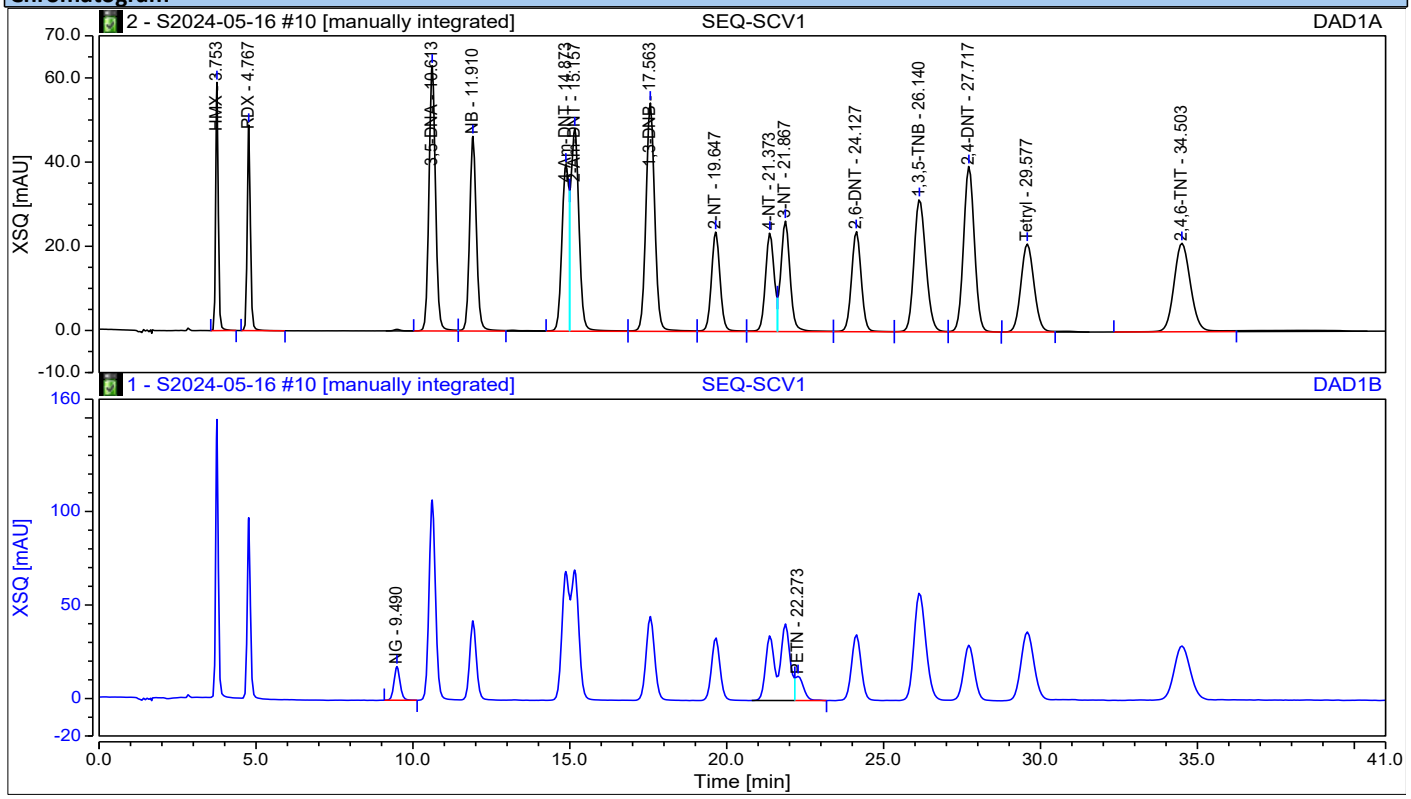
* Values outside of QC limits

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-SCV1**	*Instrument:*	**Statler**
Vial Number:	**10**	*Run Time (min):*	**41.00**
Injection Type:	**Check Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**16/May/2024 19:02**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**20/May/2024 12:45**	*Operator:*	**AOP**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.490	4.0584	18.007	50.59	58.19	927.1362
2	PETN	22.273	3.9641	12.939	49.41	41.81	933.6693
1	HMX	3.753	5.6311	58.972	3.40	10.36	929.9663
2	RDX	4.767	5.7392	48.836	3.47	8.58	917.2299
3	3,5-DNA	10.613	15.1639	62.997	9.16	11.07	916.0896
4	NB	11.910	11.6164	46.247	7.02	8.13	934.5691
n.a.	1,2-DNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5	4-Am-DNT	14.873	10.1469	39.533	6.13	6.95	911.5561
6	2-Am-DNT	15.157	14.4393	48.126	8.72	8.46	913.6993
7	1,3-DNB	17.563	17.5167	54.294	10.58	9.54	919.6039
8	2-NT	19.647	7.5740	23.620	4.57	4.15	938.2778
9	4-NT	21.373	7.5586	23.431	4.57	4.12	933.7185
10	3-NT	21.867	9.0161	26.282	5.45	4.62	927.1626
11	2,6-DNT	24.127	8.5641	23.864	5.17	4.19	907.6933
12	1,3,5-TNB	26.140	13.8143	31.494	8.34	5.54	909.6672
13	2,4-DNT	27.717	15.7654	39.342	9.52	6.91	907.6164
14	Tetryl	29.577	10.1061	20.916	6.10	3.68	954.8727
15	2,4,6-TNT	34.503	12.9242	21.040	7.81	3.70	926.1715
Total:			**173.599**	**599.941**	**200.000**	**200.000**	

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SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8330B

Laboratory:	APPL, LLC		
Client:	AECOM	Project:	Wingate 60517380 Task 3
Instrument ID:	Waldorf	Calibration:	2433019
Lab File ID:	W2024-08-14-023	Calibration Date:	08/14/24 07:00
Sequence:	SD03246	Injection Date:	08/14/24
Lab Sample ID:	SD03246-SCV1	Injection Time:	20:41

		CONC. (ng/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	LRI	1000	968	0.2047651	0.186929		-3.2	20
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	LRI	1000	917	0.1206658	0.111416		-8.3	20
1,3,5-TRINITROBENZENE	LRI	1000	936	0.2013287	0.200583		-6.4	20
1,3-DINITROBENZENE	LRI	1000	908	0.1988807	0.1838		-9.2	20
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	LRI	1000	944	6.282733E-02	0.076891		-5.6	20
NITROBENZENE	LRI	1000	905	9.565573E-02	0.084699		-9.5	20
2,4,6-TRINITROTOLUENE	LRI	1000	914	0.110253	0.099044		-8.6	20
4-AMINO-2,6-DINITROTOLUENE	LRI	1000	923	0.0887477	0.082195		-7.7	20
2-AMINO-4,6-DINITROTOLUENE	LRI	1000	908	0.1119249	0.098076		-9.2	20
2,4-DINITROTOLUENE	LRI	1000	907	0.1438011	0.130449		-9.3	20
2,6-DINITROTOLUENE	LRI	1000	909	0.0834595	0.075834		-9.1	20
2-NITROTOLUENE	LRI	1000	906	7.440527E-02	0.067639		-9.4	20
3-NITROTOLUENE	LRI	1000	899	0.0643549	0.057678		-10.1	20
4-NITROTOLUENE	LRI	1000	905	6.854373E-02	0.061255		-9.5	20
NITROGLYCERIN	LRI	1000	913	0.0339652	0.029356		-8.7	20
PENTAERYTHRITOL TETRANITRATE	LRI	1000	942	2.405293E-02	0.020872		-5.8	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

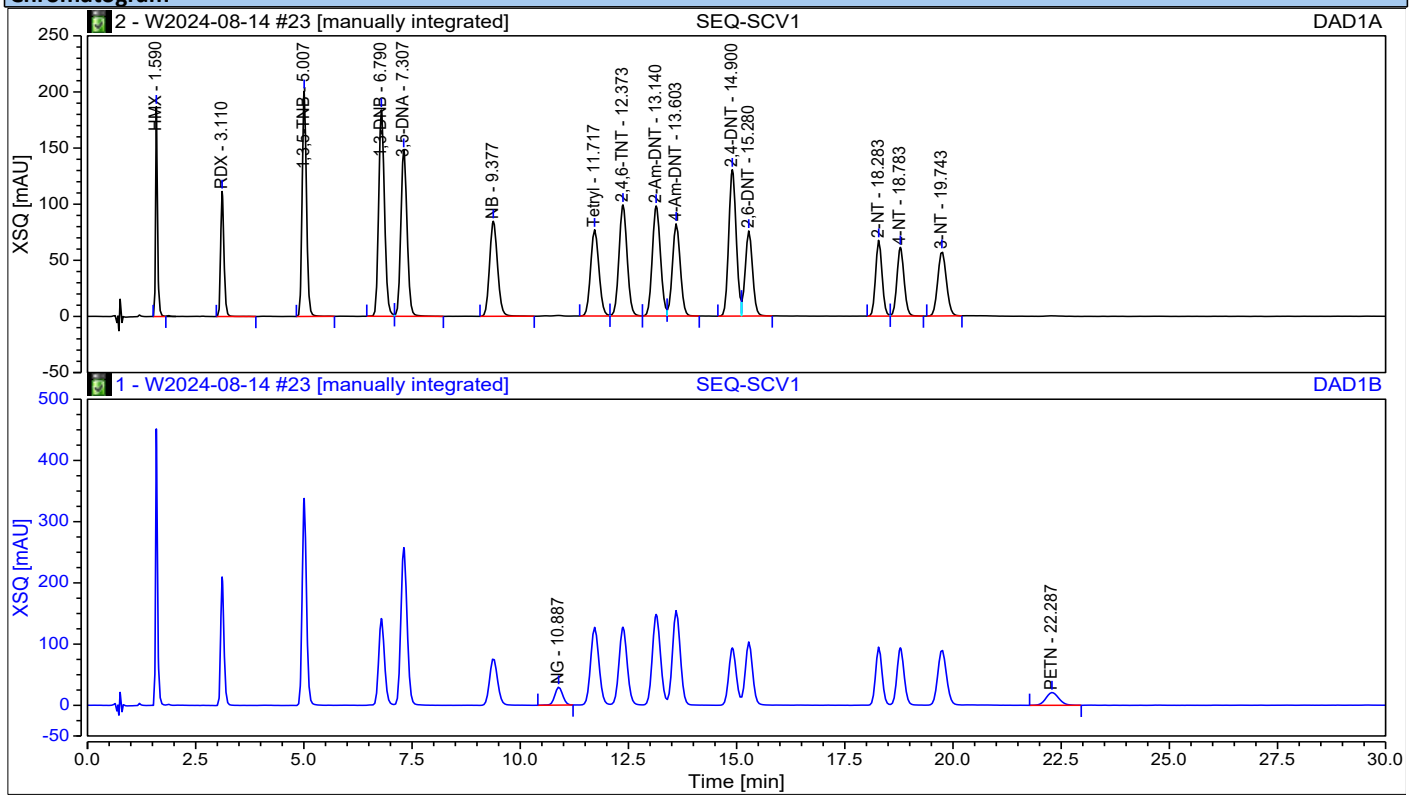
Instrument:
Sequence:W2024-08-14

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-SCV1**	*Instrument:*	**Waldorf**
Vial Number:	**23**	*Run Time (min):*	**30.00**
Injection Type:	**Check Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**14/Aug/2024 20:41**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**15/Aug/2024 14:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.887	6.2756	29.356	46.35	58.44	912.8172
2	PETN	22.287	7.2647	20.872	53.65	41.56	942.3183
1	HMX	1.590	9.4529	186.929	3.51	11.23	968.0682
2	RDX	3.110	9.8687	111.416	3.66	6.69	916.9026
3	1,3,5-TNB	5.007	23.2163	200.583	8.61	12.05	935.5536
n.a.	1,2-DNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	1,3-DNB	6.790	28.7410	183.800	10.66	11.04	907.6263
5	3,5-DNA	7.307	24.7841	148.044	9.19	8.89	913.3849
6	NB	9.377	18.1168	84.699	6.72	5.09	905.4681
7	Tetryl	11.717	17.1791	76.891	6.37	4.62	943.5852
8	2,4,6-TNT	12.373	21.5870	99.044	8.01	5.95	914.3301
9	2-Am-DNT	13.140	21.4178	98.076	7.94	5.89	907.5602
10	4-Am-DNT	13.603	17.3442	82.195	6.43	4.94	922.8750
11	2,4-DNT	14.900	26.1790	130.449	9.71	7.84	907.0745
12	2,6-DNT	15.280	14.8995	75.834	5.53	4.56	909.2090
13	2-NT	18.283	11.7446	67.639	4.36	4.06	905.9516
14	4-NT	18.783	11.6819	61.255	4.33	3.68	904.8650
15	3-NT	19.743	13.3645	57.678	4.96	3.47	899.4097
Total:			**283.118**	**1714.762**	**200.000**	**200.000**	

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CONTINUING CALIBRATION VERIFICATION

EPA 8330B

Laboratory:	APPL, LLC	Work Order:	24I0021
Client:	AECOM	Project:	Wingate 60517380 Task 3
Instrument ID:	STATLER	Calibration:	2420012
Lab File ID:	S2024-09-12-004	Calibration Date:	05/16/24 08:00
Sequence:	SD03767	Injection Date:	09/12/24
Lab Sample ID:	SD03767-CCV1	Injection Time:	12:08

		CONC. (ng/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	AVG	1000	890	0.0634132	0.05643		-11	20
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	AVG	1000	890	5.322893E-02	0.047394		-11	20
1,3,5-TRINITROBENZENE	AVG	1000	916	0.0346204	0.031719		-8	20
1,3-DINITROBENZENE	AVG	1000	904	5.905443E-02	0.053391		-10	20
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	AVG	1000	894	2.189713E-02	0.01958		-11	20
NITROBENZENE	AVG	1000	915	4.948757E-02	0.045286		-9	20
2,4,6-TRINITROTOLUENE	AVG	1000	910	0.0227055	0.020682		-9	20
4-AMINO-2,6-DINITROTOLUENE	AVG	1000	899	4.338403E-02	0.038985		-10	20
2-AMINO-4,6-DINITROTOLUENE	AVG	1000	911	5.266023E-02	0.048007		-9	20
2,4-DINITROTOLUENE	AVG	1000	912	4.334467E-02	0.039538		-9	20
2,6-DINITROTOLUENE	AVG	1000	886	0.0263017	0.023288		-12	20
2-NITROTOLUENE	AVG	1000	911	2.516953E-02	0.022941		-9	20
3-NITROTOLUENE	AVG	1000	913	0.0283433	0.025869		-9	20
4-NITROTOLUENE	AVG	1000	909	2.507787E-02	0.022801		-9	20
NITROGLYCERIN	AVG	1000	926	1.943387E-02	0.017994		-7	20
PENTAERYTHRITOL TETRANITRATE	AVG	1000	963	1.384317E-02	0.013352		-4	20
1,2-DINITROBENZENE	AVG	1000	955	0.0332162	0.031731		-5	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

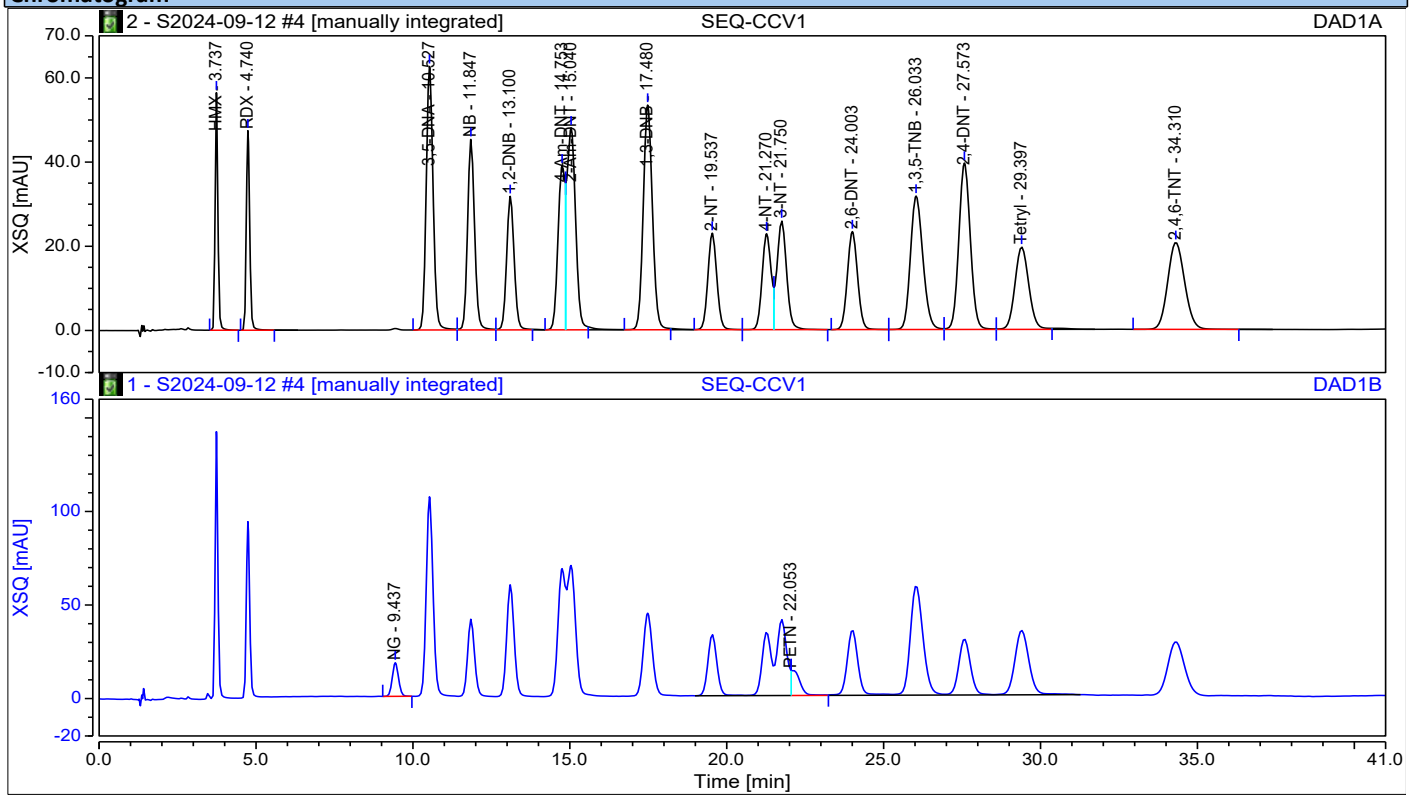
Instrument:
Sequence:S2024-09-12

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CCV1**	*Instrument:*	**Statler**
Vial Number:	**4**	*Run Time (min):*	**41.00**
Injection Type:	**Check Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**12/Sep/2024 12:08**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**12/Aug/2024 08:22**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.437	4.1628	17.994	49.14	57.40	926.4860
2	PETN	22.053	4.3084	13.352	50.86	42.60	963.4530
1	HMX	3.737	5.8396	56.430	3.26	9.56	889.8940
2	RDX	4.740	5.9146	47.394	3.30	8.03	890.1396
3	3,5-DNA	10.527	15.8360	62.613	8.83	10.61	910.4961
4	NB	11.847	11.8137	45.286	6.59	7.67	915.1472
5	1,2-DNB	13.100	8.8386	31.731	4.93	5.38	954.9203
6	4-Am-DNT	14.753	10.0857	38.985	5.62	6.60	898.9260
7	2-Am-DNT	15.040	15.3181	48.007	8.54	8.13	911.4231
8	1,3-DNB	17.480	18.0854	53.391	10.08	9.05	904.3084
9	2-NT	19.537	7.5946	22.941	4.24	3.89	911.3027
10	4-NT	21.270	7.5700	22.801	4.22	3.86	908.6067
11	3-NT	21.750	9.2261	25.869	5.14	4.38	912.5859
12	2,6-DNT	24.003	8.7796	23.288	4.90	3.95	885.7805
13	1,3,5-TNB	26.033	14.6125	31.719	8.15	5.37	916.1539
14	2,4-DNT	27.573	16.8301	39.538	9.38	6.70	912.1352
15	Tetryl	29.397	10.0342	19.580	5.60	3.32	893.8778
16	2,4,6-TNT	34.310	12.9513	20.682	7.22	3.50	910.4107
Total:			**187.801**	**621.600**	**200.000**	**200.000**	

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CONTINUING CALIBRATION VERIFICATION

EPA 8330B

Laboratory:	APPL, LLC	Work Order:	24I0021
Client:	AECOM	Project:	Wingate 60517380 Task 3
Instrument ID:	STATLER	Calibration:	2420012
Lab File ID:	S2024-09-12-012	Calibration Date:	05/16/24 08:00
Sequence:	SD03767	Injection Date:	09/12/24
Lab Sample ID:	SD03767-CCV2	Injection Time:	17:48

		CONC. (ng/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	AVG	1000	896	0.0634132	0.056835		-10	20
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	AVG	1000	896	5.322893E-02	0.047691		-10	20
1,3,5-TRINITROBENZENE	AVG	1000	923	0.0346204	0.03196		-8	20
1,3-DINITROBENZENE	AVG	1000	912	5.905443E-02	0.053824		-9	20
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	AVG	1000	907	2.189713E-02	0.01987		-9	20
NITROBENZENE	AVG	1000	907	4.948757E-02	0.044871		-9	20
2,4,6-TRINITROTOLUENE	AVG	1000	924	0.0227055	0.02098		-8	20
4-AMINO-2,6-DINITROTOLUENE	AVG	1000	907	4.338403E-02	0.039347		-9	20
2-AMINO-4,6-DINITROTOLUENE	AVG	1000	919	5.266023E-02	0.048422		-8	20
2,4-DINITROTOLUENE	AVG	1000	924	4.334467E-02	0.040062		-8	20
2,6-DINITROTOLUENE	AVG	1000	893	0.0263017	0.023469		-11	20
2-NITROTOLUENE	AVG	1000	901	2.516953E-02	0.022688		-10	20
3-NITROTOLUENE	AVG	1000	904	0.0283433	0.025638		-10	20
4-NITROTOLUENE	AVG	1000	907	2.507787E-02	0.022749		-9	20
NITROGLYCERIN	AVG	1000	934	1.943387E-02	0.018143		-7	20
PENTAERYTHRITOL TETRANITRATE	AVG	1000	862	1.384317E-02	0.01195		-14	20
1,2-DINITROBENZENE	AVG	1000	962	0.0332162	0.031961		-4	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

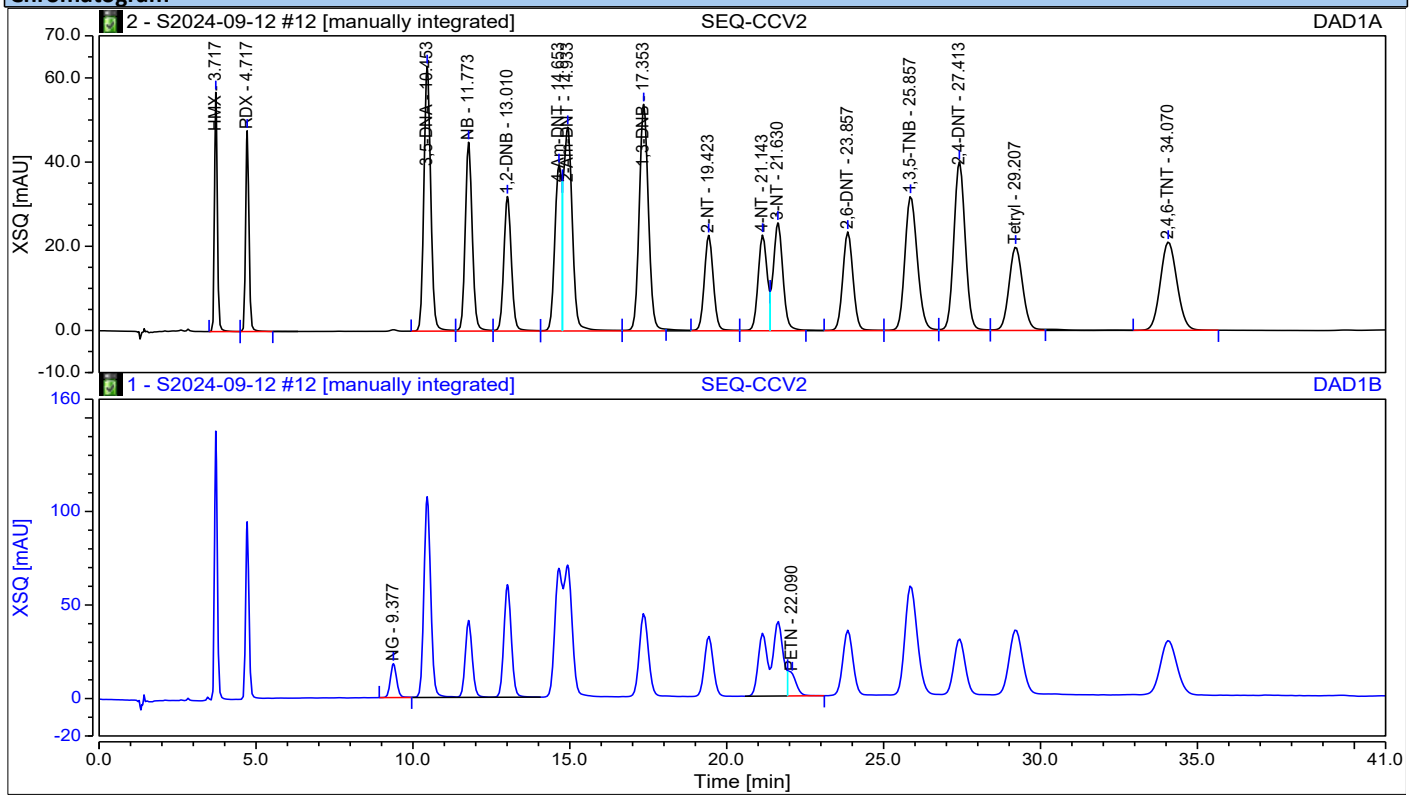
Instrument:
Sequence:S2024-09-12

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CCV2**	*Instrument:*	**Statler**
Vial Number:	**12**	*Run Time (min):*	**41.00**
Injection Type:	**Check Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**12/Sep/2024 17:48**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**12/Aug/2024 08:22**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.377	4.2407	18.143	52.05	60.29	934.1784
2	PETN	22.090	3.9071	11.950	47.95	39.71	862.2961
1	HMX	3.717	5.8407	56.835	3.25	9.58	896.2760
2	RDX	4.717	5.8958	47.691	3.28	8.04	895.7312
3	3,5-DNA	10.453	15.7981	62.890	8.79	10.60	914.5325
4	NB	11.773	11.6152	44.871	6.46	7.56	906.7487
5	1,2-DNB	13.010	8.9159	31.961	4.96	5.39	961.8545
6	4-Am-DNT	14.653	10.1294	39.347	5.64	6.63	907.2696
7	2-Am-DNT	14.933	15.6058	48.422	8.68	8.16	919.3183
8	1,3-DNB	17.353	18.1799	53.824	10.12	9.07	911.6438
9	2-NT	19.423	7.5681	22.688	4.21	3.82	901.2804
10	4-NT	21.143	7.5941	22.749	4.23	3.83	906.5541
11	3-NT	21.630	9.1078	25.638	5.07	4.32	904.4502
12	2,6-DNT	23.857	8.9045	23.469	4.95	3.96	892.6672
13	1,3,5-TNB	25.857	14.7063	31.960	8.18	5.39	923.1067
14	2,4-DNT	27.413	16.9262	40.062	9.42	6.75	924.2081
15	Tetryl	29.207	10.0479	19.870	5.59	3.35	907.0913
16	2,4,6-TNT	34.070	12.8727	20.980	7.16	3.54	923.5515
Total:			**187.856**	**623.351**	**200.000**	**200.000**	

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CONTINUING CALIBRATION VERIFICATION

EPA 8330B

Laboratory:	APPL, LLC	Work Order:	24I0021
Client:	AECOM	Project:	Wingate 60517380 Task 3
Instrument ID:	Waldorf	Calibration:	2433019
Lab File ID:	W2024-09-12-004	Calibration Date:	08/14/24 07:00
Sequence:	SD03770	Injection Date:	09/12/24
Lab Sample ID:	SD03770-CCV1	Injection Time:	11:37

		CONC. (ng/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	LRI	1000	975	0.2047651	0.182084		-2.5	20
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	LRI	1000	910	0.1206658	0.110647		-9.0	20
1,3,5-TRINITROBENZENE	LRI	1000	963	0.2013287	0.204748		-3.7	20
1,3-DINITROBENZENE	LRI	1000	911	0.1988807	0.185175		-8.9	20
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	LRI	1000	861	6.282733E-02	0.071078		-13.9	20
NITROBENZENE	LRI	1000	874	9.565573E-02	0.0824		-12.6	20
2,4,6-TRINITROTOLUENE	LRI	1000	867	0.110253	0.09444		-13.3	20
4-AMINO-2,6-DINITROTOLUENE	LRI	1000	880	0.0887477	0.077961		-12.0	20
2-AMINO-4,6-DINITROTOLUENE	LRI	1000	856	0.1119249	0.09294		-14.4	20
2,4-DINITROTOLUENE	LRI	1000	867	0.1438011	0.125653		-13.3	20
2,6-DINITROTOLUENE	LRI	1000	868	0.0834595	0.072884		-13.2	20
2-NITROTOLUENE	LRI	1000	861	7.440527E-02	0.064812		-13.9	20
3-NITROTOLUENE	LRI	1000	900	0.0643549	0.058193		-10.0	20
4-NITROTOLUENE	LRI	1000	903	6.854373E-02	0.061579		-9.7	20
NITROGLYCERIN	LRI	1000	934	0.0339652	0.029984		-6.6	20
PENTAERYTHRITOL TETRANITRATE	LRI	1000	981	2.405293E-02	0.021748		-1.9	20
1,2-DINITROBENZENE	LRI	1000	954	0.0942839	0.091648		-4.6	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

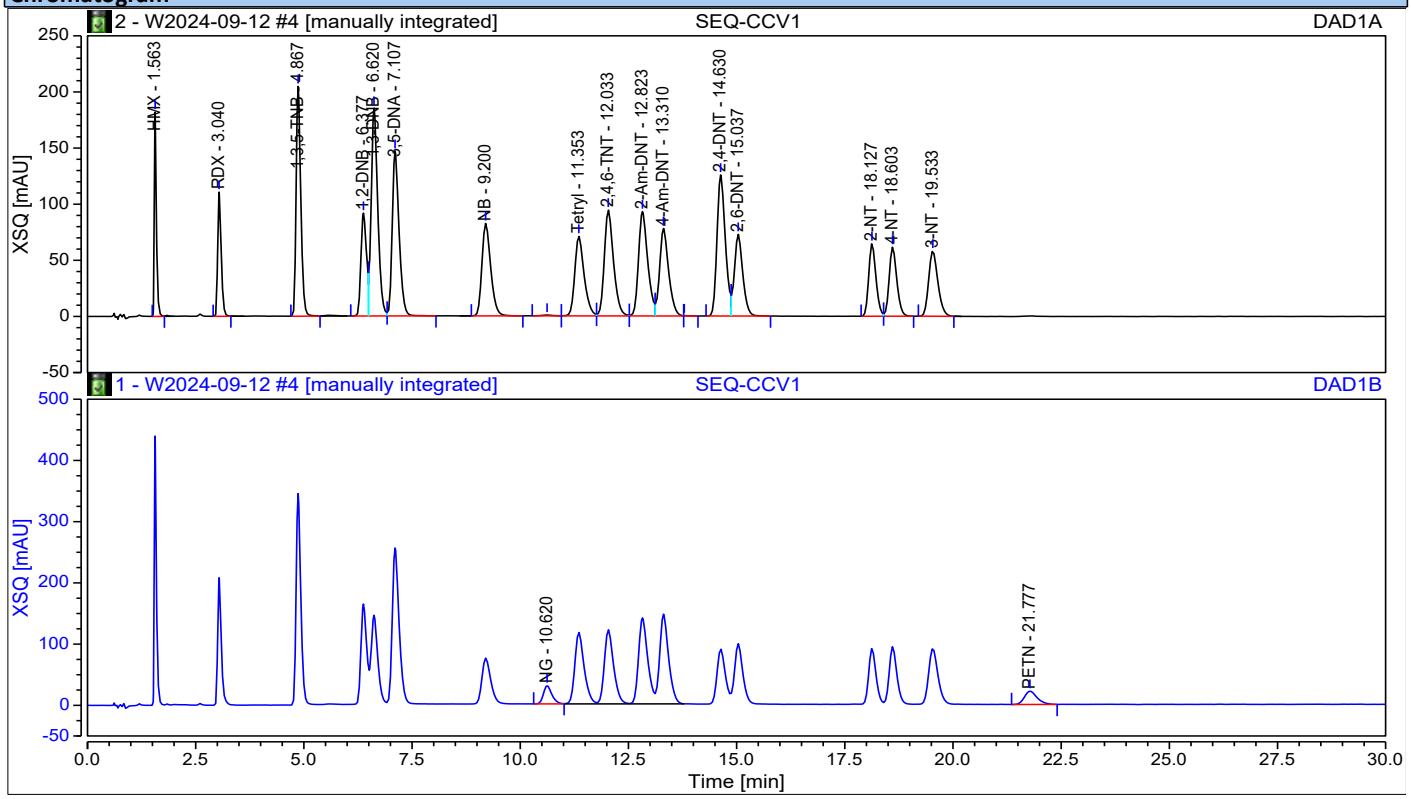
Instrument:
Sequence:W2024-09-12

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CCV1**	*Instrument:*	**Waldorf**
Vial Number:	**4**	*Run Time (min):*	**30.00**
Injection Type:	**Check Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**12/Sep/2024 11:37**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**13/Sep/2024 16:48**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.620	6.7932	29.984	47.82	57.96	934.4573
2	PETN	21.777	7.4139	21.748	52.18	42.04	980.9667
1	HMX	1.563	10.0908	182.084	3.31	10.56	975.0158
2	RDX	3.040	10.3672	110.647	3.40	6.42	909.7473
3	1,3,5-TNB	4.867	25.4074	204.748	8.33	11.88	963.3617
4	1,2-DNB	6.377	13.5524	91.648	4.44	5.32	953.9923
5	1,3-DNB	6.620	32.5136	185.175	10.66	10.74	910.7358
6	3,5-DNA	7.107	26.8138	146.713	8.79	8.51	903.5959
7	NB	9.200	19.4877	82.400	6.39	4.78	873.6270
9	Tetryl	11.353	17.7983	71.078	5.83	4.12	861.3557
10	2,4,6-TNT	12.033	23.2542	94.440	7.62	5.48	866.7493
11	2-Am-DNT	12.823	22.8663	92.940	7.49	5.39	855.5970
12	4-Am-DNT	13.310	18.8370	77.961	6.17	4.52	880.4116
14	2,4-DNT	14.630	27.9790	125.653	9.17	7.29	866.6227
15	2,6-DNT	15.037	16.3477	72.884	5.36	4.23	867.5430
16	2-NT	18.127	12.5552	64.812	4.12	3.76	860.5760
17	4-NT	18.603	12.6061	61.579	4.13	3.57	902.7871
18	3-NT	19.533	14.3679	58.193	4.71	3.38	900.3056
Total:			**319.052**	**1774.686**	**199.914**	**199.939**	

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CONTINUING CALIBRATION VERIFICATION

EPA 8330B

Laboratory:	APPL, LLC	Work Order:	24I0021
Client:	AECOM	Project:	Wingate 60517380 Task 3
Instrument ID:	Waldorf	Calibration:	2433019
Lab File ID:	W2024-09-12-012	Calibration Date:	08/14/24 07:00
Sequence:	SD03770	Injection Date:	09/12/24
Lab Sample ID:	SD03770-CCV2	Injection Time:	15:49

		CONC. (ng/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	LRI	1000	962	0.2047651	0.179608		-3.8	20
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	LRI	1000	896	0.1206658	0.109031		-10.4	20
1,3,5-TRINITROBENZENE	LRI	1000	951	0.2013287	0.202122		-4.9	20
1,3-DINITROBENZENE	LRI	1000	899	0.1988807	0.182864		-10.1	20
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	LRI	1000	849	6.282733E-02	0.070099		-15.1	20
NITROBENZENE	LRI	1000	857	9.565573E-02	0.080868		-14.3	20
2,4,6-TRINITROTOLUENE	LRI	1000	854	0.110253	0.093016		-14.6	20
4-AMINO-2,6-DINITROTOLUENE	LRI	1000	864	0.0887477	0.076468		-13.6	20
2-AMINO-4,6-DINITROTOLUENE	LRI	1000	839	0.1119249	0.09118		-16.1	20
2,4-DINITROTOLUENE	LRI	1000	852	0.1438011	0.123557		-14.8	20
2,6-DINITROTOLUENE	LRI	1000	856	0.0834595	0.071903		-14.4	20
2-NITROTOLUENE	LRI	1000	843	7.440527E-02	0.063462		-15.7	20
3-NITROTOLUENE	LRI	1000	886	0.0643549	0.057237		-11.4	20
4-NITROTOLUENE	LRI	1000	892	6.854373E-02	0.06081		-10.8	20
NITROGLYCERIN	LRI	1000	923	0.0339652	0.029612		-7.7	20
PENTAERYTHRITOL TETRANITRATE	LRI	1000	966	2.405293E-02	0.021414		-3.4	20
1,2-DINITROBENZENE	LRI	1000	940	0.0942839	0.090292		-6.0	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

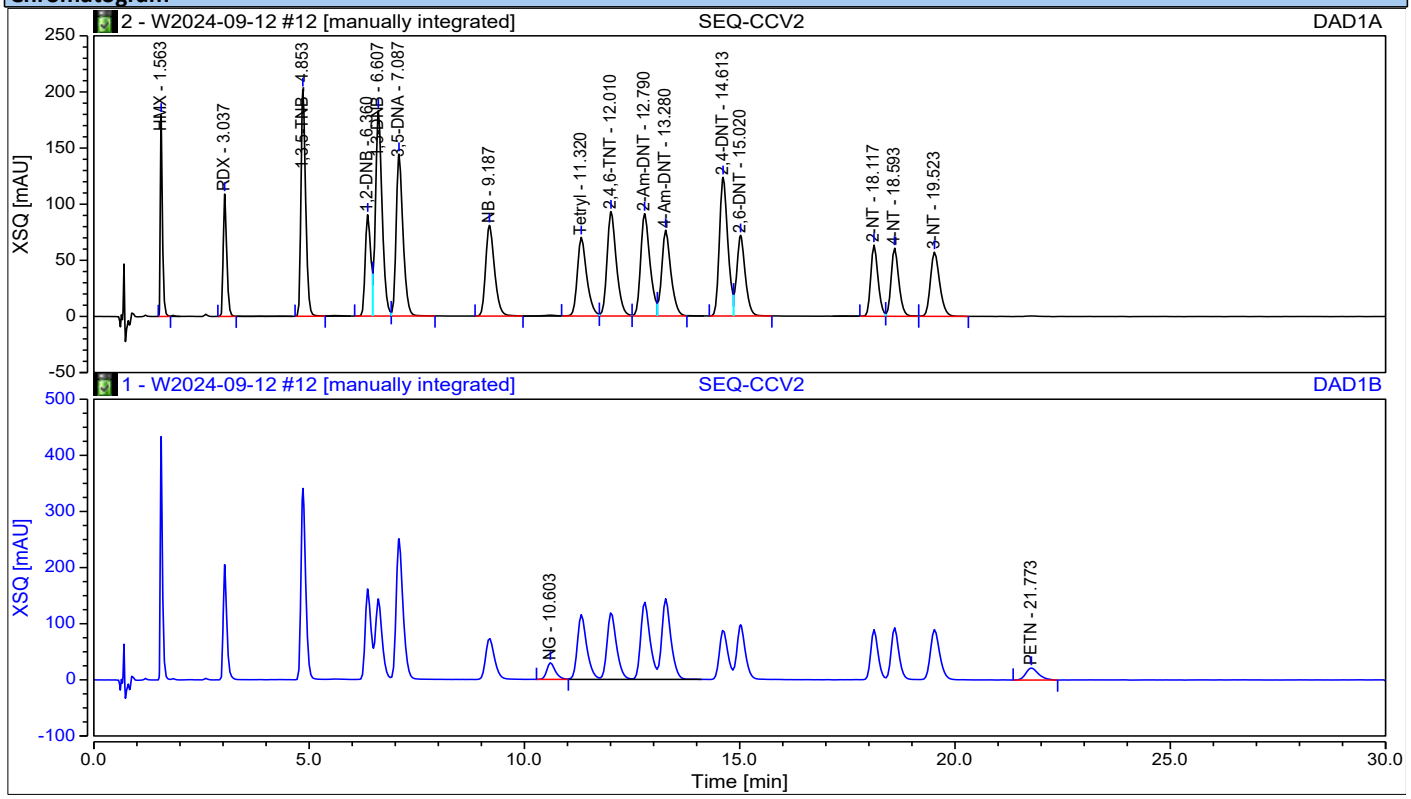
* Values outside of QC limits

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CCV2**	*Instrument:*	**Waldorf**
Vial Number:	**12**	*Run Time (min):*	**30.00**
Injection Type:	**Check Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**12/Sep/2024 15:49**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**13/Sep/2024 16:48**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.603	6.8914	29.612	48.34	58.03	922.8663
2	PETN	21.773	7.3648	21.414	51.66	41.97	965.9287
1	HMX	1.563	10.0576	179.608	3.31	10.59	961.7604
2	RDX	3.037	10.3538	109.031	3.40	6.43	896.4570
3	1,3,5-TNB	4.853	25.3600	202.122	8.34	11.91	951.0044
4	1,2-DNB	6.360	13.3542	90.292	4.39	5.32	939.8773
5	1,3-DNB	6.607	32.5653	182.864	10.70	10.78	899.3687
6	3,5-DNA	7.087	26.6375	144.244	8.76	8.50	888.3875
7	NB	9.187	19.3187	80.868	6.35	4.77	857.3862
8	Tetryl	11.320	17.8198	70.099	5.86	4.13	849.4896
9	2,4,6-TNT	12.010	23.3025	93.016	7.66	5.48	853.6781
10	2-Am-DNT	12.790	22.7780	91.180	7.49	5.37	839.3966
11	4-Am-DNT	13.280	18.8468	76.468	6.19	4.51	863.5559
12	2,4-DNT	14.613	27.8848	123.557	9.17	7.28	852.1633
13	2,6-DNT	15.020	16.3688	71.903	5.38	4.24	855.8669
14	2-NT	18.117	12.5034	63.462	4.11	3.74	842.6536
15	4-NT	18.593	12.7078	60.810	4.18	3.58	891.5107
16	3-NT	19.523	14.3779	57.237	4.73	3.37	885.5215
Total:			**318.493**	**1747.787**	**200.000**	**200.000**	

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QUALITY CONTROL RAW DATA

ANALYSIS DATA SHEET

Blank

Laboratory:	APPL, LLC			Work Order:	24I0021
Client:	AECOM		Project:	Wingate 60517380 Task 3	
Matrix:	Solid	Laboratory ID:	BDI0121-BLK1	File ID:	S2024-09-12-005
Sampled:		Prepared:	09/07/24 13:13	Analyzed:	09/12/24 12:50
Solids:		Preparation:	EPA 8330B	Dilution:	1
Batch:	BDI0121	Sequence:	SD03767	Calibration:	2420012
Instrument:	STATLER				
Column:	1				

COMPOUND	CONC. (mg/kg)	LOQ	LOD	DL	Q
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.074 U	0.50	0.074	0.037	U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.074 U	0.50	0.074	0.025	U
1,3,5-TRINITROBENZENE	0.074 U	0.50	0.074	0.013	U
1,3-DINITROBENZENE	0.074 U	0.50	0.074	0.022	U
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	0.074 U	0.50	0.074	0.037	U
NITROBENZENE	0.074 U	0.50	0.074	0.028	U
2,4,6-TRINITROTOLUENE	0.074 U	0.50	0.074	0.031	U
4-AMINO-2,6-DINITROTOLUENE	0.074 U	0.50	0.074	0.034	U
2-AMINO-4,6-DINITROTOLUENE	0.074 U	0.50	0.074	0.034	U
2,4-DINITROTOLUENE	0.074 U	0.50	0.074	0.028	U
2,6-DINITROTOLUENE	0.074 U	0.50	0.074	0.031	U
2-NITROTOLUENE	0.074 U	0.50	0.074	0.037	U
3-NITROTOLUENE	0.074 U	0.50	0.074	0.037	U
4-NITROTOLUENE	0.074 U	0.50	0.074	0.037	U
NITROGLYCERIN	0.15 U	0.50	0.15	0.060	U
PENTAERYTHRITOL TETRANITRATE	0.25 U	2.5	0.25	0.11	U

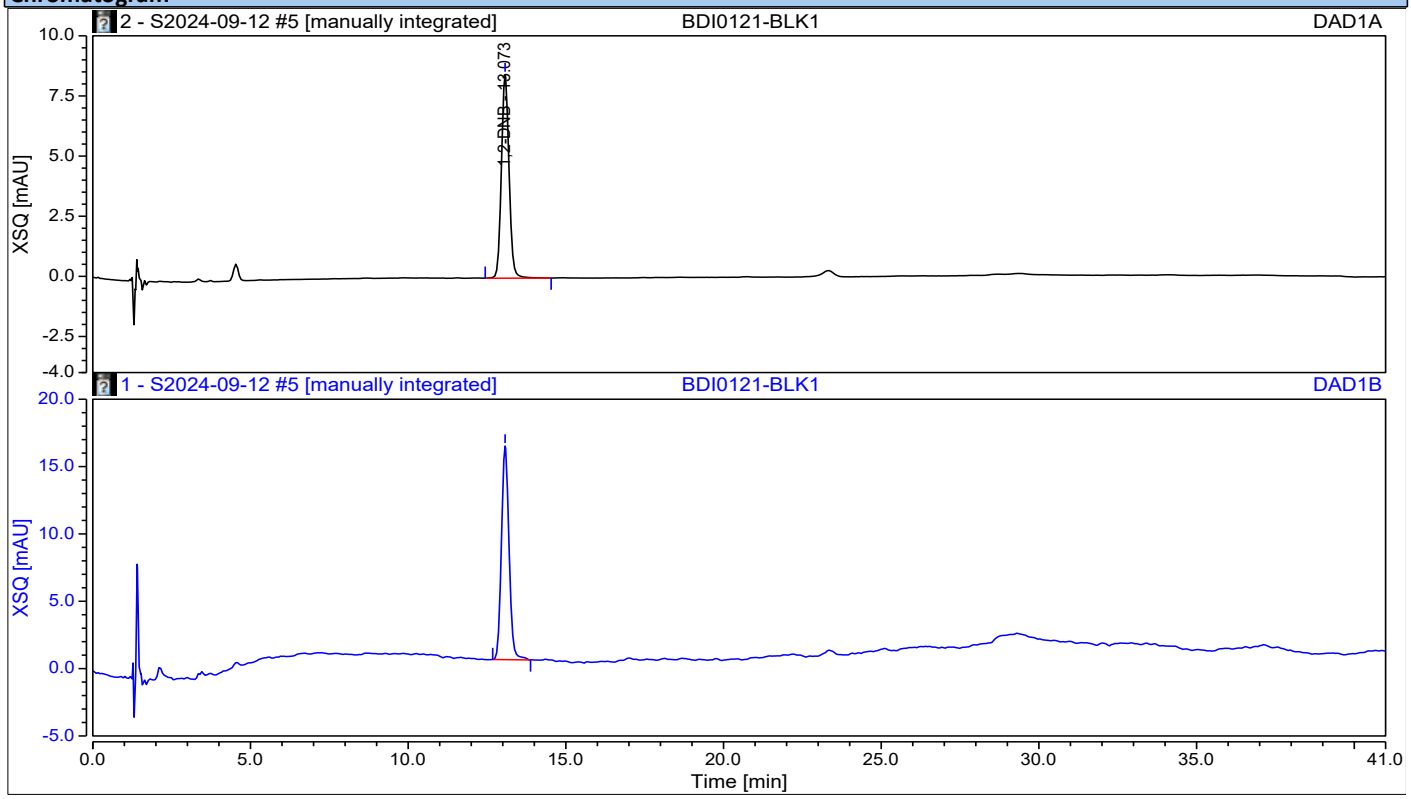
Instrument:
Sequence:S2024-09-12

Chromatogram and Results

Injection Details

Injection Name:	**BDI0121-BLK1**	*Instrument:*	**Statler**
Vial Number:	**5**	*Run Time (min):*	**40.99**
Injection Type:	**Unknown**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**12/Sep/2024 12:50**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**12/Aug/2024 08:22**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
n.a.	NG	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	PETN	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	HMX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	RDX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3,5-DNA	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	NB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	1,2-DNB	13.073	2.3735	8.462	100.00	100.00	254.6579
n.a.	4-Am-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2-Am-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	1,3-DNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	4-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2,6-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	1,3,5-TNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2,4-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Tetryl	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2,4,6-TNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**2.373**	**8.462**	**100.000**	**100.000**	

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ANALYSIS DATA SHEET

LCS

Laboratory:	APPL, LLC			Work Order:	24I0021
Client:	AECOM		Project:	Wingate 60517380 Task 3	
Matrix:	Solid	Laboratory ID:	BDI0121-BS1	File ID:	S2024-09-12-006
Sampled:		Prepared:	09/07/24 13:13	Analyzed:	09/12/24 13:33
Solids:		Preparation:	EPA 8330B	Dilution:	1
Batch:	BDI0121	Sequence:	SD03767	Calibration:	2420012
Instrument:	STATLER				
Column:	1				

COMPOUND	CONC. (mg/kg)	LOQ	DL	Q
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	1.87	0.50	0.037	
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	1.91	0.50	0.025	
1,3,5-TRINITROBENZENE	1.86	0.50	0.013	
1,3-DINITROBENZENE	1.94	0.50	0.022	
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	1.49	0.50	0.037	
NITROBENZENE	1.93	0.50	0.028	
2,4,6-TRINITROTOLUENE	1.94	0.50	0.031	
4-AMINO-2,6-DINITROTOLUENE	1.91	0.50	0.034	
2-AMINO-4,6-DINITROTOLUENE	1.93	0.50	0.034	
2,4-DINITROTOLUENE	1.92	0.50	0.028	
2,6-DINITROTOLUENE	1.86	0.50	0.031	
2-NITROTOLUENE	1.92	0.50	0.037	
3-NITROTOLUENE	1.93	0.50	0.037	
4-NITROTOLUENE	1.90	0.50	0.037	
NITROGLYCERIN	1.96	0.50	0.060	
PENTAERYTHRITOL TETRANITRATE	2.06	2.5	0.11	J

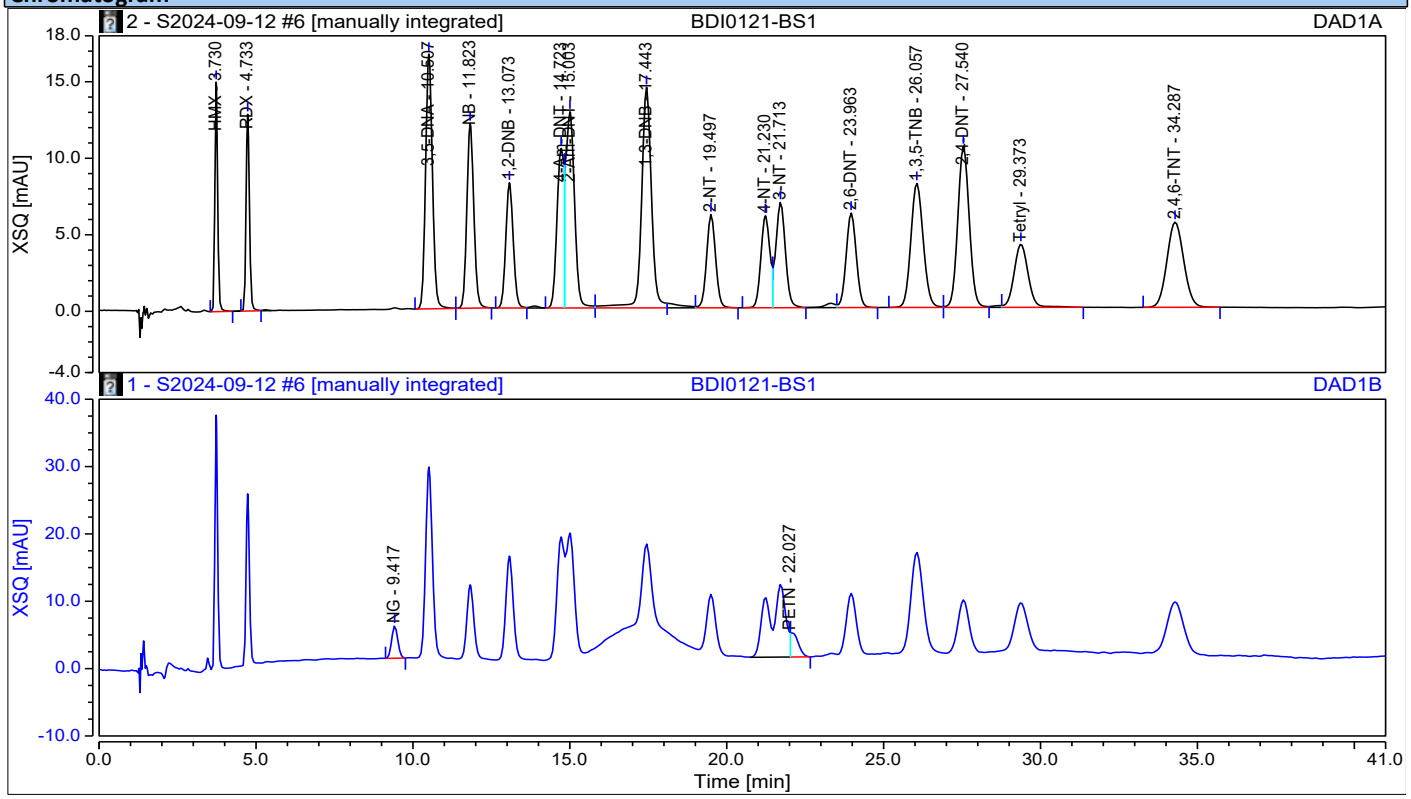
Instrument:
Sequence:S2024-09-12

Chromatogram and Results

Injection Details

Injection Name:	**BDI0121-BS1**	*Instrument:*	**Statler**
Vial Number:	**6**	*Run Time (min):*	**41.00**
Injection Type:	**Unknown**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**12/Sep/2024 13:33**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**12/Aug/2024 08:22**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.417	1.0976	4.805	51.55	57.17	247.4053
2	PETN	22.027	1.0316	3.600	48.45	42.83	259.7971
1	HMX	3.730	1.5463	14.993	3.27	9.62	236.4354
2	RDX	4.733	1.5954	12.855	3.37	8.25	241.4327
3	3,5-DNA	10.507	4.1850	16.644	8.85	10.68	242.0387
4	NB	11.823	3.1031	12.062	6.56	7.74	243.7428
5	1,2-DNB	13.073	2.2490	8.182	4.76	5.25	246.2421
6	4-Am-DNT	14.723	2.6913	10.430	5.69	6.69	240.5077
7	2-Am-DNT	15.003	4.0987	12.819	8.67	8.22	243.3798
8	1,3-DNB	17.443	5.2409	14.412	11.09	9.24	244.1051
9	2-NT	19.497	2.0287	6.093	4.29	3.91	242.0560
10	4-NT	21.230	2.0006	6.013	4.23	3.86	239.6050
11	3-NT	21.713	2.4344	6.896	5.15	4.42	243.2710
12	2,6-DNT	23.963	2.3251	6.179	4.92	3.96	235.0246
13	1,3,5-TNB	26.057	3.7027	8.116	7.83	5.21	234.4184
14	2,4-DNT	27.540	4.4634	10.505	9.44	6.74	242.3398
15	Tetryl	29.373	2.1519	4.130	4.55	2.65	188.5235
16	2,4,6-TNT	34.287	3.4593	5.568	7.32	3.57	245.1242
Total:			**49.405**	**164.303**	**200.000**	**200.000**	

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ANALYSIS DATA SHEET

LCS Dup

Laboratory:	APPL, LLC			Work Order:	24I0021
Client:	AECOM		Project:	Wingate 60517380 Task 3	
Matrix:	Solid	Laboratory ID:	BDI0121-BSD1	File ID:	S2024-09-12-007
Sampled:		Prepared:	09/07/24 13:13	Analyzed:	09/12/24 14:15
Solids:		Preparation:	EPA 8330B	Dilution:	1
Batch:	BDI0121	Sequence:	SD03767	Calibration:	2420012
Instrument:	STATLER				
Column:	1				

COMPOUND	CONC. (mg/kg)	LOQ	DL	Q
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	1.89	0.50	0.037	
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	1.94	0.50	0.025	
1,3,5-TRINITROBENZENE	1.88	0.50	0.013	
1,3-DINITROBENZENE	1.92	0.50	0.022	
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	1.46	0.50	0.037	
NITROBENZENE	1.94	0.50	0.028	
2,4,6-TRINITROTOLUENE	1.96	0.50	0.031	
4-AMINO-2,6-DINITROTOLUENE	1.92	0.50	0.034	
2-AMINO-4,6-DINITROTOLUENE	1.95	0.50	0.034	
2,4-DINITROTOLUENE	1.95	0.50	0.028	
2,6-DINITROTOLUENE	1.90	0.50	0.031	
2-NITROTOLUENE	1.93	0.50	0.037	
3-NITROTOLUENE	1.95	0.50	0.037	
4-NITROTOLUENE	1.93	0.50	0.037	
NITROGLYCERIN	1.99	0.50	0.061	
PENTAERYTHRITOL TETRANITRATE	2.17	2.5	0.11	J

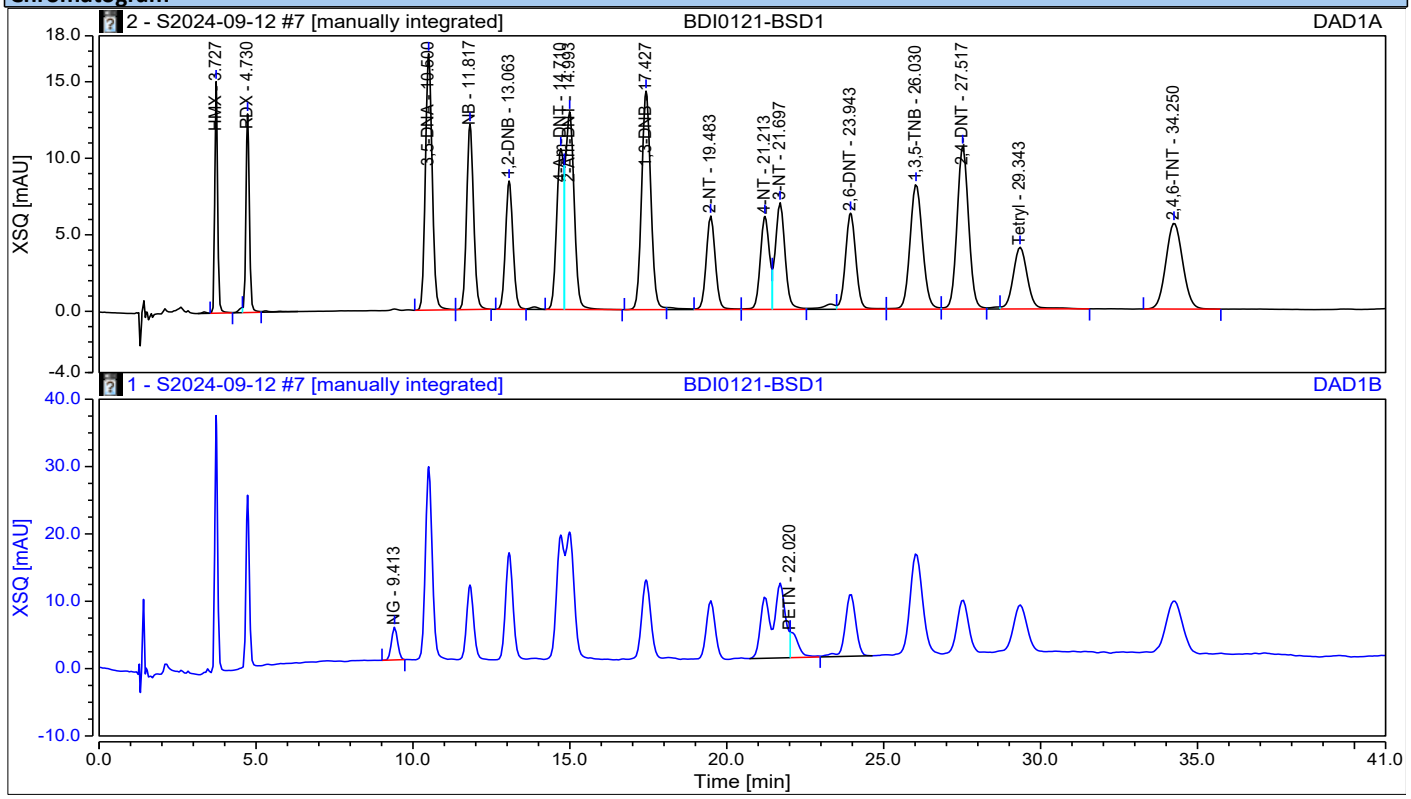
Instrument:
Sequence:S2024-09-12

Chromatogram and Results

Injection Details

Injection Name:	**BDI0121-BSD1**	*Instrument:*	**Statler**
Vial Number:	**7**	*Run Time (min):*	**40.99**
Injection Type:	**Unknown**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**12/Sep/2024 14:15**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**12/Aug/2024 08:22**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.413	1.1054	4.864	49.18	56.21	250.4508
2	PETN	22.020	1.1421	3.789	50.82	43.79	273.4300
1	HMX	3.727	1.5611	15.124	3.30	9.64	238.5039
2	RDX	4.730	1.6315	12.978	3.44	8.27	243.7424
3	3,5-DNA	10.500	4.2111	16.756	8.89	10.67	243.6595
4	NB	11.817	3.1109	12.113	6.57	7.72	244.7812
5	1,2-DNB	13.063	2.2983	8.386	4.85	5.34	252.3814
6	4-Am-DNT	14.710	2.7252	10.506	5.75	6.69	242.2469
7	2-Am-DNT	14.993	4.1077	12.917	8.67	8.23	245.2322
8	1,3-DNB	17.427	4.8190	14.279	10.17	9.10	241.8485
9	2-NT	19.483	2.0500	6.125	4.33	3.90	243.3177
10	4-NT	21.213	2.0434	6.082	4.31	3.87	242.3572
11	3-NT	21.697	2.4927	6.975	5.26	4.44	246.0802
12	2,6-DNT	23.943	2.4097	6.282	5.09	4.00	238.9382
13	1,3,5-TNB	26.030	3.7631	8.172	7.94	5.21	236.0266
14	2,4-DNT	27.517	4.5297	10.623	9.56	6.77	245.0591
15	Tetryl	29.343	2.1316	4.035	4.50	2.57	184.2288
16	2,4,6-TNT	34.250	3.4852	5.617	7.36	3.58	247.2510
Total:			**49.618**	**165.623**	**200.000**	**200.000**	

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PREPARATION BATCH SUMMARY

EPA 8330B

Laboratory:	APPL, LLC			Work Order:	24I0021
Client:	AECOM			Project:	Wingate 60517380 Task 3
Batch:	BDI0121	Batch Matrix:	Solid	Preparation:	EPA 8330B

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT g	FINAL VOL. mL
P3HWMU-ARYO-0001	24I0021-01	09/07/24 13:13	10.08	80.00
P3HWMU-ARYO-0001	24I0021-01RE1	09/07/24 13:13	10.08	80.00
P3HWMU-ARYO-0002	24I0021-02	09/07/24 13:13	10.08	80.00
P3HWMU-ARYO-0002	24I0021-02RE1	09/07/24 13:13	10.08	80.00
Blank	BDI0121-BLK1	09/07/24 13:13	10.09	80.00
LCS	BDI0121-BS1	09/07/24 13:13	10.09	80.00
LCS Dup	BDI0121-BSD1	09/07/24 13:13	10.07	80.00

PREPARATION BENCH SHEET
Organics

Print Date/Time: 09/16/2024 1:38 pm

BDI0121

(Continued)

Matrix: Solid

Prepared using: HPLC - EPA 8330B

Lab Number	Sample and Source ID ID Confirmed By:		Extract by	Initial (g)	Final (mL)	ul Spike 1	ul Spike 2	ul Surr 1	ul Surr 2	pH	Extraction Comments
24I0021-01 A	P3HWMU-ARYO-0001	F	09/16/24	10.08	80			200			
24I0021-01RE1 A	P3HWMU-ARYO-0001	F	09/16/24	10.08	80			200			Added 9/16/2024 by KMY1
24I0021-02 A	P3HWMU-ARYO-0002	F	09/16/24	10.08	80			200			
24I0021-02RE1 A	P3HWMU-ARYO-0002	F	09/16/24	10.08	80			200			Added 9/16/2024 by KMY1
BDI0121-BLK1	Blank			10.09	80			200			
BDI0121-BS1	LCS			10.09	80	200		200			
BDI0121-BSD1	LCS Dup			10.07	80	200		200			

Analyses

8330B DOD

Spiking Solution(s)

24G0171 8330 - Spike 100ug/mL 7/9/24

Surrogate Solution(s)

24H0339 8330 - 1,2-DNB SUR 100ug/mL 8/13/24

Start Date/Time _____

Stop Date/Time _____

Equipment Used:

Balances:

Hotblock/Plate:

Sonic Horns:

Pipettes:

Water Baths:

Ovens:

Desiccator:

pH Probes:

Reagents

Standard	Description	LotNum
24H0153	Acetonitrile EH784-US	EH784-US

atch Comments:
piked By:AJV/CLR
tart Time/Date: 13:09 9/10/24
top Time/Date: 8:49 9/11/24

Spiking Witnessed By _____ Date _____ Preparation Reviewed By _____ Date _____ Extracts Received By _____ Date _____

Table of Contents

INJECTION LOG - ANALYSIS SEQUENCE SUMMARY

EPA 8330B

Laboratory:	APPL, LLC	SDG:	24I0021
Client:	AECOM	Project:	Wingate 60517380 Task 3
Sequence:	SD01815	Instrument:	STATLER
Calibration:	2420012		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	SD01815-CAL1	S2024-05-16-004	05/16/24 14:47
Cal Standard	SD01815-CAL2	S2024-05-16-005	05/16/24 15:29
Cal Standard	SD01815-CAL3	S2024-05-16-006	05/16/24 16:12
Cal Standard	SD01815-CAL4	S2024-05-16-007	05/16/24 16:54
Cal Standard	SD01815-CAL5	S2024-05-16-008	05/16/24 17:37
Cal Standard	SD01815-CAL6	S2024-05-16-009	05/16/24 18:19
Secondary Cal Check	SD01815-SCV1	S2024-05-16-010	05/16/24 19:02

INJECTION LOG - ANALYSIS SEQUENCE SUMMARY

EPA 8330B

Laboratory:	APPL, LLC	SDG:	24I0021
Client:	AECOM	Project:	Wingate 60517380 Task 3
Sequence:	SD03246	Instrument:	Waldorf
Calibration:	2433019		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	SD03246-CAL1	W2024-08-14-017	08/14/24 17:32
Cal Standard	SD03246-CAL2	W2024-08-14-018	08/14/24 18:03
Cal Standard	SD03246-CAL3	W2024-08-14-019	08/14/24 18:35
Cal Standard	SD03246-CAL4	W2024-08-14-020	08/14/24 19:06
Cal Standard	SD03246-CAL5	W2024-08-14-021	08/14/24 19:38
Cal Standard	SD03246-CAL6	W2024-08-14-022	08/14/24 20:09
Secondary Cal Check	SD03246-SCV1	W2024-08-14-023	08/14/24 20:41

INJECTION LOG - ANALYSIS SEQUENCE SUMMARY

EPA 8330B

Laboratory:	APPL, LLC	SDG:	24I0021
Client:	AECOM	Project:	Wingate 60517380 Task 3
Sequence:	SD03767	Instrument:	STATLER
Calibration:	2420012		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	SD03767-CCV1	S2024-09-12-004	09/12/24 12:08
Blank	BDI0121-BLK1	S2024-09-12-005	09/12/24 12:50
LCS	BDI0121-BS1	S2024-09-12-006	09/12/24 13:33
LCS Dup	BDI0121-BSD1	S2024-09-12-007	09/12/24 14:15
P3HWMU-ARYO-0001	24I0021-01	S2024-09-12-010	09/12/24 16:23
P3HWMU-ARYO-0002	24I0021-02	S2024-09-12-011	09/12/24 17:06
Calibration Check	SD03767-CCV2	S2024-09-12-012	09/12/24 17:48

INJECTION LOG - ANALYSIS SEQUENCE SUMMARY

EPA 8330B

Laboratory:	APPL, LLC	SDG:	24I0021
Client:	AECOM	Project:	Wingate 60517380 Task 3
Sequence:	SD03770	Instrument:	Waldorf
Calibration:	2433019		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	SD03770-CCV1	W2024-09-12-004	09/12/24 11:37
P3HWMU-ARYO-0001	24I0021-01RE1	W2024-09-12-010	09/12/24 14:46
P3HWMU-ARYO-0002	24I0021-02RE1	W2024-09-12-011	09/12/24 15:18
Calibration Check	SD03770-CCV2	W2024-09-12-012	09/12/24 15:49

Analytical Standards

List of Standards

23A0023	Parent
23E0027	Parent
23L0017	Parent
24D0385	Parent
24D0501	Parent
24D0600	Parent
24E0455	Parent
24E0456	Parent
24E0457	8330 - Cal 1 0.005ug/mL 05/16/24
24E0458	8330 - Cal 2 0.05ug/mL 05/16/24
24E0459	8330 - Cal 3 0.25ug/mL 05/16/24
24E0460	8330 - Cal 4 1.0ug/mL 05/16/24
24E0462	8330 - Cal 5 2.5ug/mL 05/16/24
24E0463	8330 - Cal 6 5.0ug/mL 05/16/24
24E0464	Parent
24E0466	8330 - SCV 1.0ug/mL 05/16/24
24G0088	Parent
24G0171	8330 - Spike 100ug/mL 7/9/24
24G0473	Parent
24G0475	8330 - CCV 1.0ug/mL 7/23/24
24H0339	8330 - 1,2-DNB SUR 100ug/mL 8/13/24
24H0394	Parent
24H0395	Parent
24H0396	Parent
24H0397	8330 - Cal 1 0.005ug/mL 08/14/24
24H0398	8330 - Cal 2 0.05ug/mL 08/14/24
24H0399	8330 - Cal 3 0.25ug/mL 08/14/24
24H0400	8330 - Cal 4 1.0ug/mL 08/14/24
24H0401	8330 - Cal 5 2.5ug/mL 08/14/24
24H0402	8330 - Cal 6 5.0ug/mL 08/14/24
24H0403	8330 - SCV 1.0ug/mL 08/14/24

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 33204 **Lot No.:** A0191734

Description : 8330B Nitroaromatics and Nitramine Mix

8330B Nitroaromatics and Nitramine Mix Explosives by HPLC, EPA 8330B 1000µg/mL, Acetonitrile,1mL/ampul

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

Expiration Date : November 30, 2025 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	HMX	1,004.0 µg/mL	+/- 5.9635 µg/mL	Gravimetric
	CAS # 2691-41-0 (Lot 220927JLM)		+/- 55.0021 µg/mL	Unstressed
	Purity 99%		+/- 64.1379 µg/mL	Stressed
2	RDX	1,010.0 µg/mL	+/- 5.9991 µg/mL	Gravimetric
	CAS # 121-82-4 (Lot 080220JLM)		+/- 55.3308 µg/mL	Unstressed
	Purity 99%		+/- 64.5212 µg/mL	Stressed
3	1,3,5-Trinitrobenzene	1,008.0 µg/mL	+/- 5.9872 µg/mL	Gravimetric
	CAS # 99-35-4 (Lot A6TDK)		+/- 55.2213 µg/mL	Unstressed
	Purity 99%		+/- 64.3934 µg/mL	Stressed
4	1,3-Dinitrobenzene	1,008.0 µg/mL	+/- 5.9872 µg/mL	Gravimetric
	CAS # 99-65-0 (Lot 1-DXX-24-1)		+/- 55.2213 µg/mL	Unstressed
	Purity 99%		+/- 64.3934 µg/mL	Stressed
5	3,5-Dinitroaniline	1,010.0 µg/mL	+/- 5.9991 µg/mL	Gravimetric
	CAS # 618-87-1 (Lot 10311HS)		+/- 55.3308 µg/mL	Unstressed
	Purity 99%		+/- 64.5212 µg/mL	Stressed
6	Tetryl	1,008.0 µg/mL	+/- 5.9872 µg/mL	Gravimetric
	CAS # 479-45-8 (Lot 211028JLM)		+/- 55.2213 µg/mL	Unstressed
	Purity 99%		+/- 64.3934 µg/mL	Stressed
7	Nitrobenzene	1,006.0 µg/mL	+/- 5.9753 µg/mL	Gravimetric
	CAS # 98-95-3 (Lot 10224044)		+/- 55.1117 µg/mL	Unstressed
	Purity 99%		+/- 64.2657 µg/mL	Stressed

8	2,4,6-Trinitrotoluene		1,009.0	µg/mL	+/- 5.9932	µg/mL	Gravimetric
	CAS # 118-96-7	(Lot D11836200)			+/- 55.2761	µg/mL	Unstressed
	Purity 99%				+/- 64.4573	µg/mL	Stressed
9	Nitroglycerin		1,006.0	µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 55-63-0	(Lot 200507JLM)			+/- 55.1117	µg/mL	Unstressed
	Purity 99%				+/- 64.2657	µg/mL	Stressed
10	2-Amino-4,6-dinitrotoluene		1,010.0	µg/mL	+/- 5.9991	µg/mL	Gravimetric
	CAS # 35572-78-2	(Lot A210503-001)			+/- 55.3308	µg/mL	Unstressed
	Purity 99%				+/- 64.5212	µg/mL	Stressed
11	4-Amino-2,6-dinitrotoluene		1,010.0	µg/mL	+/- 5.9991	µg/mL	Gravimetric
	CAS # 19406-51-0	(Lot ER070908-01)			+/- 55.3308	µg/mL	Unstressed
	Purity 99%				+/- 64.5212	µg/mL	Stressed
12	2,4-Dinitrotoluene		1,009.0	µg/mL	+/- 5.9932	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)			+/- 55.2761	µg/mL	Unstressed
	Purity 99%				+/- 64.4573	µg/mL	Stressed
13	2,6-Dinitrotoluene		1,010.0	µg/mL	+/- 5.9991	µg/mL	Gravimetric
	CAS # 606-20-2	(Lot BCCG1833)			+/- 55.3308	µg/mL	Unstressed
	Purity 99%				+/- 64.5212	µg/mL	Stressed
14	2-Nitrotoluene		1,010.0	µg/mL	+/- 5.9991	µg/mL	Gravimetric
	CAS # 88-72-2	(Lot BCBZ7826)			+/- 55.3308	µg/mL	Unstressed
	Purity 99%				+/- 64.5212	µg/mL	Stressed
15	4-Nitrotoluene		1,009.0	µg/mL	+/- 5.9932	µg/mL	Gravimetric
	CAS # 99-99-0	(Lot BCCB0171)			+/- 55.2761	µg/mL	Unstressed
	Purity 99%				+/- 64.4573	µg/mL	Stressed
16	3-Nitrotoluene		1,009.0	µg/mL	+/- 5.9932	µg/mL	Gravimetric
	CAS # 99-08-1	(Lot 07329LG)			+/- 55.2761	µg/mL	Unstressed
	Purity 99%				+/- 64.4573	µg/mL	Stressed
17	PETN		1,009.0	µg/mL	+/- 5.9932	µg/mL	Gravimetric
	CAS # 78-11-5	(Lot 051108JLM)			+/- 55.2761	µg/mL	Unstressed
	Purity 99%				+/- 64.4573	µg/mL	Stressed

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

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

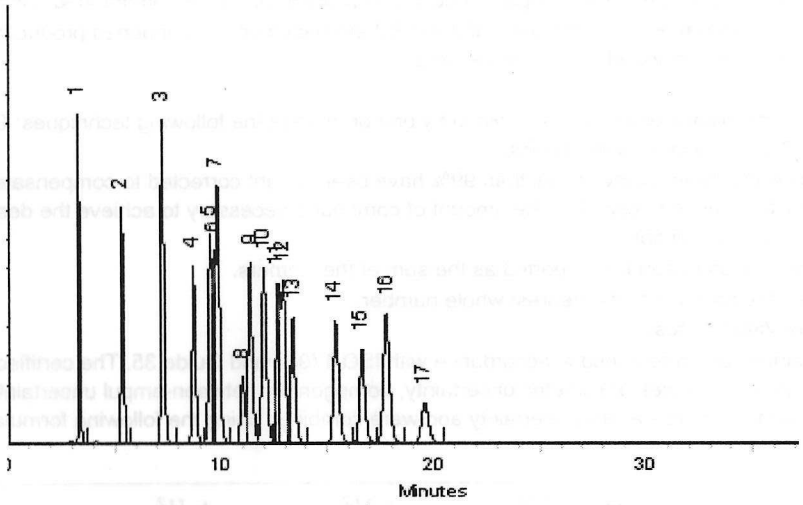
Flow Rate:
1.0 ml/min.

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

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm



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

Brittany Federinko - Operations Tech I

Date Mixed: 16-Nov-2022 **Balance:** 1128360905

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 18-Nov-2022

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Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 33204 **Lot No.:** A0188442

Description : 8330B Nitroaromatics and Nitramine Mix

8330B Nitroaromatics and Nitramine Mix Explosives by HPLC, EPA 8330B 1000µg/mL, Acetonitrile,1mL/ampul

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

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

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	HMX **CAS #** 2691-41-0 (Lot 210324JLM) **Purity** 99%	1,003.0 µg/mL	+/- 5.9575 µg/mL +/- 54.9474 µg/mL +/- 64.0740 µg/mL	Gravimetric Unstressed Stressed
2	RDX **CAS #** 121-82-4 (Lot 080220JLM) **Purity** 99%	1,004.0 µg/mL	+/- 5.9635 µg/mL +/- 55.0021 µg/mL +/- 64.1379 µg/mL	Gravimetric Unstressed Stressed
3	1,3,5-Trinitrobenzene **CAS #** 99-35-4 (Lot A6TDK) **Purity** 99%	1,008.0 µg/mL	+/- 5.9872 µg/mL +/- 55.2213 µg/mL +/- 64.3934 µg/mL	Gravimetric Unstressed Stressed
4	1,3-Dinitrobenzene **CAS #** 99-65-0 (Lot 1-DXX-24-1) **Purity** 99%	1,007.0 µg/mL	+/- 5.9813 µg/mL +/- 55.1665 µg/mL +/- 64.3295 µg/mL	Gravimetric Unstressed Stressed
5	3,5-Dinitroaniline **CAS #** 618-87-1 (Lot 10311HS) **Purity** 99%	1,008.0 µg/mL	+/- 5.9872 µg/mL +/- 55.2213 µg/mL +/- 64.3934 µg/mL	Gravimetric Unstressed Stressed
6	Tetryl **CAS #** 479-45-8 (Lot 211028JLM) **Purity** 99%	1,006.0 µg/mL	+/- 5.9753 µg/mL +/- 55.1117 µg/mL +/- 64.2657 µg/mL	Gravimetric Unstressed Stressed
7	Nitrobenzene **CAS #** 98-95-3 (Lot 10224044) **Purity** 99%	1,006.0 µg/mL	+/- 5.9753 µg/mL +/- 55.1117 µg/mL +/- 64.2657 µg/mL	Gravimetric Unstressed Stressed

8	2,4,6-Trinitrotoluene **CAS #** 118-96-7 **Purity** 99%	(Lot D13332500)	1,009.0	µg/mL	+/- 5.9932 +/- 55.2761 +/- 64.4573	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	Nitroglycerin **CAS #** 55-63-0 **Purity** 99%	(Lot 200507JLM)	1,006.0	µg/mL	+/- 5.9753 +/- 55.1117 +/- 64.2657	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	2-Amino-4,6-dinitrotoluene **CAS #** 35572-78-2 **Purity** 99%	(Lot A210503-001)	1,004.0	µg/mL	+/- 5.9635 +/- 55.0021 +/- 64.1379	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	4-Amino-2,6-dinitrotoluene **CAS #** 19406-51-0 **Purity** 99%	(Lot ER070908-01)	1,006.0	µg/mL	+/- 5.9753 +/- 55.1117 +/- 64.2657	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	2,4-Dinitrotoluene **CAS #** 121-14-2 **Purity** 99%	(Lot MKAA0690V)	1,003.0	µg/mL	+/- 5.9575 +/- 54.9474 +/- 64.0740	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	2,6-Dinitrotoluene **CAS #** 606-20-2 **Purity** 99%	(Lot BCBB8606)	1,002.0	µg/mL	+/- 5.9516 +/- 54.8926 +/- 64.0101	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	2-Nitrotoluene **CAS #** 88-72-2 **Purity** 99%	(Lot BCBZ7826)	1,009.0	µg/mL	+/- 5.9932 +/- 55.2761 +/- 64.4573	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	4-Nitrotoluene **CAS #** 99-99-0 **Purity** 99%	(Lot BCCB0171)	1,007.0	µg/mL	+/- 5.9813 +/- 55.1665 +/- 64.3295	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	3-Nitrotoluene **CAS #** 99-08-1 **Purity** 99%	(Lot 07329LG)	1,008.0	µg/mL	+/- 5.9872 +/- 55.2213 +/- 64.3934	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	PETN **CAS #** 78-11-5 **Purity** 99%	(Lot 051108JLM)	1,001.0	µg/mL	+/- 5.9456 +/- 54.8378 +/- 63.9463	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

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

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

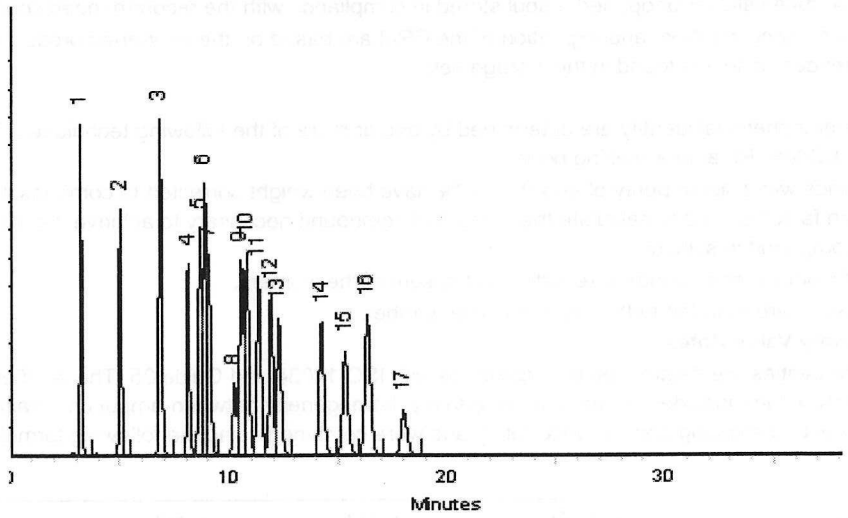
Flow Rate:
1.0 ml/min.

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

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm



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

Tom Suckar - Mix Technician **Date Mixed:** 11-Aug-2022 **Balance:** B707717271

Jennifer Pollino - Operations Tech III - ARM QC **Date Passed:** 16-Aug-2022

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

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 33204 **Lot No.:** A0201454

Description : 8330B Nitroaromatics and Nitramine Mix

8330B Nitroaromatics and Nitramine Mix Explosives by HPLC, EPA 8330B 1000µg/mL, Acetonitrile,1mL/ampul

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

Expiration Date : August 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	HMX	2691-41-0	220927JLM	99%	1,001.7 µg/mL	+/- 46.7311
2	RDX	121-82-4	080228JLM	99%	1,007.0 µg/mL	+/- 46.9783
3	1,3,5-Trinitrobenzene	99-35-4	A6TDK	99%	1,006.6 µg/mL	+/- 46.9597
4	1,3-Dinitrobenzene	99-65-0	1-DXX-24-1	99%	1,008.1 µg/mL	+/- 47.0297
5	3,5-Dinitroaniline	618-87-1	10311HS	99%	1,008.4 µg/mL	+/- 47.0437
6	Tetryl	479-45-8	211028JLM	99%	1,001.2 µg/mL	+/- 46.7078
7	Nitrobenzene	98-95-3	10224044	99%	1,008.4 µg/mL	+/- 47.0437
8	2,4,6-Trinitrotoluene	118-96-7	D13332500	99%	1,007.1 µg/mL	+/- 46.9830
9	Nitroglycerin	55-63-0	200507JLM	99%	1,007.7 µg/mL	+/- 47.0110
10	2-Amino-4,6-dinitrotoluene	35572-78-2	A210503-001	99%	1,006.7 µg/mL	+/- 46.9643
11	4-Amino-2,6-dinitrotoluene	19406-51-0	ER070908-01	99%	1,007.2 µg/mL	+/- 46.9877
12	2,4-Dinitrotoluene	121-14-2	MKAA0690V	99%	1,003.2 µg/mL	+/- 46.8011
13	2,6-Dinitrotoluene	606-20-2	BCCG1833	99%	1,005.1 µg/mL	+/- 46.8897
14	2-Nitrotoluene	88-72-2	BCBZ7826	99%	1,006.2 µg/mL	+/- 46.9410
15	4-Nitrotoluene	99-99-0	BCCB0171	99%	1,010.0 µg/mL	+/- 47.1183
16	3-Nitrotoluene	99-08-1	07329LG	99%	1,004.0 µg/mL	+/- 46.8384

17	PETN	78-11-5	051108JLM	99%	1,000.5 µg/mL	+/- 46.6751

* 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.

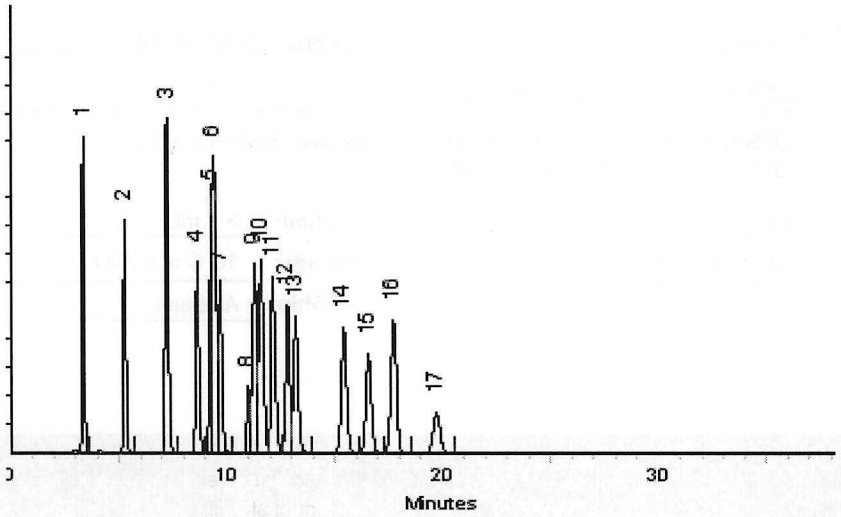
Mobile Phase A:
water:methanol (44:56 V/V)

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.

Peter Robbins - Operations Technician I

Date Mixed: 28-Aug-2023 **Balance Serial #** B251644995

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 06-Sep-2023

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Analytical Standard Record

24D0385

Description:	8330 - Spike 100ug/mL 4/15/23	Expires:	10/12/2024
Standard Type:	Analyte Spike	Prepared:	04/15/2024
Solvent:	ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	10	Department:	HPLC
Vials:	1	Last Edit:	04/15/2024 09:40 by AOP
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	23A0023	99-35-4	100	ug/mL
1,3-DINITROBENZENE	23A0023	99-65-0	100	ug/mL
2,4,6-TRINITROTOLUENE	23A0023	118-96-7	100	ug/mL
2,4-DINITROTOLUENE	23A0023	121-14-2	100	ug/mL
2,6-DINITROTOLUENE	23A0023	606-20-2	100	ug/mL
2-AMINO-4,6-DINITROTOLUENE	23A0023	35572-78-2	100	ug/mL
2-NITROTOLUENE	23A0023	88-72-2	100	ug/mL
3,5-DINITROANILINE	23A0023	618-87-1	100	ug/mL
3-NITROTOLUENE	23A0023	99-08-1	100	ug/mL
4-AMINO-2,6-DINITROTOLUENE	23A0023	19406-51-0	100	ug/mL
4-NITROTOLUENE	23A0023	99-99-0	100	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	23A0023	121-82-4	100	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	23A0023	479-45-8	100	ug/mL
NITROBENZENE	23A0023	98-95-3	100	ug/mL
NITROGLYCERIN	23A0023	55-63-0	100	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	23A0023	2691-41-0	100	ug/mL
PENTAERYTHRITOL TETRANITRATE	23A0023	78-11-5	100	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
23A0023	8330 - SSS Ampule A0191734	11/23/2022	Restek	A0191734	11/30/2025	12/04/2023 11:05	by IMC	1

Reference Standard Data Pack

8330 Surrogate Mix

Catalog # 31453

Lot # A0205460

110 Benner Circle Bellefonte, PA 16823-8812
1-814-353-1300 1-800-356-1688
www.restek.com

FOR LABORATORY USE ONLY. READ SDS PRIOR TO USE.

RAW MATERIAL TEST INFORMATION AVAILABLE UPON REQUEST

MANUFACTURED UNDER RESTEK'S ISO 9001 REGISTERED QUALITY SYSTEM

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

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ilac-MRA A2LA ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01
ilac-MRA A2LA ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** 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.

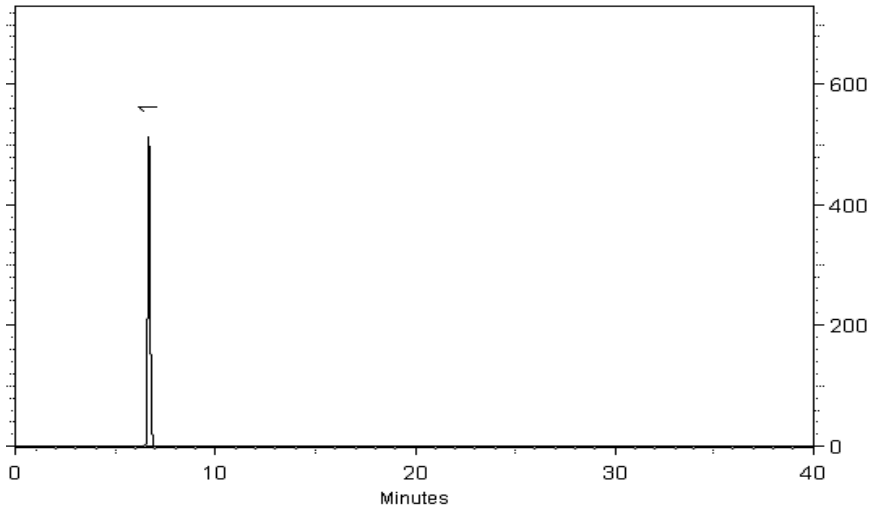
Mobile Phase A:
water:methanol (44:56 V/V)

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 Polino - 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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

RESTEK

Reference Material Batch Record
Lot #: A0205460

Catalog #: 31453	**Target:** 1000 ug/mL	
Description: 8330 Surrogate Mix		
Solvent: Methanol	**Solvent Lot:** 23H3162001	**Final Volume:** 100 ml

Made by: Malina Homan	**Date:** 12/13/2023 3:34:15PM		
Tested by: Alicia Leathers	**Date:** 12/14/2023 6:07:06AM		
Pass	**By:** Jennifer Pollino	**Date:** 12/19/2023 9:58:59AM	
Packaged by: Michael Maye1 / Malina Homan	**Date:** 12/13/2023 4:50:44F	**No. Units:** 66	**Pkg Size:** 1 mL
Balance Used: bede001743 XPE504	**Serial #:** B707717271		

Compound	CAS	Storage Location	Lot #	Purity	Target Conc(ug/mL)	Target	Actual	Calc Conc(ug/mL)
1,2-Dinitrobenzene	528-29-0	R0156	RP231117RSR	0.99	1,000.00	100.00 mg	100.40 mg	1,004.0

QA Report: 8330 Surrogate Mix (Cat.#31453)

	Runs of Lot # A0150790						Runs of Lot # A0205460							
COMPONENT	Run #1	Run #2	Run #3	AVG	STD DEV	%RSD	Run #1	Run #2	Run #3	AVG	STD DEV	%RSD	%D MEAN	P/F
1,2-Dinitrobenzene	4238059	4237731	4224314	4233368	7843	0.19	4296077	4266901	4266761	4276580	16885	0.39	-1.02	PASS

Analytical Standard Record

24D0600

Description:	8330 - 1,2-DNB SUR 100ug/mL 04/26/24	Expires:	10/23/2024
Standard Type:	Surrogate Spike	Prepared:	04/26/2024
Solvent:	ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	10	Department:	HPLC
Vials:	1	Last Edit:	04/26/2024 13:46 by AOP
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24D0501	528-29-0	100	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24D0501	8330 - 1,2-DNB SAS Ampule A0205460	04/22/2024	Restek	A0205460	12/31/2028	04/26/2024 13:46	by AOP	1

Analytical Standard Record

24D0600

Description:	8330 - 1,2-DNB SUR 100ug/mL 04/26/24	Expires:	10/23/2024
Standard Type:	Surrogate Spike	Prepared:	04/26/2024
Solvent:	ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	10	Department:	HPLC
Vials:	1	Last Edit:	04/26/2024 13:48 by AOP
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24D0501	528-29-0	100	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24D0501	8330 - 1,2-DNB SAS Ampule A0205460	04/22/2024	Restek	A0205460	12/31/2028	04/26/2024 13:46	by AOP	1

Analytical Standard Record

24E0455

Description:	8330 - Cal Std 20ug/mL 05/16/24	Expires:	09/16/2024
Standard Type:	Other	Prepared:	05/17/2024
Solvent:	ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	1	Department:	HPLC
Vials:	1	Last Edit:	05/17/2024 08:55 by AOP
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	24D0385	99-35-4	20	ug/mL
1,3-DINITROBENZENE	24D0385	99-65-0	20	ug/mL
2,4,6-TRINITROTOLUENE	24D0385	118-96-7	20	ug/mL
2,4-DINITROTOLUENE	24D0385	121-14-2	20	ug/mL
2,6-DINITROTOLUENE	24D0385	606-20-2	20	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24D0385	35572-78-2	20	ug/mL
2-NITROTOLUENE	24D0385	88-72-2	20	ug/mL
3,5-DINITROANILINE	24D0385	618-87-1	20	ug/mL
3-NITROTOLUENE	24D0385	99-08-1	20	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24D0385	19406-51-0	20	ug/mL
4-NITROTOLUENE	24D0385	99-99-0	20	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24D0385	121-82-4	20	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24D0385	479-45-8	20	ug/mL
NITROBENZENE	24D0385	98-95-3	20	ug/mL
NITROGLYCERIN	24D0385	55-63-0	20	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24D0385	2691-41-0	20	ug/mL
PENTAERYTHRITOL TETRANITRATE	24D0385	78-11-5	20	ug/mL
1,2-DINITROBENZENE	24D0600	528-29-0	20	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24D0385	8330 - Spike 100ug/mL 4/15/23	04/15/2024	In house	x	10/12/2024	04/15/2024 09:40	by AOP	0.2
24D0600	8330 - 1,2-DNB SUR 100ug/mL 04/26/24	04/26/2024	In house	x	10/23/2024	04/26/2024 13:48	by AOP	0.2

Analytical Standard Record

24E0456

Description:	8330 - Cal Std 0.2ug/mL 05/16/24	Expires:	09/16/2024
Standard Type:	Other	Prepared:	05/17/2024
Solvent:	ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	1	Department:	HPLC
Vials:	1	Last Edit:	05/17/2024 09:00 by AOP
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24E0455	528-29-0	0.2	ug/mL
1,3,5-TRINITROBENZENE	24E0455	99-35-4	0.2	ug/mL
1,3-DINITROBENZENE	24E0455	99-65-0	0.2	ug/mL
2,4,6-TRINITROTOLUENE	24E0455	118-96-7	0.2	ug/mL
2,4-DINITROTOLUENE	24E0455	121-14-2	0.2	ug/mL
2,6-DINITROTOLUENE	24E0455	606-20-2	0.2	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24E0455	35572-78-2	0.2	ug/mL
2-NITROTOLUENE	24E0455	88-72-2	0.2	ug/mL
3,5-DINITROANILINE	24E0455	618-87-1	0.2	ug/mL
3-NITROTOLUENE	24E0455	99-08-1	0.2	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24E0455	19406-51-0	0.2	ug/mL
4-NITROTOLUENE	24E0455	99-99-0	0.2	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24E0455	121-82-4	0.2	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24E0455	479-45-8	0.2	ug/mL
NITROBENZENE	24E0455	98-95-3	0.2	ug/mL
NITROGLYCERIN	24E0455	55-63-0	0.2	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24E0455	2691-41-0	0.2	ug/mL
PENTAERYTHRITOL TETRANITRATE	24E0455	78-11-5	0.2	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24E0455	8330 - Cal Std 20ug/mL 05/16/24	05/17/2024	In house	x	09/16/2024	05/17/2024 08:55	by AOP	0.01

Analytical Standard Record

24E0457

Description:	8330 - Cal 1 0.005ug/mL 05/16/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	05/17/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	05/17/2024 09:03 by AOP
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24E0456	528-29-0	0.005	ug/mL
1,3,5-TRINITROBENZENE	24E0456	99-35-4	0.005	ug/mL
1,3-DINITROBENZENE	24E0456	99-65-0	0.005	ug/mL
2,4,6-TRINITROTOLUENE	24E0456	118-96-7	0.005	ug/mL
2,4-DINITROTOLUENE	24E0456	121-14-2	0.005	ug/mL
2,6-DINITROTOLUENE	24E0456	606-20-2	0.005	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24E0456	35572-78-2	0.005	ug/mL
2-NITROTOLUENE	24E0456	88-72-2	0.005	ug/mL
3,5-DINITROANILINE	24E0456	618-87-1	0.005	ug/mL
3-NITROTOLUENE	24E0456	99-08-1	0.005	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24E0456	19406-51-0	0.005	ug/mL
4-NITROTOLUENE	24E0456	99-99-0	0.005	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24E0456	121-82-4	0.005	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24E0456	479-45-8	0.005	ug/mL
NITROBENZENE	24E0456	98-95-3	0.005	ug/mL
NITROGLYCERIN	24E0456	55-63-0	0.005	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24E0456	2691-41-0	0.005	ug/mL
PENTAERYTHRITOL TETRANITRATE	24E0456	78-11-5	0.005	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24E0456	8330 - Cal Std 0.2ug/mL 05/16/24	05/17/2024	In house	x	09/16/2024	05/17/2024 09:00	by AOP	0.02

Analytical Standard Record

24E0458

Description:	8330 - Cal 2 0.05ug/mL 05/16/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	05/17/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	05/17/2024 09:04 by AOP
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24E0456	528-29-0	0.05	ug/mL
1,3,5-TRINITROBENZENE	24E0456	99-35-4	0.05	ug/mL
1,3-DINITROBENZENE	24E0456	99-65-0	0.05	ug/mL
2,4,6-TRINITROTOLUENE	24E0456	118-96-7	0.05	ug/mL
2,4-DINITROTOLUENE	24E0456	121-14-2	0.05	ug/mL
2,6-DINITROTOLUENE	24E0456	606-20-2	0.05	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24E0456	35572-78-2	0.05	ug/mL
2-NITROTOLUENE	24E0456	88-72-2	0.05	ug/mL
3,5-DINITROANILINE	24E0456	618-87-1	0.05	ug/mL
3-NITROTOLUENE	24E0456	99-08-1	0.05	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24E0456	19406-51-0	0.05	ug/mL
4-NITROTOLUENE	24E0456	99-99-0	0.05	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24E0456	121-82-4	0.05	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24E0456	479-45-8	0.05	ug/mL
NITROBENZENE	24E0456	98-95-3	0.05	ug/mL
NITROGLYCERIN	24E0456	55-63-0	0.05	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24E0456	2691-41-0	0.05	ug/mL
PENTAERYTHRITOL TETRANITRATE	24E0456	78-11-5	0.05	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24E0456	8330 - Cal Std 0.2ug/mL 05/16/24	05/17/2024	In house	x	09/16/2024	05/17/2024 09:00	by AOP	0.2

Analytical Standard Record

24E0459

Description:	8330 - Cal 3 0.25ug/mL 05/16/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	05/17/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	05/17/2024 09:06 by AOP
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24E0455	528-29-0	0.25	ug/mL
1,3,5-TRINITROBENZENE	24E0455	99-35-4	0.25	ug/mL
1,3-DINITROBENZENE	24E0455	99-65-0	0.25	ug/mL
2,4,6-TRINITROTOLUENE	24E0455	118-96-7	0.25	ug/mL
2,4-DINITROTOLUENE	24E0455	121-14-2	0.25	ug/mL
2,6-DINITROTOLUENE	24E0455	606-20-2	0.25	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24E0455	35572-78-2	0.25	ug/mL
2-NITROTOLUENE	24E0455	88-72-2	0.25	ug/mL
3,5-DINITROANILINE	24E0455	618-87-1	0.25	ug/mL
3-NITROTOLUENE	24E0455	99-08-1	0.25	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24E0455	19406-51-0	0.25	ug/mL
4-NITROTOLUENE	24E0455	99-99-0	0.25	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24E0455	121-82-4	0.25	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24E0455	479-45-8	0.25	ug/mL
NITROBENZENE	24E0455	98-95-3	0.25	ug/mL
NITROGLYCERIN	24E0455	55-63-0	0.25	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24E0455	2691-41-0	0.25	ug/mL
PENTAERYTHRITOL TETRANITRATE	24E0455	78-11-5	0.25	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24E0455	8330 - Cal Std 20ug/mL 05/16/24	05/17/2024	In house	x	09/16/2024	05/17/2024 08:55	by AOP	0.01

Analytical Standard Record

24E0460

Description:	8330 - Cal 4 1.0ug/mL 05/16/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	05/17/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	05/17/2024 09:08 by AOP
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24E0455	528-29-0	1	ug/mL
1,3,5-TRINITROBENZENE	24E0455	99-35-4	1	ug/mL
1,3-DINITROBENZENE	24E0455	99-65-0	1	ug/mL
2,4,6-TRINITROTOLUENE	24E0455	118-96-7	1	ug/mL
2,4-DINITROTOLUENE	24E0455	121-14-2	1	ug/mL
2,6-DINITROTOLUENE	24E0455	606-20-2	1	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24E0455	35572-78-2	1	ug/mL
2-NITROTOLUENE	24E0455	88-72-2	1	ug/mL
3,5-DINITROANILINE	24E0455	618-87-1	1	ug/mL
3-NITROTOLUENE	24E0455	99-08-1	1	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24E0455	19406-51-0	1	ug/mL
4-NITROTOLUENE	24E0455	99-99-0	1	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24E0455	121-82-4	1	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24E0455	479-45-8	1	ug/mL
NITROBENZENE	24E0455	98-95-3	1	ug/mL
NITROGLYCERIN	24E0455	55-63-0	1	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24E0455	2691-41-0	1	ug/mL
PENTAERYTHRITOL TETRANITRATE	24E0455	78-11-5	1	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24E0455	8330 - Cal Std 20ug/mL 05/16/24	05/17/2024	In house	x	09/16/2024	05/17/2024 08:55	by AOP	0.04

Analytical Standard Record

24E0462

Description:	8330 - Cal 5 2.5ug/mL 05/16/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	05/17/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	05/17/2024 09:11 by AOP
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24E0455	528-29-0	2.5	ug/mL
1,3,5-TRINITROBENZENE	24E0455	99-35-4	2.5	ug/mL
1,3-DINITROBENZENE	24E0455	99-65-0	2.5	ug/mL
2,4,6-TRINITROTOLUENE	24E0455	118-96-7	2.5	ug/mL
2,4-DINITROTOLUENE	24E0455	121-14-2	2.5	ug/mL
2,6-DINITROTOLUENE	24E0455	606-20-2	2.5	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24E0455	35572-78-2	2.5	ug/mL
2-NITROTOLUENE	24E0455	88-72-2	2.5	ug/mL
3,5-DINITROANILINE	24E0455	618-87-1	2.5	ug/mL
3-NITROTOLUENE	24E0455	99-08-1	2.5	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24E0455	19406-51-0	2.5	ug/mL
4-NITROTOLUENE	24E0455	99-99-0	2.5	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24E0455	121-82-4	2.5	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24E0455	479-45-8	2.5	ug/mL
NITROBENZENE	24E0455	98-95-3	2.5	ug/mL
NITROGLYCERIN	24E0455	55-63-0	2.5	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24E0455	2691-41-0	2.5	ug/mL
PENTAERYTHRITOL TETRANITRATE	24E0455	78-11-5	2.5	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24E0455	8330 - Cal Std 20ug/mL 05/16/24	05/17/2024	In house	x	09/16/2024	05/17/2024 08:55	by AOP	0.1

Analytical Standard Record

24E0463

Description:	8330 - Cal 6 5.0ug/mL 05/16/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	05/17/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	05/17/2024 09:12 by AOP
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24E0455	528-29-0	5	ug/mL
1,3,5-TRINITROBENZENE	24E0455	99-35-4	5	ug/mL
1,3-DINITROBENZENE	24E0455	99-65-0	5	ug/mL
2,4,6-TRINITROTOLUENE	24E0455	118-96-7	5	ug/mL
2,4-DINITROTOLUENE	24E0455	121-14-2	5	ug/mL
2,6-DINITROTOLUENE	24E0455	606-20-2	5	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24E0455	35572-78-2	5	ug/mL
2-NITROTOLUENE	24E0455	88-72-2	5	ug/mL
3,5-DINITROANILINE	24E0455	618-87-1	5	ug/mL
3-NITROTOLUENE	24E0455	99-08-1	5	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24E0455	19406-51-0	5	ug/mL
4-NITROTOLUENE	24E0455	99-99-0	5	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24E0455	121-82-4	5	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24E0455	479-45-8	5	ug/mL
NITROBENZENE	24E0455	98-95-3	5	ug/mL
NITROGLYCERIN	24E0455	55-63-0	5	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24E0455	2691-41-0	5	ug/mL
PENTAERYTHRITOL TETRANITRATE	24E0455	78-11-5	5	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24E0455	8330 - Cal Std 20ug/mL 05/16/24	05/17/2024	In house	x	09/16/2024	05/17/2024 08:55	by AOP	0.2

Analytical Standard Record

24E0464

Description:	8330 - SCV DSS 20ug/mL 05/16/24	Expires:	09/16/2025
Standard Type:	Other	Prepared:	05/17/2024
Solvent:	ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	1	Department:	HPLC
Vials:	1	Last Edit:	05/17/2024 09:24 by AOP
Lot Number:	-		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	23E0027	99-35-4	20	ug/mL
1,3-DINITROBENZENE	23E0027	99-65-0	20	ug/mL
2,4,6-TRINITROTOLUENE	23E0027	118-96-7	20	ug/mL
2,4-DINITROTOLUENE	23E0027	121-14-2	20	ug/mL
2,6-DINITROTOLUENE	23E0027	606-20-2	20	ug/mL
2-AMINO-4,6-DINITROTOLUENE	23E0027	35572-78-2	20	ug/mL
2-NITROTOLUENE	23E0027	88-72-2	20	ug/mL
3,5-DINITROANILINE	23E0027	618-87-1	20	ug/mL
3-NITROTOLUENE	23E0027	99-08-1	20	ug/mL
4-AMINO-2,6-DINITROTOLUENE	23E0027	19406-51-0	20	ug/mL
4-NITROTOLUENE	23E0027	99-99-0	20	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	23E0027	121-82-4	20	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	23E0027	479-45-8	20	ug/mL
NITROBENZENE	23E0027	98-95-3	20	ug/mL
NITROGLYCERIN	23E0027	55-63-0	20	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	23E0027	2691-41-0	20	ug/mL
PENTAERYTHRITOL TETRANITRATE	23E0027	78-11-5	20	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
23E0027	8330 - SSS Ampule A0188442	04/18/2023	Restek	A0188442	08/31/2025	12/04/2023 11:05	by IMC	0.02

Analytical Standard Record

24E0466

Description:	8330 - SCV 1.0ug/mL 05/16/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	05/17/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	05/17/2024 09:27 by AOP
Lot Number:	-		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	24E0464	99-35-4	1	ug/mL
1,3-DINITROBENZENE	24E0464	99-65-0	1	ug/mL
2,4,6-TRINITROTOLUENE	24E0464	118-96-7	1	ug/mL
2,4-DINITROTOLUENE	24E0464	121-14-2	1	ug/mL
2,6-DINITROTOLUENE	24E0464	606-20-2	1	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24E0464	35572-78-2	1	ug/mL
2-NITROTOLUENE	24E0464	88-72-2	1	ug/mL
3,5-DINITROANILINE	24E0464	618-87-1	1	ug/mL
3-NITROTOLUENE	24E0464	99-08-1	1	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24E0464	19406-51-0	1	ug/mL
4-NITROTOLUENE	24E0464	99-99-0	1	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24E0464	121-82-4	1	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24E0464	479-45-8	1	ug/mL
NITROBENZENE	24E0464	98-95-3	1	ug/mL
NITROGLYCERIN	24E0464	55-63-0	1	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24E0464	2691-41-0	1	ug/mL
PENTAERYTHRITOL TETRANITRATE	24E0464	78-11-5	1	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24E0464	8330 - SCV DSS 20ug/mL 05/16/24	05/17/2024	-	-	09/16/2025	05/17/2024 09:24	by AOP	0.04

Analytical Standard Record

24G0088

Description:	8330 - Spike 100ug/mL 7/5/24	Expires:	01/01/2025
Standard Type:	Analyte Spike	Prepared:	07/05/2024
Solvent:	ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	10	Department:	HPLC
Vials:	1	Last Edit:	07/05/2024 12:25 by AOP
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	23A0023	99-35-4	100	ug/mL
1,3-DINITROBENZENE	23A0023	99-65-0	100	ug/mL
2,4,6-TRINITROTOLUENE	23A0023	118-96-7	100	ug/mL
2,4-DINITROTOLUENE	23A0023	121-14-2	100	ug/mL
2,6-DINITROTOLUENE	23A0023	606-20-2	100	ug/mL
2-AMINO-4,6-DINITROTOLUENE	23A0023	35572-78-2	100	ug/mL
2-NITROTOLUENE	23A0023	88-72-2	100	ug/mL
3,5-DINITROANILINE	23A0023	618-87-1	100	ug/mL
3-NITROTOLUENE	23A0023	99-08-1	100	ug/mL
4-AMINO-2,6-DINITROTOLUENE	23A0023	19406-51-0	100	ug/mL
4-NITROTOLUENE	23A0023	99-99-0	100	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	23A0023	121-82-4	100	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	23A0023	479-45-8	100	ug/mL
NITROBENZENE	23A0023	98-95-3	100	ug/mL
NITROGLYCERIN	23A0023	55-63-0	100	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	23A0023	2691-41-0	100	ug/mL
PENTAERYTHRITOL TETRANITRATE	23A0023	78-11-5	100	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
23A0023	8330 - SSS Ampule A0191734	11/23/2022	Restek	A0191734	11/30/2025	12/04/2023 11:05	by IMC	1

Analytical Standard Record

24G0171

Description:	8330 - Spike 100ug/mL 7/9/24	Expires:	01/05/2025
Standard Type:	Analyte Spike	Prepared:	07/09/2024
Solvent:	ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	10	Department:	HPLC
Vials:	1	Last Edit:	07/09/2024 09:58 by AOP
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	23A0023	99-35-4	100	ug/mL
1,3-DINITROBENZENE	23A0023	99-65-0	100	ug/mL
2,4,6-TRINITROTOLUENE	23A0023	118-96-7	100	ug/mL
2,4-DINITROTOLUENE	23A0023	121-14-2	100	ug/mL
2,6-DINITROTOLUENE	23A0023	606-20-2	100	ug/mL
2-AMINO-4,6-DINITROTOLUENE	23A0023	35572-78-2	100	ug/mL
2-NITROTOLUENE	23A0023	88-72-2	100	ug/mL
3,5-DINITROANILINE	23A0023	618-87-1	100	ug/mL
3-NITROTOLUENE	23A0023	99-08-1	100	ug/mL
4-AMINO-2,6-DINITROTOLUENE	23A0023	19406-51-0	100	ug/mL
4-NITROTOLUENE	23A0023	99-99-0	100	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	23A0023	121-82-4	100	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	23A0023	479-45-8	100	ug/mL
NITROBENZENE	23A0023	98-95-3	100	ug/mL
NITROGLYCERIN	23A0023	55-63-0	100	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	23A0023	2691-41-0	100	ug/mL
PENTAERYTHRITOL TETRANITRATE	23A0023	78-11-5	100	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
23A0023	8330 - SSS Ampule A0191734	11/23/2022	Restek	A0191734	11/30/2025	12/04/2023 11:05	by IMC	1

Analytical Standard Record

24G0473

Description:	8330 - CCV DSS 10ug/mL 7/23/24	Expires:	01/19/2025
Standard Type:	Analyte Spike	Prepared:	07/23/2024
Solvent:	ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	10	Department:	HPLC
Vials:	1	Last Edit:	07/23/2024 11:11 by AOP
Lot Number:	*		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	23L0017	99-35-4	10	ug/mL
1,3-DINITROBENZENE	23L0017	99-65-0	10	ug/mL
2,4,6-TRINITROTOLUENE	23L0017	118-96-7	10	ug/mL
2,4-DINITROTOLUENE	23L0017	121-14-2	10	ug/mL
2,6-DINITROTOLUENE	23L0017	606-20-2	10	ug/mL
2-AMINO-4,6-DINITROTOLUENE	23L0017	35572-78-2	10	ug/mL
2-NITROTOLUENE	23L0017	88-72-2	10	ug/mL
3,5-DINITROANILINE	23L0017	618-87-1	10	ug/mL
3-NITROTOLUENE	23L0017	99-08-1	10	ug/mL
4-AMINO-2,6-DINITROTOLUENE	23L0017	19406-51-0	10	ug/mL
4-NITROTOLUENE	23L0017	99-99-0	10	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	23L0017	121-82-4	10	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	23L0017	479-45-8	10	ug/mL
NITROBENZENE	23L0017	98-95-3	10	ug/mL
NITROGLYCERIN	23L0017	55-63-0	10	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	23L0017	2691-41-0	10	ug/mL
PENTAERYTHRITOL TETRANITRATE	23L0017	78-11-5	10	ug/mL
1,2-DINITROBENZENE	24D0501	528-29-0	10	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
23L0017	8330 - SSS Ampule A0201454	08/28/2023	Restek	A0201454	08/31/2026	12/04/2023 11:05	by IMC	0.1
24D0501	8330 - 1,2-DNB SAS Ampule A0205460	04/22/2024	Restek	A0205460	12/31/2028	04/26/2024 13:46	by AOP	0.1

Analytical Standard Record

24G0475

Description:	8330 - CCV 1.0ug/mL 7/23/24	Expires:	10/15/2024
Standard Type:	Calibration Standard	Prepared:	07/23/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	07/23/2024 12:01 by AOP
Lot Number:	*		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24G0473	528-29-0	1	ug/mL
1,3,5-TRINITROBENZENE	24G0473	99-35-4	1	ug/mL
1,3-DINITROBENZENE	24G0473	99-65-0	1	ug/mL
2,4,6-TRINITROTOLUENE	24G0473	118-96-7	1	ug/mL
2,4-DINITROTOLUENE	24G0473	121-14-2	1	ug/mL
2,6-DINITROTOLUENE	24G0473	606-20-2	1	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24G0473	35572-78-2	1	ug/mL
2-NITROTOLUENE	24G0473	88-72-2	1	ug/mL
3,5-DINITROANILINE	24G0473	618-87-1	1	ug/mL
3-NITROTOLUENE	24G0473	99-08-1	1	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24G0473	19406-51-0	1	ug/mL
4-NITROTOLUENE	24G0473	99-99-0	1	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24G0473	121-82-4	1	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24G0473	479-45-8	1	ug/mL
NITROBENZENE	24G0473	98-95-3	1	ug/mL
NITROGLYCERIN	24G0473	55-63-0	1	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24G0473	2691-41-0	1	ug/mL
PENTAERYTHRITOL TETRANITRATE	24G0473	78-11-5	1	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24G0473	8330 - CCV DSS 10ug/mL 7/23/24	07/23/2024	*	*	01/19/2025	07/23/2024 11:11	by AOP	0.08

Analytical Standard Record

24H0339

Description:	8330 - 1,2-DNB SUR 100ug/mL 8/13/24	Expires:	02/09/2025
Standard Type:	Surrogate Spike	Prepared:	08/13/2024
Solvent:	ACN	Prepared By:	Kia Yang
Final Volume (mls):	10	Department:	HPLC
Vials:	1	Last Edit:	08/13/2024 12:19 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24D0501	528-29-0	100	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24D0501	8330 - 1,2-DNB SAS Ampule A0205460	04/22/2024	Restek	A0205460	12/31/2028	04/26/2024 13:46	by AOP	1

Analytical Standard Record

24H0339

Description:	8330 - 1,2-DNB SUR 100ug/mL 8/13/24	Expires:	02/09/2025
Standard Type:	Surrogate Spike	Prepared:	08/13/2024
Solvent:	ACN	Prepared By:	Kia Yang
Final Volume (mls):	10	Department:	HPLC
Vials:	1	Last Edit:	08/13/2024 12:19 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24D0501	528-29-0	100	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24D0501	8330 - 1,2-DNB SAS Ampule A0205460	04/22/2024	Restek	A0205460	12/31/2028	04/26/2024 13:46	by AOP	1

Analytical Standard Record

24H0394

Description:	8330 - SCV DSS 20ug/mL 08/14/24	Expires:	02/12/2025
Standard Type:	Other	Prepared:	08/14/2024
Solvent:	ACN	Prepared By:	Kia Yang
Final Volume (mls):	1	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:33 by KMY1
Lot Number:	-		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	23E0027	99-35-4	20	ug/mL
1,3-DINITROBENZENE	23E0027	99-65-0	20	ug/mL
2,4,6-TRINITROTOLUENE	23E0027	118-96-7	20	ug/mL
2,4-DINITROTOLUENE	23E0027	121-14-2	20	ug/mL
2,6-DINITROTOLUENE	23E0027	606-20-2	20	ug/mL
2-AMINO-4,6-DINITROTOLUENE	23E0027	35572-78-2	20	ug/mL
2-NITROTOLUENE	23E0027	88-72-2	20	ug/mL
3,5-DINITROANILINE	23E0027	618-87-1	20	ug/mL
3-NITROTOLUENE	23E0027	99-08-1	20	ug/mL
4-AMINO-2,6-DINITROTOLUENE	23E0027	19406-51-0	20	ug/mL
4-NITROTOLUENE	23E0027	99-99-0	20	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	23E0027	121-82-4	20	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	23E0027	479-45-8	20	ug/mL
NITROBENZENE	23E0027	98-95-3	20	ug/mL
NITROGLYCERIN	23E0027	55-63-0	20	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	23E0027	2691-41-0	20	ug/mL
PENTAERYTHRITOL TETRANITRATE	23E0027	78-11-5	20	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
23E0027	8330 - SSS Ampule A0188442	04/18/2023	Restek	A0188442	08/31/2025	12/04/2023 11:05	by IMC	0.02

Analytical Standard Record

24H0394

Description:	8330 - SCV DSS 20ug/mL 08/14/24	Expires:	02/12/2025
Standard Type:	Other	Prepared:	08/14/2024
Solvent:	ACN	Prepared By:	Kia Yang
Final Volume (mls):	1	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:33 by KMY1
Lot Number:	-		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	23E0027	99-35-4	20	ug/mL
1,3-DINITROBENZENE	23E0027	99-65-0	20	ug/mL
2,4,6-TRINITROTOLUENE	23E0027	118-96-7	20	ug/mL
2,4-DINITROTOLUENE	23E0027	121-14-2	20	ug/mL
2,6-DINITROTOLUENE	23E0027	606-20-2	20	ug/mL
2-AMINO-4,6-DINITROTOLUENE	23E0027	35572-78-2	20	ug/mL
2-NITROTOLUENE	23E0027	88-72-2	20	ug/mL
3,5-DINITROANILINE	23E0027	618-87-1	20	ug/mL
3-NITROTOLUENE	23E0027	99-08-1	20	ug/mL
4-AMINO-2,6-DINITROTOLUENE	23E0027	19406-51-0	20	ug/mL
4-NITROTOLUENE	23E0027	99-99-0	20	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	23E0027	121-82-4	20	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	23E0027	479-45-8	20	ug/mL
NITROBENZENE	23E0027	98-95-3	20	ug/mL
NITROGLYCERIN	23E0027	55-63-0	20	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	23E0027	2691-41-0	20	ug/mL
PENTAERYTHRITOL TETRANITRATE	23E0027	78-11-5	20	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
23E0027	8330 - SSS Ampule A0188442	04/18/2023	Restek	A0188442	08/31/2025	12/04/2023 11:05	by IMC	0.02

Analytical Standard Record

24H0395

Description:	8330 - Cal Std 20ug/mL 08/14/24	Expires:	10/12/2024
Standard Type:	Other	Prepared:	08/14/2024
Solvent:	ACN	Prepared By:	Kia Yang
Final Volume (mls):	1	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:23 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	24G0088	99-35-4	20	ug/mL
1,3-DINITROBENZENE	24G0088	99-65-0	20	ug/mL
2,4,6-TRINITROTOLUENE	24G0088	118-96-7	20	ug/mL
2,4-DINITROTOLUENE	24G0088	121-14-2	20	ug/mL
2,6-DINITROTOLUENE	24G0088	606-20-2	20	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24G0088	35572-78-2	20	ug/mL
2-NITROTOLUENE	24G0088	88-72-2	20	ug/mL
3,5-DINITROANILINE	24G0088	618-87-1	20	ug/mL
3-NITROTOLUENE	24G0088	99-08-1	20	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24G0088	19406-51-0	20	ug/mL
4-NITROTOLUENE	24G0088	99-99-0	20	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24G0088	121-82-4	20	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24G0088	479-45-8	20	ug/mL
NITROBENZENE	24G0088	98-95-3	20	ug/mL
NITROGLYCERIN	24G0088	55-63-0	20	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24G0088	2691-41-0	20	ug/mL
PENTAERYTHRITOL TETRANITRATE	24G0088	78-11-5	20	ug/mL
1,2-DINITROBENZENE	24H0339	528-29-0	20	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24G0088	8330 - Spike 100ug/mL 7/5/24	07/05/2024	In house	x	01/01/2025	07/05/2024 12:26	by AOP	0.2
24H0339	8330 - 1,2-DNB SUR 100ug/mL 8/13/24	08/13/2024	In house	x	02/09/2025	08/13/2024 12:19	by KMY1	0.2

Analytical Standard Record

24H0396

Description:	8330 - Cal Std 0.2ug/mL 08/14/24	Expires:	09/16/2024
Standard Type:	Other	Prepared:	08/14/2024
Solvent:	ACN	Prepared By:	Kia Yang
Final Volume (mls):	1	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:24 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24H0395	528-29-0	0.2	ug/mL
1,3,5-TRINITROBENZENE	24H0395	99-35-4	0.2	ug/mL
1,3-DINITROBENZENE	24H0395	99-65-0	0.2	ug/mL
2,4,6-TRINITROTOLUENE	24H0395	118-96-7	0.2	ug/mL
2,4-DINITROTOLUENE	24H0395	121-14-2	0.2	ug/mL
2,6-DINITROTOLUENE	24H0395	606-20-2	0.2	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24H0395	35572-78-2	0.2	ug/mL
2-NITROTOLUENE	24H0395	88-72-2	0.2	ug/mL
3,5-DINITROANILINE	24H0395	618-87-1	0.2	ug/mL
3-NITROTOLUENE	24H0395	99-08-1	0.2	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24H0395	19406-51-0	0.2	ug/mL
4-NITROTOLUENE	24H0395	99-99-0	0.2	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24H0395	121-82-4	0.2	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24H0395	479-45-8	0.2	ug/mL
NITROBENZENE	24H0395	98-95-3	0.2	ug/mL
NITROGLYCERIN	24H0395	55-63-0	0.2	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24H0395	2691-41-0	0.2	ug/mL
PENTAERYTHRITOL TETRANITRATE	24H0395	78-11-5	0.2	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24H0395	8330 - Cal Std 20ug/mL 08/14/24	08/14/2024	In house	x	10/12/2024	08/16/2024 07:23	by KMY1	0.01

Analytical Standard Record

24H0397

Description:	8330 - Cal 1 0.005ug/mL 08/14/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	08/14/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Kia Yang
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:53 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24H0396	528-29-0	0.005	ug/mL
1,3,5-TRINITROBENZENE	24H0396	99-35-4	0.005	ug/mL
1,3-DINITROBENZENE	24H0396	99-65-0	0.005	ug/mL
2,4,6-TRINITROTOLUENE	24H0396	118-96-7	0.005	ug/mL
2,4-DINITROTOLUENE	24H0396	121-14-2	0.005	ug/mL
2,6-DINITROTOLUENE	24H0396	606-20-2	0.005	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24H0396	35572-78-2	0.005	ug/mL
2-NITROTOLUENE	24H0396	88-72-2	0.005	ug/mL
3,5-DINITROANILINE	24H0396	618-87-1	0.005	ug/mL
3-NITROTOLUENE	24H0396	99-08-1	0.005	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24H0396	19406-51-0	0.005	ug/mL
4-NITROTOLUENE	24H0396	99-99-0	0.005	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24H0396	121-82-4	0.005	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24H0396	479-45-8	0.005	ug/mL
NITROBENZENE	24H0396	98-95-3	0.005	ug/mL
NITROGLYCERIN	24H0396	55-63-0	0.005	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24H0396	2691-41-0	0.005	ug/mL
PENTAERYTHRITOL TETRANITRATE	24H0396	78-11-5	0.005	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24H0396	8330 - Cal Std 0.2ug/mL 08/14/24	08/14/2024	In house	x	09/16/2024	08/16/2024 07:24	by KMY1	0.02

Analytical Standard Record

24H0398

Description:	8330 - Cal 2 0.05ug/mL 08/14/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	08/14/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Kia Yang
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:53 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24H0396	528-29-0	0.05	ug/mL
1,3,5-TRINITROBENZENE	24H0396	99-35-4	0.05	ug/mL
1,3-DINITROBENZENE	24H0396	99-65-0	0.05	ug/mL
2,4,6-TRINITROTOLUENE	24H0396	118-96-7	0.05	ug/mL
2,4-DINITROTOLUENE	24H0396	121-14-2	0.05	ug/mL
2,6-DINITROTOLUENE	24H0396	606-20-2	0.05	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24H0396	35572-78-2	0.05	ug/mL
2-NITROTOLUENE	24H0396	88-72-2	0.05	ug/mL
3,5-DINITROANILINE	24H0396	618-87-1	0.05	ug/mL
3-NITROTOLUENE	24H0396	99-08-1	0.05	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24H0396	19406-51-0	0.05	ug/mL
4-NITROTOLUENE	24H0396	99-99-0	0.05	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24H0396	121-82-4	0.05	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24H0396	479-45-8	0.05	ug/mL
NITROBENZENE	24H0396	98-95-3	0.05	ug/mL
NITROGLYCERIN	24H0396	55-63-0	0.05	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24H0396	2691-41-0	0.05	ug/mL
PENTAERYTHRITOL TETRANITRATE	24H0396	78-11-5	0.05	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24H0396	8330 - Cal Std 0.2ug/mL 08/14/24	08/14/2024	In house	x	09/16/2024	08/16/2024 07:24	by KMY1	0.2

Analytical Standard Record

24H0399

Description:	8330 - Cal 3 0.25ug/mL 08/14/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	08/14/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Kia Yang
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:25 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24H0395	528-29-0	0.25	ug/mL
1,3,5-TRINITROBENZENE	24H0395	99-35-4	0.25	ug/mL
1,3-DINITROBENZENE	24H0395	99-65-0	0.25	ug/mL
2,4,6-TRINITROTOLUENE	24H0395	118-96-7	0.25	ug/mL
2,4-DINITROTOLUENE	24H0395	121-14-2	0.25	ug/mL
2,6-DINITROTOLUENE	24H0395	606-20-2	0.25	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24H0395	35572-78-2	0.25	ug/mL
2-NITROTOLUENE	24H0395	88-72-2	0.25	ug/mL
3,5-DINITROANILINE	24H0395	618-87-1	0.25	ug/mL
3-NITROTOLUENE	24H0395	99-08-1	0.25	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24H0395	19406-51-0	0.25	ug/mL
4-NITROTOLUENE	24H0395	99-99-0	0.25	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24H0395	121-82-4	0.25	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24H0395	479-45-8	0.25	ug/mL
NITROBENZENE	24H0395	98-95-3	0.25	ug/mL
NITROGLYCERIN	24H0395	55-63-0	0.25	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24H0395	2691-41-0	0.25	ug/mL
PENTAERYTHRITOL TETRANITRATE	24H0395	78-11-5	0.25	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24H0395	8330 - Cal Std 20ug/mL 08/14/24	08/14/2024	In house	x	10/12/2024	08/16/2024 07:23	by KMY1	0.01

Analytical Standard Record

24H0400

Description:	8330 - Cal 4 1.0ug/mL 08/14/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	08/14/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Kia Yang
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:26 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24H0395	528-29-0	1	ug/mL
1,3,5-TRINITROBENZENE	24H0395	99-35-4	1	ug/mL
1,3-DINITROBENZENE	24H0395	99-65-0	1	ug/mL
2,4,6-TRINITROTOLUENE	24H0395	118-96-7	1	ug/mL
2,4-DINITROTOLUENE	24H0395	121-14-2	1	ug/mL
2,6-DINITROTOLUENE	24H0395	606-20-2	1	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24H0395	35572-78-2	1	ug/mL
2-NITROTOLUENE	24H0395	88-72-2	1	ug/mL
3,5-DINITROANILINE	24H0395	618-87-1	1	ug/mL
3-NITROTOLUENE	24H0395	99-08-1	1	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24H0395	19406-51-0	1	ug/mL
4-NITROTOLUENE	24H0395	99-99-0	1	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24H0395	121-82-4	1	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24H0395	479-45-8	1	ug/mL
NITROBENZENE	24H0395	98-95-3	1	ug/mL
NITROGLYCERIN	24H0395	55-63-0	1	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24H0395	2691-41-0	1	ug/mL
PENTAERYTHRITOL TETRANITRATE	24H0395	78-11-5	1	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24H0395	8330 - Cal Std 20ug/mL 08/14/24	08/14/2024	In house	x	10/12/2024	08/16/2024 07:23	by KMY1	0.04

Analytical Standard Record

24H0401

Description:	8330 - Cal 5 2.5ug/mL 08/14/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	08/14/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Kia Yang
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:26 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24H0395	528-29-0	2.5	ug/mL
1,3,5-TRINITROBENZENE	24H0395	99-35-4	2.5	ug/mL
1,3-DINITROBENZENE	24H0395	99-65-0	2.5	ug/mL
2,4,6-TRINITROTOLUENE	24H0395	118-96-7	2.5	ug/mL
2,4-DINITROTOLUENE	24H0395	121-14-2	2.5	ug/mL
2,6-DINITROTOLUENE	24H0395	606-20-2	2.5	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24H0395	35572-78-2	2.5	ug/mL
2-NITROTOLUENE	24H0395	88-72-2	2.5	ug/mL
3,5-DINITROANILINE	24H0395	618-87-1	2.5	ug/mL
3-NITROTOLUENE	24H0395	99-08-1	2.5	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24H0395	19406-51-0	2.5	ug/mL
4-NITROTOLUENE	24H0395	99-99-0	2.5	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24H0395	121-82-4	2.5	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24H0395	479-45-8	2.5	ug/mL
NITROBENZENE	24H0395	98-95-3	2.5	ug/mL
NITROGLYCERIN	24H0395	55-63-0	2.5	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24H0395	2691-41-0	2.5	ug/mL
PENTAERYTHRITOL TETRANITRATE	24H0395	78-11-5	2.5	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24H0395	8330 - Cal Std 20ug/mL 08/14/24	08/14/2024	In house	x	10/12/2024	08/16/2024 07:23	by KMY1	0.1

Analytical Standard Record

24H0402

Description:	8330 - Cal 6 5.0ug/mL 08/14/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	08/14/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Kia Yang
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:26 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24H0395	528-29-0	5	ug/mL
1,3,5-TRINITROBENZENE	24H0395	99-35-4	5	ug/mL
1,3-DINITROBENZENE	24H0395	99-65-0	5	ug/mL
2,4,6-TRINITROTOLUENE	24H0395	118-96-7	5	ug/mL
2,4-DINITROTOLUENE	24H0395	121-14-2	5	ug/mL
2,6-DINITROTOLUENE	24H0395	606-20-2	5	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24H0395	35572-78-2	5	ug/mL
2-NITROTOLUENE	24H0395	88-72-2	5	ug/mL
3,5-DINITROANILINE	24H0395	618-87-1	5	ug/mL
3-NITROTOLUENE	24H0395	99-08-1	5	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24H0395	19406-51-0	5	ug/mL
4-NITROTOLUENE	24H0395	99-99-0	5	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24H0395	121-82-4	5	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24H0395	479-45-8	5	ug/mL
NITROBENZENE	24H0395	98-95-3	5	ug/mL
NITROGLYCERIN	24H0395	55-63-0	5	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24H0395	2691-41-0	5	ug/mL
PENTAERYTHRITOL TETRANITRATE	24H0395	78-11-5	5	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24H0395	8330 - Cal Std 20ug/mL 08/14/24	08/14/2024	In house	x	10/12/2024	08/16/2024 07:23	by KMY1	0.2

Analytical Standard Record

24H0403

Description:	8330 - SCV 1.0ug/mL 08/14/24	Expires:	02/12/2025
Standard Type:	Calibration Standard	Prepared:	08/14/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Kia Yang
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:33 by KMY1
Lot Number:	-		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	24H0394	99-35-4	1	ug/mL
1,3-DINITROBENZENE	24H0394	99-65-0	1	ug/mL
2,4,6-TRINITROTOLUENE	24H0394	118-96-7	1	ug/mL
2,4-DINITROTOLUENE	24H0394	121-14-2	1	ug/mL
2,6-DINITROTOLUENE	24H0394	606-20-2	1	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24H0394	35572-78-2	1	ug/mL
2-NITROTOLUENE	24H0394	88-72-2	1	ug/mL
3,5-DINITROANILINE	24H0394	618-87-1	1	ug/mL
3-NITROTOLUENE	24H0394	99-08-1	1	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24H0394	19406-51-0	1	ug/mL
4-NITROTOLUENE	24H0394	99-99-0	1	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24H0394	121-82-4	1	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24H0394	479-45-8	1	ug/mL
NITROBENZENE	24H0394	98-95-3	1	ug/mL
NITROGLYCERIN	24H0394	55-63-0	1	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24H0394	2691-41-0	1	ug/mL
PENTAERYTHRITOL TETRANITRATE	24H0394	78-11-5	1	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24H0394	8330 - SCV DSS 20ug/mL 08/14/24	08/14/2024	-	-	02/12/2025	08/16/2024 07:33	by KMY1	0.04

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

908 N. Temperance Ave., Clovis, CA 93611 - Phone 559-275-2175 - www.metirigroup.com

NELAP Certification Number: CA00046
DoD-ELAP Certification Number 4064.01
State Certification Number:

September 30, 2024

John Carson
AECOM Omaha
12120 Shamrock Plaza Suite 300
Omaha, NE 68154

RE: Wingate
24I0132

Enclosed are the results of analyses for samples received by our laboratory on 9/17/2024. If you have any questions concerning this report, please feel free to contact me.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness. These test results meet all requirements of NELAC and DoD QSM. Release of the hard copy has been authorized by the Laboratory Manager or designee, as verified by the following signature.

Sincerely,

Karen Volpendesta

Karen Volpendesta For Monica Garcia-Strickland
Project Manager

monica.garcia-strickland@metirigroup.com
559-825-9005

The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document.
No duplication of this report is allowed, except in its entirety.

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

AECOM Omaha	Project: Wingate	
12120 Shamrock Plaza Suite 300	Project Number: Wingate 60517380 Task 3	
Omaha, NE 68154	Project Manager: John Carson	Reported: 09/30/2024 12:35

Data Validatable Report

Analysis Case Narrative

EPA 8330:
The analyte methyl-2,4,6-trinitrophenylnitramine recovered below the lower control limit in the BDI0344-MS1 and -MSD1 performed on sample P2-ARROYO-0004.

Samples in this Report

Lab ID	Sample	Matrix	Date Sampled	Date Received
24I0132-01	P2-ARROYO-0003	Solid	09/14/2024 08:36	09/17/2024
24I0132-02	P2-ARROYO-0004	Solid	09/14/2024 08:40	09/17/2024

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

AECOM Omaha	Project: Wingate	
12120 Shamrock Plaza Suite 300	Project Number: Wingate 60517380 Task 3	
Omaha, NE 68154	Project Manager: John Carson	Reported: 09/30/2024 12:35

Containers Received

Lab ID	Container Type	Count	Preservation Check
24I0132-01			
	8oz Jar Wmouth	1	
24I0132-02			
	8oz Jar Wmouth	1	

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

AECOM Omaha	Project: Wingate	
12120 Shamrock Plaza Suite 300	Project Number: Wingate 60517380 Task 3	
Omaha, NE 68154	Project Manager: John Carson	Reported: 09/30/2024 12:35

Sample Results

Sample: P2-ARROYO-0003
24I0132-01 (Solid)

Liquid Chromatography

Analyte	Result	/Qual	LOQ	LOD	DL	Units	Date Analyzed	DF	Method	Prep Batch
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.074	U	0.50	0.074	0.037	mg/kg	09/23/24	1	EPA 8330B	BDI0344
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.052	J	0.50	0.074	0.025	mg/kg	09/23/24	1	EPA 8330B	BDI0344
1,3,5-TRINITROBENZENE	0.074	U	0.50	0.074	0.013	mg/kg	09/23/24	1	EPA 8330B	BDI0344
1,3-DINITROBENZENE	0.074	U	0.50	0.074	0.022	mg/kg	09/23/24	1	EPA 8330B	BDI0344
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	0.074	U	0.50	0.074	0.037	mg/kg	09/23/24	1	EPA 8330B	BDI0344
NITROBENZENE	0.074	U	0.50	0.074	0.028	mg/kg	09/23/24	1	EPA 8330B	BDI0344
2,4,6-TRINITROTOLUENE	2.8		0.50	0.074	0.031	mg/kg	09/23/24	1	EPA 8330B	BDI0344
4-AMINO-2,6-DINITROTOLUENE	0.074	U	0.50	0.074	0.034	mg/kg	09/23/24	1	EPA 8330B	BDI0344
2-AMINO-4,6-DINITROTOLUENE	0.096	J	0.50	0.074	0.034	mg/kg	09/23/24	1	EPA 8330B	BDI0344
2,4-DINITROTOLUENE	0.074	U	0.50	0.074	0.028	mg/kg	09/23/24	1	EPA 8330B	BDI0344
2,6-DINITROTOLUENE	0.074	U	0.50	0.074	0.031	mg/kg	09/23/24	1	EPA 8330B	BDI0344
2-NITROTOLUENE	0.074	U	0.50	0.074	0.037	mg/kg	09/23/24	1	EPA 8330B	BDI0344
3-NITROTOLUENE	0.074	U	0.50	0.074	0.037	mg/kg	09/23/24	1	EPA 8330B	BDI0344
4-NITROTOLUENE	0.074	U	0.50	0.074	0.037	mg/kg	09/23/24	1	EPA 8330B	BDI0344
NITROGLYCERIN	0.15	U	0.50	0.15	0.061	mg/kg	09/23/24	1	EPA 8330B	BDI0344
PENTAERYTHRITOL TETRANITRATE	0.25	U	2.5	0.25	0.11	mg/kg	09/23/24	1	EPA 8330B	BDI0344
Surrogate: 1,2-DINITROBENZENE	*104%*		*78-119*				*09/23/24*	1	*EPA 8330B*	*BDI0344*

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No duplication of this report is allowed, except in its entirety.

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

AECOM Omaha	Project: Wingate	
12120 Shamrock Plaza Suite 300	Project Number: Wingate 60517380 Task 3	
Omaha, NE 68154	Project Manager: John Carson	Reported: 09/30/2024 12:35

Sample Results

(Continued)

Sample: P2-ARROYO-0004
24I0132-02 (Solid)

Liquid Chromatography

Analyte	Result	/Qual	LOQ	LOD	DL	Units	Date Analyzed	DF	Method	Prep Batch
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.074	U	0.50	0.074	0.037	mg/kg	09/23/24	1	EPA 8330B	BDI0344
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.074	U	0.50	0.074	0.025	mg/kg	09/23/24	1	EPA 8330B	BDI0344
1,3,5-TRINITROBENZENE	0.074	U	0.50	0.074	0.013	mg/kg	09/23/24	1	EPA 8330B	BDI0344
1,3-DINITROBENZENE	0.074	U	0.50	0.074	0.022	mg/kg	09/23/24	1	EPA 8330B	BDI0344
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	0.074	U	0.50	0.074	0.037	mg/kg	09/23/24	1	EPA 8330B	BDI0344
NITROBENZENE	0.074	U	0.50	0.074	0.028	mg/kg	09/23/24	1	EPA 8330B	BDI0344
2,4,6-TRINITROTOLUENE	0.50		0.50	0.074	0.031	mg/kg	09/23/24	1	EPA 8330B	BDI0344
4-AMINO-2,6-DINITROTOLUENE	0.074	U	0.50	0.074	0.034	mg/kg	09/23/24	1	EPA 8330B	BDI0344
2-AMINO-4,6-DINITROTOLUENE	0.074	U	0.50	0.074	0.034	mg/kg	09/23/24	1	EPA 8330B	BDI0344
2,4-DINITROTOLUENE	0.074	U	0.50	0.074	0.028	mg/kg	09/23/24	1	EPA 8330B	BDI0344
2,6-DINITROTOLUENE	0.074	U	0.50	0.074	0.031	mg/kg	09/23/24	1	EPA 8330B	BDI0344
2-NITROTOLUENE	0.074	U	0.50	0.074	0.037	mg/kg	09/23/24	1	EPA 8330B	BDI0344
3-NITROTOLUENE	0.074	U	0.50	0.074	0.037	mg/kg	09/23/24	1	EPA 8330B	BDI0344
4-NITROTOLUENE	0.074	U	0.50	0.074	0.037	mg/kg	09/23/24	1	EPA 8330B	BDI0344
NITROGLYCERIN	0.15	U	0.50	0.15	0.060	mg/kg	09/23/24	1	EPA 8330B	BDI0344
PENTAERYTHRITOL TETRANITRATE	0.25	U	2.5	0.25	0.11	mg/kg	09/23/24	1	EPA 8330B	BDI0344
Surrogate: 1,2-DINITROBENZENE	*104%*		*78-119*				*09/23/24*	1	*EPA 8330B*	*BDI0344*

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

AECOM Omaha	Project: Wingate	
12120 Shamrock Plaza Suite 300	Project Number: Wingate 60517380 Task 3	
Omaha, NE 68154	Project Manager: John Carson	Reported: 09/30/2024 12:35

Quality Control

Liquid Chromatography

Analyte	Result/Qual	LOQ	LOD	MDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Method: EPA 8330B										
Batch: BDI0344 - EPA 8330B										
	mg/kg									
Blank (BDI0344-BLK1)						Prepared: 09/19/24 11:10 Analyzed: 09/23/24 10:18				
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.074 U	0.50	0.074	0.037						
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.074 U	0.50	0.074	0.025						
1,3,5-TRINITROBENZENE	0.074 U	0.50	0.074	0.013						
1,3-DINITROBENZENE	0.074 U	0.50	0.074	0.022						
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	0.074 U	0.50	0.074	0.037						
NITROBENZENE	0.074 U	0.50	0.074	0.028						
2,4,6-TRINITROTOLUENE	0.074 U	0.50	0.074	0.031						
4-AMINO-2,6-DINITROTOLUENE	0.074 U	0.50	0.074	0.034						
2-AMINO-4,6-DINITROTOLUENE	0.074 U	0.50	0.074	0.034						
2,4-DINITROTOLUENE	0.074 U	0.50	0.074	0.028						
2,6-DINITROTOLUENE	0.074 U	0.50	0.074	0.031						
2-NITROTOLUENE	0.074 U	0.50	0.074	0.037						
3-NITROTOLUENE	0.074 U	0.50	0.074	0.037						
4-NITROTOLUENE	0.074 U	0.50	0.074	0.037						
NITROGLYCERIN	0.15 U	0.50	0.15	0.060						
PENTAERYTHRITOL TETRANITRATE	0.25 U	2.5	0.25	0.11						
Surrogates										
1,2-DINITROBENZENE	*2.04*				*1.98*		*103*	*78-119*		
	mg/kg									
LCS (BDI0344-BS1)						Prepared: 09/19/24 11:10 Analyzed: 09/23/24 11:44				
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	2.08				1.98		105	74-124		
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	2.13				1.98		107	67-129		
1,3,5-TRINITROBENZENE	2.03				1.98		103	80-116		
1,3-DINITROBENZENE	2.12				1.98		107	73-119		
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	1.36				1.98		68.8	68-135		
NITROBENZENE	2.16				1.98		109	67-129		
2,4,6-TRINITROTOLUENE	2.15				1.98		109	71-120		
4-AMINO-2,6-DINITROTOLUENE	2.15				1.98		108	64-127		
2-AMINO-4,6-DINITROTOLUENE	2.16				1.98		109	71-123		
2,4-DINITROTOLUENE	2.13				1.98		107	75-121		
2,6-DINITROTOLUENE	2.08				1.98		105	79-117		
2-NITROTOLUENE	2.15				1.98		109	70-124		
3-NITROTOLUENE	2.15				1.98		109	67-129		
4-NITROTOLUENE	2.13				1.98		108	71-124		
NITROGLYCERIN	2.18				1.98		110	73-124		
PENTAERYTHRITOL TETRANITRATE	1.95 J				1.98		98.3	72-128		
Surrogates										
1,2-DINITROBENZENE	*2.06*				*1.98*		*104*	*78-119*		

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

AECOM Omaha	Project: Wingate	
12120 Shamrock Plaza Suite 300	Project Number: Wingate 60517380 Task 3	
Omaha, NE 68154	Project Manager: John Carson	Reported: 09/30/2024 12:35

Quality Control
(Continued)

Liquid Chromatography (Continued)

Analyte	Result/Qual	LOQ	LOD	MDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
	mg/kg									
Matrix Spike (BDI0344-MS1)		**Source: 24I0132-02**				Prepared: 09/19/24 11:10		Analyzed: 09/23/24 12:26		
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	2.06				1.98	0.0743 U	104	74-124		
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	1.88				1.98	0.0743 U	95.2	67-129		
1,3,5-TRINITROBENZENE	2.12				1.98	0.0743 U	107	80-116		
1,3-DINITROBENZENE	2.11				1.98	0.0743 U	107	73-119		
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	1.06 MS1				1.98	0.0743 U	53.7	68-135		
NITROBENZENE	2.15				1.98	0.0743 U	109	67-129		
2,4,6-TRINITROTOLUENE	2.06				1.98	0.500	79.1	71-120		
4-AMINO-2,6-DINITROTOLUENE	2.14				1.98	0.0743 U	108	64-127		
2-AMINO-4,6-DINITROTOLUENE	2.18				1.98	0.0743 U	110	71-123		
2,4-DINITROTOLUENE	2.15				1.98	0.0743 U	109	75-121		
2,6-DINITROTOLUENE	2.08				1.98	0.0743 U	105	79-117		
2-NITROTOLUENE	2.15				1.98	0.0743 U	109	70-124		
3-NITROTOLUENE	2.15				1.98	0.0743 U	109	67-129		
4-NITROTOLUENE	2.13				1.98	0.0743 U	108	71-124		
NITROGLYCERIN	2.17				1.98	0.149 U	110	73-124		
PENTAERYTHRITOL TETRANITRATE	2.23 J				1.98	0.248 U	113	72-128		
Surrogates										
1,2-DINITROBENZENE	*2.01*				*1.98*		*102*	*78-119*		
	mg/kg									
Matrix Spike Dup (BDI0344-MSD1)		**Source: 24I0132-02**				Prepared: 09/19/24 11:10		Analyzed: 09/23/24 13:09		
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	2.07				1.98	0.0743 U	105	74-124	0.457	20
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	1.88				1.98	0.0743 U	95.2	67-129	0.00133	20
1,3,5-TRINITROBENZENE	2.12				1.98	0.0743 U	107	80-116	0.0792	20
1,3-DINITROBENZENE	2.10				1.98	0.0743 U	106	73-119	0.382	20
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	1.18 MS1				1.98	0.0743 U	59.6	68-135	10.4	20
NITROBENZENE	2.20				1.98	0.0743 U	111	67-129	2.23	20
2,4,6-TRINITROTOLUENE	2.18				1.98	0.500	84.7	71-120	5.23	20
4-AMINO-2,6-DINITROTOLUENE	2.13				1.98	0.0743 U	108	64-127	0.242	20
2-AMINO-4,6-DINITROTOLUENE	2.17				1.98	0.0743 U	110	71-123	0.220	20
2,4-DINITROTOLUENE	2.15				1.98	0.0743 U	109	75-121	0.119	20
2,6-DINITROTOLUENE	2.08				1.98	0.0743 U	105	79-117	0.270	20
2-NITROTOLUENE	2.13				1.98	0.0743 U	108	70-124	0.958	20
3-NITROTOLUENE	2.15				1.98	0.0743 U	108	67-129	0.138	20
4-NITROTOLUENE	2.12				1.98	0.0743 U	107	71-124	0.463	20
NITROGLYCERIN	2.18				1.98	0.149 U	110	73-124	0.206	20
PENTAERYTHRITOL TETRANITRATE	2.30 J				1.98	0.248 U	116	72-128	2.90	20
Surrogates										
1,2-DINITROBENZENE	*2.15*				*1.98*		*109*	*78-119*		

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

AECOM Omaha	Project: Wingate	
12120 Shamrock Plaza Suite 300	Project Number: Wingate 60517380 Task 3	
Omaha, NE 68154	Project Manager: John Carson	Reported: 09/30/2024 12:35

Notes and Definitions

Item	Definition
J	Estimated value
MI2	Manual integration, non-target peak interference
MS1	Matrix spike recovered below the lower control limit
U	Not detected
Dry	Sample results reported on a dry weight basis.
DF	Dilution Factor
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
*	Value outside control limits
RPD	Relative Percent Difference
%REC	Percent Recovery
Source	Sample that was matrix spiked or duplicated.

LOQ, Limit of Quantitation = Method Reporting Limit (MRL).

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APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

WORK ORDER

24I0132

Printed: 09/30/2024 12:35 pm

Project: **Wingate**
Project Number: **Wingate 60517380 Task 3**
Project Manager: **Monica Garcia-Strickland**
PO Number: **1630628**

Report To:
AECOM Omaha
John Carson
12120 Shamrock Plaza Suite 300
Omaha, NE 68154
Phone: (402) 334-8181
Fax: (402) 334-1984

Invoice To:
AECOM Omaha
John Carson
12120 Shamrock Plaza Suite 300
Omaha, NE 68154
Phone: (402) 334-8181
Fax: (402) 334-1984

Date Received: 09/17/2024 10:00 AM
Date Due: 10/01/2024 (10.00 day TAT)

Logged In By: Shena Koop
Received By: Shena Koop

Analysis	Comments
24I0132-01 P2-ARROYO-0003 [Solid] Sampled 9/14/2024 8:36:00AM	
8330B DOD	Wingate
24I0132-02 P2-ARROYO-0004 [Solid] Sampled 9/14/2024 8:40:00AM	
8330B DOD	Wingate

24I0132 **Sample Receipt Log**

Default Cooler

Samples Received at: **4.2°C**

Custody Seals	Yes	Were all containers sealed in separate bags?	Yes
Containers Intact	Yes	Did all containers arrive in good condition?	Yes
COC/Labels Agree	Yes	Correct containers/preserv. for tests indicated?	Yes
Preservation Confirmed	Yes	Sufficient volume sent for tests requested?	Yes
Received On Ice	Yes	VOA vials for volatiles analysis of water are bubb	No
Was a chain of custody received?	Yes	Sufficient remaining holding time for analyses?	Yes
COCs complete/signed in the appropriate places?	Yes	pH of non-VOA preserved containers documented?	No
Sample labels complete? Sample ID, date/time, etc.	Yes	Unpreserved vials received for VOA analysis?	No
Did all container labels agree with COCs?	Yes	If "yes", are unpreserved VOA vials noted on Work	No

Project Name: Parcel 3 Closure and Corrective Action				Project #: 60517380 Task 3	AECOM 12120 Shamrock Plaza #100 Omaha NE 68154													AECOM
Sampler: Jeff Hayes				Project Mgr John C. Carson PE				Analytical Parameters										402.334.8181
Date	Time	Comp	Grab	ID	Matrix	# Containers	Cont Type	VOC's 8260B	SVOC's 8270D	PCB's 8082A	Explosives 8330B	Dioxins/Furans 8290	Perchlorates 6850	Metals 6010A.6020B.7471B	Nitrate 9056A	Cyanide 9014	NDMA 8270D SIM	PAGE 1 of 1
9/14/2024	8:36	X		P2-ARROYO-0003	soil	1	8 oz jar				X							4C
9/14/2024	8:40	X		P2-ARROYO-0004	soil	1	8 oz jar				X							4C
Relenquished By: *Jeffrey Hayes*				**Shipped:**				**Fedex**										**AECOM Chemist:**
Received By:				Sep 16 2024				7785-9034-9590										Wanda Davis
Relenquished By:				Ship Time: 1600				To: APPL Labs										302-465-1997
Rcv'd for Lab by: Shena Koop / Appl inc.				9/17/24 10:00				ATTN: Monica Garcia-Strickland 908 N. Temperance Ave Clovis CA 93611-8606										Brian Rothmeyer 303-619-6342

4.6°C / 4.2°C IRB.

NO. 141863

Table of Contents

CUSTODY SEAL
APPL, Inc. (559) 275-2175
Initials SB Date 9-16-24

CUSTODY SEAL
APPL, Inc. (559) 275-2175
Initials SB Date 9-16-24

Shena Koop / Appl Inc.
9/17/24 1000
4.16 C / 4.2 C IRB

HPLC

SAMPLE DATA

ANALYSIS DATA SHEET

P2-ARROYO-0003

Laboratory:	APPL, LLC			Work Order:	24I0132
Client:	AECOM			Project:	Wingate 60517380 Task 3
Matrix:	Solid	Laboratory ID:	24I0132-01	File ID:	S2024-09-23-010
Sampled:	09/14/24 08:36	Prepared:	09/19/24 11:10	Analyzed:	09/23/24 13:51
Solids:		Preparation:	EPA 8330B	Dilution:	1
Initial/Final:	10.07 g / 80 mL			Instrument:	STATLER
Batch:	BDI0344	Sequence:	SD03891	Calibration:	2420012

COMPOUND	CONC. (mg/kg)	LOQ	LOD	DL	Q
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCIN	0.074 U	0.50	0.074	0.037	
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.052 J	0.50	0.074	0.025	
1,3,5-TRINITROBENZENE	0.074 U	0.50	0.074	0.013	
1,3-DINITROBENZENE	0.074 U	0.50	0.074	0.022	
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	0.074 U	0.50	0.074	0.037	
NITROBENZENE	0.074 U	0.50	0.074	0.028	
2,4,6-TRINITROTOLUENE	2.8	0.50	0.074	0.031	
4-AMINO-2,6-DINITROTOLUENE	0.074 U	0.50	0.074	0.034	
2-AMINO-4,6-DINITROTOLUENE	0.096 J	0.50	0.074	0.034	
2,4-DINITROTOLUENE	0.074 U	0.50	0.074	0.028	
2,6-DINITROTOLUENE	0.074 U	0.50	0.074	0.031	
2-NITROTOLUENE	0.074 U	0.50	0.074	0.037	
3-NITROTOLUENE	0.074 U	0.50	0.074	0.037	
4-NITROTOLUENE	0.074 U	0.50	0.074	0.037	
NITROGLYCERIN	0.15 U	0.50	0.15	0.061	
PENTAERYTHRITOL TETRANITRATE	0.25 U	2.5	0.25	0.11	

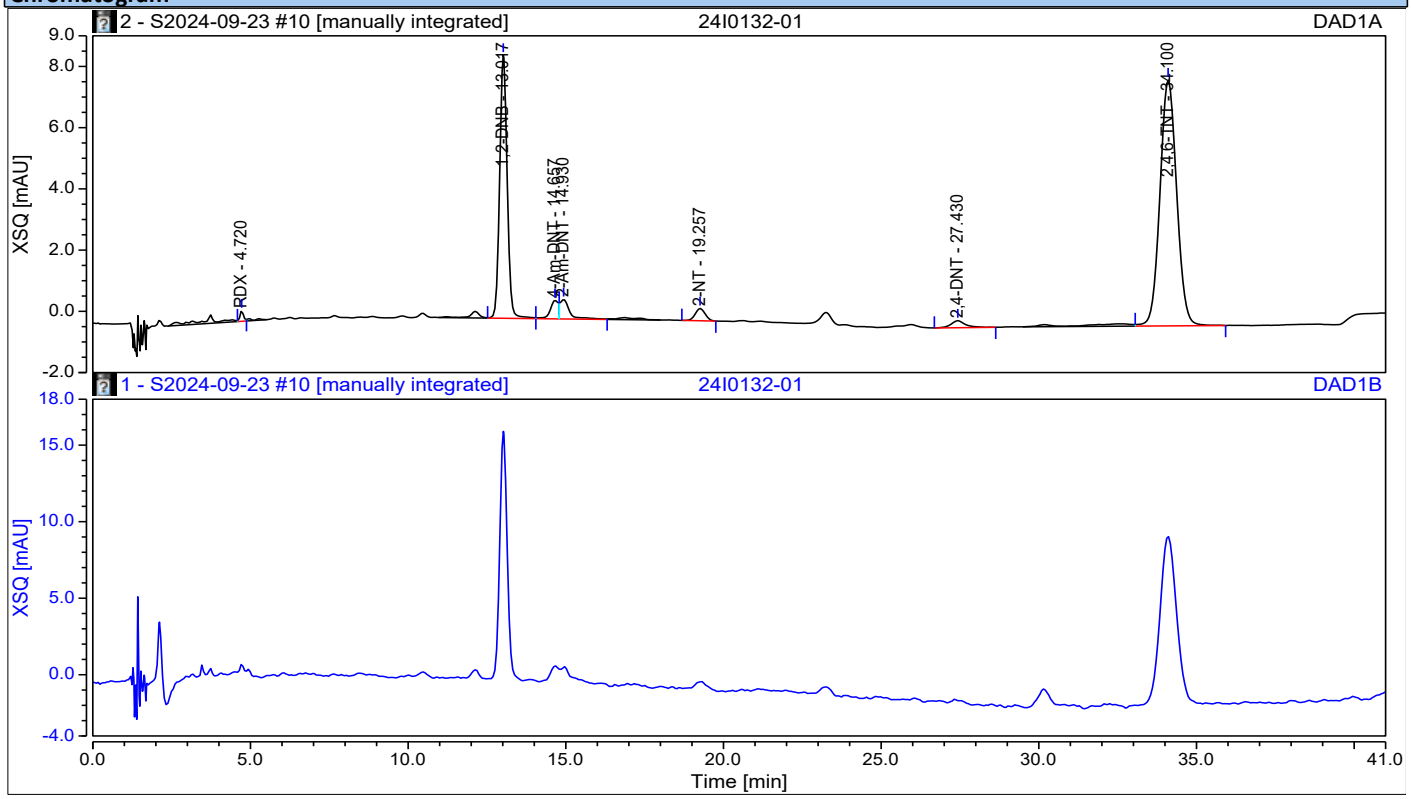
Instrument:
Sequence:S2024-09-23

Chromatogram and Results

Injection Details

Injection Name:	**24I0132-01**	*Instrument:*	**Statler**
Vial Number:	**10**	*Run Time (min):*	**41.00**
Injection Type:	**Unknown**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**23/Sep/2024 13:51**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**24/Sep/2024 08:14**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
n.a.	NG	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	PETN	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	HMX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	RDX	4.720	0.0456	0.347	0.57	1.84	6.5247
n.a.	3,5-DNA	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	NB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	1,2-DNB	13.017	2.3623	8.600	29.45	45.58	258.8194
3	4-Am-DNT	14.657	0.1795	0.604	2.24	3.20	13.9310
4	2-Am-DNT	14.930	0.2285	0.637	2.85	3.37	12.0894
n.a.	1,3-DNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5	2-NT	19.257	0.1474	0.403	1.84	2.13	16.0001
n.a.	4-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2,6-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	1,3,5-TNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
6	2,4-DNT	27.430	0.1241	0.231	1.55	1.23	5.3375
n.a.	Tetryl	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
7	2,4,6-TNT	34.100	4.9348	8.045	61.51	42.64	354.1274
Total:			**8.022**	**18.867**	**100.000**	**100.000**	

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ANALYSIS DATA SHEET

P2-ARROYO-0003

Laboratory:	APPL, LLC			Work Order:	24I0132
Client:	AECOM			Project:	Wingate 60517380 Task 3
Matrix:	Solid	Laboratory ID:	24I0132-01RE1	File ID:	W2024-09-24-005
Sampled:	09/14/24 08:36	Prepared:	09/19/24 11:10	Analyzed:	09/24/24 13:28
Solids:		Preparation:	EPA 8330B	Dilution:	1
Initial/Final:	10.07 g / 80 mL			Instrument:	Waldorf
Batch:	BDI0344	Sequence:	SD03904	Calibration:	2433019

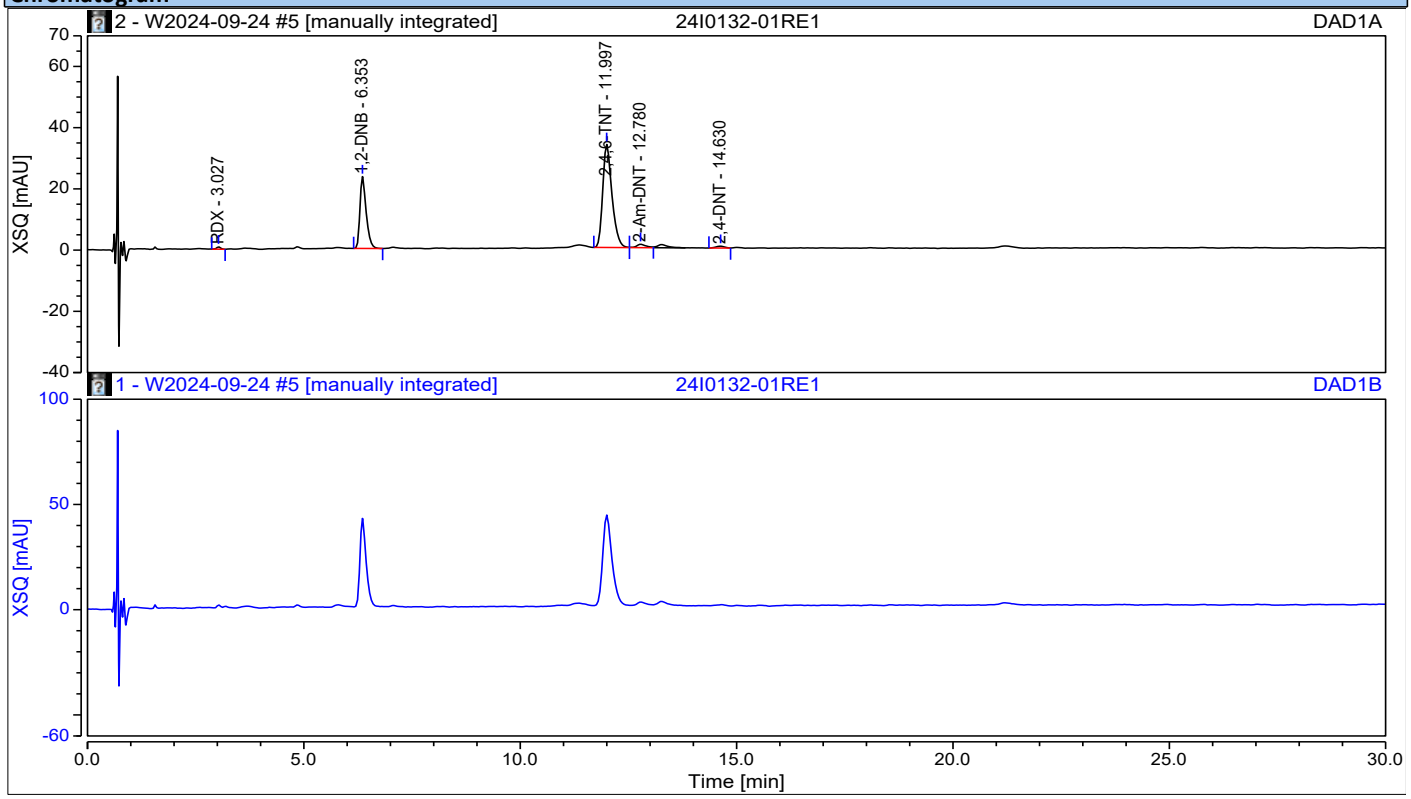
COMPOUND	CONC. (mg/kg)	LOQ	LOD	DL	Q
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCIN	0.074 U	0.50	0.074	0.037	
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.060 J	0.50	0.074	0.025	
1,3,5-TRINITROBENZENE	0.074 U	0.50	0.074	0.013	
1,3-DINITROBENZENE	0.074 U	0.50	0.074	0.022	
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	0.074 U	0.50	0.074	0.037	
NITROBENZENE	0.074 U	0.50	0.074	0.028	
2,4,6-TRINITROTOLUENE	2.5	0.50	0.074	0.031	
4-AMINO-2,6-DINITROTOLUENE	0.074 U	0.50	0.074	0.034	
2-AMINO-4,6-DINITROTOLUENE	0.13 J	0.50	0.074	0.034	
2,4-DINITROTOLUENE	0.074 U	0.50	0.074	0.028	
2,6-DINITROTOLUENE	0.074 U	0.50	0.074	0.031	
2-NITROTOLUENE	0.074 U	0.50	0.074	0.037	
3-NITROTOLUENE	0.074 U	0.50	0.074	0.037	
4-NITROTOLUENE	0.074 U	0.50	0.074	0.037	
NITROGLYCERIN	0.15 U	0.50	0.15	0.061	
PENTAERYTHRITOL TETRANITRATE	0.25 U	2.5	0.25	0.11	

Chromatogram and Results

Injection Details

Injection Name:	**24I0132-01RE1**	*Instrument:*	**Waldorf**
Vial Number:	**5**	*Run Time (min):*	**30.00**
Injection Type:	**Unknown**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**24/Sep/2024 13:28**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**24/Sep/2024 15:47**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
n.a.	NG	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	PETN	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	HMX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	RDX	3.027	0.0798	0.786	0.63	1.32	7.5701
n.a.	1,3,5-TNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	1,2-DNB	6.353	3.9031	23.479	30.65	39.36	256.3386
n.a.	1,3-DNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3,5-DNA	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	NB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Tetryl	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	2,4,6-TNT	11.997	8.3277	33.687	65.40	56.47	315.6491
4	2-Am-DNT	12.780	0.2837	1.103	2.23	1.85	16.3414
n.a.	4-Am-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5	2,4-DNT	14.630	0.1402	0.603	1.10	1.01	13.9188
n.a.	2,6-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	4-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**12.734**	**59.658**	**100.000**	**100.000**	

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ANALYSIS DATA SHEET

P2-ARROYO-0004

Laboratory:	APPL, LLC			Work Order:	24I0132
Client:	AECOM			Project:	Wingate 60517380 Task 3
Matrix:	Solid	Laboratory ID:	24I0132-02	File ID:	S2024-09-23-011
Sampled:	09/14/24 08:40	Prepared:	09/19/24 11:10	Analyzed:	09/23/24 14:34
Solids:		Preparation:	EPA 8330B	Dilution:	1
Initial/Final:	10.09 g / 80 mL			Instrument:	STATLER
Batch:	BDI0344	Sequence:	SD03891	Calibration:	2420012

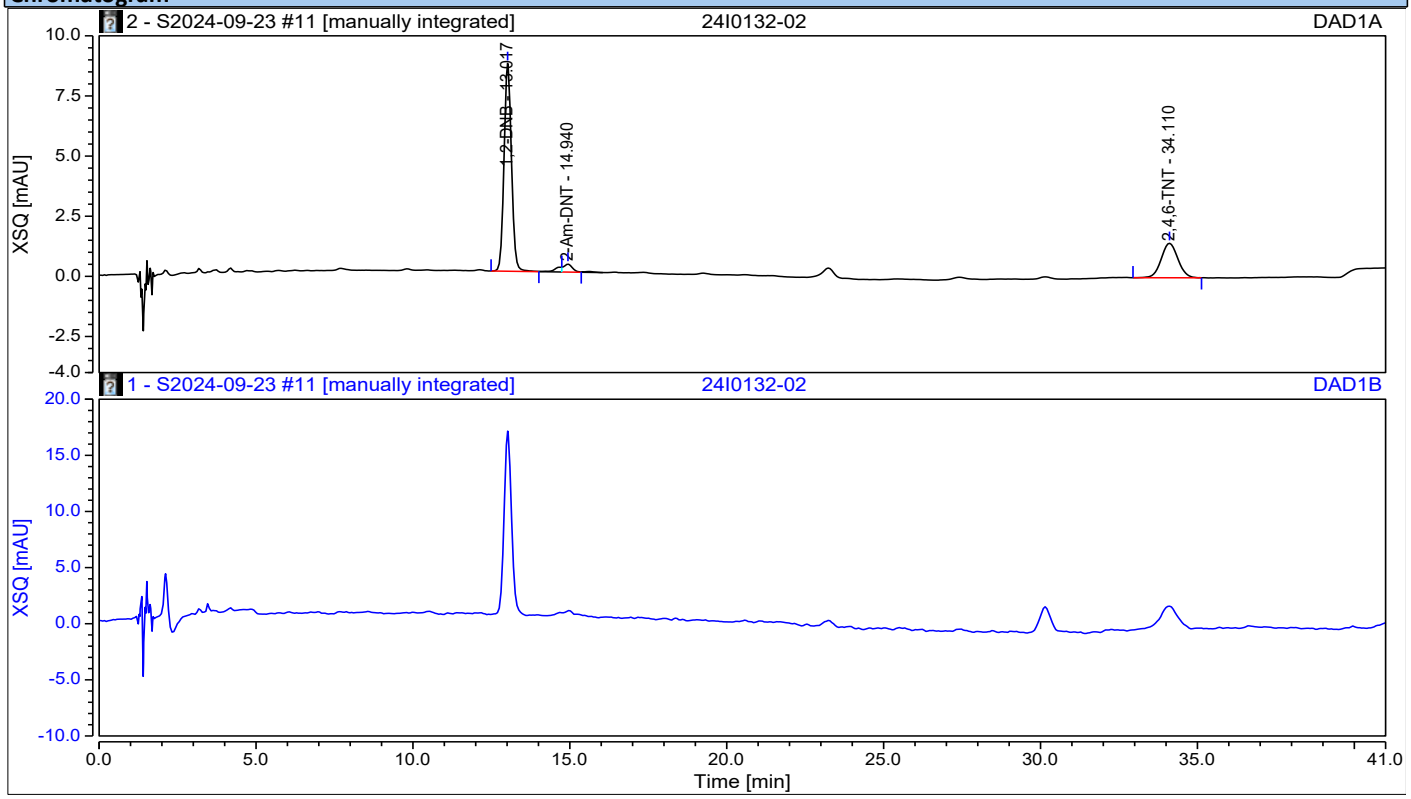
COMPOUND	CONC. (mg/kg)	LOQ	LOD	DL	Q
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCIN	0.074 U	0.50	0.074	0.037	
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.074 U	0.50	0.074	0.025	
1,3,5-TRINITROBENZENE	0.074 U	0.50	0.074	0.013	
1,3-DINITROBENZENE	0.074 U	0.50	0.074	0.022	
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	0.074 U	0.50	0.074	0.037	
NITROBENZENE	0.074 U	0.50	0.074	0.028	
2,4,6-TRINITROTOLUENE	0.50	0.50	0.074	0.031	
4-AMINO-2,6-DINITROTOLUENE	0.074 U	0.50	0.074	0.034	
2-AMINO-4,6-DINITROTOLUENE	0.074 U	0.50	0.074	0.034	
2,4-DINITROTOLUENE	0.074 U	0.50	0.074	0.028	
2,6-DINITROTOLUENE	0.074 U	0.50	0.074	0.031	
2-NITROTOLUENE	0.074 U	0.50	0.074	0.037	
3-NITROTOLUENE	0.074 U	0.50	0.074	0.037	
4-NITROTOLUENE	0.074 U	0.50	0.074	0.037	
NITROGLYCERIN	0.15 U	0.50	0.15	0.060	
PENTAERYTHRITOL TETRANITRATE	0.25 U	2.5	0.25	0.11	

Chromatogram and Results

Injection Details

Injection Name:	**24I0132-02**	*Instrument:*	**Statler**
Vial Number:	**11**	*Run Time (min):*	**41.00**
Injection Type:	**Unknown**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**23/Sep/2024 14:34**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**24/Sep/2024 08:14**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
n.a.	NG	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	PETN	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	HMX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	RDX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3,5-DNA	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	NB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	1,2-DNB	13.017	2.3667	8.640	70.44	83.04	260.0271
n.a.	4-Am-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	2-Am-DNT	14.940	0.1069	0.331	3.18	3.19	6.2921
n.a.	1,3-DNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	4-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2,6-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	1,3,5-TNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2,4-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Tetryl	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	2,4,6-TNT	34.110	0.8860	1.434	26.37	13.78	63.1072
Total:			**3.360**	**10.405**	**100.000**	**100.000**	

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ANALYSIS DATA SHEET

P2-ARROYO-0004

Laboratory:	APPL, LLC			Work Order:	24I0132
Client:	AECOM			Project:	Wingate 60517380 Task 3
Matrix:	Solid	Laboratory ID:	24I0132-02RE1	File ID:	W2024-09-24-006
Sampled:	09/14/24 08:40	Prepared:	09/19/24 11:10	Analyzed:	09/24/24 13:59
Solids:		Preparation:	EPA 8330B	Dilution:	1
Initial/Final:	10.09 g / 80 mL			Instrument:	Waldorf
Batch:	BDI0344	Sequence:	SD03904	Calibration:	2433019

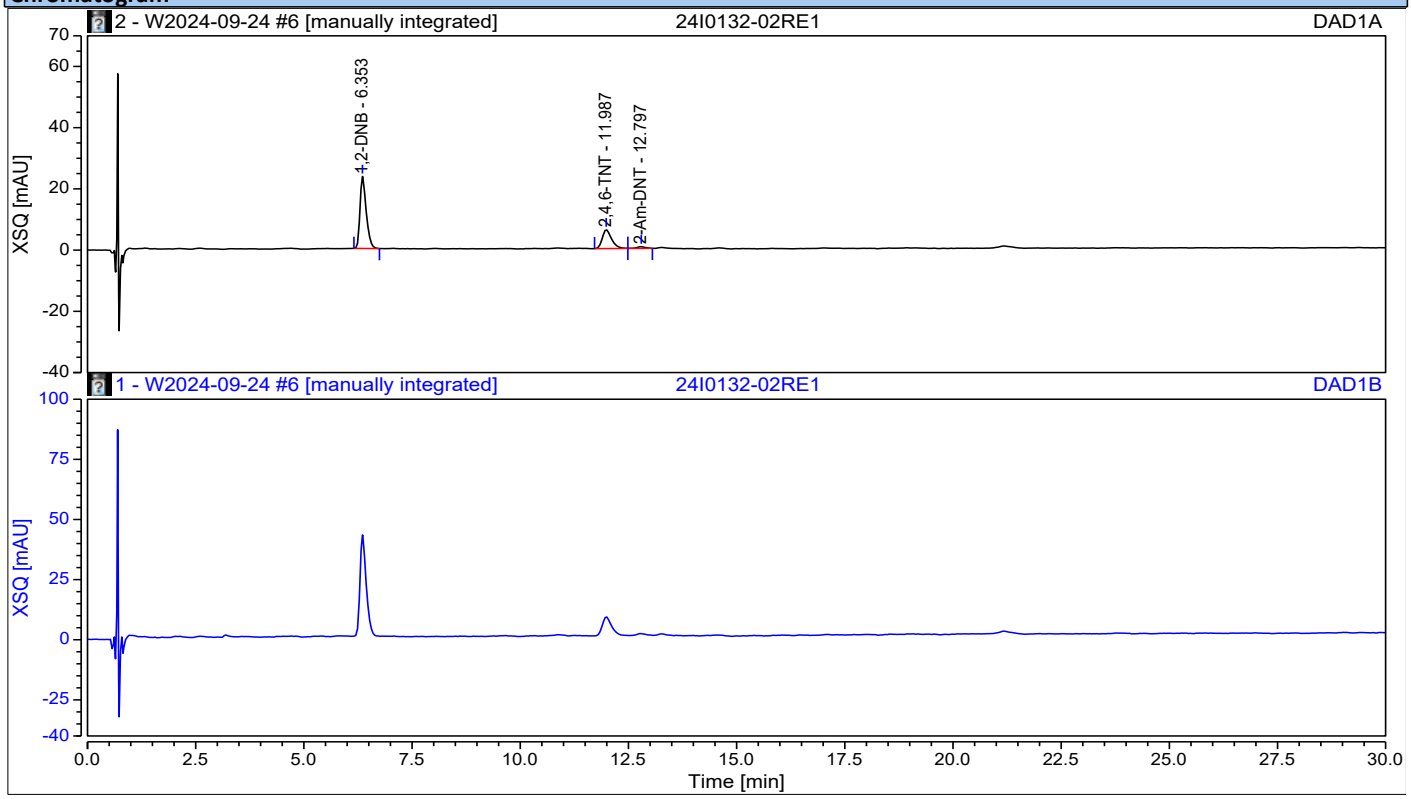
COMPOUND	CONC. (mg/kg)	LOQ	LOD	DL	Q
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCIN	0.074 U	0.50	0.074	0.037	
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.074 U	0.50	0.074	0.025	
1,3,5-TRINITROBENZENE	0.074 U	0.50	0.074	0.013	
1,3-DINITROBENZENE	0.074 U	0.50	0.074	0.022	
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	0.074 U	0.50	0.074	0.037	
NITROBENZENE	0.074 U	0.50	0.074	0.028	
2,4,6-TRINITROTOLUENE	0.50	0.50	0.074	0.031	
4-AMINO-2,6-DINITROTOLUENE	0.074 U	0.50	0.074	0.034	
2-AMINO-4,6-DINITROTOLUENE	0.074 U	0.50	0.074	0.034	
2,4-DINITROTOLUENE	0.074 U	0.50	0.074	0.028	
2,6-DINITROTOLUENE	0.074 U	0.50	0.074	0.031	
2-NITROTOLUENE	0.074 U	0.50	0.074	0.037	
3-NITROTOLUENE	0.074 U	0.50	0.074	0.037	
4-NITROTOLUENE	0.074 U	0.50	0.074	0.037	
NITROGLYCERIN	0.15 U	0.50	0.15	0.060	
PENTAERYTHRITOL TETRANITRATE	0.25 U	2.5	0.25	0.11	

Chromatogram and Results

Injection Details

Injection Name:	**24I0132-02RE1**	*Instrument:*	**Waldorf**
Vial Number:	**6**	*Run Time (min):*	**30.00**
Injection Type:	**Unknown**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**24/Sep/2024 13:59**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**24/Sep/2024 15:47**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
n.a.	NG	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	PETN	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	HMX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	RDX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	1,3,5-TNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	1,2-DNB	6.353	3.9015	23.517	70.13	77.76	256.7244
n.a.	1,3-DNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3,5-DNA	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	NB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Tetryl	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	2,4,6-TNT	11.987	1.5314	6.167	27.53	20.39	63.5664
3	2-Am-DNT	12.797	0.1300	0.557	2.34	1.84	11.3298
n.a.	4-Am-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2,4-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2,6-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	4-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**5.563**	**30.241**	**100.000**	**100.000**	

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QUALITY CONTROL

SURROGATE SUMMARY SHEET

EPA 8330B

Client: AECOM
Work Order: 24I0132
Project: Wingate 60517380 Task 3

Surrogate Compound	Spike level	% Recovery	Recovery Limits	Q
P2-ARROYO-0003 (24I0132-01) mg/kg	Lab File ID: S2024-09-23-010			Analyzed: 09/23/24 13:51
1,2-DINITROBENZENE	1.99	104	78 - 119	
P2-ARROYO-0003 (24I0132-01RE1) mg/kg	Lab File ID: W2024-09-24-005			Analyzed: 09/24/24 13:28
1,2-DINITROBENZENE	1.99	103	78 - 119	
P2-ARROYO-0004 (24I0132-02) mg/kg	Lab File ID: S2024-09-23-011			Analyzed: 09/23/24 14:34
1,2-DINITROBENZENE	1.98	104	78 - 119	
P2-ARROYO-0004 (24I0132-02RE1) mg/kg	Lab File ID: W2024-09-24-006			Analyzed: 09/24/24 13:59
1,2-DINITROBENZENE	1.98	103	78 - 119	
Blank (BDI0344-BLK1) mg/kg	Lab File ID: S2024-09-23-005			Analyzed: 09/23/24 10:18
1,2-DINITROBENZENE	1.98	103	78 - 119	
LCS (BDI0344-BS1) mg/kg	Lab File ID: S2024-09-23-007			Analyzed: 09/23/24 11:44
1,2-DINITROBENZENE	1.98	104	78 - 119	
Matrix Spike (BDI0344-MS1) mg/kg	Lab File ID: S2024-09-23-008			Analyzed: 09/23/24 12:26
1,2-DINITROBENZENE	1.98	102	78 - 119	
Matrix Spike Dup (BDI0344-MSD1) mg/kg	Lab File ID: S2024-09-23-009			Analyzed: 09/23/24 13:09
1,2-DINITROBENZENE	1.98	109	78 - 119	

METHOD BLANK SUMMARY

EPA 8330B

Laboratory:	APPL, LLC	Work Order:	24I0132
Client:	AECOM	Project:	Wingate 60517380 Task 3
Blank ID:	BDI0344-BLK1	Batch:	BDI0344
Prepared:	09/19/2024 11:10		

Client Sample ID	Laboratory Sample ID	Lab File ID	Time Analyzed
LCS	BDI0344-BS1	S2024-09-23-007	11:44
Matrix Spike	BDI0344-MS1	S2024-09-23-008	12:26
Matrix Spike Dup	BDI0344-MSD1	S2024-09-23-009	13:09
P2-ARROYO-0003	24I0132-01	S2024-09-23-010	13:51
P2-ARROYO-0004	24I0132-02	S2024-09-23-011	14:34
P2-ARROYO-0003	24I0132-01RE1	W2024-09-24-005	13:28
P2-ARROYO-0004	24I0132-02RE1	W2024-09-24-006	13:59

ANALYSIS DATA SHEET

Blank

Laboratory:	APPL, LLC			Work Order:	24I0132
Client:	AECOM		Project:	Wingate 60517380 Task 3	
Matrix:	Solid	Laboratory ID:	BDI0344-BLK1	File ID:	S2024-09-23-005
Sampled:		Prepared:	09/19/24 11:10	Analyzed:	09/23/24 10:18
Solids:		Preparation:	EPA 8330B	Dilution:	1
Batch:	BDI0344	Sequence:	SD03891	Calibration:	2420012
Instrument:	STATLER				
Column:	1				

COMPOUND	CONC. (mg/kg)	LOQ	LOD	DL	Q
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.074 U	0.50	0.074	0.037	U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.074 U	0.50	0.074	0.025	U
1,3,5-TRINITROBENZENE	0.074 U	0.50	0.074	0.013	U
1,3-DINITROBENZENE	0.074 U	0.50	0.074	0.022	U
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	0.074 U	0.50	0.074	0.037	U
NITROBENZENE	0.074 U	0.50	0.074	0.028	U
2,4,6-TRINITROTOLUENE	0.074 U	0.50	0.074	0.031	U
4-AMINO-2,6-DINITROTOLUENE	0.074 U	0.50	0.074	0.034	U
2-AMINO-4,6-DINITROTOLUENE	0.074 U	0.50	0.074	0.034	U
2,4-DINITROTOLUENE	0.074 U	0.50	0.074	0.028	U
2,6-DINITROTOLUENE	0.074 U	0.50	0.074	0.031	U
2-NITROTOLUENE	0.074 U	0.50	0.074	0.037	U
3-NITROTOLUENE	0.074 U	0.50	0.074	0.037	U
4-NITROTOLUENE	0.074 U	0.50	0.074	0.037	U
NITROGLYCERIN	0.15 U	0.50	0.15	0.060	U
PENTAERYTHRITOL TETRANITRATE	0.25 U	2.5	0.25	0.11	U

LCS / LCS DUPLICATE RECOVERY

EPA 8330B

Laboratory:	APPL, LLC	Work Order:	24I0132
Client:	AECOM	Project:	Wingate 60517380 Task 3
Matrix:	Solid	Preparation:	EPA 8330B
Batch:	BDI0344	Laboratory ID:	BDI0344-BS1

ANALYTE	SPIKE ADDED (mg/kg)	LCS CONCENTRATION (mg/kg)	LCS % REC.	QC LIMITS REC.	INSTRUMENT
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZ OCINE	1.98	2.08	105	74 - 124	STATLER
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	1.98	2.13	107	67 - 129	STATLER
1,3,5-TRINITROBENZENE	1.98	2.03	103	80 - 116	STATLER
1,3-DINITROBENZENE	1.98	2.12	107	73 - 119	STATLER
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	1.98	1.36	68.8	68 - 135	STATLER
NITROBENZENE	1.98	2.16	109	67 - 129	STATLER
2,4,6-TRINITROTOLUENE	1.98	2.15	109	71 - 120	STATLER
4-AMINO-2,6-DINITROTOLUENE	1.98	2.15	108	64 - 127	STATLER
2-AMINO-4,6-DINITROTOLUENE	1.98	2.16	109	71 - 123	STATLER
2,4-DINITROTOLUENE	1.98	2.13	107	75 - 121	STATLER
2,6-DINITROTOLUENE	1.98	2.08	105	79 - 117	STATLER
2-NITROTOLUENE	1.98	2.15	109	70 - 124	STATLER
3-NITROTOLUENE	1.98	2.15	109	67 - 129	STATLER
4-NITROTOLUENE	1.98	2.13	108	71 - 124	STATLER
NITROGLYCERIN	1.98	2.18	110	73 - 124	STATLER
PENTAERYTHRITOL TETRANITRATE	1.98	1.95	98.3	72 - 128	STATLER

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

P2-ARROYO-0004

Laboratory:	APPL, LLC	Work Order:	24I0132
Client:	AECOM	Project:	Wingate 60517380 Task 3
Matrix:	Solid	Analysis:	EPA 8330B
Batch:	BDI0344	Preparation:	EPA 8330B
% Solids:		Laboratory ID:	BDI0344-MS1
		Sample Lab ID:	24I0132-02

ANALYTE	SPIKE ADDED (mg/kg)	SAMPLE CONCENTRATION (mg/kg)	MS CONCENTRATION (mg/kg)	MS % REC.		QC LIMITS REC.	INSTRUMENT
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	1.98	ND	2.06	104		74 - 124	STATLER
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	1.98	ND	1.88	95.2		67 - 129	STATLER
1,3,5-TRINITROBENZENE	1.98	ND	2.12	107		80 - 116	STATLER
1,3-DINITROBENZENE	1.98	ND	2.11	107		73 - 119	STATLER
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	1.98	ND	1.06	53.7	*	68 - 135	STATLER
NITROBENZENE	1.98	ND	2.15	109		67 - 129	STATLER
2,4,6-TRINITROTOLUENE	1.98	0.500	2.06	79.1		71 - 120	STATLER
4-AMINO-2,6-DINITROTOLUENE	1.98	ND	2.14	108		64 - 127	STATLER
2-AMINO-4,6-DINITROTOLUENE	1.98	ND	2.18	110		71 - 123	STATLER
2,4-DINITROTOLUENE	1.98	ND	2.15	109		75 - 121	STATLER
2,6-DINITROTOLUENE	1.98	ND	2.08	105		79 - 117	STATLER
2-NITROTOLUENE	1.98	ND	2.15	109		70 - 124	STATLER
3-NITROTOLUENE	1.98	ND	2.15	109		67 - 129	STATLER
4-NITROTOLUENE	1.98	ND	2.13	108		71 - 124	STATLER
NITROGLYCERIN	1.98	ND	2.17	110		73 - 124	STATLER
PENTAERYTHRITOL TETRANITRATE	1.98	ND	2.23	113		72 - 128	STATLER

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

P2-ARROYO-0004

Laboratory:	APPL, LLC	Work Order:	24I0132
Client:	AECOM	Project:	Wingate 60517380 Task 3
Matrix:	Solid	Analysis:	EPA 8330B
Batch:	BDI0344	Preparation:	EPA 8330B
% Solids:		Laboratory ID:	BDI0344-MSD1
		Sample Lab ID:	24I0132-02

ANALYTE	SPIKE ADDED (mg/kg)	MSD CONCENTRATION (mg/kg)	MSD % REC. #		% RPD	QC LIMITS RPD	QC LIMITS REC.	INSTRUMENT
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	1.98	2.07	105		0.457	20	74 - 124	STATLER
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	1.98	1.88	95.2		0.00133	20	67 - 129	STATLER
1,3,5-TRINITROBENZENE	1.98	2.12	107		0.0792	20	80 - 116	STATLER
1,3-DINITROBENZENE	1.98	2.10	106		0.382	20	73 - 119	STATLER
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	1.98	1.18	59.6	*	10.4	20	68 - 135	STATLER
NITROBENZENE	1.98	2.20	111		2.23	20	67 - 129	STATLER
2,4,6-TRINITROTOLUENE	1.98	2.18	84.7		5.23	20	71 - 120	STATLER
4-AMINO-2,6-DINITROTOLUENE	1.98	2.13	108		0.242	20	64 - 127	STATLER
2-AMINO-4,6-DINITROTOLUENE	1.98	2.17	110		0.220	20	71 - 123	STATLER
2,4-DINITROTOLUENE	1.98	2.15	109		0.119	20	75 - 121	STATLER
2,6-DINITROTOLUENE	1.98	2.08	105		0.270	20	79 - 117	STATLER
2-NITROTOLUENE	1.98	2.13	108		0.958	20	70 - 124	STATLER
3-NITROTOLUENE	1.98	2.15	108		0.138	20	67 - 129	STATLER
4-NITROTOLUENE	1.98	2.12	107		0.463	20	71 - 124	STATLER
NITROGLYCERIN	1.98	2.18	110		0.206	20	73 - 124	STATLER
PENTAERYTHRITOL TETRANITRATE	1.98	2.30	116		2.90	20	72 - 128	STATLER

CALIBRATION SUMMARY

FORM VI
INITIAL CALIBRATION DATA SHEET

EPA 8330B

Client: AECOM Omaha SDG:

Project: Wingate

Calibration: 2420012 Instrument: STATLER

Units: ng/mL Calibration Date: 5/16/2024 8:00:34AM

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
OCTAHYDRO-1,3,5,7-TETRAN	5	0.064	50	0.06394	250	0.067944	1000	0.06311	2500	0.0599684	5000	0.0615168
HEXAHYDRO-1,3,5-TRINITRO-	5	0.053	50	0.05358	250	0.056952	1000	0.053042	2500	0.050546	5000	0.0522536
1,3,5-TRINITROBENZENE	5	0.0366	50	0.0354	250	0.03786	1000	0.034373	2500	0.0318652	5000	0.0316242
1,3-DINITROBENZENE	5	0.059	50	0.05914	250	0.063716	1000	0.05883	2500	0.055916	5000	0.0577246
METHYL-2,4,6-TRINITROPHEN	5	0.0188	50	0.02122	250	0.024476	1000	0.022759	2500	0.0217556	5000	0.0223722
NITROBENZENE	5	0.0486	50	0.04942	250	0.052832	1000	0.04947	2500	0.0474564	5000	0.049147
2,4,6-TRINITROTOLUENE	5	0.0224	50	0.02296	250	0.024564	1000	0.022706	2500	0.0215792	5000	0.0220238
4-AMINO-2,6-DINITROTOLUEN	5	0.0436	50	0.0433	250	0.046724	1000	0.04308	2500	0.0410716	5000	0.0425286
2-AMINO-4,6-DINITROTOLUEN	5	0.053	50	0.05262	250	0.056708	1000	0.052344	2500	0.049838	5000	0.0514514
2,4-DINITROTOLUENE	5	0.043	50	0.04362	250	0.04662	1000	0.043243	2500	0.0412316	5000	0.0423534
2,6-DINITROTOLUENE	5	0.0268	50	0.0261	250	0.028568	1000	0.026109	2500	0.0247176	5000	0.0255156
2-NITROTOLUENE	5	0.0244	50	0.02514	250	0.027492	1000	0.025186	2500	0.0239752	5000	0.024824
3-NITROTOLUENE	5	0.0272	50	0.0284	250	0.031092	1000	0.028476	2500	0.0270452	5000	0.0278466
4-NITROTOLUENE	5	0.0244	50	0.02504	250	0.02744	1000	0.025084	2500	0.0238528	5000	0.0246504
NITROGLYCERIN	5	0.0208	50	0.01822	250	0.02066	1000	0.019448	2500	0.0184748	5000	0.0190004
PENTAERYTHRITOL TETRAN	5	0.0112	50	0.01572	250	0.015316	1000	0.0139	2500	0.0132684	5000	0.0136546
3,5-DINITROANILINE	5	6.919999E-02	50	0.06886	250	0.073436	1000	0.068315	2500	0.0652432	5000	0.0674986
1,2-DINITROBENZENE	5	0.0324	50	0.03326	250	0.03596	1000	0.033181	2500	0.0316744	5000	0.0328218

FORM VI
INITIAL CALIBRATION DATA SHEET (Continued)
EPA 8330B

Laboratory: APPL, LLC
SDG:
Client: AECOM Omaha
Project: Wingate
Calibration: 2420012
Instrument: STATLER
Matrix: Solid
Calibration Date:: 5/16/2024 8:00:34AM

Compound	Mean RF	RF RSD	Slope/QR A	Intercept/QR B	QR C	LR r/QRCOD	LIMIT	Q	Type
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5	0.0634132	4.3					20		A
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIA	5.322893E-02	4.0					20		A
1,3,5-TRINITROBENZENE	0.0346204	7.3					20		A
1,3-DINITROBENZENE	5.905443E-02	4.4					20		A
METHYL-2,4,6-TRINITROPHENYLNITRAM	2.189713E-02	8.6					20		A
NITROBENZENE	4.948757E-02	3.6					20		A
2,4,6-TRINITROTOLUENE	0.0227055	4.6					20		A
4-AMINO-2,6-DINITROTOLUENE	4.338403E-02	4.3					20		A
2-AMINO-4,6-DINITROTOLUENE	5.266023E-02	4.3					20		A
2,4-DINITROTOLUENE	4.334467E-02	4.2					20		A
2,6-DINITROTOLUENE	0.0263017	5.0					20		A
2-NITROTOLUENE	2.516953E-02	4.9					20		A
3-NITROTOLUENE	0.0283433	5.2					20		A
4-NITROTOLUENE	2.507787E-02	5.0					20		A
NITROGLYCERIN	1.943387E-02	5.6					20		A
PENTAERYTHRITOL TETRANITRATE	1.384317E-02	11.7					20		A
3,5-DINITROANILINE	0.0687588	3.9					20		A
1,2-DINITROBENZENE	0.0332162	4.4					20		A

FORM VI
INITIAL CALIBRATION DATA SHEET

EPA 8330B

Client: AECOM Omaha SDG:

Project: Wingate

Calibration: 2433019 Instrument: Waldorf

Units: ng/mL Calibration Date: 8/14/2024 7:00:39AM

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
OCTAHYDRO-1,3,5,7-TETRAN	50	0.21292	5	0.223	250	0.213052	1000	0.199345	2500	0.1965452	5000	0.1837282
HEXAHYDRO-1,3,5-TRINITRO-	50	0.12522	5	0.1098	250	0.125968	1000	0.119806	2500	0.1214784	5000	0.1217222
1,3,5-TRINITROBENZENE	50	0.16268	5	0.1758	250	0.225936	1000	0.215112	2500	0.2172088	5000	0.2112352
1,3-DINITROBENZENE	50	0.209	5	0.1724	250	0.207284	1000	0.197927	2500	0.203082	5000	0.203591
METHYL-2,4,6-TRINITROPHEN	50	0.02714	5	0.02	250	0.08428	1000	0.080923	2500	0.0818764	5000	0.0827446
NITROBENZENE	50	0.09828	5	0.1018	250	0.094684	1000	9.103701E-02	2500	0.0934724	5000	0.094661
2,4,6-TRINITROTOLUENE	50	0.10988	5	0.1174	250	0.110516	1000	0.106445	2500	0.107976	5000	0.1093008
4-AMINO-2,6-DINITROTOLUEN	50	0.0939	5	0.079	250	0.093164	1000	0.08897	2500	0.0890572	5000	0.088395
2-AMINO-4,6-DINITROTOLUEN	50	0.11182	5	0.1264	250	0.110476	1000	0.106232	2500	0.107664	5000	0.1089574
2,4-DINITROTOLUENE	50	0.1472	5	0.14	250	0.145948	1000	0.140704	2500	0.1433952	5000	0.1455596
2,6-DINITROTOLUENE	50	0.08632	5	0.0802	250	0.085104	1000	0.081707	2500	0.0830956	5000	0.0843304
2-NITROTOLUENE	50	0.07604	5	0.0718	250	0.075564	1000	0.072876	2500	0.0745532	5000	0.0755984
3-NITROTOLUENE	50	0.06692	5	0.0624	250	0.065368	1000	0.062566	2500	0.063998	5000	0.0648774
4-NITROTOLUENE	50	0.07056	5	0.07	250	0.068556	1000	0.066077	2500	0.0676304	5000	0.068439
NITROGLYCERIN	50	0.03554	5	0.039	250	0.033144	1000	0.031947	2500	0.0320652	5000	0.032095
PENTAERYTHRITOL TETRAN	50	0.02234	5	0.0324	250	0.023504	1000	0.021852	2500	0.022	5000	0.0222216
3,5-DINITROANILINE	50	0.1665	5	0.1652	250	0.167668	1000	0.159604	2500	0.1619584	5000	0.1625648
1,2-DINITROBENZENE	50	0.09874	5	8.679999E-02	250	0.0966	1000	0.092219	2500	0.0948104	5000	9.653401E-02

FORM VI
INITIAL CALIBRATION DATA SHEET (Continued)
EPA 8330B

Laboratory: APPL, LLC
SDG:
Client: AECOM Omaha
Project: Wingate
Calibration: 2433019
Instrument: Waldorf
Matrix: Solid
Calibration Date:: 8/14/2024 7:00:39AM

Compound	Mean RF	RF RSD	Slope/QR A	Intercept/QR B	QR C	LR r/QRCOD	LIMIT	Q	Type
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5	0.2047651	6.9	0.1844759	8.343725		0.999	0.99		L
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIA	0.1206658	4.8	0.121661	-0.1350462		1.000	0.99		L
1,3,5-TRINITROBENZENE	0.2013287	12.7	0.2118969	2.342456		1.000	0.99		L
1,3-DINITROBENZENE	0.1988807	6.8	0.2035938	-0.9872698		1.000	0.99		L
METHYL-2,4,6-TRINITROPHENYLNITRAM	6.282733E-02	48.6	8.287572E-02	-1.309462		1.000	0.99		L
NITROBENZENE	9.565573E-02	4.0	9.457388E-02	-0.9343362		1.000	0.99		L
2,4,6-TRINITROTOLUENE	0.110253	3.4	0.1091691	-0.7724482		1.000	0.99		L
4-AMINO-2,6-DINITROTOLUENE	0.0887477	6.0	8.837785E-02	0.6336673		1.000	0.99		L
2-AMINO-4,6-DINITROTOLUENE	0.1119249	6.6	0.1088101	-0.675287		1.000	0.99		L
2,4-DINITROTOLUENE	0.1438011	2.1	0.1453786	-1.420227		1.000	0.99		L
2,6-DINITROTOLUENE	0.0834595	2.7	8.421144E-02	-0.7317825		1.000	0.99		L
2-NITROTOLUENE	7.440527E-02	2.3	7.552527E-02	-0.782835		1.000	0.99		L
3-NITROTOLUENE	0.0643549	2.7	6.480184E-02	-0.6053692		1.000	0.99		L
4-NITROTOLUENE	6.854373E-02	2.4	6.837814E-02	-0.6174189		1.000	0.99		L
NITROGLYCERIN	0.0339652	8.3	3.206295E-02	8.812892E-02		1.000	0.99		L
PENTAERYTHRITOL TETRANITRATE	2.405293E-02	17.2	2.217662E-02	-2.502045E-02		1.000	0.99		L
3,5-DINITROANILINE	0.1639159	1.9	0.16246	-0.3447061		1.000	0.99		L
1,2-DINITROBENZENE	0.0942839	4.5	9.640318E-02	-1.232338		1.000	0.99		L

INITIAL CALIBRATION STANDARDS

EPA 8330B

Laboratory:	APPL, LLC	Work Order:	24I0132
Client:	AECOM	Project:	Wingate 60517380 Task 3
Sequence:	SD01815	Instrument:	STATLER
Calibration:	2420012		

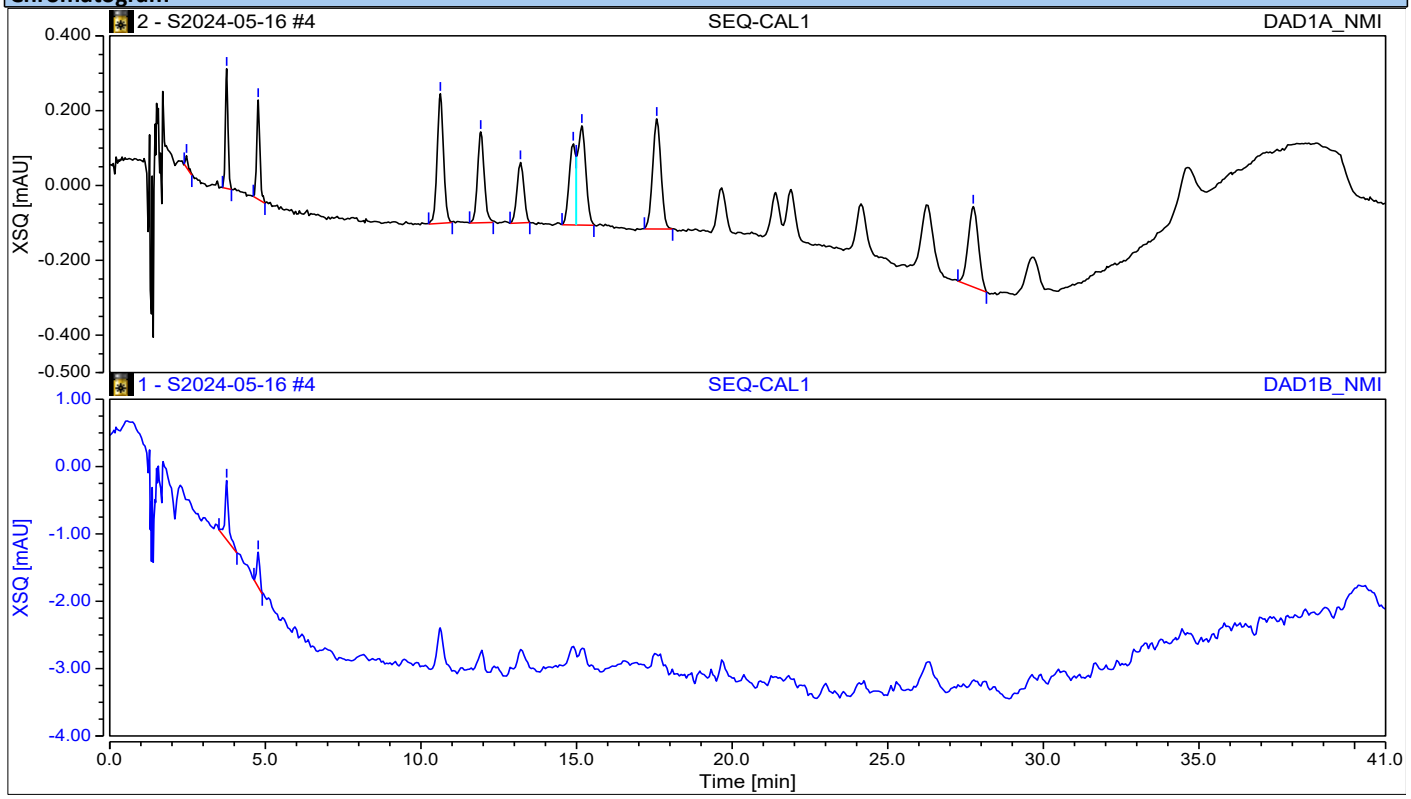
Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
24E0457	8330 - Cal 1 0.005ug/mL 05/16/24	SD01815-CAL1	S2024-05-16-004	05/16/24 14:47
24E0458	8330 - Cal 2 0.05ug/mL 05/16/24	SD01815-CAL2	S2024-05-16-005	05/16/24 15:29
24E0459	8330 - Cal 3 0.25ug/mL 05/16/24	SD01815-CAL3	S2024-05-16-006	05/16/24 16:12
24E0460	8330 - Cal 4 1.0ug/mL 05/16/24	SD01815-CAL4	S2024-05-16-007	05/16/24 16:54
24E0462	8330 - Cal 5 2.5ug/mL 05/16/24	SD01815-CAL5	S2024-05-16-008	05/16/24 17:37
24E0463	8330 - Cal 6 5.0ug/mL 05/16/24	SD01815-CAL6	S2024-05-16-009	05/16/24 18:19
24E0466	8330 - SCV 1.0ug/mL 05/16/24	SD01815-SCV1	S2024-05-16-010	05/16/24 19:02

Original Chromatogram

Injection Details

Injection Name:	**SEQ-CAL1**	*Instrument:*	**Statler**
Vial Number:	**4**	*Run Time (min):*	**41.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**16/May/2024 14:47**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**20/May/2024 12:45**	*Operator:*	**AOP**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.447	0.0228	0.104	79.87	64.73	5.3344
2	PETN	22.537	0.0057	0.056	20.13	35.27	4.0727
1	HMX	3.757	0.0305	0.320	3.35	9.90	5.0468
2	RDX	4.770	0.0312	0.265	3.43	8.21	4.9848
3	3,5-DNA	10.623	0.0819	0.346	9.00	10.71	5.0358
4	NB	11.920	0.0603	0.243	6.63	7.51	4.9098
5	1,2-DNB	13.197	0.0419	0.162	4.60	5.02	4.8881
6	4-Am-DNT	14.893	0.0525	0.218	5.76	6.73	5.0163
7	2-Am-DNT	15.170	0.0794	0.265	8.73	8.21	5.0375
8	1,3-DNB	17.577	0.0913	0.295	10.04	9.11	4.9887
9	2-NT	19.653	0.0375	0.122	4.12	3.78	4.8507
10	4-NT	21.393	0.0385	0.122	4.23	3.79	4.8814
11	3-NT	21.890	0.0422	0.136	4.64	4.21	4.7999
12	2,6-DNT	24.147	0.0490	0.134	5.39	4.13	5.0838
13	1,3,5-TNB	26.250	0.0816	0.183	8.96	5.66	5.2855
14	2,4-DNT	27.747	0.0823	0.215	9.04	6.65	4.9610
15	Tetryl	29.650	0.0423	0.094	4.65	2.91	4.3025
16	2,4,6-TNT	34.630	0.0676	0.112	7.43	3.47	4.9436
Total:			**0.939**	**3.394**	**200.000**	**200.000**	

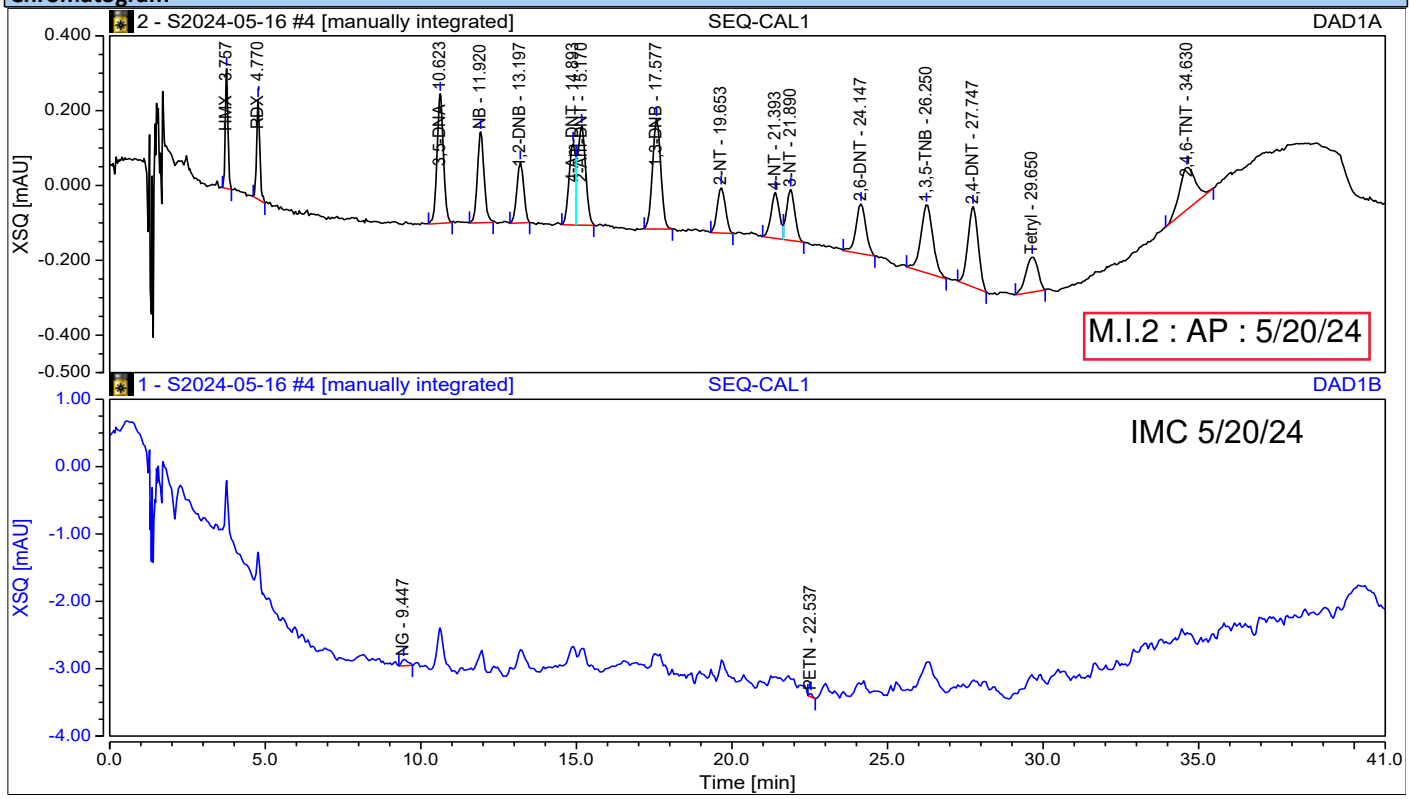
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Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL1**	*Instrument:*	**Statler**
Vial Number:	**4**	*Run Time (min):*	**41.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**16/May/2024 14:47**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**20/May/2024 12:45**	*Operator:*	**AOP**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.447	0.0228	0.104	79.87	64.73	5.3344
2	PETN	22.537	0.0057	0.056	20.13	35.27	4.0727
1	HMX	3.757	0.0305	0.320	3.35	9.90	5.0468
2	RDX	4.770	0.0312	0.265	3.43	8.21	4.9848
3	3,5-DNA	10.623	0.0819	0.346	9.00	10.71	5.0358
4	NB	11.920	0.0603	0.243	6.63	7.51	4.9098
5	1,2-DNB	13.197	0.0419	0.162	4.60	5.02	4.8881
6	4-Am-DNT	14.893	0.0525	0.218	5.76	6.73	5.0163
7	2-Am-DNT	15.170	0.0794	0.265	8.73	8.21	5.0375
8	1,3-DNB	17.577	0.0913	0.295	10.04	9.11	4.9887
9	2-NT	19.653	0.0375	0.122	4.12	3.78	4.8507
10	4-NT	21.393	0.0385	0.122	4.23	3.79	4.8814
11	3-NT	21.890	0.0422	0.136	4.64	4.21	4.7999
12	2,6-DNT	24.147	0.0490	0.134	5.39	4.13	5.0838
13	1,3,5-TNB	26.250	0.0816	0.183	8.96	5.66	5.2855
14	2,4-DNT	27.747	0.0823	0.215	9.04	6.65	4.9610
15	Tetryl	29.650	0.0423	0.094	4.65	2.91	4.3025
16	2,4,6-TNT	34.630	0.0676	0.112	7.43	3.47	4.9436
Total:			**0.939**	**3.394**	**200.000**	**200.000**	

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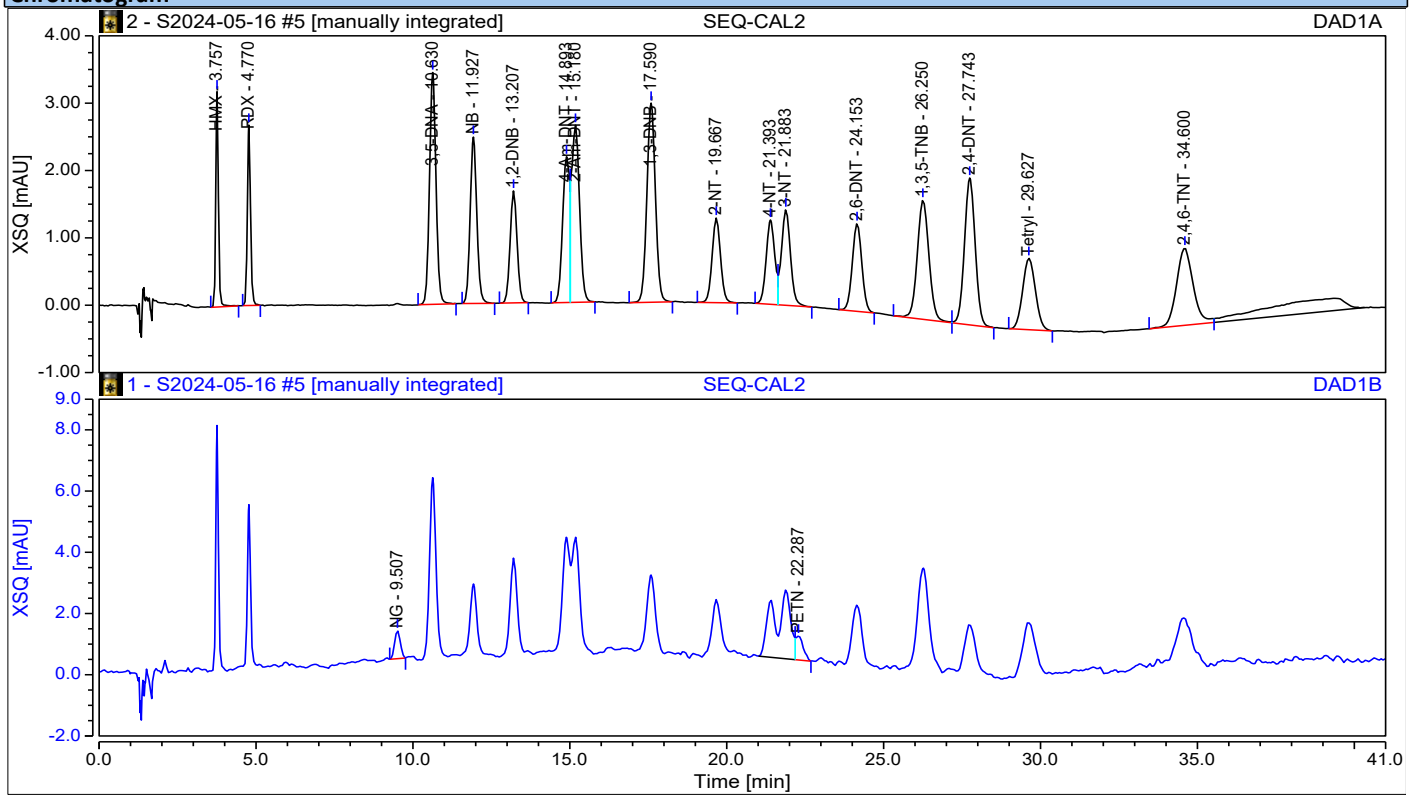
Instrument:
Sequence:S2024-05-16

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL2**	*Instrument:*	**Statler**
Vial Number:	**5**	*Run Time (min):*	**41.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**16/May/2024 15:29**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**20/May/2024 12:45**	*Operator:*	**AOP**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.507	0.1944	0.911	47.17	53.69	46.9197
2	PETN	22.287	0.2178	0.786	52.83	46.31	56.7233
1	HMX	3.757	0.3089	3.197	3.32	9.81	50.4089
2	RDX	4.770	0.3120	2.679	3.36	8.22	50.3188
3	3,5-DNA	10.630	0.8221	3.443	8.85	10.56	50.0608
4	NB	11.927	0.6068	2.471	6.53	7.58	49.9262
5	1,2-DNB	13.207	0.4275	1.663	4.60	5.10	50.0350
6	4-Am-DNT	14.893	0.5503	2.165	5.92	6.64	49.9156
7	2-Am-DNT	15.180	0.7722	2.631	8.31	8.07	49.9529
8	1,3-DNB	17.590	0.9331	2.957	10.04	9.07	50.0928
9	2-NT	19.667	0.3944	1.257	4.24	3.86	49.9356
10	4-NT	21.393	0.3964	1.252	4.26	3.84	49.8940
11	3-NT	21.883	0.4752	1.420	5.11	4.36	50.1099
12	2,6-DNT	24.153	0.4600	1.305	4.95	4.00	49.6430
13	1,3,5-TNB	26.250	0.7631	1.770	8.21	5.43	51.1360
14	2,4-DNT	27.743	0.8664	2.181	9.32	6.69	50.3218
15	Tetryl	29.627	0.5012	1.061	5.39	3.25	48.4251
16	2,4,6-TNT	34.600	0.7041	1.148	7.58	3.52	50.5477
Total:			**9.706**	**34.298**	**200.000**	**200.000**	

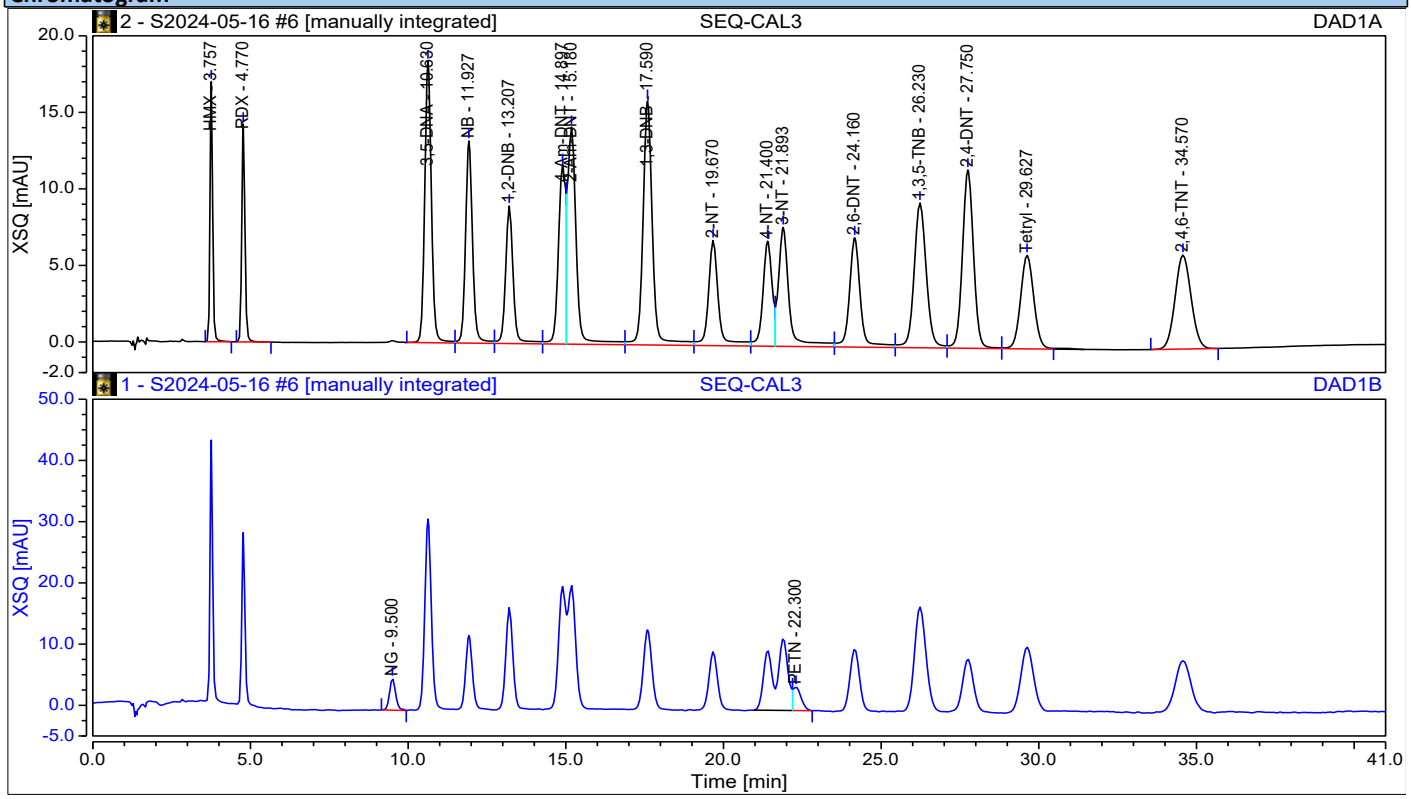
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Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL3**	*Instrument:*	**Statler**
Vial Number:	**6**	*Run Time (min):*	**41.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**16/May/2024 16:12**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**20/May/2024 12:45**	*Operator:*	**AOP**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.500	1.1723	5.165	50.88	57.43	265.9566
2	PETN	22.300	1.1316	3.829	49.12	42.57	276.3165
1	HMX	3.757	1.6276	16.986	3.07	9.67	267.8606
2	RDX	4.770	1.6675	14.238	3.15	8.11	267.4163
3	3,5-DNA	10.630	4.4581	18.359	8.42	10.46	266.9772
4	NB	11.927	3.3732	13.208	6.37	7.52	266.9131
5	1,2-DNB	13.207	2.5153	8.990	4.75	5.12	270.5373
6	4-Am-DNT	14.897	3.0688	11.681	5.80	6.65	269.3519
7	2-Am-DNT	15.180	4.4804	14.177	8.46	8.07	269.1593
8	1,3-DNB	17.590	5.4798	15.929	10.35	9.07	269.7932
9	2-NT	19.670	2.5362	6.873	4.79	3.91	273.0403
10	4-NT	21.400	2.2982	6.860	4.34	3.91	273.3563
11	3-NT	21.893	3.0047	7.773	5.68	4.43	274.2004
12	2,6-DNT	24.160	2.8516	7.142	5.39	4.07	271.6604
13	1,3,5-TNB	26.230	4.2420	9.465	8.01	5.39	273.3941
14	2,4-DNT	27.750	4.7444	11.655	8.96	6.64	268.8725
15	Tetryl	29.627	2.9688	6.119	5.61	3.48	279.3670
16	2,4,6-TNT	34.570	3.6167	6.141	6.83	3.50	270.3428
Total:			**55.237**	**184.592**	**200.000**	**200.000**	

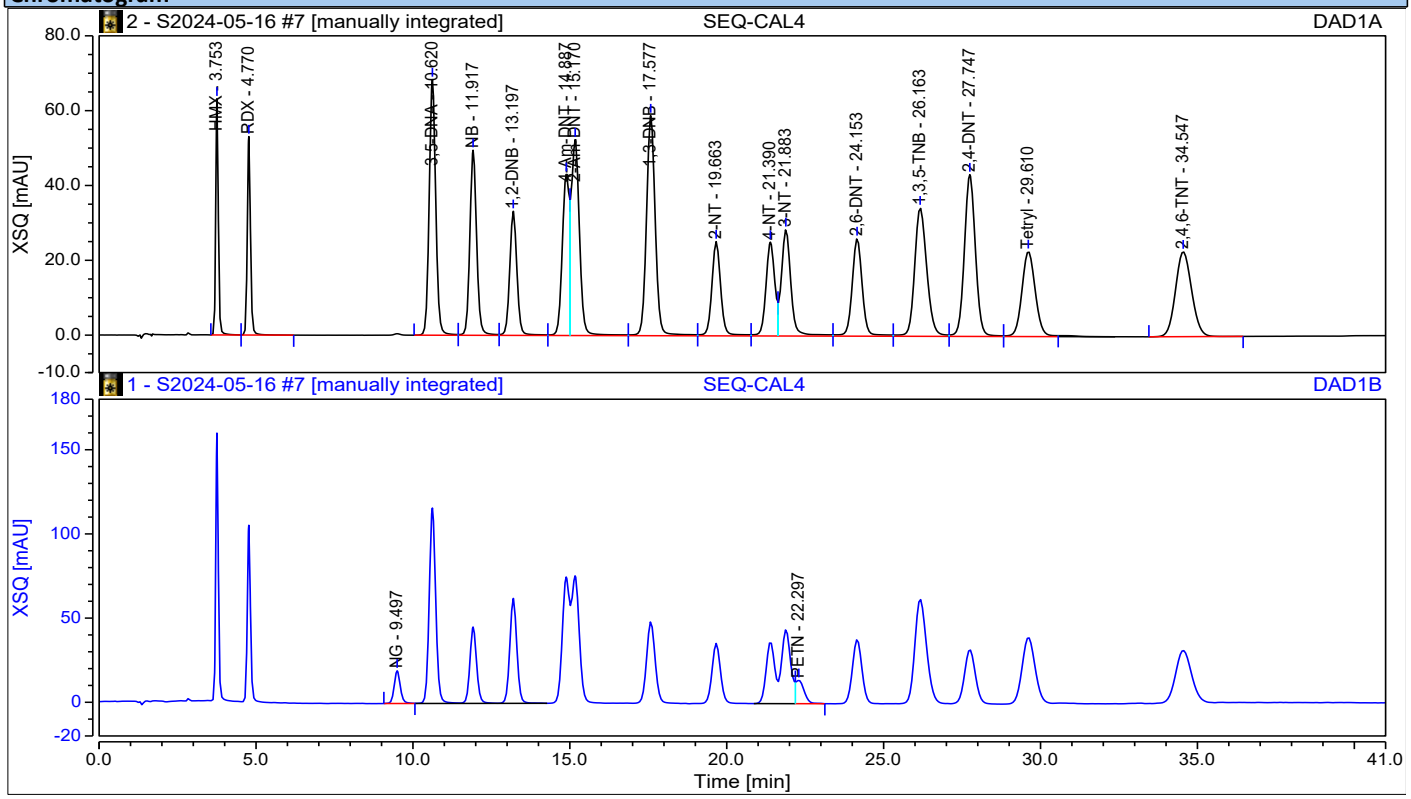
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Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL4**	*Instrument:*	**Statler**
Vial Number:	**7**	*Run Time (min):*	**41.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**16/May/2024 16:54**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**20/May/2024 12:45**	*Operator:*	**AOP**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.497	4.4300	19.448	50.84	58.32	1001.3514
2	PETN	22.297	4.2832	13.900	49.16	41.68	1003.0095
1	HMX	3.753	6.0536	63.110	3.19	9.72	995.2325
2	RDX	4.770	6.2501	53.042	3.29	8.17	996.2347
3	3,5-DNA	10.620	16.4023	68.315	8.63	10.52	993.4117
4	NB	11.917	12.3812	49.470	6.52	7.62	999.6964
5	1,2-DNB	13.197	8.8507	33.181	4.66	5.11	998.5531
6	4-Am-DNT	14.887	11.0928	43.080	5.84	6.63	993.3480
7	2-Am-DNT	15.170	15.7772	52.344	8.30	8.06	993.7785
8	1,3-DNB	17.577	19.1681	58.830	10.09	9.06	996.4402
9	2-NT	19.663	8.3052	25.186	4.37	3.88	1000.4835
10	4-NT	21.390	8.1467	25.084	4.29	3.86	999.5856
11	3-NT	21.883	10.0874	28.476	5.31	4.39	1004.5562
12	2,6-DNT	24.153	9.7621	26.109	5.14	4.02	993.0677
13	1,3,5-TNB	26.163	15.4203	34.373	8.12	5.29	992.8145
14	2,4-DNT	27.747	17.6031	43.243	9.26	6.66	997.6072
15	Tetryl	29.610	11.1836	22.759	5.89	3.51	1039.0014
16	2,4,6-TNT	34.547	13.5246	22.706	7.12	3.50	999.5417
Total:			**198.722**	**682.657**	**200.000**	**200.000**	

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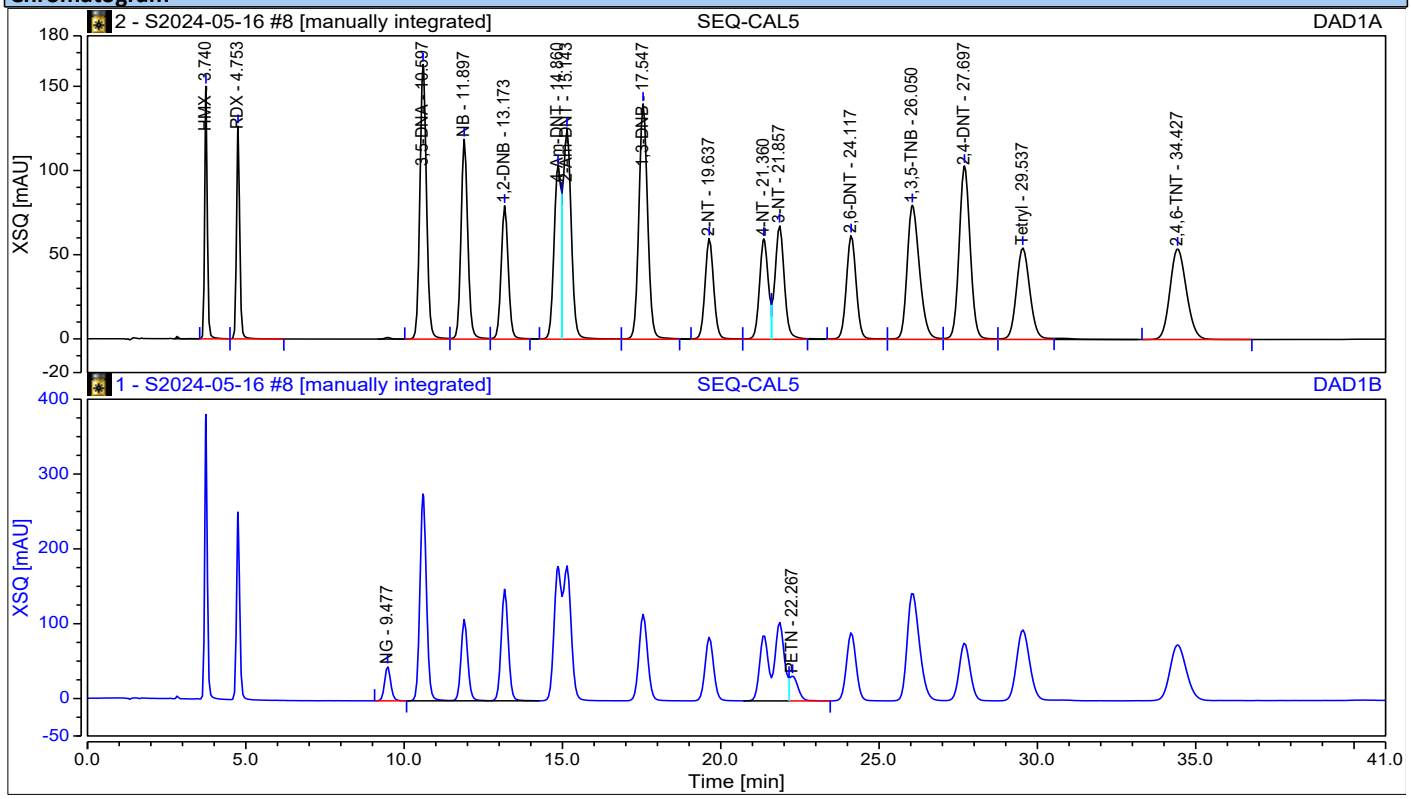
Instrument:
Sequence:S2024-05-16

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL5**	*Instrument:*	**Statler**
Vial Number:	**8**	*Run Time (min):*	**41.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**16/May/2024 17:37**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**20/May/2024 12:45**	*Operator:*	**AOP**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.477	10.3759	46.187	49.94	58.20	2378.1084
2	PETN	22.267	10.3998	33.171	50.06	41.80	2393.5753
1	HMX	3.740	14.3985	149.921	3.22	9.71	2364.2139
2	RDX	4.753	14.9296	126.365	3.34	8.18	2373.3611
3	3,5-DNA	10.597	39.1748	163.108	8.75	10.56	2371.8718
4	NB	11.897	29.5893	118.641	6.61	7.68	2397.5017
5	1,2-DNB	13.173	20.8405	79.186	4.66	5.13	2383.0597
6	4-Am-DNT	14.860	26.2869	102.679	5.87	6.65	2367.5950
7	2-Am-DNT	15.143	37.2330	124.595	8.32	8.07	2365.4949
8	1,3-DNB	17.547	44.8446	139.790	10.02	9.05	2367.7000
9	2-NT	19.637	19.0826	59.938	4.26	3.88	2381.0002
10	4-NT	21.360	19.0589	59.632	4.26	3.86	2376.3037
11	3-NT	21.857	23.0537	67.613	5.15	4.38	2385.2514
12	2,6-DNT	24.117	22.2453	61.794	4.97	4.00	2350.3760
13	1,3,5-TNB	26.050	36.0478	79.663	8.05	5.16	2300.9529
14	2,4-DNT	27.697	41.7212	103.079	9.32	6.67	2377.9869
15	Tetryl	29.537	26.7206	54.389	5.97	3.52	2482.9674
16	2,4,6-TNT	34.427	32.3706	53.948	7.23	3.49	2374.7789
Total:			**468.374**	**1623.699**	**200.000**	**200.000**	

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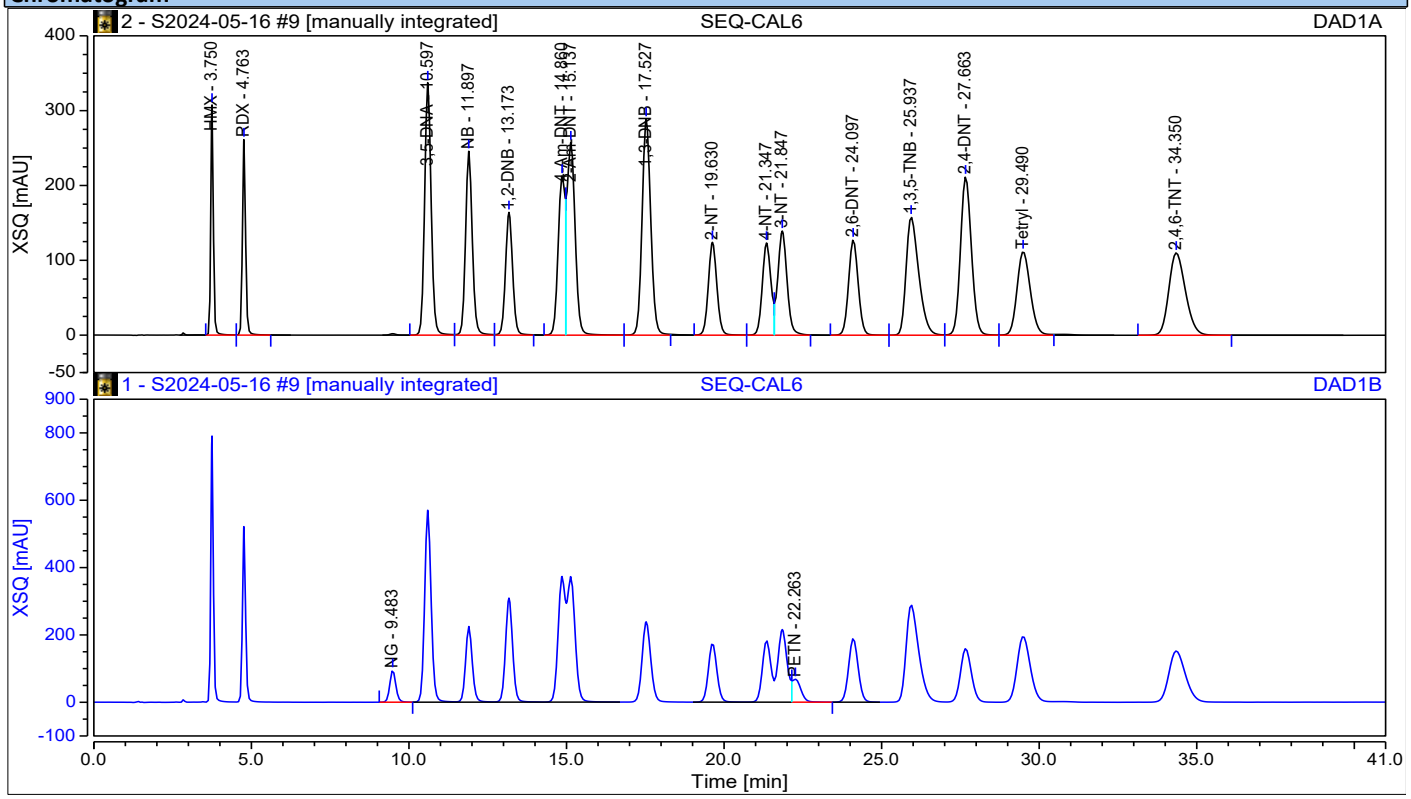
Instrument:
Sequence:S2024-05-16

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL6**	*Instrument:*	**Statler**
Vial Number:	**9**	*Run Time (min):*	**40.99**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**16/May/2024 18:19**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**20/May/2024 12:45**	*Operator:*	**AOP**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.483	21.4347	95.002	49.76	58.19	4891.4881
2	PETN	22.263	21.6391	68.273	50.24	41.81	4926.4705
1	HMX	3.750	29.6499	307.584	3.22	9.67	4850.5215
2	RDX	4.763	30.8321	261.268	3.34	8.21	4907.0923
3	3,5-DNA	10.597	81.1175	337.493	8.80	10.61	4907.7296
4	NB	11.897	61.2435	245.735	6.64	7.73	4965.8322
5	1,2-DNB	13.173	43.1247	164.109	4.68	5.16	4938.7717
6	4-Am-DNT	14.860	54.0054	212.643	5.86	6.69	4903.1501
7	2-Am-DNT	15.137	77.1684	257.257	8.37	8.09	4884.1271
8	1,3-DNB	17.527	92.3933	288.623	10.02	9.07	4888.5651
9	2-NT	19.630	39.1922	124.120	4.25	3.90	4930.5666
10	4-NT	21.347	39.1550	123.252	4.25	3.87	4911.5317
11	3-NT	21.847	47.4873	139.233	5.15	4.38	4911.8275
12	2,6-DNT	24.097	45.2755	127.578	4.91	4.01	4852.5564
13	1,3,5-TNB	25.937	73.6972	158.121	7.99	4.97	4567.0762
14	2,4-DNT	27.663	85.6744	211.767	9.29	6.66	4885.3942
15	Tetryl	29.490	54.8813	111.861	5.95	3.52	5106.6986
16	2,4,6-TNT	34.350	67.3248	110.119	7.30	3.46	4847.4640
Total:			**965.296**	**3344.037**	**200.000**	**200.000**	

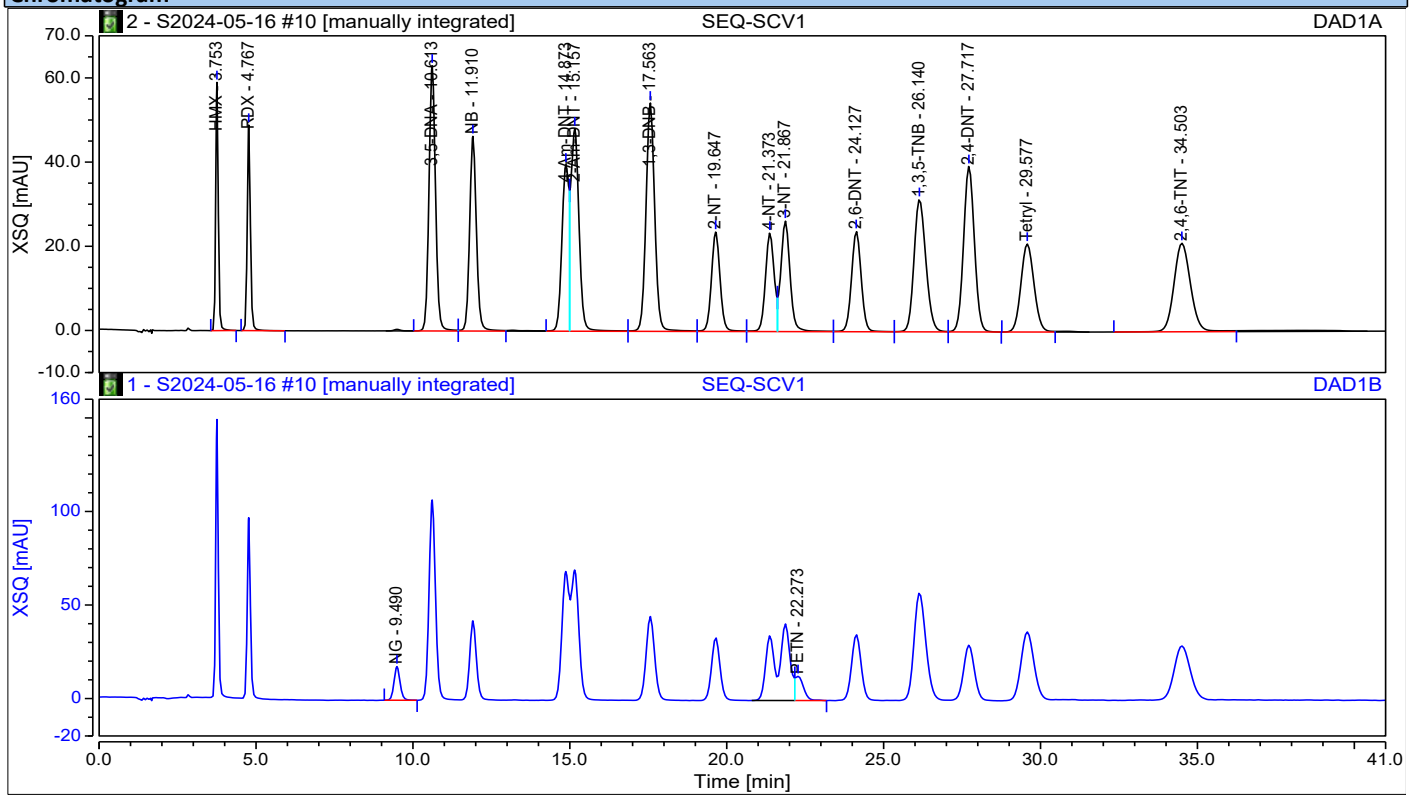
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Chromatogram and Results

Injection Details

Injection Name:	**SEQ-SCV1**	*Instrument:*	**Statler**
Vial Number:	**10**	*Run Time (min):*	**41.00**
Injection Type:	**Check Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**16/May/2024 19:02**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**20/May/2024 12:45**	*Operator:*	**AOP**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.490	4.0584	18.007	50.59	58.19	927.1362
2	PETN	22.273	3.9641	12.939	49.41	41.81	933.6693
1	HMX	3.753	5.6311	58.972	3.40	10.36	929.9663
2	RDX	4.767	5.7392	48.836	3.47	8.58	917.2299
3	3,5-DNA	10.613	15.1639	62.997	9.16	11.07	916.0896
4	NB	11.910	11.6164	46.247	7.02	8.13	934.5691
n.a.	1,2-DNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5	4-Am-DNT	14.873	10.1469	39.533	6.13	6.95	911.5561
6	2-Am-DNT	15.157	14.4393	48.126	8.72	8.46	913.6993
7	1,3-DNB	17.563	17.5167	54.294	10.58	9.54	919.6039
8	2-NT	19.647	7.5740	23.620	4.57	4.15	938.2778
9	4-NT	21.373	7.5586	23.431	4.57	4.12	933.7185
10	3-NT	21.867	9.0161	26.282	5.45	4.62	927.1626
11	2,6-DNT	24.127	8.5641	23.864	5.17	4.19	907.6933
12	1,3,5-TNB	26.140	13.8143	31.494	8.34	5.54	909.6672
13	2,4-DNT	27.717	15.7654	39.342	9.52	6.91	907.6164
14	Tetryl	29.577	10.1061	20.916	6.10	3.68	954.8727
15	2,4,6-TNT	34.503	12.9242	21.040	7.81	3.70	926.1715
Total:			**173.599**	**599.941**	**200.000**	**200.000**	

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INITIAL CALIBRATION STANDARDS

EPA 8330B

Laboratory:	APPL, LLC	Work Order:	24I0132
Client:	AECOM	Project:	Wingate 60517380 Task 3
Sequence:	SD03246	Instrument:	Waldorf
Calibration:	2433019		

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
24H0397	8330 - Cal 1 0.005ug/mL 08/14/24	SD03246-CAL1	W2024-08-14-017	08/14/24 17:32
24H0398	8330 - Cal 2 0.05ug/mL 08/14/24	SD03246-CAL2	W2024-08-14-018	08/14/24 18:03
24H0399	8330 - Cal 3 0.25ug/mL 08/14/24	SD03246-CAL3	W2024-08-14-019	08/14/24 18:35
24H0400	8330 - Cal 4 1.0ug/mL 08/14/24	SD03246-CAL4	W2024-08-14-020	08/14/24 19:06
24H0401	8330 - Cal 5 2.5ug/mL 08/14/24	SD03246-CAL5	W2024-08-14-021	08/14/24 19:38
24H0402	8330 - Cal 6 5.0ug/mL 08/14/24	SD03246-CAL6	W2024-08-14-022	08/14/24 20:09
24H0403	8330 - SCV 1.0ug/mL 08/14/24	SD03246-SCV1	W2024-08-14-023	08/14/24 20:41

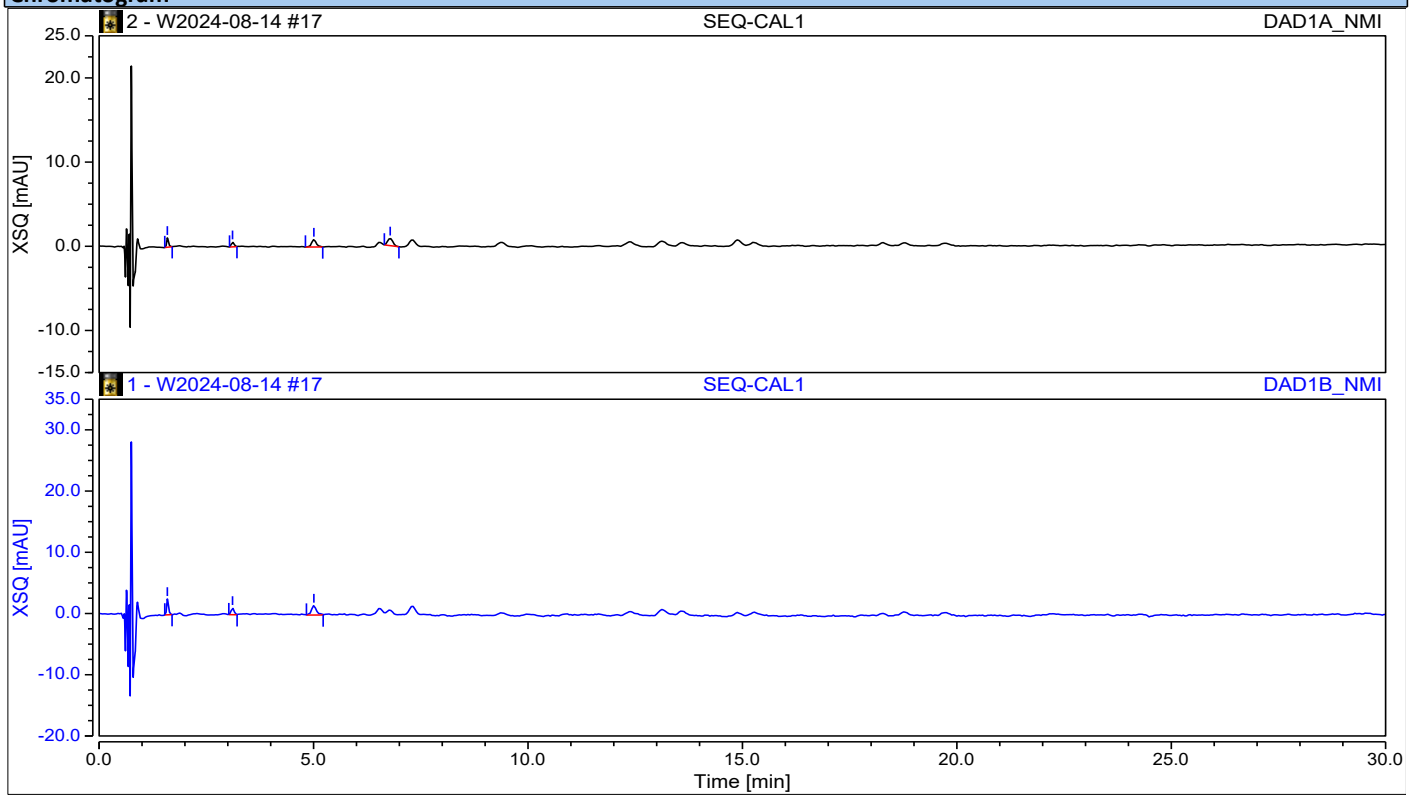
Instrument:
Sequence:W2024-08-14

Original Chromatogram

Injection Details

Injection Name:	**SEQ-CAL1**	*Instrument:*	**Waldorf**
Vial Number:	**17**	*Run Time (min):*	**30.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**14/Aug/2024 17:32**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**15/Aug/2024 14:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.927	0.0366	0.195	58.55	54.66	3.3385
2	PETN	22.233	0.0259	0.162	41.45	45.34	8.4312
1	HMX	1.590	0.0571	1.115	4.13	12.37	n.a.
2	RDX	3.110	0.0430	0.549	3.11	6.09	5.6192
3	1,3,5-TNB	5.007	0.1130	0.879	8.16	9.76	n.a.
4	1,2-DNB	6.533	0.0522	0.434	3.77	4.82	17.2890
5	1,3-DNB	6.787	0.1229	0.862	8.88	9.56	9.0831
6	3,5-DNA	7.297	0.1353	0.826	9.78	9.16	7.2055
7	NB	9.383	0.0965	0.509	6.97	5.64	15.2579
8	Tetryl	11.650	0.0178	0.100	1.29	1.11	17.0100
9	2,4,6-TNT	12.377	0.1352	0.587	9.77	6.52	12.4543
10	2-Am-DNT	13.120	0.1445	0.632	10.44	7.01	12.0146
11	4-Am-DNT	13.583	0.0705	0.395	5.10	4.38	n.a.
12	2,4-DNT	14.887	0.1293	0.700	9.34	7.77	14.5865
13	2,6-DNT	15.247	0.0741	0.401	5.35	4.45	13.4510
14	2-NT	18.277	0.0601	0.359	4.35	3.99	15.1215
15	4-NT	18.783	0.0598	0.350	4.32	3.89	14.1551
16	3-NT	19.727	0.0725	0.312	5.24	3.47	14.1590
Total:			**1.446**	**9.369**	**200.000**	**200.000**	

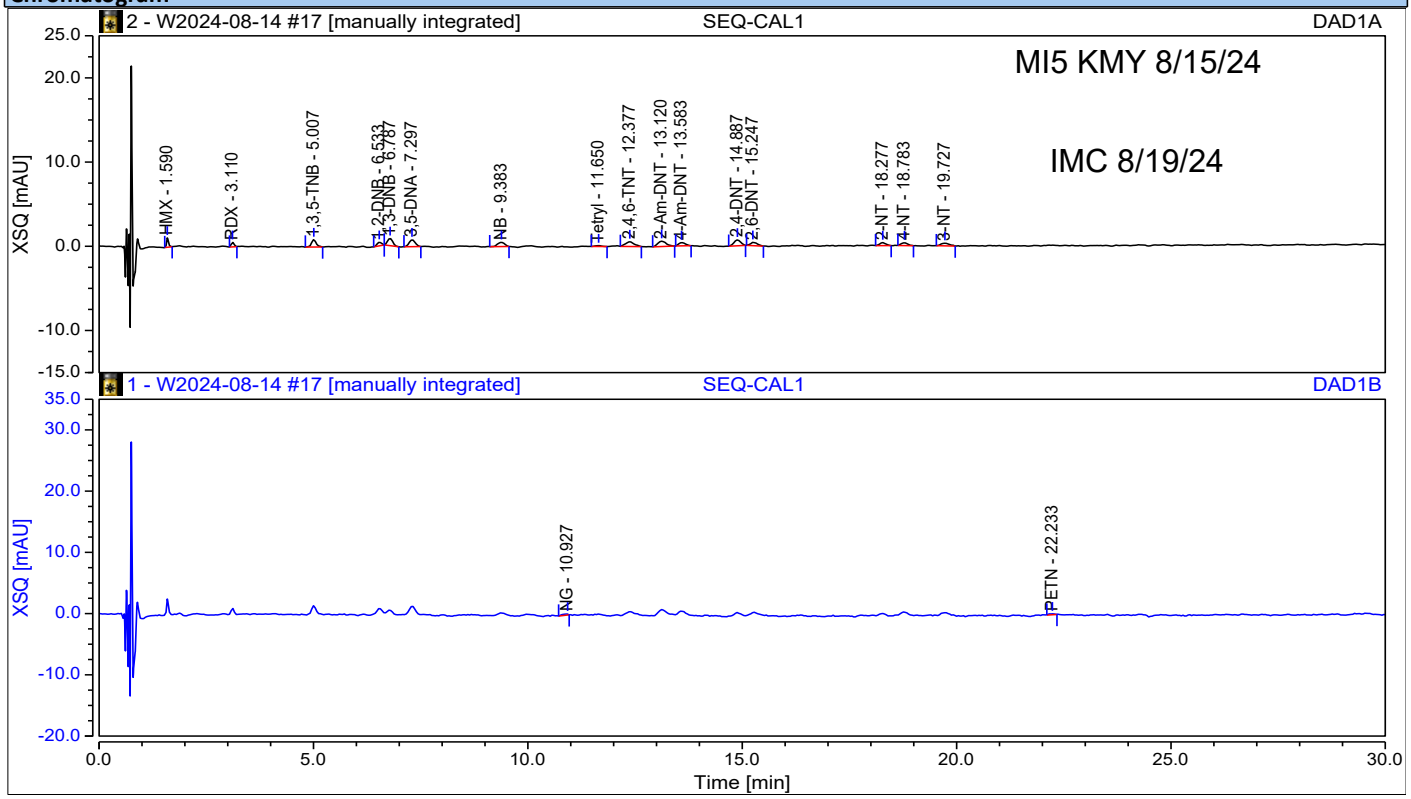
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Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL1**	*Instrument:*	**Waldorf**
Vial Number:	**17**	*Run Time (min):*	**30.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**14/Aug/2024 17:32**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**15/Aug/2024 14:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.927	0.0366	0.195	58.55	54.66	3.3385
2	PETN	22.233	0.0259	0.162	41.45	45.34	8.4312
1	HMX	1.590	0.0571	1.115	4.13	12.37	n.a.
2	RDX	3.110	0.0430	0.549	3.11	6.09	5.6192
3	1,3,5-TNB	5.007	0.1130	0.879	8.16	9.76	n.a.
4	1,2-DNB	6.533	0.0522	0.434	3.77	4.82	17.2890
5	1,3-DNB	6.787	0.1229	0.862	8.88	9.56	9.0831
6	3,5-DNA	7.297	0.1353	0.826	9.78	9.16	7.2055
7	NB	9.383	0.0965	0.509	6.97	5.64	15.2579
8	Tetryl	11.650	0.0178	0.100	1.29	1.11	17.0100
9	2,4,6-TNT	12.377	0.1352	0.587	9.77	6.52	12.4543
10	2-Am-DNT	13.120	0.1445	0.632	10.44	7.01	12.0146
11	4-Am-DNT	13.583	0.0705	0.395	5.10	4.38	n.a.
12	2,4-DNT	14.887	0.1293	0.700	9.34	7.77	14.5865
13	2,6-DNT	15.247	0.0741	0.401	5.35	4.45	13.4510
14	2-NT	18.277	0.0601	0.359	4.35	3.99	15.1215
15	4-NT	18.783	0.0598	0.350	4.32	3.89	14.1551
16	3-NT	19.727	0.0725	0.312	5.24	3.47	14.1590
Total:			**1.446**	**9.369**	**200.000**	**200.000**	

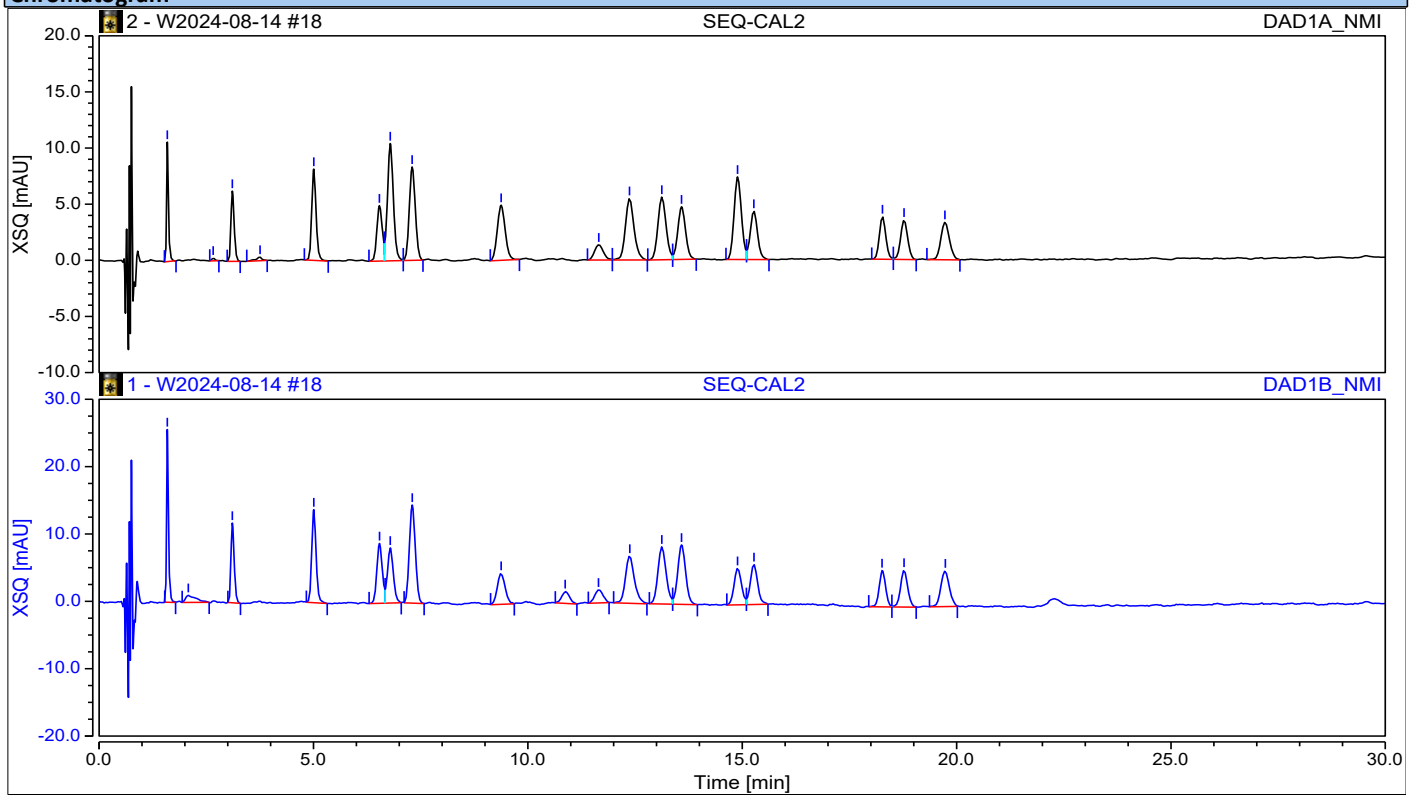
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Original Chromatogram

Injection Details

Injection Name:	**SEQ-CAL2**	*Instrument:*	**Waldorf**
Vial Number:	**18**	*Run Time (min):*	**30.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**14/Aug/2024 18:03**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**15/Aug/2024 14:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.870	0.3740	1.777	51.33	61.40	52.6688
2	PETN	22.263	0.3545	1.117	48.67	38.60	51.4974
1	HMX	1.590	0.5346	10.646	3.52	11.43	12.4781
2	RDX	3.107	0.5487	6.261	3.61	6.72	52.5737
3	1,3,5-TNB	5.007	0.9596	8.134	6.32	8.73	27.3315
4	1,2-DNB	6.537	0.7238	4.937	4.77	5.30	63.9938
5	1,3-DNB	6.790	1.6717	10.450	11.01	11.22	56.1759
6	3,5-DNA	7.300	1.3604	8.325	8.96	8.94	53.3630
7	NB	9.377	1.0502	4.914	6.92	5.27	61.8352
8	Tetryl	11.653	0.3263	1.357	2.15	1.46	32.1754
9	2,4,6-TNT	12.370	1.2943	5.494	8.53	5.90	57.4010
10	2-Am-DNT	13.123	1.2429	5.591	8.19	6.00	57.5879
11	4-Am-DNT	13.583	0.9908	4.695	6.53	5.04	45.9507
12	2,4-DNT	14.890	1.4776	7.360	9.73	7.90	60.3941
13	2,6-DNT	15.270	0.8644	4.316	5.69	4.63	59.9438
14	2-NT	18.270	0.6677	3.802	4.40	4.08	60.7078
15	4-NT	18.773	0.6784	3.528	4.47	3.79	60.6226
16	3-NT	19.727	0.7879	3.346	5.19	3.59	60.9732
Total:			**15.908**	**96.048**	**200.000**	**200.000**	

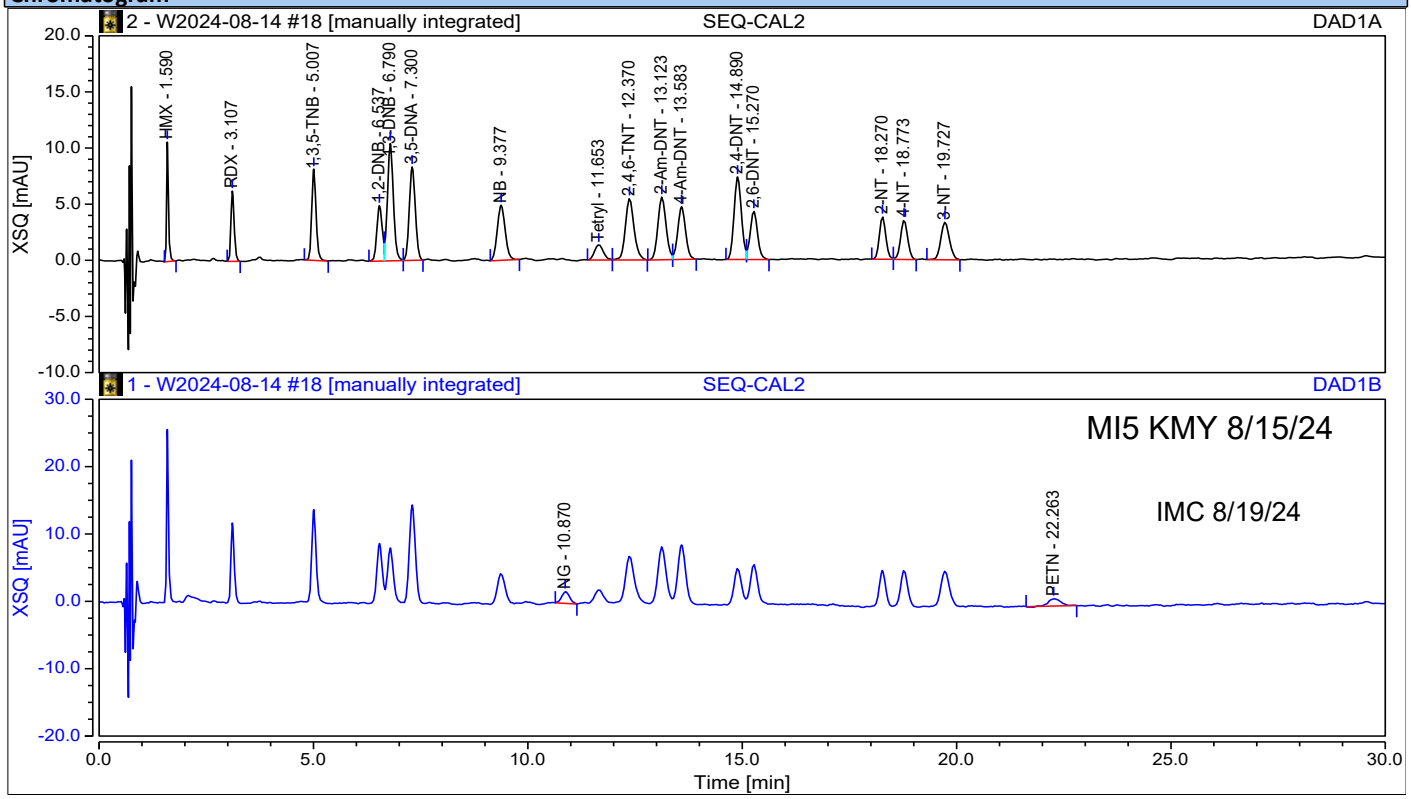
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Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL2**	*Instrument:*	**Waldorf**
Vial Number:	**18**	*Run Time (min):*	**30.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**14/Aug/2024 18:03**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**15/Aug/2024 14:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.870	0.3740	1.777	51.33	61.40	52.6688
2	PETN	22.263	0.3545	1.117	48.67	38.60	51.4974
1	HMX	1.590	0.5346	10.646	3.52	11.43	12.4781
2	RDX	3.107	0.5487	6.261	3.61	6.72	52.5737
3	1,3,5-TNB	5.007	0.9596	8.134	6.32	8.73	27.3315
4	1,2-DNB	6.537	0.7238	4.937	4.77	5.30	63.9938
5	1,3-DNB	6.790	1.6717	10.450	11.01	11.22	56.1759
6	3,5-DNA	7.300	1.3604	8.325	8.96	8.94	53.3630
7	NB	9.377	1.0502	4.914	6.92	5.27	61.8352
8	Tetryl	11.653	0.3263	1.357	2.15	1.46	32.1754
9	2,4,6-TNT	12.370	1.2943	5.494	8.53	5.90	57.4010
10	2-Am-DNT	13.123	1.2429	5.591	8.19	6.00	57.5879
11	4-Am-DNT	13.583	0.9908	4.695	6.53	5.04	45.9507
12	2,4-DNT	14.890	1.4776	7.360	9.73	7.90	60.3941
13	2,6-DNT	15.270	0.8644	4.316	5.69	4.63	59.9438
14	2-NT	18.270	0.6677	3.802	4.40	4.08	60.7078
15	4-NT	18.773	0.6784	3.528	4.47	3.79	60.6226
16	3-NT	19.727	0.7879	3.346	5.19	3.59	60.9732
Total:			**15.908**	**96.048**	**200.000**	**200.000**	

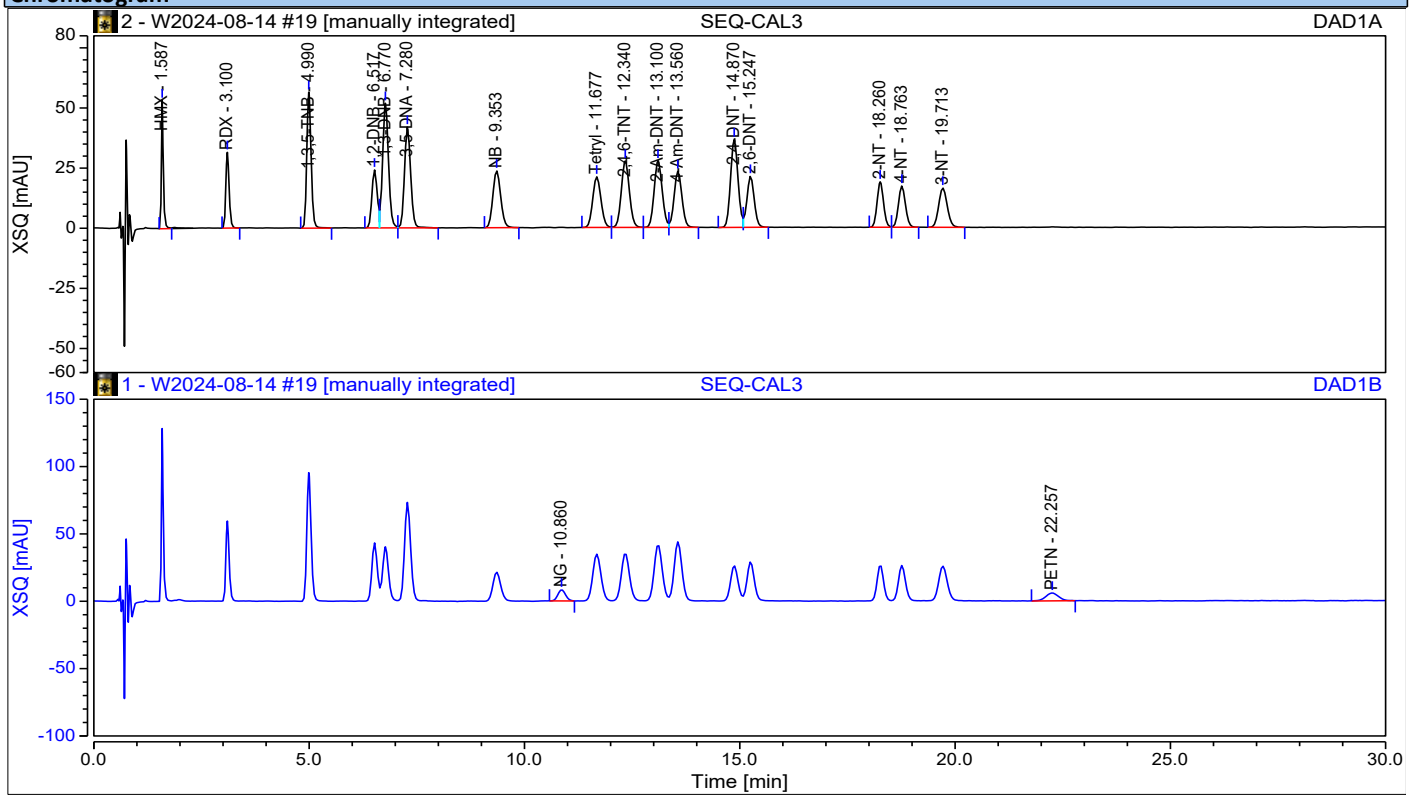
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Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL3**	*Instrument:*	**Waldorf**
Vial Number:	**19**	*Run Time (min):*	**30.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**14/Aug/2024 18:35**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**15/Aug/2024 14:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.860	1.7189	8.286	45.74	58.51	255.6858
2	PETN	22.257	2.0395	5.876	54.26	41.49	266.0856
1	HMX	1.587	2.7161	53.263	3.42	10.81	243.4984
2	RDX	3.100	2.7617	31.492	3.48	6.39	259.9634
3	1,3,5-TNB	4.990	6.5708	56.484	8.28	11.47	255.5077
4	1,2-DNB	6.517	3.4795	24.150	4.39	4.90	263.2961
5	1,3-DNB	6.770	8.2270	51.821	10.37	10.52	259.3827
6	3,5-DNA	7.280	7.0229	41.917	8.85	8.51	260.1398
7	NB	9.353	5.0264	23.671	6.34	4.81	260.1731
8	Tetryl	11.677	4.6857	21.070	5.91	4.28	270.0324
9	2,4,6-TNT	12.340	6.0386	27.629	7.61	5.61	260.1610
10	2-Am-DNT	13.100	6.0302	27.619	7.60	5.61	260.0341
11	4-Am-DNT	13.560	4.9085	23.291	6.19	4.73	256.3657
12	2,4-DNT	14.870	7.3634	36.487	9.28	7.41	260.7468
13	2,6-DNT	15.247	4.1755	21.276	5.26	4.32	261.3397
14	2-NT	18.260	3.2741	18.891	4.13	3.84	260.4861
15	4-NT	18.763	3.2626	17.139	4.11	3.48	259.6764
16	3-NT	19.713	3.7937	16.342	4.78	3.32	261.5261
Total:			**83.095**	**506.704**	**200.000**	**200.000**	

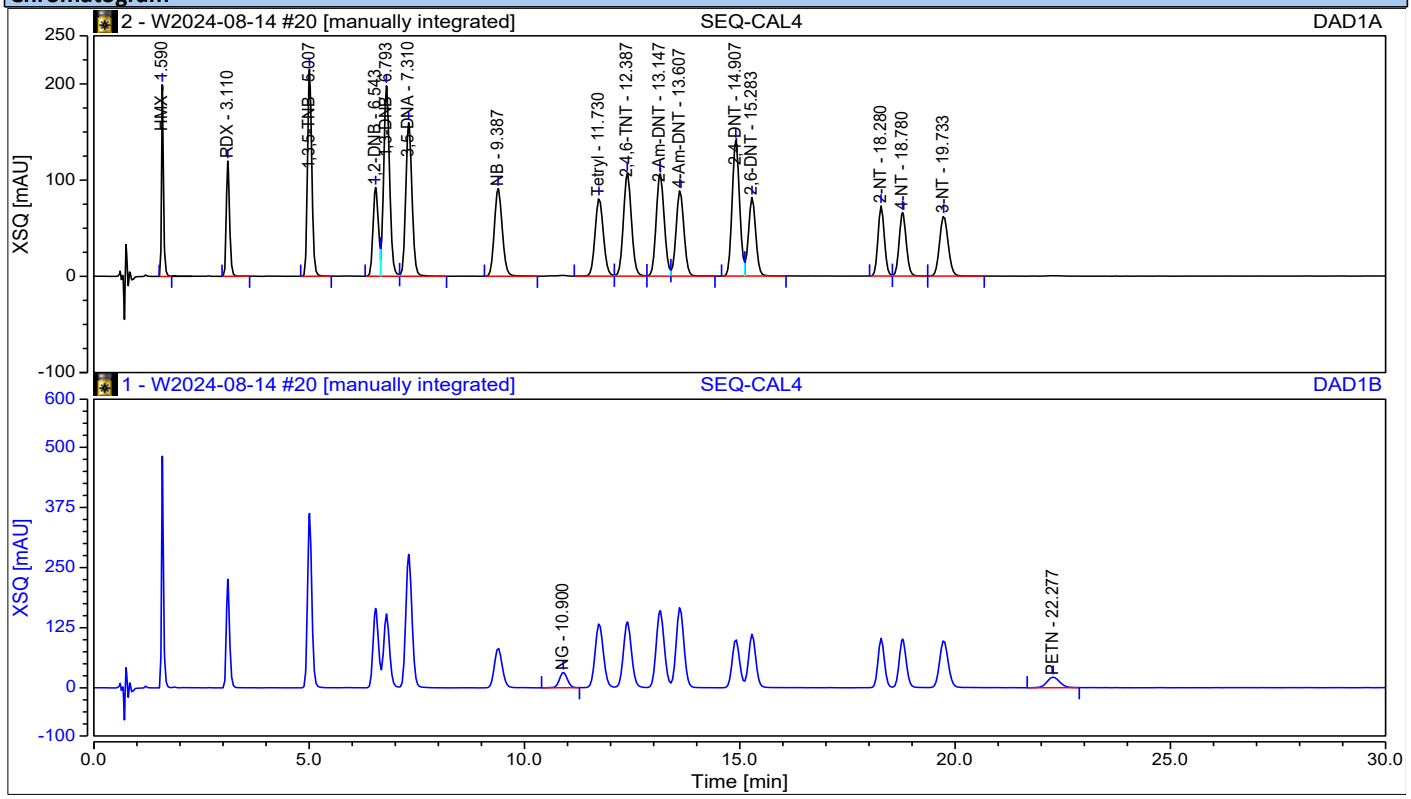
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Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL4**	*Instrument:*	**Waldorf**
Vial Number:	**20**	*Run Time (min):*	**30.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**14/Aug/2024 19:06**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**15/Aug/2024 14:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.900	6.9167	31.947	47.71	59.38	993.6356
2	PETN	22.277	7.5803	21.852	52.29	40.62	986.4985
1	HMX	1.590	10.1154	199.345	3.33	10.59	1035.3704
2	RDX	3.110	10.5583	119.806	3.48	6.37	985.8594
3	1,3,5-TNB	5.007	24.8796	215.112	8.19	11.43	1004.1168
4	1,2-DNB	6.543	13.2740	92.219	4.37	4.90	969.3762
5	1,3-DNB	6.793	31.4477	197.927	10.35	10.52	977.0128
6	3,5-DNA	7.310	26.7775	159.604	8.81	8.48	984.5408
7	NB	9.387	19.5185	91.037	6.42	4.84	972.4846
8	Tetryl	11.730	18.1614	80.923	5.98	4.30	992.2396
9	2,4,6-TNT	12.387	23.2429	106.445	7.65	5.66	982.1185
10	2-Am-DNT	13.147	23.1172	106.232	7.61	5.65	982.5122
11	4-Am-DNT	13.607	18.7805	88.970	6.18	4.73	999.5352
12	2,4-DNT	14.907	28.1321	140.704	9.26	7.48	977.6157
13	2,6-DNT	15.283	16.0322	81.707	5.28	4.34	978.9497
14	2-NT	18.280	12.6036	72.876	4.15	3.87	975.2896
15	4-NT	18.780	12.6028	66.077	4.15	3.51	975.3726
16	3-NT	19.733	14.5691	62.566	4.80	3.33	974.8362
Total:			**318.310**	**1935.347**	**200.000**	**200.000**	

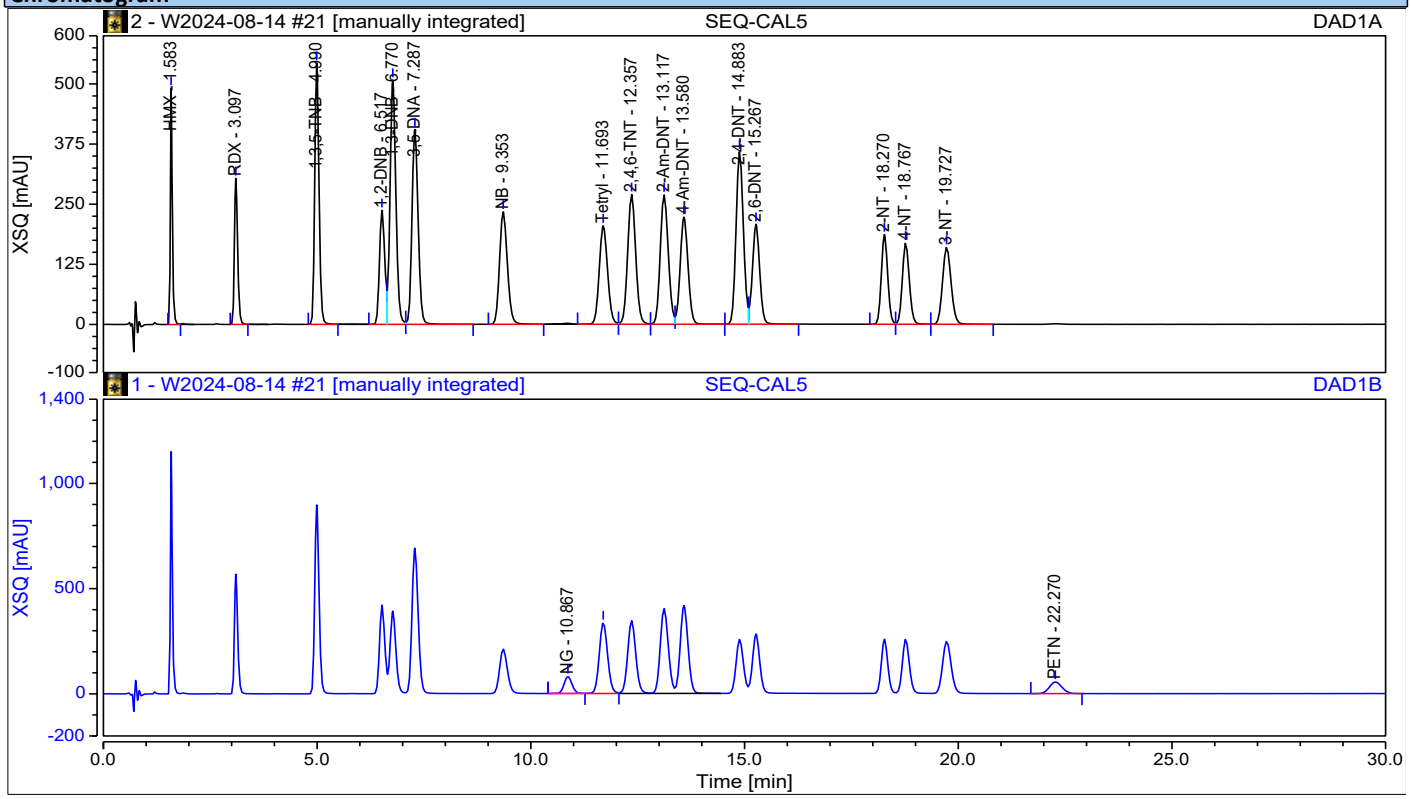
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Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL5**	*Instrument:*	**Waldorf**
Vial Number:	**21**	*Run Time (min):*	**30.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**14/Aug/2024 19:38**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**15/Aug/2024 14:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.867	17.2199	80.163	15.25	16.97	2497.4155
3	PETN	22.270	18.8964	55.000	16.74	11.65	2481.2192
1	HMX	1.583	25.0547	491.363	3.24	10.30	2618.3334
2	RDX	3.097	26.7264	303.696	3.46	6.37	2497.3613
3	1,3,5-TNB	4.990	62.7770	543.022	8.13	11.39	2551.6180
4	1,2-DNB	6.517	33.8741	237.026	4.38	4.97	2471.4745
5	1,3-DNB	6.770	79.9158	507.705	10.34	10.64	2498.5661
6	3,5-DNA	7.287	67.8554	404.896	8.78	8.49	2494.4038
7	NB	9.353	49.8467	233.681	6.45	4.90	2480.7668
8	Tetryl	11.693	46.2909	204.691	5.99	4.29	2485.6517
9	2,4,6-TNT	12.357	59.1642	269.940	7.66	5.66	2479.7568
10	2-Am-DNT	13.117	58.9543	269.160	7.63	5.64	2479.8766
11	4-Am-DNT	13.580	47.4922	222.643	6.15	4.67	2512.0488
12	2,4-DNT	14.883	71.7986	358.488	9.29	7.52	2475.6619
13	2,6-DNT	15.267	40.9522	207.739	5.30	4.36	2475.5612
14	2-NT	18.270	32.3174	186.383	4.18	3.91	2478.1888
15	4-NT	18.767	32.2296	169.076	4.17	3.54	2481.6939
16	3-NT	19.727	37.3456	159.995	4.83	3.35	2478.3358
Total:			**808.712**	**4904.669**	**131.988**	**128.619**	

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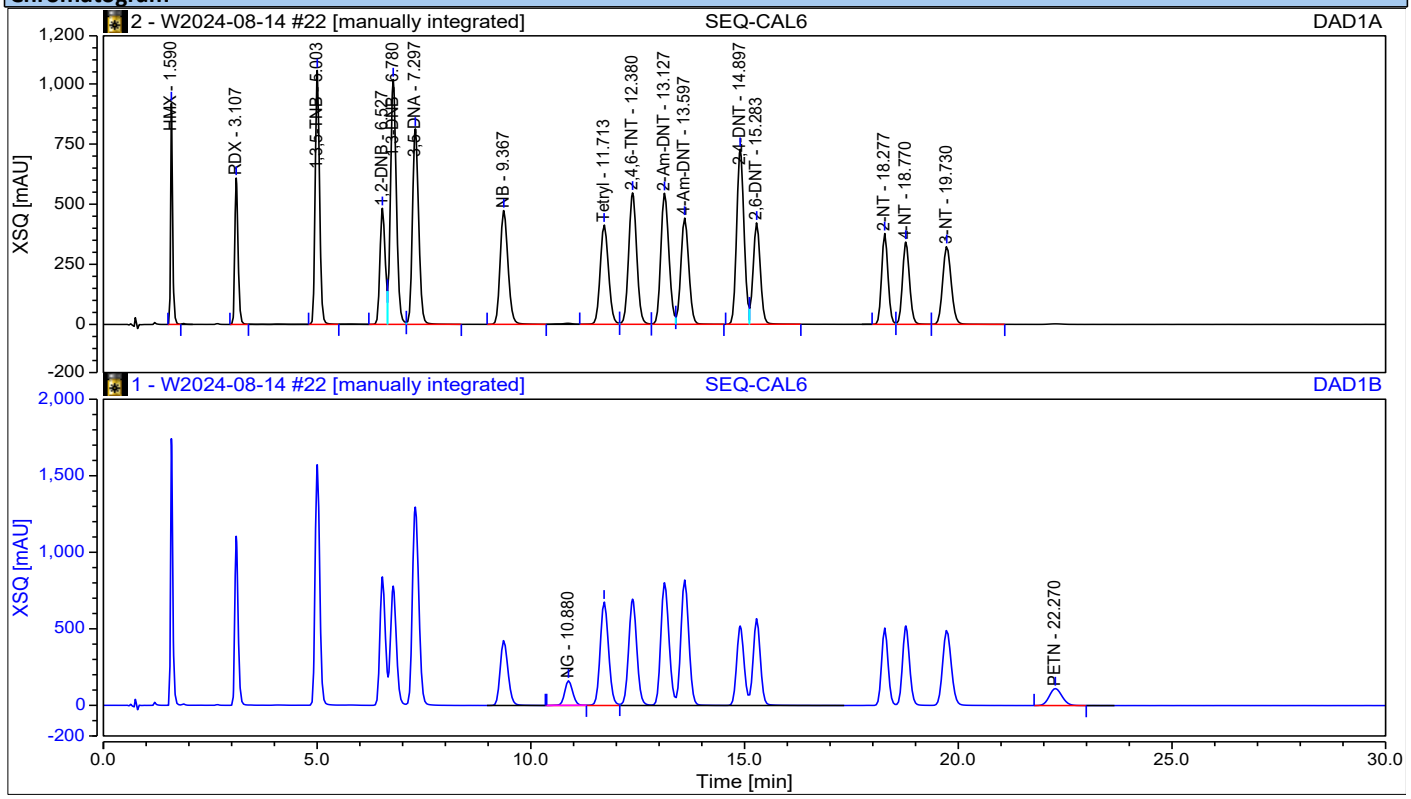
Instrument:
Sequence:W2024-08-14

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL6**	*Instrument:*	**Waldorf**
Vial Number:	**22**	*Run Time (min):*	**30.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**14/Aug/2024 20:09**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**15/Aug/2024 14:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.880	34.5446	160.475	15.15	16.91	5002.2558
3	PETN	22.270	38.3771	111.108	16.83	11.71	5011.2680
1	HMX	1.590	47.9812	918.641	3.09	9.66	4934.5037
2	RDX	3.107	53.6803	608.611	3.46	6.40	5003.6229
3	1,3,5-TNB	5.003	123.8677	1056.176	7.98	11.10	4973.3308
4	1,2-DNB	6.527	68.4562	482.670	4.41	5.07	5019.5705
5	1,3-DNB	6.780	160.9872	1017.955	10.37	10.70	5004.7794
6	3,5-DNA	7.297	136.3503	812.824	8.78	8.55	5005.3471
7	NB	9.367	100.6515	473.305	6.48	4.98	5014.4824
8	Tetryl	11.713	93.6395	413.723	6.03	4.35	5007.8909
9	2,4,6-TNT	12.380	119.5108	546.504	7.70	5.75	5013.1084
10	2-Am-DNT	13.127	118.9946	544.787	7.67	5.73	5012.9746
11	4-Am-DNT	13.597	94.8642	441.975	6.11	4.65	4993.7985
12	2,4-DNT	14.897	145.0643	727.798	9.35	7.65	5015.9951
13	2,6-DNT	15.283	82.5719	421.652	5.32	4.43	5015.7546
14	2-NT	18.277	65.2669	377.992	4.20	3.97	5015.2062
15	4-NT	18.770	64.9673	342.195	4.19	3.60	5013.4793
16	3-NT	19.730	75.3108	324.387	4.85	3.41	5015.1697
Total:			**1625.086**	**9782.776**	**131.987**	**128.623**	

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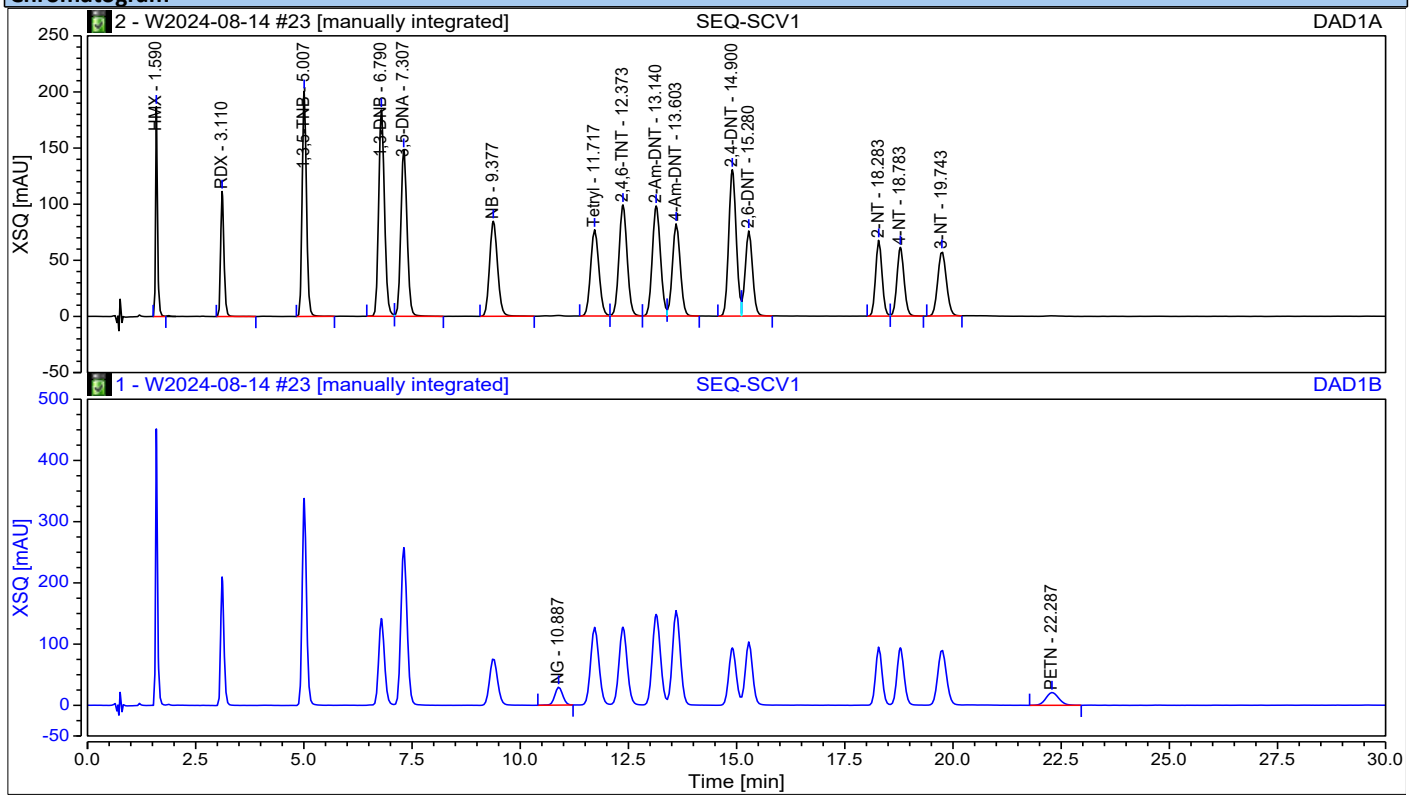
Instrument:
Sequence:W2024-08-14

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-SCV1**	*Instrument:*	**Waldorf**
Vial Number:	**23**	*Run Time (min):*	**30.00**
Injection Type:	**Check Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**14/Aug/2024 20:41**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**15/Aug/2024 14:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.887	6.2756	29.356	46.35	58.44	912.8172
2	PETN	22.287	7.2647	20.872	53.65	41.56	942.3183
1	HMX	1.590	9.4529	186.929	3.51	11.23	968.0682
2	RDX	3.110	9.8687	111.416	3.66	6.69	916.9026
3	1,3,5-TNB	5.007	23.2163	200.583	8.61	12.05	935.5536
n.a.	1,2-DNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	1,3-DNB	6.790	28.7410	183.800	10.66	11.04	907.6263
5	3,5-DNA	7.307	24.7841	148.044	9.19	8.89	913.3849
6	NB	9.377	18.1168	84.699	6.72	5.09	905.4681
7	Tetryl	11.717	17.1791	76.891	6.37	4.62	943.5852
8	2,4,6-TNT	12.373	21.5870	99.044	8.01	5.95	914.3301
9	2-Am-DNT	13.140	21.4178	98.076	7.94	5.89	907.5602
10	4-Am-DNT	13.603	17.3442	82.195	6.43	4.94	922.8750
11	2,4-DNT	14.900	26.1790	130.449	9.71	7.84	907.0745
12	2,6-DNT	15.280	14.8995	75.834	5.53	4.56	909.2090
13	2-NT	18.283	11.7446	67.639	4.36	4.06	905.9516
14	4-NT	18.783	11.6819	61.255	4.33	3.68	904.8650
15	3-NT	19.743	13.3645	57.678	4.96	3.47	899.4097
Total:			**283.118**	**1714.762**	**200.000**	**200.000**	

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SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8330B

Laboratory:	APPL, LLC		
Client:	AECOM	Project:	Wingate 60517380 Task 3
Instrument ID:	STATLER	Calibration:	2420012
Lab File ID:	S2024-05-16-010	Calibration Date:	05/16/24 08:00
Sequence:	SD01815	Injection Date:	05/16/24
Lab Sample ID:	SD01815-SCV1	Injection Time:	19:02

		CONC. (ng/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	AVG	1000	930	0.0634132	0.058972		-7.0	20
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	AVG	1000	917	5.322893E-02	0.048836		-8.3	20
1,3,5-TRINITROBENZENE	AVG	1000	910	0.0346204	0.031494		-9.0	20
1,3-DINITROBENZENE	AVG	1000	920	5.905443E-02	0.054294		-8.1	20
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	AVG	1000	955	2.189713E-02	0.020916		-4.5	20
NITROBENZENE	AVG	1000	935	4.948757E-02	0.046247		-6.5	20
2,4,6-TRINITROTOLUENE	AVG	1000	926	0.0227055	0.02104		-7.3	20
4-AMINO-2,6-DINITROTOLUENE	AVG	1000	912	4.338403E-02	0.039533		-8.9	20
2-AMINO-4,6-DINITROTOLUENE	AVG	1000	914	5.266023E-02	0.048126		-8.6	20
2,4-DINITROTOLUENE	AVG	1000	908	4.334467E-02	0.039342		-9.2	20
2,6-DINITROTOLUENE	AVG	1000	908	0.0263017	0.023864		-9.3	20
2-NITROTOLUENE	AVG	1000	938	2.516953E-02	0.02362		-6.2	20
3-NITROTOLUENE	AVG	1000	927	0.0283433	0.026282		-7.3	20
4-NITROTOLUENE	AVG	1000	934	2.507787E-02	0.023431		-6.6	20
NITROGLYCERIN	AVG	1000	927	1.943387E-02	0.018007		-7.3	20
PENTAERYTHRITOL TETRANITRATE	AVG	1000	934	1.384317E-02	0.012939		-6.5	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

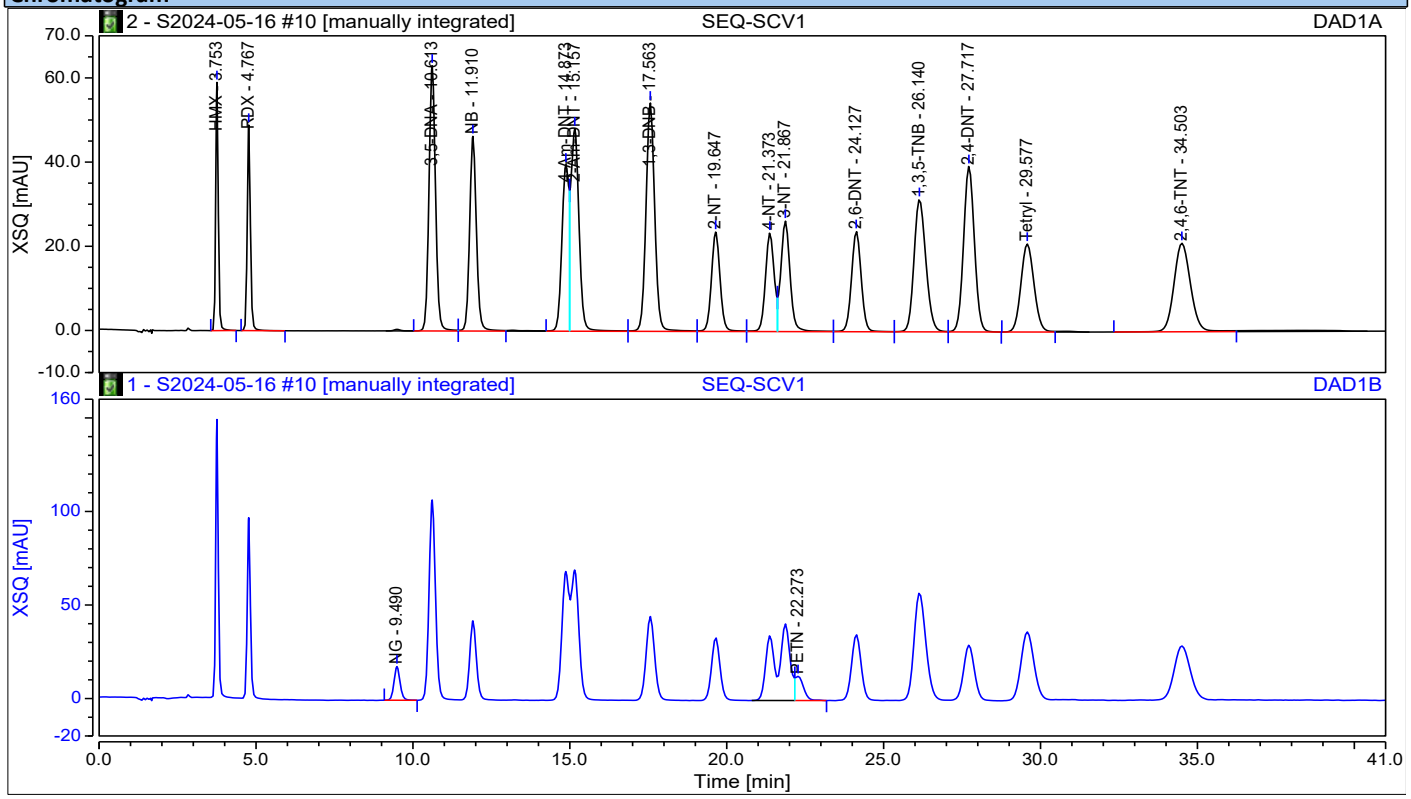
Instrument:
Sequence:S2024-05-16

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-SCV1**	*Instrument:*	**Statler**
Vial Number:	**10**	*Run Time (min):*	**41.00**
Injection Type:	**Check Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**16/May/2024 19:02**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**20/May/2024 12:45**	*Operator:*	**AOP**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.490	4.0584	18.007	50.59	58.19	927.1362
2	PETN	22.273	3.9641	12.939	49.41	41.81	933.6693
1	HMX	3.753	5.6311	58.972	3.40	10.36	929.9663
2	RDX	4.767	5.7392	48.836	3.47	8.58	917.2299
3	3,5-DNA	10.613	15.1639	62.997	9.16	11.07	916.0896
4	NB	11.910	11.6164	46.247	7.02	8.13	934.5691
n.a.	1,2-DNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5	4-Am-DNT	14.873	10.1469	39.533	6.13	6.95	911.5561
6	2-Am-DNT	15.157	14.4393	48.126	8.72	8.46	913.6993
7	1,3-DNB	17.563	17.5167	54.294	10.58	9.54	919.6039
8	2-NT	19.647	7.5740	23.620	4.57	4.15	938.2778
9	4-NT	21.373	7.5586	23.431	4.57	4.12	933.7185
10	3-NT	21.867	9.0161	26.282	5.45	4.62	927.1626
11	2,6-DNT	24.127	8.5641	23.864	5.17	4.19	907.6933
12	1,3,5-TNB	26.140	13.8143	31.494	8.34	5.54	909.6672
13	2,4-DNT	27.717	15.7654	39.342	9.52	6.91	907.6164
14	Tetryl	29.577	10.1061	20.916	6.10	3.68	954.8727
15	2,4,6-TNT	34.503	12.9242	21.040	7.81	3.70	926.1715
Total:			**173.599**	**599.941**	**200.000**	**200.000**	

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SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8330B

Laboratory:	APPL, LLC		
Client:	AECOM	Project:	Wingate 60517380 Task 3
Instrument ID:	Waldorf	Calibration:	2433019
Lab File ID:	W2024-08-14-023	Calibration Date:	08/14/24 07:00
Sequence:	SD03246	Injection Date:	08/14/24
Lab Sample ID:	SD03246-SCV1	Injection Time:	20:41

		CONC. (ng/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	LRI	1000	968	0.2047651	0.186929		-3.2	20
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	LRI	1000	917	0.1206658	0.111416		-8.3	20
1,3,5-TRINITROBENZENE	LRI	1000	936	0.2013287	0.200583		-6.4	20
1,3-DINITROBENZENE	LRI	1000	908	0.1988807	0.1838		-9.2	20
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	LRI	1000	944	6.282733E-02	0.076891		-5.6	20
NITROBENZENE	LRI	1000	905	9.565573E-02	0.084699		-9.5	20
2,4,6-TRINITROTOLUENE	LRI	1000	914	0.110253	0.099044		-8.6	20
4-AMINO-2,6-DINITROTOLUENE	LRI	1000	923	0.0887477	0.082195		-7.7	20
2-AMINO-4,6-DINITROTOLUENE	LRI	1000	908	0.1119249	0.098076		-9.2	20
2,4-DINITROTOLUENE	LRI	1000	907	0.1438011	0.130449		-9.3	20
2,6-DINITROTOLUENE	LRI	1000	909	0.0834595	0.075834		-9.1	20
2-NITROTOLUENE	LRI	1000	906	7.440527E-02	0.067639		-9.4	20
3-NITROTOLUENE	LRI	1000	899	0.0643549	0.057678		-10.1	20
4-NITROTOLUENE	LRI	1000	905	6.854373E-02	0.061255		-9.5	20
NITROGLYCERIN	LRI	1000	913	0.0339652	0.029356		-8.7	20
PENTAERYTHRITOL TETRANITRATE	LRI	1000	942	2.405293E-02	0.020872		-5.8	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

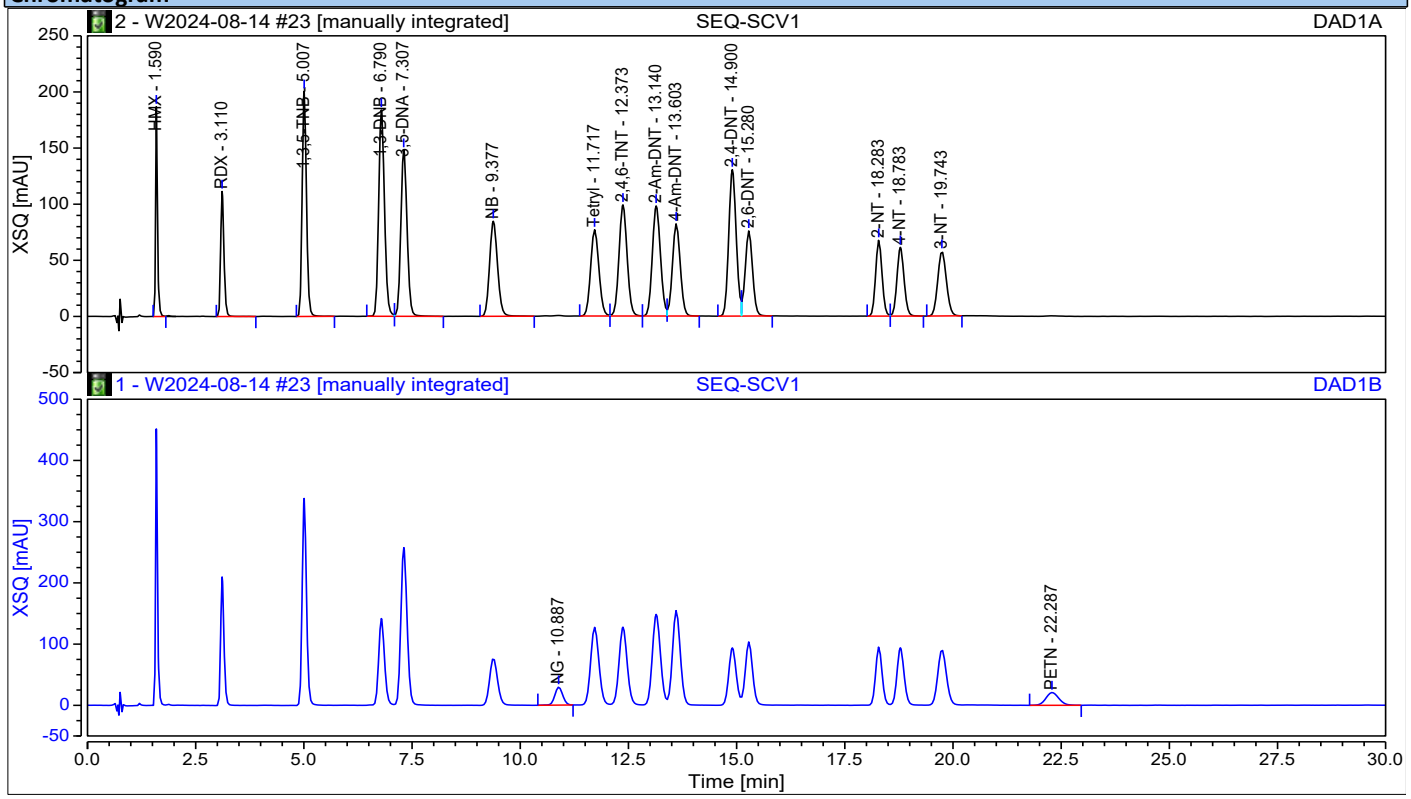
* Values outside of QC limits

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-SCV1**	*Instrument:*	**Waldorf**
Vial Number:	**23**	*Run Time (min):*	**30.00**
Injection Type:	**Check Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**14/Aug/2024 20:41**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**15/Aug/2024 14:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.887	6.2756	29.356	46.35	58.44	912.8172
2	PETN	22.287	7.2647	20.872	53.65	41.56	942.3183
1	HMX	1.590	9.4529	186.929	3.51	11.23	968.0682
2	RDX	3.110	9.8687	111.416	3.66	6.69	916.9026
3	1,3,5-TNB	5.007	23.2163	200.583	8.61	12.05	935.5536
n.a.	1,2-DNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	1,3-DNB	6.790	28.7410	183.800	10.66	11.04	907.6263
5	3,5-DNA	7.307	24.7841	148.044	9.19	8.89	913.3849
6	NB	9.377	18.1168	84.699	6.72	5.09	905.4681
7	Tetryl	11.717	17.1791	76.891	6.37	4.62	943.5852
8	2,4,6-TNT	12.373	21.5870	99.044	8.01	5.95	914.3301
9	2-Am-DNT	13.140	21.4178	98.076	7.94	5.89	907.5602
10	4-Am-DNT	13.603	17.3442	82.195	6.43	4.94	922.8750
11	2,4-DNT	14.900	26.1790	130.449	9.71	7.84	907.0745
12	2,6-DNT	15.280	14.8995	75.834	5.53	4.56	909.2090
13	2-NT	18.283	11.7446	67.639	4.36	4.06	905.9516
14	4-NT	18.783	11.6819	61.255	4.33	3.68	904.8650
15	3-NT	19.743	13.3645	57.678	4.96	3.47	899.4097
Total:			**283.118**	**1714.762**	**200.000**	**200.000**	

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CONTINUING CALIBRATION VERIFICATION

EPA 8330B

Laboratory:	APPL, LLC	Work Order:	24I0132
Client:	AECOM	Project:	Wingate 60517380 Task 3
Instrument ID:	STATLER	Calibration:	2420012
Lab File ID:	S2024-09-23-004	Calibration Date:	05/16/24 08:00
Sequence:	SD03891	Injection Date:	09/23/24
Lab Sample ID:	SD03891-CCV1	Injection Time:	09:36

		CONC. (ng/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	AVG	1000	832	0.0634132	0.052748		-17	20
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	AVG	1000	826	5.322893E-02	0.043984		-17	20
1,3,5-TRINITROBENZENE	AVG	1000	862	0.0346204	0.02986		-14	20
1,3-DINITROBENZENE	AVG	1000	846	5.905443E-02	0.049933		-15	20
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	AVG	1000	848	2.189713E-02	0.018577		-15	20
NITROBENZENE	AVG	1000	843	4.948757E-02	0.041696		-16	20
2,4,6-TRINITROTOLUENE	AVG	1000	863	0.0227055	0.01961		-14	20
4-AMINO-2,6-DINITROTOLUENE	AVG	1000	851	4.338403E-02	0.036905		-15	20
2-AMINO-4,6-DINITROTOLUENE	AVG	1000	856	5.266023E-02	0.045071		-14	20
2,4-DINITROTOLUENE	AVG	1000	860	4.334467E-02	0.037262		-14	20
2,6-DINITROTOLUENE	AVG	1000	834	0.0263017	0.021915		-17	20
2-NITROTOLUENE	AVG	1000	846	2.516953E-02	0.021307		-15	20
3-NITROTOLUENE	AVG	1000	847	0.0283433	0.024013		-15	20
4-NITROTOLUENE	AVG	1000	846	2.507787E-02	0.02124		-15	20
NITROGLYCERIN	AVG	1000	870	1.943387E-02	0.016906		-13	20
PENTAERYTHRITOL TETRANITRATE	AVG	1000	897	1.384317E-02	0.012433		-10	20
1,2-DINITROBENZENE	AVG	1000	892	0.0332162	0.029654		-11	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

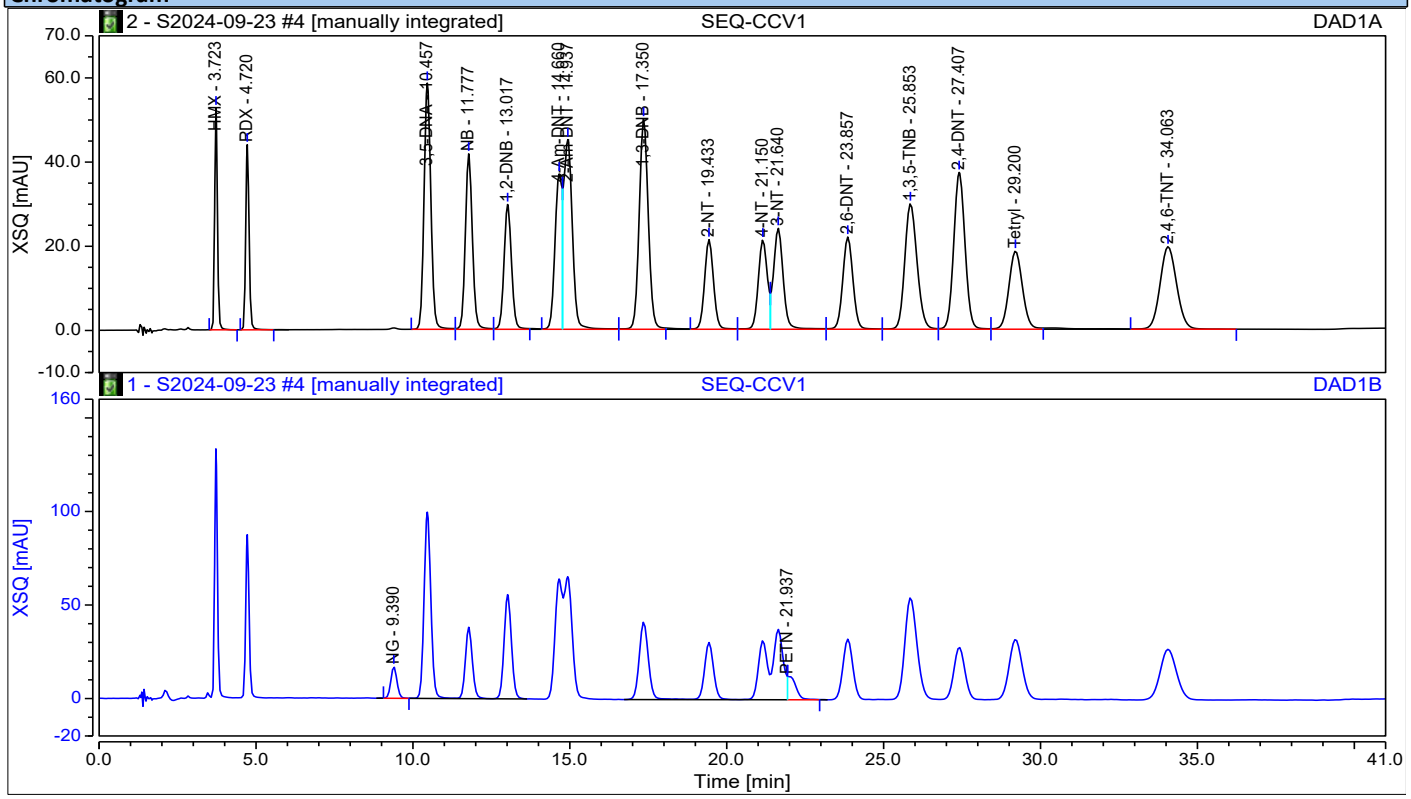
Instrument:
Sequence:S2024-09-23

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CCV1**	*Instrument:*	**Statler**
Vial Number:	**4**	*Run Time (min):*	**41.00**
Injection Type:	**Check Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**23/Sep/2024 09:36**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**24/Sep/2024 08:14**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.390	3.8651	16.906	50.08	57.62	870.4630
2	PETN	21.937	3.8533	12.433	49.92	42.38	897.1406
1	HMX	3.723	5.3996	52.748	3.25	9.55	831.8265
2	RDX	4.720	5.4658	43.984	3.29	7.96	826.1107
3	3,5-DNA	10.457	14.6443	58.491	8.80	10.59	850.5582
4	NB	11.777	10.8382	41.696	6.51	7.55	842.5935
5	1,2-DNB	13.017	8.1975	29.654	4.93	5.37	892.4210
6	4-Am-DNT	14.660	9.4283	36.905	5.67	6.68	850.9589
7	2-Am-DNT	14.937	14.3634	45.071	8.63	8.16	855.6910
8	1,3-DNB	17.350	16.7430	49.933	10.06	9.04	845.7412
9	2-NT	19.433	7.0459	21.307	4.23	3.86	846.4097
10	4-NT	21.150	7.0895	21.240	4.26	3.85	846.4020
11	3-NT	21.640	8.5801	24.013	5.16	4.35	847.1207
12	2,6-DNT	23.857	8.2534	21.915	4.96	3.97	833.5667
13	1,3,5-TNB	25.853	13.5259	29.860	8.13	5.41	862.4615
14	2,4-DNT	27.407	15.5088	37.262	9.32	6.75	859.6313
15	Tetryl	29.200	9.2919	18.577	5.58	3.36	848.0875
16	2,4,6-TNT	34.063	12.0042	19.610	7.21	3.55	863.2198
Total:			**174.098**	**581.606**	**200.000**	**200.000**	

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CONTINUING CALIBRATION VERIFICATION

EPA 8330B

Laboratory:	APPL, LLC	Work Order:	24I0132
Client:	AECOM	Project:	Wingate 60517380 Task 3
Instrument ID:	STATLER	Calibration:	2420012
Lab File ID:	S2024-09-23-012	Calibration Date:	05/16/24 08:00
Sequence:	SD03891	Injection Date:	09/23/24
Lab Sample ID:	SD03891-CCV2	Injection Time:	15:16

		CONC. (ng/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	AVG	1000	847	0.0634132	0.053703		-15	20
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	AVG	1000	836	5.322893E-02	0.044489		-16	20
1,3,5-TRINITROBENZENE	AVG	1000	857	0.0346204	0.02966		-14	20
1,3-DINITROBENZENE	AVG	1000	843	5.905443E-02	0.049791		-16	20
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	AVG	1000	842	2.189713E-02	0.018453		-16	20
NITROBENZENE	AVG	1000	831	4.948757E-02	0.041106		-17	20
2,4,6-TRINITROTOLUENE	AVG	1000	858	0.0227055	0.019484		-14	20
4-AMINO-2,6-DINITROTOLUENE	AVG	1000	845	4.338403E-02	0.03664		-16	20
2-AMINO-4,6-DINITROTOLUENE	AVG	1000	851	5.266023E-02	0.044814		-15	20
2,4-DINITROTOLUENE	AVG	1000	856	4.334467E-02	0.037114		-14	20
2,6-DINITROTOLUENE	AVG	1000	824	0.0263017	0.021671		-18	20
2-NITROTOLUENE	AVG	1000	832	2.516953E-02	0.020953		-17	20
3-NITROTOLUENE	AVG	1000	834	0.0283433	0.023641		-17	20
4-NITROTOLUENE	AVG	1000	835	2.507787E-02	0.020944		-17	20
NITROGLYCERIN	AVG	1000	865	1.943387E-02	0.016806		-14	20
PENTAERYTHRITOL TETRANITRATE	AVG	1000	896	1.384317E-02	0.01242		-10	20
1,2-DINITROBENZENE	AVG	1000	888	0.0332162	0.029523		-11	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

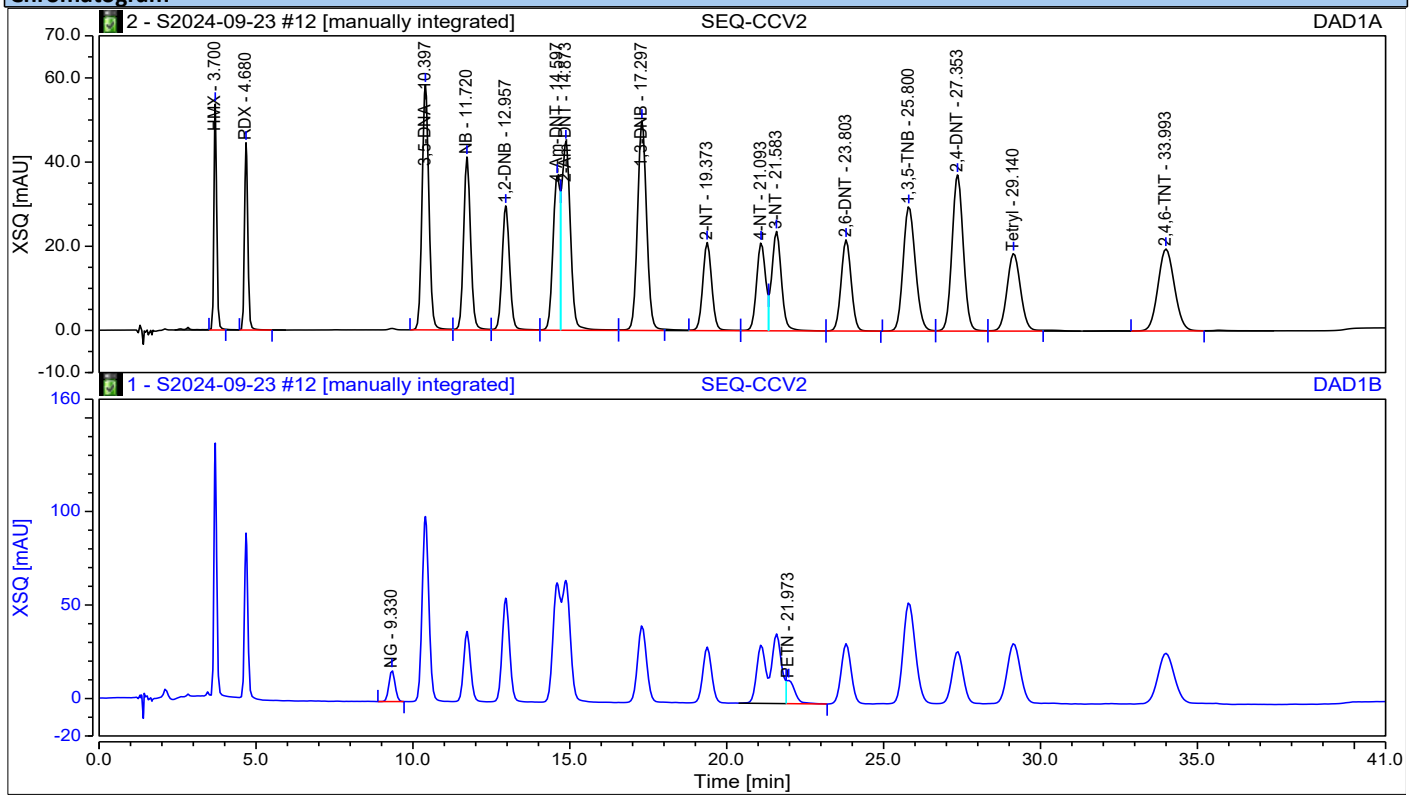
Instrument:
Sequence:S2024-09-23

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CCV2**	*Instrument:*	**Statler**
Vial Number:	**12**	*Run Time (min):*	**41.00**
Injection Type:	**Check Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**23/Sep/2024 15:16**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**24/Sep/2024 08:14**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.330	3.7916	16.806	48.89	57.50	865.2966
2	PETN	21.973	3.9631	12.420	51.11	42.50	896.2254
1	HMX	3.700	5.4162	53.703	3.28	9.76	846.8757
2	RDX	4.680	5.4600	44.489	3.30	8.09	835.5814
3	3,5-DNA	10.397	14.5857	58.217	8.82	10.58	846.5757
4	NB	11.720	10.6928	41.106	6.47	7.47	830.6740
5	1,2-DNB	12.957	8.2336	29.523	4.98	5.37	888.4822
6	4-Am-DNT	14.597	9.4827	36.640	5.74	6.66	844.8542
7	2-Am-DNT	14.873	14.2714	44.814	8.63	8.15	850.8171
8	1,3-DNB	17.297	16.7499	49.791	10.13	9.05	843.3366
9	2-NT	19.373	6.9783	20.953	4.22	3.81	832.3288
10	4-NT	21.093	6.9802	20.944	4.22	3.81	834.6256
11	3-NT	21.583	8.4248	23.641	5.10	4.30	834.0076
12	2,6-DNT	23.803	8.0568	21.671	4.87	3.94	824.2933
13	1,3,5-TNB	25.800	13.4158	29.660	8.12	5.39	856.6983
14	2,4-DNT	27.353	15.4662	37.114	9.36	6.75	856.2150
15	Tetryl	29.140	9.2100	18.453	5.57	3.35	842.4253
16	2,4,6-TNT	33.993	11.8599	19.484	7.18	3.54	857.6965
Total:			**173.039**	**579.431**	**200.000**	**200.000**	

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CONTINUING CALIBRATION VERIFICATION

EPA 8330B

Laboratory:	APPL, LLC	Work Order:	24I0132
Client:	AECOM	Project:	Wingate 60517380 Task 3
Instrument ID:	Waldorf	Calibration:	2433019
Lab File ID:	W2024-09-24-004	Calibration Date:	08/14/24 07:00
Sequence:	SD03904	Injection Date:	09/24/24
Lab Sample ID:	SD03904-CCV1	Injection Time:	12:56

		CONC. (ng/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	LRI	1000	918	0.2047651	0.177605		-8.2	20
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	LRI	1000	889	0.1206658	0.107971		-11.1	20
1,3,5-TRINITROBENZENE	LRI	1000	922	0.2013287	0.197703		-7.8	20
1,3-DINITROBENZENE	LRI	1000	900	0.1988807	0.182154		-10.0	20
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	LRI	1000	906	6.282733E-02	0.073806		-9.4	20
NITROBENZENE	LRI	1000	878	9.565573E-02	0.082098		-12.2	20
2,4,6-TRINITROTOLUENE	LRI	1000	853	0.110253	0.092345		-14.7	20
4-AMINO-2,6-DINITROTOLUENE	LRI	1000	850	0.0887477	0.075712		-15.0	20
2-AMINO-4,6-DINITROTOLUENE	LRI	1000	830	0.1119249	0.089625		-17.0	20
2,4-DINITROTOLUENE	LRI	1000	843	0.1438011	0.121196		-15.7	20
2,6-DINITROTOLUENE	LRI	1000	855	0.0834595	0.071239		-14.5	20
2-NITROTOLUENE	LRI	1000	855	7.440527E-02	0.063754		-14.5	20
3-NITROTOLUENE	LRI	1000	910	0.0643549	0.058393		-9.0	20
4-NITROTOLUENE	LRI	1000	901	6.854373E-02	0.061		-9.9	20
NITROGLYCERIN	LRI	1000	914	0.0339652	0.029384		-8.6	20
PENTAERYTHRITOL TETRANITRATE	LRI	1000	973	2.405293E-02	0.021558		-2.7	20
1,2-DINITROBENZENE	LRI	1000	918	0.0942839	0.087302		-8.2	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

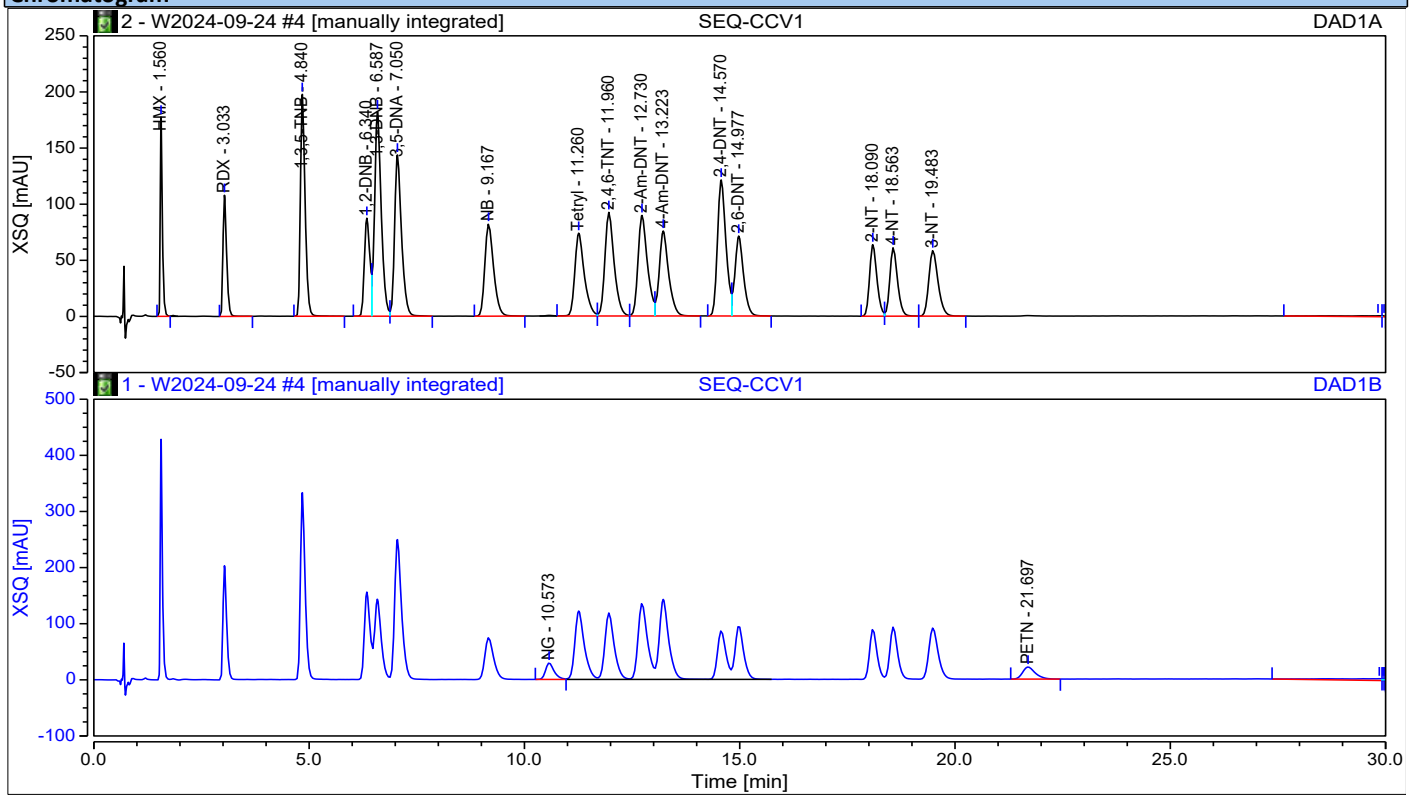
* Values outside of QC limits

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CCV1**	*Instrument:*	**Waldorf**
Vial Number:	**4**	*Run Time (min):*	**30.00**
Injection Type:	**Check Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**24/Sep/2024 12:56**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**24/Sep/2024 15:47**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.573	6.8288	29.384	36.79	48.42	913.6874
2	PETN	21.697	7.3685	21.558	39.70	35.52	973.2078
1	HMX	1.560	10.0791	177.605	3.29	10.53	917.5228
2	RDX	3.033	10.6150	107.971	3.47	6.40	888.5818
3	1,3,5-TNB	4.840	25.0096	197.703	8.17	11.72	921.9610
4	1,2-DNB	6.340	12.8677	87.302	4.20	5.17	918.3774
5	1,3-DNB	6.587	32.4373	182.154	10.60	10.80	899.5444
6	3,5-DNA	7.050	26.7586	143.671	8.74	8.52	886.4675
7	NB	9.167	19.4868	82.098	6.37	4.87	877.9677
8	Tetryl	11.260	18.8142	73.806	6.15	4.37	906.3594
9	2,4,6-TNT	11.960	23.0371	92.345	7.53	5.47	852.9680
10	2-Am-DNT	12.730	22.6718	89.625	7.41	5.31	829.8921
11	4-Am-DNT	13.223	19.1343	75.712	6.25	4.49	849.5129
12	2,4-DNT	14.570	27.7207	121.196	9.06	7.18	843.4294
13	2,6-DNT	14.977	16.4831	71.239	5.38	4.22	854.6467
14	2-NT	18.090	12.6847	63.754	4.14	3.78	854.5074
15	4-NT	18.563	12.7214	61.000	4.16	3.62	901.1286
16	3-NT	19.483	14.6182	58.393	4.78	3.46	910.4488
Total:			**319.337**	**1736.516**	**176.164**	**183.844**	

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CONTINUING CALIBRATION VERIFICATION

EPA 8330B

Laboratory:	APPL, LLC	Work Order:	24I0132
Client:	AECOM	Project:	Wingate 60517380 Task 3
Instrument ID:	Waldorf	Calibration:	2433019
Lab File ID:	W2024-09-24-007	Calibration Date:	08/14/24 07:00
Sequence:	SD03904	Injection Date:	09/24/24
Lab Sample ID:	SD03904-CCV2	Injection Time:	14:31

		CONC. (ng/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	LRI	1000	917	0.2047651	0.177445		-8.3	20
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	LRI	1000	887	0.1206658	0.107779		-11.3	20
1,3,5-TRINITROBENZENE	LRI	1000	921	0.2013287	0.197511		-7.9	20
1,3-DINITROBENZENE	LRI	1000	896	0.1988807	0.181497		-10.4	20
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	LRI	1000	901	6.282733E-02	0.073371		-9.9	20
NITROBENZENE	LRI	1000	874	9.565573E-02	0.081715		-12.6	20
2,4,6-TRINITROTOLUENE	LRI	1000	856	0.110253	0.092698		-14.4	20
4-AMINO-2,6-DINITROTOLUENE	LRI	1000	854	0.0887477	0.076086		-14.6	20
2-AMINO-4,6-DINITROTOLUENE	LRI	1000	834	0.1119249	0.09009		-16.6	20
2,4-DINITROTOLUENE	LRI	1000	850	0.1438011	0.122212		-15.0	20
2,6-DINITROTOLUENE	LRI	1000	859	0.0834595	0.071606		-14.1	20
2-NITROTOLUENE	LRI	1000	856	7.440527E-02	0.063857		-14.4	20
3-NITROTOLUENE	LRI	1000	905	0.0643549	0.058057		-9.5	20
4-NITROTOLUENE	LRI	1000	900	6.854373E-02	0.06094		-10.0	20
NITROGLYCERIN	LRI	1000	906	0.0339652	0.029147		-9.4	20
PENTAERYTHRITOL TETRANITRATE	LRI	1000	974	2.405293E-02	0.021571		-2.6	20
1,2-DINITROBENZENE	LRI	1000	913	0.0942839	0.086823		-8.7	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

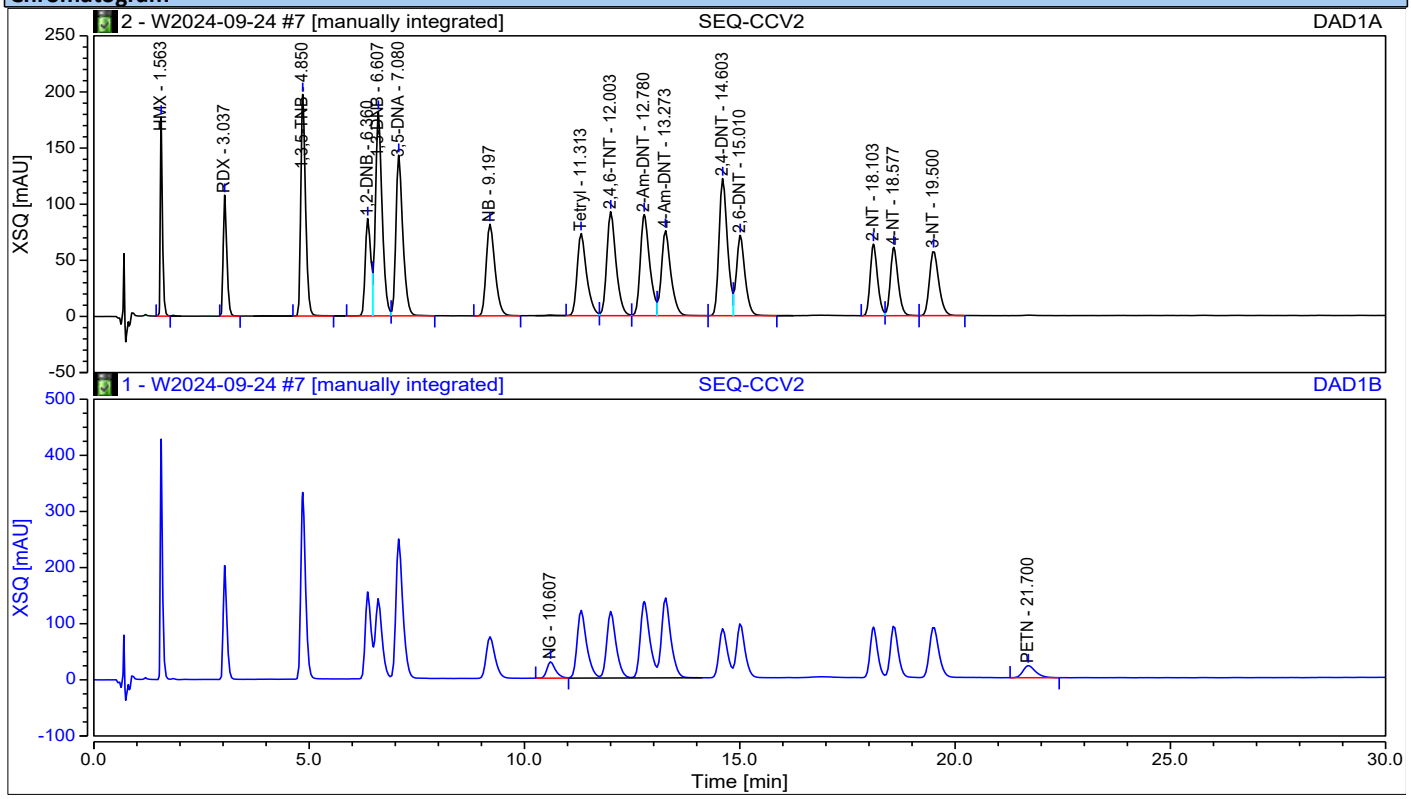
* Values outside of QC limits

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CCV2**	*Instrument:*	**Waldorf**
Vial Number:	**7**	*Run Time (min):*	**30.00**
Injection Type:	**Check Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**24/Sep/2024 14:31**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**24/Sep/2024 15:47**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.607	6.7776	29.147	47.90	57.47	906.2872
2	PETN	21.700	7.3721	21.571	52.10	42.53	973.8232
1	HMX	1.563	10.0841	177.445	3.30	10.53	916.6562
2	RDX	3.037	10.5376	107.779	3.45	6.40	887.0053
3	1,3,5-TNB	4.850	25.1190	197.511	8.22	11.72	921.0565
4	1,2-DNB	6.360	12.8831	86.823	4.22	5.15	913.4051
5	1,3-DNB	6.607	32.5715	181.497	10.66	10.77	896.3172
6	3,5-DNA	7.080	26.7965	143.144	8.77	8.50	883.2235
7	NB	9.197	19.4731	81.715	6.37	4.85	873.9106
8	Tetryl	11.313	18.7695	73.371	6.14	4.35	901.1188
9	2,4,6-TNT	12.003	23.1181	92.698	7.57	5.50	856.1949
10	2-Am-DNT	12.780	22.7333	90.090	7.44	5.35	834.1666
11	4-Am-DNT	13.273	19.2094	76.086	6.29	4.52	853.7451
12	2,4-DNT	14.603	27.7869	122.212	9.10	7.25	850.4141
13	2,6-DNT	15.010	16.5373	71.606	5.41	4.25	858.9970
14	2-NT	18.103	12.6429	63.857	4.14	3.79	855.8658
15	4-NT	18.577	12.7128	60.940	4.16	3.62	900.2474
16	3-NT	19.500	14.5058	58.057	4.75	3.45	905.2523
Total:			**319.631**	**1735.547**	**200.000**	**200.000**	

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QUALITY CONTROL RAW DATA

ANALYSIS DATA SHEET

Blank

Laboratory:	APPL, LLC			Work Order:	24I0132
Client:	AECOM		Project:	Wingate 60517380 Task 3	
Matrix:	Solid	Laboratory ID:	BDI0344-BLK1	File ID:	S2024-09-23-005
Sampled:		Prepared:	09/19/24 11:10	Analyzed:	09/23/24 10:18
Solids:		Preparation:	EPA 8330B	Dilution:	1
Batch:	BDI0344	Sequence:	SD03891	Calibration:	2420012
Instrument:	STATLER				
Column:	1				

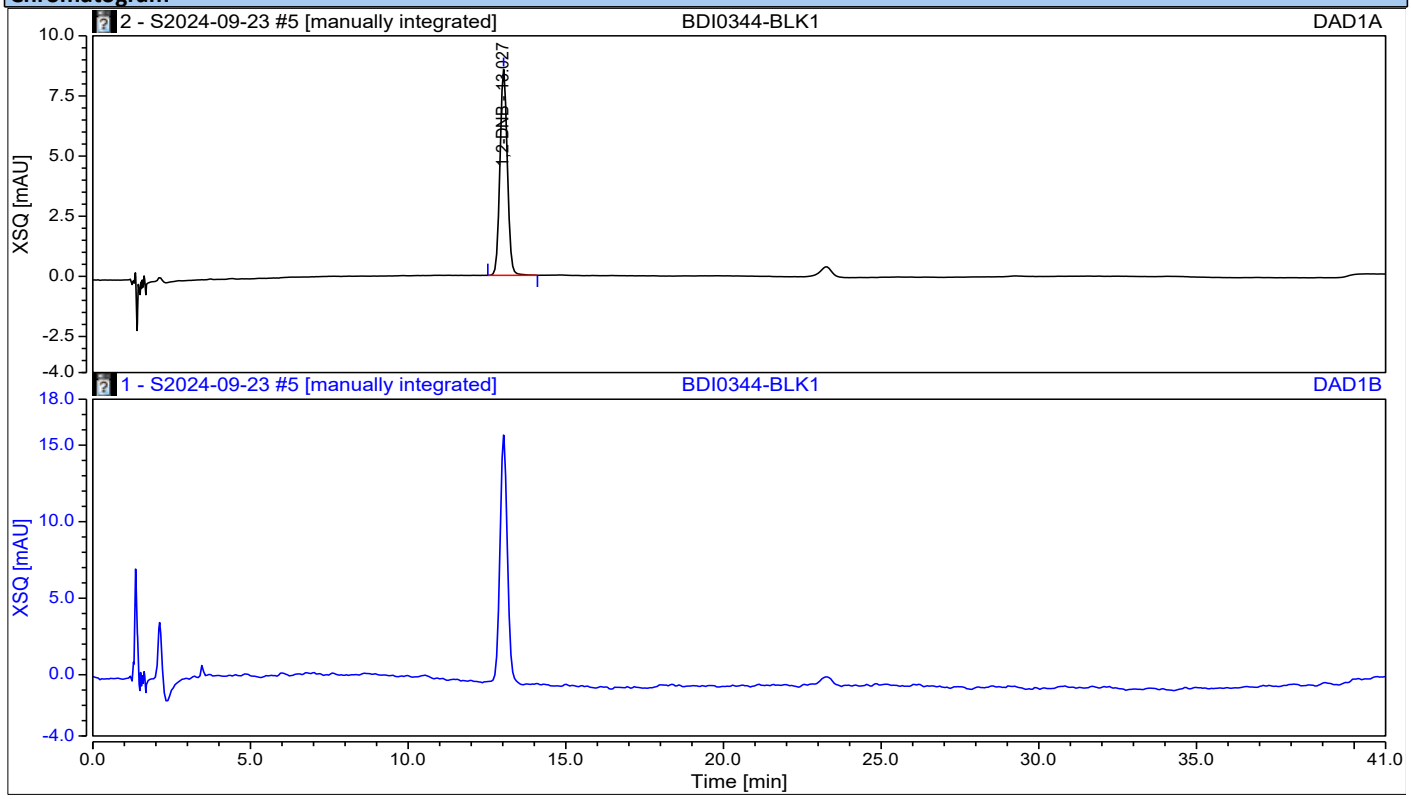
COMPOUND	CONC. (mg/kg)	LOQ	LOD	DL	Q
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.074 U	0.50	0.074	0.037	U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.074 U	0.50	0.074	0.025	U
1,3,5-TRINITROBENZENE	0.074 U	0.50	0.074	0.013	U
1,3-DINITROBENZENE	0.074 U	0.50	0.074	0.022	U
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	0.074 U	0.50	0.074	0.037	U
NITROBENZENE	0.074 U	0.50	0.074	0.028	U
2,4,6-TRINITROTOLUENE	0.074 U	0.50	0.074	0.031	U
4-AMINO-2,6-DINITROTOLUENE	0.074 U	0.50	0.074	0.034	U
2-AMINO-4,6-DINITROTOLUENE	0.074 U	0.50	0.074	0.034	U
2,4-DINITROTOLUENE	0.074 U	0.50	0.074	0.028	U
2,6-DINITROTOLUENE	0.074 U	0.50	0.074	0.031	U
2-NITROTOLUENE	0.074 U	0.50	0.074	0.037	U
3-NITROTOLUENE	0.074 U	0.50	0.074	0.037	U
4-NITROTOLUENE	0.074 U	0.50	0.074	0.037	U
NITROGLYCERIN	0.15 U	0.50	0.15	0.060	U
PENTAERYTHRITOL TETRANITRATE	0.25 U	2.5	0.25	0.11	U

Chromatogram and Results

Injection Details

Injection Name:	**BDI0344-BLK1**	*Instrument:*	**Statler**
Vial Number:	**5**	*Run Time (min):*	**41.00**
Injection Type:	**Unknown**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**23/Sep/2024 10:18**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**24/Sep/2024 08:14**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
n.a.	NG	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	PETN	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	HMX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	RDX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3,5-DNA	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	NB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	1,2-DNB	13.027	2.3220	8.566	100.00	100.00	257.8024
n.a.	4-Am-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2-Am-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	1,3-DNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	4-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2,6-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	1,3,5-TNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2,4-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Tetryl	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2,4,6-TNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**2.322**	**8.566**	**100.000**	**100.000**	

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ANALYSIS DATA SHEET

LCS

Laboratory:	APPL, LLC			Work Order:	24I0132
Client:	AECOM		Project:	Wingate 60517380 Task 3	
Matrix:	Solid	Laboratory ID:	BDI0344-BS1	File ID:	S2024-09-23-007
Sampled:		Prepared:	09/19/24 11:10	Analyzed:	09/23/24 11:44
Solids:		Preparation:	EPA 8330B	Dilution:	1
Batch:	BDI0344	Sequence:	SD03891	Calibration:	2420012
Instrument:	STATLER				
Column:	1				

COMPOUND	CONC. (mg/kg)	LOQ	DL	Q
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	2.08	0.50	0.037	
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	2.13	0.50	0.025	
1,3,5-TRINITROBENZENE	2.03	0.50	0.013	
1,3-DINITROBENZENE	2.12	0.50	0.022	
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	1.36	0.50	0.037	
NITROBENZENE	2.16	0.50	0.028	
2,4,6-TRINITROTOLUENE	2.15	0.50	0.031	
4-AMINO-2,6-DINITROTOLUENE	2.15	0.50	0.034	
2-AMINO-4,6-DINITROTOLUENE	2.16	0.50	0.034	
2,4-DINITROTOLUENE	2.13	0.50	0.028	
2,6-DINITROTOLUENE	2.08	0.50	0.031	
2-NITROTOLUENE	2.15	0.50	0.037	
3-NITROTOLUENE	2.15	0.50	0.037	
4-NITROTOLUENE	2.13	0.50	0.037	
NITROGLYCERIN	2.18	0.50	0.060	
PENTAERYTHRITOL TETRANITRATE	1.95	2.5	0.11	J

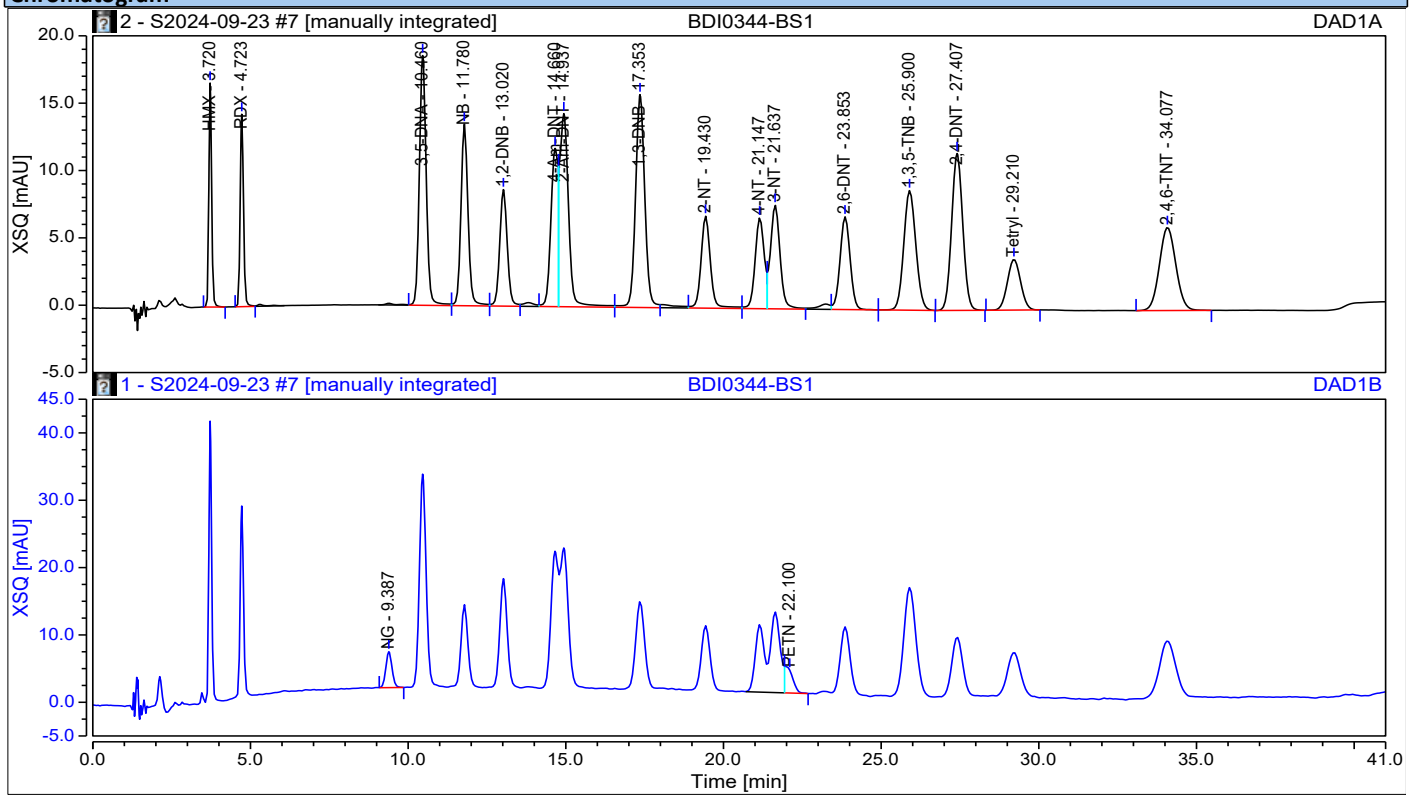
Instrument:
Sequence:S2024-09-23

Chromatogram and Results

Injection Details

Injection Name:	**BDI0344-BS1**	*Instrument:*	**Statler**
Vial Number:	**7**	*Run Time (min):*	**41.00**
Injection Type:	**Unknown**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**23/Sep/2024 11:44**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**24/Sep/2024 08:14**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.387	1.2193	5.338	52.18	61.06	274.8251
2	PETN	22.100	1.1172	3.404	47.82	38.94	245.6513
1	HMX	3.720	1.6799	16.632	3.28	9.66	262.2880
2	RDX	4.723	1.7358	14.288	3.39	8.30	268.3594
3	3,5-DNA	10.460	4.6414	18.543	9.08	10.77	269.6422
4	NB	11.780	3.5012	13.488	6.85	7.84	272.5641
5	1,2-DNB	13.020	2.4006	8.650	4.69	5.03	260.3082
6	4-Am-DNT	14.660	3.0295	11.751	5.92	6.83	270.9512
7	2-Am-DNT	14.937	4.6233	14.336	9.04	8.33	272.1802
8	1,3-DNB	17.353	5.3406	15.803	10.44	9.18	267.6639
9	2-NT	19.430	2.3529	6.833	4.60	3.97	271.4410
10	4-NT	21.147	2.2520	6.749	4.40	3.92	268.9605
11	3-NT	21.637	2.7224	7.702	5.32	4.47	271.7217
12	2,6-DNT	23.853	2.5595	6.886	5.00	4.00	261.9269
13	1,3,5-TNB	25.900	3.9435	8.882	7.71	5.16	256.5340
14	2,4-DNT	27.407	4.7827	11.647	9.35	6.77	268.6919
15	Tetryl	29.210	1.8354	3.765	3.59	2.19	171.8854
16	2,4,6-TNT	34.077	3.7433	6.171	7.32	3.58	271.6339
Total:			**53.480**	**180.868**	**200.000**	**200.000**	

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ANALYSIS DATA SHEET

Matrix Spike

Laboratory:	APPL, LLC			Work Order:	24I0132
Client:	AECOM		Project:	Wingate 60517380 Task 3	
Matrix:	Solid	Laboratory ID:	BDI0344-MS1	File ID:	S2024-09-23-008
Sampled:		Prepared:	09/19/24 11:10	Analyzed:	09/23/24 12:26
Solids:		Preparation:	EPA 8330B	Dilution:	1
Batch:	BDI0344	Sequence:	SD03891	Calibration:	2420012
Instrument:	STATLER				
Column:	1				

COMPOUND	CONC. (mg/kg)	LOQ	DL	Q
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	2.06	0.49	0.037	
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	1.88	0.49	0.025	
1,3,5-TRINITROBENZENE	2.12	0.49	0.013	
1,3-DINITROBENZENE	2.11	0.49	0.022	
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	1.06	0.49	0.037	MS1
NITROBENZENE	2.15	0.49	0.028	
2,4,6-TRINITROTOLUENE	2.06	0.49	0.031	
4-AMINO-2,6-DINITROTOLUENE	2.14	0.49	0.034	
2-AMINO-4,6-DINITROTOLUENE	2.18	0.49	0.034	
2,4-DINITROTOLUENE	2.15	0.49	0.028	
2,6-DINITROTOLUENE	2.08	0.49	0.031	
2-NITROTOLUENE	2.15	0.49	0.037	
3-NITROTOLUENE	2.15	0.49	0.037	
4-NITROTOLUENE	2.13	0.49	0.037	
NITROGLYCERIN	2.17	0.49	0.060	
PENTAERYTHRITOL TETRANITRATE	2.23	2.5	0.11	J

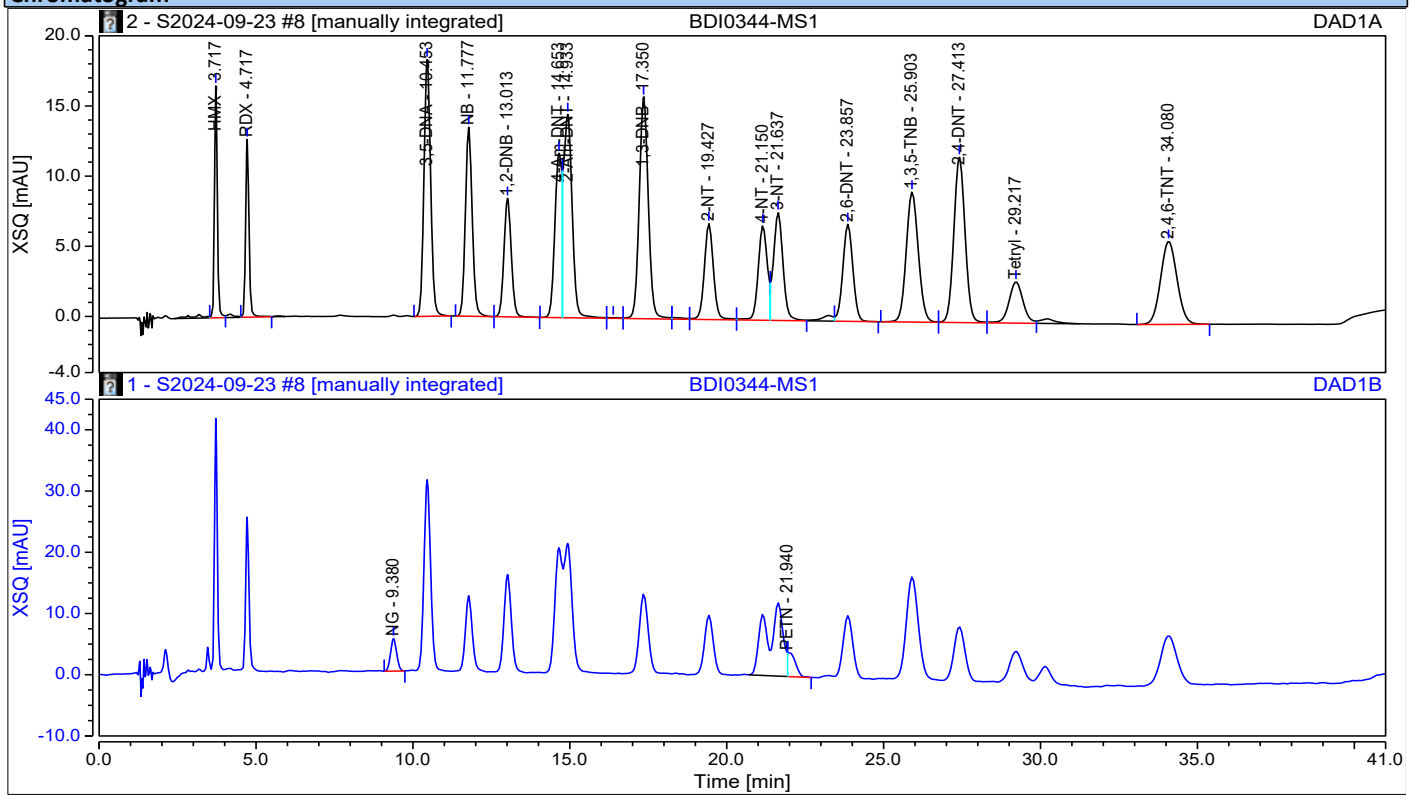
Instrument:
Sequence:S2024-09-23

Chromatogram and Results

Injection Details

Injection Name:	**BDI0344-MS1**	*Instrument:*	**Statler**
Vial Number:	**8**	*Run Time (min):*	**41.00**
Injection Type:	**Unknown**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**23/Sep/2024 12:26**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**24/Sep/2024 08:14**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.380	1.1903	5.330	51.59	57.70	274.4320
2	PETN	21.940	1.1169	3.908	48.41	42.30	281.9707
1	HMX	3.717	1.7092	16.527	3.39	9.74	260.6236
2	RDX	4.717	1.5774	12.671	3.13	7.47	237.9930
3	3,5-DNA	10.453	4.4855	18.294	8.91	10.78	266.0295
4	NB	11.777	3.4078	13.471	6.77	7.94	272.2235
5	1,2-DNB	13.013	2.2914	8.449	4.55	4.98	254.2550
6	4-Am-DNT	14.653	2.9897	11.717	5.94	6.91	270.1788
7	2-Am-DNT	14.933	4.5403	14.494	9.02	8.54	275.1816
9	1,3-DNB	17.350	5.2881	15.764	10.50	9.29	267.0083
11	2-NT	19.427	2.2998	6.848	4.57	4.04	272.0184
12	4-NT	21.150	2.2611	6.745	4.49	3.98	268.7759
13	3-NT	21.637	2.7008	7.698	5.36	4.54	271.5774
14	2,6-DNT	23.857	2.5632	6.915	5.09	4.08	263.0042
15	1,3,5-TNB	25.903	4.1502	9.267	8.24	5.46	267.6663
16	2,4-DNT	27.413	4.8912	11.785	9.71	6.95	271.8717
17	Tetryl	29.217	1.5279	2.943	3.03	1.73	134.3583
18	2,4,6-TNT	34.080	3.6094	5.927	7.17	3.49	260.9262
Total:			**52.600**	**178.753**	**199.860**	**199.908**	

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ANALYSIS DATA SHEET

Matrix Spike Dup

Laboratory:	APPL, LLC			Work Order:	24I0132
Client:	AECOM		Project:	Wingate 60517380 Task 3	
Matrix:	Solid	Laboratory ID:	BDI0344-MSD1	File ID:	S2024-09-23-009
Sampled:		Prepared:	09/19/24 11:10	Analyzed:	09/23/24 13:09
Solids:		Preparation:	EPA 8330B	Dilution:	1
Batch:	BDI0344	Sequence:	SD03891	Calibration:	2420012
Instrument:	STATLER				
Column:	1				

COMPOUND	CONC. (mg/kg)	LOQ	DL	Q
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	2.07	0.49	0.037	
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	1.88	0.49	0.025	
1,3,5-TRINITROBENZENE	2.12	0.49	0.013	
1,3-DINITROBENZENE	2.10	0.49	0.022	
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	1.18	0.49	0.037	MS1
NITROBENZENE	2.20	0.49	0.028	
2,4,6-TRINITROTOLUENE	2.18	0.49	0.031	
4-AMINO-2,6-DINITROTOLUENE	2.13	0.49	0.034	
2-AMINO-4,6-DINITROTOLUENE	2.17	0.49	0.034	
2,4-DINITROTOLUENE	2.15	0.49	0.028	
2,6-DINITROTOLUENE	2.08	0.49	0.031	
2-NITROTOLUENE	2.13	0.49	0.037	
3-NITROTOLUENE	2.15	0.49	0.037	
4-NITROTOLUENE	2.12	0.49	0.037	
NITROGLYCERIN	2.18	0.49	0.060	
PENTAERYTHRITOL TETRANITRATE	2.30	2.5	0.11	J

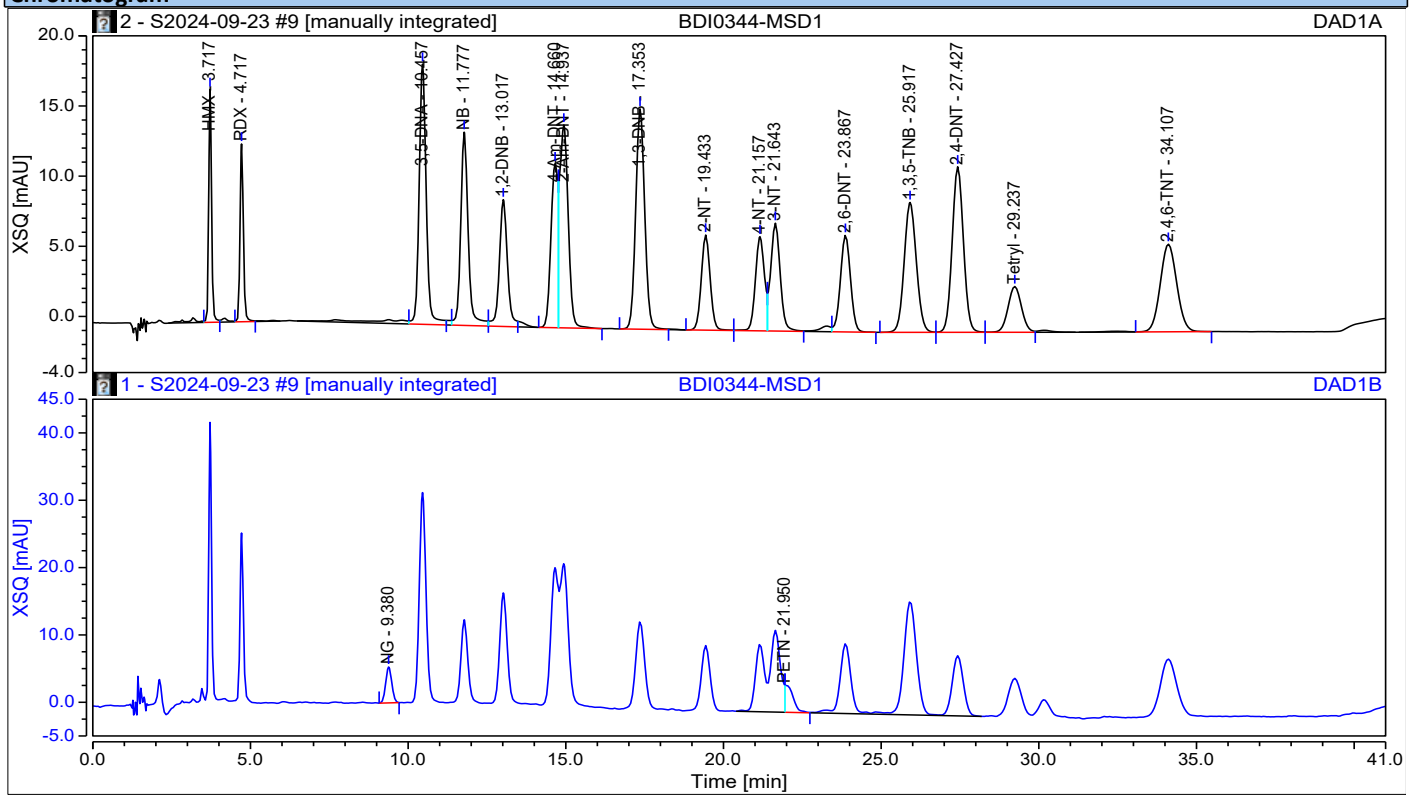
Instrument:
Sequence:S2024-09-23

Chromatogram and Results

Injection Details

Injection Name:	**BDI0344-MSD1**	*Instrument:*	**Statler**
Vial Number:	**9**	*Run Time (min):*	**41.00**
Injection Type:	**Unknown**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**23/Sep/2024 13:09**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**24/Sep/2024 08:14**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.380	1.1957	5.341	50.08	57.04	274.9981
2	PETN	21.950	1.1917	4.023	49.92	42.96	290.2686
1	HMX	3.717	1.7083	16.603	3.33	9.70	261.8185
2	RDX	4.717	1.5586	12.672	3.04	7.40	237.9962
3	3,5-DNA	10.457	4.8011	18.545	9.35	10.84	269.6696
4	NB	11.777	3.7882	13.774	7.38	8.05	278.3500
5	1,2-DNB	13.017	2.6741	9.038	5.21	5.28	271.9854
6	4-Am-DNT	14.660	2.9601	11.689	5.76	6.83	269.5251
7	2-Am-DNT	14.937	4.5059	14.462	8.78	8.45	274.5762
8	1,3-DNB	17.353	5.2034	15.704	10.13	9.18	265.9915
9	2-NT	19.433	2.2209	6.782	4.33	3.96	269.4236
10	4-NT	21.157	2.2258	6.714	4.33	3.92	267.5331
11	3-NT	21.643	2.6891	7.688	5.24	4.49	271.2036
12	2,6-DNT	23.867	2.5626	6.896	4.99	4.03	262.2943
13	1,3,5-TNB	25.917	4.1436	9.260	8.07	5.41	267.4543
14	2,4-DNT	27.427	4.8907	11.799	9.52	6.89	272.1952
15	Tetryl	29.237	1.6175	3.264	3.15	1.91	149.0278
16	2,4,6-TNT	34.107	3.7968	6.246	7.39	3.65	274.9347
Total:			**53.734**	**180.498**	**200.000**	**200.000**	

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PREPARATION BATCH SUMMARY

EPA 8330B

Laboratory:	APPL, LLC			Work Order:	24I0132
Client:	AECOM			Project:	Wingate 60517380 Task 3
Batch:	BDI0344	Batch Matrix:	Solid	Preparation:	EPA 8330B

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT g	FINAL VOL. mL
P2-ARROYO-0003	24I0132-01	09/19/24 11:10	10.07	80.00
P2-ARROYO-0003	24I0132-01RE1	09/19/24 11:10	10.07	80.00
P2-ARROYO-0004	24I0132-02	09/19/24 11:10	10.09	80.00
P2-ARROYO-0004	24I0132-02RE1	09/19/24 11:10	10.09	80.00
Blank	BDI0344-BLK1	09/19/24 11:10	10.09	80.00
LCS	BDI0344-BS1	09/19/24 11:10	10.09	80.00
P2-ARROYO-0004	BDI0344-MS1	09/19/24 11:10	10.11	80.00
P2-ARROYO-0004	BDI0344-MSD1	09/19/24 11:10	10.11	80.00

PREPARATION BENCH SHEET
Organics

Print Date/Time: 09/25/2024 9:00 am

BDI0344

(Continued)

Matrix: Solid

Prepared using: HPLC - EPA 8330B

Lab Number	Sample and Source ID ID Confirmed By:		Extract by	Initial (g)	Final (mL)	ul Spike 1	ul Spike 2	ul Surr 1	ul Surr 2	pH	Extraction Comments
24I0132-01 A	P2-ARROYO-0003	G	09/28/24	10.07	80			200			
24I0132-01RE1 A	P2-ARROYO-0003	G	09/28/24	10.07	80			200			Added 9/25/2024 by KMY1
24I0132-02 A	P2-ARROYO-0004	G	09/28/24	10.09	80			200			
24I0132-02RE1 A	P2-ARROYO-0004	G	09/28/24	10.09	80			200			Added 9/25/2024 by KMY1
BDI0344-BLK1	Blank			10.09	80			200			
BDI0344-BS1	LCS			10.09	80	200		200			
BDI0344-MS1	Matrix Spike [24I0132-02]			10.11	80	200		200			
BDI0344-MSD1	Matrix Spike Dup [24I0132-02]			10.11	80	200		200			

Analyses

8330B DOD

Spiking Solution(s)

24G0171 8330 - Spike 100ug/mL 7/9/24

Surrogate Solution(s)

24H0339 8330 - 1,2-DNB SUR 100ug/mL 8/13/24

Start Date/Time _____

Stop Date/Time _____

Equipment Used:

Balances: EB1

Hotblock/Plate:

Sonic Horns:

Pipettes:

Water Baths:

Ovens:

Desiccator:

pH Probes:

Reagents

Standard	Description	LotNum
24H0153	Acetonitrile EH784-US	EH784-US

atch Comments:
piked By: AJV/SMW
tart Time/Date: 11:10 9/19/24
top Time/Date:8:58 9/19/24

Spiking Witnessed By _____ Date _____ Preparation Reviewed By _____ Date _____ Extracts Received By _____ Date _____

INJECTION LOG - ANALYSIS SEQUENCE SUMMARY

EPA 8330B

Laboratory:	APPL, LLC	SDG:	24I0132
Client:	AECOM	Project:	Wingate 60517380 Task 3
Sequence:	SD01815	Instrument:	STATLER
Calibration:	2420012		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	SD01815-CAL1	S2024-05-16-004	05/16/24 14:47
Cal Standard	SD01815-CAL2	S2024-05-16-005	05/16/24 15:29
Cal Standard	SD01815-CAL3	S2024-05-16-006	05/16/24 16:12
Cal Standard	SD01815-CAL4	S2024-05-16-007	05/16/24 16:54
Cal Standard	SD01815-CAL5	S2024-05-16-008	05/16/24 17:37
Cal Standard	SD01815-CAL6	S2024-05-16-009	05/16/24 18:19
Secondary Cal Check	SD01815-SCV1	S2024-05-16-010	05/16/24 19:02

INJECTION LOG - ANALYSIS SEQUENCE SUMMARY

EPA 8330B

Laboratory:	APPL, LLC	SDG:	24I0132
Client:	AECOM	Project:	Wingate 60517380 Task 3
Sequence:	SD03246	Instrument:	Waldorf
Calibration:	2433019		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	SD03246-CAL1	W2024-08-14-017	08/14/24 17:32
Cal Standard	SD03246-CAL2	W2024-08-14-018	08/14/24 18:03
Cal Standard	SD03246-CAL3	W2024-08-14-019	08/14/24 18:35
Cal Standard	SD03246-CAL4	W2024-08-14-020	08/14/24 19:06
Cal Standard	SD03246-CAL5	W2024-08-14-021	08/14/24 19:38
Cal Standard	SD03246-CAL6	W2024-08-14-022	08/14/24 20:09
Secondary Cal Check	SD03246-SCV1	W2024-08-14-023	08/14/24 20:41

INJECTION LOG - ANALYSIS SEQUENCE SUMMARY

EPA 8330B

Laboratory:	APPL, LLC	SDG:	24I0132
Client:	AECOM	Project:	Wingate 60517380 Task 3
Sequence:	SD03891	Instrument:	STATLER
Calibration:	2420012		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	SD03891-CCV1	S2024-09-23-004	09/23/24 09:36
Blank	BDI0344-BLK1	S2024-09-23-005	09/23/24 10:18
LCS	BDI0344-BS1	S2024-09-23-007	09/23/24 11:44
P2-ARROYO-0004	BDI0344-MS1	S2024-09-23-008	09/23/24 12:26
P2-ARROYO-0004	BDI0344-MSD1	S2024-09-23-009	09/23/24 13:09
P2-ARROYO-0003	24I0132-01	S2024-09-23-010	09/23/24 13:51
P2-ARROYO-0004	24I0132-02	S2024-09-23-011	09/23/24 14:34
Calibration Check	SD03891-CCV2	S2024-09-23-012	09/23/24 15:16

INJECTION LOG - ANALYSIS SEQUENCE SUMMARY

EPA 8330B

Laboratory:	APPL, LLC	SDG:	24I0132
Client:	AECOM	Project:	Wingate 60517380 Task 3
Sequence:	SD03904	Instrument:	Waldorf
Calibration:	2433019		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	SD03904-CCV1	W2024-09-24-004	09/24/24 12:56
P2-ARROYO-0003	24I0132-01RE1	W2024-09-24-005	09/24/24 13:28
P2-ARROYO-0004	24I0132-02RE1	W2024-09-24-006	09/24/24 13:59
Calibration Check	SD03904-CCV2	W2024-09-24-007	09/24/24 14:31

Analytical Standards

List of Standards

23A0023	Parent
23E0027	Parent
23L0017	Parent
24D0385	Parent
24D0501	Parent
24D0600	Parent
24E0455	Parent
24E0456	Parent
24E0457	8330 - Cal 1 0.005ug/mL 05/16/24
24E0458	8330 - Cal 2 0.05ug/mL 05/16/24
24E0459	8330 - Cal 3 0.25ug/mL 05/16/24
24E0460	8330 - Cal 4 1.0ug/mL 05/16/24
24E0462	8330 - Cal 5 2.5ug/mL 05/16/24
24E0463	8330 - Cal 6 5.0ug/mL 05/16/24
24E0464	Parent
24E0466	8330 - SCV 1.0ug/mL 05/16/24
24G0088	Parent
24G0171	8330 - Spike 100ug/mL 7/9/24
24G0473	Parent
24G0475	8330 - CCV 1.0ug/mL 7/23/24
24H0339	8330 - 1,2-DNB SUR 100ug/mL 8/13/24
24H0394	Parent
24H0395	Parent
24H0396	Parent
24H0397	8330 - Cal 1 0.005ug/mL 08/14/24
24H0398	8330 - Cal 2 0.05ug/mL 08/14/24
24H0399	8330 - Cal 3 0.25ug/mL 08/14/24
24H0400	8330 - Cal 4 1.0ug/mL 08/14/24
24H0401	8330 - Cal 5 2.5ug/mL 08/14/24
24H0402	8330 - Cal 6 5.0ug/mL 08/14/24
24H0403	8330 - SCV 1.0ug/mL 08/14/24
24I0469	Parent
24I0470	8330 - CCV 1.0ug/mL 09/24/24

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ISO/IEC 17025 Accredited
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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 33204 **Lot No.:** A0191734

Description : 8330B Nitroaromatics and Nitramine Mix

8330B Nitroaromatics and Nitramine Mix Explosives by HPLC, EPA 8330B 1000µg/mL, Acetonitrile,1mL/ampul

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

Expiration Date : November 30, 2025 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	HMX	1,004.0 µg/mL	+/- 5.9635 µg/mL	Gravimetric
	CAS # 2691-41-0 (Lot 220927JLM)		+/- 55.0021 µg/mL	Unstressed
	Purity 99%		+/- 64.1379 µg/mL	Stressed
2	RDX	1,010.0 µg/mL	+/- 5.9991 µg/mL	Gravimetric
	CAS # 121-82-4 (Lot 080220JLM)		+/- 55.3308 µg/mL	Unstressed
	Purity 99%		+/- 64.5212 µg/mL	Stressed
3	1,3,5-Trinitrobenzene	1,008.0 µg/mL	+/- 5.9872 µg/mL	Gravimetric
	CAS # 99-35-4 (Lot A6TDK)		+/- 55.2213 µg/mL	Unstressed
	Purity 99%		+/- 64.3934 µg/mL	Stressed
4	1,3-Dinitrobenzene	1,008.0 µg/mL	+/- 5.9872 µg/mL	Gravimetric
	CAS # 99-65-0 (Lot 1-DXX-24-1)		+/- 55.2213 µg/mL	Unstressed
	Purity 99%		+/- 64.3934 µg/mL	Stressed
5	3,5-Dinitroaniline	1,010.0 µg/mL	+/- 5.9991 µg/mL	Gravimetric
	CAS # 618-87-1 (Lot 10311HS)		+/- 55.3308 µg/mL	Unstressed
	Purity 99%		+/- 64.5212 µg/mL	Stressed
6	Tetryl	1,008.0 µg/mL	+/- 5.9872 µg/mL	Gravimetric
	CAS # 479-45-8 (Lot 211028JLM)		+/- 55.2213 µg/mL	Unstressed
	Purity 99%		+/- 64.3934 µg/mL	Stressed
7	Nitrobenzene	1,006.0 µg/mL	+/- 5.9753 µg/mL	Gravimetric
	CAS # 98-95-3 (Lot 10224044)		+/- 55.1117 µg/mL	Unstressed
	Purity 99%		+/- 64.2657 µg/mL	Stressed

8	2,4,6-Trinitrotoluene		1,009.0	µg/mL	+/- 5.9932	µg/mL	Gravimetric
	CAS # 118-96-7	(Lot D11836200)			+/- 55.2761	µg/mL	Unstressed
	Purity 99%				+/- 64.4573	µg/mL	Stressed
9	Nitroglycerin		1,006.0	µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 55-63-0	(Lot 200507JLM)			+/- 55.1117	µg/mL	Unstressed
	Purity 99%				+/- 64.2657	µg/mL	Stressed
10	2-Amino-4,6-dinitrotoluene		1,010.0	µg/mL	+/- 5.9991	µg/mL	Gravimetric
	CAS # 35572-78-2	(Lot A210503-001)			+/- 55.3308	µg/mL	Unstressed
	Purity 99%				+/- 64.5212	µg/mL	Stressed
11	4-Amino-2,6-dinitrotoluene		1,010.0	µg/mL	+/- 5.9991	µg/mL	Gravimetric
	CAS # 19406-51-0	(Lot ER070908-01)			+/- 55.3308	µg/mL	Unstressed
	Purity 99%				+/- 64.5212	µg/mL	Stressed
12	2,4-Dinitrotoluene		1,009.0	µg/mL	+/- 5.9932	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)			+/- 55.2761	µg/mL	Unstressed
	Purity 99%				+/- 64.4573	µg/mL	Stressed
13	2,6-Dinitrotoluene		1,010.0	µg/mL	+/- 5.9991	µg/mL	Gravimetric
	CAS # 606-20-2	(Lot BCCG1833)			+/- 55.3308	µg/mL	Unstressed
	Purity 99%				+/- 64.5212	µg/mL	Stressed
14	2-Nitrotoluene		1,010.0	µg/mL	+/- 5.9991	µg/mL	Gravimetric
	CAS # 88-72-2	(Lot BCBZ7826)			+/- 55.3308	µg/mL	Unstressed
	Purity 99%				+/- 64.5212	µg/mL	Stressed
15	4-Nitrotoluene		1,009.0	µg/mL	+/- 5.9932	µg/mL	Gravimetric
	CAS # 99-99-0	(Lot BCCB0171)			+/- 55.2761	µg/mL	Unstressed
	Purity 99%				+/- 64.4573	µg/mL	Stressed
16	3-Nitrotoluene		1,009.0	µg/mL	+/- 5.9932	µg/mL	Gravimetric
	CAS # 99-08-1	(Lot 07329LG)			+/- 55.2761	µg/mL	Unstressed
	Purity 99%				+/- 64.4573	µg/mL	Stressed
17	PETN		1,009.0	µg/mL	+/- 5.9932	µg/mL	Gravimetric
	CAS # 78-11-5	(Lot 051108JLM)			+/- 55.2761	µg/mL	Unstressed
	Purity 99%				+/- 64.4573	µg/mL	Stressed

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

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

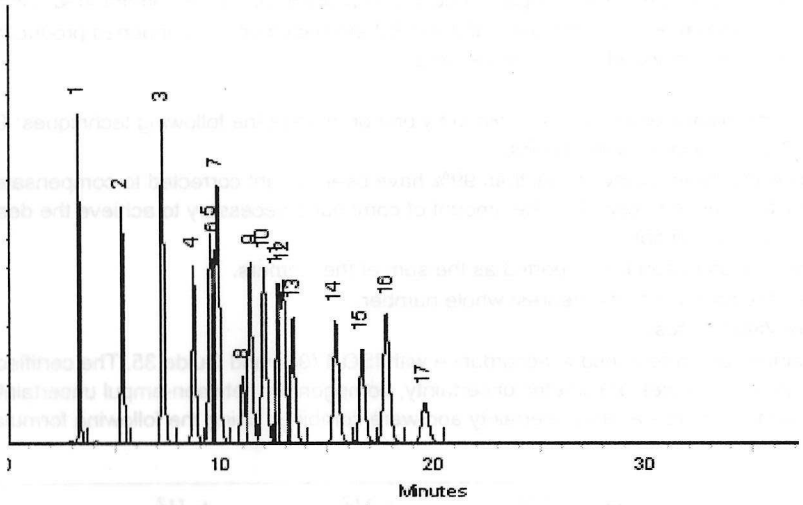
Flow Rate:
1.0 ml/min.

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

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm



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

Brittany Federinko - Operations Tech I

Date Mixed: 16-Nov-2022 **Balance:** 1128360905

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 18-Nov-2022

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 33204 **Lot No.:** A0188442

Description : 8330B Nitroaromatics and Nitramine Mix

8330B Nitroaromatics and Nitramine Mix Explosives by HPLC, EPA 8330B 1000µg/mL, Acetonitrile,1mL/ampul

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

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

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	HMX **CAS #** 2691-41-0 (Lot 210324JLM) **Purity** 99%	1,003.0 µg/mL	+/- 5.9575 µg/mL +/- 54.9474 µg/mL +/- 64.0740 µg/mL	Gravimetric Unstressed Stressed
2	RDX **CAS #** 121-82-4 (Lot 080220JLM) **Purity** 99%	1,004.0 µg/mL	+/- 5.9635 µg/mL +/- 55.0021 µg/mL +/- 64.1379 µg/mL	Gravimetric Unstressed Stressed
3	1,3,5-Trinitrobenzene **CAS #** 99-35-4 (Lot A6TDK) **Purity** 99%	1,008.0 µg/mL	+/- 5.9872 µg/mL +/- 55.2213 µg/mL +/- 64.3934 µg/mL	Gravimetric Unstressed Stressed
4	1,3-Dinitrobenzene **CAS #** 99-65-0 (Lot 1-DXX-24-1) **Purity** 99%	1,007.0 µg/mL	+/- 5.9813 µg/mL +/- 55.1665 µg/mL +/- 64.3295 µg/mL	Gravimetric Unstressed Stressed
5	3,5-Dinitroaniline **CAS #** 618-87-1 (Lot 10311HS) **Purity** 99%	1,008.0 µg/mL	+/- 5.9872 µg/mL +/- 55.2213 µg/mL +/- 64.3934 µg/mL	Gravimetric Unstressed Stressed
6	Tetryl **CAS #** 479-45-8 (Lot 211028JLM) **Purity** 99%	1,006.0 µg/mL	+/- 5.9753 µg/mL +/- 55.1117 µg/mL +/- 64.2657 µg/mL	Gravimetric Unstressed Stressed
7	Nitrobenzene **CAS #** 98-95-3 (Lot 10224044) **Purity** 99%	1,006.0 µg/mL	+/- 5.9753 µg/mL +/- 55.1117 µg/mL +/- 64.2657 µg/mL	Gravimetric Unstressed Stressed

8	2,4,6-Trinitrotoluene **CAS #** 118-96-7 **Purity** 99%	(Lot D13332500)	1,009.0	µg/mL	+/- 5.9932 +/- 55.2761 +/- 64.4573	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	Nitroglycerin **CAS #** 55-63-0 **Purity** 99%	(Lot 200507JLM)	1,006.0	µg/mL	+/- 5.9753 +/- 55.1117 +/- 64.2657	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	2-Amino-4,6-dinitrotoluene **CAS #** 35572-78-2 **Purity** 99%	(Lot A210503-001)	1,004.0	µg/mL	+/- 5.9635 +/- 55.0021 +/- 64.1379	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	4-Amino-2,6-dinitrotoluene **CAS #** 19406-51-0 **Purity** 99%	(Lot ER070908-01)	1,006.0	µg/mL	+/- 5.9753 +/- 55.1117 +/- 64.2657	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	2,4-Dinitrotoluene **CAS #** 121-14-2 **Purity** 99%	(Lot MKAA0690V)	1,003.0	µg/mL	+/- 5.9575 +/- 54.9474 +/- 64.0740	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	2,6-Dinitrotoluene **CAS #** 606-20-2 **Purity** 99%	(Lot BCBB8606)	1,002.0	µg/mL	+/- 5.9516 +/- 54.8926 +/- 64.0101	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	2-Nitrotoluene **CAS #** 88-72-2 **Purity** 99%	(Lot BCBZ7826)	1,009.0	µg/mL	+/- 5.9932 +/- 55.2761 +/- 64.4573	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	4-Nitrotoluene **CAS #** 99-99-0 **Purity** 99%	(Lot BCCB0171)	1,007.0	µg/mL	+/- 5.9813 +/- 55.1665 +/- 64.3295	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	3-Nitrotoluene **CAS #** 99-08-1 **Purity** 99%	(Lot 07329LG)	1,008.0	µg/mL	+/- 5.9872 +/- 55.2213 +/- 64.3934	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	PETN **CAS #** 78-11-5 **Purity** 99%	(Lot 051108JLM)	1,001.0	µg/mL	+/- 5.9456 +/- 54.8378 +/- 63.9463	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

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

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

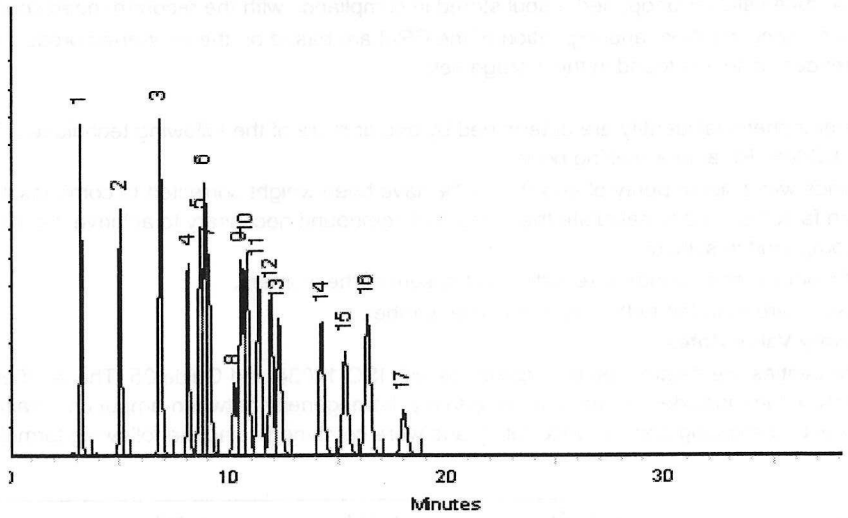
Flow Rate:
1.0 ml/min.

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

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm



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

Tom Suckar - Mix Technician **Date Mixed:** 11-Aug-2022 **Balance:** B707717271

Jennifer Pollino - Operations Tech III - ARM QC **Date Passed:** 16-Aug-2022

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

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 33204 **Lot No.:** A0201454

Description : 8330B Nitroaromatics and Nitramine Mix

8330B Nitroaromatics and Nitramine Mix Explosives by HPLC, EPA 8330B 1000µg/mL, Acetonitrile,1mL/ampul

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

Expiration Date : August 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	HMX	2691-41-0	220927JLM	99%	1,001.7 µg/mL	+/- 46.7311
2	RDX	121-82-4	080228JLM	99%	1,007.0 µg/mL	+/- 46.9783
3	1,3,5-Trinitrobenzene	99-35-4	A6TDK	99%	1,006.6 µg/mL	+/- 46.9597
4	1,3-Dinitrobenzene	99-65-0	1-DXX-24-1	99%	1,008.1 µg/mL	+/- 47.0297
5	3,5-Dinitroaniline	618-87-1	10311HS	99%	1,008.4 µg/mL	+/- 47.0437
6	Tetryl	479-45-8	211028JLM	99%	1,001.2 µg/mL	+/- 46.7078
7	Nitrobenzene	98-95-3	10224044	99%	1,008.4 µg/mL	+/- 47.0437
8	2,4,6-Trinitrotoluene	118-96-7	D13332500	99%	1,007.1 µg/mL	+/- 46.9830
9	Nitroglycerin	55-63-0	200507JLM	99%	1,007.7 µg/mL	+/- 47.0110
10	2-Amino-4,6-dinitrotoluene	35572-78-2	A210503-001	99%	1,006.7 µg/mL	+/- 46.9643
11	4-Amino-2,6-dinitrotoluene	19406-51-0	ER070908-01	99%	1,007.2 µg/mL	+/- 46.9877
12	2,4-Dinitrotoluene	121-14-2	MKAA0690V	99%	1,003.2 µg/mL	+/- 46.8011
13	2,6-Dinitrotoluene	606-20-2	BCCG1833	99%	1,005.1 µg/mL	+/- 46.8897
14	2-Nitrotoluene	88-72-2	BCBZ7826	99%	1,006.2 µg/mL	+/- 46.9410
15	4-Nitrotoluene	99-99-0	BCCB0171	99%	1,010.0 µg/mL	+/- 47.1183
16	3-Nitrotoluene	99-08-1	07329LG	99%	1,004.0 µg/mL	+/- 46.8384

17	PETN	78-11-5	051108JLM	99%	1,000.5 µg/mL	+/- 46.6751

* 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.

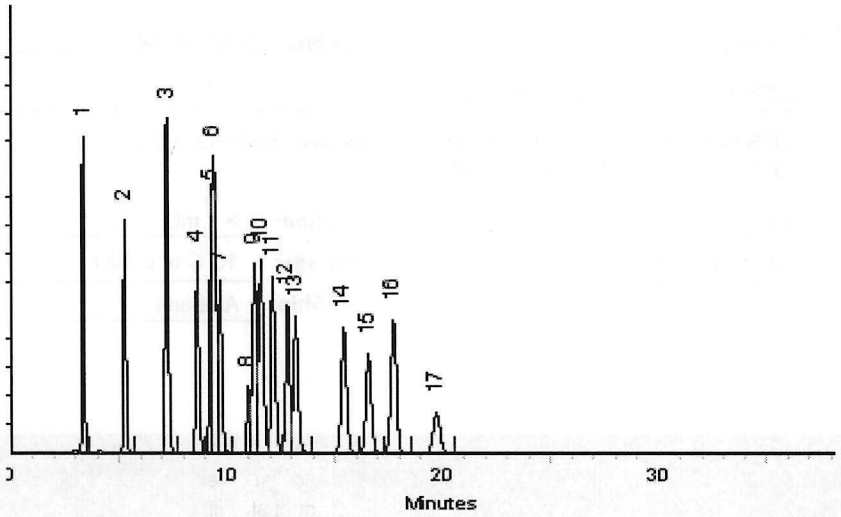
Mobile Phase A:
water:methanol (44:56 V/V)

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.

Peter Robbins - Operations Technician I

Date Mixed: 28-Aug-2023 **Balance Serial #** B251644995

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 06-Sep-2023

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Analytical Standard Record

24D0385

Description:	8330 - Spike 100ug/mL 4/15/23	Expires:	10/12/2024
Standard Type:	Analyte Spike	Prepared:	04/15/2024
Solvent:	ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	10	Department:	HPLC
Vials:	1	Last Edit:	04/15/2024 09:40 by AOP
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	23A0023	99-35-4	100	ug/mL
1,3-DINITROBENZENE	23A0023	99-65-0	100	ug/mL
2,4,6-TRINITROTOLUENE	23A0023	118-96-7	100	ug/mL
2,4-DINITROTOLUENE	23A0023	121-14-2	100	ug/mL
2,6-DINITROTOLUENE	23A0023	606-20-2	100	ug/mL
2-AMINO-4,6-DINITROTOLUENE	23A0023	35572-78-2	100	ug/mL
2-NITROTOLUENE	23A0023	88-72-2	100	ug/mL
3,5-DINITROANILINE	23A0023	618-87-1	100	ug/mL
3-NITROTOLUENE	23A0023	99-08-1	100	ug/mL
4-AMINO-2,6-DINITROTOLUENE	23A0023	19406-51-0	100	ug/mL
4-NITROTOLUENE	23A0023	99-99-0	100	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	23A0023	121-82-4	100	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	23A0023	479-45-8	100	ug/mL
NITROBENZENE	23A0023	98-95-3	100	ug/mL
NITROGLYCERIN	23A0023	55-63-0	100	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	23A0023	2691-41-0	100	ug/mL
PENTAERYTHRITOL TETRANITRATE	23A0023	78-11-5	100	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
23A0023	8330 - SSS Ampule A0191734	11/23/2022	Restek	A0191734	11/30/2025	12/04/2023 11:05	by IMC	1

Reference Standard Data Pack

8330 Surrogate Mix

Catalog # 31453

Lot # A0205460

110 Benner Circle Bellefonte, PA 16823-8812
1-814-353-1300 1-800-356-1688
www.restek.com

FOR LABORATORY USE ONLY. READ SDS PRIOR TO USE.

RAW MATERIAL TEST INFORMATION AVAILABLE UPON REQUEST

MANUFACTURED UNDER RESTEK'S ISO 9001 REGISTERED QUALITY SYSTEM

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** 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.

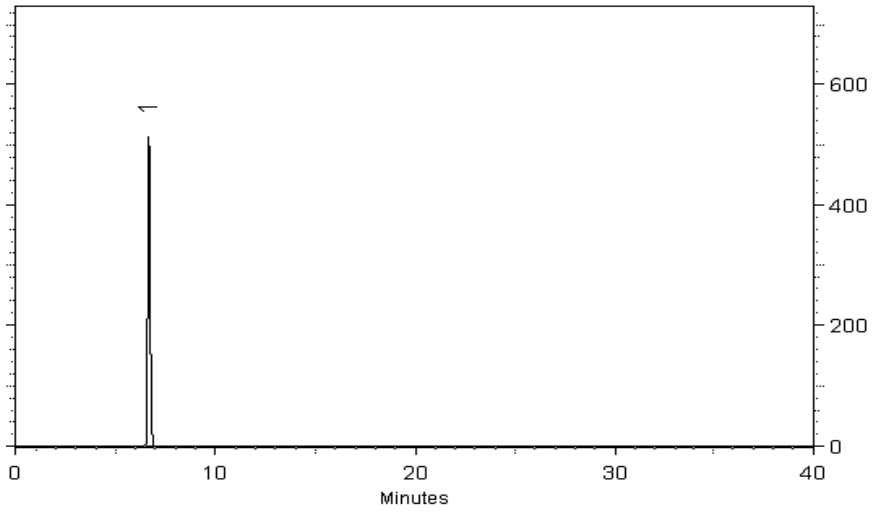
Mobile Phase A:
water:methanol (44:56 V/V)

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 Polino - 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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

RESTEK

Reference Material Batch Record
Lot #: A0205460

Catalog #: 31453	**Target:** 1000 ug/mL	
Description: 8330 Surrogate Mix		
Solvent: Methanol	**Solvent Lot:** 23H3162001	**Final Volume:** 100 ml

Made by: Malina Homan	**Date:** 12/13/2023 3:34:15PM		
Tested by: Alicia Leathers	**Date:** 12/14/2023 6:07:06AM		
Pass	**By:** Jennifer Pollino	**Date:** 12/19/2023 9:58:59AM	
Packaged by: Michael Maye1 / Malina Homan	**Date:** 12/13/2023 4:50:44F	**No. Units:** 66	**Pkg Size:** 1 mL
Balance Used: bede001743 XPE504	**Serial #:** B707717271		

Compound	CAS	Storage Location	Lot #	Purity	Target Conc(ug/mL)	Target	Actual	Calc Conc(ug/mL)
1,2-Dinitrobenzene	528-29-0	R0156	RP231117RSR	0.99	1,000.00	100.00 mg	100.40 mg	1,004.0

QA Report: 8330 Surrogate Mix (Cat.#31453)

	Runs of Lot # A0150790						Runs of Lot # A0205460							
COMPONENT	Run #1	Run #2	Run #3	AVG	STD DEV	%RSD	Run #1	Run #2	Run #3	AVG	STD DEV	%RSD	%D MEAN	P/F
1,2-Dinitrobenzene	4238059	4237731	4224314	4233368	7843	0.19	4296077	4266901	4266761	4276580	16885	0.39	-1.02	PASS

Analytical Standard Record

24D0600

Description:	8330 - 1,2-DNB SUR 100ug/mL 04/26/24	Expires:	10/23/2024
Standard Type:	Surrogate Spike	Prepared:	04/26/2024
Solvent:	ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	10	Department:	HPLC
Vials:	1	Last Edit:	04/26/2024 13:46 by AOP
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24D0501	528-29-0	100	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24D0501	8330 - 1,2-DNB SAS Ampule A0205460	04/22/2024	Restek	A0205460	12/31/2028	04/26/2024 13:46	by AOP	1

Analytical Standard Record

24D0600

Description:	8330 - 1,2-DNB SUR 100ug/mL 04/26/24	Expires:	10/23/2024
Standard Type:	Surrogate Spike	Prepared:	04/26/2024
Solvent:	ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	10	Department:	HPLC
Vials:	1	Last Edit:	04/26/2024 13:48 by AOP
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24D0501	528-29-0	100	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24D0501	8330 - 1,2-DNB SAS Ampule A0205460	04/22/2024	Restek	A0205460	12/31/2028	04/26/2024 13:46	by AOP	1

Analytical Standard Record

24E0455

Description:	8330 - Cal Std 20ug/mL 05/16/24	Expires:	09/16/2024
Standard Type:	Other	Prepared:	05/17/2024
Solvent:	ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	1	Department:	HPLC
Vials:	1	Last Edit:	05/17/2024 08:55 by AOP
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	24D0385	99-35-4	20	ug/mL
1,3-DINITROBENZENE	24D0385	99-65-0	20	ug/mL
2,4,6-TRINITROTOLUENE	24D0385	118-96-7	20	ug/mL
2,4-DINITROTOLUENE	24D0385	121-14-2	20	ug/mL
2,6-DINITROTOLUENE	24D0385	606-20-2	20	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24D0385	35572-78-2	20	ug/mL
2-NITROTOLUENE	24D0385	88-72-2	20	ug/mL
3,5-DINITROANILINE	24D0385	618-87-1	20	ug/mL
3-NITROTOLUENE	24D0385	99-08-1	20	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24D0385	19406-51-0	20	ug/mL
4-NITROTOLUENE	24D0385	99-99-0	20	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24D0385	121-82-4	20	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24D0385	479-45-8	20	ug/mL
NITROBENZENE	24D0385	98-95-3	20	ug/mL
NITROGLYCERIN	24D0385	55-63-0	20	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24D0385	2691-41-0	20	ug/mL
PENTAERYTHRITOL TETRANITRATE	24D0385	78-11-5	20	ug/mL
1,2-DINITROBENZENE	24D0600	528-29-0	20	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24D0385	8330 - Spike 100ug/mL 4/15/23	04/15/2024	In house	x	10/12/2024	04/15/2024 09:40	by AOP	0.2
24D0600	8330 - 1,2-DNB SUR 100ug/mL 04/26/24	04/26/2024	In house	x	10/23/2024	04/26/2024 13:48	by AOP	0.2

Analytical Standard Record

24E0456

Description:	8330 - Cal Std 0.2ug/mL 05/16/24	Expires:	09/16/2024
Standard Type:	Other	Prepared:	05/17/2024
Solvent:	ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	1	Department:	HPLC
Vials:	1	Last Edit:	05/17/2024 09:00 by AOP
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24E0455	528-29-0	0.2	ug/mL
1,3,5-TRINITROBENZENE	24E0455	99-35-4	0.2	ug/mL
1,3-DINITROBENZENE	24E0455	99-65-0	0.2	ug/mL
2,4,6-TRINITROTOLUENE	24E0455	118-96-7	0.2	ug/mL
2,4-DINITROTOLUENE	24E0455	121-14-2	0.2	ug/mL
2,6-DINITROTOLUENE	24E0455	606-20-2	0.2	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24E0455	35572-78-2	0.2	ug/mL
2-NITROTOLUENE	24E0455	88-72-2	0.2	ug/mL
3,5-DINITROANILINE	24E0455	618-87-1	0.2	ug/mL
3-NITROTOLUENE	24E0455	99-08-1	0.2	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24E0455	19406-51-0	0.2	ug/mL
4-NITROTOLUENE	24E0455	99-99-0	0.2	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24E0455	121-82-4	0.2	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24E0455	479-45-8	0.2	ug/mL
NITROBENZENE	24E0455	98-95-3	0.2	ug/mL
NITROGLYCERIN	24E0455	55-63-0	0.2	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24E0455	2691-41-0	0.2	ug/mL
PENTAERYTHRITOL TETRANITRATE	24E0455	78-11-5	0.2	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24E0455	8330 - Cal Std 20ug/mL 05/16/24	05/17/2024	In house	x	09/16/2024	05/17/2024 08:55	by AOP	0.01

Analytical Standard Record

24E0457

Description:	8330 - Cal 1 0.005ug/mL 05/16/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	05/17/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	05/17/2024 09:03 by AOP
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24E0456	528-29-0	0.005	ug/mL
1,3,5-TRINITROBENZENE	24E0456	99-35-4	0.005	ug/mL
1,3-DINITROBENZENE	24E0456	99-65-0	0.005	ug/mL
2,4,6-TRINITROTOLUENE	24E0456	118-96-7	0.005	ug/mL
2,4-DINITROTOLUENE	24E0456	121-14-2	0.005	ug/mL
2,6-DINITROTOLUENE	24E0456	606-20-2	0.005	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24E0456	35572-78-2	0.005	ug/mL
2-NITROTOLUENE	24E0456	88-72-2	0.005	ug/mL
3,5-DINITROANILINE	24E0456	618-87-1	0.005	ug/mL
3-NITROTOLUENE	24E0456	99-08-1	0.005	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24E0456	19406-51-0	0.005	ug/mL
4-NITROTOLUENE	24E0456	99-99-0	0.005	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24E0456	121-82-4	0.005	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24E0456	479-45-8	0.005	ug/mL
NITROBENZENE	24E0456	98-95-3	0.005	ug/mL
NITROGLYCERIN	24E0456	55-63-0	0.005	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24E0456	2691-41-0	0.005	ug/mL
PENTAERYTHRITOL TETRANITRATE	24E0456	78-11-5	0.005	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24E0456	8330 - Cal Std 0.2ug/mL 05/16/24	05/17/2024	In house	x	09/16/2024	05/17/2024 09:00	by AOP	0.02

Analytical Standard Record

24E0458

Description:	8330 - Cal 2 0.05ug/mL 05/16/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	05/17/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	05/17/2024 09:04 by AOP
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24E0456	528-29-0	0.05	ug/mL
1,3,5-TRINITROBENZENE	24E0456	99-35-4	0.05	ug/mL
1,3-DINITROBENZENE	24E0456	99-65-0	0.05	ug/mL
2,4,6-TRINITROTOLUENE	24E0456	118-96-7	0.05	ug/mL
2,4-DINITROTOLUENE	24E0456	121-14-2	0.05	ug/mL
2,6-DINITROTOLUENE	24E0456	606-20-2	0.05	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24E0456	35572-78-2	0.05	ug/mL
2-NITROTOLUENE	24E0456	88-72-2	0.05	ug/mL
3,5-DINITROANILINE	24E0456	618-87-1	0.05	ug/mL
3-NITROTOLUENE	24E0456	99-08-1	0.05	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24E0456	19406-51-0	0.05	ug/mL
4-NITROTOLUENE	24E0456	99-99-0	0.05	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24E0456	121-82-4	0.05	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24E0456	479-45-8	0.05	ug/mL
NITROBENZENE	24E0456	98-95-3	0.05	ug/mL
NITROGLYCERIN	24E0456	55-63-0	0.05	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24E0456	2691-41-0	0.05	ug/mL
PENTAERYTHRITOL TETRANITRATE	24E0456	78-11-5	0.05	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24E0456	8330 - Cal Std 0.2ug/mL 05/16/24	05/17/2024	In house	x	09/16/2024	05/17/2024 09:00	by AOP	0.2

Analytical Standard Record

24E0459

Description:	8330 - Cal 3 0.25ug/mL 05/16/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	05/17/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	05/17/2024 09:06 by AOP
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24E0455	528-29-0	0.25	ug/mL
1,3,5-TRINITROBENZENE	24E0455	99-35-4	0.25	ug/mL
1,3-DINITROBENZENE	24E0455	99-65-0	0.25	ug/mL
2,4,6-TRINITROTOLUENE	24E0455	118-96-7	0.25	ug/mL
2,4-DINITROTOLUENE	24E0455	121-14-2	0.25	ug/mL
2,6-DINITROTOLUENE	24E0455	606-20-2	0.25	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24E0455	35572-78-2	0.25	ug/mL
2-NITROTOLUENE	24E0455	88-72-2	0.25	ug/mL
3,5-DINITROANILINE	24E0455	618-87-1	0.25	ug/mL
3-NITROTOLUENE	24E0455	99-08-1	0.25	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24E0455	19406-51-0	0.25	ug/mL
4-NITROTOLUENE	24E0455	99-99-0	0.25	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24E0455	121-82-4	0.25	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24E0455	479-45-8	0.25	ug/mL
NITROBENZENE	24E0455	98-95-3	0.25	ug/mL
NITROGLYCERIN	24E0455	55-63-0	0.25	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24E0455	2691-41-0	0.25	ug/mL
PENTAERYTHRITOL TETRANITRATE	24E0455	78-11-5	0.25	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24E0455	8330 - Cal Std 20ug/mL 05/16/24	05/17/2024	In house	x	09/16/2024	05/17/2024 08:55	by AOP	0.01

Analytical Standard Record

24E0460

Description:	8330 - Cal 4 1.0ug/mL 05/16/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	05/17/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	05/17/2024 09:08 by AOP
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24E0455	528-29-0	1	ug/mL
1,3,5-TRINITROBENZENE	24E0455	99-35-4	1	ug/mL
1,3-DINITROBENZENE	24E0455	99-65-0	1	ug/mL
2,4,6-TRINITROTOLUENE	24E0455	118-96-7	1	ug/mL
2,4-DINITROTOLUENE	24E0455	121-14-2	1	ug/mL
2,6-DINITROTOLUENE	24E0455	606-20-2	1	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24E0455	35572-78-2	1	ug/mL
2-NITROTOLUENE	24E0455	88-72-2	1	ug/mL
3,5-DINITROANILINE	24E0455	618-87-1	1	ug/mL
3-NITROTOLUENE	24E0455	99-08-1	1	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24E0455	19406-51-0	1	ug/mL
4-NITROTOLUENE	24E0455	99-99-0	1	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24E0455	121-82-4	1	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24E0455	479-45-8	1	ug/mL
NITROBENZENE	24E0455	98-95-3	1	ug/mL
NITROGLYCERIN	24E0455	55-63-0	1	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24E0455	2691-41-0	1	ug/mL
PENTAERYTHRITOL TETRANITRATE	24E0455	78-11-5	1	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24E0455	8330 - Cal Std 20ug/mL 05/16/24	05/17/2024	In house	x	09/16/2024	05/17/2024 08:55	by AOP	0.04

Analytical Standard Record

24E0462

Description:	8330 - Cal 5 2.5ug/mL 05/16/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	05/17/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	05/17/2024 09:11 by AOP
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24E0455	528-29-0	2.5	ug/mL
1,3,5-TRINITROBENZENE	24E0455	99-35-4	2.5	ug/mL
1,3-DINITROBENZENE	24E0455	99-65-0	2.5	ug/mL
2,4,6-TRINITROTOLUENE	24E0455	118-96-7	2.5	ug/mL
2,4-DINITROTOLUENE	24E0455	121-14-2	2.5	ug/mL
2,6-DINITROTOLUENE	24E0455	606-20-2	2.5	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24E0455	35572-78-2	2.5	ug/mL
2-NITROTOLUENE	24E0455	88-72-2	2.5	ug/mL
3,5-DINITROANILINE	24E0455	618-87-1	2.5	ug/mL
3-NITROTOLUENE	24E0455	99-08-1	2.5	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24E0455	19406-51-0	2.5	ug/mL
4-NITROTOLUENE	24E0455	99-99-0	2.5	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24E0455	121-82-4	2.5	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24E0455	479-45-8	2.5	ug/mL
NITROBENZENE	24E0455	98-95-3	2.5	ug/mL
NITROGLYCERIN	24E0455	55-63-0	2.5	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24E0455	2691-41-0	2.5	ug/mL
PENTAERYTHRITOL TETRANITRATE	24E0455	78-11-5	2.5	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24E0455	8330 - Cal Std 20ug/mL 05/16/24	05/17/2024	In house	x	09/16/2024	05/17/2024 08:55	by AOP	0.1

Analytical Standard Record

24E0463

Description:	8330 - Cal 6 5.0ug/mL 05/16/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	05/17/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	05/17/2024 09:12 by AOP
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24E0455	528-29-0	5	ug/mL
1,3,5-TRINITROBENZENE	24E0455	99-35-4	5	ug/mL
1,3-DINITROBENZENE	24E0455	99-65-0	5	ug/mL
2,4,6-TRINITROTOLUENE	24E0455	118-96-7	5	ug/mL
2,4-DINITROTOLUENE	24E0455	121-14-2	5	ug/mL
2,6-DINITROTOLUENE	24E0455	606-20-2	5	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24E0455	35572-78-2	5	ug/mL
2-NITROTOLUENE	24E0455	88-72-2	5	ug/mL
3,5-DINITROANILINE	24E0455	618-87-1	5	ug/mL
3-NITROTOLUENE	24E0455	99-08-1	5	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24E0455	19406-51-0	5	ug/mL
4-NITROTOLUENE	24E0455	99-99-0	5	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24E0455	121-82-4	5	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24E0455	479-45-8	5	ug/mL
NITROBENZENE	24E0455	98-95-3	5	ug/mL
NITROGLYCERIN	24E0455	55-63-0	5	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24E0455	2691-41-0	5	ug/mL
PENTAERYTHRITOL TETRANITRATE	24E0455	78-11-5	5	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24E0455	8330 - Cal Std 20ug/mL 05/16/24	05/17/2024	In house	x	09/16/2024	05/17/2024 08:55	by AOP	0.2

Analytical Standard Record

24E0464

Description:	8330 - SCV DSS 20ug/mL 05/16/24	Expires:	09/16/2025
Standard Type:	Other	Prepared:	05/17/2024
Solvent:	ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	1	Department:	HPLC
Vials:	1	Last Edit:	05/17/2024 09:24 by AOP
Lot Number:	-		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	23E0027	99-35-4	20	ug/mL
1,3-DINITROBENZENE	23E0027	99-65-0	20	ug/mL
2,4,6-TRINITROTOLUENE	23E0027	118-96-7	20	ug/mL
2,4-DINITROTOLUENE	23E0027	121-14-2	20	ug/mL
2,6-DINITROTOLUENE	23E0027	606-20-2	20	ug/mL
2-AMINO-4,6-DINITROTOLUENE	23E0027	35572-78-2	20	ug/mL
2-NITROTOLUENE	23E0027	88-72-2	20	ug/mL
3,5-DINITROANILINE	23E0027	618-87-1	20	ug/mL
3-NITROTOLUENE	23E0027	99-08-1	20	ug/mL
4-AMINO-2,6-DINITROTOLUENE	23E0027	19406-51-0	20	ug/mL
4-NITROTOLUENE	23E0027	99-99-0	20	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	23E0027	121-82-4	20	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	23E0027	479-45-8	20	ug/mL
NITROBENZENE	23E0027	98-95-3	20	ug/mL
NITROGLYCERIN	23E0027	55-63-0	20	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	23E0027	2691-41-0	20	ug/mL
PENTAERYTHRITOL TETRANITRATE	23E0027	78-11-5	20	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
23E0027	8330 - SSS Ampule A0188442	04/18/2023	Restek	A0188442	08/31/2025	12/04/2023 11:05	by IMC	0.02

Analytical Standard Record

24E0466

Description:	8330 - SCV 1.0ug/mL 05/16/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	05/17/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	05/17/2024 09:27 by AOP
Lot Number:	-		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	24E0464	99-35-4	1	ug/mL
1,3-DINITROBENZENE	24E0464	99-65-0	1	ug/mL
2,4,6-TRINITROTOLUENE	24E0464	118-96-7	1	ug/mL
2,4-DINITROTOLUENE	24E0464	121-14-2	1	ug/mL
2,6-DINITROTOLUENE	24E0464	606-20-2	1	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24E0464	35572-78-2	1	ug/mL
2-NITROTOLUENE	24E0464	88-72-2	1	ug/mL
3,5-DINITROANILINE	24E0464	618-87-1	1	ug/mL
3-NITROTOLUENE	24E0464	99-08-1	1	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24E0464	19406-51-0	1	ug/mL
4-NITROTOLUENE	24E0464	99-99-0	1	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24E0464	121-82-4	1	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24E0464	479-45-8	1	ug/mL
NITROBENZENE	24E0464	98-95-3	1	ug/mL
NITROGLYCERIN	24E0464	55-63-0	1	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24E0464	2691-41-0	1	ug/mL
PENTAERYTHRITOL TETRANITRATE	24E0464	78-11-5	1	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24E0464	8330 - SCV DSS 20ug/mL 05/16/24	05/17/2024	-	-	09/16/2025	05/17/2024 09:24	by AOP	0.04

Analytical Standard Record

24G0088

Description:	8330 - Spike 100ug/mL 7/5/24	Expires:	01/01/2025
Standard Type:	Analyte Spike	Prepared:	07/05/2024
Solvent:	ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	10	Department:	HPLC
Vials:	1	Last Edit:	07/05/2024 12:25 by AOP
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	23A0023	99-35-4	100	ug/mL
1,3-DINITROBENZENE	23A0023	99-65-0	100	ug/mL
2,4,6-TRINITROTOLUENE	23A0023	118-96-7	100	ug/mL
2,4-DINITROTOLUENE	23A0023	121-14-2	100	ug/mL
2,6-DINITROTOLUENE	23A0023	606-20-2	100	ug/mL
2-AMINO-4,6-DINITROTOLUENE	23A0023	35572-78-2	100	ug/mL
2-NITROTOLUENE	23A0023	88-72-2	100	ug/mL
3,5-DINITROANILINE	23A0023	618-87-1	100	ug/mL
3-NITROTOLUENE	23A0023	99-08-1	100	ug/mL
4-AMINO-2,6-DINITROTOLUENE	23A0023	19406-51-0	100	ug/mL
4-NITROTOLUENE	23A0023	99-99-0	100	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	23A0023	121-82-4	100	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	23A0023	479-45-8	100	ug/mL
NITROBENZENE	23A0023	98-95-3	100	ug/mL
NITROGLYCERIN	23A0023	55-63-0	100	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	23A0023	2691-41-0	100	ug/mL
PENTAERYTHRITOL TETRANITRATE	23A0023	78-11-5	100	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
23A0023	8330 - SSS Ampule A0191734	11/23/2022	Restek	A0191734	11/30/2025	12/04/2023 11:05	by IMC	1

Analytical Standard Record

24G0171

Description:	8330 - Spike 100ug/mL 7/9/24	Expires:	01/05/2025
Standard Type:	Analyte Spike	Prepared:	07/09/2024
Solvent:	ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	10	Department:	HPLC
Vials:	1	Last Edit:	07/09/2024 09:58 by AOP
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	23A0023	99-35-4	100	ug/mL
1,3-DINITROBENZENE	23A0023	99-65-0	100	ug/mL
2,4,6-TRINITROTOLUENE	23A0023	118-96-7	100	ug/mL
2,4-DINITROTOLUENE	23A0023	121-14-2	100	ug/mL
2,6-DINITROTOLUENE	23A0023	606-20-2	100	ug/mL
2-AMINO-4,6-DINITROTOLUENE	23A0023	35572-78-2	100	ug/mL
2-NITROTOLUENE	23A0023	88-72-2	100	ug/mL
3,5-DINITROANILINE	23A0023	618-87-1	100	ug/mL
3-NITROTOLUENE	23A0023	99-08-1	100	ug/mL
4-AMINO-2,6-DINITROTOLUENE	23A0023	19406-51-0	100	ug/mL
4-NITROTOLUENE	23A0023	99-99-0	100	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	23A0023	121-82-4	100	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	23A0023	479-45-8	100	ug/mL
NITROBENZENE	23A0023	98-95-3	100	ug/mL
NITROGLYCERIN	23A0023	55-63-0	100	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	23A0023	2691-41-0	100	ug/mL
PENTAERYTHRITOL TETRANITRATE	23A0023	78-11-5	100	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
23A0023	8330 - SSS Ampule A0191734	11/23/2022	Restek	A0191734	11/30/2025	12/04/2023 11:05	by IMC	1

Analytical Standard Record

24G0473

Description:	8330 - CCV DSS 10ug/mL 7/23/24	Expires:	01/19/2025
Standard Type:	Analyte Spike	Prepared:	07/23/2024
Solvent:	ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	10	Department:	HPLC
Vials:	1	Last Edit:	07/23/2024 11:11 by AOP
Lot Number:	*		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	23L0017	99-35-4	10	ug/mL
1,3-DINITROBENZENE	23L0017	99-65-0	10	ug/mL
2,4,6-TRINITROTOLUENE	23L0017	118-96-7	10	ug/mL
2,4-DINITROTOLUENE	23L0017	121-14-2	10	ug/mL
2,6-DINITROTOLUENE	23L0017	606-20-2	10	ug/mL
2-AMINO-4,6-DINITROTOLUENE	23L0017	35572-78-2	10	ug/mL
2-NITROTOLUENE	23L0017	88-72-2	10	ug/mL
3,5-DINITROANILINE	23L0017	618-87-1	10	ug/mL
3-NITROTOLUENE	23L0017	99-08-1	10	ug/mL
4-AMINO-2,6-DINITROTOLUENE	23L0017	19406-51-0	10	ug/mL
4-NITROTOLUENE	23L0017	99-99-0	10	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	23L0017	121-82-4	10	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	23L0017	479-45-8	10	ug/mL
NITROBENZENE	23L0017	98-95-3	10	ug/mL
NITROGLYCERIN	23L0017	55-63-0	10	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	23L0017	2691-41-0	10	ug/mL
PENTAERYTHRITOL TETRANITRATE	23L0017	78-11-5	10	ug/mL
1,2-DINITROBENZENE	24D0501	528-29-0	10	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
23L0017	8330 - SSS Ampule A0201454	08/28/2023	Restek	A0201454	08/31/2026	12/04/2023 11:05	by IMC	0.1
24D0501	8330 - 1,2-DNB SAS Ampule A0205460	04/22/2024	Restek	A0205460	12/31/2028	04/26/2024 13:46	by AOP	0.1

Analytical Standard Record

24G0475

Description:	8330 - CCV 1.0ug/mL 7/23/24	Expires:	10/15/2024
Standard Type:	Calibration Standard	Prepared:	07/23/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	07/23/2024 12:01 by AOP
Lot Number:	*		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24G0473	528-29-0	1	ug/mL
1,3,5-TRINITROBENZENE	24G0473	99-35-4	1	ug/mL
1,3-DINITROBENZENE	24G0473	99-65-0	1	ug/mL
2,4,6-TRINITROTOLUENE	24G0473	118-96-7	1	ug/mL
2,4-DINITROTOLUENE	24G0473	121-14-2	1	ug/mL
2,6-DINITROTOLUENE	24G0473	606-20-2	1	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24G0473	35572-78-2	1	ug/mL
2-NITROTOLUENE	24G0473	88-72-2	1	ug/mL
3,5-DINITROANILINE	24G0473	618-87-1	1	ug/mL
3-NITROTOLUENE	24G0473	99-08-1	1	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24G0473	19406-51-0	1	ug/mL
4-NITROTOLUENE	24G0473	99-99-0	1	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24G0473	121-82-4	1	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24G0473	479-45-8	1	ug/mL
NITROBENZENE	24G0473	98-95-3	1	ug/mL
NITROGLYCERIN	24G0473	55-63-0	1	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24G0473	2691-41-0	1	ug/mL
PENTAERYTHRITOL TETRANITRATE	24G0473	78-11-5	1	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24G0473	8330 - CCV DSS 10ug/mL 7/23/24	07/23/2024	*	*	01/19/2025	07/23/2024 11:11	by AOP	0.08

Analytical Standard Record

24H0339

Description:	8330 - 1,2-DNB SUR 100ug/mL 8/13/24	Expires:	02/09/2025
Standard Type:	Surrogate Spike	Prepared:	08/13/2024
Solvent:	ACN	Prepared By:	Kia Yang
Final Volume (mls):	10	Department:	HPLC
Vials:	1	Last Edit:	08/13/2024 12:19 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24D0501	528-29-0	100	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24D0501	8330 - 1,2-DNB SAS Ampule A0205460	04/22/2024	Restek	A0205460	12/31/2028	04/26/2024 13:46	by AOP	1

Analytical Standard Record

24H0339

Description:	8330 - 1,2-DNB SUR 100ug/mL 8/13/24	Expires:	02/09/2025
Standard Type:	Surrogate Spike	Prepared:	08/13/2024
Solvent:	ACN	Prepared By:	Kia Yang
Final Volume (mls):	10	Department:	HPLC
Vials:	1	Last Edit:	08/13/2024 12:19 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24D0501	528-29-0	100	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24D0501	8330 - 1,2-DNB SAS Ampule A0205460	04/22/2024	Restek	A0205460	12/31/2028	04/26/2024 13:46	by AOP	1

Analytical Standard Record

24H0394

Description:	8330 - SCV DSS 20ug/mL 08/14/24	Expires:	02/12/2025
Standard Type:	Other	Prepared:	08/14/2024
Solvent:	ACN	Prepared By:	Kia Yang
Final Volume (mls):	1	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:33 by KMY1
Lot Number:	-		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	23E0027	99-35-4	20	ug/mL
1,3-DINITROBENZENE	23E0027	99-65-0	20	ug/mL
2,4,6-TRINITROTOLUENE	23E0027	118-96-7	20	ug/mL
2,4-DINITROTOLUENE	23E0027	121-14-2	20	ug/mL
2,6-DINITROTOLUENE	23E0027	606-20-2	20	ug/mL
2-AMINO-4,6-DINITROTOLUENE	23E0027	35572-78-2	20	ug/mL
2-NITROTOLUENE	23E0027	88-72-2	20	ug/mL
3,5-DINITROANILINE	23E0027	618-87-1	20	ug/mL
3-NITROTOLUENE	23E0027	99-08-1	20	ug/mL
4-AMINO-2,6-DINITROTOLUENE	23E0027	19406-51-0	20	ug/mL
4-NITROTOLUENE	23E0027	99-99-0	20	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	23E0027	121-82-4	20	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	23E0027	479-45-8	20	ug/mL
NITROBENZENE	23E0027	98-95-3	20	ug/mL
NITROGLYCERIN	23E0027	55-63-0	20	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	23E0027	2691-41-0	20	ug/mL
PENTAERYTHRITOL TETRANITRATE	23E0027	78-11-5	20	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
23E0027	8330 - SSS Ampule A0188442	04/18/2023	Restek	A0188442	08/31/2025	12/04/2023 11:05	by IMC	0.02

Analytical Standard Record

24H0394

Description:	8330 - SCV DSS 20ug/mL 08/14/24	Expires:	02/12/2025
Standard Type:	Other	Prepared:	08/14/2024
Solvent:	ACN	Prepared By:	Kia Yang
Final Volume (mls):	1	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:33 by KMY1
Lot Number:	-		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	23E0027	99-35-4	20	ug/mL
1,3-DINITROBENZENE	23E0027	99-65-0	20	ug/mL
2,4,6-TRINITROTOLUENE	23E0027	118-96-7	20	ug/mL
2,4-DINITROTOLUENE	23E0027	121-14-2	20	ug/mL
2,6-DINITROTOLUENE	23E0027	606-20-2	20	ug/mL
2-AMINO-4,6-DINITROTOLUENE	23E0027	35572-78-2	20	ug/mL
2-NITROTOLUENE	23E0027	88-72-2	20	ug/mL
3,5-DINITROANILINE	23E0027	618-87-1	20	ug/mL
3-NITROTOLUENE	23E0027	99-08-1	20	ug/mL
4-AMINO-2,6-DINITROTOLUENE	23E0027	19406-51-0	20	ug/mL
4-NITROTOLUENE	23E0027	99-99-0	20	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	23E0027	121-82-4	20	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	23E0027	479-45-8	20	ug/mL
NITROBENZENE	23E0027	98-95-3	20	ug/mL
NITROGLYCERIN	23E0027	55-63-0	20	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	23E0027	2691-41-0	20	ug/mL
PENTAERYTHRITOL TETRANITRATE	23E0027	78-11-5	20	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
23E0027	8330 - SSS Ampule A0188442	04/18/2023	Restek	A0188442	08/31/2025	12/04/2023 11:05	by IMC	0.02

Analytical Standard Record

24H0395

Description:	8330 - Cal Std 20ug/mL 08/14/24	Expires:	10/12/2024
Standard Type:	Other	Prepared:	08/14/2024
Solvent:	ACN	Prepared By:	Kia Yang
Final Volume (mls):	1	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:23 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	24G0088	99-35-4	20	ug/mL
1,3-DINITROBENZENE	24G0088	99-65-0	20	ug/mL
2,4,6-TRINITROTOLUENE	24G0088	118-96-7	20	ug/mL
2,4-DINITROTOLUENE	24G0088	121-14-2	20	ug/mL
2,6-DINITROTOLUENE	24G0088	606-20-2	20	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24G0088	35572-78-2	20	ug/mL
2-NITROTOLUENE	24G0088	88-72-2	20	ug/mL
3,5-DINITROANILINE	24G0088	618-87-1	20	ug/mL
3-NITROTOLUENE	24G0088	99-08-1	20	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24G0088	19406-51-0	20	ug/mL
4-NITROTOLUENE	24G0088	99-99-0	20	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24G0088	121-82-4	20	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24G0088	479-45-8	20	ug/mL
NITROBENZENE	24G0088	98-95-3	20	ug/mL
NITROGLYCERIN	24G0088	55-63-0	20	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24G0088	2691-41-0	20	ug/mL
PENTAERYTHRITOL TETRANITRATE	24G0088	78-11-5	20	ug/mL
1,2-DINITROBENZENE	24H0339	528-29-0	20	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24G0088	8330 - Spike 100ug/mL 7/5/24	07/05/2024	In house	x	01/01/2025	07/05/2024 12:26	by AOP	0.2
24H0339	8330 - 1,2-DNB SUR 100ug/mL 8/13/24	08/13/2024	In house	x	02/09/2025	08/13/2024 12:19	by KMY1	0.2

Analytical Standard Record

24H0396

Description:	8330 - Cal Std 0.2ug/mL 08/14/24	Expires:	09/16/2024
Standard Type:	Other	Prepared:	08/14/2024
Solvent:	ACN	Prepared By:	Kia Yang
Final Volume (mls):	1	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:24 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24H0395	528-29-0	0.2	ug/mL
1,3,5-TRINITROBENZENE	24H0395	99-35-4	0.2	ug/mL
1,3-DINITROBENZENE	24H0395	99-65-0	0.2	ug/mL
2,4,6-TRINITROTOLUENE	24H0395	118-96-7	0.2	ug/mL
2,4-DINITROTOLUENE	24H0395	121-14-2	0.2	ug/mL
2,6-DINITROTOLUENE	24H0395	606-20-2	0.2	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24H0395	35572-78-2	0.2	ug/mL
2-NITROTOLUENE	24H0395	88-72-2	0.2	ug/mL
3,5-DINITROANILINE	24H0395	618-87-1	0.2	ug/mL
3-NITROTOLUENE	24H0395	99-08-1	0.2	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24H0395	19406-51-0	0.2	ug/mL
4-NITROTOLUENE	24H0395	99-99-0	0.2	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24H0395	121-82-4	0.2	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24H0395	479-45-8	0.2	ug/mL
NITROBENZENE	24H0395	98-95-3	0.2	ug/mL
NITROGLYCERIN	24H0395	55-63-0	0.2	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24H0395	2691-41-0	0.2	ug/mL
PENTAERYTHRITOL TETRANITRATE	24H0395	78-11-5	0.2	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24H0395	8330 - Cal Std 20ug/mL 08/14/24	08/14/2024	In house	x	10/12/2024	08/16/2024 07:23	by KMY1	0.01

Analytical Standard Record

24H0397

Description:	8330 - Cal 1 0.005ug/mL 08/14/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	08/14/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Kia Yang
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:53 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24H0396	528-29-0	0.005	ug/mL
1,3,5-TRINITROBENZENE	24H0396	99-35-4	0.005	ug/mL
1,3-DINITROBENZENE	24H0396	99-65-0	0.005	ug/mL
2,4,6-TRINITROTOLUENE	24H0396	118-96-7	0.005	ug/mL
2,4-DINITROTOLUENE	24H0396	121-14-2	0.005	ug/mL
2,6-DINITROTOLUENE	24H0396	606-20-2	0.005	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24H0396	35572-78-2	0.005	ug/mL
2-NITROTOLUENE	24H0396	88-72-2	0.005	ug/mL
3,5-DINITROANILINE	24H0396	618-87-1	0.005	ug/mL
3-NITROTOLUENE	24H0396	99-08-1	0.005	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24H0396	19406-51-0	0.005	ug/mL
4-NITROTOLUENE	24H0396	99-99-0	0.005	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24H0396	121-82-4	0.005	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24H0396	479-45-8	0.005	ug/mL
NITROBENZENE	24H0396	98-95-3	0.005	ug/mL
NITROGLYCERIN	24H0396	55-63-0	0.005	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24H0396	2691-41-0	0.005	ug/mL
PENTAERYTHRITOL TETRANITRATE	24H0396	78-11-5	0.005	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24H0396	8330 - Cal Std 0.2ug/mL 08/14/24	08/14/2024	In house	x	09/16/2024	08/16/2024 07:24	by KMY1	0.02

Analytical Standard Record

24H0398

Description:	8330 - Cal 2 0.05ug/mL 08/14/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	08/14/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Kia Yang
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:53 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24H0396	528-29-0	0.05	ug/mL
1,3,5-TRINITROBENZENE	24H0396	99-35-4	0.05	ug/mL
1,3-DINITROBENZENE	24H0396	99-65-0	0.05	ug/mL
2,4,6-TRINITROTOLUENE	24H0396	118-96-7	0.05	ug/mL
2,4-DINITROTOLUENE	24H0396	121-14-2	0.05	ug/mL
2,6-DINITROTOLUENE	24H0396	606-20-2	0.05	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24H0396	35572-78-2	0.05	ug/mL
2-NITROTOLUENE	24H0396	88-72-2	0.05	ug/mL
3,5-DINITROANILINE	24H0396	618-87-1	0.05	ug/mL
3-NITROTOLUENE	24H0396	99-08-1	0.05	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24H0396	19406-51-0	0.05	ug/mL
4-NITROTOLUENE	24H0396	99-99-0	0.05	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24H0396	121-82-4	0.05	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24H0396	479-45-8	0.05	ug/mL
NITROBENZENE	24H0396	98-95-3	0.05	ug/mL
NITROGLYCERIN	24H0396	55-63-0	0.05	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24H0396	2691-41-0	0.05	ug/mL
PENTAERYTHRITOL TETRANITRATE	24H0396	78-11-5	0.05	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24H0396	8330 - Cal Std 0.2ug/mL 08/14/24	08/14/2024	In house	x	09/16/2024	08/16/2024 07:24	by KMY1	0.2

Analytical Standard Record

24H0399

Description:	8330 - Cal 3 0.25ug/mL 08/14/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	08/14/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Kia Yang
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:25 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24H0395	528-29-0	0.25	ug/mL
1,3,5-TRINITROBENZENE	24H0395	99-35-4	0.25	ug/mL
1,3-DINITROBENZENE	24H0395	99-65-0	0.25	ug/mL
2,4,6-TRINITROTOLUENE	24H0395	118-96-7	0.25	ug/mL
2,4-DINITROTOLUENE	24H0395	121-14-2	0.25	ug/mL
2,6-DINITROTOLUENE	24H0395	606-20-2	0.25	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24H0395	35572-78-2	0.25	ug/mL
2-NITROTOLUENE	24H0395	88-72-2	0.25	ug/mL
3,5-DINITROANILINE	24H0395	618-87-1	0.25	ug/mL
3-NITROTOLUENE	24H0395	99-08-1	0.25	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24H0395	19406-51-0	0.25	ug/mL
4-NITROTOLUENE	24H0395	99-99-0	0.25	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24H0395	121-82-4	0.25	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24H0395	479-45-8	0.25	ug/mL
NITROBENZENE	24H0395	98-95-3	0.25	ug/mL
NITROGLYCERIN	24H0395	55-63-0	0.25	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24H0395	2691-41-0	0.25	ug/mL
PENTAERYTHRITOL TETRANITRATE	24H0395	78-11-5	0.25	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24H0395	8330 - Cal Std 20ug/mL 08/14/24	08/14/2024	In house	x	10/12/2024	08/16/2024 07:23	by KMY1	0.01

Analytical Standard Record

24H0400

Description:	8330 - Cal 4 1.0ug/mL 08/14/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	08/14/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Kia Yang
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:26 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24H0395	528-29-0	1	ug/mL
1,3,5-TRINITROBENZENE	24H0395	99-35-4	1	ug/mL
1,3-DINITROBENZENE	24H0395	99-65-0	1	ug/mL
2,4,6-TRINITROTOLUENE	24H0395	118-96-7	1	ug/mL
2,4-DINITROTOLUENE	24H0395	121-14-2	1	ug/mL
2,6-DINITROTOLUENE	24H0395	606-20-2	1	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24H0395	35572-78-2	1	ug/mL
2-NITROTOLUENE	24H0395	88-72-2	1	ug/mL
3,5-DINITROANILINE	24H0395	618-87-1	1	ug/mL
3-NITROTOLUENE	24H0395	99-08-1	1	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24H0395	19406-51-0	1	ug/mL
4-NITROTOLUENE	24H0395	99-99-0	1	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24H0395	121-82-4	1	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24H0395	479-45-8	1	ug/mL
NITROBENZENE	24H0395	98-95-3	1	ug/mL
NITROGLYCERIN	24H0395	55-63-0	1	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24H0395	2691-41-0	1	ug/mL
PENTAERYTHRITOL TETRANITRATE	24H0395	78-11-5	1	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24H0395	8330 - Cal Std 20ug/mL 08/14/24	08/14/2024	In house	x	10/12/2024	08/16/2024 07:23	by KMY1	0.04

Analytical Standard Record

24H0401

Description:	8330 - Cal 5 2.5ug/mL 08/14/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	08/14/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Kia Yang
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:26 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24H0395	528-29-0	2.5	ug/mL
1,3,5-TRINITROBENZENE	24H0395	99-35-4	2.5	ug/mL
1,3-DINITROBENZENE	24H0395	99-65-0	2.5	ug/mL
2,4,6-TRINITROTOLUENE	24H0395	118-96-7	2.5	ug/mL
2,4-DINITROTOLUENE	24H0395	121-14-2	2.5	ug/mL
2,6-DINITROTOLUENE	24H0395	606-20-2	2.5	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24H0395	35572-78-2	2.5	ug/mL
2-NITROTOLUENE	24H0395	88-72-2	2.5	ug/mL
3,5-DINITROANILINE	24H0395	618-87-1	2.5	ug/mL
3-NITROTOLUENE	24H0395	99-08-1	2.5	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24H0395	19406-51-0	2.5	ug/mL
4-NITROTOLUENE	24H0395	99-99-0	2.5	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24H0395	121-82-4	2.5	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24H0395	479-45-8	2.5	ug/mL
NITROBENZENE	24H0395	98-95-3	2.5	ug/mL
NITROGLYCERIN	24H0395	55-63-0	2.5	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24H0395	2691-41-0	2.5	ug/mL
PENTAERYTHRITOL TETRANITRATE	24H0395	78-11-5	2.5	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24H0395	8330 - Cal Std 20ug/mL 08/14/24	08/14/2024	In house	x	10/12/2024	08/16/2024 07:23	by KMY1	0.1

Analytical Standard Record

24H0402

Description:	8330 - Cal 6 5.0ug/mL 08/14/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	08/14/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Kia Yang
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:26 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24H0395	528-29-0	5	ug/mL
1,3,5-TRINITROBENZENE	24H0395	99-35-4	5	ug/mL
1,3-DINITROBENZENE	24H0395	99-65-0	5	ug/mL
2,4,6-TRINITROTOLUENE	24H0395	118-96-7	5	ug/mL
2,4-DINITROTOLUENE	24H0395	121-14-2	5	ug/mL
2,6-DINITROTOLUENE	24H0395	606-20-2	5	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24H0395	35572-78-2	5	ug/mL
2-NITROTOLUENE	24H0395	88-72-2	5	ug/mL
3,5-DINITROANILINE	24H0395	618-87-1	5	ug/mL
3-NITROTOLUENE	24H0395	99-08-1	5	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24H0395	19406-51-0	5	ug/mL
4-NITROTOLUENE	24H0395	99-99-0	5	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24H0395	121-82-4	5	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24H0395	479-45-8	5	ug/mL
NITROBENZENE	24H0395	98-95-3	5	ug/mL
NITROGLYCERIN	24H0395	55-63-0	5	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24H0395	2691-41-0	5	ug/mL
PENTAERYTHRITOL TETRANITRATE	24H0395	78-11-5	5	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24H0395	8330 - Cal Std 20ug/mL 08/14/24	08/14/2024	In house	x	10/12/2024	08/16/2024 07:23	by KMY1	0.2

Analytical Standard Record

24H0403

Description:	8330 - SCV 1.0ug/mL 08/14/24	Expires:	02/12/2025
Standard Type:	Calibration Standard	Prepared:	08/14/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Kia Yang
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:33 by KMY1
Lot Number:	-		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	24H0394	99-35-4	1	ug/mL
1,3-DINITROBENZENE	24H0394	99-65-0	1	ug/mL
2,4,6-TRINITROTOLUENE	24H0394	118-96-7	1	ug/mL
2,4-DINITROTOLUENE	24H0394	121-14-2	1	ug/mL
2,6-DINITROTOLUENE	24H0394	606-20-2	1	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24H0394	35572-78-2	1	ug/mL
2-NITROTOLUENE	24H0394	88-72-2	1	ug/mL
3,5-DINITROANILINE	24H0394	618-87-1	1	ug/mL
3-NITROTOLUENE	24H0394	99-08-1	1	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24H0394	19406-51-0	1	ug/mL
4-NITROTOLUENE	24H0394	99-99-0	1	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24H0394	121-82-4	1	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24H0394	479-45-8	1	ug/mL
NITROBENZENE	24H0394	98-95-3	1	ug/mL
NITROGLYCERIN	24H0394	55-63-0	1	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24H0394	2691-41-0	1	ug/mL
PENTAERYTHRITOL TETRANITRATE	24H0394	78-11-5	1	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24H0394	8330 - SCV DSS 20ug/mL 08/14/24	08/14/2024	-	-	02/12/2025	08/16/2024 07:33	by KMY1	0.04

Analytical Standard Record

24I0469

Description:	8330 - CCV DSS 10ug/mL 09/24/24	Expires:	03/23/2025
Standard Type:	Analyte Spike	Prepared:	09/24/2024
Solvent:	ACN	Prepared By:	Kia Yang
Final Volume (mls):	10	Department:	HPLC
Vials:	1	Last Edit:	09/24/2024 10:51 by KMY1
Lot Number:	*		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	23A0023	99-35-4	10	ug/mL
1,3-DINITROBENZENE	23A0023	99-65-0	10	ug/mL
2,4,6-TRINITROTOLUENE	23A0023	118-96-7	10	ug/mL
2,4-DINITROTOLUENE	23A0023	121-14-2	10	ug/mL
2,6-DINITROTOLUENE	23A0023	606-20-2	10	ug/mL
2-AMINO-4,6-DINITROTOLUENE	23A0023	35572-78-2	10	ug/mL
2-NITROTOLUENE	23A0023	88-72-2	10	ug/mL
3,5-DINITROANILINE	23A0023	618-87-1	10	ug/mL
3-NITROTOLUENE	23A0023	99-08-1	10	ug/mL
4-AMINO-2,6-DINITROTOLUENE	23A0023	19406-51-0	10	ug/mL
4-NITROTOLUENE	23A0023	99-99-0	10	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	23A0023	121-82-4	10	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	23A0023	479-45-8	10	ug/mL
NITROBENZENE	23A0023	98-95-3	10	ug/mL
NITROGLYCERIN	23A0023	55-63-0	10	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	23A0023	2691-41-0	10	ug/mL
PENTAERYTHRITOL TETRANITRATE	23A0023	78-11-5	10	ug/mL
1,2-DINITROBENZENE	24D0501	528-29-0	10	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
23A0023	8330 - SSS Ampule A0191734	11/23/2022	Restek	A0191734	11/30/2025	12/04/2023 11:05	by IMC	0.1
24D0501	8330 - 1,2-DNB SAS Ampule A0205460	04/22/2024	Restek	A0205460	12/31/2028	04/26/2024 13:46	by AOP	0.1

Analytical Standard Record

24I0470

Description:	8330 - CCV 1.0ug/mL 09/24/24	Expires:	03/23/2025
Standard Type:	Calibration Standard	Prepared:	09/24/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Kia Yang
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	09/24/2024 10:53 by KMY1
Lot Number:	*		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24I0469	528-29-0	1	ug/mL
1,3,5-TRINITROBENZENE	24I0469	99-35-4	1	ug/mL
1,3-DINITROBENZENE	24I0469	99-65-0	1	ug/mL
2,4,6-TRINITROTOLUENE	24I0469	118-96-7	1	ug/mL
2,4-DINITROTOLUENE	24I0469	121-14-2	1	ug/mL
2,6-DINITROTOLUENE	24I0469	606-20-2	1	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24I0469	35572-78-2	1	ug/mL
2-NITROTOLUENE	24I0469	88-72-2	1	ug/mL
3,5-DINITROANILINE	24I0469	618-87-1	1	ug/mL
3-NITROTOLUENE	24I0469	99-08-1	1	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24I0469	19406-51-0	1	ug/mL
4-NITROTOLUENE	24I0469	99-99-0	1	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24I0469	121-82-4	1	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24I0469	479-45-8	1	ug/mL
NITROBENZENE	24I0469	98-95-3	1	ug/mL
NITROGLYCERIN	24I0469	55-63-0	1	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24I0469	2691-41-0	1	ug/mL
PENTAERYTHRITOL TETRANITRATE	24I0469	78-11-5	1	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24I0469	8330 - CCV DSS 10ug/mL 09/24/24	09/24/2024	*	*	03/23/2025	09/24/2024 10:51	by KMY1	0.08

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

908 N. Temperance Ave., Clovis, CA 93611 - Phone 559-275-2175 - www.metirigroup.com

NELAP Certification Number: CA00046
DoD-ELAP Certification Number 4064.01
State Certification Number:

October 01, 2024

John Carson
AECOM Omaha
12120 Shamrock Plaza Suite 300
Omaha, NE 68154

RE: Wingate
24I0203

Enclosed are the results of analyses for samples received by our laboratory on 9/24/2024. If you have any questions concerning this report, please feel free to contact me.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness. These test results meet all requirements of NELAC and DoD QSM. Release of the hard copy has been authorized by the Laboratory Manager or designee, as verified by the following signature.

Sincerely,

Karen Volpendesta For Monica Garcia-Strickland
Project Manager

monica.garcia-strickland@metirigroup.com
559-825-9005

The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document.
No duplication of this report is allowed, except in its entirety.

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

AECOM Omaha	Project: Wingate	
12120 Shamrock Plaza Suite 300	Project Number: Wingate 60517380 Task 3	
Omaha, NE 68154	Project Manager: John Carson	Reported: 10/01/2024 10:38

Data Validatable Report

Analysis Case Narrative

EPA 8330:
The analyte 2,4,6-trinitrotoluene recovered above the upper control limit in the BDI0507-MS1 performed on sample P2-ARROYO-0007. The RPD for 2,4,6-trinitrotoluene and methyl, 2,4,6-trinitrophenylnitramine exceeded the 20% limit.
Corrective action: None, all analytes recovered within the control limits in the -BS1 and -BSD1.

Samples in this Report

Lab ID	Sample	Matrix	Date Sampled	Date Received
24I0203-01	P2-ARROYO-0005	Solid	09/21/2024 09:15	09/24/2024
24I0203-02	P2-ARROYO-0006	Solid	09/21/2024 09:17	09/24/2024
24I0203-03	P2-ARROYO-0007	Solid	09/21/2024 09:19	09/24/2024

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

AECOM Omaha	Project: Wingate	
12120 Shamrock Plaza Suite 300	Project Number: Wingate 60517380 Task 3	
Omaha, NE 68154	Project Manager: John Carson	Reported: 10/01/2024 10:38

Containers Received

Lab ID	Container Type	Count	Preservation Check
24I0203-01			
	8oz Jar Wmouth	1	
24I0203-02			
	8oz Jar Wmouth	1	
24I0203-03			
	8oz Jar Wmouth	1	

The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document.
No duplication of this report is allowed, except in its entirety.

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

AECOM Omaha	Project: Wingate	
12120 Shamrock Plaza Suite 300	Project Number: Wingate 60517380 Task 3	
Omaha, NE 68154	Project Manager: John Carson	Reported: 10/01/2024 10:38

Sample Results

Sample: P2-ARROYO-0005
24I0203-01 (Solid)

Liquid Chromatography

Analyte	Result /Qual	LOQ	LOD	DL	Units	Date Analyzed	DF	Method	Prep Batch
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.075 U	0.50	0.075	0.037	mg/kg	09/26/24	1	EPA 8330B	BDI0507
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.075 U	0.50	0.075	0.025	mg/kg	09/26/24	1	EPA 8330B	BDI0507
1,3,5-TRINITROBENZENE	0.075 U	0.50	0.075	0.013	mg/kg	09/26/24	1	EPA 8330B	BDI0507
1,3-DINITROBENZENE	0.075 U	0.50	0.075	0.022	mg/kg	09/26/24	1	EPA 8330B	BDI0507
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	0.075 U	0.50	0.075	0.037	mg/kg	09/26/24	1	EPA 8330B	BDI0507
NITROBENZENE	0.075 U	0.50	0.075	0.028	mg/kg	09/26/24	1	EPA 8330B	BDI0507
2,4,6-TRINITROTOLUENE	38	0.50	0.075	0.031	mg/kg	09/26/24	1	EPA 8330B	BDI0507
4-AMINO-2,6-DINITROTOLUENE	0.11 J	0.50	0.075	0.034	mg/kg	09/26/24	1	EPA 8330B	BDI0507
2-AMINO-4,6-DINITROTOLUENE	0.075 U	0.50	0.075	0.034	mg/kg	09/26/24	1	EPA 8330B	BDI0507
2,4-DINITROTOLUENE	0.075 U	0.50	0.075	0.028	mg/kg	09/26/24	1	EPA 8330B	BDI0507
2,6-DINITROTOLUENE	0.075 U	0.50	0.075	0.031	mg/kg	09/26/24	1	EPA 8330B	BDI0507
2-NITROTOLUENE	0.075 U	0.50	0.075	0.037	mg/kg	09/26/24	1	EPA 8330B	BDI0507
3-NITROTOLUENE	0.075 U	0.50	0.075	0.037	mg/kg	09/26/24	1	EPA 8330B	BDI0507
4-NITROTOLUENE	0.075 U	0.50	0.075	0.037	mg/kg	09/26/24	1	EPA 8330B	BDI0507
NITROGLYCERIN	0.15 U	0.50	0.15	0.061	mg/kg	09/26/24	1	EPA 8330B	BDI0507
PENTAERYTHRITOL TETRANITRATE	0.25 U	2.5	0.25	0.11	mg/kg	09/26/24	1	EPA 8330B	BDI0507
Surrogate: 1,2-DINITROBENZENE	*101%*		*78-119*			*09/26/24*	1	*EPA 8330B*	*BDI0507*

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

AECOM Omaha	Project: Wingate	
12120 Shamrock Plaza Suite 300	Project Number: Wingate 60517380 Task 3	
Omaha, NE 68154	Project Manager: John Carson	Reported: 10/01/2024 10:38

Sample Results

(Continued)

Sample: P2-ARROYO-0006
24I0203-02 (Solid)

Liquid Chromatography

Analyte	Result /Qual	LOQ	LOD	DL	Units	Date Analyzed	DF	Method	Prep Batch
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.075 U	0.50	0.075	0.037	mg/kg	09/26/24	1	EPA 8330B	BDI0507
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.075 U	0.50	0.075	0.025	mg/kg	09/26/24	1	EPA 8330B	BDI0507
1,3,5-TRINITROBENZENE	0.075 U	0.50	0.075	0.013	mg/kg	09/26/24	1	EPA 8330B	BDI0507
1,3-DINITROBENZENE	0.075 U	0.50	0.075	0.022	mg/kg	09/26/24	1	EPA 8330B	BDI0507
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	0.075 U	0.50	0.075	0.037	mg/kg	09/26/24	1	EPA 8330B	BDI0507
NITROBENZENE	0.075 U	0.50	0.075	0.028	mg/kg	09/26/24	1	EPA 8330B	BDI0507
2,4,6-TRINITROTOLUENE	0.79	0.50	0.075	0.031	mg/kg	09/26/24	1	EPA 8330B	BDI0507
4-AMINO-2,6-DINITROTOLUENE	0.075 U	0.50	0.075	0.034	mg/kg	09/26/24	1	EPA 8330B	BDI0507
2-AMINO-4,6-DINITROTOLUENE	0.075 U	0.50	0.075	0.034	mg/kg	09/26/24	1	EPA 8330B	BDI0507
2,4-DINITROTOLUENE	0.075 U	0.50	0.075	0.028	mg/kg	09/26/24	1	EPA 8330B	BDI0507
2,6-DINITROTOLUENE	0.075 U	0.50	0.075	0.031	mg/kg	09/26/24	1	EPA 8330B	BDI0507
2-NITROTOLUENE	0.075 U	0.50	0.075	0.037	mg/kg	09/26/24	1	EPA 8330B	BDI0507
3-NITROTOLUENE	0.075 U	0.50	0.075	0.037	mg/kg	09/26/24	1	EPA 8330B	BDI0507
4-NITROTOLUENE	0.075 U	0.50	0.075	0.037	mg/kg	09/26/24	1	EPA 8330B	BDI0507
NITROGLYCERIN	0.15 U	0.50	0.15	0.061	mg/kg	09/26/24	1	EPA 8330B	BDI0507
PENTAERYTHRITOL TETRANITRATE	0.25 U	2.5	0.25	0.11	mg/kg	09/26/24	1	EPA 8330B	BDI0507
Surrogate: 1,2-DINITROBENZENE	*101%*		*78-119*			*09/26/24*	1	*EPA 8330B*	*BDI0507*

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

AECOM Omaha	Project: Wingate	
12120 Shamrock Plaza Suite 300	Project Number: Wingate 60517380 Task 3	
Omaha, NE 68154	Project Manager: John Carson	Reported: 10/01/2024 10:38

Sample Results

(Continued)

Sample: P2-ARROYO-0007
24I0203-03 (Solid)

Liquid Chromatography

Analyte	Result	/Qual	LOQ	LOD	DL	Units	Date Analyzed	DF	Method	Prep Batch
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.075	U	0.50	0.075	0.037	mg/kg	09/26/24	1	EPA 8330B	BDI0507
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.075	U	0.50	0.075	0.025	mg/kg	09/26/24	1	EPA 8330B	BDI0507
1,3,5-TRINITROBENZENE	0.075	U	0.50	0.075	0.013	mg/kg	09/26/24	1	EPA 8330B	BDI0507
1,3-DINITROBENZENE	0.075	U	0.50	0.075	0.022	mg/kg	09/26/24	1	EPA 8330B	BDI0507
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	0.075	U	0.50	0.075	0.037	mg/kg	09/26/24	1	EPA 8330B	BDI0507
NITROBENZENE	0.075	U	0.50	0.075	0.028	mg/kg	09/26/24	1	EPA 8330B	BDI0507
2,4,6-TRINITROTOLUENE	0.74		0.50	0.075	0.031	mg/kg	09/26/24	1	EPA 8330B	BDI0507
4-AMINO-2,6-DINITROTOLUENE	0.075	U	0.50	0.075	0.034	mg/kg	09/26/24	1	EPA 8330B	BDI0507
2-AMINO-4,6-DINITROTOLUENE	0.075	U	0.50	0.075	0.034	mg/kg	09/26/24	1	EPA 8330B	BDI0507
2,4-DINITROTOLUENE	0.075	U	0.50	0.075	0.028	mg/kg	09/26/24	1	EPA 8330B	BDI0507
2,6-DINITROTOLUENE	0.075	U	0.50	0.075	0.031	mg/kg	09/26/24	1	EPA 8330B	BDI0507
2-NITROTOLUENE	0.075	U	0.50	0.075	0.037	mg/kg	09/26/24	1	EPA 8330B	BDI0507
3-NITROTOLUENE	0.075	U	0.50	0.075	0.037	mg/kg	09/26/24	1	EPA 8330B	BDI0507
4-NITROTOLUENE	0.075	U	0.50	0.075	0.037	mg/kg	09/26/24	1	EPA 8330B	BDI0507
NITROGLYCERIN	0.15	U	0.50	0.15	0.061	mg/kg	09/26/24	1	EPA 8330B	BDI0507
PENTAERYTHRITOL TETRANITRATE	0.25	U	2.5	0.25	0.11	mg/kg	09/26/24	1	EPA 8330B	BDI0507
Surrogate: 1,2-DINITROBENZENE	*102%*			*78-119*			*09/26/24*	1	*EPA 8330B*	*BDI0507*

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

AECOM Omaha	Project: Wingate	
12120 Shamrock Plaza Suite 300	Project Number: Wingate 60517380 Task 3	
Omaha, NE 68154	Project Manager: John Carson	Reported: 10/01/2024 10:38

Quality Control

Liquid Chromatography

Analyte	Result/Qual	LOQ	LOD	MDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Method: EPA 8330B										
Batch: BDI0507 - EPA 8330B										
	mg/kg									
Blank (BDI0507-BLK1)						Prepared: 09/25/24 11:39 Analyzed: 09/26/24 13:03				
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.075 U	0.50	0.075	0.037						
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.075 U	0.50	0.075	0.025						
1,3,5-TRINITROBENZENE	0.075 U	0.50	0.075	0.013						
1,3-DINITROBENZENE	0.075 U	0.50	0.075	0.022						
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	0.075 U	0.50	0.075	0.037						
NITROBENZENE	0.075 U	0.50	0.075	0.028						
2,4,6-TRINITROTOLUENE	0.075 U	0.50	0.075	0.031						
4-AMINO-2,6-DINITROTOLUENE	0.075 U	0.50	0.075	0.034						
2-AMINO-4,6-DINITROTOLUENE	0.075 U	0.50	0.075	0.034						
2,4-DINITROTOLUENE	0.075 U	0.50	0.075	0.028						
2,6-DINITROTOLUENE	0.075 U	0.50	0.075	0.031						
2-NITROTOLUENE	0.075 U	0.50	0.075	0.037						
3-NITROTOLUENE	0.075 U	0.50	0.075	0.037						
4-NITROTOLUENE	0.075 U	0.50	0.075	0.037						
NITROGLYCERIN	0.15 U	0.50	0.15	0.061						
PENTAERYTHRITOL TETRANITRATE	0.25 U	2.5	0.25	0.11						
Surrogates										
1,2-DINITROBENZENE	*2.03*				*1.99*		*102*	*78-119*		
	mg/kg									
LCS (BDI0507-BS1)						Prepared: 09/25/24 11:39 Analyzed: 09/26/24 13:46				
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	2.04				1.99		103	74-124		
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	2.08				1.99		105	67-129		
1,3,5-TRINITROBENZENE	2.01				1.99		101	80-116		
1,3-DINITROBENZENE	2.07				1.99		104	73-119		
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	1.70				1.99		85.5	68-135		
NITROBENZENE	2.12				1.99		106	67-129		
2,4,6-TRINITROTOLUENE	2.12				1.99		107	71-120		
4-AMINO-2,6-DINITROTOLUENE	2.11				1.99		106	64-127		
2-AMINO-4,6-DINITROTOLUENE	2.12				1.99		107	71-123		
2,4-DINITROTOLUENE	2.10				1.99		106	75-121		
2,6-DINITROTOLUENE	2.04				1.99		102	79-117		
2-NITROTOLUENE	2.08				1.99		105	70-124		
3-NITROTOLUENE	2.10				1.99		105	67-129		
4-NITROTOLUENE	2.07				1.99		104	71-124		
NITROGLYCERIN	2.15				1.99		108	73-124		
PENTAERYTHRITOL TETRANITRATE	1.96 J				1.99		98.7	72-128		
Surrogates										
1,2-DINITROBENZENE	*2.03*				*1.99*		*102*	*78-119*		

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

AECOM Omaha	Project: Wingate	
12120 Shamrock Plaza Suite 300	Project Number: Wingate 60517380 Task 3	
Omaha, NE 68154	Project Manager: John Carson	Reported: 10/01/2024 10:38

Quality Control
(Continued)

Liquid Chromatography (Continued)

Analyte	Result/Qual	LOQ	LOD	MDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
	mg/kg									
LCS Dup (BDI0507-BSD1)						Prepared: 09/25/24 11:39		Analyzed: 09/26/24 14:29		
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	2.13				1.99		107	74-124	4.31	20
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	2.14				1.99		108	67-129	2.86	20
1,3,5-TRINITROBENZENE	2.06				1.99		104	80-116	2.78	20
1,3-DINITROBENZENE	2.12				1.99		107	73-119	2.35	20
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	1.76				1.99		88.6	68-135	3.78	20
NITROBENZENE	2.16				1.99		108	67-129	2.13	20
2,4,6-TRINITROTOLUENE	2.18				1.99		109	71-120	2.69	20
4-AMINO-2,6-DINITROTOLUENE	2.15				1.99		108	64-127	2.11	20
2-AMINO-4,6-DINITROTOLUENE	2.17				1.99		109	71-123	2.30	20
2,4-DINITROTOLUENE	2.15				1.99		108	75-121	2.67	20
2,6-DINITROTOLUENE	2.08				1.99		105	79-117	2.29	20
2-NITROTOLUENE	2.12				1.99		107	70-124	1.91	20
3-NITROTOLUENE	2.14				1.99		107	67-129	2.00	20
4-NITROTOLUENE	2.11				1.99		106	71-124	1.83	20
NITROGLYCERIN	2.24				1.99		112	73-124	4.10	20
PENTAERYTHRITOL TETRANITRATE	1.92 J				1.99		96.2	72-128	2.31	20
Surrogates										
1,2-DINITROBENZENE	*2.05*				*1.99*		*103*	*78-119*		

Analyte	Result/Qual	LOQ	LOD	MDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
	mg/kg									
Matrix Spike (BDI0507-MS1)		**Source: 24I0203-03**				Prepared: 09/25/24 11:39		Analyzed: 09/26/24 15:11		
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	2.07				1.99	0.0746 U	104	74-124		
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	1.91				1.99	0.0746 U	96.0	67-129		
1,3,5-TRINITROBENZENE	2.17				1.99	0.0746 U	109	80-116		
1,3-DINITROBENZENE	2.12				1.99	0.0746 U	106	73-119		
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	1.70				1.99	0.0746 U	85.4	68-135		
NITROBENZENE	2.14				1.99	0.0746 U	108	67-129		
2,4,6-TRINITROTOLUENE	3.66 MS2				1.99	0.738	147	71-120		
4-AMINO-2,6-DINITROTOLUENE	2.15				1.99	0.0746 U	108	64-127		
2-AMINO-4,6-DINITROTOLUENE	2.18				1.99	0.0746 U	109	71-123		
2,4-DINITROTOLUENE	2.19				1.99	0.0746 U	110	75-121		
2,6-DINITROTOLUENE	2.12				1.99	0.0746 U	107	79-117		
2-NITROTOLUENE	2.14				1.99	0.0746 U	108	70-124		
3-NITROTOLUENE	2.16				1.99	0.0746 U	109	67-129		
4-NITROTOLUENE	2.14				1.99	0.0746 U	108	71-124		
NITROGLYCERIN	2.23				1.99	0.149 U	112	73-124		
PENTAERYTHRITOL TETRANITRATE	1.92 J				1.99	0.249 U	96.4	72-128		
Surrogates										
1,2-DINITROBENZENE	*1.95*				*1.99*		*97.9*	*78-119*		

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

AECOM Omaha	Project: Wingate	
12120 Shamrock Plaza Suite 300	Project Number: Wingate 60517380 Task 3	
Omaha, NE 68154	Project Manager: John Carson	Reported: 10/01/2024 10:38

Quality Control
(Continued)

Liquid Chromatography (Continued)

Analyte	Result/Qual	LOQ	LOD	MDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
	mg/kg									
Matrix Spike Dup (BDI0507-MSD1)	**Source: 24I0203-03**					Prepared: 09/25/24 11:39		Analyzed: 09/26/24 15:54		
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	1.99				1.98	0.0746 U	101	74-124	3.71	20
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	1.84				1.98	0.0746 U	93.0	67-129	3.59	20
1,3,5-TRINITROBENZENE	2.06				1.98	0.0746 U	104	80-116	5.31	20
1,3-DINITROBENZENE	2.03				1.98	0.0746 U	102	73-119	4.14	20
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	1.35 MS3				1.98	0.0746 U	68.0	68-135	23.1	20
NITROBENZENE	2.06				1.98	0.0746 U	104	67-129	3.98	20
2,4,6-TRINITROTOLUENE	2.92 MS3				1.98	0.738	110	71-120	22.5	20
4-AMINO-2,6-DINITROTOLUENE	2.07				1.98	0.0746 U	105	64-127	3.83	20
2-AMINO-4,6-DINITROTOLUENE	2.10				1.98	0.0746 U	106	71-123	3.78	20
2,4-DINITROTOLUENE	2.07				1.98	0.0746 U	105	75-121	5.42	20
2,6-DINITROTOLUENE	2.00				1.98	0.0746 U	101	79-117	5.78	20
2-NITROTOLUENE	2.04				1.98	0.0746 U	103	70-124	4.66	20
3-NITROTOLUENE	2.05				1.98	0.0746 U	104	67-129	5.23	20
4-NITROTOLUENE	2.03				1.98	0.0746 U	102	71-124	5.33	20
NITROGLYCERIN	2.13				1.98	0.149 U	108	73-124	4.24	20
PENTAERYTHRITOL TETRANITRATE	1.91 J				1.98	0.249 U	96.5	72-128	0.316	20
Surrogates										
1,2-DINITROBENZENE	*2.00*				*1.98*		*101*	*78-119*		

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

AECOM Omaha	Project: Wingate	
12120 Shamrock Plaza Suite 300	Project Number: Wingate 60517380 Task 3	
Omaha, NE 68154	Project Manager: John Carson	Reported: 10/01/2024 10:38

Notes and Definitions

Item	Definition
J	Estimated value
MI2	Manual integration, non-target peak interference
MS2	Matrix spike recovered above the upper control limit
MS3	MS/MSD recovered with high RPD
U	Not detected
Dry	Sample results reported on a dry weight basis.
DF	Dilution Factor
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
*	Value outside control limits
RPD	Relative Percent Difference
%REC	Percent Recovery
Source	Sample that was matrix spiked or duplicated.

LOQ, Limit of Quantitation = Method Reporting Limit (MRL).

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APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

WORK ORDER

24I0203

Printed: 10/01/2024 10:38 am

Project: **Wingate**
Project Number: **Wingate 60517380 Task 3**
Project Manager: **Monica Garcia-Strickland**
PO Number: **1630628**

Report To:

AECOM Omaha
John Carson
12120 Shamrock Plaza Suite 300
Omaha, NE 68154
Phone: (402) 334-8181
Fax: (402) 334-1984

Invoice To:

AECOM Omaha
John Carson
12120 Shamrock Plaza Suite 300
Omaha, NE 68154
Phone: (402) 334-8181
Fax: (402) 334-1984

Date Received: 09/24/2024 09:56 AM
Date Due: 10/01/2024 (5.00 day TAT)

Logged In By: Christina Aguilar
Received By: Christina Aguilar

Analysis	Comments
24I0203-01 P2-ARROYO-0005 [Solid] Sampled 9/21/2024 9:15:00AM	
8330B DOD	Wingate
24I0203-02 P2-ARROYO-0006 [Solid] Sampled 9/21/2024 9:17:00AM	
8330B DOD	Wingate
24I0203-03 P2-ARROYO-0007 [Solid] Sampled 9/21/2024 9:19:00AM	
8330B DOD	Wingate

24I0203 **Sample Receipt Log**

Default Cooler

Samples Received at: **3.9°C**

Custody Seals	Yes	Were all containers sealed in separate bags?	Yes
Containers Intact	Yes	Did all containers arrive in good condition?	Yes
COC/Labels Agree	Yes	Correct containers/preserv. for tests indicated?	Yes
Preservation Confirmed	Yes	Sufficient volume sent for tests requested?	Yes
Received On Ice	Yes	VOA vials for volatiles analysis of water are bubb	No
Was a chain of custody received?	Yes	Sufficient remaining holding time for analyses?	Yes
COCs complete/signed in the appropriate places?	Yes	pH of non-VOA preserved containers documented?	No
Sample labels complete? Sample ID, date/time, etc.	Yes	Unpreserved vials received for VOA analysis?	No
Did all container labels agree with COCs?	Yes	If "yes", are unpreserved VOA vials noted on Work	No

Project Name: Parcel 3 Closure and Corrective Action				Project #: 60517380 Task 3	AECOM 12120 Shamrock Plaza #100 Omaha NE 68154													AECOM
Sampler: Jeff Hayes				Project Mgr John C. Carson PE				Analytical Parameters										402.334.8181
Date	Time	Comp	Grab	ID	Matrix	# Containers	Cont Type	VOC's 8260B	SVOC's 8270D	PCB's 8082A	Explosives 8330B	Dioxins/Furans 8290	Perchlorates 6850	Metals 6010A.6020B.7471B	Nitrate 9056A	Cyanide 9014	NDMA 8270D SIM	PAGE 1 of 1
9/21/2024	9:15	X		P2-ARROYO-0005	soil	1	8 oz jar				X							4C
9/21/2024	9:17	X		P2-ARROYO-0006	soil	1	8 oz jar				X							4C
9/21/2024	9:19	X		P2-ARROYO-0007	soil	1	8 oz jar				X							4C
Relenquished By: *Jeffrey Hayes*				**Shipped:**				**Fedex**										**AECOM Chemist:**
Received By:				Sep 23 2024				7787-5822-4313										Wanda Davis
Relenquished By:				Ship Time: 1600				To: APPL Labs										302-465-1997
Rcv'd for Lab by: C. Aguilar - Appl Inc				1123 4.3/3.9				ATTN: Monica Garcia-Strickland 908 N. Temperance Ave Clovis CA 93611-8606										Brian Rothmeyer 303-619-6342

956 9/24/24

NEED A 5 DAY TAT

NO. 141864

C. Aguilar 956 9/24/24 IRB 4.3/3.9oc

CUSTODY SEAL
APPL Inc. (559) 275-2175
Initials JBH Date 9-23-24

CUSTODY SEAL
APPL Inc. (559) 275-2175
Initials JBH Date 9-23-24

HPLC

SAMPLE DATA

ANALYSIS DATA SHEET

P2-ARROYO-0005

Laboratory:	APPL, LLC			Work Order:	24I0203
Client:	AECOM			Project:	Wingate 60517380 Task 3
Matrix:	Solid	Laboratory ID:	24I0203-01	File ID:	S2024-09-26-010
Sampled:	09/21/24 09:15	Prepared:	09/25/24 11:39	Analyzed:	09/26/24 16:37
Solids:		Preparation:	EPA 8330B	Dilution:	1
Initial/Final:	10.06 g / 80 mL			Instrument:	STATLER
Batch:	BDI0507	Sequence:	SD03963	Calibration:	2420012

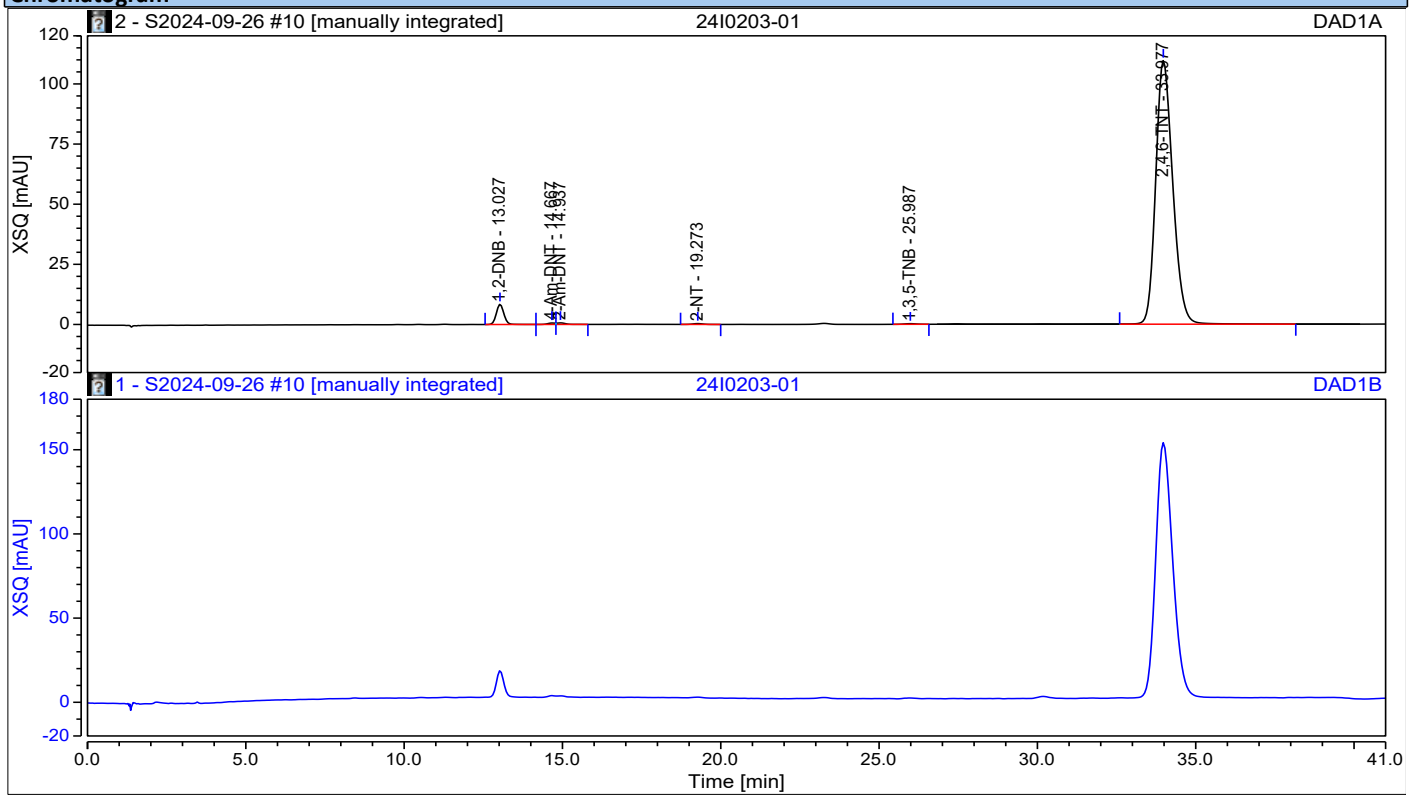
COMPOUND	CONC. (mg/kg)	LOQ	LOD	DL	Q
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCIN	0.075 U	0.50	0.075	0.037	
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.075 U	0.50	0.075	0.025	
1,3,5-TRINITROBENZENE	0.075 U	0.50	0.075	0.013	
1,3-DINITROBENZENE	0.075 U	0.50	0.075	0.022	
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	0.075 U	0.50	0.075	0.037	
NITROBENZENE	0.075 U	0.50	0.075	0.028	
2,4,6-TRINITROTOLUENE	38	0.50	0.075	0.031	
4-AMINO-2,6-DINITROTOLUENE	0.11 J	0.50	0.075	0.034	
2-AMINO-4,6-DINITROTOLUENE	0.075 U	0.50	0.075	0.034	
2,4-DINITROTOLUENE	0.075 U	0.50	0.075	0.028	
2,6-DINITROTOLUENE	0.075 U	0.50	0.075	0.031	
2-NITROTOLUENE	0.075 U	0.50	0.075	0.037	
3-NITROTOLUENE	0.075 U	0.50	0.075	0.037	
4-NITROTOLUENE	0.075 U	0.50	0.075	0.037	
NITROGLYCERIN	0.15 U	0.50	0.15	0.061	
PENTAERYTHRITOL TETRANITRATE	0.25 U	2.5	0.25	0.11	

Chromatogram and Results

Injection Details

Injection Name:	**24I0203-01**	*Instrument:*	**Statler**
Vial Number:	**10**	*Run Time (min):*	**41.00**
Injection Type:	**Unknown**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**26/Sep/2024 16:37**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**12/Aug/2024 08:22**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
n.a.	NG	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	PETN	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	HMX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	RDX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3,5-DNA	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	NB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	1,2-DNB	13.027	2.3280	8.413	3.26	7.02	253.1754
2	4-Am-DNT	14.667	0.1651	0.596	0.23	0.50	13.7349
3	2-Am-DNT	14.937	0.2043	0.641	0.29	0.54	12.1771
n.a.	1,3-DNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	2-NT	19.273	0.1292	0.347	0.18	0.29	13.7943
n.a.	4-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2,6-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5	1,3,5-TNB	25.987	0.1141	0.262	0.16	0.22	7.5650
n.a.	2,4-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Tetryl	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
6	2,4,6-TNT	33.977	68.5156	109.594	95.88	91.44	4824.3469
Total:			**71.456**	**119.853**	**100.000**	**100.000**	

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ANALYSIS DATA SHEET

P2-ARROYO-0005

Laboratory:	APPL, LLC			Work Order:	24I0203
Client:	AECOM			Project:	Wingate 60517380 Task 3
Matrix:	Solid	Laboratory ID:	24I0203-01RE1	File ID:	W2024-09-26-010
Sampled:	09/21/24 09:15	Prepared:	09/25/24 11:39	Analyzed:	09/26/24 14:57
Solids:		Preparation:	EPA 8330B	Dilution:	1
Initial/Final:	10.06 g / 80 mL			Instrument:	Waldorf
Batch:	BDI0507	Sequence:	SD03964	Calibration:	2433019

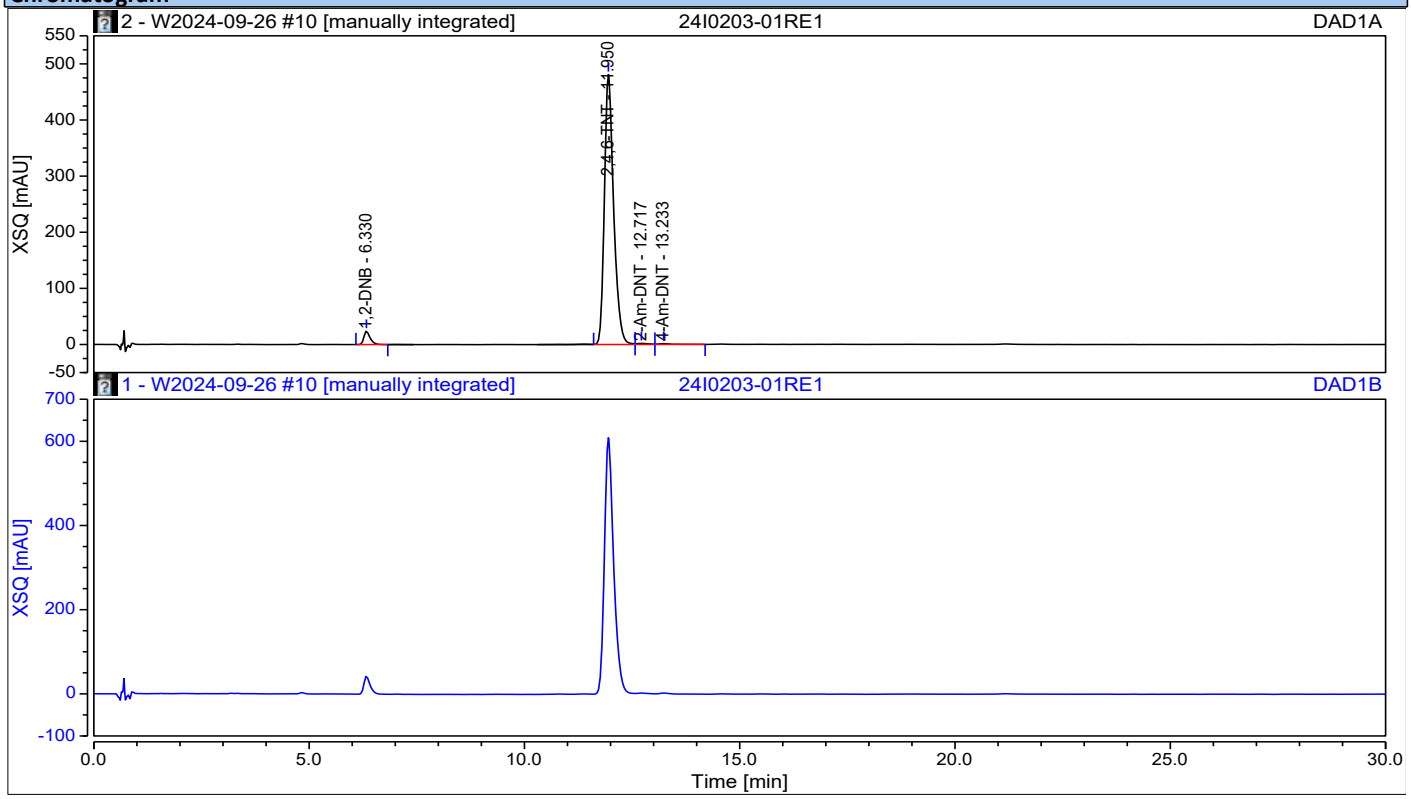
COMPOUND	CONC. (mg/kg)	LOQ	LOD	DL	Q
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCIN	0.075 U	0.50	0.075	0.037	
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.075 U	0.50	0.075	0.025	
1,3,5-TRINITROBENZENE	0.075 U	0.50	0.075	0.013	
1,3-DINITROBENZENE	0.075 U	0.50	0.075	0.022	
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	0.075 U	0.50	0.075	0.037	
NITROBENZENE	0.075 U	0.50	0.075	0.028	
2,4,6-TRINITROTOLUENE	35	0.50	0.075	0.031	
4-AMINO-2,6-DINITROTOLUENE	0.078 J	0.50	0.075	0.034	
2-AMINO-4,6-DINITROTOLUENE	0.075 U	0.50	0.075	0.034	
2,4-DINITROTOLUENE	0.075 U	0.50	0.075	0.028	
2,6-DINITROTOLUENE	0.075 U	0.50	0.075	0.031	
2-NITROTOLUENE	0.075 U	0.50	0.075	0.037	
3-NITROTOLUENE	0.075 U	0.50	0.075	0.037	
4-NITROTOLUENE	0.075 U	0.50	0.075	0.037	
NITROGLYCERIN	0.15 U	0.50	0.15	0.061	
PENTAERYTHRITOL TETRANITRATE	0.25 U	2.5	0.25	0.11	

Chromatogram and Results

Injection Details

Injection Name:	**24I0203-01RE1**	*Instrument:*	**Waldorf**
Vial Number:	**10**	*Run Time (min):*	**30.00**
Injection Type:	**Unknown**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**26/Sep/2024 14:57**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**24/Sep/2024 15:47**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
n.a.	NG	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	PETN	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	HMX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	RDX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	1,3,5-TNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	1,2-DNB	6.330	4.0233	23.919	3.24	4.70	260.8997
n.a.	1,3-DNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3,5-DNA	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	NB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Tetryl	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	2,4,6-TNT	11.950	119.0059	481.149	95.81	94.63	4414.4453
3	2-Am-DNT	12.717	0.6272	1.913	0.50	0.38	23.7851
4	4-Am-DNT	13.233	0.5538	1.498	0.45	0.29	9.7807
n.a.	2,4-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2,6-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	4-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**124.210**	**508.478**	**100.000**	**100.000**	

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ANALYSIS DATA SHEET

P2-ARROYO-0006

Laboratory:	APPL, LLC			Work Order:	24I0203
Client:	AECOM			Project:	Wingate 60517380 Task 3
Matrix:	Solid	Laboratory ID:	24I0203-02	File ID:	S2024-09-26-011
Sampled:	09/21/24 09:17	Prepared:	09/25/24 11:39	Analyzed:	09/26/24 17:19
Solids:		Preparation:	EPA 8330B	Dilution:	1
Initial/Final:	10.06 g / 80 mL			Instrument:	STATLER
Batch:	BDI0507	Sequence:	SD03963	Calibration:	2420012

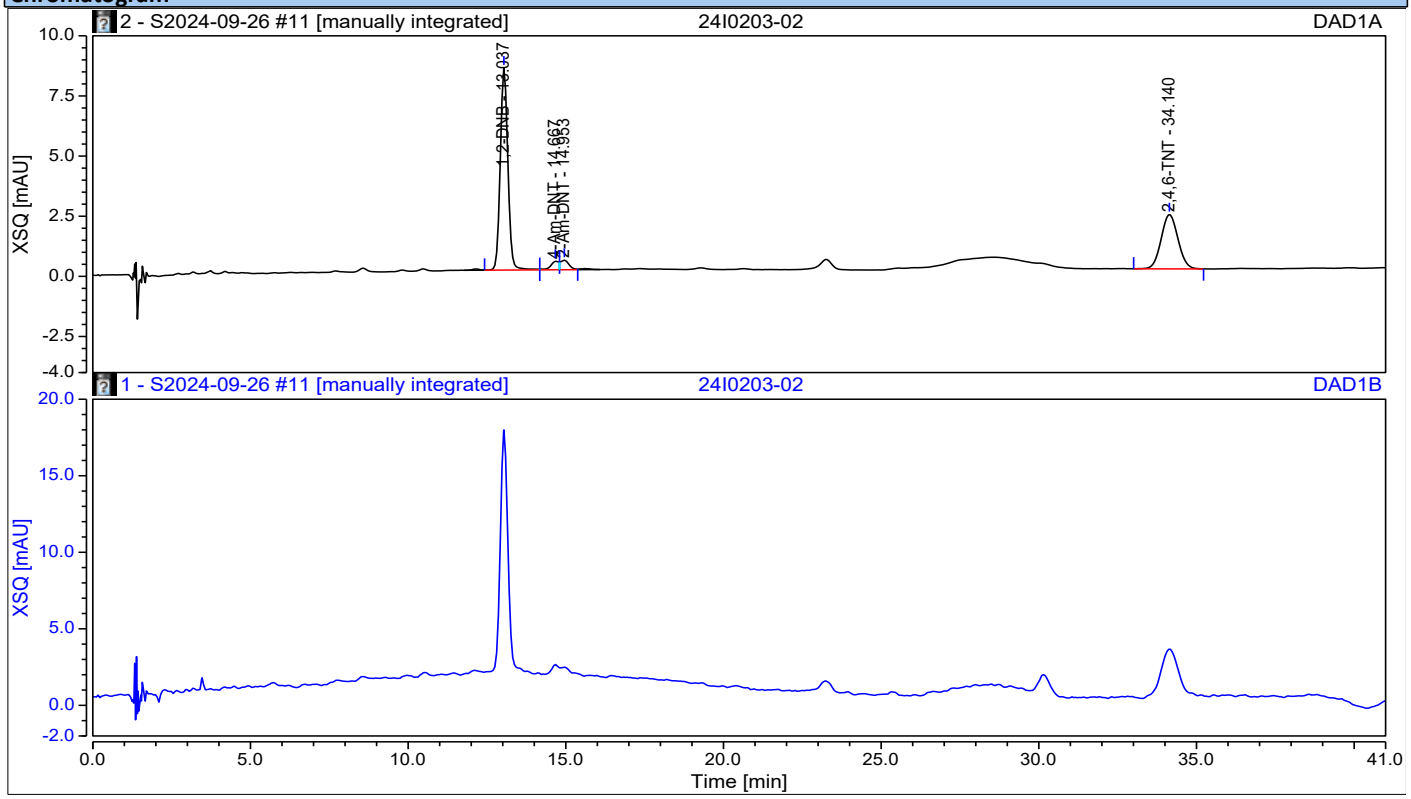
COMPOUND	CONC. (mg/kg)	LOQ	LOD	DL	Q
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCIN	0.075 U	0.50	0.075	0.037	
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.075 U	0.50	0.075	0.025	
1,3,5-TRINITROBENZENE	0.075 U	0.50	0.075	0.013	
1,3-DINITROBENZENE	0.075 U	0.50	0.075	0.022	
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	0.075 U	0.50	0.075	0.037	
NITROBENZENE	0.075 U	0.50	0.075	0.028	
2,4,6-TRINITROTOLUENE	0.79	0.50	0.075	0.031	
4-AMINO-2,6-DINITROTOLUENE	0.075 U	0.50	0.075	0.034	
2-AMINO-4,6-DINITROTOLUENE	0.075 U	0.50	0.075	0.034	
2,4-DINITROTOLUENE	0.075 U	0.50	0.075	0.028	
2,6-DINITROTOLUENE	0.075 U	0.50	0.075	0.031	
2-NITROTOLUENE	0.075 U	0.50	0.075	0.037	
3-NITROTOLUENE	0.075 U	0.50	0.075	0.037	
4-NITROTOLUENE	0.075 U	0.50	0.075	0.037	
NITROGLYCERIN	0.15 U	0.50	0.15	0.061	
PENTAERYTHRITOL TETRANITRATE	0.25 U	2.5	0.25	0.11	

Chromatogram and Results

Injection Details

Injection Name:	**24I0203-02**	*Instrument:*	**Statler**
Vial Number:	**11**	*Run Time (min):*	**41.00**
Injection Type:	**Unknown**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**26/Sep/2024 17:19**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**12/Aug/2024 08:22**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
n.a.	NG	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	PETN	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	HMX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	RDX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3,5-DNA	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	NB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	1,2-DNB	13.037	2.3477	8.410	59.04	73.60	253.0916
2	4-Am-DNT	14.667	0.1050	0.357	2.64	3.13	8.2362
3	2-Am-DNT	14.953	0.1242	0.398	3.12	3.48	7.5495
n.a.	1,3-DNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	4-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2,6-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	1,3,5-TNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2,4-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Tetryl	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	2,4,6-TNT	34.140	1.3996	2.261	35.20	19.79	99.5336
Total:			**3.976**	**11.426**	**100.000**	**100.000**	

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ANALYSIS DATA SHEET

P2-ARROYO-0006

Laboratory:	APPL, LLC			Work Order:	24I0203
Client:	AECOM			Project:	Wingate 60517380 Task 3
Matrix:	Solid	Laboratory ID:	24I0203-02RE1	File ID:	W2024-09-26-011
Sampled:	09/21/24 09:17	Prepared:	09/25/24 11:39	Analyzed:	09/26/24 15:29
Solids:		Preparation:	EPA 8330B	Dilution:	1
Initial/Final:	10.06 g / 80 mL			Instrument:	Waldorf
Batch:	BDI0507	Sequence:	SD03964	Calibration:	2433019

COMPOUND	CONC. (mg/kg)	LOQ	LOD	DL	Q
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCIN	0.075 U	0.50	0.075	0.037	
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.075 U	0.50	0.075	0.025	
1,3,5-TRINITROBENZENE	0.075 U	0.50	0.075	0.013	
1,3-DINITROBENZENE	0.075 U	0.50	0.075	0.022	
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	0.075 U	0.50	0.075	0.037	
NITROBENZENE	0.075 U	0.50	0.075	0.028	
2,4,6-TRINITROTOLUENE	0.84	0.50	0.075	0.031	
4-AMINO-2,6-DINITROTOLUENE	0.075 U	0.50	0.075	0.034	
2-AMINO-4,6-DINITROTOLUENE	0.075 U	0.50	0.075	0.034	
2,4-DINITROTOLUENE	0.075 U	0.50	0.075	0.028	
2,6-DINITROTOLUENE	0.075 U	0.50	0.075	0.031	
2-NITROTOLUENE	0.075 U	0.50	0.075	0.037	
3-NITROTOLUENE	0.075 U	0.50	0.075	0.037	
4-NITROTOLUENE	0.075 U	0.50	0.075	0.037	
NITROGLYCERIN	0.15 U	0.50	0.15	0.061	
PENTAERYTHRITOL TETRANITRATE	0.25 U	2.5	0.25	0.11	

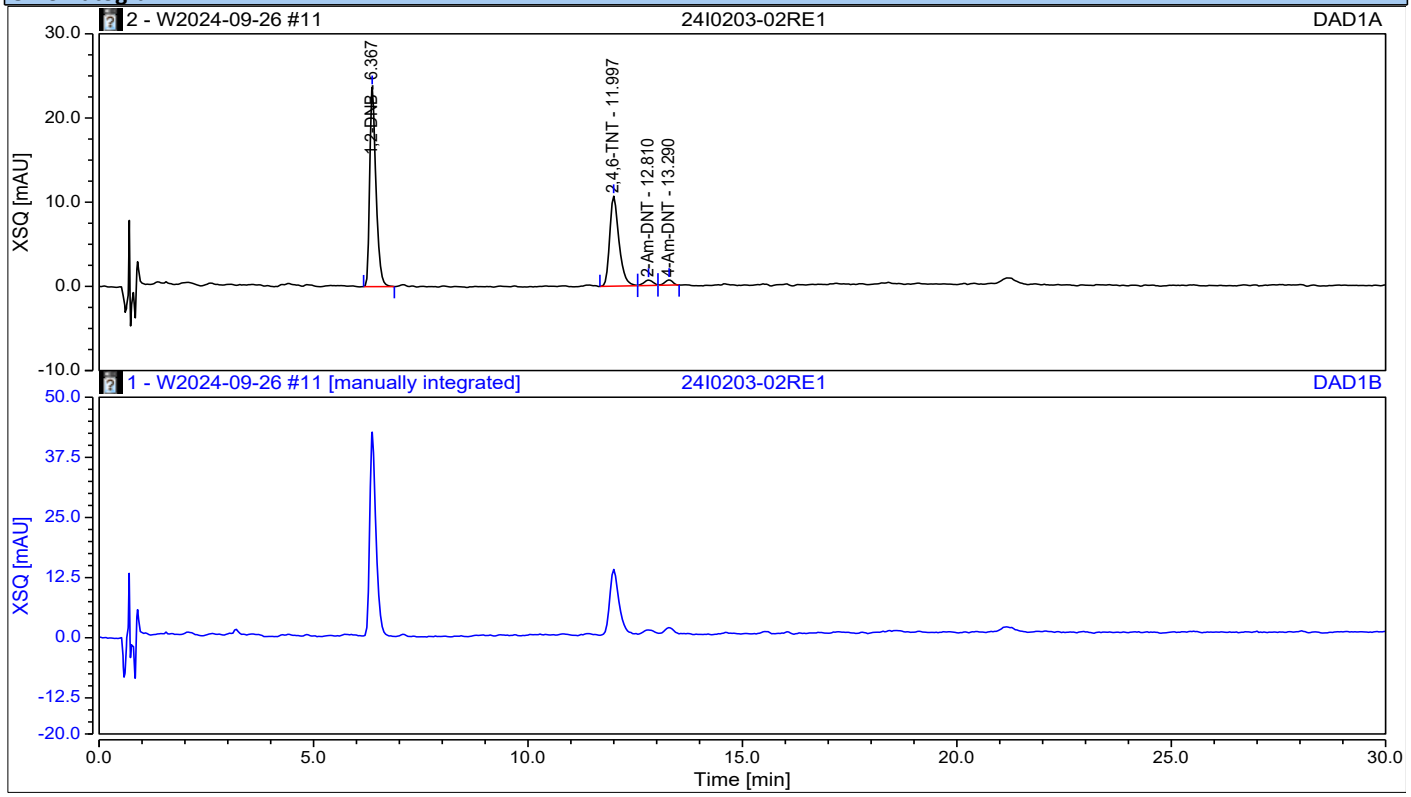
Instrument:
Sequence:W2024-09-26

Chromatogram and Results

Injection Details

Injection Name:	**24I0203-02RE1**	*Instrument:*	**Waldorf**
Vial Number:	**11**	*Run Time (min):*	**30.00**
Injection Type:	**Unknown**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**26/Sep/2024 15:29**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**24/Sep/2024 15:47**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
n.a.	NG	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	PETN	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	HMX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	RDX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	1,3,5-TNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	1,2-DNB	6.367	3.9831	23.685	57.27	66.43	258.4668
n.a.	1,3-DNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3,5-DNA	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	NB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Tetryl	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	2,4,6-TNT	11.997	2.6804	10.700	38.54	30.01	105.0904
3	2-Am-DNT	12.810	0.1598	0.651	2.30	1.83	12.1921
4	4-Am-DNT	13.290	0.1322	0.619	1.90	1.74	n.a.
n.a.	2,4-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2,6-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	4-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**6.955**	**35.655**	**100.000**	**100.000**	

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ANALYSIS DATA SHEET

P2-ARROYO-0007

Laboratory:	APPL, LLC			Work Order:	24I0203
Client:	AECOM			Project:	Wingate 60517380 Task 3
Matrix:	Solid	Laboratory ID:	24I0203-03	File ID:	S2024-09-26-012
Sampled:	09/21/24 09:19	Prepared:	09/25/24 11:39	Analyzed:	09/26/24 18:02
Solids:		Preparation:	EPA 8330B	Dilution:	1
Initial/Final:	10.05 g / 80 mL			Instrument:	STATLER
Batch:	BDI0507	Sequence:	SD03963	Calibration:	2420012

COMPOUND	CONC. (mg/kg)	LOQ	LOD	DL	Q
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCIN	0.075 U	0.50	0.075	0.037	
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.075 U	0.50	0.075	0.025	
1,3,5-TRINITROBENZENE	0.075 U	0.50	0.075	0.013	
1,3-DINITROBENZENE	0.075 U	0.50	0.075	0.022	
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	0.075 U	0.50	0.075	0.037	
NITROBENZENE	0.075 U	0.50	0.075	0.028	
2,4,6-TRINITROTOLUENE	0.74	0.50	0.075	0.031	
4-AMINO-2,6-DINITROTOLUENE	0.075 U	0.50	0.075	0.034	
2-AMINO-4,6-DINITROTOLUENE	0.075 U	0.50	0.075	0.034	
2,4-DINITROTOLUENE	0.075 U	0.50	0.075	0.028	
2,6-DINITROTOLUENE	0.075 U	0.50	0.075	0.031	
2-NITROTOLUENE	0.075 U	0.50	0.075	0.037	
3-NITROTOLUENE	0.075 U	0.50	0.075	0.037	
4-NITROTOLUENE	0.075 U	0.50	0.075	0.037	
NITROGLYCERIN	0.15 U	0.50	0.15	0.061	
PENTAERYTHRITOL TETRANITRATE	0.25 U	2.5	0.25	0.11	

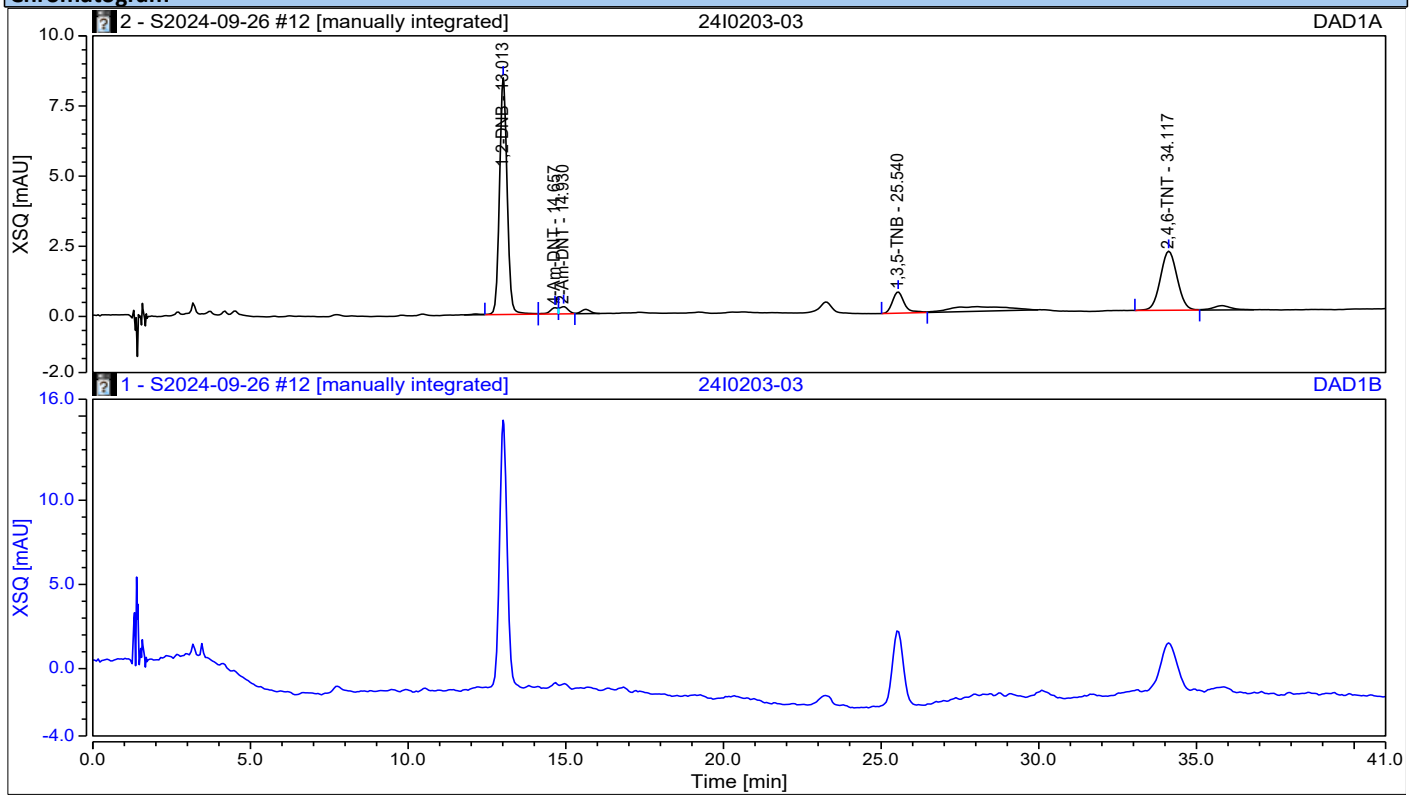
Instrument:
Sequence:S2024-09-26

Chromatogram and Results

Injection Details

Injection Name:	**24I0203-03**	*Instrument:*	**Statler**
Vial Number:	**12**	*Run Time (min):*	**41.00**
Injection Type:	**Unknown**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**26/Sep/2024 18:02**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**12/Aug/2024 08:22**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
n.a.	NG	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	PETN	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	HMX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	RDX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3,5-DNA	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	NB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	1,2-DNB	13.013	2.3549	8.436	56.95	71.56	253.8721
2	4-Am-DNT	14.657	0.0652	0.224	1.58	1.90	5.1658
3	2-Am-DNT	14.930	0.0819	0.264	1.98	2.24	5.0050
n.a.	1,3-DNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	4-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2,6-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	1,3,5-TNB	25.540	0.3324	0.759	8.04	6.44	21.9127
n.a.	2,4-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Tetryl	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5	2,4,6-TNT	34.117	1.3006	2.107	31.45	17.87	92.7392
Total:			**4.135**	**11.789**	**100.000**	**100.000**	

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ANALYSIS DATA SHEET

P2-ARROYO-0007

Laboratory:	APPL, LLC			Work Order:	24I0203
Client:	AECOM			Project:	Wingate 60517380 Task 3
Matrix:	Solid	Laboratory ID:	24I0203-03RE1	File ID:	W2024-09-26-012
Sampled:	09/21/24 09:19	Prepared:	09/25/24 11:39	Analyzed:	09/26/24 16:01
Solids:		Preparation:	EPA 8330B	Dilution:	1
Initial/Final:	10.05 g / 80 mL			Instrument:	Waldorf
Batch:	BDI0507	Sequence:	SD03964	Calibration:	2433019

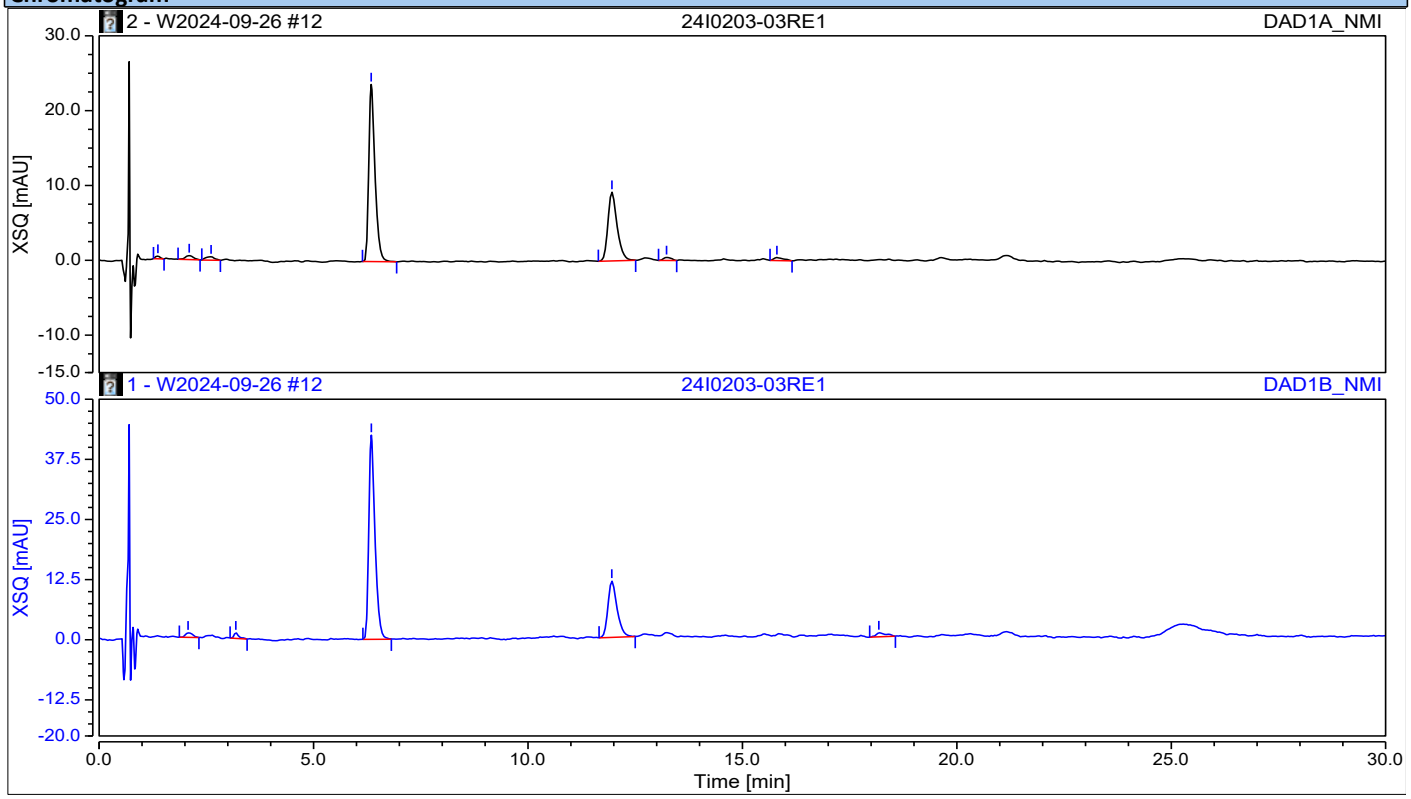
COMPOUND	CONC. (mg/kg)	LOQ	LOD	DL	Q
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCIN	0.075 U	0.50	0.075	0.037	
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.075 U	0.50	0.075	0.025	
1,3,5-TRINITROBENZENE	0.075 U	0.50	0.075	0.013	
1,3-DINITROBENZENE	0.075 U	0.50	0.075	0.022	
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	0.075 U	0.50	0.075	0.037	
NITROBENZENE	0.075 U	0.50	0.075	0.028	
2,4,6-TRINITROTOLUENE	0.73	0.50	0.075	0.031	
4-AMINO-2,6-DINITROTOLUENE	0.075 U	0.50	0.075	0.034	
2-AMINO-4,6-DINITROTOLUENE	0.075 U	0.50	0.075	0.034	
2,4-DINITROTOLUENE	0.075 U	0.50	0.075	0.028	
2,6-DINITROTOLUENE	0.075 U	0.50	0.075	0.031	
2-NITROTOLUENE	0.075 U	0.50	0.075	0.037	
3-NITROTOLUENE	0.075 U	0.50	0.075	0.037	
4-NITROTOLUENE	0.075 U	0.50	0.075	0.037	
NITROGLYCERIN	0.15 U	0.50	0.15	0.061	
PENTAERYTHRITOL TETRANITRATE	0.25 U	2.5	0.25	0.11	

Original Chromatogram

Injection Details

Injection Name:	**24I0203-03RE1**	*Instrument:*	**Waldorf**
Vial Number:	**12**	*Run Time (min):*	**30.00**
Injection Type:	**Unknown**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**26/Sep/2024 16:01**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**24/Sep/2024 15:47**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
n.a.	NG	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	PETN	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	HMX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	RDX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	1,3,5-TNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	1,2-DNB	6.343	3.9639	23.666	61.68	70.45	258.2755
n.a.	1,3-DNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3,5-DNA	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	NB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Tetryl	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	2,4,6-TNT	11.957	2.2889	9.193	35.62	27.37	91.2822
3	2-Am-DNT	12.720	0.0852	0.329	1.33	0.98	9.2355
4	4-Am-DNT	13.230	0.0880	0.404	1.37	1.20	n.a.
n.a.	2,4-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2,6-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	4-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**6.426**	**33.593**	**100.000**	**100.000**	

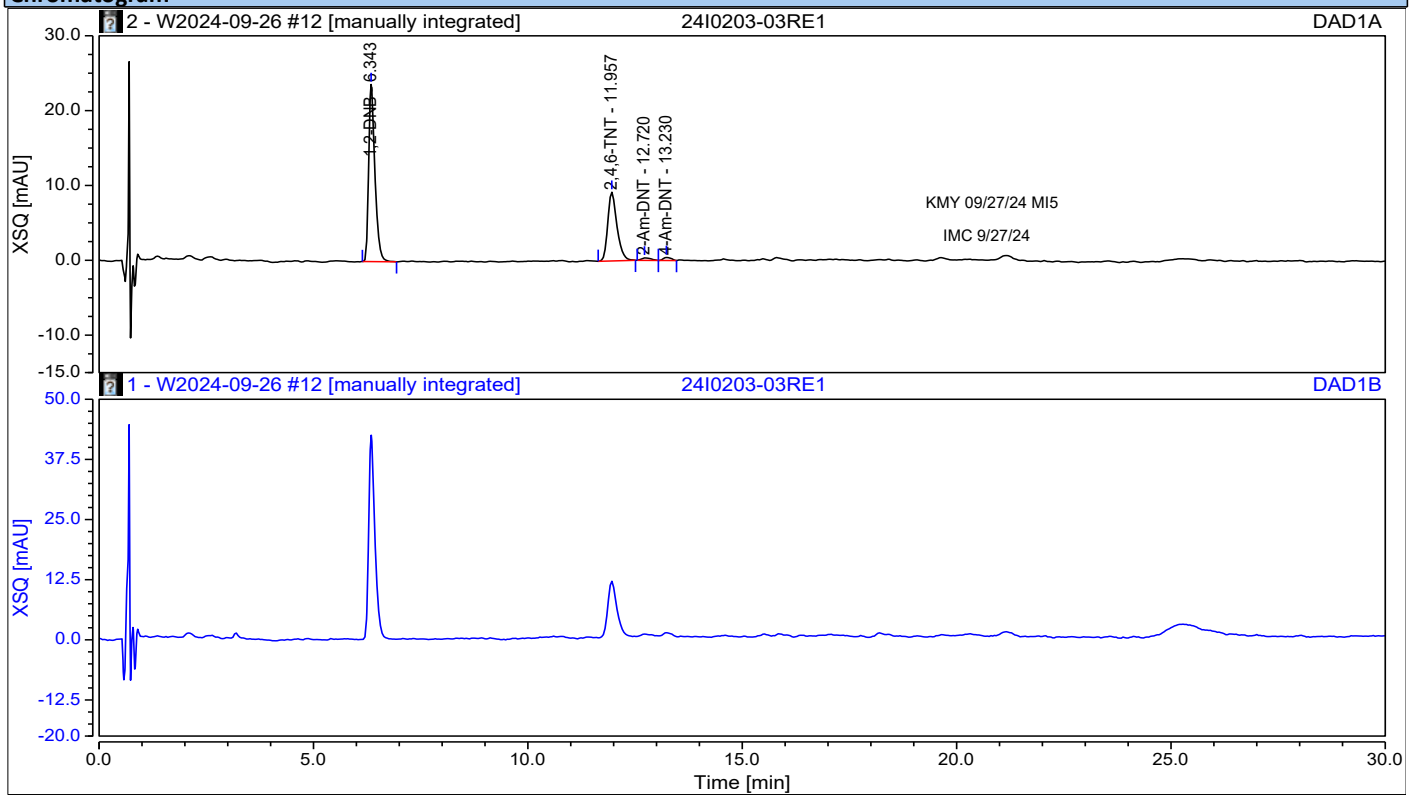
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Chromatogram and Results

Injection Details

Injection Name:	**24I0203-03RE1**	*Instrument:*	**Waldorf**
Vial Number:	**12**	*Run Time (min):*	**30.00**
Injection Type:	**Unknown**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**26/Sep/2024 16:01**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**24/Sep/2024 15:47**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
n.a.	NG	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	PETN	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	HMX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	RDX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	1,3,5-TNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	1,2-DNB	6.343	3.9639	23.666	61.68	70.45	258.2755
n.a.	1,3-DNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3,5-DNA	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	NB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Tetryl	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	2,4,6-TNT	11.957	2.2889	9.193	35.62	27.37	91.2822
3	2-Am-DNT	12.720	0.0852	0.329	1.33	0.98	9.2355
4	4-Am-DNT	13.230	0.0880	0.404	1.37	1.20	n.a.
n.a.	2,4-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2,6-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	4-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**6.426**	**33.593**	**100.000**	**100.000**	

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QUALITY CONTROL

SURROGATE SUMMARY SHEET

EPA 8330B

Client: AECOM
Work Order: 24I0203
Project: Wingate 60517380 Task 3

Surrogate Compound	Spike level	% Recovery	Recovery Limits	Q
P2-ARROYO-0005 (24I0203-01) mg/kg	Lab File ID: S2024-09-26-010			Analyzed: 09/26/24 16:37
1,2-DINITROBENZENE	1.99	101	78 - 119	
P2-ARROYO-0005 (24I0203-01RE1) mg/kg	Lab File ID: W2024-09-26-010			Analyzed: 09/26/24 14:57
1,2-DINITROBENZENE	1.99	104	78 - 119	
P2-ARROYO-0006 (24I0203-02) mg/kg	Lab File ID: S2024-09-26-011			Analyzed: 09/26/24 17:19
1,2-DINITROBENZENE	1.99	101	78 - 119	
P2-ARROYO-0006 (24I0203-02RE1) mg/kg	Lab File ID: W2024-09-26-011			Analyzed: 09/26/24 15:29
1,2-DINITROBENZENE	1.99	103	78 - 119	
P2-ARROYO-0007 (24I0203-03) mg/kg	Lab File ID: S2024-09-26-012			Analyzed: 09/26/24 18:02
1,2-DINITROBENZENE	1.99	102	78 - 119	
P2-ARROYO-0007 (24I0203-03RE1) mg/kg	Lab File ID: W2024-09-26-012			Analyzed: 09/26/24 16:01
1,2-DINITROBENZENE	1.99	103	78 - 119	
Blank (BDI0507-BLK1) mg/kg	Lab File ID: S2024-09-26-005			Analyzed: 09/26/24 13:03
1,2-DINITROBENZENE	1.99	102	78 - 119	
LCS (BDI0507-BS1) mg/kg	Lab File ID: S2024-09-26-006			Analyzed: 09/26/24 13:46
1,2-DINITROBENZENE	1.99	102	78 - 119	
LCS Dup (BDI0507-BSD1) mg/kg	Lab File ID: S2024-09-26-007			Analyzed: 09/26/24 14:29
1,2-DINITROBENZENE	1.99	103	78 - 119	
Matrix Spike (BDI0507-MS1) mg/kg	Lab File ID: S2024-09-26-008			Analyzed: 09/26/24 15:11
1,2-DINITROBENZENE	1.99	97.9	78 - 119	
Matrix Spike Dup (BDI0507-MSD1) mg/kg	Lab File ID: S2024-09-26-009			Analyzed: 09/26/24 15:54
1,2-DINITROBENZENE	1.98	101	78 - 119	

METHOD BLANK SUMMARY

EPA 8330B

Laboratory:	APPL, LLC	Work Order:	24I0203
Client:	AECOM	Project:	Wingate 60517380 Task 3
Blank ID:	BDI0507-BLK1	Batch:	BDI0507
Prepared:	09/25/2024 11:39		

Client Sample ID	Laboratory Sample ID	Lab File ID	Time Analyzed
LCS	BDI0507-BS1	S2024-09-26-006	13:46
LCS Dup	BDI0507-BSD1	S2024-09-26-007	14:29
P2-ARROYO-0005	24I0203-01RE1	W2024-09-26-010	14:57
Matrix Spike	BDI0507-MS1	S2024-09-26-008	15:11
P2-ARROYO-0006	24I0203-02RE1	W2024-09-26-011	15:29
Matrix Spike Dup	BDI0507-MSD1	S2024-09-26-009	15:54
P2-ARROYO-0007	24I0203-03RE1	W2024-09-26-012	16:01
P2-ARROYO-0005	24I0203-01	S2024-09-26-010	16:37
P2-ARROYO-0006	24I0203-02	S2024-09-26-011	17:19
P2-ARROYO-0007	24I0203-03	S2024-09-26-012	18:02

ANALYSIS DATA SHEET

Blank

Laboratory:	APPL, LLC			Work Order:	24I0203
Client:	AECOM		Project:	Wingate 60517380 Task 3	
Matrix:	Solid	Laboratory ID:	BDI0507-BLK1	File ID:	S2024-09-26-005
Sampled:		Prepared:	09/25/24 11:39	Analyzed:	09/26/24 13:03
Solids:		Preparation:	EPA 8330B	Dilution:	1
Batch:	BDI0507	Sequence:	SD03963	Calibration:	2420012
Instrument:	STATLER				
Column:	1				

COMPOUND	CONC. (mg/kg)	LOQ	LOD	DL	Q
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.075 U	0.50	0.075	0.037	U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.075 U	0.50	0.075	0.025	U
1,3,5-TRINITROBENZENE	0.075 U	0.50	0.075	0.013	U
1,3-DINITROBENZENE	0.075 U	0.50	0.075	0.022	U
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	0.075 U	0.50	0.075	0.037	U
NITROBENZENE	0.075 U	0.50	0.075	0.028	U
2,4,6-TRINITROTOLUENE	0.075 U	0.50	0.075	0.031	U
4-AMINO-2,6-DINITROTOLUENE	0.075 U	0.50	0.075	0.034	U
2-AMINO-4,6-DINITROTOLUENE	0.075 U	0.50	0.075	0.034	U
2,4-DINITROTOLUENE	0.075 U	0.50	0.075	0.028	U
2,6-DINITROTOLUENE	0.075 U	0.50	0.075	0.031	U
2-NITROTOLUENE	0.075 U	0.50	0.075	0.037	U
3-NITROTOLUENE	0.075 U	0.50	0.075	0.037	U
4-NITROTOLUENE	0.075 U	0.50	0.075	0.037	U
NITROGLYCERIN	0.15 U	0.50	0.15	0.061	U
PENTAERYTHRITOL TETRANITRATE	0.25 U	2.5	0.25	0.11	U

LCS / LCS DUPLICATE RECOVERY

EPA 8330B

Laboratory:	APPL, LLC	Work Order:	24I0203
Client:	AECOM	Project:	Wingate 60517380 Task 3
Matrix:	Solid	Preparation:	EPA 8330B
Batch:	BDI0507	Laboratory ID:	BDI0507-BS1

ANALYTE	SPIKE ADDED (mg/kg)	LCS CONCENTRATION (mg/kg)	LCS % REC.	QC LIMITS REC.	INSTRUMENT
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	1.99	2.04	103	74 - 124	STATLER
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	1.99	2.08	105	67 - 129	STATLER
1,3,5-TRINITROBENZENE	1.99	2.01	101	80 - 116	STATLER
1,3-DINITROBENZENE	1.99	2.07	104	73 - 119	STATLER
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	1.99	1.70	85.5	68 - 135	STATLER
NITROBENZENE	1.99	2.12	106	67 - 129	STATLER
2,4,6-TRINITROTOLUENE	1.99	2.12	107	71 - 120	STATLER
4-AMINO-2,6-DINITROTOLUENE	1.99	2.11	106	64 - 127	STATLER
2-AMINO-4,6-DINITROTOLUENE	1.99	2.12	107	71 - 123	STATLER
2,4-DINITROTOLUENE	1.99	2.10	106	75 - 121	STATLER
2,6-DINITROTOLUENE	1.99	2.04	102	79 - 117	STATLER
2-NITROTOLUENE	1.99	2.08	105	70 - 124	STATLER
3-NITROTOLUENE	1.99	2.10	105	67 - 129	STATLER
4-NITROTOLUENE	1.99	2.07	104	71 - 124	STATLER
NITROGLYCERIN	1.99	2.15	108	73 - 124	STATLER
PENTAERYTHRITOL TETRANITRATE	1.99	1.96	98.7	72 - 128	STATLER

ANALYTE	SPIKE ADDED (mg/kg)	LCSD CONCENTRATION (mg/kg)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.	INSTRUMENT
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	1.99	2.13	107	4.31	20	74 - 124	STATLER
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	1.99	2.14	108	2.86	20	67 - 129	STATLER
1,3,5-TRINITROBENZENE	1.99	2.06	104	2.78	20	80 - 116	STATLER
1,3-DINITROBENZENE	1.99	2.12	107	2.35	20	73 - 119	STATLER
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	1.99	1.76	88.6	3.78	20	68 - 135	STATLER
NITROBENZENE	1.99	2.16	108	2.13	20	67 - 129	STATLER
2,4,6-TRINITROTOLUENE	1.99	2.18	109	2.69	20	71 - 120	STATLER
4-AMINO-2,6-DINITROTOLUENE	1.99	2.15	108	2.11	20	64 - 127	STATLER
2-AMINO-4,6-DINITROTOLUENE	1.99	2.17	109	2.30	20	71 - 123	STATLER
2,4-DINITROTOLUENE	1.99	2.15	108	2.67	20	75 - 121	STATLER
2,6-DINITROTOLUENE	1.99	2.08	105	2.29	20	79 - 117	STATLER
2-NITROTOLUENE	1.99	2.12	107	1.91	20	70 - 124	STATLER

LCS / LCS DUPLICATE RECOVERY

EPA 8330B

Laboratory:	APPL, LLC	Work Order:	24I0203
Client:	AECOM	Project:	Wingate 60517380 Task 3
Matrix:	Solid	Preparation:	EPA 8330B
Batch:	BDI0507	Laboratory ID:	BDI0507-BSD1

ANALYTE	SPIKE ADDED (mg/kg)	LCSD CONCENTRATION (mg/kg)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.	INSTRUMENT
3-NITROTOLUENE	1.99	2.14	107	2.00	20	67 - 129	STATLER
4-NITROTOLUENE	1.99	2.11	106	1.83	20	71 - 124	STATLER
NITROGLYCERIN	1.99	2.24	112	4.10	20	73 - 124	STATLER
PENTAERYTHRITOL TETRANITRATE	1.99	1.92	96.2	2.31	20	72 - 128	STATLER

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

P2-ARROYO-0007

Laboratory:	APPL, LLC	Work Order:	24I0203
Client:	AECOM	Project:	Wingate 60517380 Task 3
Matrix:	Solid	Analysis:	EPA 8330B
Batch:	BDI0507	Preparation:	EPA 8330B
% Solids:		Laboratory ID:	BDI0507-MS1
		Sample Lab ID:	24I0203-03

ANALYTE	SPIKE ADDED (mg/kg)	SAMPLE CONCENTRATION (mg/kg)	MS CONCENTRATION (mg/kg)	MS % REC.		QC LIMITS REC.	INSTRUMENT
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	1.99	ND	2.07	104		74 - 124	STATLER
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	1.99	ND	1.91	96.0		67 - 129	STATLER
1,3,5-TRINITROBENZENE	1.99	ND	2.17	109		80 - 116	STATLER
1,3-DINITROBENZENE	1.99	ND	2.12	106		73 - 119	STATLER
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	1.99	ND	1.70	85.4		68 - 135	STATLER
NITROBENZENE	1.99	ND	2.14	108		67 - 129	STATLER
2,4,6-TRINITROTOLUENE	1.99	0.738	3.66	147	*	71 - 120	STATLER
4-AMINO-2,6-DINITROTOLUENE	1.99	ND	2.15	108		64 - 127	STATLER
2-AMINO-4,6-DINITROTOLUENE	1.99	ND	2.18	109		71 - 123	STATLER
2,4-DINITROTOLUENE	1.99	ND	2.19	110		75 - 121	STATLER
2,6-DINITROTOLUENE	1.99	ND	2.12	107		79 - 117	STATLER
2-NITROTOLUENE	1.99	ND	2.14	108		70 - 124	STATLER
3-NITROTOLUENE	1.99	ND	2.16	109		67 - 129	STATLER
4-NITROTOLUENE	1.99	ND	2.14	108		71 - 124	STATLER
NITROGLYCERIN	1.99	ND	2.23	112		73 - 124	STATLER
PENTAERYTHRITOL TETRANITRATE	1.99	ND	1.92	96.4		72 - 128	STATLER

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

P2-ARROYO-0007

Laboratory:	APPL, LLC	Work Order:	24I0203
Client:	AECOM	Project:	Wingate 60517380 Task 3
Matrix:	Solid	Analysis:	EPA 8330B
Batch:	BDI0507	Preparation:	EPA 8330B
% Solids:		Laboratory ID:	BDI0507-MSD1
		Sample Lab ID:	24I0203-03

ANALYTE	SPIKE ADDED (mg/kg)	MSD CONCENTRATION (mg/kg)	MSD % REC. #	% RPD		QC LIMITS RPD	QC LIMITS REC.	INSTRUMENT
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	1.98	1.99	101	3.71		20	74 - 124	STATLER
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	1.98	1.84	93.0	3.59		20	67 - 129	STATLER
1,3,5-TRINITROBENZENE	1.98	2.06	104	5.31		20	80 - 116	STATLER
1,3-DINITROBENZENE	1.98	2.03	102	4.14		20	73 - 119	STATLER
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	1.98	1.35	68.0	23.1	*	20	68 - 135	STATLER
NITROBENZENE	1.98	2.06	104	3.98		20	67 - 129	STATLER
2,4,6-TRINITROTOLUENE	1.98	2.92	110	22.5	*	20	71 - 120	STATLER
4-AMINO-2,6-DINITROTOLUENE	1.98	2.07	105	3.83		20	64 - 127	STATLER
2-AMINO-4,6-DINITROTOLUENE	1.98	2.10	106	3.78		20	71 - 123	STATLER
2,4-DINITROTOLUENE	1.98	2.07	105	5.42		20	75 - 121	STATLER
2,6-DINITROTOLUENE	1.98	2.00	101	5.78		20	79 - 117	STATLER
2-NITROTOLUENE	1.98	2.04	103	4.66		20	70 - 124	STATLER
3-NITROTOLUENE	1.98	2.05	104	5.23		20	67 - 129	STATLER
4-NITROTOLUENE	1.98	2.03	102	5.33		20	71 - 124	STATLER
NITROGLYCERIN	1.98	2.13	108	4.24		20	73 - 124	STATLER
PENTAERYTHRITOL TETRANITRATE	1.98	1.91	96.5	0.316		20	72 - 128	STATLER

CALIBRATION SUMMARY

FORM VI
INITIAL CALIBRATION DATA SHEET

EPA 8330B

Client: AECOM Omaha SDG:

Project: Wingate

Calibration: 2420012 Instrument: STATLER

Units: ng/mL Calibration Date: 5/16/2024 8:00:34AM

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
OCTAHYDRO-1,3,5,7-TETRAN	5	0.064	50	0.06394	250	0.067944	1000	0.06311	2500	0.0599684	5000	0.0615168
HEXAHYDRO-1,3,5-TRINITRO-	5	0.053	50	0.05358	250	0.056952	1000	0.053042	2500	0.050546	5000	0.0522536
1,3,5-TRINITROBENZENE	5	0.0366	50	0.0354	250	0.03786	1000	0.034373	2500	0.0318652	5000	0.0316242
1,3-DINITROBENZENE	5	0.059	50	0.05914	250	0.063716	1000	0.05883	2500	0.055916	5000	0.0577246
METHYL-2,4,6-TRINITROPHEN	5	0.0188	50	0.02122	250	0.024476	1000	0.022759	2500	0.0217556	5000	0.0223722
NITROBENZENE	5	0.0486	50	0.04942	250	0.052832	1000	0.04947	2500	0.0474564	5000	0.049147
2,4,6-TRINITROTOLUENE	5	0.0224	50	0.02296	250	0.024564	1000	0.022706	2500	0.0215792	5000	0.0220238
4-AMINO-2,6-DINITROTOLUEN	5	0.0436	50	0.0433	250	0.046724	1000	0.04308	2500	0.0410716	5000	0.0425286
2-AMINO-4,6-DINITROTOLUEN	5	0.053	50	0.05262	250	0.056708	1000	0.052344	2500	0.049838	5000	0.0514514
2,4-DINITROTOLUENE	5	0.043	50	0.04362	250	0.04662	1000	0.043243	2500	0.0412316	5000	0.0423534
2,6-DINITROTOLUENE	5	0.0268	50	0.0261	250	0.028568	1000	0.026109	2500	0.0247176	5000	0.0255156
2-NITROTOLUENE	5	0.0244	50	0.02514	250	0.027492	1000	0.025186	2500	0.0239752	5000	0.024824
3-NITROTOLUENE	5	0.0272	50	0.0284	250	0.031092	1000	0.028476	2500	0.0270452	5000	0.0278466
4-NITROTOLUENE	5	0.0244	50	0.02504	250	0.02744	1000	0.025084	2500	0.0238528	5000	0.0246504
NITROGLYCERIN	5	0.0208	50	0.01822	250	0.02066	1000	0.019448	2500	0.0184748	5000	0.0190004
PENTAERYTHRITOL TETRAN	5	0.0112	50	0.01572	250	0.015316	1000	0.0139	2500	0.0132684	5000	0.0136546
3,5-DINITROANILINE	5	6.919999E-02	50	0.06886	250	0.073436	1000	0.068315	2500	0.0652432	5000	0.0674986
1,2-DINITROBENZENE	5	0.0324	50	0.03326	250	0.03596	1000	0.033181	2500	0.0316744	5000	0.0328218

FORM VI
INITIAL CALIBRATION DATA SHEET (Continued)
EPA 8330B

Laboratory: APPL, LLC
SDG:
Client: AECOM Omaha
Project: Wingate
Calibration: 2420012
Instrument: STATLER
Matrix: Solid
Calibration Date:: 5/16/2024 8:00:34AM

Compound	Mean RF	RF RSD	Slope/QR A	Intercept/QR B	QR C	LR r/QRCOD	LIMIT	Q	Type
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5	0.0634132	4.3					20		A
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIA	5.322893E-02	4.0					20		A
1,3,5-TRINITROBENZENE	0.0346204	7.3					20		A
1,3-DINITROBENZENE	5.905443E-02	4.4					20		A
METHYL-2,4,6-TRINITROPHENYLNITRAM	2.189713E-02	8.6					20		A
NITROBENZENE	4.948757E-02	3.6					20		A
2,4,6-TRINITROTOLUENE	0.0227055	4.6					20		A
4-AMINO-2,6-DINITROTOLUENE	4.338403E-02	4.3					20		A
2-AMINO-4,6-DINITROTOLUENE	5.266023E-02	4.3					20		A
2,4-DINITROTOLUENE	4.334467E-02	4.2					20		A
2,6-DINITROTOLUENE	0.0263017	5.0					20		A
2-NITROTOLUENE	2.516953E-02	4.9					20		A
3-NITROTOLUENE	0.0283433	5.2					20		A
4-NITROTOLUENE	2.507787E-02	5.0					20		A
NITROGLYCERIN	1.943387E-02	5.6					20		A
PENTAERYTHRITOL TETRANITRATE	1.384317E-02	11.7					20		A
3,5-DINITROANILINE	0.0687588	3.9					20		A
1,2-DINITROBENZENE	0.0332162	4.4					20		A

FORM VI
INITIAL CALIBRATION DATA SHEET

EPA 8330B

Client: AECOM Omaha SDG:

Project: Wingate

Calibration: 2433019 Instrument: Waldorf

Units: ng/mL Calibration Date: 8/14/2024 7:00:39AM

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
OCTAHYDRO-1,3,5,7-TETRAN	50	0.21292	5	0.223	250	0.213052	1000	0.199345	2500	0.1965452	5000	0.1837282
HEXAHYDRO-1,3,5-TRINITRO-	50	0.12522	5	0.1098	250	0.125968	1000	0.119806	2500	0.1214784	5000	0.1217222
1,3,5-TRINITROBENZENE	50	0.16268	5	0.1758	250	0.225936	1000	0.215112	2500	0.2172088	5000	0.2112352
1,3-DINITROBENZENE	50	0.209	5	0.1724	250	0.207284	1000	0.197927	2500	0.203082	5000	0.203591
METHYL-2,4,6-TRINITROPHEN	50	0.02714	5	0.02	250	0.08428	1000	0.080923	2500	0.0818764	5000	0.0827446
NITROBENZENE	50	0.09828	5	0.1018	250	0.094684	1000	9.103701E-02	2500	0.0934724	5000	0.094661
2,4,6-TRINITROTOLUENE	50	0.10988	5	0.1174	250	0.110516	1000	0.106445	2500	0.107976	5000	0.1093008
4-AMINO-2,6-DINITROTOLUEN	50	0.0939	5	0.079	250	0.093164	1000	0.08897	2500	0.0890572	5000	0.088395
2-AMINO-4,6-DINITROTOLUEN	50	0.11182	5	0.1264	250	0.110476	1000	0.106232	2500	0.107664	5000	0.1089574
2,4-DINITROTOLUENE	50	0.1472	5	0.14	250	0.145948	1000	0.140704	2500	0.1433952	5000	0.1455596
2,6-DINITROTOLUENE	50	0.08632	5	0.0802	250	0.085104	1000	0.081707	2500	0.0830956	5000	0.0843304
2-NITROTOLUENE	50	0.07604	5	0.0718	250	0.075564	1000	0.072876	2500	0.0745532	5000	0.0755984
3-NITROTOLUENE	50	0.06692	5	0.0624	250	0.065368	1000	0.062566	2500	0.063998	5000	0.0648774
4-NITROTOLUENE	50	0.07056	5	0.07	250	0.068556	1000	0.066077	2500	0.0676304	5000	0.068439
NITROGLYCERIN	50	0.03554	5	0.039	250	0.033144	1000	0.031947	2500	0.0320652	5000	0.032095
PENTAERYTHRITOL TETRAN	50	0.02234	5	0.0324	250	0.023504	1000	0.021852	2500	0.022	5000	0.0222216
3,5-DINITROANILINE	50	0.1665	5	0.1652	250	0.167668	1000	0.159604	2500	0.1619584	5000	0.1625648
1,2-DINITROBENZENE	50	0.09874	5	8.679999E-02	250	0.0966	1000	0.092219	2500	0.0948104	5000	9.653401E-02

FORM VI
INITIAL CALIBRATION DATA SHEET (Continued)
EPA 8330B

Laboratory: APPL, LLC
SDG:
Client: AECOM Omaha
Project: Wingate
Calibration: 2433019
Instrument: Waldorf
Matrix: Solid
Calibration Date:: 8/14/2024 7:00:39AM

Compound	Mean RF	RF RSD	Slope/QR A	Intercept/QR B	QR C	LR r/QRCOD	LIMIT	Q	Type
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5	0.2047651	6.9	0.1844759	8.343725		0.999	0.99		L
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIA	0.1206658	4.8	0.121661	-0.1350462		1.000	0.99		L
1,3,5-TRINITROBENZENE	0.2013287	12.7	0.2118969	2.342456		1.000	0.99		L
1,3-DINITROBENZENE	0.1988807	6.8	0.2035938	-0.9872698		1.000	0.99		L
METHYL-2,4,6-TRINITROPHENYLNITRAM	6.282733E-02	48.6	8.287572E-02	-1.309462		1.000	0.99		L
NITROBENZENE	9.565573E-02	4.0	9.457388E-02	-0.9343362		1.000	0.99		L
2,4,6-TRINITROTOLUENE	0.110253	3.4	0.1091691	-0.7724482		1.000	0.99		L
4-AMINO-2,6-DINITROTOLUENE	0.0887477	6.0	8.837785E-02	0.6336673		1.000	0.99		L
2-AMINO-4,6-DINITROTOLUENE	0.1119249	6.6	0.1088101	-0.675287		1.000	0.99		L
2,4-DINITROTOLUENE	0.1438011	2.1	0.1453786	-1.420227		1.000	0.99		L
2,6-DINITROTOLUENE	0.0834595	2.7	8.421144E-02	-0.7317825		1.000	0.99		L
2-NITROTOLUENE	7.440527E-02	2.3	7.552527E-02	-0.782835		1.000	0.99		L
3-NITROTOLUENE	0.0643549	2.7	6.480184E-02	-0.6053692		1.000	0.99		L
4-NITROTOLUENE	6.854373E-02	2.4	6.837814E-02	-0.6174189		1.000	0.99		L
NITROGLYCERIN	0.0339652	8.3	3.206295E-02	8.812892E-02		1.000	0.99		L
PENTAERYTHRITOL TETRANITRATE	2.405293E-02	17.2	2.217662E-02	-2.502045E-02		1.000	0.99		L
3,5-DINITROANILINE	0.1639159	1.9	0.16246	-0.3447061		1.000	0.99		L
1,2-DINITROBENZENE	0.0942839	4.5	9.640318E-02	-1.232338		1.000	0.99		L

INITIAL CALIBRATION STANDARDS

EPA 8330B

Laboratory:	APPL, LLC	Work Order:	24I0203
Client:	AECOM	Project:	Wingate 60517380 Task 3
Sequence:	SD01815	Instrument:	STATLER
Calibration:	2420012		

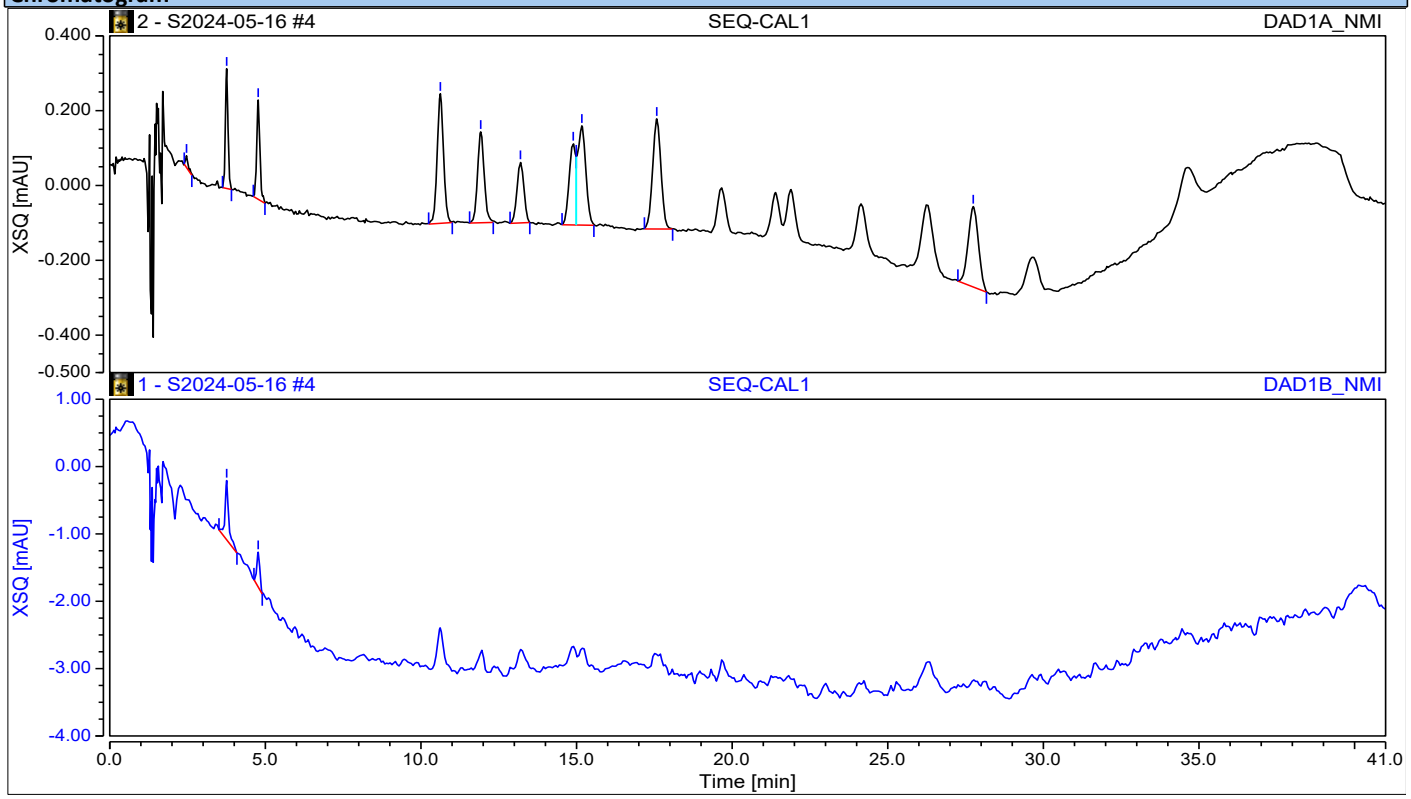
Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
24E0457	8330 - Cal 1 0.005ug/mL 05/16/24	SD01815-CAL1	S2024-05-16-004	05/16/24 14:47
24E0458	8330 - Cal 2 0.05ug/mL 05/16/24	SD01815-CAL2	S2024-05-16-005	05/16/24 15:29
24E0459	8330 - Cal 3 0.25ug/mL 05/16/24	SD01815-CAL3	S2024-05-16-006	05/16/24 16:12
24E0460	8330 - Cal 4 1.0ug/mL 05/16/24	SD01815-CAL4	S2024-05-16-007	05/16/24 16:54
24E0462	8330 - Cal 5 2.5ug/mL 05/16/24	SD01815-CAL5	S2024-05-16-008	05/16/24 17:37
24E0463	8330 - Cal 6 5.0ug/mL 05/16/24	SD01815-CAL6	S2024-05-16-009	05/16/24 18:19
24E0466	8330 - SCV 1.0ug/mL 05/16/24	SD01815-SCV1	S2024-05-16-010	05/16/24 19:02

Original Chromatogram

Injection Details

Injection Name:	**SEQ-CAL1**	*Instrument:*	**Statler**
Vial Number:	**4**	*Run Time (min):*	**41.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**16/May/2024 14:47**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**20/May/2024 12:45**	*Operator:*	**AOP**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.447	0.0228	0.104	79.87	64.73	5.3344
2	PETN	22.537	0.0057	0.056	20.13	35.27	4.0727
1	HMX	3.757	0.0305	0.320	3.35	9.90	5.0468
2	RDX	4.770	0.0312	0.265	3.43	8.21	4.9848
3	3,5-DNA	10.623	0.0819	0.346	9.00	10.71	5.0358
4	NB	11.920	0.0603	0.243	6.63	7.51	4.9098
5	1,2-DNB	13.197	0.0419	0.162	4.60	5.02	4.8881
6	4-Am-DNT	14.893	0.0525	0.218	5.76	6.73	5.0163
7	2-Am-DNT	15.170	0.0794	0.265	8.73	8.21	5.0375
8	1,3-DNB	17.577	0.0913	0.295	10.04	9.11	4.9887
9	2-NT	19.653	0.0375	0.122	4.12	3.78	4.8507
10	4-NT	21.393	0.0385	0.122	4.23	3.79	4.8814
11	3-NT	21.890	0.0422	0.136	4.64	4.21	4.7999
12	2,6-DNT	24.147	0.0490	0.134	5.39	4.13	5.0838
13	1,3,5-TNB	26.250	0.0816	0.183	8.96	5.66	5.2855
14	2,4-DNT	27.747	0.0823	0.215	9.04	6.65	4.9610
15	Tetryl	29.650	0.0423	0.094	4.65	2.91	4.3025
16	2,4,6-TNT	34.630	0.0676	0.112	7.43	3.47	4.9436
Total:			**0.939**	**3.394**	**200.000**	**200.000**	

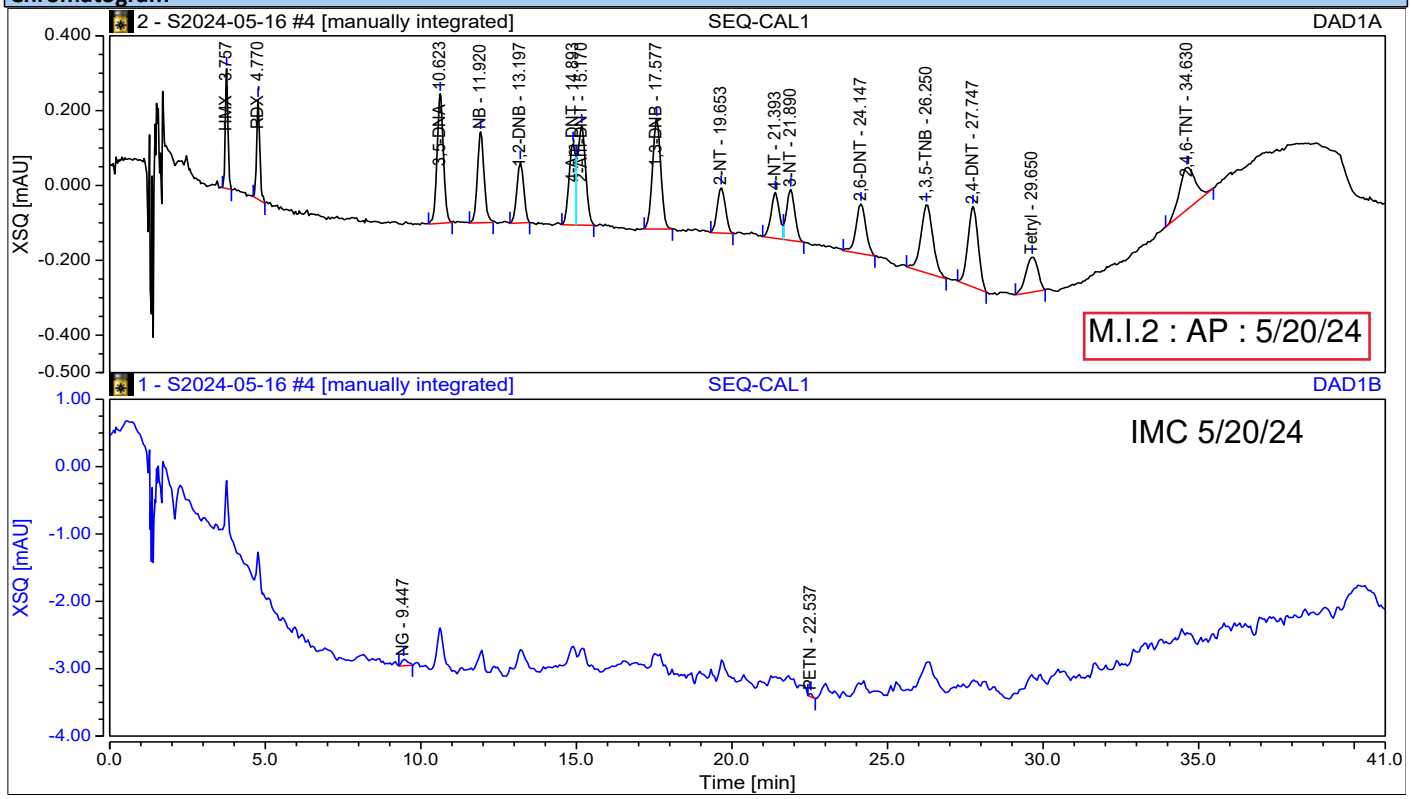
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Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL1**	*Instrument:*	**Statler**
Vial Number:	**4**	*Run Time (min):*	**41.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**16/May/2024 14:47**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**20/May/2024 12:45**	*Operator:*	**AOP**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.447	0.0228	0.104	79.87	64.73	5.3344
2	PETN	22.537	0.0057	0.056	20.13	35.27	4.0727
1	HMX	3.757	0.0305	0.320	3.35	9.90	5.0468
2	RDX	4.770	0.0312	0.265	3.43	8.21	4.9848
3	3,5-DNA	10.623	0.0819	0.346	9.00	10.71	5.0358
4	NB	11.920	0.0603	0.243	6.63	7.51	4.9098
5	1,2-DNB	13.197	0.0419	0.162	4.60	5.02	4.8881
6	4-Am-DNT	14.893	0.0525	0.218	5.76	6.73	5.0163
7	2-Am-DNT	15.170	0.0794	0.265	8.73	8.21	5.0375
8	1,3-DNB	17.577	0.0913	0.295	10.04	9.11	4.9887
9	2-NT	19.653	0.0375	0.122	4.12	3.78	4.8507
10	4-NT	21.393	0.0385	0.122	4.23	3.79	4.8814
11	3-NT	21.890	0.0422	0.136	4.64	4.21	4.7999
12	2,6-DNT	24.147	0.0490	0.134	5.39	4.13	5.0838
13	1,3,5-TNB	26.250	0.0816	0.183	8.96	5.66	5.2855
14	2,4-DNT	27.747	0.0823	0.215	9.04	6.65	4.9610
15	Tetryl	29.650	0.0423	0.094	4.65	2.91	4.3025
16	2,4,6-TNT	34.630	0.0676	0.112	7.43	3.47	4.9436
Total:			**0.939**	**3.394**	**200.000**	**200.000**	

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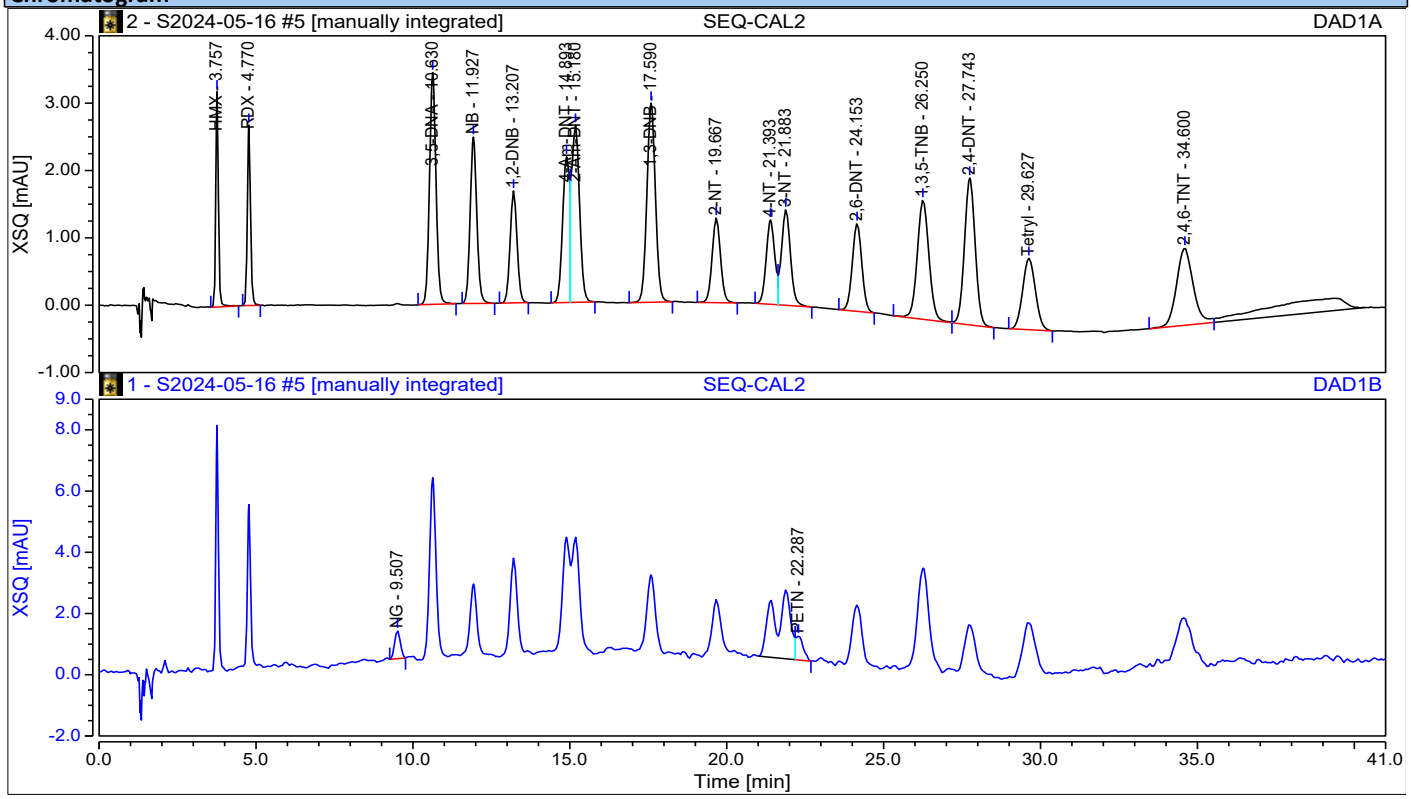
Instrument:
Sequence:S2024-05-16

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL2**	*Instrument:*	**Statler**
Vial Number:	**5**	*Run Time (min):*	**41.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**16/May/2024 15:29**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**20/May/2024 12:45**	*Operator:*	**AOP**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.507	0.1944	0.911	47.17	53.69	46.9197
2	PETN	22.287	0.2178	0.786	52.83	46.31	56.7233
1	HMX	3.757	0.3089	3.197	3.32	9.81	50.4089
2	RDX	4.770	0.3120	2.679	3.36	8.22	50.3188
3	3,5-DNA	10.630	0.8221	3.443	8.85	10.56	50.0608
4	NB	11.927	0.6068	2.471	6.53	7.58	49.9262
5	1,2-DNB	13.207	0.4275	1.663	4.60	5.10	50.0350
6	4-Am-DNT	14.893	0.5503	2.165	5.92	6.64	49.9156
7	2-Am-DNT	15.180	0.7722	2.631	8.31	8.07	49.9529
8	1,3-DNB	17.590	0.9331	2.957	10.04	9.07	50.0928
9	2-NT	19.667	0.3944	1.257	4.24	3.86	49.9356
10	4-NT	21.393	0.3964	1.252	4.26	3.84	49.8940
11	3-NT	21.883	0.4752	1.420	5.11	4.36	50.1099
12	2,6-DNT	24.153	0.4600	1.305	4.95	4.00	49.6430
13	1,3,5-TNB	26.250	0.7631	1.770	8.21	5.43	51.1360
14	2,4-DNT	27.743	0.8664	2.181	9.32	6.69	50.3218
15	Tetryl	29.627	0.5012	1.061	5.39	3.25	48.4251
16	2,4,6-TNT	34.600	0.7041	1.148	7.58	3.52	50.5477
Total:			**9.706**	**34.298**	**200.000**	**200.000**	

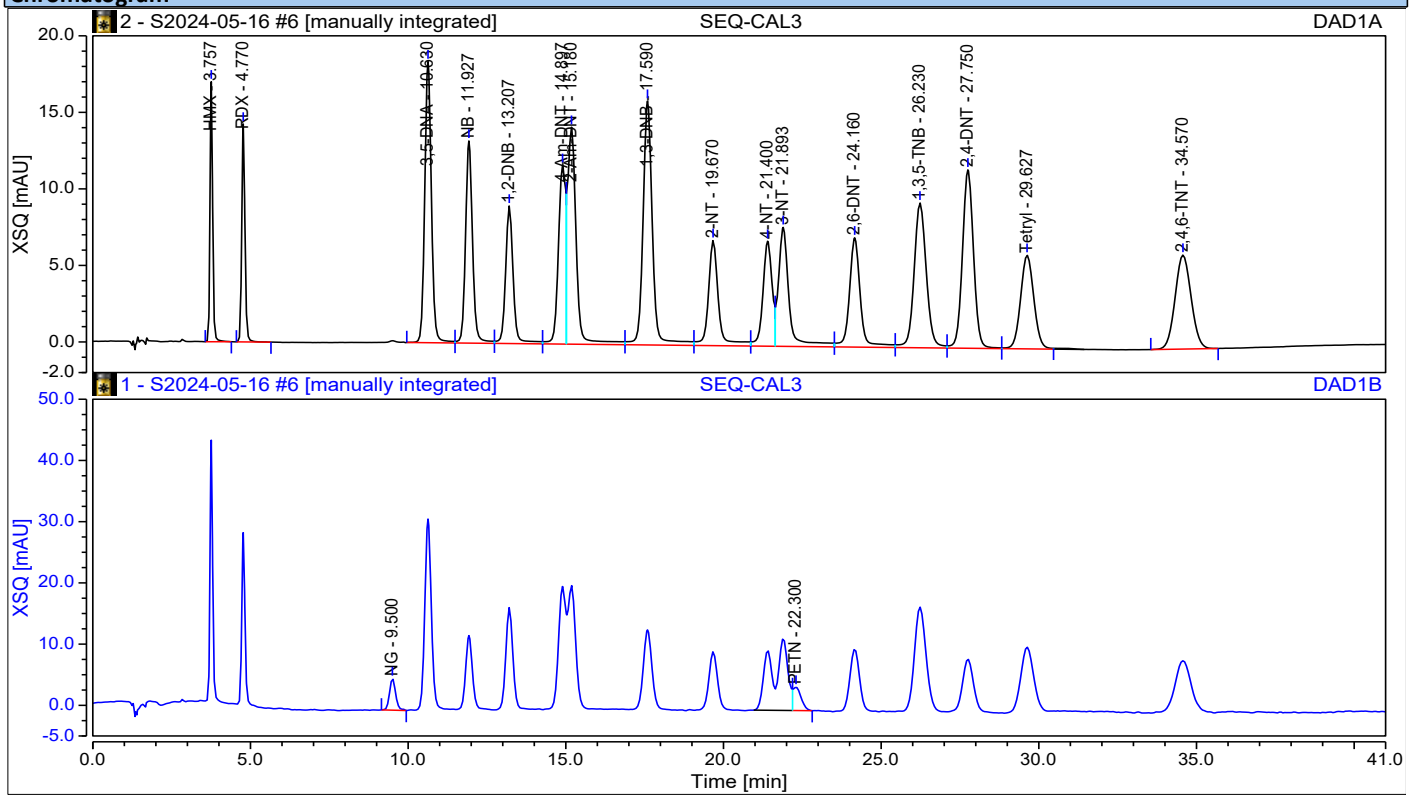
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Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL3**	*Instrument:*	**Statler**
Vial Number:	**6**	*Run Time (min):*	**41.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**16/May/2024 16:12**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**20/May/2024 12:45**	*Operator:*	**AOP**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.500	1.1723	5.165	50.88	57.43	265.9566
2	PETN	22.300	1.1316	3.829	49.12	42.57	276.3165
1	HMX	3.757	1.6276	16.986	3.07	9.67	267.8606
2	RDX	4.770	1.6675	14.238	3.15	8.11	267.4163
3	3,5-DNA	10.630	4.4581	18.359	8.42	10.46	266.9772
4	NB	11.927	3.3732	13.208	6.37	7.52	266.9131
5	1,2-DNB	13.207	2.5153	8.990	4.75	5.12	270.5373
6	4-Am-DNT	14.897	3.0688	11.681	5.80	6.65	269.3519
7	2-Am-DNT	15.180	4.4804	14.177	8.46	8.07	269.1593
8	1,3-DNB	17.590	5.4798	15.929	10.35	9.07	269.7932
9	2-NT	19.670	2.5362	6.873	4.79	3.91	273.0403
10	4-NT	21.400	2.2982	6.860	4.34	3.91	273.3563
11	3-NT	21.893	3.0047	7.773	5.68	4.43	274.2004
12	2,6-DNT	24.160	2.8516	7.142	5.39	4.07	271.6604
13	1,3,5-TNB	26.230	4.2420	9.465	8.01	5.39	273.3941
14	2,4-DNT	27.750	4.7444	11.655	8.96	6.64	268.8725
15	Tetryl	29.627	2.9688	6.119	5.61	3.48	279.3670
16	2,4,6-TNT	34.570	3.6167	6.141	6.83	3.50	270.3428
Total:			**55.237**	**184.592**	**200.000**	**200.000**	

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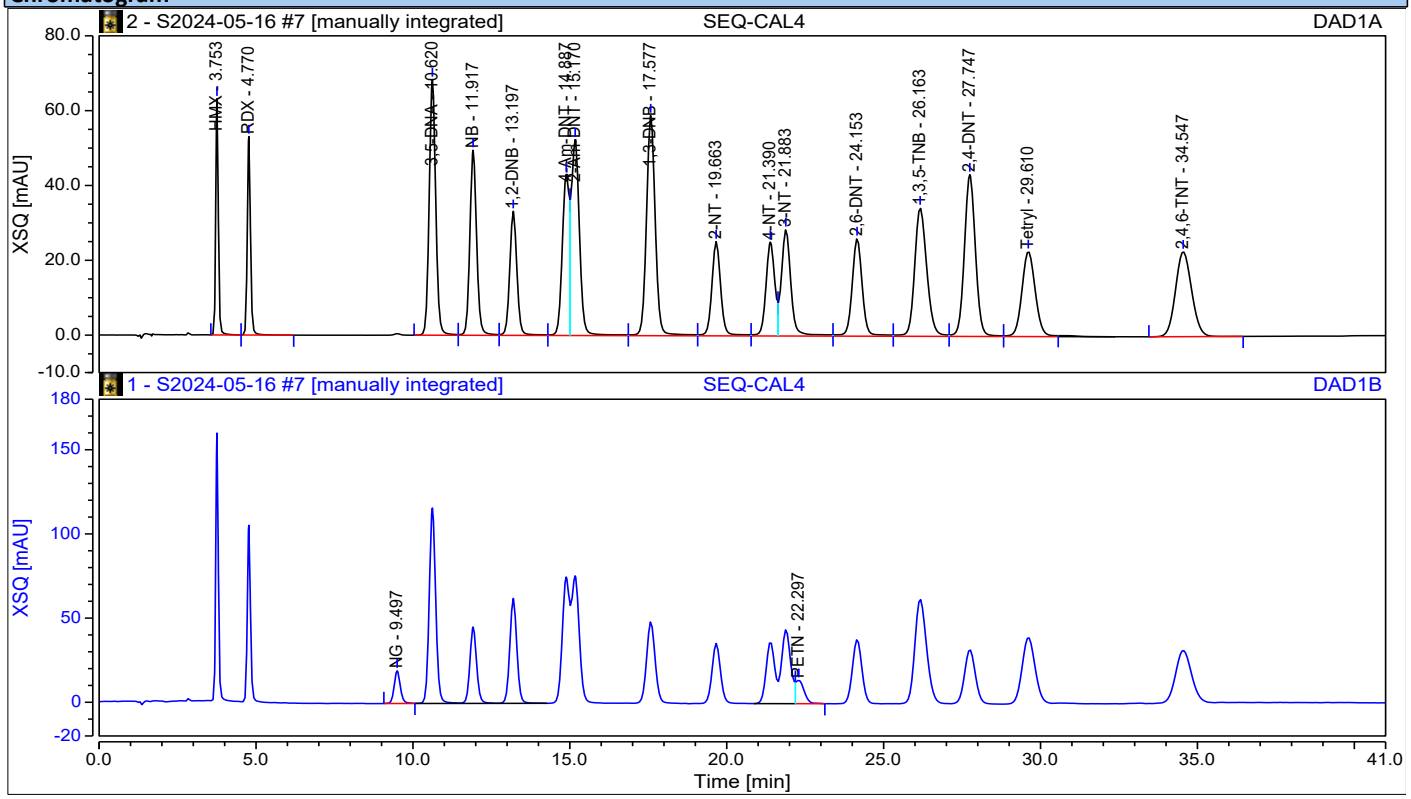
Instrument:
Sequence:S2024-05-16

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL4**	*Instrument:*	**Statler**
Vial Number:	**7**	*Run Time (min):*	**41.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**16/May/2024 16:54**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**20/May/2024 12:45**	*Operator:*	**AOP**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.497	4.4300	19.448	50.84	58.32	1001.3514
2	PETN	22.297	4.2832	13.900	49.16	41.68	1003.0095
1	HMX	3.753	6.0536	63.110	3.19	9.72	995.2325
2	RDX	4.770	6.2501	53.042	3.29	8.17	996.2347
3	3,5-DNA	10.620	16.4023	68.315	8.63	10.52	993.4117
4	NB	11.917	12.3812	49.470	6.52	7.62	999.6964
5	1,2-DNB	13.197	8.8507	33.181	4.66	5.11	998.5531
6	4-Am-DNT	14.887	11.0928	43.080	5.84	6.63	993.3480
7	2-Am-DNT	15.170	15.7772	52.344	8.30	8.06	993.7785
8	1,3-DNB	17.577	19.1681	58.830	10.09	9.06	996.4402
9	2-NT	19.663	8.3052	25.186	4.37	3.88	1000.4835
10	4-NT	21.390	8.1467	25.084	4.29	3.86	999.5856
11	3-NT	21.883	10.0874	28.476	5.31	4.39	1004.5562
12	2,6-DNT	24.153	9.7621	26.109	5.14	4.02	993.0677
13	1,3,5-TNB	26.163	15.4203	34.373	8.12	5.29	992.8145
14	2,4-DNT	27.747	17.6031	43.243	9.26	6.66	997.6072
15	Tetryl	29.610	11.1836	22.759	5.89	3.51	1039.0014
16	2,4,6-TNT	34.547	13.5246	22.706	7.12	3.50	999.5417
Total:			**198.722**	**682.657**	**200.000**	**200.000**	

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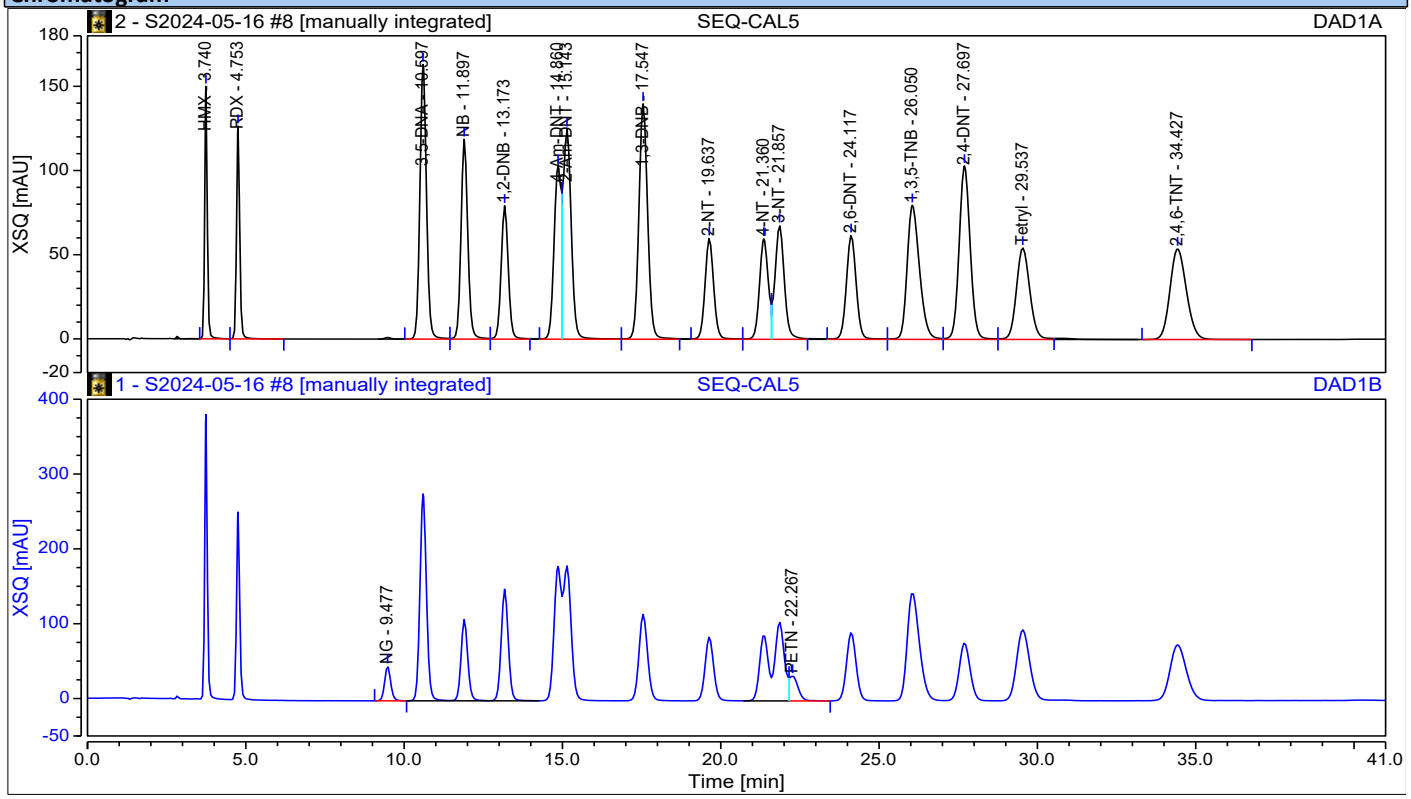
Instrument:
Sequence:S2024-05-16

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL5**	*Instrument:*	**Statler**
Vial Number:	**8**	*Run Time (min):*	**41.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**16/May/2024 17:37**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**20/May/2024 12:45**	*Operator:*	**AOP**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.477	10.3759	46.187	49.94	58.20	2378.1084
2	PETN	22.267	10.3998	33.171	50.06	41.80	2393.5753
1	HMX	3.740	14.3985	149.921	3.22	9.71	2364.2139
2	RDX	4.753	14.9296	126.365	3.34	8.18	2373.3611
3	3,5-DNA	10.597	39.1748	163.108	8.75	10.56	2371.8718
4	NB	11.897	29.5893	118.641	6.61	7.68	2397.5017
5	1,2-DNB	13.173	20.8405	79.186	4.66	5.13	2383.0597
6	4-Am-DNT	14.860	26.2869	102.679	5.87	6.65	2367.5950
7	2-Am-DNT	15.143	37.2330	124.595	8.32	8.07	2365.4949
8	1,3-DNB	17.547	44.8446	139.790	10.02	9.05	2367.7000
9	2-NT	19.637	19.0826	59.938	4.26	3.88	2381.0002
10	4-NT	21.360	19.0589	59.632	4.26	3.86	2376.3037
11	3-NT	21.857	23.0537	67.613	5.15	4.38	2385.2514
12	2,6-DNT	24.117	22.2453	61.794	4.97	4.00	2350.3760
13	1,3,5-TNB	26.050	36.0478	79.663	8.05	5.16	2300.9529
14	2,4-DNT	27.697	41.7212	103.079	9.32	6.67	2377.9869
15	Tetryl	29.537	26.7206	54.389	5.97	3.52	2482.9674
16	2,4,6-TNT	34.427	32.3706	53.948	7.23	3.49	2374.7789
Total:			**468.374**	**1623.699**	**200.000**	**200.000**	

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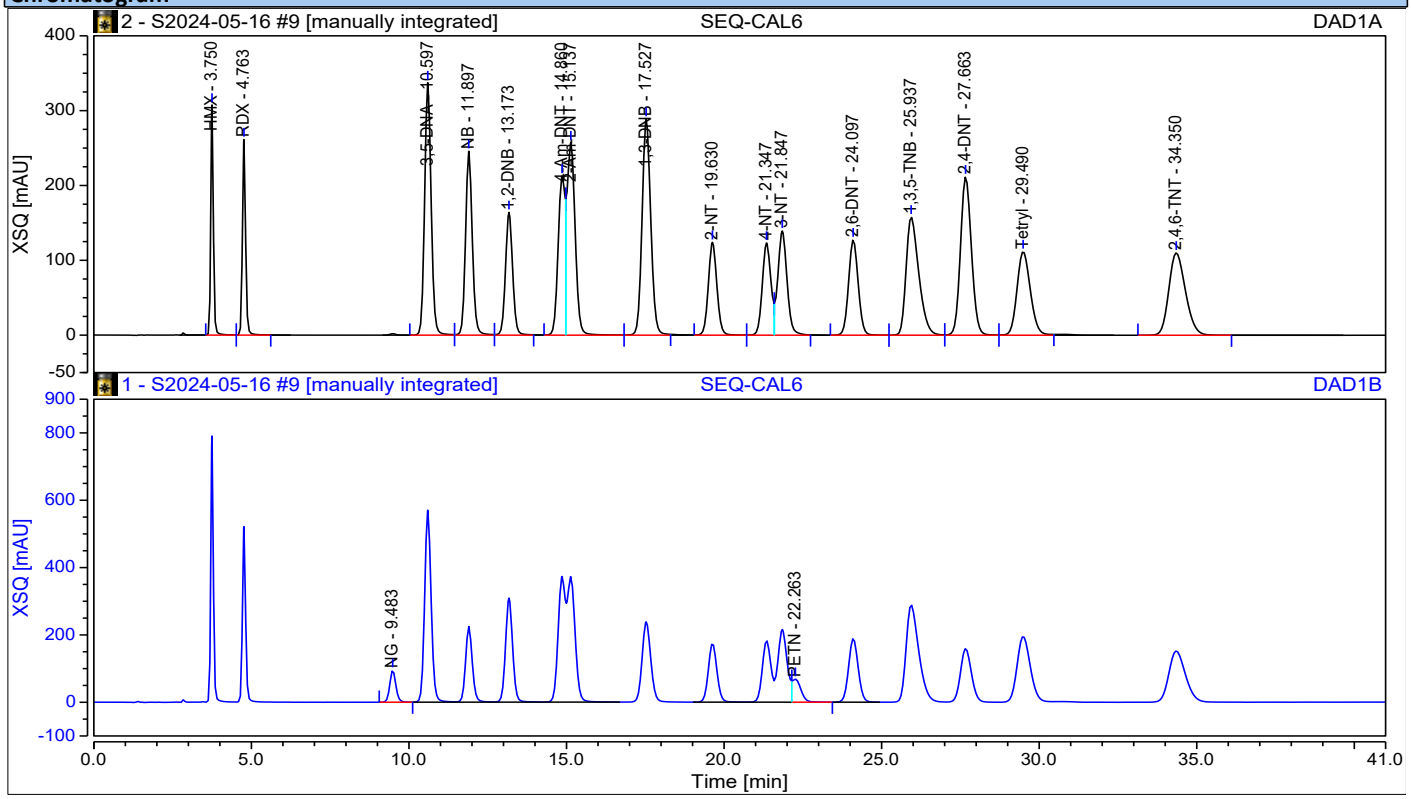
Instrument:
Sequence:S2024-05-16

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL6**	*Instrument:*	**Statler**
Vial Number:	**9**	*Run Time (min):*	**40.99**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**16/May/2024 18:19**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**20/May/2024 12:45**	*Operator:*	**AOP**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.483	21.4347	95.002	49.76	58.19	4891.4881
2	PETN	22.263	21.6391	68.273	50.24	41.81	4926.4705
1	HMX	3.750	29.6499	307.584	3.22	9.67	4850.5215
2	RDX	4.763	30.8321	261.268	3.34	8.21	4907.0923
3	3,5-DNA	10.597	81.1175	337.493	8.80	10.61	4907.7296
4	NB	11.897	61.2435	245.735	6.64	7.73	4965.8322
5	1,2-DNB	13.173	43.1247	164.109	4.68	5.16	4938.7717
6	4-Am-DNT	14.860	54.0054	212.643	5.86	6.69	4903.1501
7	2-Am-DNT	15.137	77.1684	257.257	8.37	8.09	4884.1271
8	1,3-DNB	17.527	92.3933	288.623	10.02	9.07	4888.5651
9	2-NT	19.630	39.1922	124.120	4.25	3.90	4930.5666
10	4-NT	21.347	39.1550	123.252	4.25	3.87	4911.5317
11	3-NT	21.847	47.4873	139.233	5.15	4.38	4911.8275
12	2,6-DNT	24.097	45.2755	127.578	4.91	4.01	4852.5564
13	1,3,5-TNB	25.937	73.6972	158.121	7.99	4.97	4567.0762
14	2,4-DNT	27.663	85.6744	211.767	9.29	6.66	4885.3942
15	Tetryl	29.490	54.8813	111.861	5.95	3.52	5106.6986
16	2,4,6-TNT	34.350	67.3248	110.119	7.30	3.46	4847.4640
Total:			**965.296**	**3344.037**	**200.000**	**200.000**	

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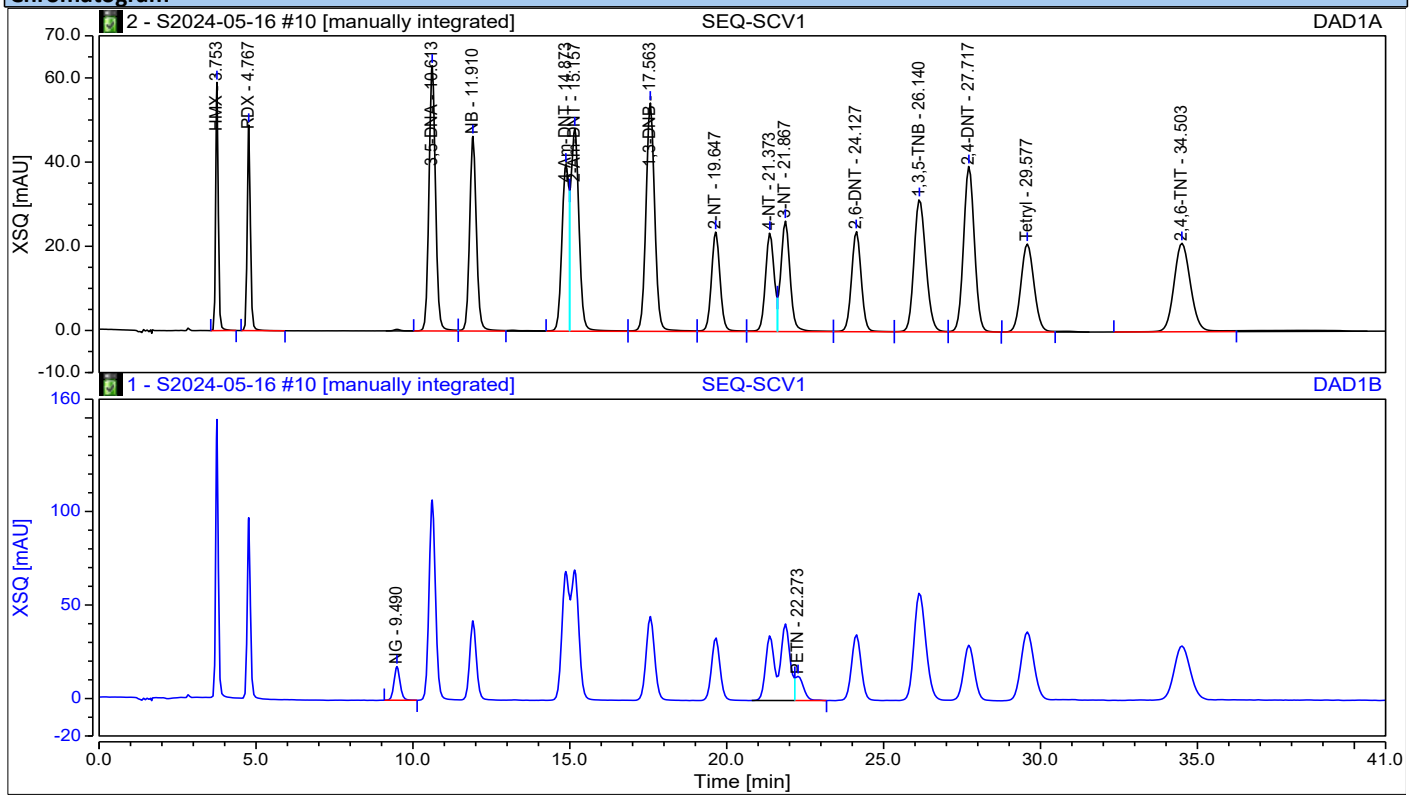
Instrument:
Sequence:S2024-05-16

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-SCV1**	*Instrument:*	**Statler**
Vial Number:	**10**	*Run Time (min):*	**41.00**
Injection Type:	**Check Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**16/May/2024 19:02**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**20/May/2024 12:45**	*Operator:*	**AOP**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.490	4.0584	18.007	50.59	58.19	927.1362
2	PETN	22.273	3.9641	12.939	49.41	41.81	933.6693
1	HMX	3.753	5.6311	58.972	3.40	10.36	929.9663
2	RDX	4.767	5.7392	48.836	3.47	8.58	917.2299
3	3,5-DNA	10.613	15.1639	62.997	9.16	11.07	916.0896
4	NB	11.910	11.6164	46.247	7.02	8.13	934.5691
n.a.	1,2-DNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5	4-Am-DNT	14.873	10.1469	39.533	6.13	6.95	911.5561
6	2-Am-DNT	15.157	14.4393	48.126	8.72	8.46	913.6993
7	1,3-DNB	17.563	17.5167	54.294	10.58	9.54	919.6039
8	2-NT	19.647	7.5740	23.620	4.57	4.15	938.2778
9	4-NT	21.373	7.5586	23.431	4.57	4.12	933.7185
10	3-NT	21.867	9.0161	26.282	5.45	4.62	927.1626
11	2,6-DNT	24.127	8.5641	23.864	5.17	4.19	907.6933
12	1,3,5-TNB	26.140	13.8143	31.494	8.34	5.54	909.6672
13	2,4-DNT	27.717	15.7654	39.342	9.52	6.91	907.6164
14	Tetryl	29.577	10.1061	20.916	6.10	3.68	954.8727
15	2,4,6-TNT	34.503	12.9242	21.040	7.81	3.70	926.1715
Total:			**173.599**	**599.941**	**200.000**	**200.000**	

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INITIAL CALIBRATION STANDARDS

EPA 8330B

Laboratory:	APPL, LLC	Work Order:	24I0203
Client:	AECOM	Project:	Wingate 60517380 Task 3
Sequence:	SD03246	Instrument:	Waldorf
Calibration:	2433019		

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
24H0397	8330 - Cal 1 0.005ug/mL 08/14/24	SD03246-CAL1	W2024-08-14-017	08/14/24 17:32
24H0398	8330 - Cal 2 0.05ug/mL 08/14/24	SD03246-CAL2	W2024-08-14-018	08/14/24 18:03
24H0399	8330 - Cal 3 0.25ug/mL 08/14/24	SD03246-CAL3	W2024-08-14-019	08/14/24 18:35
24H0400	8330 - Cal 4 1.0ug/mL 08/14/24	SD03246-CAL4	W2024-08-14-020	08/14/24 19:06
24H0401	8330 - Cal 5 2.5ug/mL 08/14/24	SD03246-CAL5	W2024-08-14-021	08/14/24 19:38
24H0402	8330 - Cal 6 5.0ug/mL 08/14/24	SD03246-CAL6	W2024-08-14-022	08/14/24 20:09
24H0403	8330 - SCV 1.0ug/mL 08/14/24	SD03246-SCV1	W2024-08-14-023	08/14/24 20:41

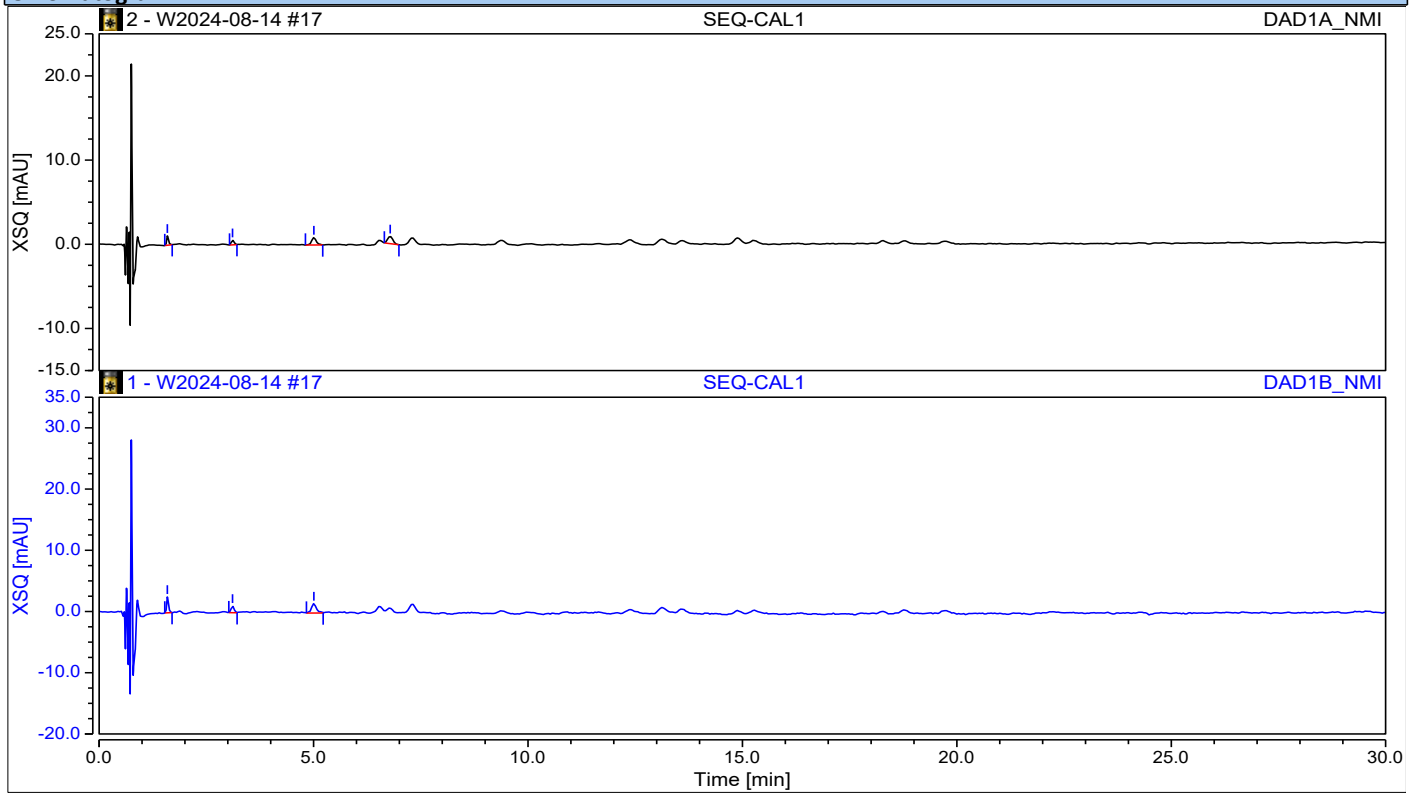
Instrument:
Sequence:W2024-08-14

Original Chromatogram

Injection Details

Injection Name:	**SEQ-CAL1**	*Instrument:*	**Waldorf**
Vial Number:	**17**	*Run Time (min):*	**30.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**14/Aug/2024 17:32**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**15/Aug/2024 14:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.927	0.0366	0.195	58.55	54.66	3.3385
2	PETN	22.233	0.0259	0.162	41.45	45.34	8.4312
1	HMX	1.590	0.0571	1.115	4.13	12.37	n.a.
2	RDX	3.110	0.0430	0.549	3.11	6.09	5.6192
3	1,3,5-TNB	5.007	0.1130	0.879	8.16	9.76	n.a.
4	1,2-DNB	6.533	0.0522	0.434	3.77	4.82	17.2890
5	1,3-DNB	6.787	0.1229	0.862	8.88	9.56	9.0831
6	3,5-DNA	7.297	0.1353	0.826	9.78	9.16	7.2055
7	NB	9.383	0.0965	0.509	6.97	5.64	15.2579
8	Tetryl	11.650	0.0178	0.100	1.29	1.11	17.0100
9	2,4,6-TNT	12.377	0.1352	0.587	9.77	6.52	12.4543
10	2-Am-DNT	13.120	0.1445	0.632	10.44	7.01	12.0146
11	4-Am-DNT	13.583	0.0705	0.395	5.10	4.38	n.a.
12	2,4-DNT	14.887	0.1293	0.700	9.34	7.77	14.5865
13	2,6-DNT	15.247	0.0741	0.401	5.35	4.45	13.4510
14	2-NT	18.277	0.0601	0.359	4.35	3.99	15.1215
15	4-NT	18.783	0.0598	0.350	4.32	3.89	14.1551
16	3-NT	19.727	0.0725	0.312	5.24	3.47	14.1590
Total:			**1.446**	**9.369**	**200.000**	**200.000**	

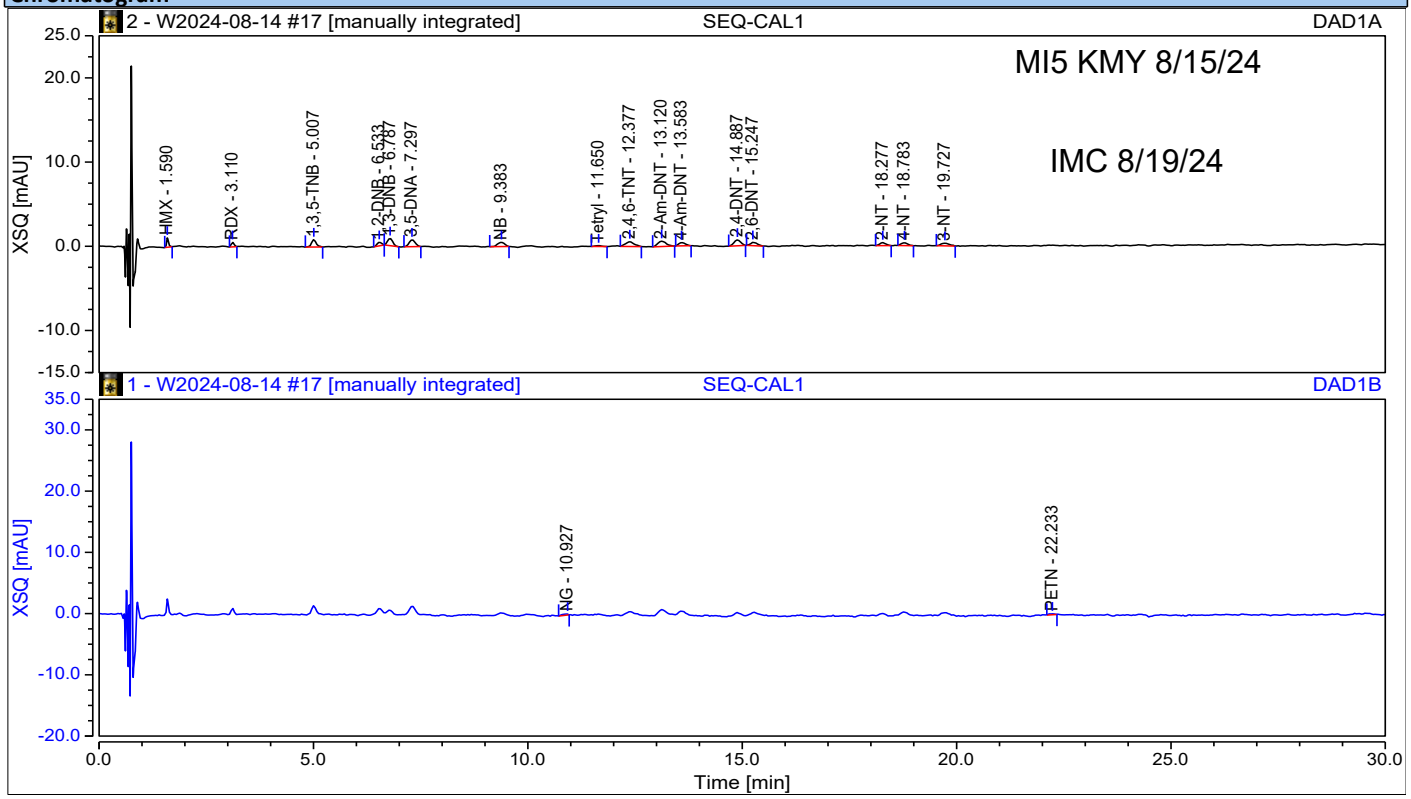
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Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL1**	*Instrument:*	**Waldorf**
Vial Number:	**17**	*Run Time (min):*	**30.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**14/Aug/2024 17:32**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**15/Aug/2024 14:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.927	0.0366	0.195	58.55	54.66	3.3385
2	PETN	22.233	0.0259	0.162	41.45	45.34	8.4312
1	HMX	1.590	0.0571	1.115	4.13	12.37	n.a.
2	RDX	3.110	0.0430	0.549	3.11	6.09	5.6192
3	1,3,5-TNB	5.007	0.1130	0.879	8.16	9.76	n.a.
4	1,2-DNB	6.533	0.0522	0.434	3.77	4.82	17.2890
5	1,3-DNB	6.787	0.1229	0.862	8.88	9.56	9.0831
6	3,5-DNA	7.297	0.1353	0.826	9.78	9.16	7.2055
7	NB	9.383	0.0965	0.509	6.97	5.64	15.2579
8	Tetryl	11.650	0.0178	0.100	1.29	1.11	17.0100
9	2,4,6-TNT	12.377	0.1352	0.587	9.77	6.52	12.4543
10	2-Am-DNT	13.120	0.1445	0.632	10.44	7.01	12.0146
11	4-Am-DNT	13.583	0.0705	0.395	5.10	4.38	n.a.
12	2,4-DNT	14.887	0.1293	0.700	9.34	7.77	14.5865
13	2,6-DNT	15.247	0.0741	0.401	5.35	4.45	13.4510
14	2-NT	18.277	0.0601	0.359	4.35	3.99	15.1215
15	4-NT	18.783	0.0598	0.350	4.32	3.89	14.1551
16	3-NT	19.727	0.0725	0.312	5.24	3.47	14.1590
Total:			**1.446**	**9.369**	**200.000**	**200.000**	

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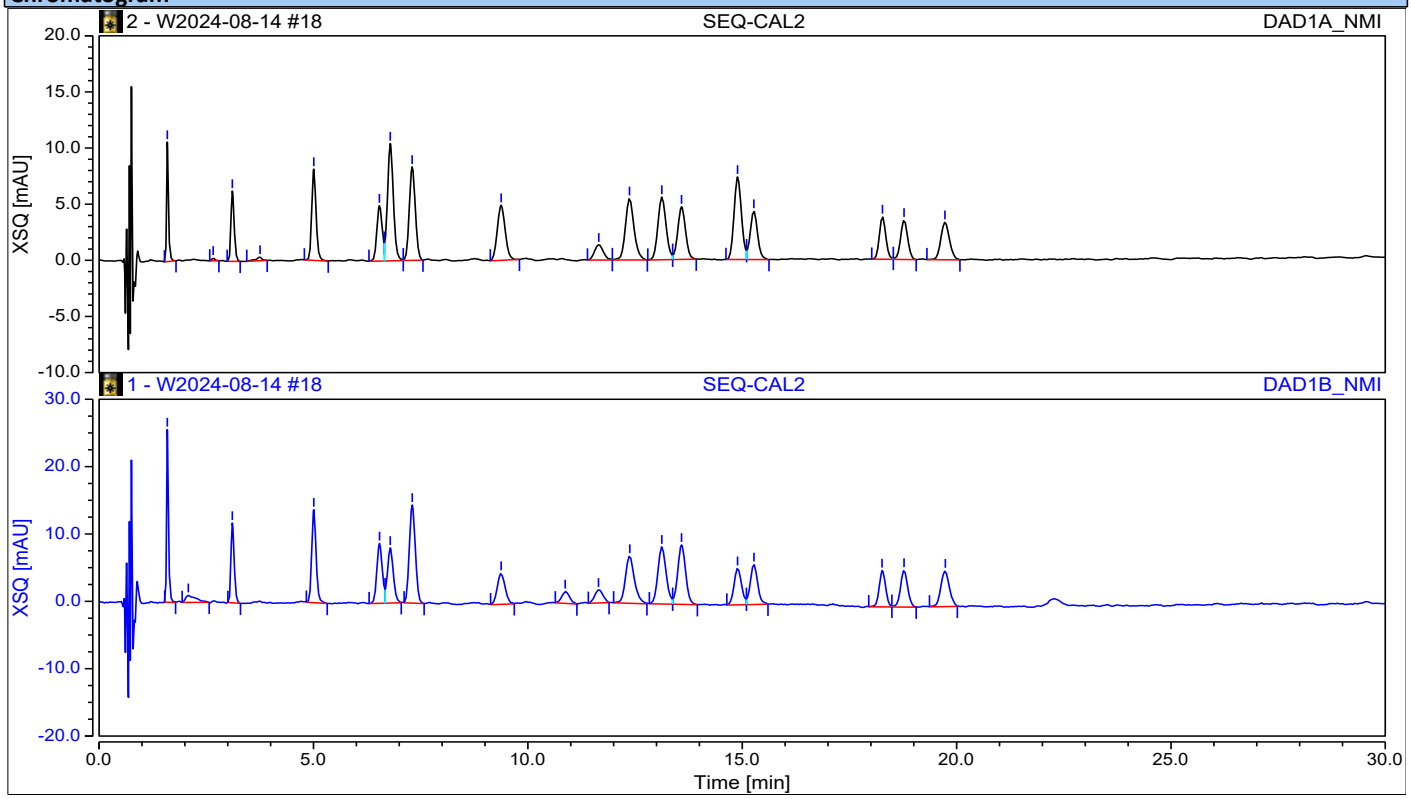
Instrument:
Sequence:W2024-08-14

Original Chromatogram

Injection Details

Injection Name:	**SEQ-CAL2**	*Instrument:*	**Waldorf**
Vial Number:	**18**	*Run Time (min):*	**30.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**14/Aug/2024 18:03**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**15/Aug/2024 14:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.870	0.3740	1.777	51.33	61.40	52.6688
2	PETN	22.263	0.3545	1.117	48.67	38.60	51.4974
1	HMX	1.590	0.5346	10.646	3.52	11.43	12.4781
2	RDX	3.107	0.5487	6.261	3.61	6.72	52.5737
3	1,3,5-TNB	5.007	0.9596	8.134	6.32	8.73	27.3315
4	1,2-DNB	6.537	0.7238	4.937	4.77	5.30	63.9938
5	1,3-DNB	6.790	1.6717	10.450	11.01	11.22	56.1759
6	3,5-DNA	7.300	1.3604	8.325	8.96	8.94	53.3630
7	NB	9.377	1.0502	4.914	6.92	5.27	61.8352
8	Tetryl	11.653	0.3263	1.357	2.15	1.46	32.1754
9	2,4,6-TNT	12.370	1.2943	5.494	8.53	5.90	57.4010
10	2-Am-DNT	13.123	1.2429	5.591	8.19	6.00	57.5879
11	4-Am-DNT	13.583	0.9908	4.695	6.53	5.04	45.9507
12	2,4-DNT	14.890	1.4776	7.360	9.73	7.90	60.3941
13	2,6-DNT	15.270	0.8644	4.316	5.69	4.63	59.9438
14	2-NT	18.270	0.6677	3.802	4.40	4.08	60.7078
15	4-NT	18.773	0.6784	3.528	4.47	3.79	60.6226
16	3-NT	19.727	0.7879	3.346	5.19	3.59	60.9732
Total:			**15.908**	**96.048**	**200.000**	**200.000**	

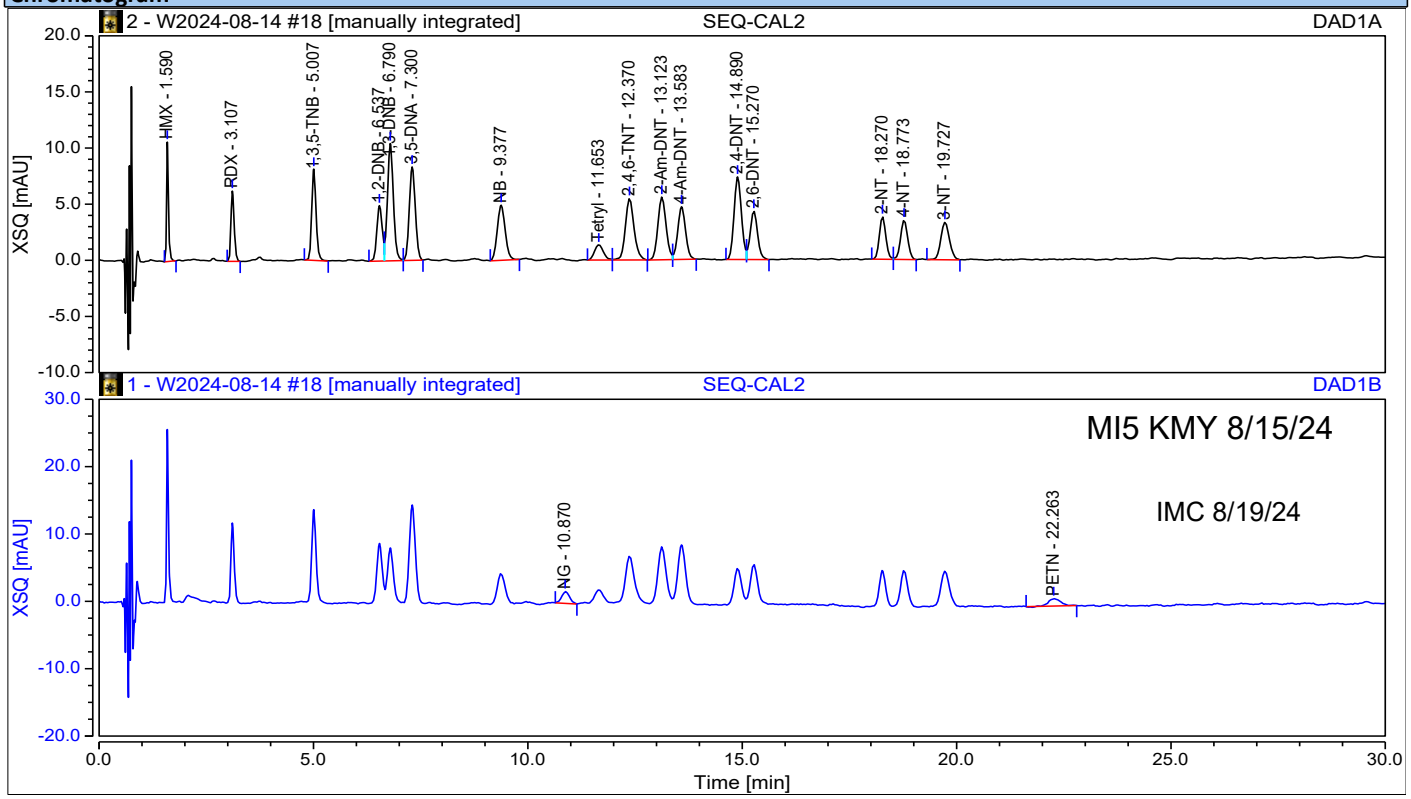
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Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL2**	*Instrument:*	**Waldorf**
Vial Number:	**18**	*Run Time (min):*	**30.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**14/Aug/2024 18:03**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**15/Aug/2024 14:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.870	0.3740	1.777	51.33	61.40	52.6688
2	PETN	22.263	0.3545	1.117	48.67	38.60	51.4974
1	HMX	1.590	0.5346	10.646	3.52	11.43	12.4781
2	RDX	3.107	0.5487	6.261	3.61	6.72	52.5737
3	1,3,5-TNB	5.007	0.9596	8.134	6.32	8.73	27.3315
4	1,2-DNB	6.537	0.7238	4.937	4.77	5.30	63.9938
5	1,3-DNB	6.790	1.6717	10.450	11.01	11.22	56.1759
6	3,5-DNA	7.300	1.3604	8.325	8.96	8.94	53.3630
7	NB	9.377	1.0502	4.914	6.92	5.27	61.8352
8	Tetryl	11.653	0.3263	1.357	2.15	1.46	32.1754
9	2,4,6-TNT	12.370	1.2943	5.494	8.53	5.90	57.4010
10	2-Am-DNT	13.123	1.2429	5.591	8.19	6.00	57.5879
11	4-Am-DNT	13.583	0.9908	4.695	6.53	5.04	45.9507
12	2,4-DNT	14.890	1.4776	7.360	9.73	7.90	60.3941
13	2,6-DNT	15.270	0.8644	4.316	5.69	4.63	59.9438
14	2-NT	18.270	0.6677	3.802	4.40	4.08	60.7078
15	4-NT	18.773	0.6784	3.528	4.47	3.79	60.6226
16	3-NT	19.727	0.7879	3.346	5.19	3.59	60.9732
Total:			**15.908**	**96.048**	**200.000**	**200.000**	

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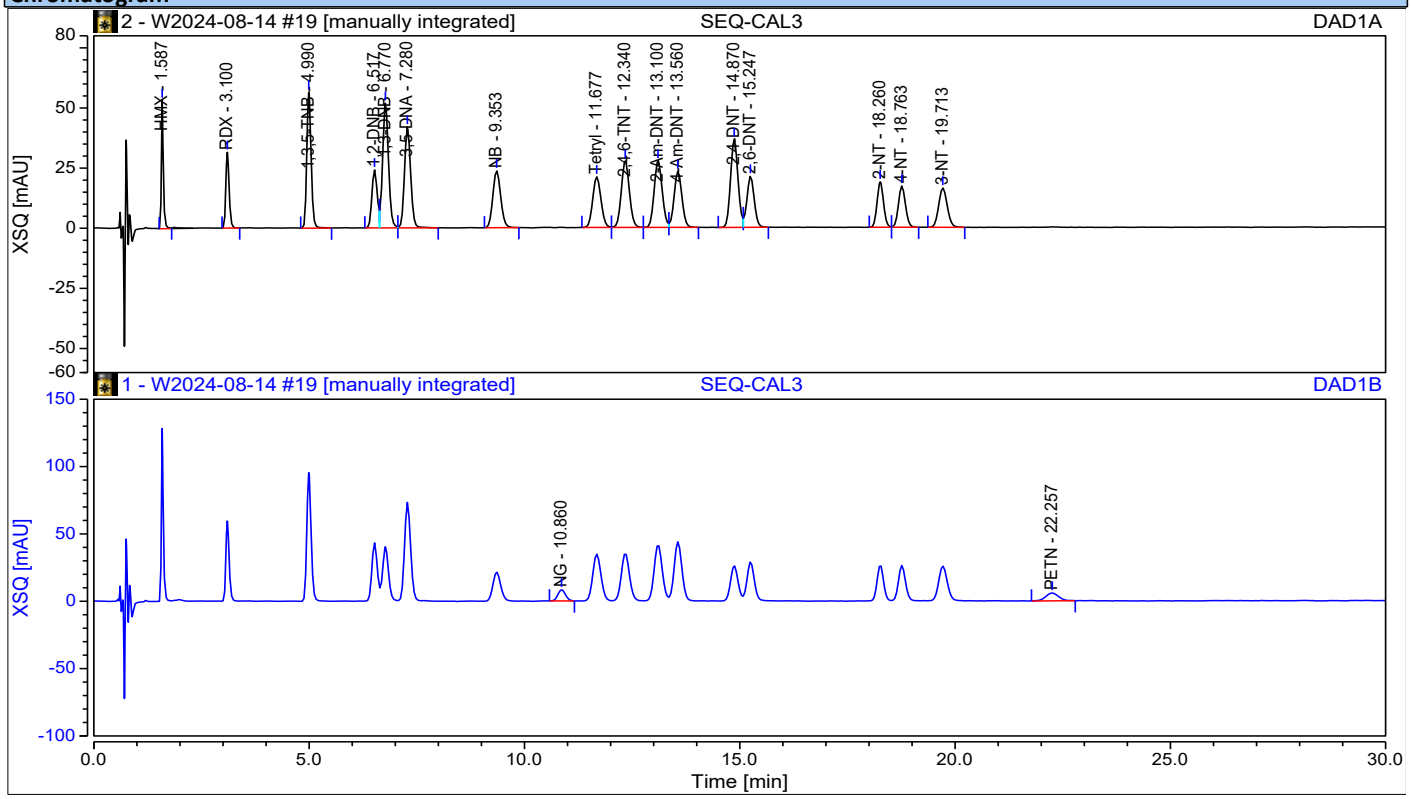
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Sequence:W2024-08-14

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL3**	*Instrument:*	**Waldorf**
Vial Number:	**19**	*Run Time (min):*	**30.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**14/Aug/2024 18:35**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**15/Aug/2024 14:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.860	1.7189	8.286	45.74	58.51	255.6858
2	PETN	22.257	2.0395	5.876	54.26	41.49	266.0856
1	HMX	1.587	2.7161	53.263	3.42	10.81	243.4984
2	RDX	3.100	2.7617	31.492	3.48	6.39	259.9634
3	1,3,5-TNB	4.990	6.5708	56.484	8.28	11.47	255.5077
4	1,2-DNB	6.517	3.4795	24.150	4.39	4.90	263.2961
5	1,3-DNB	6.770	8.2270	51.821	10.37	10.52	259.3827
6	3,5-DNA	7.280	7.0229	41.917	8.85	8.51	260.1398
7	NB	9.353	5.0264	23.671	6.34	4.81	260.1731
8	Tetryl	11.677	4.6857	21.070	5.91	4.28	270.0324
9	2,4,6-TNT	12.340	6.0386	27.629	7.61	5.61	260.1610
10	2-Am-DNT	13.100	6.0302	27.619	7.60	5.61	260.0341
11	4-Am-DNT	13.560	4.9085	23.291	6.19	4.73	256.3657
12	2,4-DNT	14.870	7.3634	36.487	9.28	7.41	260.7468
13	2,6-DNT	15.247	4.1755	21.276	5.26	4.32	261.3397
14	2-NT	18.260	3.2741	18.891	4.13	3.84	260.4861
15	4-NT	18.763	3.2626	17.139	4.11	3.48	259.6764
16	3-NT	19.713	3.7937	16.342	4.78	3.32	261.5261
Total:			**83.095**	**506.704**	**200.000**	**200.000**	

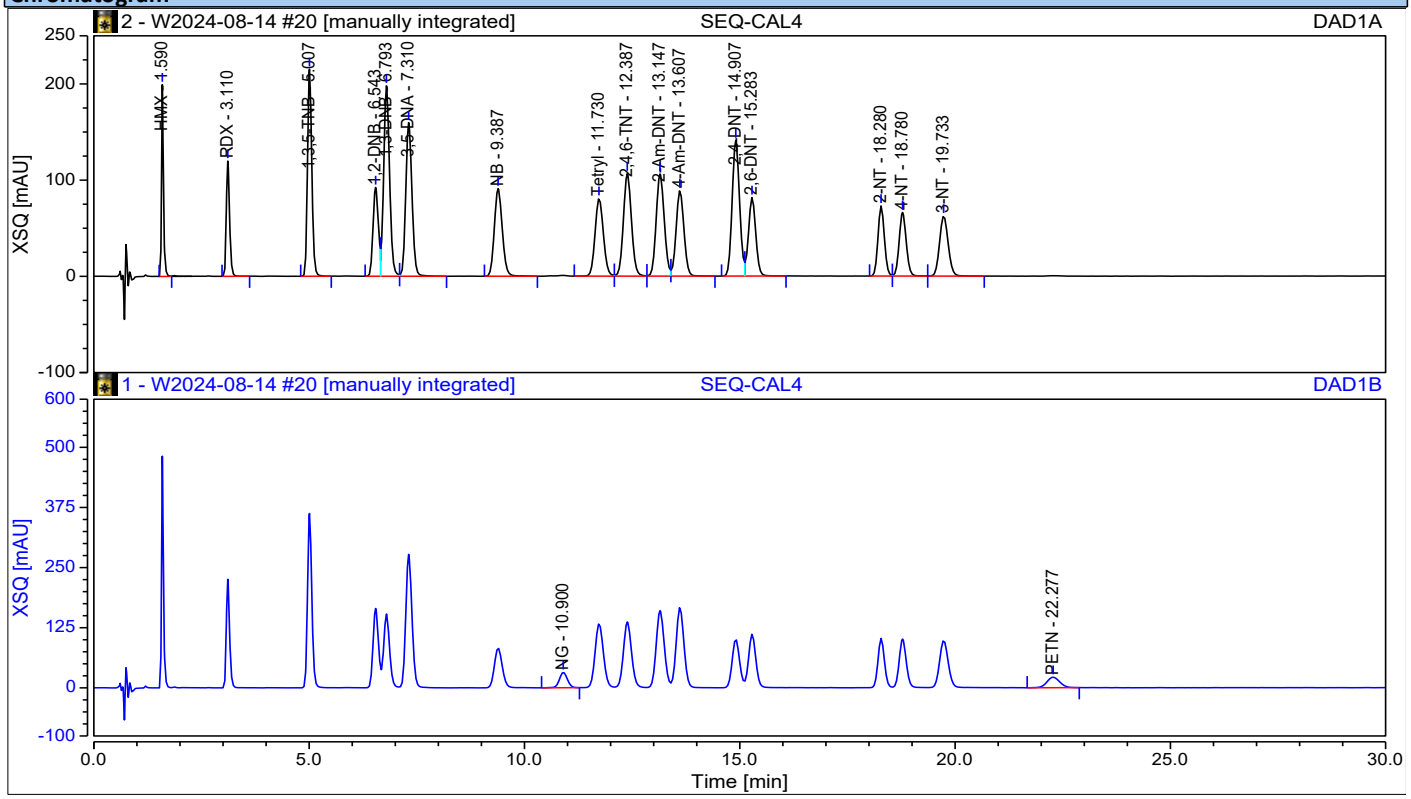
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Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL4**	*Instrument:*	**Waldorf**
Vial Number:	**20**	*Run Time (min):*	**30.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**14/Aug/2024 19:06**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**15/Aug/2024 14:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.900	6.9167	31.947	47.71	59.38	993.6356
2	PETN	22.277	7.5803	21.852	52.29	40.62	986.4985
1	HMX	1.590	10.1154	199.345	3.33	10.59	1035.3704
2	RDX	3.110	10.5583	119.806	3.48	6.37	985.8594
3	1,3,5-TNB	5.007	24.8796	215.112	8.19	11.43	1004.1168
4	1,2-DNB	6.543	13.2740	92.219	4.37	4.90	969.3762
5	1,3-DNB	6.793	31.4477	197.927	10.35	10.52	977.0128
6	3,5-DNA	7.310	26.7775	159.604	8.81	8.48	984.5408
7	NB	9.387	19.5185	91.037	6.42	4.84	972.4846
8	Tetryl	11.730	18.1614	80.923	5.98	4.30	992.2396
9	2,4,6-TNT	12.387	23.2429	106.445	7.65	5.66	982.1185
10	2-Am-DNT	13.147	23.1172	106.232	7.61	5.65	982.5122
11	4-Am-DNT	13.607	18.7805	88.970	6.18	4.73	999.5352
12	2,4-DNT	14.907	28.1321	140.704	9.26	7.48	977.6157
13	2,6-DNT	15.283	16.0322	81.707	5.28	4.34	978.9497
14	2-NT	18.280	12.6036	72.876	4.15	3.87	975.2896
15	4-NT	18.780	12.6028	66.077	4.15	3.51	975.3726
16	3-NT	19.733	14.5691	62.566	4.80	3.33	974.8362
Total:			**318.310**	**1935.347**	**200.000**	**200.000**	

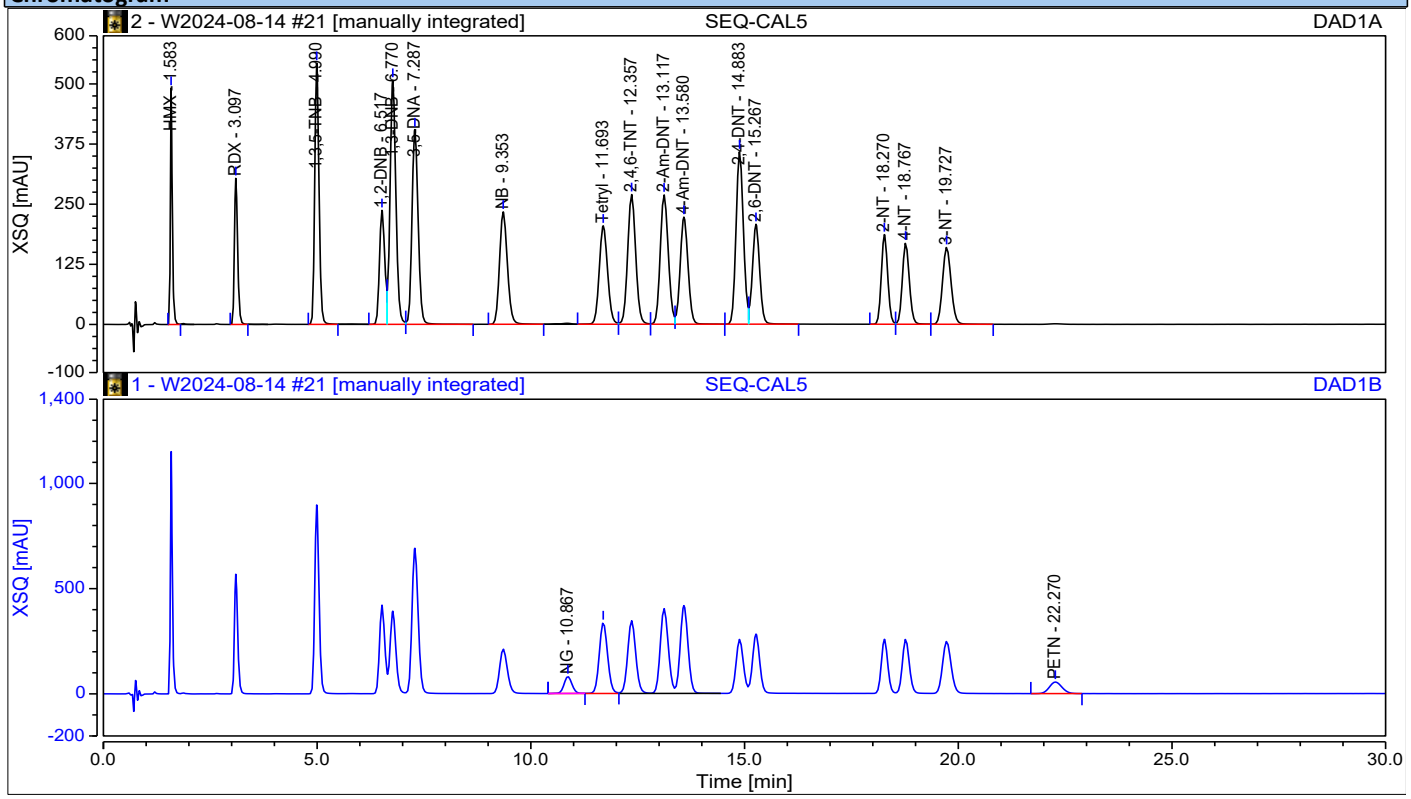
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Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL5**	*Instrument:*	**Waldorf**
Vial Number:	**21**	*Run Time (min):*	**30.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**14/Aug/2024 19:38**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**15/Aug/2024 14:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.867	17.2199	80.163	15.25	16.97	2497.4155
3	PETN	22.270	18.8964	55.000	16.74	11.65	2481.2192
1	HMX	1.583	25.0547	491.363	3.24	10.30	2618.3334
2	RDX	3.097	26.7264	303.696	3.46	6.37	2497.3613
3	1,3,5-TNB	4.990	62.7770	543.022	8.13	11.39	2551.6180
4	1,2-DNB	6.517	33.8741	237.026	4.38	4.97	2471.4745
5	1,3-DNB	6.770	79.9158	507.705	10.34	10.64	2498.5661
6	3,5-DNA	7.287	67.8554	404.896	8.78	8.49	2494.4038
7	NB	9.353	49.8467	233.681	6.45	4.90	2480.7668
8	Tetryl	11.693	46.2909	204.691	5.99	4.29	2485.6517
9	2,4,6-TNT	12.357	59.1642	269.940	7.66	5.66	2479.7568
10	2-Am-DNT	13.117	58.9543	269.160	7.63	5.64	2479.8766
11	4-Am-DNT	13.580	47.4922	222.643	6.15	4.67	2512.0488
12	2,4-DNT	14.883	71.7986	358.488	9.29	7.52	2475.6619
13	2,6-DNT	15.267	40.9522	207.739	5.30	4.36	2475.5612
14	2-NT	18.270	32.3174	186.383	4.18	3.91	2478.1888
15	4-NT	18.767	32.2296	169.076	4.17	3.54	2481.6939
16	3-NT	19.727	37.3456	159.995	4.83	3.35	2478.3358
Total:			**808.712**	**4904.669**	**131.988**	**128.619**	

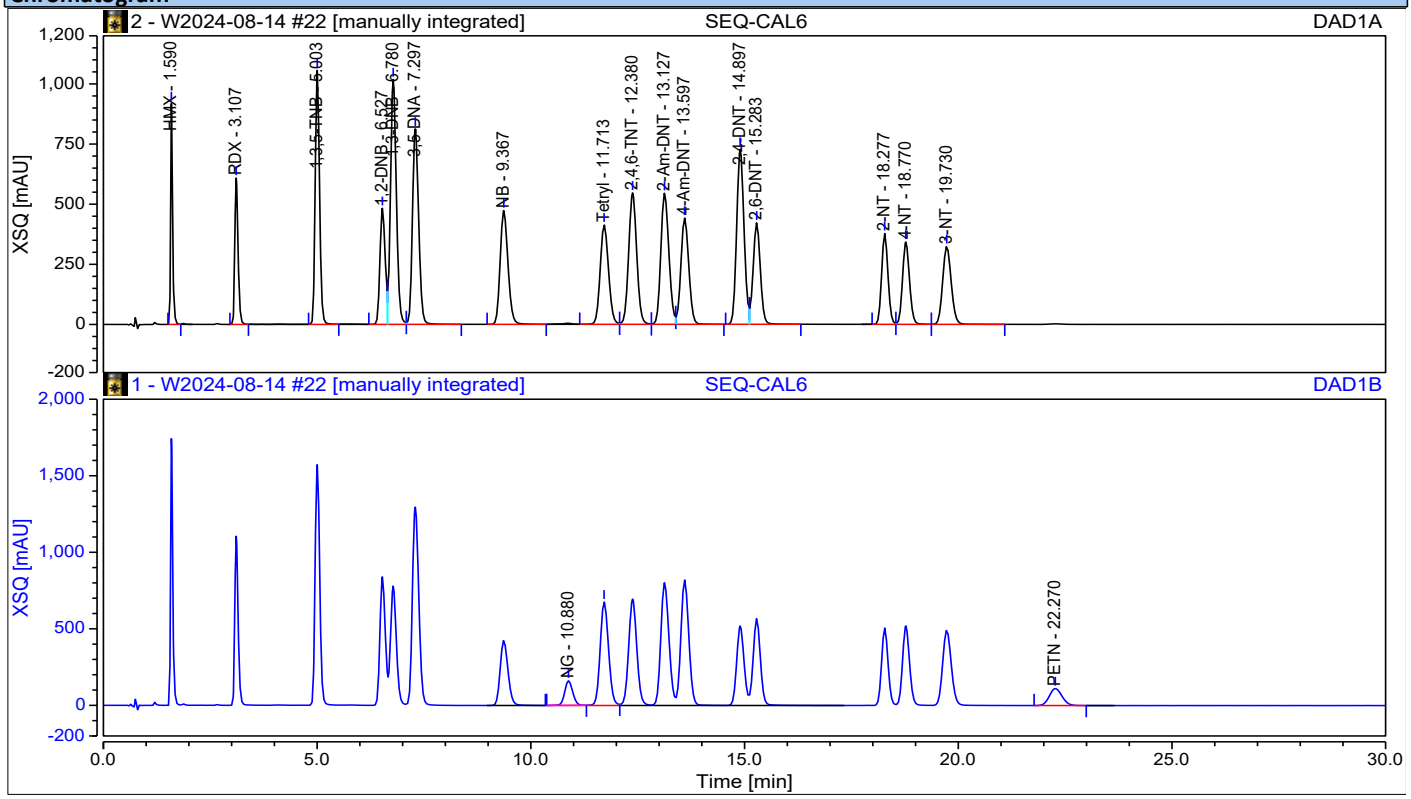
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Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL6**	*Instrument:*	**Waldorf**
Vial Number:	**22**	*Run Time (min):*	**30.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**14/Aug/2024 20:09**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**15/Aug/2024 14:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.880	34.5446	160.475	15.15	16.91	5002.2558
3	PETN	22.270	38.3771	111.108	16.83	11.71	5011.2680
1	HMX	1.590	47.9812	918.641	3.09	9.66	4934.5037
2	RDX	3.107	53.6803	608.611	3.46	6.40	5003.6229
3	1,3,5-TNB	5.003	123.8677	1056.176	7.98	11.10	4973.3308
4	1,2-DNB	6.527	68.4562	482.670	4.41	5.07	5019.5705
5	1,3-DNB	6.780	160.9872	1017.955	10.37	10.70	5004.7794
6	3,5-DNA	7.297	136.3503	812.824	8.78	8.55	5005.3471
7	NB	9.367	100.6515	473.305	6.48	4.98	5014.4824
8	Tetryl	11.713	93.6395	413.723	6.03	4.35	5007.8909
9	2,4,6-TNT	12.380	119.5108	546.504	7.70	5.75	5013.1084
10	2-Am-DNT	13.127	118.9946	544.787	7.67	5.73	5012.9746
11	4-Am-DNT	13.597	94.8642	441.975	6.11	4.65	4993.7985
12	2,4-DNT	14.897	145.0643	727.798	9.35	7.65	5015.9951
13	2,6-DNT	15.283	82.5719	421.652	5.32	4.43	5015.7546
14	2-NT	18.277	65.2669	377.992	4.20	3.97	5015.2062
15	4-NT	18.770	64.9673	342.195	4.19	3.60	5013.4793
16	3-NT	19.730	75.3108	324.387	4.85	3.41	5015.1697
Total:			**1625.086**	**9782.776**	**131.987**	**128.623**	

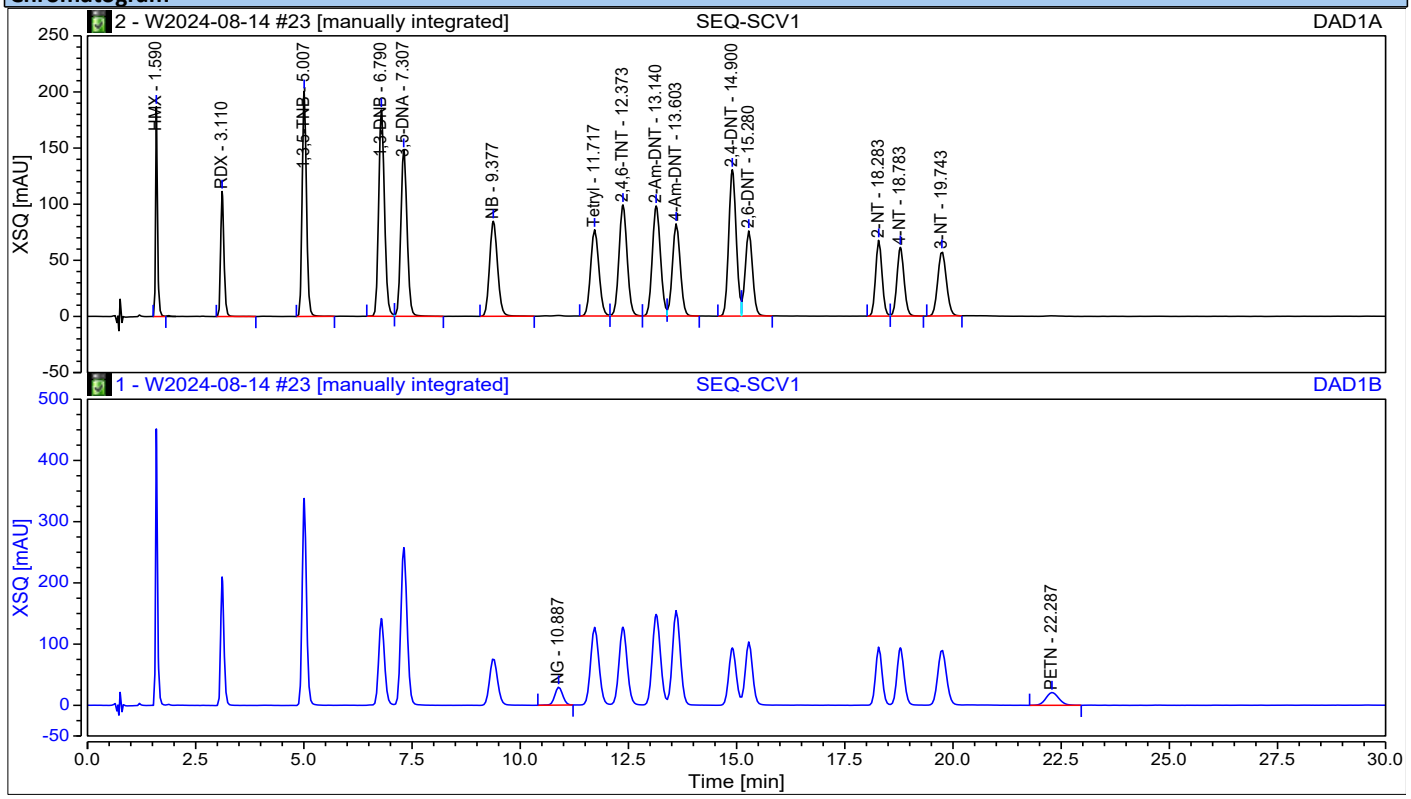
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Chromatogram and Results

Injection Details

Injection Name:	**SEQ-SCV1**	*Instrument:*	**Waldorf**
Vial Number:	**23**	*Run Time (min):*	**30.00**
Injection Type:	**Check Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**14/Aug/2024 20:41**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**15/Aug/2024 14:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.887	6.2756	29.356	46.35	58.44	912.8172
2	PETN	22.287	7.2647	20.872	53.65	41.56	942.3183
1	HMX	1.590	9.4529	186.929	3.51	11.23	968.0682
2	RDX	3.110	9.8687	111.416	3.66	6.69	916.9026
3	1,3,5-TNB	5.007	23.2163	200.583	8.61	12.05	935.5536
n.a.	1,2-DNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	1,3-DNB	6.790	28.7410	183.800	10.66	11.04	907.6263
5	3,5-DNA	7.307	24.7841	148.044	9.19	8.89	913.3849
6	NB	9.377	18.1168	84.699	6.72	5.09	905.4681
7	Tetryl	11.717	17.1791	76.891	6.37	4.62	943.5852
8	2,4,6-TNT	12.373	21.5870	99.044	8.01	5.95	914.3301
9	2-Am-DNT	13.140	21.4178	98.076	7.94	5.89	907.5602
10	4-Am-DNT	13.603	17.3442	82.195	6.43	4.94	922.8750
11	2,4-DNT	14.900	26.1790	130.449	9.71	7.84	907.0745
12	2,6-DNT	15.280	14.8995	75.834	5.53	4.56	909.2090
13	2-NT	18.283	11.7446	67.639	4.36	4.06	905.9516
14	4-NT	18.783	11.6819	61.255	4.33	3.68	904.8650
15	3-NT	19.743	13.3645	57.678	4.96	3.47	899.4097
Total:			**283.118**	**1714.762**	**200.000**	**200.000**	

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SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8330B

Laboratory:	APPL, LLC		
Client:	AECOM	Project:	Wingate 60517380 Task 3
Instrument ID:	STATLER	Calibration:	2420012
Lab File ID:	S2024-05-16-010	Calibration Date:	05/16/24 08:00
Sequence:	SD01815	Injection Date:	05/16/24
Lab Sample ID:	SD01815-SCV1	Injection Time:	19:02

		CONC. (ng/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	AVG	1000	930	0.0634132	0.058972		-7.0	20
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	AVG	1000	917	5.322893E-02	0.048836		-8.3	20
1,3,5-TRINITROBENZENE	AVG	1000	910	0.0346204	0.031494		-9.0	20
1,3-DINITROBENZENE	AVG	1000	920	5.905443E-02	0.054294		-8.1	20
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	AVG	1000	955	2.189713E-02	0.020916		-4.5	20
NITROBENZENE	AVG	1000	935	4.948757E-02	0.046247		-6.5	20
2,4,6-TRINITROTOLUENE	AVG	1000	926	0.0227055	0.02104		-7.3	20
4-AMINO-2,6-DINITROTOLUENE	AVG	1000	912	4.338403E-02	0.039533		-8.9	20
2-AMINO-4,6-DINITROTOLUENE	AVG	1000	914	5.266023E-02	0.048126		-8.6	20
2,4-DINITROTOLUENE	AVG	1000	908	4.334467E-02	0.039342		-9.2	20
2,6-DINITROTOLUENE	AVG	1000	908	0.0263017	0.023864		-9.3	20
2-NITROTOLUENE	AVG	1000	938	2.516953E-02	0.02362		-6.2	20
3-NITROTOLUENE	AVG	1000	927	0.0283433	0.026282		-7.3	20
4-NITROTOLUENE	AVG	1000	934	2.507787E-02	0.023431		-6.6	20
NITROGLYCERIN	AVG	1000	927	1.943387E-02	0.018007		-7.3	20
PENTAERYTHRITOL TETRANITRATE	AVG	1000	934	1.384317E-02	0.012939		-6.5	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

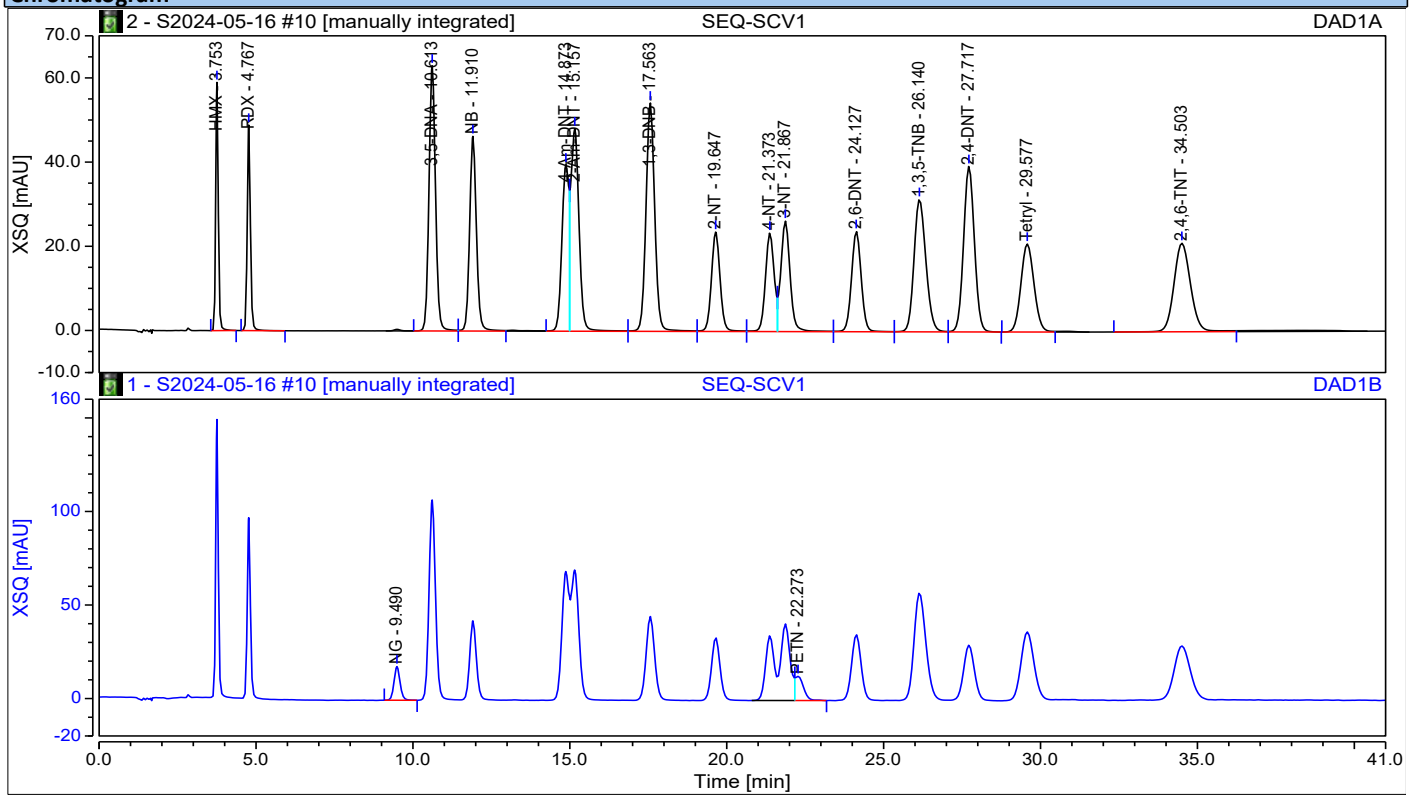
Instrument:
Sequence:S2024-05-16

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-SCV1**	*Instrument:*	**Statler**
Vial Number:	**10**	*Run Time (min):*	**41.00**
Injection Type:	**Check Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**16/May/2024 19:02**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**20/May/2024 12:45**	*Operator:*	**AOP**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.490	4.0584	18.007	50.59	58.19	927.1362
2	PETN	22.273	3.9641	12.939	49.41	41.81	933.6693
1	HMX	3.753	5.6311	58.972	3.40	10.36	929.9663
2	RDX	4.767	5.7392	48.836	3.47	8.58	917.2299
3	3,5-DNA	10.613	15.1639	62.997	9.16	11.07	916.0896
4	NB	11.910	11.6164	46.247	7.02	8.13	934.5691
n.a.	1,2-DNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5	4-Am-DNT	14.873	10.1469	39.533	6.13	6.95	911.5561
6	2-Am-DNT	15.157	14.4393	48.126	8.72	8.46	913.6993
7	1,3-DNB	17.563	17.5167	54.294	10.58	9.54	919.6039
8	2-NT	19.647	7.5740	23.620	4.57	4.15	938.2778
9	4-NT	21.373	7.5586	23.431	4.57	4.12	933.7185
10	3-NT	21.867	9.0161	26.282	5.45	4.62	927.1626
11	2,6-DNT	24.127	8.5641	23.864	5.17	4.19	907.6933
12	1,3,5-TNB	26.140	13.8143	31.494	8.34	5.54	909.6672
13	2,4-DNT	27.717	15.7654	39.342	9.52	6.91	907.6164
14	Tetryl	29.577	10.1061	20.916	6.10	3.68	954.8727
15	2,4,6-TNT	34.503	12.9242	21.040	7.81	3.70	926.1715
Total:			**173.599**	**599.941**	**200.000**	**200.000**	

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SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8330B

Laboratory:	APPL, LLC		
Client:	AECOM	Project:	Wingate 60517380 Task 3
Instrument ID:	Waldorf	Calibration:	2433019
Lab File ID:	W2024-08-14-023	Calibration Date:	08/14/24 07:00
Sequence:	SD03246	Injection Date:	08/14/24
Lab Sample ID:	SD03246-SCV1	Injection Time:	20:41

		CONC. (ng/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	LRI	1000	968	0.2047651	0.186929		-3.2	20
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	LRI	1000	917	0.1206658	0.111416		-8.3	20
1,3,5-TRINITROBENZENE	LRI	1000	936	0.2013287	0.200583		-6.4	20
1,3-DINITROBENZENE	LRI	1000	908	0.1988807	0.1838		-9.2	20
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	LRI	1000	944	6.282733E-02	0.076891		-5.6	20
NITROBENZENE	LRI	1000	905	9.565573E-02	0.084699		-9.5	20
2,4,6-TRINITROTOLUENE	LRI	1000	914	0.110253	0.099044		-8.6	20
4-AMINO-2,6-DINITROTOLUENE	LRI	1000	923	0.0887477	0.082195		-7.7	20
2-AMINO-4,6-DINITROTOLUENE	LRI	1000	908	0.1119249	0.098076		-9.2	20
2,4-DINITROTOLUENE	LRI	1000	907	0.1438011	0.130449		-9.3	20
2,6-DINITROTOLUENE	LRI	1000	909	0.0834595	0.075834		-9.1	20
2-NITROTOLUENE	LRI	1000	906	7.440527E-02	0.067639		-9.4	20
3-NITROTOLUENE	LRI	1000	899	0.0643549	0.057678		-10.1	20
4-NITROTOLUENE	LRI	1000	905	6.854373E-02	0.061255		-9.5	20
NITROGLYCERIN	LRI	1000	913	0.0339652	0.029356		-8.7	20
PENTAERYTHRITOL TETRANITRATE	LRI	1000	942	2.405293E-02	0.020872		-5.8	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

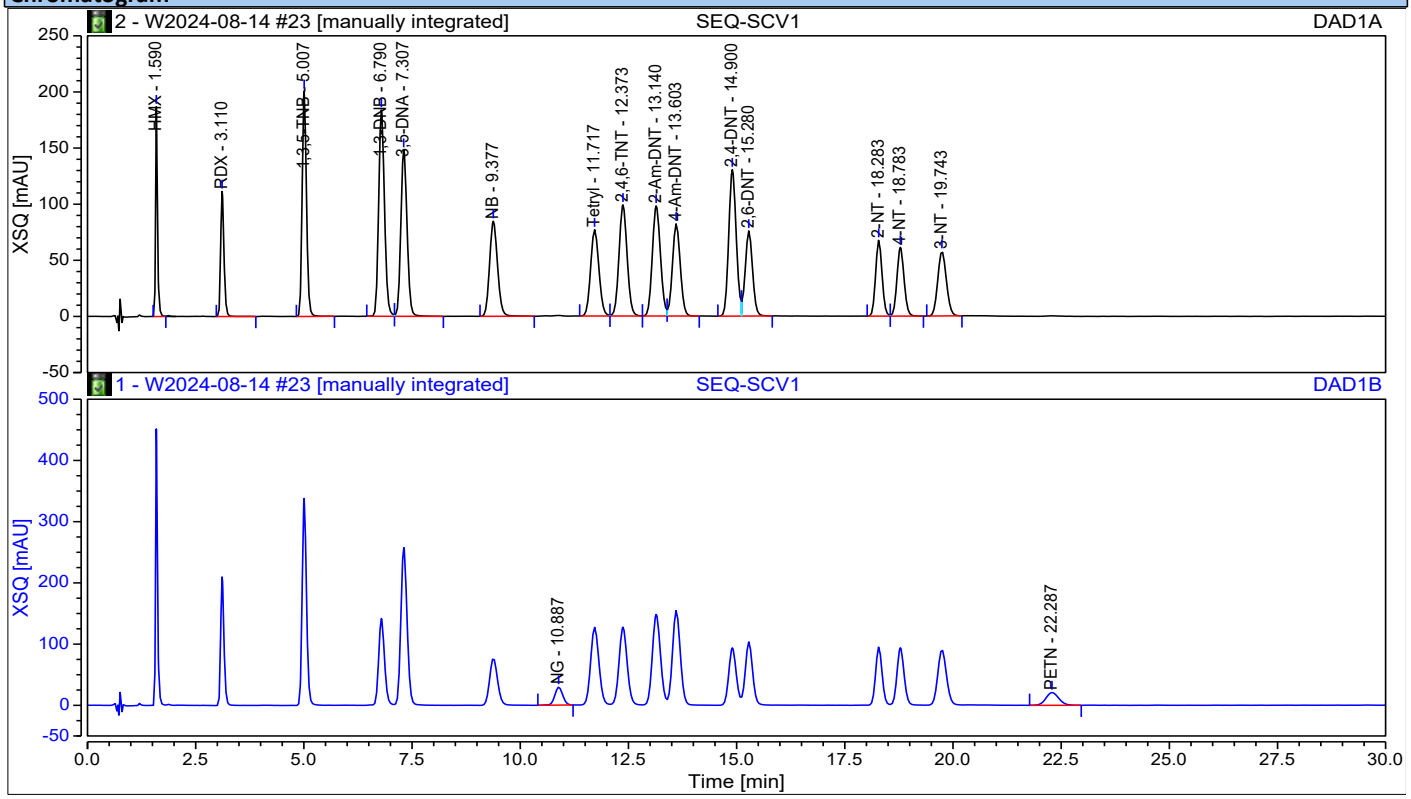
* Values outside of QC limits

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-SCV1**	*Instrument:*	**Waldorf**
Vial Number:	**23**	*Run Time (min):*	**30.00**
Injection Type:	**Check Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**14/Aug/2024 20:41**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**15/Aug/2024 14:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.887	6.2756	29.356	46.35	58.44	912.8172
2	PETN	22.287	7.2647	20.872	53.65	41.56	942.3183
1	HMX	1.590	9.4529	186.929	3.51	11.23	968.0682
2	RDX	3.110	9.8687	111.416	3.66	6.69	916.9026
3	1,3,5-TNB	5.007	23.2163	200.583	8.61	12.05	935.5536
n.a.	1,2-DNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	1,3-DNB	6.790	28.7410	183.800	10.66	11.04	907.6263
5	3,5-DNA	7.307	24.7841	148.044	9.19	8.89	913.3849
6	NB	9.377	18.1168	84.699	6.72	5.09	905.4681
7	Tetryl	11.717	17.1791	76.891	6.37	4.62	943.5852
8	2,4,6-TNT	12.373	21.5870	99.044	8.01	5.95	914.3301
9	2-Am-DNT	13.140	21.4178	98.076	7.94	5.89	907.5602
10	4-Am-DNT	13.603	17.3442	82.195	6.43	4.94	922.8750
11	2,4-DNT	14.900	26.1790	130.449	9.71	7.84	907.0745
12	2,6-DNT	15.280	14.8995	75.834	5.53	4.56	909.2090
13	2-NT	18.283	11.7446	67.639	4.36	4.06	905.9516
14	4-NT	18.783	11.6819	61.255	4.33	3.68	904.8650
15	3-NT	19.743	13.3645	57.678	4.96	3.47	899.4097
Total:			**283.118**	**1714.762**	**200.000**	**200.000**	

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CONTINUING CALIBRATION VERIFICATION

EPA 8330B

Laboratory:	APPL, LLC	Work Order:	24I0203
Client:	AECOM	Project:	Wingate 60517380 Task 3
Instrument ID:	STATLER	Calibration:	2420012
Lab File ID:	S2024-09-26-004	Calibration Date:	05/16/24 08:00
Sequence:	SD03963	Injection Date:	09/26/24
Lab Sample ID:	SD03963-CCV1	Injection Time:	12:20

		CONC. (ng/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	AVG	1000	890	0.0634132	0.056454		-11	20
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	AVG	1000	910	5.322893E-02	0.048457		-9	20
1,3,5-TRINITROBENZENE	AVG	1000	908	0.0346204	0.031433		-9	20
1,3-DINITROBENZENE	AVG	1000	906	5.905443E-02	0.053517		-9	20
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	AVG	1000	971	2.189713E-02	0.021264		-3	20
NITROBENZENE	AVG	1000	936	4.948757E-02	0.046305		-6	20
2,4,6-TRINITROTOLUENE	AVG	1000	931	0.0227055	0.02116		-7	20
4-AMINO-2,6-DINITROTOLUENE	AVG	1000	918	4.338403E-02	0.039798		-8	20
2-AMINO-4,6-DINITROTOLUENE	AVG	1000	923	5.266023E-02	0.048631		-8	20
2,4-DINITROTOLUENE	AVG	1000	918	4.334467E-02	0.039797		-8	20
2,6-DINITROTOLUENE	AVG	1000	896	0.0263017	0.023548		-11	20
2-NITROTOLUENE	AVG	1000	922	2.516953E-02	0.023217		-8	20
3-NITROTOLUENE	AVG	1000	929	0.0283433	0.026343		-7	20
4-NITROTOLUENE	AVG	1000	917	2.507787E-02	0.02302		-8	20
NITROGLYCERIN	AVG	1000	938	1.943387E-02	0.01822		-6	20
PENTAERYTHRITOL TETRANITRATE	AVG	1000	859	1.384317E-02	0.01191		-14	20
1,2-DINITROBENZENE	AVG	1000	930	0.0332162	0.030894		-7	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

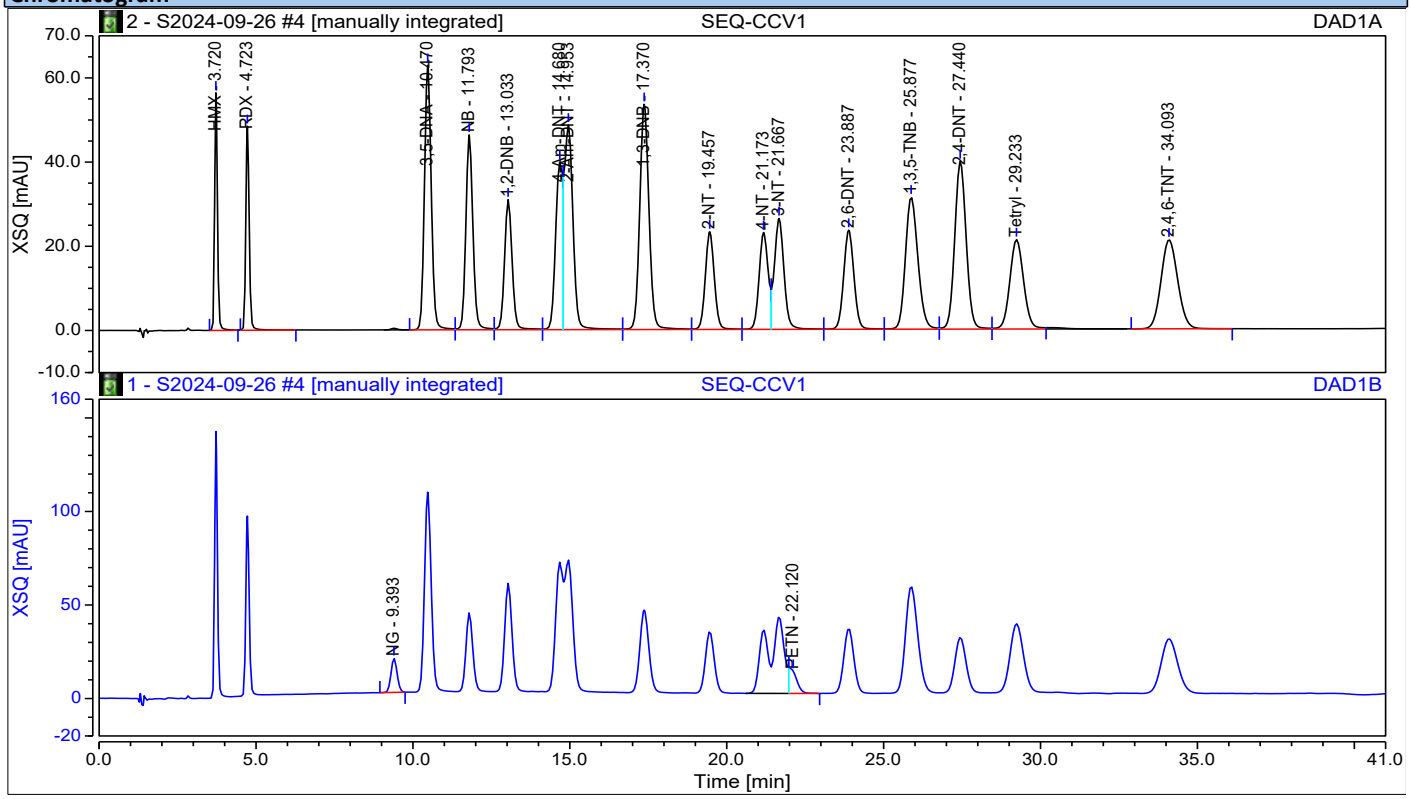
Instrument:
Sequence:S2024-09-26

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CCV1**	*Instrument:*	**Statler**
Vial Number:	**4**	*Run Time (min):*	**41.00**
Injection Type:	**Check Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**26/Sep/2024 12:20**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**12/Aug/2024 08:22**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.393	4.1464	18.220	52.80	60.47	938.1244
2	PETN	22.120	3.7062	11.910	47.20	39.53	859.4245
1	HMX	3.720	5.8451	56.454	3.22	9.46	890.2671
2	RDX	4.723	6.0561	48.457	3.34	8.12	910.1109
3	3,5-DNA	10.470	15.8095	62.836	8.72	10.53	913.7460
4	NB	11.793	12.0653	46.305	6.65	7.76	935.7366
5	1,2-DNB	13.033	8.7093	30.894	4.80	5.18	929.7322
6	4-Am-DNT	14.680	10.1956	39.798	5.62	6.67	917.6727
7	2-Am-DNT	14.953	15.5598	48.631	8.58	8.15	923.2746
8	1,3-DNB	17.370	18.2427	53.517	10.06	8.97	906.4543
9	2-NT	19.457	7.7126	23.217	4.25	3.89	922.2785
10	4-NT	21.173	7.6770	23.020	4.23	3.86	917.3548
11	3-NT	21.667	9.3751	26.343	5.17	4.41	929.3313
12	2,6-DNT	23.887	8.9225	23.548	4.92	3.95	895.6705
13	1,3,5-TNB	25.877	14.4901	31.433	7.99	5.27	907.9093
14	2,4-DNT	27.440	16.8674	39.797	9.30	6.67	918.0995
15	Tetryl	29.233	10.8119	21.264	5.96	3.56	970.7599
16	2,4,6-TNT	34.093	13.0421	21.160	7.19	3.55	931.4818
Total:			**189.235**	**626.807**	**200.000**	**200.000**	

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CONTINUING CALIBRATION VERIFICATION

EPA 8330B

Laboratory:	APPL, LLC	Work Order:	24I0203
Client:	AECOM	Project:	Wingate 60517380 Task 3
Instrument ID:	STATLER	Calibration:	2420012
Lab File ID:	S2024-09-26-018	Calibration Date:	05/16/24 08:00
Sequence:	SD03963	Injection Date:	09/26/24
Lab Sample ID:	SD03963-CCV2	Injection Time:	22:18

		CONC. (ng/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	AVG	1000	890	0.0634132	0.056409		-11	20
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	AVG	1000	908	5.322893E-02	0.048348		-9	20
1,3,5-TRINITROBENZENE	AVG	1000	914	0.0346204	0.031659		-9	20
1,3-DINITROBENZENE	AVG	1000	915	5.905443E-02	0.054026		-9	20
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	AVG	1000	982	2.189713E-02	0.021514		-2	20
NITROBENZENE	AVG	1000	914	4.948757E-02	0.045245		-9	20
2,4,6-TRINITROTOLUENE	AVG	1000	937	0.0227055	0.02129		-6	20
4-AMINO-2,6-DINITROTOLUENE	AVG	1000	919	4.338403E-02	0.039866		-8	20
2-AMINO-4,6-DINITROTOLUENE	AVG	1000	925	5.266023E-02	0.048707		-8	20
2,4-DINITROTOLUENE	AVG	1000	925	4.334467E-02	0.04011		-8	20
2,6-DINITROTOLUENE	AVG	1000	908	0.0263017	0.023859		-9	20
2-NITROTOLUENE	AVG	1000	909	2.516953E-02	0.022894		-9	20
3-NITROTOLUENE	AVG	1000	917	0.0283433	0.025996		-8	20
4-NITROTOLUENE	AVG	1000	917	2.507787E-02	0.023003		-8	20
NITROGLYCERIN	AVG	1000	936	1.943387E-02	0.018174		-7	20
PENTAERYTHRITOL TETRANITRATE	AVG	1000	861	1.384317E-02	0.011936		-14	20
1,2-DINITROBENZENE	AVG	1000	935	0.0332162	0.031065		-7	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

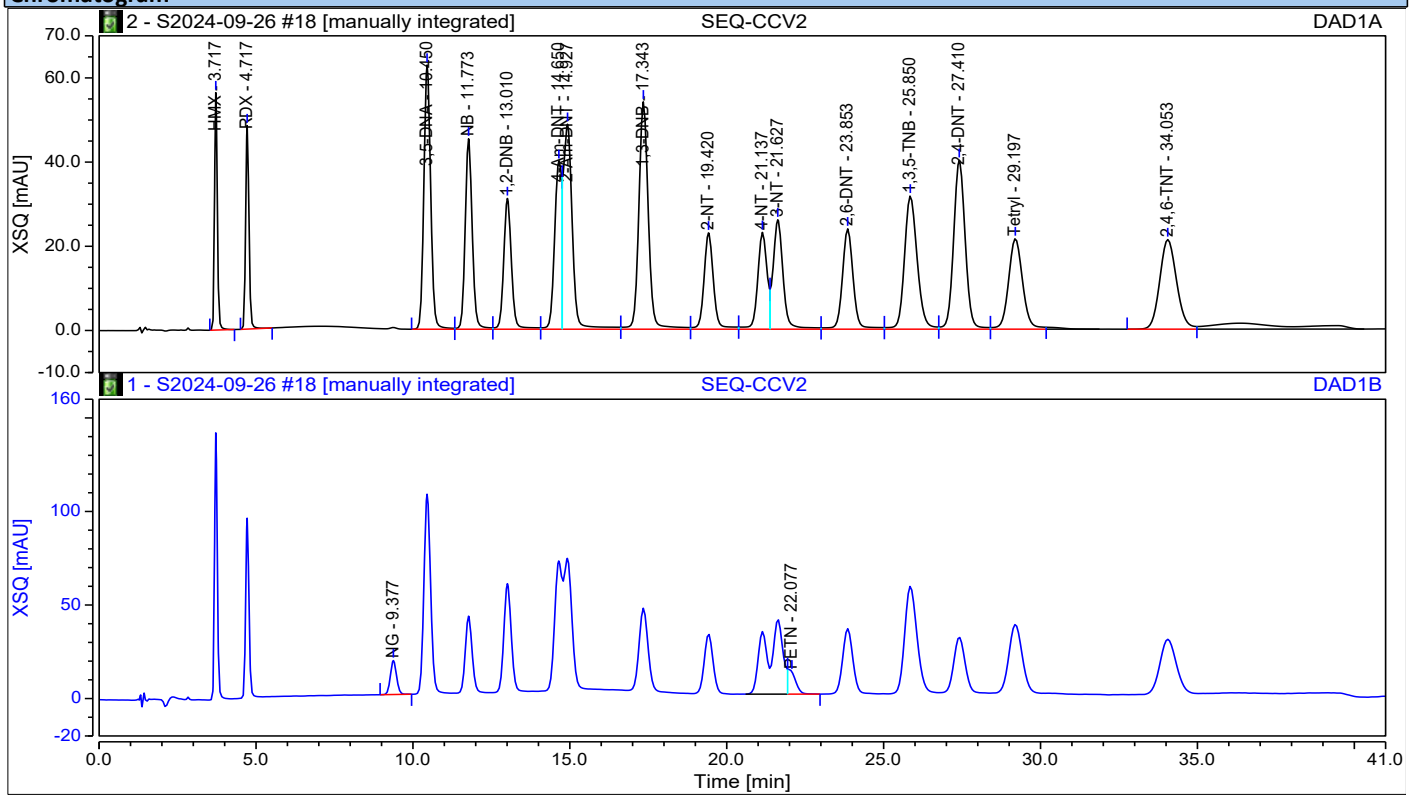
Instrument:
Sequence:S2024-09-26

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CCV2**	*Instrument:*	**Statler**
Vial Number:	**18**	*Run Time (min):*	**41.00**
Injection Type:	**Check Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**26/Sep/2024 22:18**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**12/Aug/2024 08:22**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.377	4.1520	18.174	52.96	60.36	935.7275
2	PETN	22.077	3.6883	11.936	47.04	39.64	861.2729
1	HMX	3.717	5.7591	56.409	3.12	9.45	889.5544
2	RDX	4.717	5.9383	48.348	3.21	8.10	908.0687
3	3,5-DNA	10.450	15.7130	62.764	8.50	10.52	912.7019
4	NB	11.773	11.7445	45.245	6.36	7.58	914.3156
5	1,2-DNB	13.010	8.8861	31.065	4.81	5.21	934.8706
6	4-Am-DNT	14.650	10.2948	39.866	5.57	6.68	919.2441
7	2-Am-DNT	14.927	16.0243	48.707	8.67	8.16	924.7203
8	1,3-DNB	17.343	18.9445	54.026	10.25	9.05	915.0701
9	2-NT	19.420	7.9931	22.894	4.33	3.84	909.4327
10	4-NT	21.137	7.9299	23.003	4.29	3.85	916.6517
11	3-NT	21.627	9.5597	25.996	5.17	4.36	917.0955
12	2,6-DNT	23.853	9.5059	23.859	5.14	4.00	907.5025
13	1,3,5-TNB	25.850	14.9029	31.659	8.07	5.31	914.4184
14	2,4-DNT	27.410	17.1646	40.110	9.29	6.72	925.3147
15	Tetryl	29.197	11.1804	21.514	6.05	3.61	982.1550
16	2,4,6-TNT	34.053	13.2341	21.290	7.16	3.57	937.1940
Total:			**192.616**	**626.864**	**200.000**	**200.000**	

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CONTINUING CALIBRATION VERIFICATION

EPA 8330B

Laboratory:	APPL, LLC	Work Order:	24I0203
Client:	AECOM	Project:	Wingate 60517380 Task 3
Instrument ID:	Waldorf	Calibration:	2433019
Lab File ID:	W2024-09-26-004	Calibration Date:	08/14/24 07:00
Sequence:	SD03964	Injection Date:	09/26/24
Lab Sample ID:	SD03964-CCV1	Injection Time:	11:47

		CONC. (ng/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	LRI	1000	922	0.2047651	0.178498		-7.8	20
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	LRI	1000	898	0.1206658	0.109099		-10.2	20
1,3,5-TRINITROBENZENE	LRI	1000	931	0.2013287	0.199558		-6.9	20
1,3-DINITROBENZENE	LRI	1000	908	0.1988807	0.183834		-9.2	20
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	LRI	1000	907	6.282733E-02	0.073835		-9.3	20
NITROBENZENE	LRI	1000	886	9.565573E-02	0.082835		-11.4	20
2,4,6-TRINITROTOLUENE	LRI	1000	861	0.110253	0.093261		-13.9	20
4-AMINO-2,6-DINITROTOLUENE	LRI	1000	861	0.0887477	0.076759		-13.9	20
2-AMINO-4,6-DINITROTOLUENE	LRI	1000	839	0.1119249	0.090638		-16.1	20
2,4-DINITROTOLUENE	LRI	1000	854	0.1438011	0.122719		-14.6	20
2,6-DINITROTOLUENE	LRI	1000	866	0.0834595	0.072185		-13.4	20
2-NITROTOLUENE	LRI	1000	861	7.440527E-02	0.064256		-13.9	20
3-NITROTOLUENE	LRI	1000	913	0.0643549	0.058576		-8.7	20
4-NITROTOLUENE	LRI	1000	905	6.854373E-02	0.061295		-9.5	20
NITROGLYCERIN	LRI	1000	925	0.0339652	0.029758		-7.5	20
PENTAERYTHRITOL TETRANITRATE	LRI	1000	989	2.405293E-02	0.021905		-1.1	20
1,2-DINITROBENZENE	LRI	1000	924	0.0942839	0.087864		-7.6	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

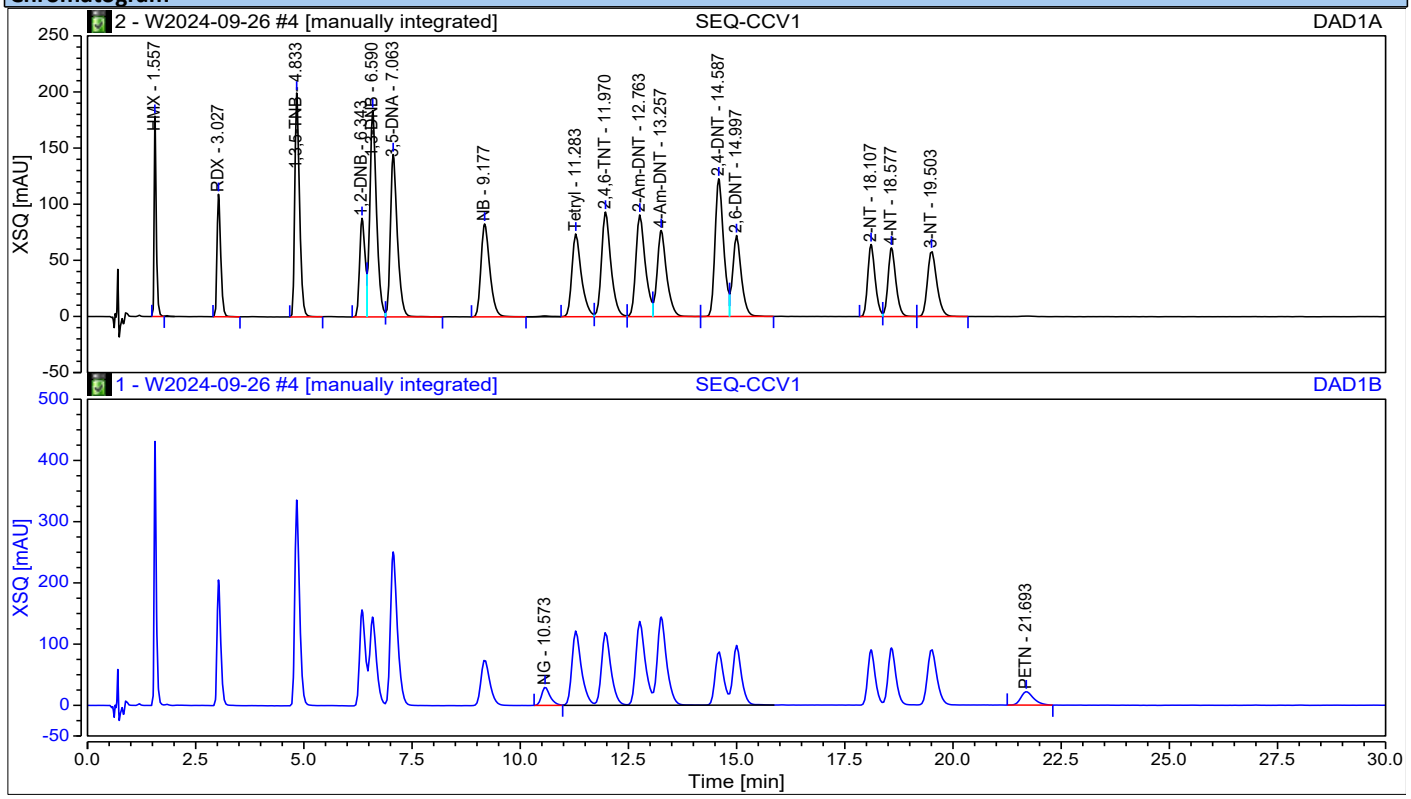
* Values outside of QC limits

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CCV1**	*Instrument:*	**Waldorf**
Vial Number:	**4**	*Run Time (min):*	**30.00**
Injection Type:	**Check Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**26/Sep/2024 11:47**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**24/Sep/2024 15:47**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.573	6.8657	29.758	47.84	57.60	925.3525
2	PETN	21.693	7.4870	21.905	52.16	42.40	988.8855
1	HMX	1.557	10.1781	178.498	3.30	10.50	922.3633
2	RDX	3.027	10.6751	109.099	3.47	6.42	897.8574
3	1,3,5-TNB	4.833	25.1393	199.558	8.16	11.74	930.7148
4	1,2-DNB	6.343	12.8603	87.864	4.17	5.17	924.2063
5	1,3-DNB	6.590	32.8898	183.834	10.68	10.81	907.7953
6	3,5-DNA	7.063	27.0525	144.691	8.78	8.51	892.7505
7	NB	9.177	19.7094	82.835	6.40	4.87	885.7531
8	Tetryl	11.283	18.8363	73.835	6.11	4.34	906.7080
9	2,4,6-TNT	11.970	23.3742	93.261	7.59	5.49	861.3559
10	2-Am-DNT	12.763	22.9096	90.638	7.44	5.33	839.1964
11	4-Am-DNT	13.257	19.3778	76.759	6.29	4.52	861.3669
12	2,4-DNT	14.587	28.0453	122.719	9.10	7.22	853.9023
13	2,6-DNT	14.997	16.7539	72.185	5.44	4.25	865.8714
14	2-NT	18.107	12.7060	64.256	4.12	3.78	861.1519
15	4-NT	18.577	12.8249	61.295	4.16	3.61	905.4508
16	3-NT	19.503	14.7344	58.576	4.78	3.45	913.2690
Total:			**322.420**	**1751.566**	**200.000**	**200.000**	

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CONTINUING CALIBRATION VERIFICATION

EPA 8330B

Laboratory:	APPL, LLC	Work Order:	24I0203
Client:	AECOM	Project:	Wingate 60517380 Task 3
Instrument ID:	Waldorf	Calibration:	2433019
Lab File ID:	W2024-09-26-018	Calibration Date:	08/14/24 07:00
Sequence:	SD03964	Injection Date:	09/26/24
Lab Sample ID:	SD03964-CCV2	Injection Time:	19:12

		CONC. (ng/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	LRI	1000	910	0.2047651	0.176255		-9.0	20
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	LRI	1000	884	0.1206658	0.107383		-11.6	20
1,3,5-TRINITROBENZENE	LRI	1000	934	0.2013287	0.200284		-6.6	20
1,3-DINITROBENZENE	LRI	1000	904	0.1988807	0.183043		-9.6	20
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	LRI	1000	873	6.282733E-02	0.071028		-12.7	20
NITROBENZENE	LRI	1000	865	9.565573E-02	0.080863		-13.5	20
2,4,6-TRINITROTOLUENE	LRI	1000	855	0.110253	0.092593		-14.5	20
4-AMINO-2,6-DINITROTOLUENE	LRI	1000	836	0.0887477	0.074489		-16.4	20
2-AMINO-4,6-DINITROTOLUENE	LRI	1000	822	0.1119249	0.088783		-17.8	20
2,4-DINITROTOLUENE	LRI	1000	854	0.1438011	0.122681		-14.6	20
2,6-DINITROTOLUENE	LRI	1000	861	0.0834595	0.07178		-13.9	20
2-NITROTOLUENE	LRI	1000	839	7.440527E-02	0.062606		-16.1	20
3-NITROTOLUENE	LRI	1000	899	0.0643549	0.057677		-10.1	20
4-NITROTOLUENE	LRI	1000	897	6.854373E-02	0.060709		-10.3	20
NITROGLYCERIN	LRI	1000	929	0.0339652	0.02989		-7.1	20
PENTAERYTHRITOL TETRANITRATE	LRI	1000	984	2.405293E-02	0.02179		-1.6	20
1,2-DINITROBENZENE	LRI	1000	913	0.0942839	0.08677		-8.7	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

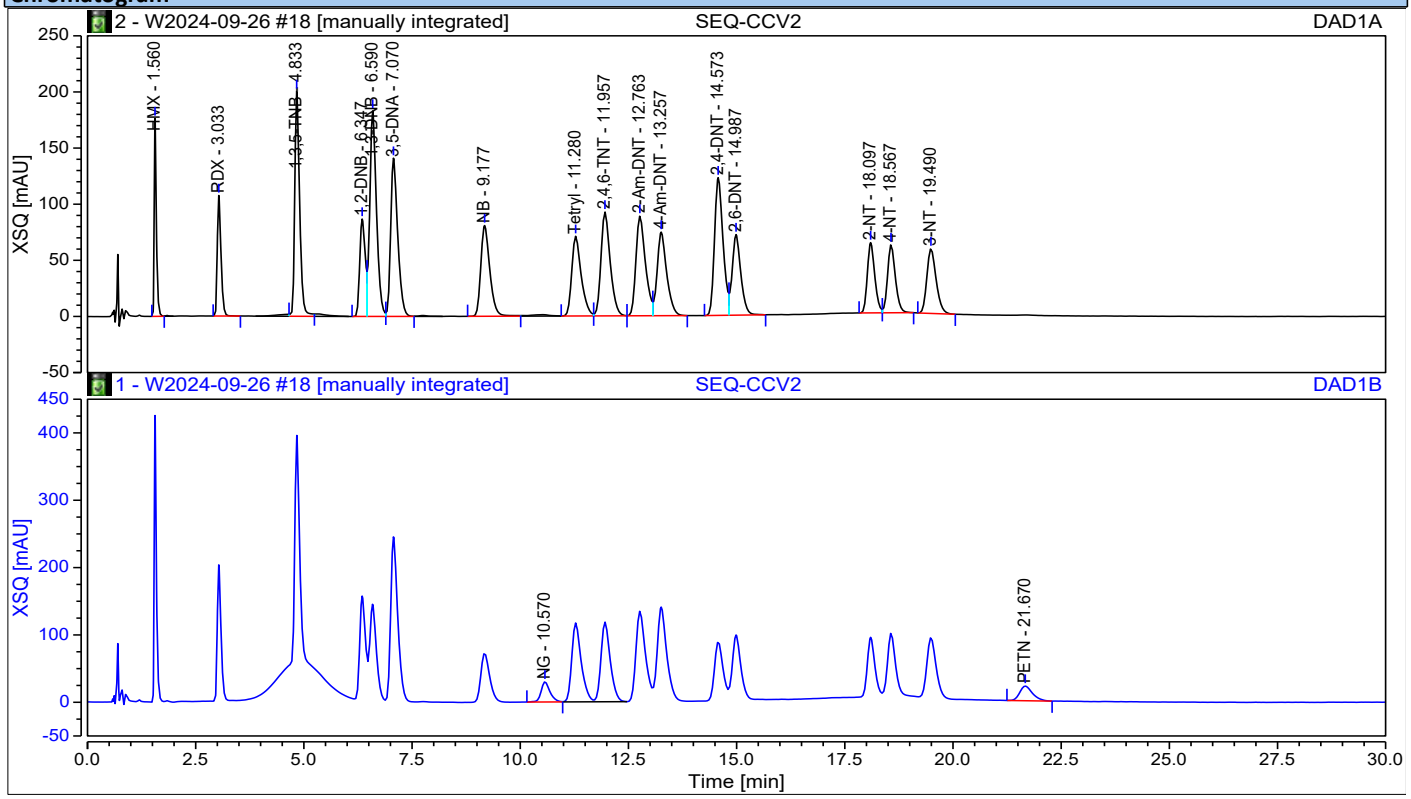
* Values outside of QC limits

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CCV2**	*Instrument:*	**Waldorf**
Vial Number:	**18**	*Run Time (min):*	**30.00**
Injection Type:	**Check Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**26/Sep/2024 19:12**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**24/Sep/2024 15:47**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.570	7.1344	29.890	48.83	57.84	929.4752
2	PETN	21.670	7.4748	21.790	51.17	42.16	983.6817
1	HMX	1.560	10.1114	176.255	3.31	10.50	910.2067
2	RDX	3.033	10.6238	107.383	3.48	6.40	883.7479
3	1,3,5-TNB	4.833	26.1229	200.284	8.55	11.94	934.1400
4	1,2-DNB	6.347	12.6968	86.770	4.16	5.17	912.8540
5	1,3-DNB	6.590	32.8201	183.043	10.75	10.91	903.9113
6	3,5-DNA	7.070	26.5910	140.997	8.71	8.40	870.0093
7	NB	9.177	19.5483	80.863	6.40	4.82	864.9019
8	Tetryl	11.280	18.0302	71.028	5.90	4.23	872.8457
9	2,4,6-TNT	11.957	22.9682	92.593	7.52	5.52	855.2376
10	2-Am-DNT	12.763	22.6337	88.783	7.41	5.29	822.1514
11	4-Am-DNT	13.257	19.0741	74.489	6.25	4.44	835.6786
12	2,4-DNT	14.573	28.0195	122.681	9.18	7.31	853.6397
13	2,6-DNT	14.987	16.6328	71.780	5.45	4.28	861.0646
14	2-NT	18.097	12.4261	62.606	4.07	3.73	839.2995
15	4-NT	18.567	12.7068	60.709	4.16	3.62	896.8708
16	3-NT	19.490	14.3827	57.677	4.71	3.44	899.4006
Total:			**319.998**	**1729.619**	**200.000**	**200.000**	

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QUALITY CONTROL RAW DATA

ANALYSIS DATA SHEET

Blank

Laboratory:	APPL, LLC			Work Order:	24I0203
Client:	AECOM		Project:	Wingate 60517380 Task 3	
Matrix:	Solid	Laboratory ID:	BDI0507-BLK1	File ID:	S2024-09-26-005
Sampled:		Prepared:	09/25/24 11:39	Analyzed:	09/26/24 13:03
Solids:		Preparation:	EPA 8330B	Dilution:	1
Batch:	BDI0507	Sequence:	SD03963	Calibration:	2420012
Instrument:	STATLER				
Column:	1				

COMPOUND	CONC. (mg/kg)	LOQ	LOD	DL	Q
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.075 U	0.50	0.075	0.037	U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.075 U	0.50	0.075	0.025	U
1,3,5-TRINITROBENZENE	0.075 U	0.50	0.075	0.013	U
1,3-DINITROBENZENE	0.075 U	0.50	0.075	0.022	U
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	0.075 U	0.50	0.075	0.037	U
NITROBENZENE	0.075 U	0.50	0.075	0.028	U
2,4,6-TRINITROTOLUENE	0.075 U	0.50	0.075	0.031	U
4-AMINO-2,6-DINITROTOLUENE	0.075 U	0.50	0.075	0.034	U
2-AMINO-4,6-DINITROTOLUENE	0.075 U	0.50	0.075	0.034	U
2,4-DINITROTOLUENE	0.075 U	0.50	0.075	0.028	U
2,6-DINITROTOLUENE	0.075 U	0.50	0.075	0.031	U
2-NITROTOLUENE	0.075 U	0.50	0.075	0.037	U
3-NITROTOLUENE	0.075 U	0.50	0.075	0.037	U
4-NITROTOLUENE	0.075 U	0.50	0.075	0.037	U
NITROGLYCERIN	0.15 U	0.50	0.15	0.061	U
PENTAERYTHRITOL TETRANITRATE	0.25 U	2.5	0.25	0.11	U

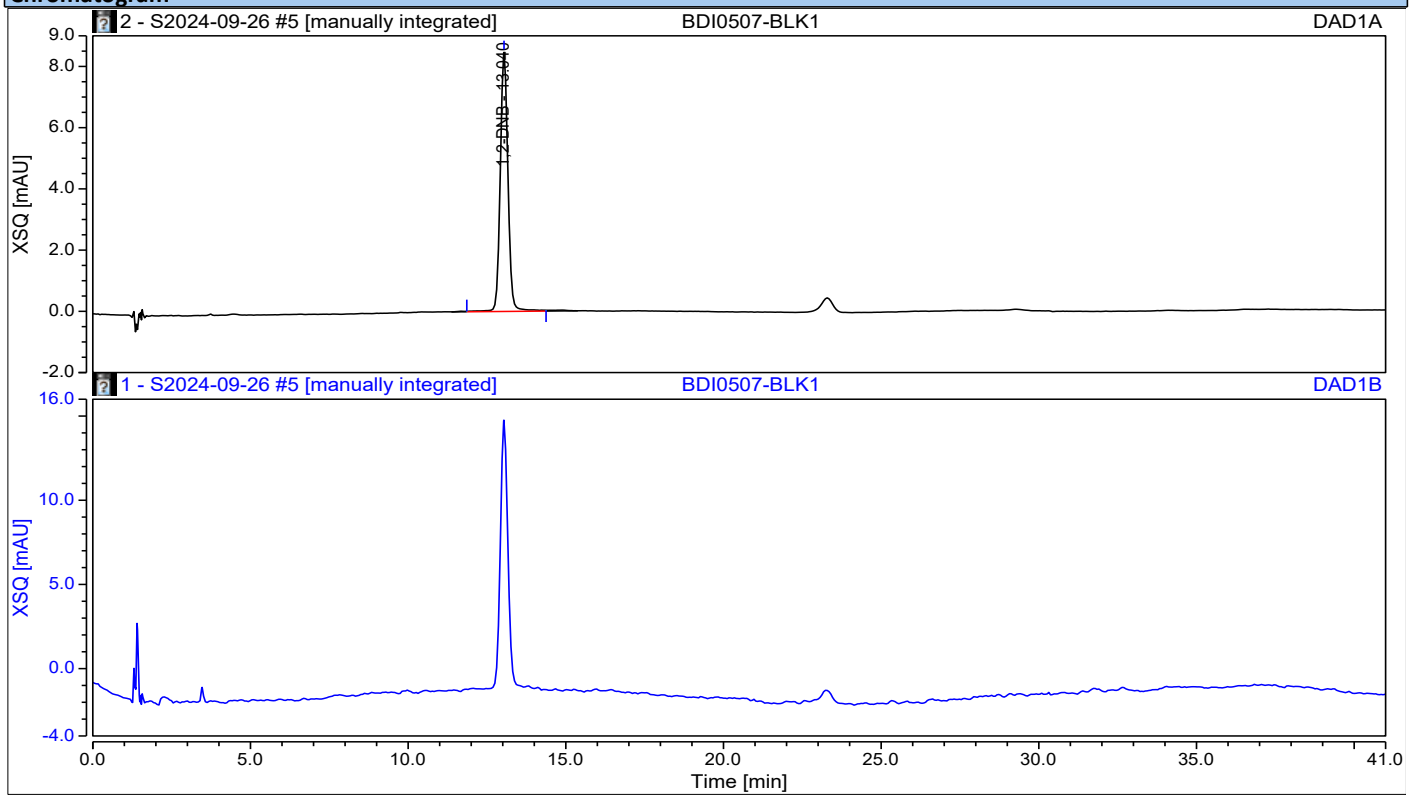
Instrument:
Sequence:S2024-09-26

Chromatogram and Results

Injection Details

Injection Name:	**BDI0507-BLK1**	*Instrument:*	**Statler**
Vial Number:	**5**	*Run Time (min):*	**41.00**
Injection Type:	**Unknown**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**26/Sep/2024 13:03**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**12/Aug/2024 08:22**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
n.a.	NG	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	PETN	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	HMX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	RDX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3,5-DNA	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	NB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	1,2-DNB	13.040	2.3958	8.465	100.00	100.00	254.7398
n.a.	4-Am-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2-Am-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	1,3-DNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	4-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2,6-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	1,3,5-TNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2,4-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Tetryl	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2,4,6-TNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**2.396**	**8.465**	**100.000**	**100.000**	

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ANALYSIS DATA SHEET

LCS

Laboratory:	APPL, LLC			Work Order:	24I0203
Client:	AECOM		Project:	Wingate 60517380 Task 3	
Matrix:	Solid	Laboratory ID:	BDI0507-BS1	File ID:	S2024-09-26-006
Sampled:		Prepared:	09/25/24 11:39	Analyzed:	09/26/24 13:46
Solids:		Preparation:	EPA 8330B	Dilution:	1
Batch:	BDI0507	Sequence:	SD03963	Calibration:	2420012
Instrument:	STATLER				
Column:	1				

COMPOUND	CONC. (mg/kg)	LOQ	DL	Q
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	2.04	0.50	0.037	
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	2.08	0.50	0.025	
1,3,5-TRINITROBENZENE	2.01	0.50	0.013	
1,3-DINITROBENZENE	2.07	0.50	0.022	
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	1.70	0.50	0.037	
NITROBENZENE	2.12	0.50	0.028	
2,4,6-TRINITROTOLUENE	2.12	0.50	0.031	
4-AMINO-2,6-DINITROTOLUENE	2.11	0.50	0.034	
2-AMINO-4,6-DINITROTOLUENE	2.12	0.50	0.034	
2,4-DINITROTOLUENE	2.10	0.50	0.028	
2,6-DINITROTOLUENE	2.04	0.50	0.031	
2-NITROTOLUENE	2.08	0.50	0.037	
3-NITROTOLUENE	2.10	0.50	0.037	
4-NITROTOLUENE	2.07	0.50	0.037	
NITROGLYCERIN	2.15	0.50	0.061	
PENTAERYTHRITOL TETRANITRATE	1.96	2.5	0.11	J

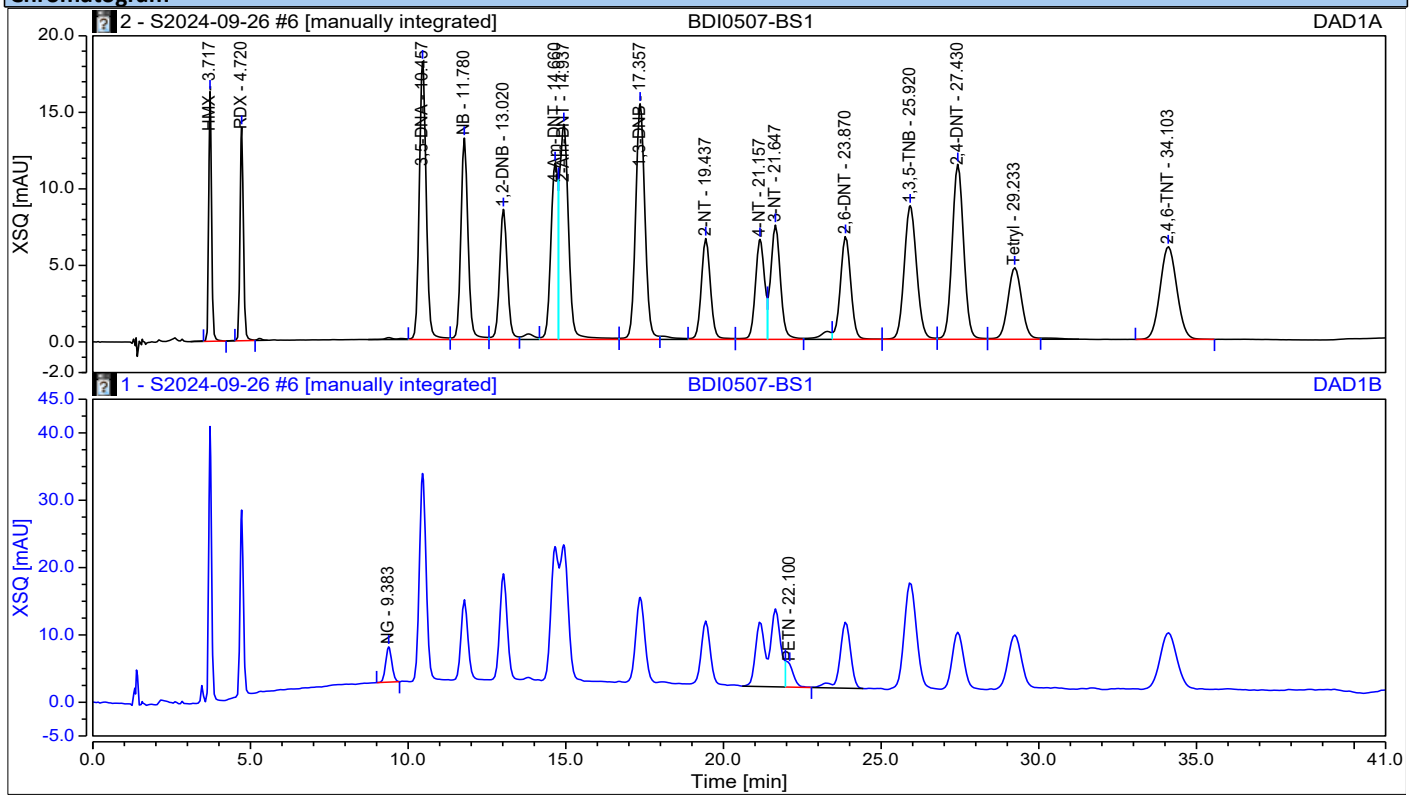
Instrument:
Sequence:S2024-09-26

Chromatogram and Results

Injection Details

Injection Name:	**BDI0507-BS1**	*Instrument:*	**Statler**
Vial Number:	**6**	*Run Time (min):*	**41.00**
Injection Type:	**Unknown**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**26/Sep/2024 13:46**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**12/Aug/2024 08:22**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.383	1.1841	5.243	53.35	60.53	269.9320
2	PETN	22.100	1.0355	3.418	46.65	39.47	246.6646
1	HMX	3.717	1.6687	16.306	3.25	9.63	257.1430
2	RDX	4.720	1.7144	13.951	3.34	8.24	262.0300
3	3,5-DNA	10.457	4.5999	18.154	8.97	10.72	263.9849
4	NB	11.780	3.4750	13.162	6.78	7.78	265.9709
5	1,2-DNB	13.020	2.4117	8.503	4.70	5.02	255.9003
6	4-Am-DNT	14.660	2.9536	11.504	5.76	6.80	265.2534
7	2-Am-DNT	14.937	4.6088	14.059	8.99	8.30	266.9090
8	1,3-DNB	17.357	5.2389	15.396	10.21	9.09	260.7640
9	2-NT	19.437	2.2257	6.591	4.34	3.89	261.8355
10	4-NT	21.157	2.2045	6.539	4.30	3.86	260.5896
11	3-NT	21.647	2.6659	7.468	5.20	4.41	263.4494
12	2,6-DNT	23.870	2.5742	6.736	5.02	3.98	256.2118
13	1,3,5-TNB	25.920	3.9864	8.732	7.77	5.16	252.2013
14	2,4-DNT	27.430	4.8439	11.435	9.44	6.76	263.8046
15	Tetryl	29.233	2.3859	4.681	4.65	2.77	213.6795
16	2,4,6-TNT	34.103	3.7294	6.064	7.27	3.58	266.9534
Total:			**53.507**	**177.941**	**200.000**	**200.000**	

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ANALYSIS DATA SHEET

LCS Dup

Laboratory:	APPL, LLC			Work Order:	24I0203
Client:	AECOM		Project:	Wingate 60517380 Task 3	
Matrix:	Solid	Laboratory ID:	BDI0507-BSD1	File ID:	S2024-09-26-007
Sampled:		Prepared:	09/25/24 11:39	Analyzed:	09/26/24 14:29
Solids:		Preparation:	EPA 8330B	Dilution:	1
Batch:	BDI0507	Sequence:	SD03963	Calibration:	2420012
Instrument:	STATLER				
Column:	1				

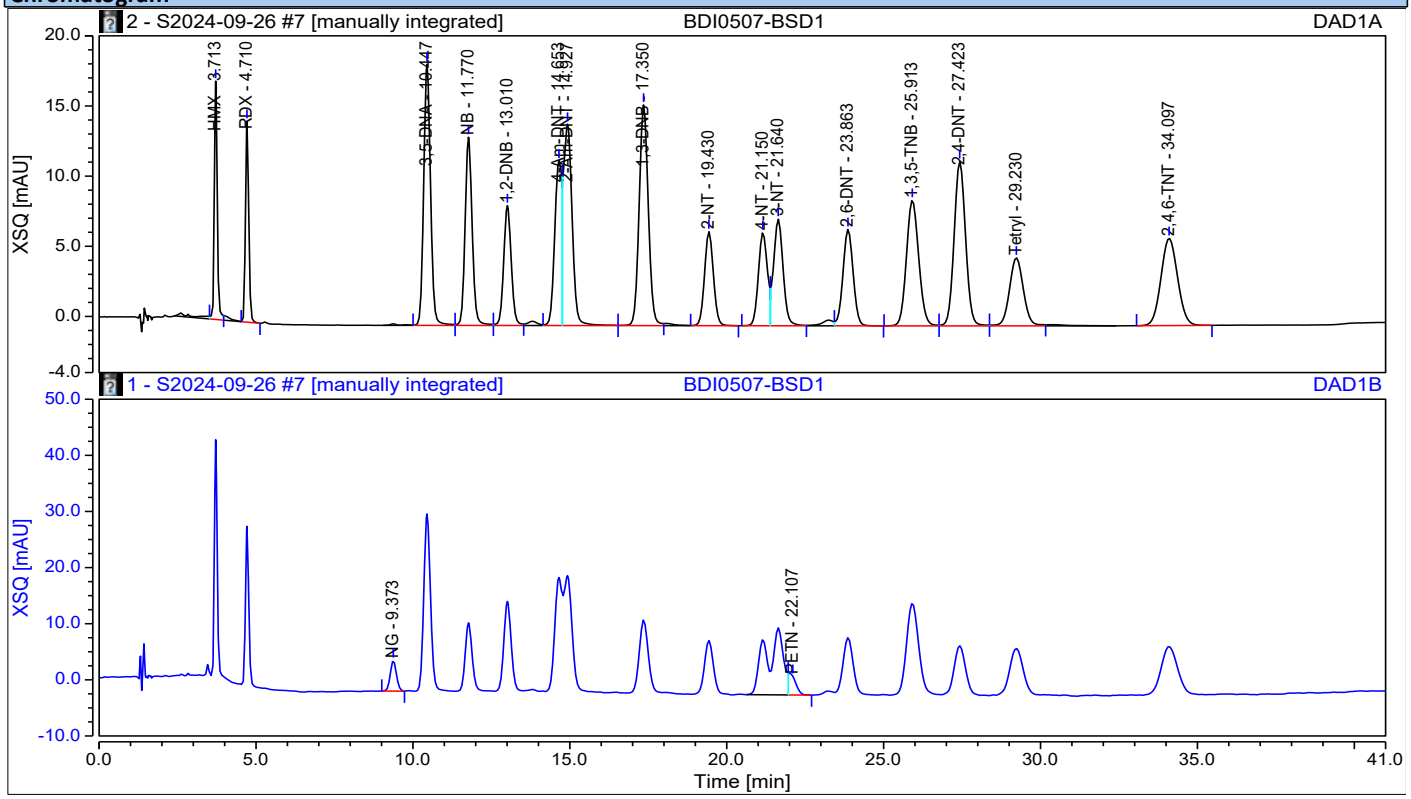
COMPOUND	CONC. (mg/kg)	LOQ	DL	Q
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	2.13	0.50	0.037	
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	2.14	0.50	0.025	
1,3,5-TRINITROBENZENE	2.06	0.50	0.013	
1,3-DINITROBENZENE	2.12	0.50	0.022	
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	1.76	0.50	0.037	
NITROBENZENE	2.16	0.50	0.028	
2,4,6-TRINITROTOLUENE	2.18	0.50	0.031	
4-AMINO-2,6-DINITROTOLUENE	2.15	0.50	0.034	
2-AMINO-4,6-DINITROTOLUENE	2.17	0.50	0.034	
2,4-DINITROTOLUENE	2.15	0.50	0.028	
2,6-DINITROTOLUENE	2.08	0.50	0.031	
2-NITROTOLUENE	2.12	0.50	0.037	
3-NITROTOLUENE	2.14	0.50	0.037	
4-NITROTOLUENE	2.11	0.50	0.037	
NITROGLYCERIN	2.24	0.50	0.061	
PENTAERYTHRITOL TETRANITRATE	1.92	2.5	0.11	J

Chromatogram and Results

Injection Details

Injection Name:	**BDI0507-BSD1**	*Instrument:*	**Statler**
Vial Number:	**7**	*Run Time (min):*	**41.00**
Injection Type:	**Unknown**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**26/Sep/2024 14:29**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**12/Aug/2024 08:22**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.373	1.2464	5.451	55.15	62.05	280.6592
2	PETN	22.107	1.0137	3.334	44.85	37.95	240.5444
1	HMX	3.713	1.7962	16.991	3.46	9.81	267.9390
2	RDX	4.710	1.7368	14.328	3.34	8.27	269.1002
3	3,5-DNA	10.447	4.6820	18.606	9.01	10.74	270.5618
4	NB	11.770	3.4915	13.418	6.72	7.74	271.1593
5	1,2-DNB	13.010	2.3802	8.546	4.58	4.93	257.1843
6	4-Am-DNT	14.653	3.0218	11.725	5.81	6.77	270.3628
7	2-Am-DNT	14.927	4.5708	14.357	8.79	8.29	272.5751
8	1,3-DNB	17.350	5.2990	15.731	10.19	9.08	266.4426
9	2-NT	19.430	2.2014	6.705	4.24	3.87	266.3607
10	4-NT	21.150	2.2043	6.647	4.24	3.84	264.8653
11	3-NT	21.640	2.6829	7.604	5.16	4.39	268.2356
12	2,6-DNT	23.863	2.5889	6.878	4.98	3.97	261.6228
13	1,3,5-TNB	25.913	4.0689	8.960	7.83	5.17	258.7858
14	2,4-DNT	27.423	4.9464	11.721	9.52	6.76	270.3937
15	Tetryl	29.230	2.4846	4.851	4.78	2.80	221.4795
16	2,4,6-TNT	34.097	3.8227	6.217	7.35	3.59	273.6796
Total:			**54.238**	**182.069**	**200.000**	**200.000**	

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ANALYSIS DATA SHEET

Matrix Spike

Laboratory:	APPL, LLC			Work Order:	24I0203
Client:	AECOM		Project:	Wingate 60517380 Task 3	
Matrix:	Solid	Laboratory ID:	BDI0507-MS1	File ID:	S2024-09-26-008
Sampled:		Prepared:	09/25/24 11:39	Analyzed:	09/26/24 15:11
Solids:		Preparation:	EPA 8330B	Dilution:	1
Batch:	BDI0507	Sequence:	SD03963	Calibration:	2420012
Instrument:	STATLER				
Column:	1				

COMPOUND	CONC. (mg/kg)	LOQ	DL	Q
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	2.07	0.50	0.037	
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	1.91	0.50	0.025	
1,3,5-TRINITROBENZENE	2.17	0.50	0.013	
1,3-DINITROBENZENE	2.12	0.50	0.022	
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	1.70	0.50	0.037	
NITROBENZENE	2.14	0.50	0.028	
2,4,6-TRINITROTOLUENE	3.66	0.50	0.031	MS2
4-AMINO-2,6-DINITROTOLUENE	2.15	0.50	0.034	
2-AMINO-4,6-DINITROTOLUENE	2.18	0.50	0.034	
2,4-DINITROTOLUENE	2.19	0.50	0.028	
2,6-DINITROTOLUENE	2.12	0.50	0.031	
2-NITROTOLUENE	2.14	0.50	0.037	
3-NITROTOLUENE	2.16	0.50	0.037	
4-NITROTOLUENE	2.14	0.50	0.037	
NITROGLYCERIN	2.23	0.50	0.061	
PENTAERYTHRITOL TETRANITRATE	1.92	2.5	0.11	J

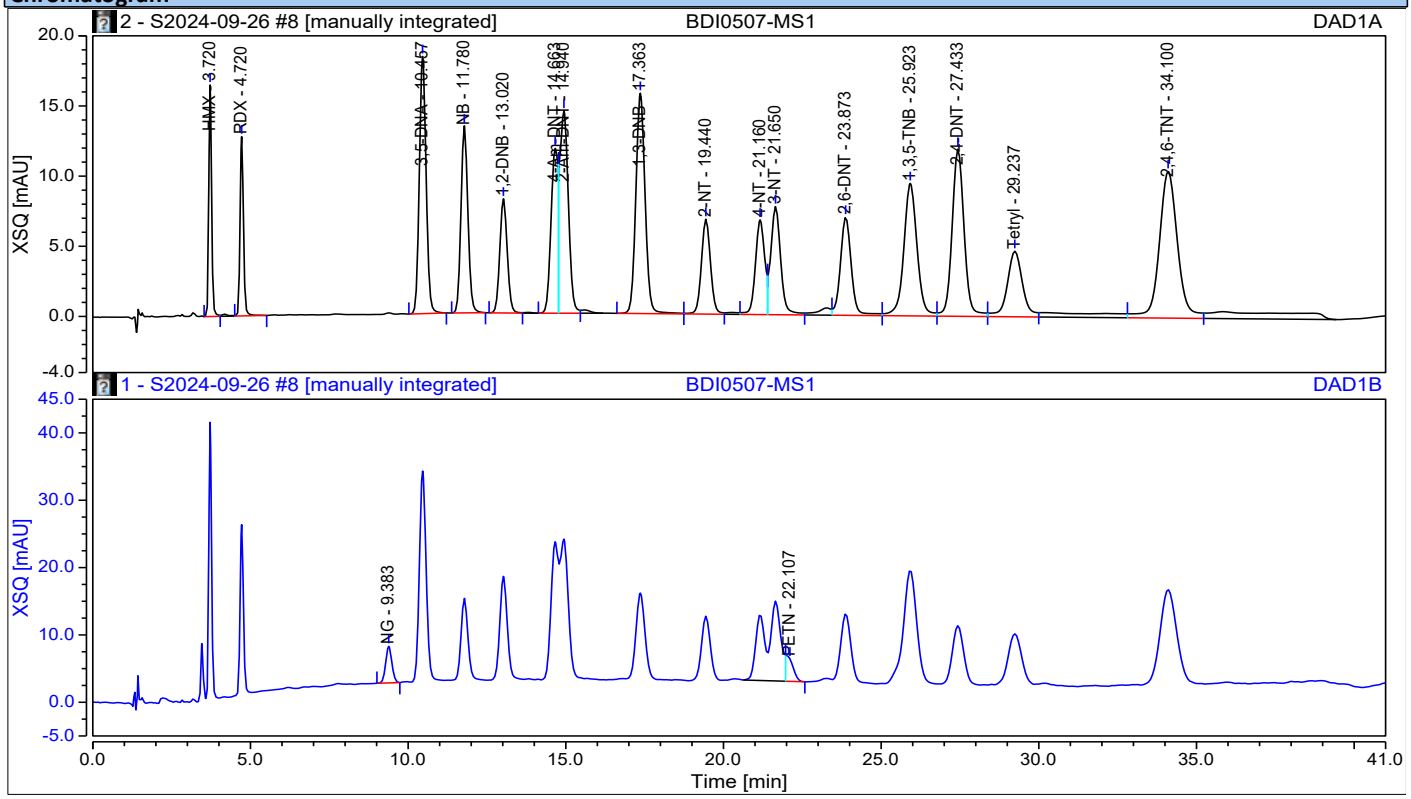
Instrument:
Sequence:S2024-09-26

Chromatogram and Results

Injection Details

Injection Name:	**BDI0507-MS1**	*Instrument:*	**Statler**
Vial Number:	**8**	*Run Time (min):*	**41.00**
Injection Type:	**Unknown**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**26/Sep/2024 15:11**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**12/Aug/2024 08:22**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.383	1.2410	5.437	55.74	61.94	279.9192
2	PETN	22.107	0.9855	3.341	44.26	38.06	241.0762
1	HMX	3.720	1.6889	16.503	3.02	9.39	260.2532
2	RDX	4.720	1.5862	12.775	2.84	7.27	239.9342
3	3,5-DNA	10.457	4.5472	18.338	8.13	10.44	266.6622
4	NB	11.780	3.3918	13.335	6.07	7.59	269.4658
5	1,2-DNB	13.020	2.2241	8.136	3.98	4.63	244.8430
6	4-Am-DNT	14.663	2.9890	11.745	5.35	6.69	270.8074
7	2-Am-DNT	14.940	4.5217	14.412	8.09	8.20	273.6240
8	1,3-DNB	17.363	5.3315	15.703	9.53	8.94	265.9728
9	2-NT	19.440	2.2697	6.766	4.06	3.85	268.7678
10	4-NT	21.160	2.2980	6.750	4.11	3.84	268.9726
11	3-NT	21.650	2.8002	7.711	5.01	4.39	272.0177
12	2,6-DNT	23.873	2.7965	7.006	5.00	3.99	266.4832
13	1,3,5-TNB	25.923	4.6006	9.445	8.23	5.38	272.8091
14	2,4-DNT	27.433	5.2610	11.918	9.41	6.78	274.9342
15	Tetryl	29.237	2.6059	4.675	4.66	2.66	213.4032
16	2,4,6-TNT	34.100	7.0042	10.464	12.53	5.96	460.6135
Total:			**58.143**	**184.457**	**200.000**	**200.000**	

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ANALYSIS DATA SHEET

Matrix Spike Dup

Laboratory:	APPL, LLC			Work Order:	24I0203
Client:	AECOM		Project:	Wingate 60517380 Task 3	
Matrix:	Solid	Laboratory ID:	BDI0507-MSD1	File ID:	S2024-09-26-009
Sampled:		Prepared:	09/25/24 11:39	Analyzed:	09/26/24 15:54
Solids:		Preparation:	EPA 8330B	Dilution:	1
Batch:	BDI0507	Sequence:	SD03963	Calibration:	2420012
Instrument:	STATLER				
Column:	1				

COMPOUND	CONC. (mg/kg)	LOQ	DL	Q
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	1.99	0.50	0.037	
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	1.84	0.50	0.025	
1,3,5-TRINITROBENZENE	2.06	0.50	0.013	
1,3-DINITROBENZENE	2.03	0.50	0.022	
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	1.35	0.50	0.037	MS3
NITROBENZENE	2.06	0.50	0.028	
2,4,6-TRINITROTOLUENE	2.92	0.50	0.031	MS3
4-AMINO-2,6-DINITROTOLUENE	2.07	0.50	0.034	
2-AMINO-4,6-DINITROTOLUENE	2.10	0.50	0.034	
2,4-DINITROTOLUENE	2.07	0.50	0.028	
2,6-DINITROTOLUENE	2.00	0.50	0.031	
2-NITROTOLUENE	2.04	0.50	0.037	
3-NITROTOLUENE	2.05	0.50	0.037	
4-NITROTOLUENE	2.03	0.50	0.037	
NITROGLYCERIN	2.13	0.50	0.060	
PENTAERYTHRITOL TETRANITRATE	1.91	2.5	0.11	J

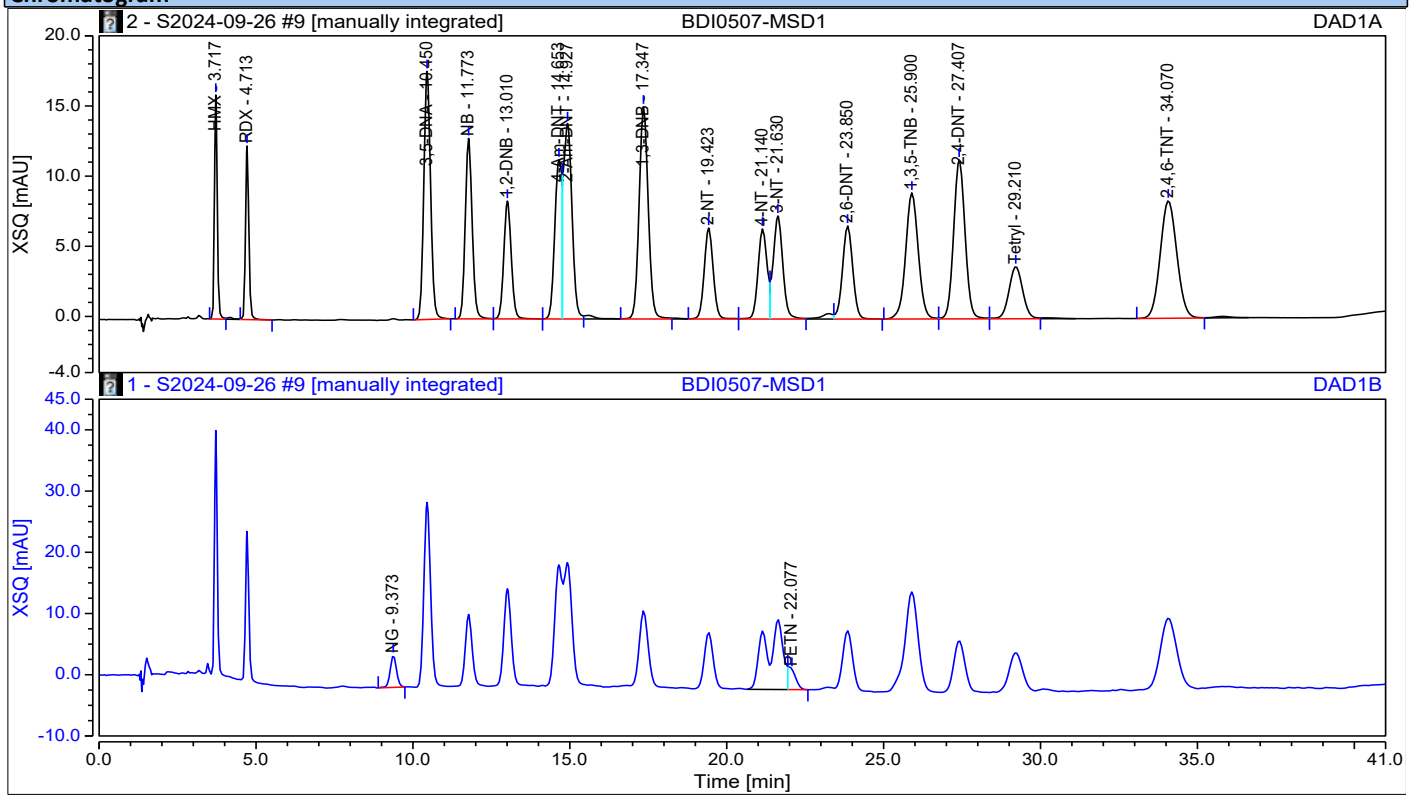
Instrument:
Sequence:S2024-09-26

Chromatogram and Results

Injection Details

Injection Name:	**BDI0507-MSD1**	*Instrument:*	**Statler**
Vial Number:	**9**	*Run Time (min):*	**41.00**
Injection Type:	**Unknown**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**26/Sep/2024 15:54**
Processing Method:	**8330 Statler 2024-05-16**	*Dilution Factor:*	**1.0000**
Last Updated:	**12/Aug/2024 08:22**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.373	1.2290	5.231	55.55	61.01	269.3591
2	PETN	22.077	0.9834	3.344	44.45	38.99	241.2701
1	HMX	3.717	1.6268	15.966	3.19	9.56	251.7753
2	RDX	4.713	1.5274	12.373	3.00	7.41	232.3871
3	3,5-DNA	10.450	4.3902	17.688	8.62	10.59	257.2133
4	NB	11.773	3.2881	12.865	6.45	7.70	259.9858
5	1,2-DNB	13.010	2.3184	8.402	4.55	5.03	252.8592
6	4-Am-DNT	14.653	2.9073	11.349	5.71	6.79	261.6794
7	2-Am-DNT	14.927	4.3561	13.932	8.55	8.34	264.5085
8	1,3-DNB	17.347	5.1015	15.126	10.01	9.06	256.1932
9	2-NT	19.423	2.1520	6.483	4.22	3.88	257.5431
10	4-NT	21.140	2.1437	6.425	4.21	3.85	256.0290
11	3-NT	21.630	2.5993	7.346	5.10	4.40	259.1677
12	2,6-DNT	23.850	2.5117	6.639	4.93	3.97	252.5204
13	1,3,5-TNB	25.900	4.2002	8.993	8.24	5.38	259.7370
14	2,4-DNT	27.407	4.7981	11.333	9.42	6.79	261.4563
15	Tetryl	29.210	1.8859	3.721	3.70	2.23	169.8902
16	2,4,6-TNT	34.070	5.1413	8.377	10.09	5.02	368.7558
Total:			**53.160**	**175.594**	**200.000**	**200.000**	

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PREPARATION BATCH SUMMARY

EPA 8330B

Laboratory:	APPL, LLC			Work Order:	24I0203
Client:	AECOM			Project:	Wingate 60517380 Task 3
Batch:	BDI0507	Batch Matrix:	Solid	Preparation:	EPA 8330B

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT g	FINAL VOL. mL
P2-ARROYO-0005	24I0203-01	09/25/24 11:39	10.06	80.00
P2-ARROYO-0005	24I0203-01RE1	09/25/24 11:39	10.06	80.00
P2-ARROYO-0006	24I0203-02	09/25/24 11:39	10.06	80.00
P2-ARROYO-0006	24I0203-02RE1	09/25/24 11:39	10.06	80.00
P2-ARROYO-0007	24I0203-03	09/25/24 11:39	10.05	80.00
P2-ARROYO-0007	24I0203-03RE1	09/25/24 11:39	10.05	80.00
Blank	BDI0507-BLK1	09/25/24 11:39	10.05	80.00
LCS	BDI0507-BS1	09/25/24 11:39	10.06	80.00
LCS Dup	BDI0507-BSD1	09/25/24 11:39	10.04	80.00
P2-ARROYO-0007	BDI0507-MS1	09/25/24 11:39	10.06	80.00
P2-ARROYO-0007	BDI0507-MSD1	09/25/24 11:39	10.10	80.00

PREPARATION BENCH SHEET
Organics

Print Date/Time: 09/26/2024 9:28 am

BDI0507

(Continued)

Matrix: Solid

Prepared using: HPLC - EPA 8330B

Lab Number	Sample and Source ID ID Confirmed By:		Extract by	Initial (g)	Final (mL)	ul Spike 1	ul Spike 2	ul Surr 1	ul Surr 2	pH	Extraction Comments
24I0203-01 A	P2-ARROYO-0005	B	10/05/24	10.06	80			200			
24I0203-02 A	P2-ARROYO-0006	B	10/05/24	10.06	80			200			
24I0203-03 A	P2-ARROYO-0007	B	10/05/24	10.05	80			200			
BDI0507-BLK1	Blank			10.05	80			200			
BDI0507-BS1	LCS			10.06	80	200		200			
BDI0507-BSD1	LCS Dup			10.04	80	200		200			
BDI0507-MS1	Matrix Spike [24I0203-03]			10.06	80	200		200			
BDI0507-MSD1	Matrix Spike Dup [24I0203-03]			10.1	80	200		200			

Analyses

8330B DOD

Spiking Solution(s)

24G0171 8330 - Spike 100ug/mL 7/9/24

Surrogate Solution(s)

24H0339 8330 - 1,2-DNB SUR 100ug/mL 8/13/24

Start Date/Time _____

Stop Date/Time _____

Equipment Used:

Balances: EB1

Hotblock/Plate:

Sonic Horns:

Pipettes:

Water Baths:

Ovens:

Desiccator:

pH Probes:

Reagents

Standard	Description	LotNum
24H0153	Acetonitrile EH784-US	EH784-US

atch Comments:
pike By: AJV 09/25/24 11:39
Witnessed By: YR
nd Date/Time: 09/26/24 08:29

Spiking Witnessed By _____ Date _____ Preparation Reviewed By _____ Date _____ Extracts Received By _____ Date _____

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Table of Contents

INJECTION LOG - ANALYSIS SEQUENCE SUMMARY

EPA 8330B

Laboratory:	APPL, LLC	SDG:	24I0203
Client:	AECOM	Project:	Wingate 60517380 Task 3
Sequence:	SD01815	Instrument:	STATLER
Calibration:	2420012		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	SD01815-CAL1	S2024-05-16-004	05/16/24 14:47
Cal Standard	SD01815-CAL2	S2024-05-16-005	05/16/24 15:29
Cal Standard	SD01815-CAL3	S2024-05-16-006	05/16/24 16:12
Cal Standard	SD01815-CAL4	S2024-05-16-007	05/16/24 16:54
Cal Standard	SD01815-CAL5	S2024-05-16-008	05/16/24 17:37
Cal Standard	SD01815-CAL6	S2024-05-16-009	05/16/24 18:19
Secondary Cal Check	SD01815-SCV1	S2024-05-16-010	05/16/24 19:02

INJECTION LOG - ANALYSIS SEQUENCE SUMMARY

EPA 8330B

Laboratory:	APPL, LLC	SDG:	24I0203
Client:	AECOM	Project:	Wingate 60517380 Task 3
Sequence:	SD03246	Instrument:	Waldorf
Calibration:	2433019		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	SD03246-CAL1	W2024-08-14-017	08/14/24 17:32
Cal Standard	SD03246-CAL2	W2024-08-14-018	08/14/24 18:03
Cal Standard	SD03246-CAL3	W2024-08-14-019	08/14/24 18:35
Cal Standard	SD03246-CAL4	W2024-08-14-020	08/14/24 19:06
Cal Standard	SD03246-CAL5	W2024-08-14-021	08/14/24 19:38
Cal Standard	SD03246-CAL6	W2024-08-14-022	08/14/24 20:09
Secondary Cal Check	SD03246-SCV1	W2024-08-14-023	08/14/24 20:41

INJECTION LOG - ANALYSIS SEQUENCE SUMMARY

EPA 8330B

Laboratory:	APPL, LLC	SDG:	24I0203
Client:	AECOM	Project:	Wingate 60517380 Task 3
Sequence:	SD03963	Instrument:	STATLER
Calibration:	2420012		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	SD03963-CCV1	S2024-09-26-004	09/26/24 12:20
Blank	BDI0507-BLK1	S2024-09-26-005	09/26/24 13:03
LCS	BDI0507-BS1	S2024-09-26-006	09/26/24 13:46
LCS Dup	BDI0507-BSD1	S2024-09-26-007	09/26/24 14:29
P2-ARROYO-0007	BDI0507-MS1	S2024-09-26-008	09/26/24 15:11
P2-ARROYO-0007	BDI0507-MSD1	S2024-09-26-009	09/26/24 15:54
P2-ARROYO-0005	24I0203-01	S2024-09-26-010	09/26/24 16:37
P2-ARROYO-0006	24I0203-02	S2024-09-26-011	09/26/24 17:19
P2-ARROYO-0007	24I0203-03	S2024-09-26-012	09/26/24 18:02
Calibration Check	SD03963-CCV2	S2024-09-26-018	09/26/24 22:18

INJECTION LOG - ANALYSIS SEQUENCE SUMMARY

EPA 8330B

Laboratory:	APPL, LLC	SDG:	24I0203
Client:	AECOM	Project:	Wingate 60517380 Task 3
Sequence:	SD03964	Instrument:	Waldorf
Calibration:	2433019		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	SD03964-CCV1	W2024-09-26-004	09/26/24 11:47
P2-ARROYO-0005	24I0203-01RE1	W2024-09-26-010	09/26/24 14:57
P2-ARROYO-0006	24I0203-02RE1	W2024-09-26-011	09/26/24 15:29
P2-ARROYO-0007	24I0203-03RE1	W2024-09-26-012	09/26/24 16:01
Calibration Check	SD03964-CCV2	W2024-09-26-018	09/26/24 19:12

Analytical Standards

List of Standards

23A0023	Parent
23E0027	Parent
24D0385	Parent
24D0501	Parent
24D0600	Parent
24E0455	Parent
24E0456	Parent
24E0457	8330 - Cal 1 0.005ug/mL 05/16/24
24E0458	8330 - Cal 2 0.05ug/mL 05/16/24
24E0459	8330 - Cal 3 0.25ug/mL 05/16/24
24E0460	8330 - Cal 4 1.0ug/mL 05/16/24
24E0462	8330 - Cal 5 2.5ug/mL 05/16/24
24E0463	8330 - Cal 6 5.0ug/mL 05/16/24
24E0464	Parent
24E0466	8330 - SCV 1.0ug/mL 05/16/24
24G0088	Parent
24G0171	8330 - Spike 100ug/mL 7/9/24
24H0339	8330 - 1,2-DNB SUR 100ug/mL 8/13/24
24H0394	Parent
24H0395	Parent
24H0396	Parent
24H0397	8330 - Cal 1 0.005ug/mL 08/14/24
24H0398	8330 - Cal 2 0.05ug/mL 08/14/24
24H0399	8330 - Cal 3 0.25ug/mL 08/14/24
24H0400	8330 - Cal 4 1.0ug/mL 08/14/24
24H0401	8330 - Cal 5 2.5ug/mL 08/14/24
24H0402	8330 - Cal 6 5.0ug/mL 08/14/24
24H0403	8330 - SCV 1.0ug/mL 08/14/24
24I0469	Parent
24I0470	8330 - CCV 1.0ug/mL 09/24/24

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CERTIFIED REFERENCE MATERIAL

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Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 33204 **Lot No.:** A0191734

Description : 8330B Nitroaromatics and Nitramine Mix

8330B Nitroaromatics and Nitramine Mix Explosives by HPLC, EPA 8330B 1000µg/mL, Acetonitrile,1mL/ampul

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

Expiration Date : November 30, 2025 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	HMX	1,004.0 µg/mL	+/- 5.9635 µg/mL	Gravimetric
	CAS # 2691-41-0 (Lot 220927JLM)		+/- 55.0021 µg/mL	Unstressed
	Purity 99%		+/- 64.1379 µg/mL	Stressed
2	RDX	1,010.0 µg/mL	+/- 5.9991 µg/mL	Gravimetric
	CAS # 121-82-4 (Lot 080220JLM)		+/- 55.3308 µg/mL	Unstressed
	Purity 99%		+/- 64.5212 µg/mL	Stressed
3	1,3,5-Trinitrobenzene	1,008.0 µg/mL	+/- 5.9872 µg/mL	Gravimetric
	CAS # 99-35-4 (Lot A6TDK)		+/- 55.2213 µg/mL	Unstressed
	Purity 99%		+/- 64.3934 µg/mL	Stressed
4	1,3-Dinitrobenzene	1,008.0 µg/mL	+/- 5.9872 µg/mL	Gravimetric
	CAS # 99-65-0 (Lot 1-DXX-24-1)		+/- 55.2213 µg/mL	Unstressed
	Purity 99%		+/- 64.3934 µg/mL	Stressed
5	3,5-Dinitroaniline	1,010.0 µg/mL	+/- 5.9991 µg/mL	Gravimetric
	CAS # 618-87-1 (Lot 10311HS)		+/- 55.3308 µg/mL	Unstressed
	Purity 99%		+/- 64.5212 µg/mL	Stressed
6	Tetryl	1,008.0 µg/mL	+/- 5.9872 µg/mL	Gravimetric
	CAS # 479-45-8 (Lot 211028JLM)		+/- 55.2213 µg/mL	Unstressed
	Purity 99%		+/- 64.3934 µg/mL	Stressed
7	Nitrobenzene	1,006.0 µg/mL	+/- 5.9753 µg/mL	Gravimetric
	CAS # 98-95-3 (Lot 10224044)		+/- 55.1117 µg/mL	Unstressed
	Purity 99%		+/- 64.2657 µg/mL	Stressed

8	2,4,6-Trinitrotoluene		1,009.0	µg/mL	+/- 5.9932	µg/mL	Gravimetric
	CAS # 118-96-7	(Lot D11836200)			+/- 55.2761	µg/mL	Unstressed
	Purity 99%				+/- 64.4573	µg/mL	Stressed
9	Nitroglycerin		1,006.0	µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 55-63-0	(Lot 200507JLM)			+/- 55.1117	µg/mL	Unstressed
	Purity 99%				+/- 64.2657	µg/mL	Stressed
10	2-Amino-4,6-dinitrotoluene		1,010.0	µg/mL	+/- 5.9991	µg/mL	Gravimetric
	CAS # 35572-78-2	(Lot A210503-001)			+/- 55.3308	µg/mL	Unstressed
	Purity 99%				+/- 64.5212	µg/mL	Stressed
11	4-Amino-2,6-dinitrotoluene		1,010.0	µg/mL	+/- 5.9991	µg/mL	Gravimetric
	CAS # 19406-51-0	(Lot ER070908-01)			+/- 55.3308	µg/mL	Unstressed
	Purity 99%				+/- 64.5212	µg/mL	Stressed
12	2,4-Dinitrotoluene		1,009.0	µg/mL	+/- 5.9932	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)			+/- 55.2761	µg/mL	Unstressed
	Purity 99%				+/- 64.4573	µg/mL	Stressed
13	2,6-Dinitrotoluene		1,010.0	µg/mL	+/- 5.9991	µg/mL	Gravimetric
	CAS # 606-20-2	(Lot BCCG1833)			+/- 55.3308	µg/mL	Unstressed
	Purity 99%				+/- 64.5212	µg/mL	Stressed
14	2-Nitrotoluene		1,010.0	µg/mL	+/- 5.9991	µg/mL	Gravimetric
	CAS # 88-72-2	(Lot BCBZ7826)			+/- 55.3308	µg/mL	Unstressed
	Purity 99%				+/- 64.5212	µg/mL	Stressed
15	4-Nitrotoluene		1,009.0	µg/mL	+/- 5.9932	µg/mL	Gravimetric
	CAS # 99-99-0	(Lot BCCB0171)			+/- 55.2761	µg/mL	Unstressed
	Purity 99%				+/- 64.4573	µg/mL	Stressed
16	3-Nitrotoluene		1,009.0	µg/mL	+/- 5.9932	µg/mL	Gravimetric
	CAS # 99-08-1	(Lot 07329LG)			+/- 55.2761	µg/mL	Unstressed
	Purity 99%				+/- 64.4573	µg/mL	Stressed
17	PETN		1,009.0	µg/mL	+/- 5.9932	µg/mL	Gravimetric
	CAS # 78-11-5	(Lot 051108JLM)			+/- 55.2761	µg/mL	Unstressed
	Purity 99%				+/- 64.4573	µg/mL	Stressed

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

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

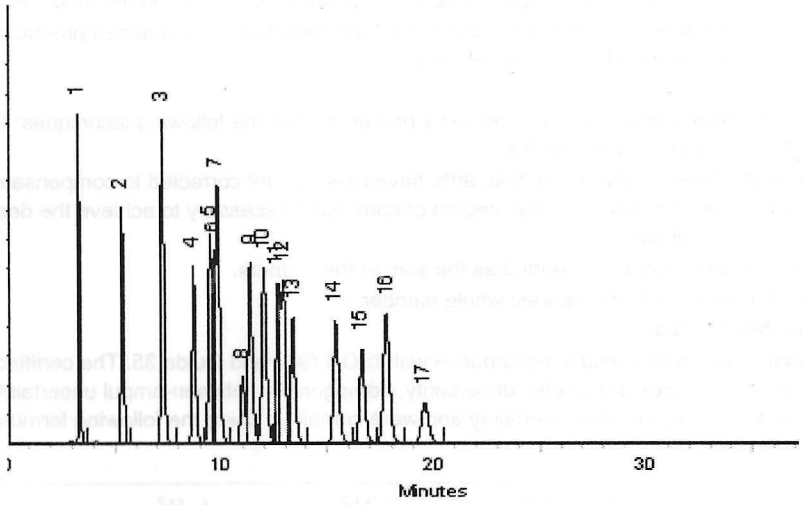
Flow Rate:
1.0 ml/min.

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

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm



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

Brittany Federinko - Operations Tech I

Date Mixed: 16-Nov-2022 **Balance:** 1128360905

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 18-Nov-2022

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

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 33204 **Lot No.:** A0188442

Description : 8330B Nitroaromatics and Nitramine Mix

8330B Nitroaromatics and Nitramine Mix Explosives by HPLC, EPA 8330B 1000µg/mL, Acetonitrile,1mL/ampul

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

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

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	HMX **CAS #** 2691-41-0 (Lot 210324JLM) **Purity** 99%	1,003.0 µg/mL	+/- 5.9575 µg/mL +/- 54.9474 µg/mL +/- 64.0740 µg/mL	Gravimetric Unstressed Stressed
2	RDX **CAS #** 121-82-4 (Lot 080220JLM) **Purity** 99%	1,004.0 µg/mL	+/- 5.9635 µg/mL +/- 55.0021 µg/mL +/- 64.1379 µg/mL	Gravimetric Unstressed Stressed
3	1,3,5-Trinitrobenzene **CAS #** 99-35-4 (Lot A6TDK) **Purity** 99%	1,008.0 µg/mL	+/- 5.9872 µg/mL +/- 55.2213 µg/mL +/- 64.3934 µg/mL	Gravimetric Unstressed Stressed
4	1,3-Dinitrobenzene **CAS #** 99-65-0 (Lot 1-DXX-24-1) **Purity** 99%	1,007.0 µg/mL	+/- 5.9813 µg/mL +/- 55.1665 µg/mL +/- 64.3295 µg/mL	Gravimetric Unstressed Stressed
5	3,5-Dinitroaniline **CAS #** 618-87-1 (Lot 10311HS) **Purity** 99%	1,008.0 µg/mL	+/- 5.9872 µg/mL +/- 55.2213 µg/mL +/- 64.3934 µg/mL	Gravimetric Unstressed Stressed
6	Tetryl **CAS #** 479-45-8 (Lot 211028JLM) **Purity** 99%	1,006.0 µg/mL	+/- 5.9753 µg/mL +/- 55.1117 µg/mL +/- 64.2657 µg/mL	Gravimetric Unstressed Stressed
7	Nitrobenzene **CAS #** 98-95-3 (Lot 10224044) **Purity** 99%	1,006.0 µg/mL	+/- 5.9753 µg/mL +/- 55.1117 µg/mL +/- 64.2657 µg/mL	Gravimetric Unstressed Stressed

8	2,4,6-Trinitrotoluene **CAS #** 118-96-7 **Purity** 99%	(Lot D13332500)	1,009.0	µg/mL	+/- 5.9932 +/- 55.2761 +/- 64.4573	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	Nitroglycerin **CAS #** 55-63-0 **Purity** 99%	(Lot 200507JLM)	1,006.0	µg/mL	+/- 5.9753 +/- 55.1117 +/- 64.2657	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	2-Amino-4,6-dinitrotoluene **CAS #** 35572-78-2 **Purity** 99%	(Lot A210503-001)	1,004.0	µg/mL	+/- 5.9635 +/- 55.0021 +/- 64.1379	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	4-Amino-2,6-dinitrotoluene **CAS #** 19406-51-0 **Purity** 99%	(Lot ER070908-01)	1,006.0	µg/mL	+/- 5.9753 +/- 55.1117 +/- 64.2657	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	2,4-Dinitrotoluene **CAS #** 121-14-2 **Purity** 99%	(Lot MKAA0690V)	1,003.0	µg/mL	+/- 5.9575 +/- 54.9474 +/- 64.0740	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	2,6-Dinitrotoluene **CAS #** 606-20-2 **Purity** 99%	(Lot BCBB8606)	1,002.0	µg/mL	+/- 5.9516 +/- 54.8926 +/- 64.0101	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	2-Nitrotoluene **CAS #** 88-72-2 **Purity** 99%	(Lot BCBZ7826)	1,009.0	µg/mL	+/- 5.9932 +/- 55.2761 +/- 64.4573	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	4-Nitrotoluene **CAS #** 99-99-0 **Purity** 99%	(Lot BCCB0171)	1,007.0	µg/mL	+/- 5.9813 +/- 55.1665 +/- 64.3295	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	3-Nitrotoluene **CAS #** 99-08-1 **Purity** 99%	(Lot 07329LG)	1,008.0	µg/mL	+/- 5.9872 +/- 55.2213 +/- 64.3934	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	PETN **CAS #** 78-11-5 **Purity** 99%	(Lot 051108JLM)	1,001.0	µg/mL	+/- 5.9456 +/- 54.8378 +/- 63.9463	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

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

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

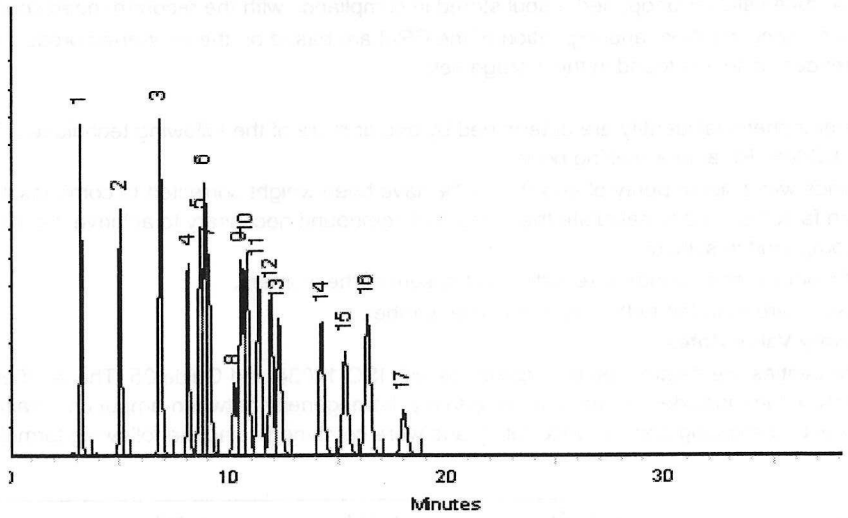
Flow Rate:
1.0 ml/min.

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

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm



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

Tom Suckar - Mix Technician **Date Mixed:** 11-Aug-2022 **Balance:** B707717271

Jennifer Pollino - Operations Tech III - ARM QC **Date Passed:** 16-Aug-2022

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

Analytical Standard Record

24D0385

Description:	8330 - Spike 100ug/mL 4/15/23	Expires:	10/12/2024
Standard Type:	Analyte Spike	Prepared:	04/15/2024
Solvent:	ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	10	Department:	HPLC
Vials:	1	Last Edit:	04/15/2024 09:40 by AOP
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	23A0023	99-35-4	100	ug/mL
1,3-DINITROBENZENE	23A0023	99-65-0	100	ug/mL
2,4,6-TRINITROTOLUENE	23A0023	118-96-7	100	ug/mL
2,4-DINITROTOLUENE	23A0023	121-14-2	100	ug/mL
2,6-DINITROTOLUENE	23A0023	606-20-2	100	ug/mL
2-AMINO-4,6-DINITROTOLUENE	23A0023	35572-78-2	100	ug/mL
2-NITROTOLUENE	23A0023	88-72-2	100	ug/mL
3,5-DINITROANILINE	23A0023	618-87-1	100	ug/mL
3-NITROTOLUENE	23A0023	99-08-1	100	ug/mL
4-AMINO-2,6-DINITROTOLUENE	23A0023	19406-51-0	100	ug/mL
4-NITROTOLUENE	23A0023	99-99-0	100	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	23A0023	121-82-4	100	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	23A0023	479-45-8	100	ug/mL
NITROBENZENE	23A0023	98-95-3	100	ug/mL
NITROGLYCERIN	23A0023	55-63-0	100	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	23A0023	2691-41-0	100	ug/mL
PENTAERYTHRITOL TETRANITRATE	23A0023	78-11-5	100	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
23A0023	8330 - SSS Ampule A0191734	11/23/2022	Restek	A0191734	11/30/2025	12/04/2023 11:05	by IMC	1

Reference Standard Data Pack

8330 Surrogate Mix

Catalog # 31453

Lot # A0205460

110 Benner Circle Bellefonte, PA 16823-8812
1-814-353-1300 1-800-356-1688
www.restek.com

FOR LABORATORY USE ONLY. READ SDS PRIOR TO USE.

RAW MATERIAL TEST INFORMATION AVAILABLE UPON REQUEST

MANUFACTURED UNDER RESTEK'S ISO 9001 REGISTERED QUALITY SYSTEM

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

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ilac-MRA A2LA ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01
ilac-MRA A2LA ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** 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.

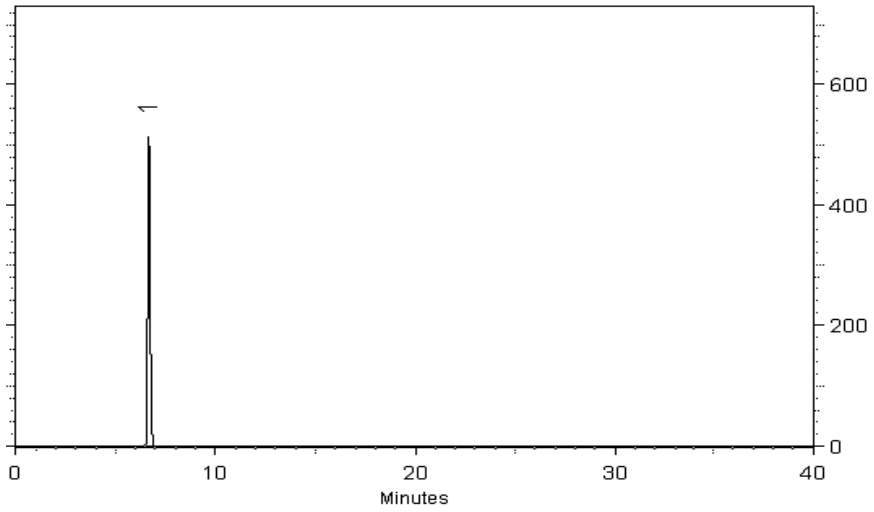
Mobile Phase A:
water:methanol (44:56 V/V)

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 Polino - 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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

RESTEK

Reference Material Batch Record
Lot #: A0205460

Catalog #: 31453	**Target:** 1000 ug/mL	
Description: 8330 Surrogate Mix		
Solvent: Methanol	**Solvent Lot:** 23H3162001	**Final Volume:** 100 ml

Made by: Malina Homan	**Date:** 12/13/2023 3:34:15PM		
Tested by: Alicia Leathers	**Date:** 12/14/2023 6:07:06AM		
Pass	**By:** Jennifer Pollino	**Date:** 12/19/2023 9:58:59AM	
Packaged by: Michael Maye1 / Malina Homan	**Date:** 12/13/2023 4:50:44F	**No. Units:** 66	**Pkg Size:** 1 mL
Balance Used: bede001743 XPE504	**Serial #:** B707717271		

Compound	CAS	Storage Location	Lot #	Purity	Target Conc(ug/mL)	Target	Actual	Calc Conc(ug/mL)
1,2-Dinitrobenzene	528-29-0	R0156	RP231117RSR	0.99	1,000.00	100.00 mg	100.40 mg	1,004.0

QA Report: 8330 Surrogate Mix (Cat.#31453)

	Runs of Lot # A0150790						Runs of Lot # A0205460							
COMPONENT	Run #1	Run #2	Run #3	AVG	STD DEV	%RSD	Run #1	Run #2	Run #3	AVG	STD DEV	%RSD	%D MEAN	P/F
1,2-Dinitrobenzene	4238059	4237731	4224314	4233368	7843	0.19	4296077	4266901	4266761	4276580	16885	0.39	-1.02	PASS

Analytical Standard Record

24D0600

Description:	8330 - 1,2-DNB SUR 100ug/mL 04/26/24	Expires:	10/23/2024
Standard Type:	Surrogate Spike	Prepared:	04/26/2024
Solvent:	ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	10	Department:	HPLC
Vials:	1	Last Edit:	04/26/2024 13:46 by AOP
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24D0501	528-29-0	100	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24D0501	8330 - 1,2-DNB SAS Ampule A0205460	04/22/2024	Restek	A0205460	12/31/2028	04/26/2024 13:46	by AOP	1

Analytical Standard Record

24D0600

Description:	8330 - 1,2-DNB SUR 100ug/mL 04/26/24	Expires:	10/23/2024
Standard Type:	Surrogate Spike	Prepared:	04/26/2024
Solvent:	ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	10	Department:	HPLC
Vials:	1	Last Edit:	04/26/2024 13:48 by AOP
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24D0501	528-29-0	100	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24D0501	8330 - 1,2-DNB SAS Ampule A0205460	04/22/2024	Restek	A0205460	12/31/2028	04/26/2024 13:46	by AOP	1

Analytical Standard Record

24E0455

Description:	8330 - Cal Std 20ug/mL 05/16/24	Expires:	09/16/2024
Standard Type:	Other	Prepared:	05/17/2024
Solvent:	ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	1	Department:	HPLC
Vials:	1	Last Edit:	05/17/2024 08:55 by AOP
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	24D0385	99-35-4	20	ug/mL
1,3-DINITROBENZENE	24D0385	99-65-0	20	ug/mL
2,4,6-TRINITROTOLUENE	24D0385	118-96-7	20	ug/mL
2,4-DINITROTOLUENE	24D0385	121-14-2	20	ug/mL
2,6-DINITROTOLUENE	24D0385	606-20-2	20	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24D0385	35572-78-2	20	ug/mL
2-NITROTOLUENE	24D0385	88-72-2	20	ug/mL
3,5-DINITROANILINE	24D0385	618-87-1	20	ug/mL
3-NITROTOLUENE	24D0385	99-08-1	20	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24D0385	19406-51-0	20	ug/mL
4-NITROTOLUENE	24D0385	99-99-0	20	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24D0385	121-82-4	20	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24D0385	479-45-8	20	ug/mL
NITROBENZENE	24D0385	98-95-3	20	ug/mL
NITROGLYCERIN	24D0385	55-63-0	20	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24D0385	2691-41-0	20	ug/mL
PENTAERYTHRITOL TETRANITRATE	24D0385	78-11-5	20	ug/mL
1,2-DINITROBENZENE	24D0600	528-29-0	20	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24D0385	8330 - Spike 100ug/mL 4/15/23	04/15/2024	In house	x	10/12/2024	04/15/2024 09:40	by AOP	0.2
24D0600	8330 - 1,2-DNB SUR 100ug/mL 04/26/24	04/26/2024	In house	x	10/23/2024	04/26/2024 13:48	by AOP	0.2

Analytical Standard Record

24E0456

Description:	8330 - Cal Std 0.2ug/mL 05/16/24	Expires:	09/16/2024
Standard Type:	Other	Prepared:	05/17/2024
Solvent:	ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	1	Department:	HPLC
Vials:	1	Last Edit:	05/17/2024 09:00 by AOP
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24E0455	528-29-0	0.2	ug/mL
1,3,5-TRINITROBENZENE	24E0455	99-35-4	0.2	ug/mL
1,3-DINITROBENZENE	24E0455	99-65-0	0.2	ug/mL
2,4,6-TRINITROTOLUENE	24E0455	118-96-7	0.2	ug/mL
2,4-DINITROTOLUENE	24E0455	121-14-2	0.2	ug/mL
2,6-DINITROTOLUENE	24E0455	606-20-2	0.2	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24E0455	35572-78-2	0.2	ug/mL
2-NITROTOLUENE	24E0455	88-72-2	0.2	ug/mL
3,5-DINITROANILINE	24E0455	618-87-1	0.2	ug/mL
3-NITROTOLUENE	24E0455	99-08-1	0.2	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24E0455	19406-51-0	0.2	ug/mL
4-NITROTOLUENE	24E0455	99-99-0	0.2	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24E0455	121-82-4	0.2	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24E0455	479-45-8	0.2	ug/mL
NITROBENZENE	24E0455	98-95-3	0.2	ug/mL
NITROGLYCERIN	24E0455	55-63-0	0.2	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24E0455	2691-41-0	0.2	ug/mL
PENTAERYTHRITOL TETRANITRATE	24E0455	78-11-5	0.2	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24E0455	8330 - Cal Std 20ug/mL 05/16/24	05/17/2024	In house	x	09/16/2024	05/17/2024 08:55	by AOP	0.01

Analytical Standard Record

24E0457

Description:	8330 - Cal 1 0.005ug/mL 05/16/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	05/17/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	05/17/2024 09:03 by AOP
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24E0456	528-29-0	0.005	ug/mL
1,3,5-TRINITROBENZENE	24E0456	99-35-4	0.005	ug/mL
1,3-DINITROBENZENE	24E0456	99-65-0	0.005	ug/mL
2,4,6-TRINITROTOLUENE	24E0456	118-96-7	0.005	ug/mL
2,4-DINITROTOLUENE	24E0456	121-14-2	0.005	ug/mL
2,6-DINITROTOLUENE	24E0456	606-20-2	0.005	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24E0456	35572-78-2	0.005	ug/mL
2-NITROTOLUENE	24E0456	88-72-2	0.005	ug/mL
3,5-DINITROANILINE	24E0456	618-87-1	0.005	ug/mL
3-NITROTOLUENE	24E0456	99-08-1	0.005	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24E0456	19406-51-0	0.005	ug/mL
4-NITROTOLUENE	24E0456	99-99-0	0.005	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24E0456	121-82-4	0.005	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24E0456	479-45-8	0.005	ug/mL
NITROBENZENE	24E0456	98-95-3	0.005	ug/mL
NITROGLYCERIN	24E0456	55-63-0	0.005	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24E0456	2691-41-0	0.005	ug/mL
PENTAERYTHRITOL TETRANITRATE	24E0456	78-11-5	0.005	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24E0456	8330 - Cal Std 0.2ug/mL 05/16/24	05/17/2024	In house	x	09/16/2024	05/17/2024 09:00	by AOP	0.02

Analytical Standard Record

24E0458

Description:	8330 - Cal 2 0.05ug/mL 05/16/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	05/17/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	05/17/2024 09:04 by AOP
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24E0456	528-29-0	0.05	ug/mL
1,3,5-TRINITROBENZENE	24E0456	99-35-4	0.05	ug/mL
1,3-DINITROBENZENE	24E0456	99-65-0	0.05	ug/mL
2,4,6-TRINITROTOLUENE	24E0456	118-96-7	0.05	ug/mL
2,4-DINITROTOLUENE	24E0456	121-14-2	0.05	ug/mL
2,6-DINITROTOLUENE	24E0456	606-20-2	0.05	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24E0456	35572-78-2	0.05	ug/mL
2-NITROTOLUENE	24E0456	88-72-2	0.05	ug/mL
3,5-DINITROANILINE	24E0456	618-87-1	0.05	ug/mL
3-NITROTOLUENE	24E0456	99-08-1	0.05	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24E0456	19406-51-0	0.05	ug/mL
4-NITROTOLUENE	24E0456	99-99-0	0.05	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24E0456	121-82-4	0.05	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24E0456	479-45-8	0.05	ug/mL
NITROBENZENE	24E0456	98-95-3	0.05	ug/mL
NITROGLYCERIN	24E0456	55-63-0	0.05	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24E0456	2691-41-0	0.05	ug/mL
PENTAERYTHRITOL TETRANITRATE	24E0456	78-11-5	0.05	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24E0456	8330 - Cal Std 0.2ug/mL 05/16/24	05/17/2024	In house	x	09/16/2024	05/17/2024 09:00	by AOP	0.2

Analytical Standard Record

24E0459

Description:	8330 - Cal 3 0.25ug/mL 05/16/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	05/17/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	05/17/2024 09:06 by AOP
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24E0455	528-29-0	0.25	ug/mL
1,3,5-TRINITROBENZENE	24E0455	99-35-4	0.25	ug/mL
1,3-DINITROBENZENE	24E0455	99-65-0	0.25	ug/mL
2,4,6-TRINITROTOLUENE	24E0455	118-96-7	0.25	ug/mL
2,4-DINITROTOLUENE	24E0455	121-14-2	0.25	ug/mL
2,6-DINITROTOLUENE	24E0455	606-20-2	0.25	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24E0455	35572-78-2	0.25	ug/mL
2-NITROTOLUENE	24E0455	88-72-2	0.25	ug/mL
3,5-DINITROANILINE	24E0455	618-87-1	0.25	ug/mL
3-NITROTOLUENE	24E0455	99-08-1	0.25	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24E0455	19406-51-0	0.25	ug/mL
4-NITROTOLUENE	24E0455	99-99-0	0.25	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24E0455	121-82-4	0.25	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24E0455	479-45-8	0.25	ug/mL
NITROBENZENE	24E0455	98-95-3	0.25	ug/mL
NITROGLYCERIN	24E0455	55-63-0	0.25	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24E0455	2691-41-0	0.25	ug/mL
PENTAERYTHRITOL TETRANITRATE	24E0455	78-11-5	0.25	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24E0455	8330 - Cal Std 20ug/mL 05/16/24	05/17/2024	In house	x	09/16/2024	05/17/2024 08:55	by AOP	0.01

Analytical Standard Record

24E0460

Description:	8330 - Cal 4 1.0ug/mL 05/16/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	05/17/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	05/17/2024 09:08 by AOP
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24E0455	528-29-0	1	ug/mL
1,3,5-TRINITROBENZENE	24E0455	99-35-4	1	ug/mL
1,3-DINITROBENZENE	24E0455	99-65-0	1	ug/mL
2,4,6-TRINITROTOLUENE	24E0455	118-96-7	1	ug/mL
2,4-DINITROTOLUENE	24E0455	121-14-2	1	ug/mL
2,6-DINITROTOLUENE	24E0455	606-20-2	1	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24E0455	35572-78-2	1	ug/mL
2-NITROTOLUENE	24E0455	88-72-2	1	ug/mL
3,5-DINITROANILINE	24E0455	618-87-1	1	ug/mL
3-NITROTOLUENE	24E0455	99-08-1	1	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24E0455	19406-51-0	1	ug/mL
4-NITROTOLUENE	24E0455	99-99-0	1	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24E0455	121-82-4	1	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24E0455	479-45-8	1	ug/mL
NITROBENZENE	24E0455	98-95-3	1	ug/mL
NITROGLYCERIN	24E0455	55-63-0	1	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24E0455	2691-41-0	1	ug/mL
PENTAERYTHRITOL TETRANITRATE	24E0455	78-11-5	1	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24E0455	8330 - Cal Std 20ug/mL 05/16/24	05/17/2024	In house	x	09/16/2024	05/17/2024 08:55	by AOP	0.04

Analytical Standard Record

24E0462

Description:	8330 - Cal 5 2.5ug/mL 05/16/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	05/17/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	05/17/2024 09:11 by AOP
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24E0455	528-29-0	2.5	ug/mL
1,3,5-TRINITROBENZENE	24E0455	99-35-4	2.5	ug/mL
1,3-DINITROBENZENE	24E0455	99-65-0	2.5	ug/mL
2,4,6-TRINITROTOLUENE	24E0455	118-96-7	2.5	ug/mL
2,4-DINITROTOLUENE	24E0455	121-14-2	2.5	ug/mL
2,6-DINITROTOLUENE	24E0455	606-20-2	2.5	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24E0455	35572-78-2	2.5	ug/mL
2-NITROTOLUENE	24E0455	88-72-2	2.5	ug/mL
3,5-DINITROANILINE	24E0455	618-87-1	2.5	ug/mL
3-NITROTOLUENE	24E0455	99-08-1	2.5	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24E0455	19406-51-0	2.5	ug/mL
4-NITROTOLUENE	24E0455	99-99-0	2.5	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24E0455	121-82-4	2.5	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24E0455	479-45-8	2.5	ug/mL
NITROBENZENE	24E0455	98-95-3	2.5	ug/mL
NITROGLYCERIN	24E0455	55-63-0	2.5	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24E0455	2691-41-0	2.5	ug/mL
PENTAERYTHRITOL TETRANITRATE	24E0455	78-11-5	2.5	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24E0455	8330 - Cal Std 20ug/mL 05/16/24	05/17/2024	In house	x	09/16/2024	05/17/2024 08:55	by AOP	0.1

Analytical Standard Record

24E0463

Description:	8330 - Cal 6 5.0ug/mL 05/16/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	05/17/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	05/17/2024 09:12 by AOP
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24E0455	528-29-0	5	ug/mL
1,3,5-TRINITROBENZENE	24E0455	99-35-4	5	ug/mL
1,3-DINITROBENZENE	24E0455	99-65-0	5	ug/mL
2,4,6-TRINITROTOLUENE	24E0455	118-96-7	5	ug/mL
2,4-DINITROTOLUENE	24E0455	121-14-2	5	ug/mL
2,6-DINITROTOLUENE	24E0455	606-20-2	5	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24E0455	35572-78-2	5	ug/mL
2-NITROTOLUENE	24E0455	88-72-2	5	ug/mL
3,5-DINITROANILINE	24E0455	618-87-1	5	ug/mL
3-NITROTOLUENE	24E0455	99-08-1	5	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24E0455	19406-51-0	5	ug/mL
4-NITROTOLUENE	24E0455	99-99-0	5	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24E0455	121-82-4	5	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24E0455	479-45-8	5	ug/mL
NITROBENZENE	24E0455	98-95-3	5	ug/mL
NITROGLYCERIN	24E0455	55-63-0	5	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24E0455	2691-41-0	5	ug/mL
PENTAERYTHRITOL TETRANITRATE	24E0455	78-11-5	5	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24E0455	8330 - Cal Std 20ug/mL 05/16/24	05/17/2024	In house	x	09/16/2024	05/17/2024 08:55	by AOP	0.2

Analytical Standard Record

24E0464

Description:	8330 - SCV DSS 20ug/mL 05/16/24	Expires:	09/16/2025
Standard Type:	Other	Prepared:	05/17/2024
Solvent:	ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	1	Department:	HPLC
Vials:	1	Last Edit:	05/17/2024 09:24 by AOP
Lot Number:	-		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	23E0027	99-35-4	20	ug/mL
1,3-DINITROBENZENE	23E0027	99-65-0	20	ug/mL
2,4,6-TRINITROTOLUENE	23E0027	118-96-7	20	ug/mL
2,4-DINITROTOLUENE	23E0027	121-14-2	20	ug/mL
2,6-DINITROTOLUENE	23E0027	606-20-2	20	ug/mL
2-AMINO-4,6-DINITROTOLUENE	23E0027	35572-78-2	20	ug/mL
2-NITROTOLUENE	23E0027	88-72-2	20	ug/mL
3,5-DINITROANILINE	23E0027	618-87-1	20	ug/mL
3-NITROTOLUENE	23E0027	99-08-1	20	ug/mL
4-AMINO-2,6-DINITROTOLUENE	23E0027	19406-51-0	20	ug/mL
4-NITROTOLUENE	23E0027	99-99-0	20	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	23E0027	121-82-4	20	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	23E0027	479-45-8	20	ug/mL
NITROBENZENE	23E0027	98-95-3	20	ug/mL
NITROGLYCERIN	23E0027	55-63-0	20	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	23E0027	2691-41-0	20	ug/mL
PENTAERYTHRITOL TETRANITRATE	23E0027	78-11-5	20	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
23E0027	8330 - SSS Ampule A0188442	04/18/2023	Restek	A0188442	08/31/2025	12/04/2023 11:05	by IMC	0.02

Analytical Standard Record

24E0466

Description:	8330 - SCV 1.0ug/mL 05/16/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	05/17/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	05/17/2024 09:27 by AOP
Lot Number:	-		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	24E0464	99-35-4	1	ug/mL
1,3-DINITROBENZENE	24E0464	99-65-0	1	ug/mL
2,4,6-TRINITROTOLUENE	24E0464	118-96-7	1	ug/mL
2,4-DINITROTOLUENE	24E0464	121-14-2	1	ug/mL
2,6-DINITROTOLUENE	24E0464	606-20-2	1	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24E0464	35572-78-2	1	ug/mL
2-NITROTOLUENE	24E0464	88-72-2	1	ug/mL
3,5-DINITROANILINE	24E0464	618-87-1	1	ug/mL
3-NITROTOLUENE	24E0464	99-08-1	1	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24E0464	19406-51-0	1	ug/mL
4-NITROTOLUENE	24E0464	99-99-0	1	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24E0464	121-82-4	1	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24E0464	479-45-8	1	ug/mL
NITROBENZENE	24E0464	98-95-3	1	ug/mL
NITROGLYCERIN	24E0464	55-63-0	1	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24E0464	2691-41-0	1	ug/mL
PENTAERYTHRITOL TETRANITRATE	24E0464	78-11-5	1	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24E0464	8330 - SCV DSS 20ug/mL 05/16/24	05/17/2024	-	-	09/16/2025	05/17/2024 09:24	by AOP	0.04

Analytical Standard Record

24G0088

Description:	8330 - Spike 100ug/mL 7/5/24	Expires:	01/01/2025
Standard Type:	Analyte Spike	Prepared:	07/05/2024
Solvent:	ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	10	Department:	HPLC
Vials:	1	Last Edit:	07/05/2024 12:25 by AOP
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	23A0023	99-35-4	100	ug/mL
1,3-DINITROBENZENE	23A0023	99-65-0	100	ug/mL
2,4,6-TRINITROTOLUENE	23A0023	118-96-7	100	ug/mL
2,4-DINITROTOLUENE	23A0023	121-14-2	100	ug/mL
2,6-DINITROTOLUENE	23A0023	606-20-2	100	ug/mL
2-AMINO-4,6-DINITROTOLUENE	23A0023	35572-78-2	100	ug/mL
2-NITROTOLUENE	23A0023	88-72-2	100	ug/mL
3,5-DINITROANILINE	23A0023	618-87-1	100	ug/mL
3-NITROTOLUENE	23A0023	99-08-1	100	ug/mL
4-AMINO-2,6-DINITROTOLUENE	23A0023	19406-51-0	100	ug/mL
4-NITROTOLUENE	23A0023	99-99-0	100	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	23A0023	121-82-4	100	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	23A0023	479-45-8	100	ug/mL
NITROBENZENE	23A0023	98-95-3	100	ug/mL
NITROGLYCERIN	23A0023	55-63-0	100	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	23A0023	2691-41-0	100	ug/mL
PENTAERYTHRITOL TETRANITRATE	23A0023	78-11-5	100	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
23A0023	8330 - SSS Ampule A0191734	11/23/2022	Restek	A0191734	11/30/2025	12/04/2023 11:05	by IMC	1

Analytical Standard Record

24G0171

Description:	8330 - Spike 100ug/mL 7/9/24	Expires:	01/05/2025
Standard Type:	Analyte Spike	Prepared:	07/09/2024
Solvent:	ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	10	Department:	HPLC
Vials:	1	Last Edit:	07/09/2024 09:58 by AOP
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	23A0023	99-35-4	100	ug/mL
1,3-DINITROBENZENE	23A0023	99-65-0	100	ug/mL
2,4,6-TRINITROTOLUENE	23A0023	118-96-7	100	ug/mL
2,4-DINITROTOLUENE	23A0023	121-14-2	100	ug/mL
2,6-DINITROTOLUENE	23A0023	606-20-2	100	ug/mL
2-AMINO-4,6-DINITROTOLUENE	23A0023	35572-78-2	100	ug/mL
2-NITROTOLUENE	23A0023	88-72-2	100	ug/mL
3,5-DINITROANILINE	23A0023	618-87-1	100	ug/mL
3-NITROTOLUENE	23A0023	99-08-1	100	ug/mL
4-AMINO-2,6-DINITROTOLUENE	23A0023	19406-51-0	100	ug/mL
4-NITROTOLUENE	23A0023	99-99-0	100	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	23A0023	121-82-4	100	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	23A0023	479-45-8	100	ug/mL
NITROBENZENE	23A0023	98-95-3	100	ug/mL
NITROGLYCERIN	23A0023	55-63-0	100	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	23A0023	2691-41-0	100	ug/mL
PENTAERYTHRITOL TETRANITRATE	23A0023	78-11-5	100	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
23A0023	8330 - SSS Ampule A0191734	11/23/2022	Restek	A0191734	11/30/2025	12/04/2023 11:05	by IMC	1

Analytical Standard Record

24H0339

Description:	8330 - 1,2-DNB SUR 100ug/mL 8/13/24	Expires:	02/09/2025
Standard Type:	Surrogate Spike	Prepared:	08/13/2024
Solvent:	ACN	Prepared By:	Kia Yang
Final Volume (mls):	10	Department:	HPLC
Vials:	1	Last Edit:	08/13/2024 12:19 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24D0501	528-29-0	100	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24D0501	8330 - 1,2-DNB SAS Ampule A0205460	04/22/2024	Restek	A0205460	12/31/2028	04/26/2024 13:46	by AOP	1

Analytical Standard Record

24H0339

Description:	8330 - 1,2-DNB SUR 100ug/mL 8/13/24	Expires:	02/09/2025
Standard Type:	Surrogate Spike	Prepared:	08/13/2024
Solvent:	ACN	Prepared By:	Kia Yang
Final Volume (mls):	10	Department:	HPLC
Vials:	1	Last Edit:	08/13/2024 12:19 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24D0501	528-29-0	100	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24D0501	8330 - 1,2-DNB SAS Ampule A0205460	04/22/2024	Restek	A0205460	12/31/2028	04/26/2024 13:46	by AOP	1

Analytical Standard Record

24H0394

Description:	8330 - SCV DSS 20ug/mL 08/14/24	Expires:	02/12/2025
Standard Type:	Other	Prepared:	08/14/2024
Solvent:	ACN	Prepared By:	Kia Yang
Final Volume (mls):	1	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:33 by KMY1
Lot Number:	-		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	23E0027	99-35-4	20	ug/mL
1,3-DINITROBENZENE	23E0027	99-65-0	20	ug/mL
2,4,6-TRINITROTOLUENE	23E0027	118-96-7	20	ug/mL
2,4-DINITROTOLUENE	23E0027	121-14-2	20	ug/mL
2,6-DINITROTOLUENE	23E0027	606-20-2	20	ug/mL
2-AMINO-4,6-DINITROTOLUENE	23E0027	35572-78-2	20	ug/mL
2-NITROTOLUENE	23E0027	88-72-2	20	ug/mL
3,5-DINITROANILINE	23E0027	618-87-1	20	ug/mL
3-NITROTOLUENE	23E0027	99-08-1	20	ug/mL
4-AMINO-2,6-DINITROTOLUENE	23E0027	19406-51-0	20	ug/mL
4-NITROTOLUENE	23E0027	99-99-0	20	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	23E0027	121-82-4	20	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	23E0027	479-45-8	20	ug/mL
NITROBENZENE	23E0027	98-95-3	20	ug/mL
NITROGLYCERIN	23E0027	55-63-0	20	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	23E0027	2691-41-0	20	ug/mL
PENTAERYTHRITOL TETRANITRATE	23E0027	78-11-5	20	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
23E0027	8330 - SSS Ampule A0188442	04/18/2023	Restek	A0188442	08/31/2025	12/04/2023 11:05	by IMC	0.02

Analytical Standard Record

24H0394

Description:	8330 - SCV DSS 20ug/mL 08/14/24	Expires:	02/12/2025
Standard Type:	Other	Prepared:	08/14/2024
Solvent:	ACN	Prepared By:	Kia Yang
Final Volume (mls):	1	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:33 by KMY1
Lot Number:	-		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	23E0027	99-35-4	20	ug/mL
1,3-DINITROBENZENE	23E0027	99-65-0	20	ug/mL
2,4,6-TRINITROTOLUENE	23E0027	118-96-7	20	ug/mL
2,4-DINITROTOLUENE	23E0027	121-14-2	20	ug/mL
2,6-DINITROTOLUENE	23E0027	606-20-2	20	ug/mL
2-AMINO-4,6-DINITROTOLUENE	23E0027	35572-78-2	20	ug/mL
2-NITROTOLUENE	23E0027	88-72-2	20	ug/mL
3,5-DINITROANILINE	23E0027	618-87-1	20	ug/mL
3-NITROTOLUENE	23E0027	99-08-1	20	ug/mL
4-AMINO-2,6-DINITROTOLUENE	23E0027	19406-51-0	20	ug/mL
4-NITROTOLUENE	23E0027	99-99-0	20	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	23E0027	121-82-4	20	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	23E0027	479-45-8	20	ug/mL
NITROBENZENE	23E0027	98-95-3	20	ug/mL
NITROGLYCERIN	23E0027	55-63-0	20	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	23E0027	2691-41-0	20	ug/mL
PENTAERYTHRITOL TETRANITRATE	23E0027	78-11-5	20	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
23E0027	8330 - SSS Ampule A0188442	04/18/2023	Restek	A0188442	08/31/2025	12/04/2023 11:05	by IMC	0.02

Analytical Standard Record

24H0395

Description:	8330 - Cal Std 20ug/mL 08/14/24	Expires:	10/12/2024
Standard Type:	Other	Prepared:	08/14/2024
Solvent:	ACN	Prepared By:	Kia Yang
Final Volume (mls):	1	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:23 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	24G0088	99-35-4	20	ug/mL
1,3-DINITROBENZENE	24G0088	99-65-0	20	ug/mL
2,4,6-TRINITROTOLUENE	24G0088	118-96-7	20	ug/mL
2,4-DINITROTOLUENE	24G0088	121-14-2	20	ug/mL
2,6-DINITROTOLUENE	24G0088	606-20-2	20	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24G0088	35572-78-2	20	ug/mL
2-NITROTOLUENE	24G0088	88-72-2	20	ug/mL
3,5-DINITROANILINE	24G0088	618-87-1	20	ug/mL
3-NITROTOLUENE	24G0088	99-08-1	20	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24G0088	19406-51-0	20	ug/mL
4-NITROTOLUENE	24G0088	99-99-0	20	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24G0088	121-82-4	20	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24G0088	479-45-8	20	ug/mL
NITROBENZENE	24G0088	98-95-3	20	ug/mL
NITROGLYCERIN	24G0088	55-63-0	20	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24G0088	2691-41-0	20	ug/mL
PENTAERYTHRITOL TETRANITRATE	24G0088	78-11-5	20	ug/mL
1,2-DINITROBENZENE	24H0339	528-29-0	20	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24G0088	8330 - Spike 100ug/mL 7/5/24	07/05/2024	In house	x	01/01/2025	07/05/2024 12:26	by AOP	0.2
24H0339	8330 - 1,2-DNB SUR 100ug/mL 8/13/24	08/13/2024	In house	x	02/09/2025	08/13/2024 12:19	by KMY1	0.2

Analytical Standard Record

24H0396

Description:	8330 - Cal Std 0.2ug/mL 08/14/24	Expires:	09/16/2024
Standard Type:	Other	Prepared:	08/14/2024
Solvent:	ACN	Prepared By:	Kia Yang
Final Volume (mls):	1	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:24 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24H0395	528-29-0	0.2	ug/mL
1,3,5-TRINITROBENZENE	24H0395	99-35-4	0.2	ug/mL
1,3-DINITROBENZENE	24H0395	99-65-0	0.2	ug/mL
2,4,6-TRINITROTOLUENE	24H0395	118-96-7	0.2	ug/mL
2,4-DINITROTOLUENE	24H0395	121-14-2	0.2	ug/mL
2,6-DINITROTOLUENE	24H0395	606-20-2	0.2	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24H0395	35572-78-2	0.2	ug/mL
2-NITROTOLUENE	24H0395	88-72-2	0.2	ug/mL
3,5-DINITROANILINE	24H0395	618-87-1	0.2	ug/mL
3-NITROTOLUENE	24H0395	99-08-1	0.2	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24H0395	19406-51-0	0.2	ug/mL
4-NITROTOLUENE	24H0395	99-99-0	0.2	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24H0395	121-82-4	0.2	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24H0395	479-45-8	0.2	ug/mL
NITROBENZENE	24H0395	98-95-3	0.2	ug/mL
NITROGLYCERIN	24H0395	55-63-0	0.2	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24H0395	2691-41-0	0.2	ug/mL
PENTAERYTHRITOL TETRANITRATE	24H0395	78-11-5	0.2	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24H0395	8330 - Cal Std 20ug/mL 08/14/24	08/14/2024	In house	x	10/12/2024	08/16/2024 07:23	by KMY1	0.01

Analytical Standard Record

24H0397

Description:	8330 - Cal 1 0.005ug/mL 08/14/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	08/14/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Kia Yang
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:53 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24H0396	528-29-0	0.005	ug/mL
1,3,5-TRINITROBENZENE	24H0396	99-35-4	0.005	ug/mL
1,3-DINITROBENZENE	24H0396	99-65-0	0.005	ug/mL
2,4,6-TRINITROTOLUENE	24H0396	118-96-7	0.005	ug/mL
2,4-DINITROTOLUENE	24H0396	121-14-2	0.005	ug/mL
2,6-DINITROTOLUENE	24H0396	606-20-2	0.005	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24H0396	35572-78-2	0.005	ug/mL
2-NITROTOLUENE	24H0396	88-72-2	0.005	ug/mL
3,5-DINITROANILINE	24H0396	618-87-1	0.005	ug/mL
3-NITROTOLUENE	24H0396	99-08-1	0.005	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24H0396	19406-51-0	0.005	ug/mL
4-NITROTOLUENE	24H0396	99-99-0	0.005	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24H0396	121-82-4	0.005	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24H0396	479-45-8	0.005	ug/mL
NITROBENZENE	24H0396	98-95-3	0.005	ug/mL
NITROGLYCERIN	24H0396	55-63-0	0.005	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24H0396	2691-41-0	0.005	ug/mL
PENTAERYTHRITOL TETRANITRATE	24H0396	78-11-5	0.005	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24H0396	8330 - Cal Std 0.2ug/mL 08/14/24	08/14/2024	In house	x	09/16/2024	08/16/2024 07:24	by KMY1	0.02

Analytical Standard Record

24H0398

Description:	8330 - Cal 2 0.05ug/mL 08/14/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	08/14/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Kia Yang
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:53 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24H0396	528-29-0	0.05	ug/mL
1,3,5-TRINITROBENZENE	24H0396	99-35-4	0.05	ug/mL
1,3-DINITROBENZENE	24H0396	99-65-0	0.05	ug/mL
2,4,6-TRINITROTOLUENE	24H0396	118-96-7	0.05	ug/mL
2,4-DINITROTOLUENE	24H0396	121-14-2	0.05	ug/mL
2,6-DINITROTOLUENE	24H0396	606-20-2	0.05	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24H0396	35572-78-2	0.05	ug/mL
2-NITROTOLUENE	24H0396	88-72-2	0.05	ug/mL
3,5-DINITROANILINE	24H0396	618-87-1	0.05	ug/mL
3-NITROTOLUENE	24H0396	99-08-1	0.05	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24H0396	19406-51-0	0.05	ug/mL
4-NITROTOLUENE	24H0396	99-99-0	0.05	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24H0396	121-82-4	0.05	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24H0396	479-45-8	0.05	ug/mL
NITROBENZENE	24H0396	98-95-3	0.05	ug/mL
NITROGLYCERIN	24H0396	55-63-0	0.05	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24H0396	2691-41-0	0.05	ug/mL
PENTAERYTHRITOL TETRANITRATE	24H0396	78-11-5	0.05	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24H0396	8330 - Cal Std 0.2ug/mL 08/14/24	08/14/2024	In house	x	09/16/2024	08/16/2024 07:24	by KMY1	0.2

Analytical Standard Record

24H0399

Description:	8330 - Cal 3 0.25ug/mL 08/14/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	08/14/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Kia Yang
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:25 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24H0395	528-29-0	0.25	ug/mL
1,3,5-TRINITROBENZENE	24H0395	99-35-4	0.25	ug/mL
1,3-DINITROBENZENE	24H0395	99-65-0	0.25	ug/mL
2,4,6-TRINITROTOLUENE	24H0395	118-96-7	0.25	ug/mL
2,4-DINITROTOLUENE	24H0395	121-14-2	0.25	ug/mL
2,6-DINITROTOLUENE	24H0395	606-20-2	0.25	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24H0395	35572-78-2	0.25	ug/mL
2-NITROTOLUENE	24H0395	88-72-2	0.25	ug/mL
3,5-DINITROANILINE	24H0395	618-87-1	0.25	ug/mL
3-NITROTOLUENE	24H0395	99-08-1	0.25	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24H0395	19406-51-0	0.25	ug/mL
4-NITROTOLUENE	24H0395	99-99-0	0.25	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24H0395	121-82-4	0.25	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24H0395	479-45-8	0.25	ug/mL
NITROBENZENE	24H0395	98-95-3	0.25	ug/mL
NITROGLYCERIN	24H0395	55-63-0	0.25	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24H0395	2691-41-0	0.25	ug/mL
PENTAERYTHRITOL TETRANITRATE	24H0395	78-11-5	0.25	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit	(mls)
24H0395	8330 - Cal Std 20ug/mL 08/14/24	08/14/2024	In house	x	10/12/2024	08/16/2024 07:23 by KMY1	0.01

Analytical Standard Record

24H0400

Description:	8330 - Cal 4 1.0ug/mL 08/14/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	08/14/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Kia Yang
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:26 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24H0395	528-29-0	1	ug/mL
1,3,5-TRINITROBENZENE	24H0395	99-35-4	1	ug/mL
1,3-DINITROBENZENE	24H0395	99-65-0	1	ug/mL
2,4,6-TRINITROTOLUENE	24H0395	118-96-7	1	ug/mL
2,4-DINITROTOLUENE	24H0395	121-14-2	1	ug/mL
2,6-DINITROTOLUENE	24H0395	606-20-2	1	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24H0395	35572-78-2	1	ug/mL
2-NITROTOLUENE	24H0395	88-72-2	1	ug/mL
3,5-DINITROANILINE	24H0395	618-87-1	1	ug/mL
3-NITROTOLUENE	24H0395	99-08-1	1	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24H0395	19406-51-0	1	ug/mL
4-NITROTOLUENE	24H0395	99-99-0	1	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24H0395	121-82-4	1	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24H0395	479-45-8	1	ug/mL
NITROBENZENE	24H0395	98-95-3	1	ug/mL
NITROGLYCERIN	24H0395	55-63-0	1	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24H0395	2691-41-0	1	ug/mL
PENTAERYTHRITOL TETRANITRATE	24H0395	78-11-5	1	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24H0395	8330 - Cal Std 20ug/mL 08/14/24	08/14/2024	In house	x	10/12/2024	08/16/2024 07:23	by KMY1	0.04

Analytical Standard Record

24H0401

Description:	8330 - Cal 5 2.5ug/mL 08/14/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	08/14/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Kia Yang
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:26 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24H0395	528-29-0	2.5	ug/mL
1,3,5-TRINITROBENZENE	24H0395	99-35-4	2.5	ug/mL
1,3-DINITROBENZENE	24H0395	99-65-0	2.5	ug/mL
2,4,6-TRINITROTOLUENE	24H0395	118-96-7	2.5	ug/mL
2,4-DINITROTOLUENE	24H0395	121-14-2	2.5	ug/mL
2,6-DINITROTOLUENE	24H0395	606-20-2	2.5	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24H0395	35572-78-2	2.5	ug/mL
2-NITROTOLUENE	24H0395	88-72-2	2.5	ug/mL
3,5-DINITROANILINE	24H0395	618-87-1	2.5	ug/mL
3-NITROTOLUENE	24H0395	99-08-1	2.5	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24H0395	19406-51-0	2.5	ug/mL
4-NITROTOLUENE	24H0395	99-99-0	2.5	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24H0395	121-82-4	2.5	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24H0395	479-45-8	2.5	ug/mL
NITROBENZENE	24H0395	98-95-3	2.5	ug/mL
NITROGLYCERIN	24H0395	55-63-0	2.5	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24H0395	2691-41-0	2.5	ug/mL
PENTAERYTHRITOL TETRANITRATE	24H0395	78-11-5	2.5	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24H0395	8330 - Cal Std 20ug/mL 08/14/24	08/14/2024	In house	x	10/12/2024	08/16/2024 07:23	by KMY1	0.1

Analytical Standard Record

24H0402

Description:	8330 - Cal 6 5.0ug/mL 08/14/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	08/14/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Kia Yang
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:26 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24H0395	528-29-0	5	ug/mL
1,3,5-TRINITROBENZENE	24H0395	99-35-4	5	ug/mL
1,3-DINITROBENZENE	24H0395	99-65-0	5	ug/mL
2,4,6-TRINITROTOLUENE	24H0395	118-96-7	5	ug/mL
2,4-DINITROTOLUENE	24H0395	121-14-2	5	ug/mL
2,6-DINITROTOLUENE	24H0395	606-20-2	5	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24H0395	35572-78-2	5	ug/mL
2-NITROTOLUENE	24H0395	88-72-2	5	ug/mL
3,5-DINITROANILINE	24H0395	618-87-1	5	ug/mL
3-NITROTOLUENE	24H0395	99-08-1	5	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24H0395	19406-51-0	5	ug/mL
4-NITROTOLUENE	24H0395	99-99-0	5	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24H0395	121-82-4	5	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24H0395	479-45-8	5	ug/mL
NITROBENZENE	24H0395	98-95-3	5	ug/mL
NITROGLYCERIN	24H0395	55-63-0	5	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24H0395	2691-41-0	5	ug/mL
PENTAERYTHRITOL TETRANITRATE	24H0395	78-11-5	5	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24H0395	8330 - Cal Std 20ug/mL 08/14/24	08/14/2024	In house	x	10/12/2024	08/16/2024 07:23	by KMY1	0.2

Analytical Standard Record

24H0403

Description:	8330 - SCV 1.0ug/mL 08/14/24	Expires:	02/12/2025
Standard Type:	Calibration Standard	Prepared:	08/14/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Kia Yang
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:33 by KMY1
Lot Number:	-		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	24H0394	99-35-4	1	ug/mL
1,3-DINITROBENZENE	24H0394	99-65-0	1	ug/mL
2,4,6-TRINITROTOLUENE	24H0394	118-96-7	1	ug/mL
2,4-DINITROTOLUENE	24H0394	121-14-2	1	ug/mL
2,6-DINITROTOLUENE	24H0394	606-20-2	1	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24H0394	35572-78-2	1	ug/mL
2-NITROTOLUENE	24H0394	88-72-2	1	ug/mL
3,5-DINITROANILINE	24H0394	618-87-1	1	ug/mL
3-NITROTOLUENE	24H0394	99-08-1	1	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24H0394	19406-51-0	1	ug/mL
4-NITROTOLUENE	24H0394	99-99-0	1	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24H0394	121-82-4	1	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24H0394	479-45-8	1	ug/mL
NITROBENZENE	24H0394	98-95-3	1	ug/mL
NITROGLYCERIN	24H0394	55-63-0	1	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24H0394	2691-41-0	1	ug/mL
PENTAERYTHRITOL TETRANITRATE	24H0394	78-11-5	1	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24H0394	8330 - SCV DSS 20ug/mL 08/14/24	08/14/2024	-	-	02/12/2025	08/16/2024 07:33	by KMY1	0.04

Analytical Standard Record

24I0469

Description:	8330 - CCV DSS 10ug/mL 09/24/24	Expires:	03/23/2025
Standard Type:	Analyte Spike	Prepared:	09/24/2024
Solvent:	ACN	Prepared By:	Kia Yang
Final Volume (mls):	10	Department:	HPLC
Vials:	1	Last Edit:	09/24/2024 10:51 by KMY1
Lot Number:	*		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	23A0023	99-35-4	10	ug/mL
1,3-DINITROBENZENE	23A0023	99-65-0	10	ug/mL
2,4,6-TRINITROTOLUENE	23A0023	118-96-7	10	ug/mL
2,4-DINITROTOLUENE	23A0023	121-14-2	10	ug/mL
2,6-DINITROTOLUENE	23A0023	606-20-2	10	ug/mL
2-AMINO-4,6-DINITROTOLUENE	23A0023	35572-78-2	10	ug/mL
2-NITROTOLUENE	23A0023	88-72-2	10	ug/mL
3,5-DINITROANILINE	23A0023	618-87-1	10	ug/mL
3-NITROTOLUENE	23A0023	99-08-1	10	ug/mL
4-AMINO-2,6-DINITROTOLUENE	23A0023	19406-51-0	10	ug/mL
4-NITROTOLUENE	23A0023	99-99-0	10	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	23A0023	121-82-4	10	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	23A0023	479-45-8	10	ug/mL
NITROBENZENE	23A0023	98-95-3	10	ug/mL
NITROGLYCERIN	23A0023	55-63-0	10	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	23A0023	2691-41-0	10	ug/mL
PENTAERYTHRITOL TETRANITRATE	23A0023	78-11-5	10	ug/mL
1,2-DINITROBENZENE	24D0501	528-29-0	10	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
23A0023	8330 - SSS Ampule A0191734	11/23/2022	Restek	A0191734	11/30/2025	12/04/2023 11:05	by IMC	0.1
24D0501	8330 - 1,2-DNB SAS Ampule A0205460	04/22/2024	Restek	A0205460	12/31/2028	04/26/2024 13:46	by AOP	0.1

Analytical Standard Record

24I0470

Description:	8330 - CCV 1.0ug/mL 09/24/24	Expires:	03/23/2025
Standard Type:	Calibration Standard	Prepared:	09/24/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Kia Yang
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	09/24/2024 10:53 by KMY1
Lot Number:	*		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24I0469	528-29-0	1	ug/mL
1,3,5-TRINITROBENZENE	24I0469	99-35-4	1	ug/mL
1,3-DINITROBENZENE	24I0469	99-65-0	1	ug/mL
2,4,6-TRINITROTOLUENE	24I0469	118-96-7	1	ug/mL
2,4-DINITROTOLUENE	24I0469	121-14-2	1	ug/mL
2,6-DINITROTOLUENE	24I0469	606-20-2	1	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24I0469	35572-78-2	1	ug/mL
2-NITROTOLUENE	24I0469	88-72-2	1	ug/mL
3,5-DINITROANILINE	24I0469	618-87-1	1	ug/mL
3-NITROTOLUENE	24I0469	99-08-1	1	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24I0469	19406-51-0	1	ug/mL
4-NITROTOLUENE	24I0469	99-99-0	1	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24I0469	121-82-4	1	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24I0469	479-45-8	1	ug/mL
NITROBENZENE	24I0469	98-95-3	1	ug/mL
NITROGLYCERIN	24I0469	55-63-0	1	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24I0469	2691-41-0	1	ug/mL
PENTAERYTHRITOL TETRANITRATE	24I0469	78-11-5	1	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24I0469	8330 - CCV DSS 10ug/mL 09/24/24	09/24/2024	*	*	03/23/2025	09/24/2024 10:51	by KMY1	0.08

AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

908 N. Temperance Ave., Clovis, CA 93611 - Phone 559-275-2175 - www.metirigroup.com

NELAP Certification Number: CA00046
DoD-ELAP Certification Number 4064.01
State Certification Number:

October 28, 2024

John Carson
AECOM Omaha
12120 Shamrock Plaza Suite 300
Omaha, NE 68154

RE: Wingate
24J0093

Enclosed are the results of analyses for samples received by our laboratory on 10/9/2024. If you have any questions concerning this report, please feel free to contact me.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness. These test results meet all requirements of NELAC and DoD QSM. Release of the hard copy has been authorized by the Laboratory Manager or designee, as verified by the following signature.

Sincerely,

Karen Volpendesta For Monica Garcia-Strickland
Project Manager

monica.garcia-strickland@metirigroup.com
559-825-9005

The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document.
No duplication of this report is allowed, except in its entirety.

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

AECOM Omaha	Project: Wingate	
12120 Shamrock Plaza Suite 300	Project Number: Wingate 60517380 Task 3	
Omaha, NE 68154	Project Manager: John Carson	Reported: 10/28/2024 12:41

Data Validatable Report

Analysis Case Narrative

EPA 8330B:
The analyte methyl-2,4,6-trinitrophenylnitramine recovered below the lower control limit in the BDJ0318-BS1 and BSD1. The RPD for methyl-2,4,6-trinitrophenylnitramine exceeded the 20% limit. Corrective action: The samples and QC were re-analyzed with similar results. Methyl-2,4,6-trinitrophenylnitramine was not detected in the associated samples.

The analyte pentaerythritol tetranitrate increased sensitivity on the confirmation column in the continuing calibrations SD04327-CCV1 and -CCV2. The analytes methyl-2,4,6-trinitrophenylnitramine and 2,4,6-trinitrotoluene decreased sensitivity on the confirmation column in the continuing calibration SD04327-CCV2. Corrective action: None, all analytes recovered within the control limits on the primary column.

Manual integrations were performed for EPA 8330 in accordance with APPL's SOP. Chromatograms for before and after manual integration are enclosed for specific samples and analytes. Abbreviated flags for technical justification are listed on the chromatograms.

Samples in this Report

Lab ID	Sample	Matrix	Date Sampled	Date Received
24J0093-01	P2ARROYO-008	Solid	10/05/2024 11:30	10/09/2024

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

AECOM Omaha	Project: Wingate	
12120 Shamrock Plaza Suite 300	Project Number: Wingate 60517380 Task 3	
Omaha, NE 68154	Project Manager: John Carson	Reported: 10/28/2024 12:41

Containers Received

Lab ID	Container Type	Count	Preservation Check
24J0093-01			
	8 oz Jar Amber Wmouth	1	

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APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

AECOM Omaha	Project: Wingate	
12120 Shamrock Plaza Suite 300	Project Number: Wingate 60517380 Task 3	
Omaha, NE 68154	Project Manager: John Carson	Reported: 10/28/2024 12:41

Sample Results

Sample: P2ARROYO-008
24J0093-01 (Solid)

Liquid Chromatography

Analyte	Result	/Qual	LOQ	LOD	DL	Units	Date Analyzed	DF	Method	Prep Batch
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.073 U		0.49	0.073	0.036	mg/kg	10/18/24	1	EPA 8330B	BDJ0318
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.073 U		0.49	0.073	0.024	mg/kg	10/18/24	1	EPA 8330B	BDJ0318
1,3,5-TRINITROBENZENE	0.073 U		0.49	0.073	0.013	mg/kg	10/18/24	1	EPA 8330B	BDJ0318
1,3-DINITROBENZENE	0.073 U		0.49	0.073	0.021	mg/kg	10/18/24	1	EPA 8330B	BDJ0318
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	0.073 U		0.49	0.073	0.036	mg/kg	10/18/24	1	EPA 8330B	BDJ0318
NITROBENZENE	0.073 U		0.49	0.073	0.027	mg/kg	10/18/24	1	EPA 8330B	BDJ0318
2,4,6-TRINITROTOLUENE	0.66	MI5	0.49	0.073	0.030	mg/kg	10/18/24	1	EPA 8330B	BDJ0318
4-AMINO-2,6-DINITROTOLUENE	0.073 U		0.49	0.073	0.033	mg/kg	10/18/24	1	EPA 8330B	BDJ0318
2-AMINO-4,6-DINITROTOLUENE	0.073 U		0.49	0.073	0.033	mg/kg	10/18/24	1	EPA 8330B	BDJ0318
2,4-DINITROTOLUENE	0.073 U		0.49	0.073	0.027	mg/kg	10/18/24	1	EPA 8330B	BDJ0318
2,6-DINITROTOLUENE	0.10 J	MI5,	0.49	0.073	0.030	mg/kg	10/18/24	1	EPA 8330B	BDJ0318
2-NITROTOLUENE	0.073 U		0.49	0.073	0.036	mg/kg	10/18/24	1	EPA 8330B	BDJ0318
3-NITROTOLUENE	0.073 U		0.49	0.073	0.036	mg/kg	10/18/24	1	EPA 8330B	BDJ0318
4-NITROTOLUENE	0.073 U		0.49	0.073	0.036	mg/kg	10/18/24	1	EPA 8330B	BDJ0318
NITROGLYCERIN	0.15 U		0.49	0.15	0.060	mg/kg	10/18/24	1	EPA 8330B	BDJ0318
PENTAERYTHRITOL TETRANITRATE	0.24 U		2.4	0.24	0.11	mg/kg	10/18/24	1	EPA 8330B	BDJ0318
Surrogate: 1,2-DINITROBENZENE	*102%*			*78-119*			*10/18/24*	1	*EPA 8330B*	*BDJ0318*

WetLab

Analyte	Result	/Qual	LOQ	LOD	DL	Units	Date Analyzed	DF	Method	Prep Batch
% Solids	97.6		2.00	1.50	0.750	%	10/10/24	1	ISM02.2	BDJ0255

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No duplication of this report is allowed, except in its entirety.

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

AECOM Omaha	Project: Wingate	
12120 Shamrock Plaza Suite 300	Project Number: Wingate 60517380 Task 3	
Omaha, NE 68154	Project Manager: John Carson	Reported: 10/28/2024 12:41

Quality Control

Liquid Chromatography

Analyte	Result/Qual	LOQ	LOD	MDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Method: EPA 8330B										
Batch: BDJ0318 - EPA 8330A										
	mg/kg									
Blank (BDJ0318-BLK1)						Prepared: 10/14/24 07:57 Analyzed: 10/18/24 18:54				
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.074 U	0.49	0.074	0.037						
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.074 U	0.49	0.074	0.025						
1,3,5-TRINITROBENZENE	0.074 U	0.49	0.074	0.013						
1,3-DINITROBENZENE	0.074 U	0.49	0.074	0.022						
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	0.074 U	0.49	0.074	0.037						
NITROBENZENE	0.074 U	0.49	0.074	0.028						
2,4,6-TRINITROTOLUENE	0.074 U	0.49	0.074	0.031						
4-AMINO-2,6-DINITROTOLUENE	0.074 U	0.49	0.074	0.034						
2-AMINO-4,6-DINITROTOLUENE	0.074 U	0.49	0.074	0.034						
2,4-DINITROTOLUENE	0.074 U	0.49	0.074	0.028						
2,6-DINITROTOLUENE	0.074 U	0.49	0.074	0.031						
2-NITROTOLUENE	0.074 U	0.49	0.074	0.037						
3-NITROTOLUENE	0.074 U	0.49	0.074	0.037						
4-NITROTOLUENE	0.074 U	0.49	0.074	0.037						
NITROGLYCERIN	0.15 U	0.49	0.15	0.060						
PENTAERYTHRITOL TETRANITRATE	0.25 U	2.5	0.25	0.11						
Surrogates										
1,2-DINITROBENZENE	*2.06*				*1.97*		*104*	*78-119*		
	mg/kg									
LCS (BDJ0318-BS1)						Prepared: 10/14/24 07:57 Analyzed: 10/18/24 19:37				
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	2.00				1.99		101	74-124		
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	2.03				1.99		102	67-129		
1,3,5-TRINITROBENZENE	1.99				1.99		100	80-116		
1,3-DINITROBENZENE	2.07				1.99		104	73-119		
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	1.01 BS1				1.99		50.6	68-135		
NITROBENZENE	2.04				1.99		103	67-129		
2,4,6-TRINITROTOLUENE	2.07				1.99		104	71-120		
4-AMINO-2,6-DINITROTOLUENE	2.04				1.99		103	64-127		
2-AMINO-4,6-DINITROTOLUENE	2.03				1.99		102	71-123		
2,4-DINITROTOLUENE	2.11				1.99		106	75-121		
2,6-DINITROTOLUENE	1.95				1.99		97.9	79-117		
2-NITROTOLUENE	2.12				1.99		107	70-124		
3-NITROTOLUENE	2.04				1.99		103	67-129		
4-NITROTOLUENE	2.14				1.99		108	71-124		
NITROGLYCERIN	2.08				1.99		105	73-124		
PENTAERYTHRITOL TETRANITRATE	1.97 J MI3,				1.99		99.1	72-128		
Surrogates										
1,2-DINITROBENZENE	*2.04*				*1.99*		*103*	*78-119*		

The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document.
No duplication of this report is allowed, except in its entirety.

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

AECOM Omaha	Project: Wingate	
12120 Shamrock Plaza Suite 300	Project Number: Wingate 60517380 Task 3	
Omaha, NE 68154	Project Manager: John Carson	Reported: 10/28/2024 12:41

Quality Control
(Continued)

Liquid Chromatography (Continued)

Analyte	Result/Qual	LOQ	LOD	MDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
	mg/kg									
LCS Dup (BDJ0318-BSD1)						Prepared: 10/14/24 07:57		Analyzed: 10/18/24 20:19		
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	1.96				1.95		101	74-124	1.94	20
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	2.00				1.95		102	67-129	1.74	20
1,3,5-TRINITROBENZENE	1.99				1.95		102	80-116	0.266	20
1,3-DINITROBENZENE	2.03				1.95		104	73-119	2.10	20
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	1.25 BS1, BS3				1.95		64.2	68-135	21.9	20
NITROBENZENE	2.01				1.95		103	67-129	1.41	20
2,4,6-TRINITROTOLUENE	1.99				1.95		102	71-120	4.16	20
4-AMINO-2,6-DINITROTOLUENE	2.01				1.95		103	64-127	1.63	20
2-AMINO-4,6-DINITROTOLUENE	1.99				1.95		102	71-123	2.36	20
2,4-DINITROTOLUENE	2.07				1.95		106	75-121	1.81	20
2,6-DINITROTOLUENE	1.91				1.95		97.9	79-117	1.95	20
2-NITROTOLUENE	2.07				1.95		106	70-124	2.73	20
3-NITROTOLUENE	2.02				1.95		103	67-129	1.18	20
4-NITROTOLUENE	2.11				1.95		108	71-124	1.68	20
NITROGLYCERIN	1.97				1.95		101	73-124	5.35	20
PENTAERYTHRITOL TETRANITRATE	2.13 J MI3,				1.95		109	72-128	7.99	20
Surrogates										
1,2-DINITROBENZENE	*1.98*				*1.95*		*102*	*78-119*		

The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document.
No duplication of this report is allowed, except in its entirety.

APPL, LLC - 908 N. Temperance Ave., Clovis, CA 93611

AECOM Omaha	Project: Wingate	
12120 Shamrock Plaza Suite 300	Project Number: Wingate 60517380 Task 3	
Omaha, NE 68154	Project Manager: John Carson	Reported: 10/28/2024 12:41

Notes and Definitions

Item	Definition
BS1	Blank spike recovered below the lower control limit
BS3	BS/BSD recovered with high RPD
CV1	Calibration verification recovered below the lower control limit
CV2	Calibration verification recovered above the upper control limit
J	Estimated value
MI3	Manual integration, peaks split
MI5	Manual integration, whole peak was not integrated
U	Not detected
Dry	Sample results reported on a dry weight basis.
DF	Dilution Factor
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
*	Value outside control limits
RPD	Relative Percent Difference
%REC	Percent Recovery
Source	Sample that was matrix spiked or duplicated.

LOQ, Limit of Quantitation = Method Reporting Limit (MRL).

The contents of this report apply to the sample(s) analyzed in accordance with the chain of custody document.
No duplication of this report is allowed, except in its entirety.

APPL
AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES
A METIRI GROUP COMPANY

WORK ORDER

24J0093

Printed: 10/28/2024 12:42 pm

Project: **Wingate**
Project Number: **Wingate 60517380 Task 3**
Project Manager: **Monica Garcia-Strickland**
PO Number: **1630628**

Report To:
AECOM Omaha
John Carson
12120 Shamrock Plaza Suite 300
Omaha, NE 68154
Phone: (402) 334-8181
Fax: (402) 334-1984

Invoice To:
AECOM Omaha
John Carson
12120 Shamrock Plaza Suite 300
Omaha, NE 68154
Phone: (402) 334-8181
Fax: (402) 334-1984

Date Received: 10/09/2024 09:35 AM
Date Due: 10/23/2024 (10.00 day TAT)

Logged In By: Steven Crupi
Received By: Steven Crupi

Analysis	Comments
24J0093-01 P2ARROYO-008 [Solid] Sampled 10/5/2024 11:30:00AM	
% Solids	NONE
8330B DOD	Wingate

24J0093 **Sample Receipt Log**

Default Cooler

Samples Received at: **3.1°C**

Custody Seals	Yes	Were all containers sealed in separate bags?	Yes
Containers Intact	Yes	Did all containers arrive in good condition?	Yes
COC/Labels Agree	Yes	Correct containers/preserv. for tests indicated?	Yes
Preservation Confirmed	Yes	Sufficient volume sent for tests requested?	Yes
Received On Ice	Yes	VOA vials for volatiles analysis of water are bubb	No
Was a chain of custody received?	Yes	Sufficient remaining holding time for analyses?	Yes
COCs complete/signed in the appropriate places?	Yes	pH of non-VOA preserved containers documented?	No
Sample labels complete? Sample ID, date/time, etc.	Yes	Unpreserved vials received for VOA analysis?	No
Did all container labels agree with COCs?	Yes	If "yes", are unpreserved VOA vials noted on Work	No

Project Name: Parcel 3 Closure and Corrective Action	Project #: 60517380 Task 3	AECOM 12120 Shamrock Plaza #100 Omaha NE 68154	AECOM
Sampler: Jeff Hayes	Project Mgr John C. Carson PE	Analytical Parameters	402.334.8181

Page 2 of 2

Date	Time	Comp	Grab	ID	Matrix	# Containers	Cont Type	VOC's 8260B	SVOC's 8270D	PCB's 8082A	Explosives 8330B	Dioxins/Furans 8290	Perchlorates 6850	Metals 6010A.6020B.7471B	Nitrate 9056A	Cyanide 9014	NDMA 8270D SIM	
10/5/24	11:30	X		P2ARROYO-008	soil	1	8 oz jar				X							4C

Relenquished By: *Jeffrey Hayes*			Fedex
Received By:	10/8/25		7790 9564 3274
Relenquished By:	Ship Time: 1600		To: APPL Labs ATTN: Monica Garcia-Strickland 908 N. Temperance Ave Clovis CA 93611-8606
Rcv'd for Lab by:			

AECOM Chemist:
Wanda Davis
302-465-1997
Brian Rothmeyer
303-619-6342

NO. 141866

10/9/24
0935

3.5/3.1°C FRB
Frozen temp blank

Page 11 of 125 24J0093 APPL_L4_DOD (Rev0).PDF

Table of Contents

Project Name: Parcel 3 Closure and Corrective Action	Project #: 60517380 Task 3	AECOM 12120 Shamrock Plaza #100 Omaha NE 68154	AECOM
Sampler: Jeff Hayes	Project Mgr John C. Carson PE	Analytical Parameters	402.334.8181

Date	Time	Comp	Grab	ID	Matrix	# Containers	Cont Type	VOC's 8260B	SVOC's 8270D	PCB's 8082A	Explosives 8330B	Dioxins/Furans 8290	Perchlorates 6850	Metals 6010A.6020B.7471B	Nitrate 9056A	Cyanide 9014	NDMA 8270D SIM	Page 2 of 2
10/5/24	11:30	X		P2ARROYO-008	soil	1	8 oz jar				X							4C

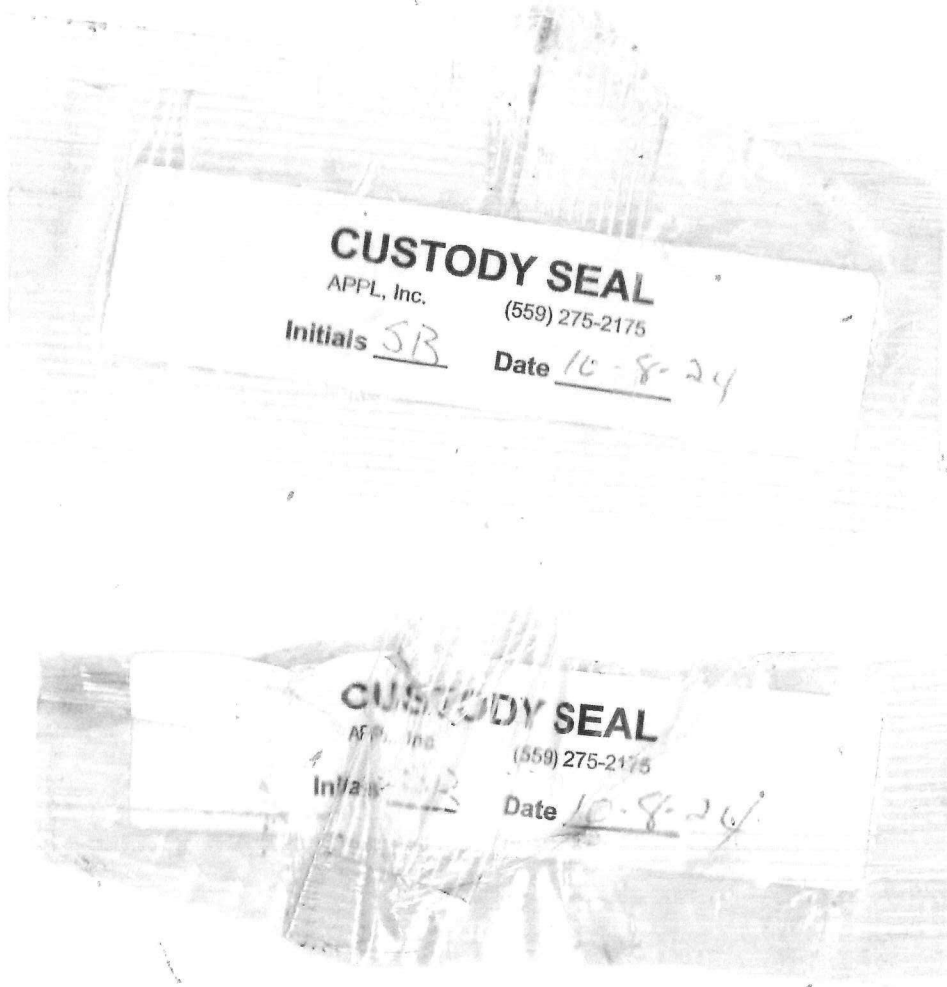
Relenquished By: *Jeffrey Hayes*			Fedex	AECOM Chemist:
Received By:	10/8/25		7790 9564 3274	Wanda Davis 302-465-1997
Relenquished By:	Ship Time: 1600		To: APPL Labs ATTN: Monica Garcia-Strickland 908 N. Temperance Ave Clovis CA 93611-8606	Brian Rothmeyer 303-619-6342
Rcv'd for Lab by:				

10/8/24
0935

NO. 141866

3.5 | 3.1 °C IRB
Frozen temp blank

Table of Contents



ERB

3.5/3.1°C

Frozen temp limit

HPLC

SAMPLE DATA

ANALYSIS DATA SHEET

P2ARROYO-008

Laboratory:	APPL, LLC			Work Order:	24J0093
Client:	AECOM			Project:	Wingate 60517380 Task 3
Matrix:	Solid	Laboratory ID:	24J0093-01	File ID:	W2024-10-18-017
Sampled:	10/05/24 11:30	Prepared:	10/14/24 07:57	Analyzed:	10/18/24 22:27
Solids:	97.60	Preparation:	EPA 8330A	Dilution:	1
Initial/Final:	10.25 g / 80 mL			Instrument:	Waldorf
Batch:	BDJ0318	Sequence:	SD04325	Calibration:	2443002

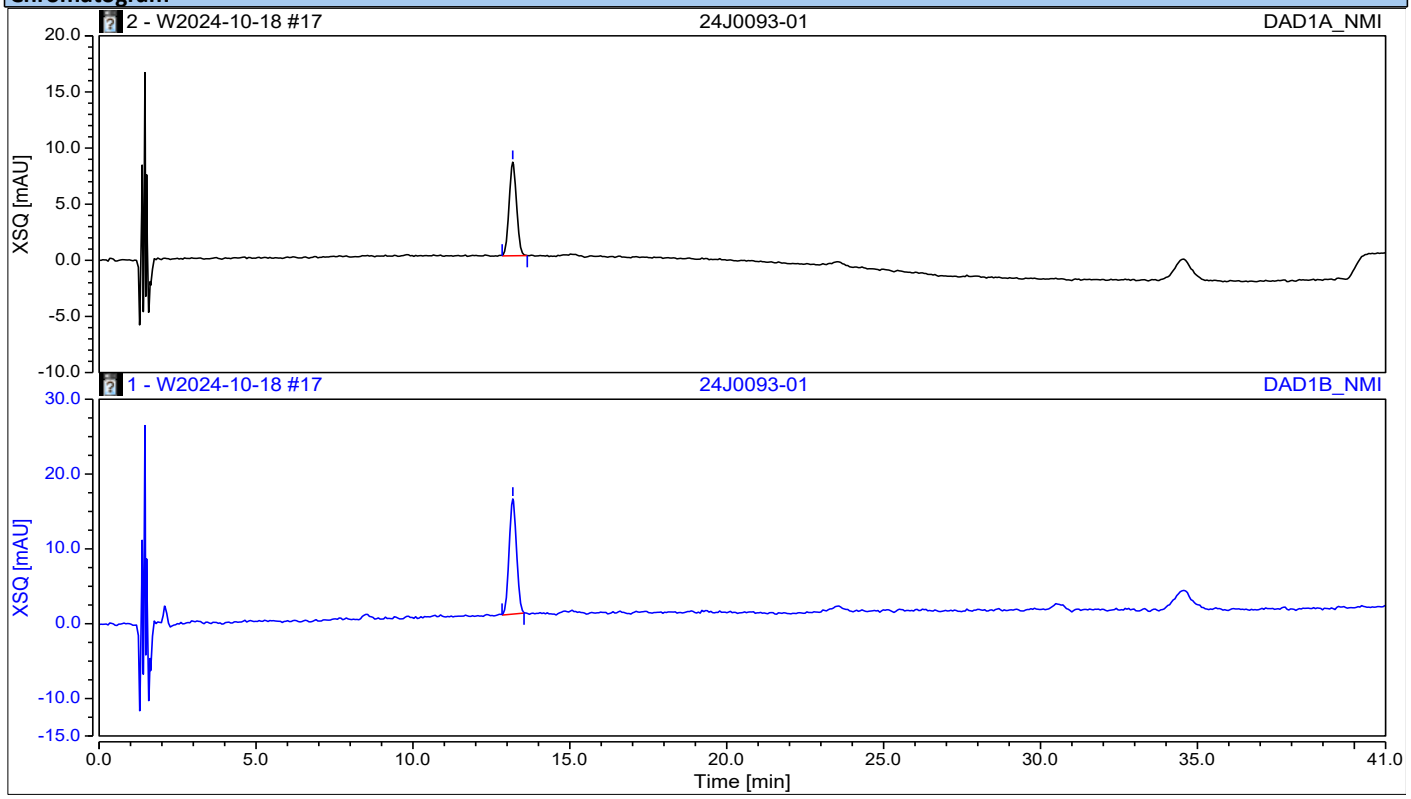
COMPOUND	CONC. (mg/kg)	LOQ	LOD	DL	Q
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCIN	0.073 U	0.49	0.073	0.036	
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.073 U	0.49	0.073	0.024	
1,3,5-TRINITROBENZENE	0.073 U	0.49	0.073	0.013	
1,3-DINITROBENZENE	0.073 U	0.49	0.073	0.021	
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	0.073 U	0.49	0.073	0.036	
NITROBENZENE	0.073 U	0.49	0.073	0.027	
2,4,6-TRINITROTOLUENE	0.66	0.49	0.073	0.030	MI5
4-AMINO-2,6-DINITROTOLUENE	0.073 U	0.49	0.073	0.033	
2-AMINO-4,6-DINITROTOLUENE	0.073 U	0.49	0.073	0.033	
2,4-DINITROTOLUENE	0.073 U	0.49	0.073	0.027	
2,6-DINITROTOLUENE	0.10 J	0.49	0.073	0.030	MI5,
2-NITROTOLUENE	0.073 U	0.49	0.073	0.036	
3-NITROTOLUENE	0.073 U	0.49	0.073	0.036	
4-NITROTOLUENE	0.073 U	0.49	0.073	0.036	
NITROGLYCERIN	0.15 U	0.49	0.15	0.060	
PENTAERYTHRITOL TETRANITRATE	0.24 U	2.4	0.24	0.11	

Original Chromatogram

Injection Details

Injection Name:	**24J0093-01**	*Instrument:*	**Waldorf**
Vial Number:	**17**	*Run Time (min):*	**41.00**
Injection Type:	**Unknown**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**18/Oct/2024 22:27**
Processing Method:	**8330 Statler 2024-10-18**	*Dilution Factor:*	**1.0000**
Last Updated:	**21/Oct/2024 07:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
n.a.	NG	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	PETN	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	HMX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	RDX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3,5-DNA	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	NB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	1,2-DNB	13.180	2.2847	8.339	63.06	78.68	254.6894
n.a.	4-Am-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2-Am-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	1,3-DNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	4-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	2,6-DNT	23.543	0.1132	0.337	3.12	3.18	13.2155
n.a.	1,3,5-TNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2,4-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Tetryl	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	2,4,6-TNT	34.563	1.2253	1.922	33.82	18.14	85.1011
Total:			**3.623**	**10.598**	**100.000**	**100.000**	

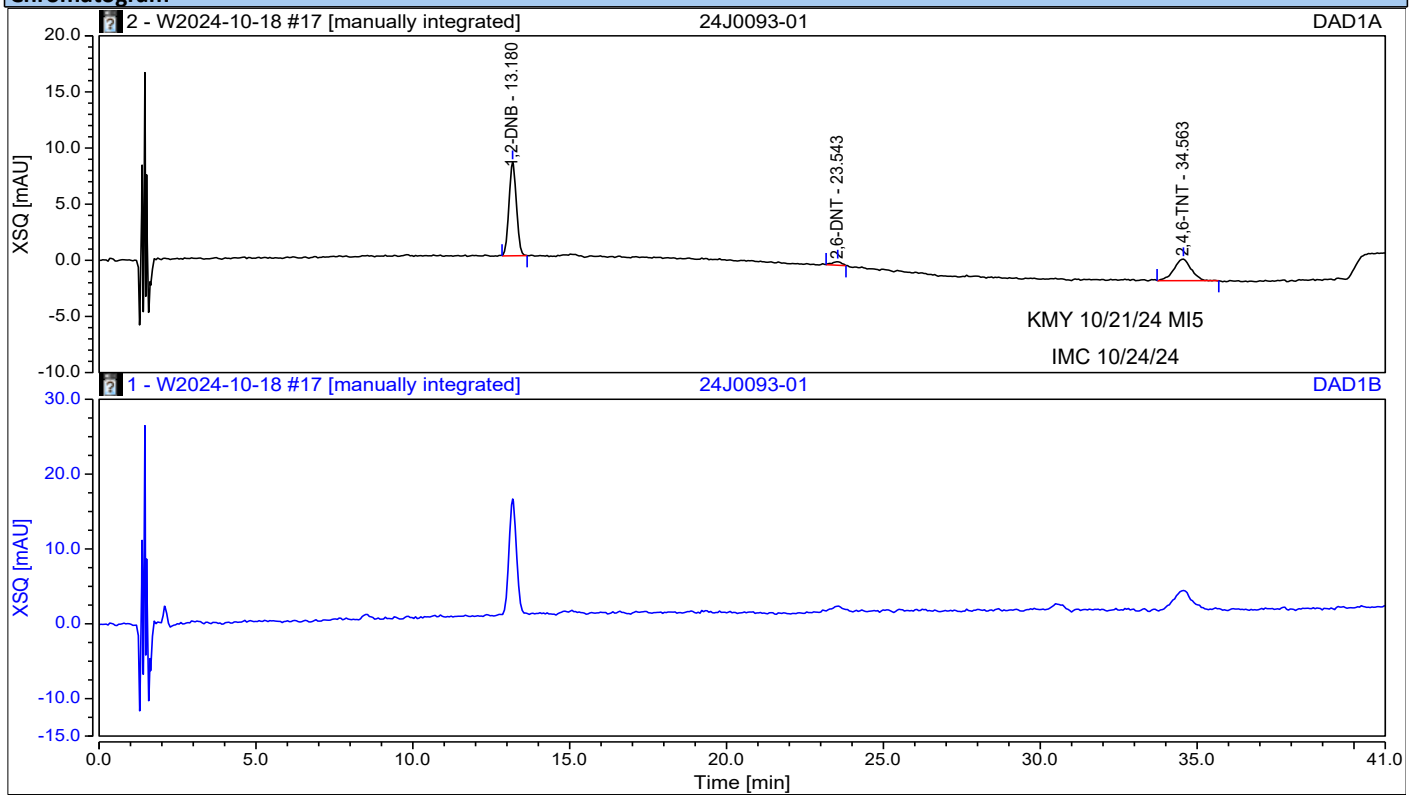
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Chromatogram and Results

Injection Details

Injection Name:	**24J0093-01**	*Instrument:*	**Waldorf**
Vial Number:	**17**	*Run Time (min):*	**41.00**
Injection Type:	**Unknown**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**18/Oct/2024 22:27**
Processing Method:	**8330 Statler 2024-10-18**	*Dilution Factor:*	**1.0000**
Last Updated:	**21/Oct/2024 07:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
n.a.	NG	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	PETN	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	HMX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	RDX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3,5-DNA	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	NB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	1,2-DNB	13.180	2.2847	8.339	63.06	78.68	254.6894
n.a.	4-Am-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2-Am-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	1,3-DNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	4-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	2,6-DNT	23.543	0.1132	0.337	3.12	3.18	13.2155
n.a.	1,3,5-TNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2,4-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Tetryl	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	2,4,6-TNT	34.563	1.2253	1.922	33.82	18.14	85.1011
Total:			**3.623**	**10.598**	**100.000**	**100.000**	

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Chromeleon 7.3.2.10759

ANALYSIS DATA SHEET

P2ARROYO-008

Laboratory:	APPL, LLC			Work Order:	24J0093
Client:	AECOM			Project:	Wingate 60517380 Task 3
Matrix:	Solid	Laboratory ID:	24J0093-01RE1	File ID:	W2024-10-17-010
Sampled:	10/05/24 11:30	Prepared:	10/14/24 07:57	Analyzed:	10/17/24 16:37
Solids:	97.60	Preparation:	EPA 8330A	Dilution:	1
Initial/Final:	10.25 g / 80 mL			Instrument:	Waldorf
Batch:	BDJ0318	Sequence:	SD04327	Calibration:	2433019

COMPOUND	CONC. (mg/kg)	LOQ	LOD	DL	Q
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCIN	0.073 U	0.49	0.073	0.036	
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.073 U	0.49	0.073	0.024	
1,3,5-TRINITROBENZENE	0.073 U	0.49	0.073	0.013	
1,3-DINITROBENZENE	0.073 U	0.49	0.073	0.021	
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	0.073 U	0.49	0.073	0.036	
NITROBENZENE	0.073 U	0.49	0.073	0.027	
2,4,6-TRINITROTOLUENE	0.58	0.49	0.073	0.030	
4-AMINO-2,6-DINITROTOLUENE	0.073 U	0.49	0.073	0.033	
2-AMINO-4,6-DINITROTOLUENE	0.073 U	0.49	0.073	0.033	
2,4-DINITROTOLUENE	0.073 U	0.49	0.073	0.027	
2,6-DINITROTOLUENE	0.088 J	0.49	0.073	0.030	
2-NITROTOLUENE	0.073 U	0.49	0.073	0.036	
3-NITROTOLUENE	0.073 U	0.49	0.073	0.036	
4-NITROTOLUENE	0.073 U	0.49	0.073	0.036	
NITROGLYCERIN	0.15 U	0.49	0.15	0.060	
PENTAERYTHRITOL TETRANITRATE	0.24 U	2.4	0.24	0.11	

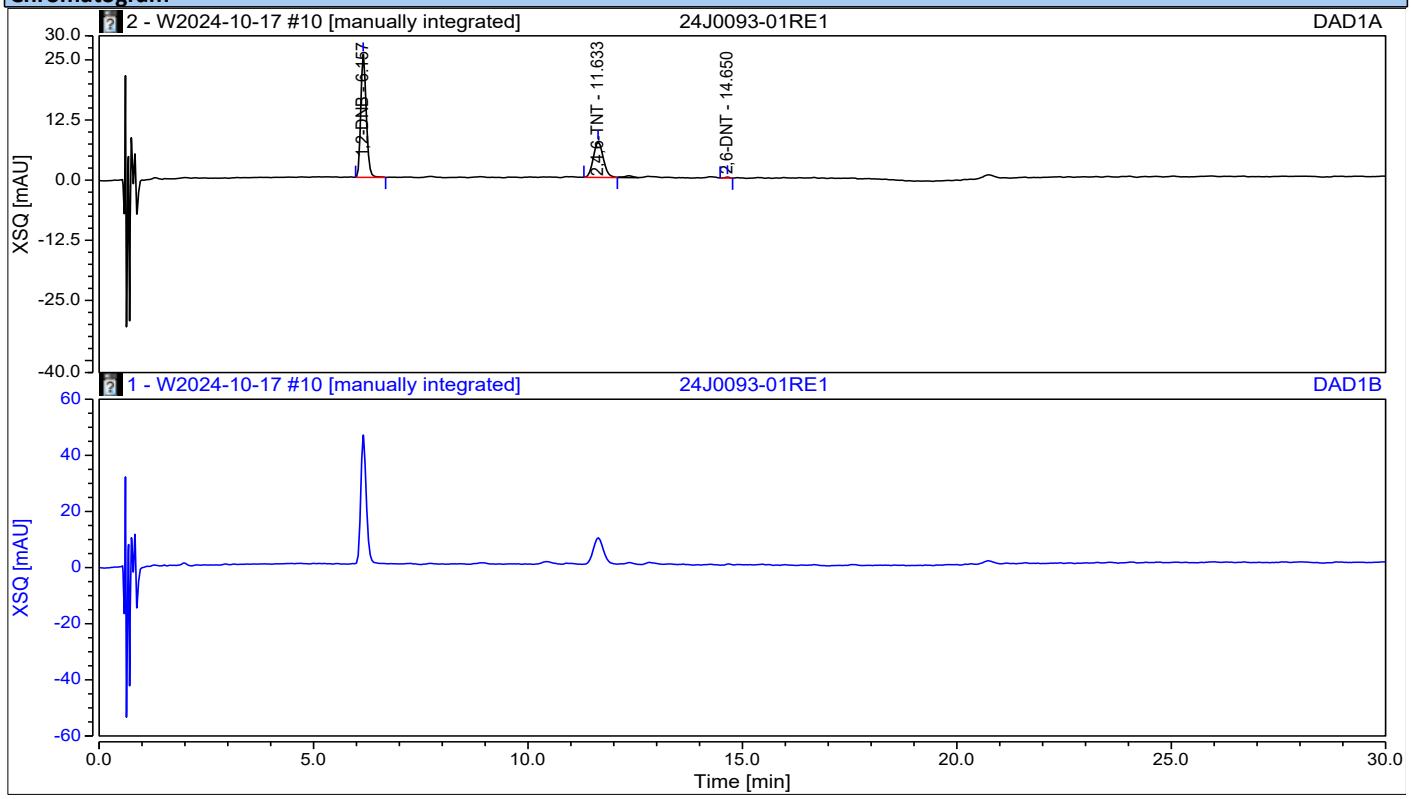
Instrument:
Sequence:W2024-10-17

Chromatogram and Results

Injection Details

Injection Name:	**24J0093-01RE1**	*Instrument:*	**Waldorf**
Vial Number:	**10**	*Run Time (min):*	**30.00**
Injection Type:	**Unknown**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**17/Oct/2024 16:37**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**21/Oct/2024 10:51**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
n.a.	NG	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	PETN	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	HMX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	RDX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	1,3,5-TNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	1,2-DNB	6.157	3.7855	25.613	65.27	77.15	278.4751
n.a.	1,3-DNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3,5-DNA	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	NB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Tetryl	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	2,4,6-TNT	11.633	1.9905	7.367	34.32	22.19	74.5545
n.a.	2-Am-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	4-Am-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2,4-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	2,6-DNT	14.650	0.0235	0.218	0.41	0.66	11.2717
n.a.	2-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	4-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**5.800**	**33.198**	**100.000**	**100.000**	

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QUALITY CONTROL

SURROGATE SUMMARY SHEET

EPA 8330B

Client: AECOM
Work Order: 24J0093
Project: Wingate 60517380 Task 3

Surrogate Compound	Spike level	% Recovery	Recovery Limits	Q
P2ARROYO-008 (24J0093-01) mg/kg	Lab File ID: W2024-10-18-017			Analyzed: 10/18/24 22:27
1,2-DINITROBENZENE	1.95	102	78 - 119	
P2ARROYO-008 (24J0093-01RE1) mg/kg	Lab File ID: W2024-10-17-010			Analyzed: 10/17/24 16:37
1,2-DINITROBENZENE	1.95	111	78 - 119	
Blank (BDJ0318-BLK1) mg/kg	Lab File ID: W2024-10-18-012			Analyzed: 10/18/24 18:54
1,2-DINITROBENZENE	1.97	104	78 - 119	
LCS (BDJ0318-BS1) mg/kg	Lab File ID: W2024-10-18-013			Analyzed: 10/18/24 19:37
1,2-DINITROBENZENE	1.99	103	78 - 119	
LCS Dup (BDJ0318-BSD1) mg/kg	Lab File ID: W2024-10-18-014			Analyzed: 10/18/24 20:19
1,2-DINITROBENZENE	1.95	102	78 - 119	

METHOD BLANK SUMMARY

EPA 8330B

Laboratory:	APPL, LLC	Work Order:	24J0093
Client:	AECOM	Project:	Wingate 60517380 Task 3
Blank ID:	BDJ0318-BLK1	Batch:	BDJ0318
Prepared:	10/14/2024 07:57		

Client Sample ID	Laboratory Sample ID	Lab File ID	Time Analyzed
P2ARROYO-008	24J0093-01RE1	W2024-10-17-010	16:37
LCS	BDJ0318-BS1	W2024-10-18-013	19:37
LCS Dup	BDJ0318-BSD1	W2024-10-18-014	20:19
P2ARROYO-008	24J0093-01	W2024-10-18-017	22:27

ANALYSIS DATA SHEET

Blank

Laboratory:	APPL, LLC			Work Order:	24J0093
Client:	AECOM		Project:	Wingate 60517380 Task 3	
Matrix:	Solid	Laboratory ID:	BDJ0318-BLK1	File ID:	W2024-10-18-012
Sampled:		Prepared:	10/14/24 07:57	Analyzed:	10/18/24 18:54
Solids:		Preparation:	EPA 8330A	Dilution:	1
Batch:	BDJ0318	Sequence:	SD04325	Calibration:	2443002
Instrument:	Waldorf				
Column:	1				

COMPOUND	CONC. (mg/kg)	LOQ	LOD	DL	Q
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.074 U	0.49	0.074	0.037	U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.074 U	0.49	0.074	0.025	U
1,3,5-TRINITROBENZENE	0.074 U	0.49	0.074	0.013	U
1,3-DINITROBENZENE	0.074 U	0.49	0.074	0.022	U
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	0.074 U	0.49	0.074	0.037	U
NITROBENZENE	0.074 U	0.49	0.074	0.028	U
2,4,6-TRINITROTOLUENE	0.074 U	0.49	0.074	0.031	U
4-AMINO-2,6-DINITROTOLUENE	0.074 U	0.49	0.074	0.034	U
2-AMINO-4,6-DINITROTOLUENE	0.074 U	0.49	0.074	0.034	U
2,4-DINITROTOLUENE	0.074 U	0.49	0.074	0.028	U
2,6-DINITROTOLUENE	0.074 U	0.49	0.074	0.031	U
2-NITROTOLUENE	0.074 U	0.49	0.074	0.037	U
3-NITROTOLUENE	0.074 U	0.49	0.074	0.037	U
4-NITROTOLUENE	0.074 U	0.49	0.074	0.037	U
NITROGLYCERIN	0.15 U	0.49	0.15	0.060	U
PENTAERYTHRITOL TETRANITRATE	0.25 U	2.5	0.25	0.11	U

LCS / LCS DUPLICATE RECOVERY

EPA 8330B

Laboratory:	APPL, LLC	Work Order:	24J0093
Client:	AECOM	Project:	Wingate 60517380 Task 3
Matrix:	Solid	Preparation:	EPA 8330A
Batch:	BDJ0318	Laboratory ID:	BDJ0318-BS1

ANALYTE	SPIKE ADDED (mg/kg)	LCS CONCENTRATION (mg/kg)	LCS % REC.		QC LIMITS REC.	INSTRUMENT
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	1.99	2.00	101		74 - 124	Waldorf
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	1.99	2.03	102		67 - 129	Waldorf
1,3,5-TRINITROBENZENE	1.99	1.99	100		80 - 116	Waldorf
1,3-DINITROBENZENE	1.99	2.07	104		73 - 119	Waldorf
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	1.99	1.01	50.6	*	68 - 135	Waldorf
NITROBENZENE	1.99	2.04	103		67 - 129	Waldorf
2,4,6-TRINITROTOLUENE	1.99	2.07	104		71 - 120	Waldorf
4-AMINO-2,6-DINITROTOLUENE	1.99	2.04	103		64 - 127	Waldorf
2-AMINO-4,6-DINITROTOLUENE	1.99	2.03	102		71 - 123	Waldorf
2,4-DINITROTOLUENE	1.99	2.11	106		75 - 121	Waldorf
2,6-DINITROTOLUENE	1.99	1.95	97.9		79 - 117	Waldorf
2-NITROTOLUENE	1.99	2.12	107		70 - 124	Waldorf
3-NITROTOLUENE	1.99	2.04	103		67 - 129	Waldorf
4-NITROTOLUENE	1.99	2.14	108		71 - 124	Waldorf
NITROGLYCERIN	1.99	2.08	105		73 - 124	Waldorf
PENTAERYTHRITOL TETRANITRATE	1.99	1.97	99.1		72 - 128	Waldorf

ANALYTE	SPIKE ADDED (mg/kg)	LCSD CONCENTRATION (mg/kg)	LCSD % REC. #		% RPD #		QC LIMITS RPD	QC LIMITS REC.	INSTRUMENT
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	1.95	1.96	101		1.94		20	74 - 124	Waldorf
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	1.95	2.00	102		1.74		20	67 - 129	Waldorf
1,3,5-TRINITROBENZENE	1.95	1.99	102		0.266		20	80 - 116	Waldorf
1,3-DINITROBENZENE	1.95	2.03	104		2.10		20	73 - 119	Waldorf
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	1.95	1.25	64.2	*	21.9	*	20	68 - 135	Waldorf
NITROBENZENE	1.95	2.01	103		1.41		20	67 - 129	Waldorf
2,4,6-TRINITROTOLUENE	1.95	1.99	102		4.16		20	71 - 120	Waldorf
4-AMINO-2,6-DINITROTOLUENE	1.95	2.01	103		1.63		20	64 - 127	Waldorf
2-AMINO-4,6-DINITROTOLUENE	1.95	1.99	102		2.36		20	71 - 123	Waldorf
2,4-DINITROTOLUENE	1.95	2.07	106		1.81		20	75 - 121	Waldorf
2,6-DINITROTOLUENE	1.95	1.91	97.9		1.95		20	79 - 117	Waldorf
2-NITROTOLUENE	1.95	2.07	106		2.73		20	70 - 124	Waldorf

LCS / LCS DUPLICATE RECOVERY

EPA 8330B

Laboratory:	APPL, LLC	Work Order:	24J0093
Client:	AECOM	Project:	Wingate 60517380 Task 3
Matrix:	Solid	Preparation:	EPA 8330A
Batch:	BDJ0318	Laboratory ID:	BDJ0318-BSD1

ANALYTE	SPIKE ADDED (mg/kg)	LCSD CONCENTRATION (mg/kg)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.	INSTRUMENT
3-NITROTOLUENE	1.95	2.02	103	1.18	20	67 - 129	Waldorf
4-NITROTOLUENE	1.95	2.11	108	1.68	20	71 - 124	Waldorf
NITROGLYCERIN	1.95	1.97	101	5.35	20	73 - 124	Waldorf
PENTAERYTHRITOL TETRANITRATE	1.95	2.13	109	7.99	20	72 - 128	Waldorf

CALIBRATION SUMMARY

FORM VI
INITIAL CALIBRATION DATA SHEET

EPA 8330B

Client: AECOM Omaha SDG:

Project: Wingate

Calibration: 2433019 Instrument: Waldorf

Units: ng/mL Calibration Date: 8/14/2024 7:00:39AM

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
OCTAHYDRO-1,3,5,7-TETRAN	50	0.21292	5	0.223	250	0.213052	1000	0.199345	2500	0.1965452	5000	0.1837282
HEXAHYDRO-1,3,5-TRINITRO-	50	0.12522	5	0.1098	250	0.125968	1000	0.119806	2500	0.1214784	5000	0.1217222
1,3,5-TRINITROBENZENE	50	0.16268	5	0.1758	250	0.225936	1000	0.215112	2500	0.2172088	5000	0.2112352
1,3-DINITROBENZENE	50	0.209	5	0.1724	250	0.207284	1000	0.197927	2500	0.203082	5000	0.203591
METHYL-2,4,6-TRINITROPHEN	50	0.02714	5	0.02	250	0.08428	1000	0.080923	2500	0.0818764	5000	0.0827446
NITROBENZENE	50	0.09828	5	0.1018	250	0.094684	1000	9.103701E-02	2500	0.0934724	5000	0.094661
2,4,6-TRINITROTOLUENE	50	0.10988	5	0.1174	250	0.110516	1000	0.106445	2500	0.107976	5000	0.1093008
4-AMINO-2,6-DINITROTOLUEN	50	0.0939	5	0.079	250	0.093164	1000	0.08897	2500	0.0890572	5000	0.088395
2-AMINO-4,6-DINITROTOLUEN	50	0.11182	5	0.1264	250	0.110476	1000	0.106232	2500	0.107664	5000	0.1089574
2,4-DINITROTOLUENE	50	0.1472	5	0.14	250	0.145948	1000	0.140704	2500	0.1433952	5000	0.1455596
2,6-DINITROTOLUENE	50	0.08632	5	0.0802	250	0.085104	1000	0.081707	2500	0.0830956	5000	0.0843304
2-NITROTOLUENE	50	0.07604	5	0.0718	250	0.075564	1000	0.072876	2500	0.0745532	5000	0.0755984
3-NITROTOLUENE	50	0.06692	5	0.0624	250	0.065368	1000	0.062566	2500	0.063998	5000	0.0648774
4-NITROTOLUENE	50	0.07056	5	0.07	250	0.068556	1000	0.066077	2500	0.0676304	5000	0.068439
NITROGLYCERIN	50	0.03554	5	0.039	250	0.033144	1000	0.031947	2500	0.0320652	5000	0.032095
PENTAERYTHRITOL TETRAN	50	0.02234	5	0.0324	250	0.023504	1000	0.021852	2500	0.022	5000	0.0222216
3,5-DINITROANILINE	50	0.1665	5	0.1652	250	0.167668	1000	0.159604	2500	0.1619584	5000	0.1625648
1,2-DINITROBENZENE	50	0.09874	5	8.679999E-02	250	0.0966	1000	0.092219	2500	0.0948104	5000	9.653401E-02

FORM VI
INITIAL CALIBRATION DATA SHEET (Continued)
EPA 8330B

Laboratory: APPL, LLC
SDG:
Client: AECOM Omaha
Project: Wingate
Calibration: 2433019
Instrument: Waldorf
Matrix: Solid
Calibration Date:: 8/14/2024 7:00:39AM

Compound	Mean RF	RF RSD	Slope/QR A	Intercept/QR B	QR C	LR r/QRCOD	LIMIT	Q	Type
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5	0.2047651	6.9	0.1844759	8.343725		0.999	0.99		L
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIA	0.1206658	4.8	0.121661	-0.1350462		1.000	0.99		L
1,3,5-TRINITROBENZENE	0.2013287	12.7	0.2118969	2.342456		1.000	0.99		L
1,3-DINITROBENZENE	0.1988807	6.8	0.2035938	-0.9872698		1.000	0.99		L
METHYL-2,4,6-TRINITROPHENYLNITRAM	6.282733E-02	48.6	8.287572E-02	-1.309462		1.000	0.99		L
NITROBENZENE	9.565573E-02	4.0	9.457388E-02	-0.9343362		1.000	0.99		L
2,4,6-TRINITROTOLUENE	0.110253	3.4	0.1091691	-0.7724482		1.000	0.99		L
4-AMINO-2,6-DINITROTOLUENE	0.0887477	6.0	8.837785E-02	0.6336673		1.000	0.99		L
2-AMINO-4,6-DINITROTOLUENE	0.1119249	6.6	0.1088101	-0.675287		1.000	0.99		L
2,4-DINITROTOLUENE	0.1438011	2.1	0.1453786	-1.420227		1.000	0.99		L
2,6-DINITROTOLUENE	0.0834595	2.7	8.421144E-02	-0.7317825		1.000	0.99		L
2-NITROTOLUENE	7.440527E-02	2.3	7.552527E-02	-0.782835		1.000	0.99		L
3-NITROTOLUENE	0.0643549	2.7	6.480184E-02	-0.6053692		1.000	0.99		L
4-NITROTOLUENE	6.854373E-02	2.4	6.837814E-02	-0.6174189		1.000	0.99		L
NITROGLYCERIN	0.0339652	8.3	3.206295E-02	8.812892E-02		1.000	0.99		L
PENTAERYTHRITOL TETRANITRATE	2.405293E-02	17.2	2.217662E-02	-2.502045E-02		1.000	0.99		L
3,5-DINITROANILINE	0.1639159	1.9	0.16246	-0.3447061		1.000	0.99		L
1,2-DINITROBENZENE	0.0942839	4.5	9.640318E-02	-1.232338		1.000	0.99		L

FORM VI
INITIAL CALIBRATION DATA SHEET

EPA 8330B

Client: AECOM Omaha SDG:

Project: Wingate

Calibration: 2443002 Instrument: Waldorf

Units: ng/mL Calibration Date: 10/18/2024 8:00:22AM

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
OCTAHYDRO-1,3,5,7-TETRAN	5	0.072	50	0.06102	250	0.062436	1000	0.060995	2500	0.0587932	5000	0.0590096
HEXAHYDRO-1,3,5-TRINITRO-	5	0.0572	50	0.05322	250	0.053672	1000	0.05244	2500	0.050754	5000	0.0513522
1,3,5-TRINITROBENZENE	5	0.0298	50	0.03446	250	0.035048	1000	0.033704	2500	0.0318324	5000	0.0314242
1,3-DINITROBENZENE	5	0.0618	50	0.05754	250	0.057516	1000	0.05631	2500	0.0542528	5000	0.0550654
METHYL-2,4,6-TRINITROPHEN	5	0.0244	50	0.02174	250	0.023496	1000	0.022948	2500	0.0221348	5000	0.0225142
NITROBENZENE	5	0.055	50	0.04838	250	0.048392	1000	0.049076	2500	0.0475028	5000	0.0480714
2,4,6-TRINITROTOLUENE	5	0.0228	50	0.0227	250	0.023312	1000	0.022708	2500	0.0218364	5000	0.0220814
4-AMINO-2,6-DINITROTOLUEN	5	0.0486	50	0.04158	250	0.041744	1000	0.040944	2500	0.0395772	5000	0.0403328
2-AMINO-4,6-DINITROTOLUEN	5	0.0578	50	0.05158	250	0.05308	1000	0.051957	2500	0.0501784	5000	0.0509268
2,4-DINITROTOLUENE	5	0.0374	50	0.0427	250	0.043668	1000	0.042813	2500	0.0412684	5000	0.0420448
2,6-DINITROTOLUENE	5	0.03	50	0.02554	250	0.025148	1000	0.024592	2500	0.02375	5000	0.0242372
2-NITROTOLUENE	5	0.0222	50	0.02512	250	0.024364	1000	0.024701	2500	0.0239636	5000	0.0242854
3-NITROTOLUENE	5	0.0336	50	0.0269	250	0.026976	1000	0.027296	2500	0.0262916	5000	0.0266018
4-NITROTOLUENE	5	0.0228	50	0.023	250	0.02352	1000	0.023861	2500	0.0231092	5000	0.0234906
NITROGLYCERIN	5	0.0232	50	0.01992	250	0.018308	1000	0.018063	2500	0.017356	5000	0.0175032
PENTAERYTHRITOL TETRAN	5	0.0126	50	0.01414	250	0.013208	1000	0.011813	2500	0.0112636	5000	0.0117376
3,5-DINITROANILINE	5	0.0784	50	0.06696	250	0.06786	1000	0.066355	2500	0.0642608	5000	0.0652438
1,2-DINITROBENZENE	5	0.0322	50	0.03316	250	0.033684	1000	0.033002	2500	0.0319232	5000	0.0325348

FORM VI
INITIAL CALIBRATION DATA SHEET (Continued)
EPA 8330B

Laboratory: APPL, LLC
SDG:
Client: AECOM Omaha
Project: Wingate
Calibration: 2443002
Instrument: Waldorf
Matrix: Solid
Calibration Date:: 10/18/2024 8:00:22AM

Compound	Mean RF	RF RSD	Slope/QR A	Intercept/QR B	QR C	LR r/QRCOD	LIMIT	Q	Type
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5	6.237563E-02	7.9					20		A
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIA	5.310637E-02	4.3					20		A
1,3,5-TRINITROBENZENE	3.271143E-02	6.2					20		A
1,3-DINITROBENZENE	0.0570807	4.7					20		A
METHYL-2,4,6-TRINITROPHENYLNITRAM	2.287217E-02	4.2					20		A
NITROBENZENE	0.0494037	5.6					20		A
2,4,6-TRINITROTOLUENE	2.257297E-02	2.4					20		A
4-AMINO-2,6-DINITROTOLUENE	4.212967E-02	7.8					20		A
2-AMINO-4,6-DINITROTOLUENE	5.258703E-02	5.2					20		A
2,4-DINITROTOLUENE	4.164903E-02	5.4					20		A
2,6-DINITROTOLUENE	2.554453E-02	8.9					20		A
2-NITROTOLUENE	2.410567E-02	4.2					20		A
3-NITROTOLUENE	2.794423E-02	10.0					20		A
4-NITROTOLUENE	0.0232968	1.7					20		A
NITROGLYCERIN	1.905837E-02	11.7					20		A
PENTAERYTHRITOL TETRANITRATE	1.246037E-02	8.6					20		A
3,5-DINITROANILINE	6.817993E-02	7.6					20		A
1,2-DINITROBENZENE	3.275067E-02	2.0					20		A

INITIAL CALIBRATION STANDARDS

EPA 8330B

Laboratory:	APPL, LLC	Work Order:	24J0093
Client:	AECOM	Project:	Wingate 60517380 Task 3
Sequence:	SD03246	Instrument:	Waldorf
Calibration:	2433019		

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
24H0397	8330 - Cal 1 0.005ug/mL 08/14/24	SD03246-CAL1	W2024-08-14-017	08/14/24 17:32
24H0398	8330 - Cal 2 0.05ug/mL 08/14/24	SD03246-CAL2	W2024-08-14-018	08/14/24 18:03
24H0399	8330 - Cal 3 0.25ug/mL 08/14/24	SD03246-CAL3	W2024-08-14-019	08/14/24 18:35
24H0400	8330 - Cal 4 1.0ug/mL 08/14/24	SD03246-CAL4	W2024-08-14-020	08/14/24 19:06
24H0401	8330 - Cal 5 2.5ug/mL 08/14/24	SD03246-CAL5	W2024-08-14-021	08/14/24 19:38
24H0402	8330 - Cal 6 5.0ug/mL 08/14/24	SD03246-CAL6	W2024-08-14-022	08/14/24 20:09
24H0403	8330 - SCV 1.0ug/mL 08/14/24	SD03246-SCV1	W2024-08-14-023	08/14/24 20:41

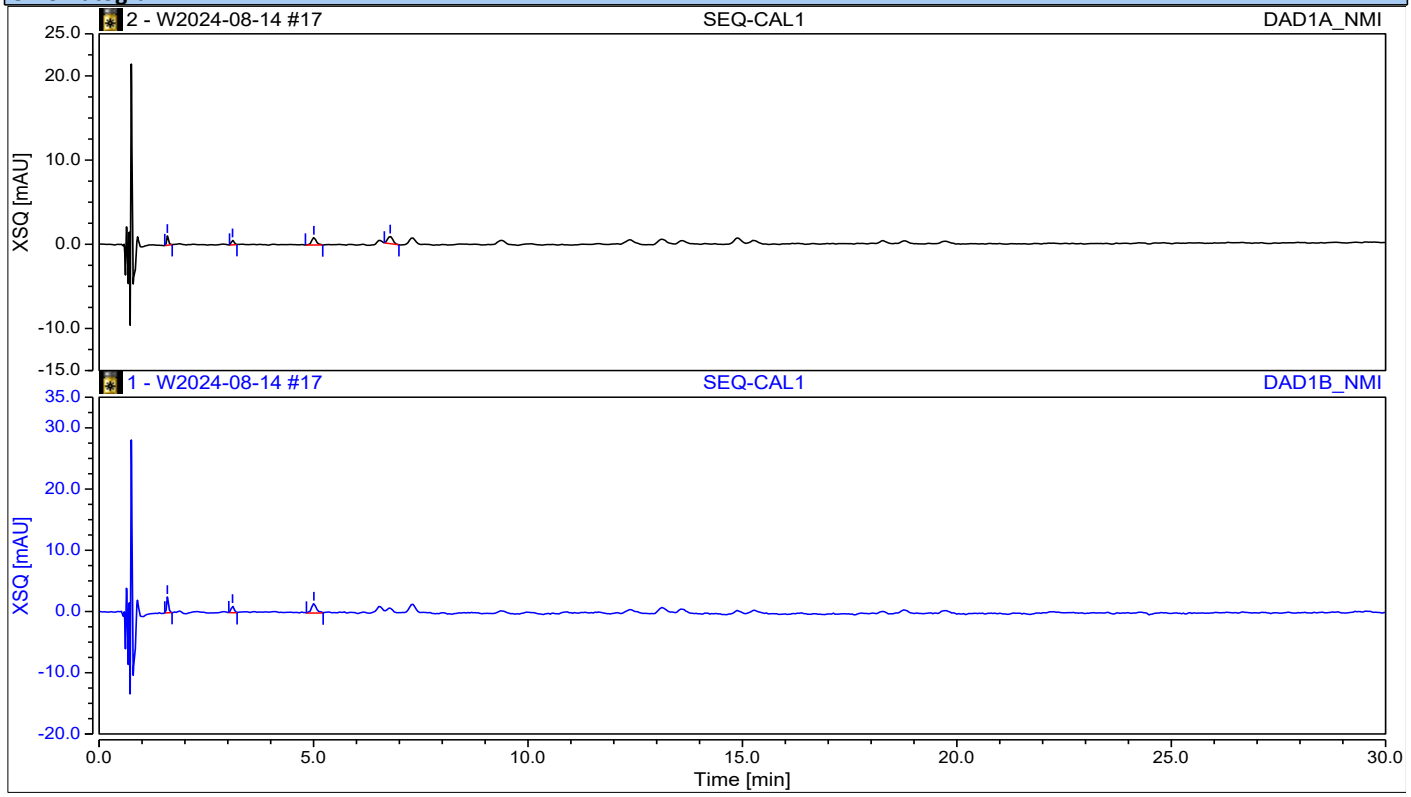
Instrument:
Sequence:W2024-08-14

Original Chromatogram

Injection Details

Injection Name:	**SEQ-CAL1**	*Instrument:*	**Waldorf**
Vial Number:	**17**	*Run Time (min):*	**30.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**14/Aug/2024 17:32**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**15/Aug/2024 14:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.927	0.0366	0.195	58.55	54.66	3.3385
2	PETN	22.233	0.0259	0.162	41.45	45.34	8.4312
1	HMX	1.590	0.0571	1.115	4.13	12.37	n.a.
2	RDX	3.110	0.0430	0.549	3.11	6.09	5.6192
3	1,3,5-TNB	5.007	0.1130	0.879	8.16	9.76	n.a.
4	1,2-DNB	6.533	0.0522	0.434	3.77	4.82	17.2890
5	1,3-DNB	6.787	0.1229	0.862	8.88	9.56	9.0831
6	3,5-DNA	7.297	0.1353	0.826	9.78	9.16	7.2055
7	NB	9.383	0.0965	0.509	6.97	5.64	15.2579
8	Tetryl	11.650	0.0178	0.100	1.29	1.11	17.0100
9	2,4,6-TNT	12.377	0.1352	0.587	9.77	6.52	12.4543
10	2-Am-DNT	13.120	0.1445	0.632	10.44	7.01	12.0146
11	4-Am-DNT	13.583	0.0705	0.395	5.10	4.38	n.a.
12	2,4-DNT	14.887	0.1293	0.700	9.34	7.77	14.5865
13	2,6-DNT	15.247	0.0741	0.401	5.35	4.45	13.4510
14	2-NT	18.277	0.0601	0.359	4.35	3.99	15.1215
15	4-NT	18.783	0.0598	0.350	4.32	3.89	14.1551
16	3-NT	19.727	0.0725	0.312	5.24	3.47	14.1590
Total:			**1.446**	**9.369**	**200.000**	**200.000**	

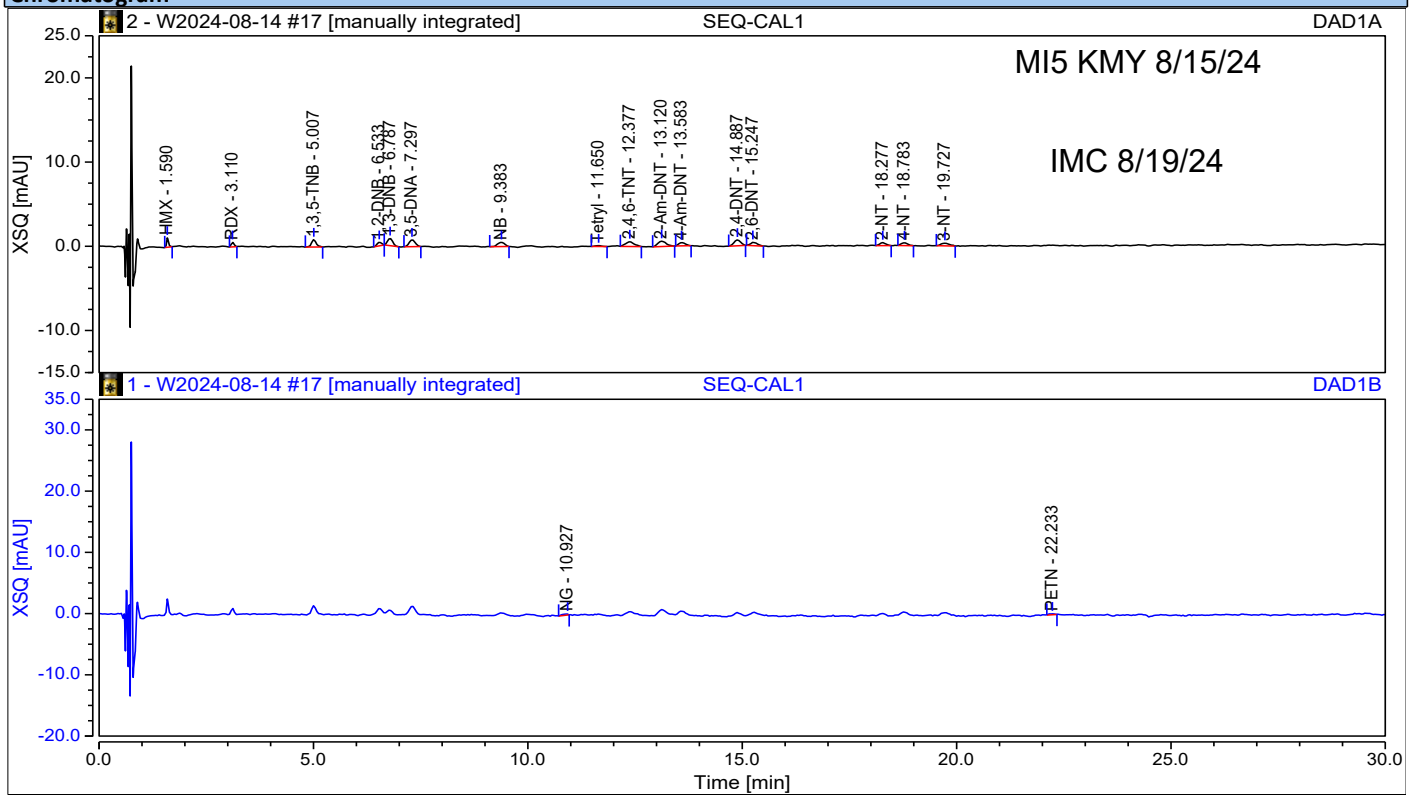
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Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL1**	*Instrument:*	**Waldorf**
Vial Number:	**17**	*Run Time (min):*	**30.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**14/Aug/2024 17:32**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**15/Aug/2024 14:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.927	0.0366	0.195	58.55	54.66	3.3385
2	PETN	22.233	0.0259	0.162	41.45	45.34	8.4312
1	HMX	1.590	0.0571	1.115	4.13	12.37	n.a.
2	RDX	3.110	0.0430	0.549	3.11	6.09	5.6192
3	1,3,5-TNB	5.007	0.1130	0.879	8.16	9.76	n.a.
4	1,2-DNB	6.533	0.0522	0.434	3.77	4.82	17.2890
5	1,3-DNB	6.787	0.1229	0.862	8.88	9.56	9.0831
6	3,5-DNA	7.297	0.1353	0.826	9.78	9.16	7.2055
7	NB	9.383	0.0965	0.509	6.97	5.64	15.2579
8	Tetryl	11.650	0.0178	0.100	1.29	1.11	17.0100
9	2,4,6-TNT	12.377	0.1352	0.587	9.77	6.52	12.4543
10	2-Am-DNT	13.120	0.1445	0.632	10.44	7.01	12.0146
11	4-Am-DNT	13.583	0.0705	0.395	5.10	4.38	n.a.
12	2,4-DNT	14.887	0.1293	0.700	9.34	7.77	14.5865
13	2,6-DNT	15.247	0.0741	0.401	5.35	4.45	13.4510
14	2-NT	18.277	0.0601	0.359	4.35	3.99	15.1215
15	4-NT	18.783	0.0598	0.350	4.32	3.89	14.1551
16	3-NT	19.727	0.0725	0.312	5.24	3.47	14.1590
Total:			**1.446**	**9.369**	**200.000**	**200.000**	

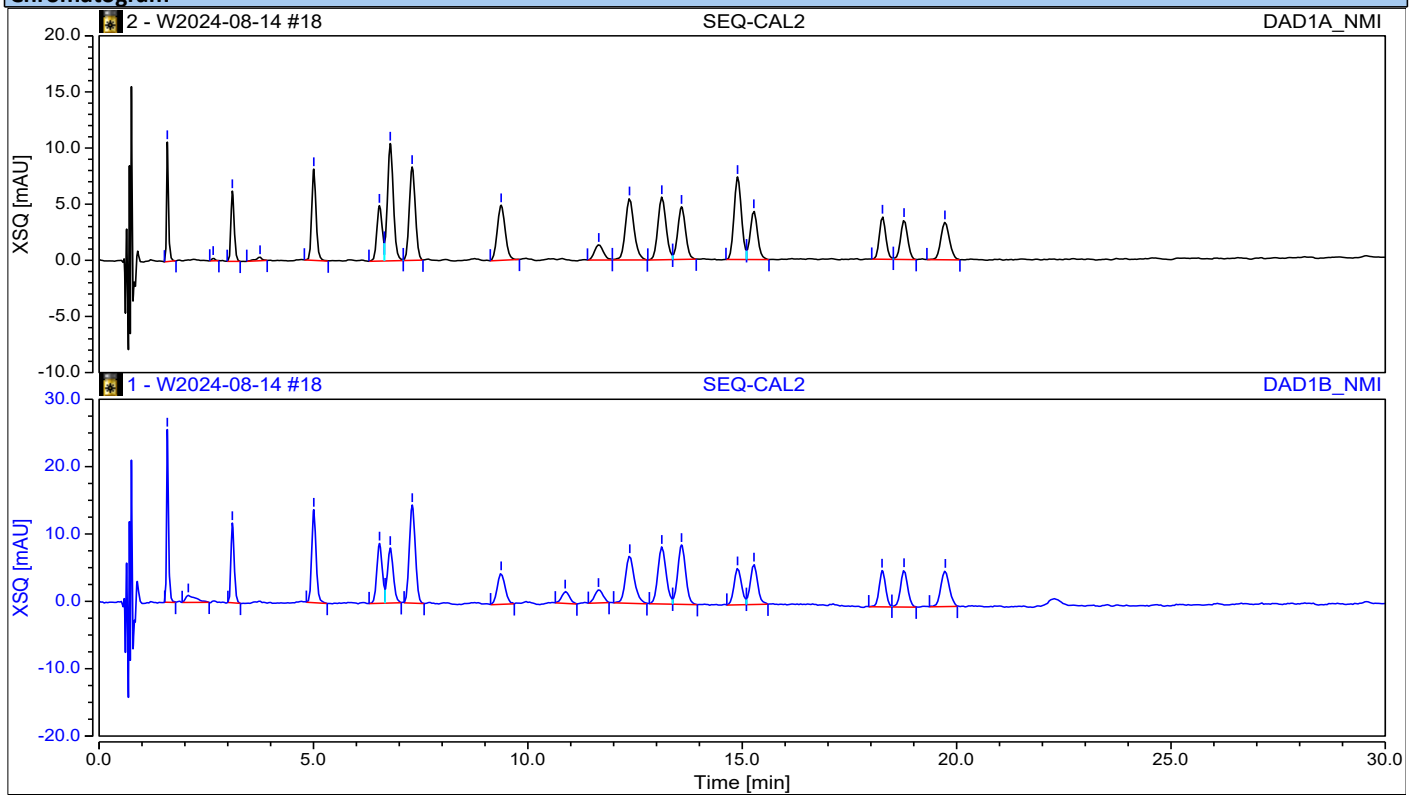
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Original Chromatogram

Injection Details

Injection Name:	**SEQ-CAL2**	*Instrument:*	**Waldorf**
Vial Number:	**18**	*Run Time (min):*	**30.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**14/Aug/2024 18:03**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**15/Aug/2024 14:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.870	0.3740	1.777	51.33	61.40	52.6688
2	PETN	22.263	0.3545	1.117	48.67	38.60	51.4974
1	HMX	1.590	0.5346	10.646	3.52	11.43	12.4781
2	RDX	3.107	0.5487	6.261	3.61	6.72	52.5737
3	1,3,5-TNB	5.007	0.9596	8.134	6.32	8.73	27.3315
4	1,2-DNB	6.537	0.7238	4.937	4.77	5.30	63.9938
5	1,3-DNB	6.790	1.6717	10.450	11.01	11.22	56.1759
6	3,5-DNA	7.300	1.3604	8.325	8.96	8.94	53.3630
7	NB	9.377	1.0502	4.914	6.92	5.27	61.8352
8	Tetryl	11.653	0.3263	1.357	2.15	1.46	32.1754
9	2,4,6-TNT	12.370	1.2943	5.494	8.53	5.90	57.4010
10	2-Am-DNT	13.123	1.2429	5.591	8.19	6.00	57.5879
11	4-Am-DNT	13.583	0.9908	4.695	6.53	5.04	45.9507
12	2,4-DNT	14.890	1.4776	7.360	9.73	7.90	60.3941
13	2,6-DNT	15.270	0.8644	4.316	5.69	4.63	59.9438
14	2-NT	18.270	0.6677	3.802	4.40	4.08	60.7078
15	4-NT	18.773	0.6784	3.528	4.47	3.79	60.6226
16	3-NT	19.727	0.7879	3.346	5.19	3.59	60.9732
Total:			**15.908**	**96.048**	**200.000**	**200.000**	

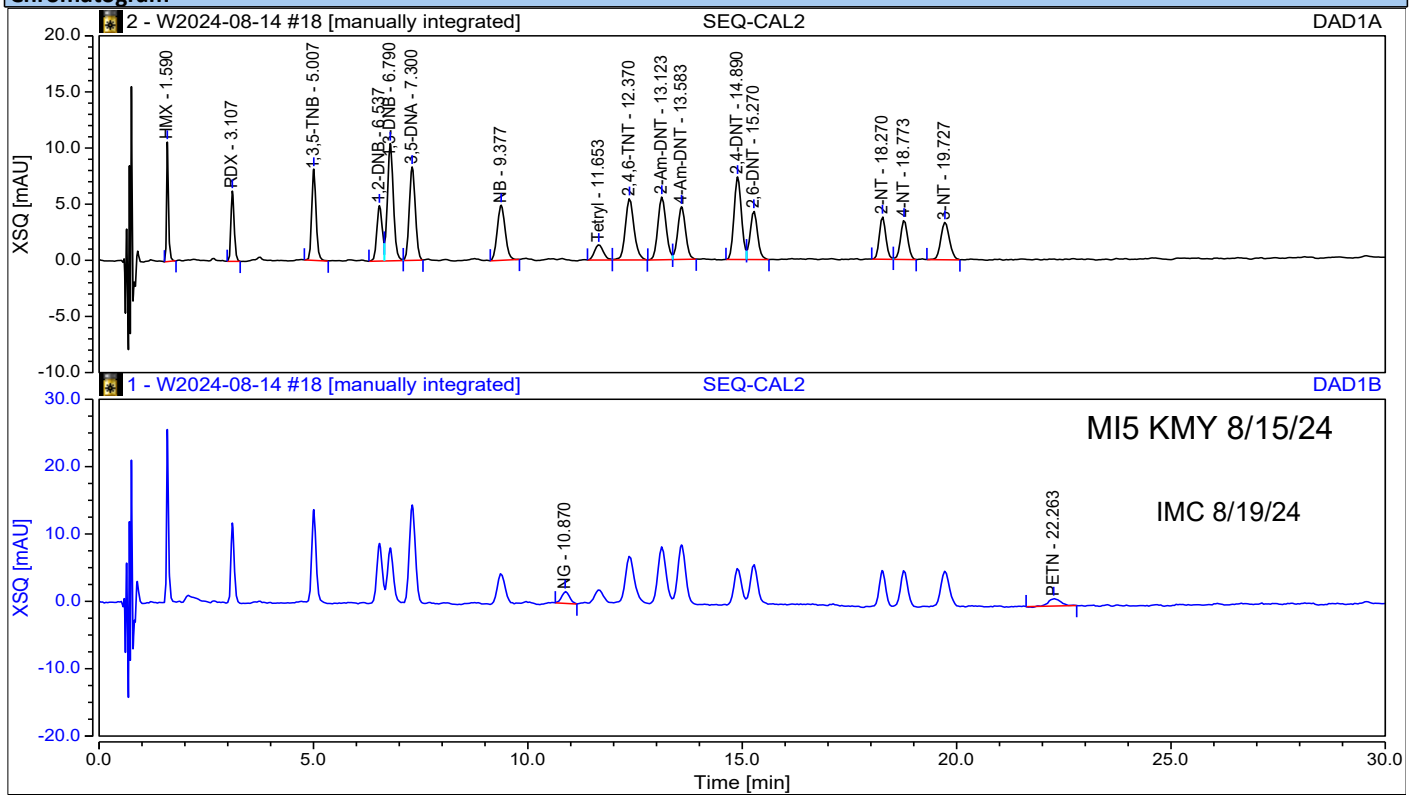
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Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL2**	*Instrument:*	**Waldorf**
Vial Number:	**18**	*Run Time (min):*	**30.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**14/Aug/2024 18:03**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**15/Aug/2024 14:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.870	0.3740	1.777	51.33	61.40	52.6688
2	PETN	22.263	0.3545	1.117	48.67	38.60	51.4974
1	HMX	1.590	0.5346	10.646	3.52	11.43	12.4781
2	RDX	3.107	0.5487	6.261	3.61	6.72	52.5737
3	1,3,5-TNB	5.007	0.9596	8.134	6.32	8.73	27.3315
4	1,2-DNB	6.537	0.7238	4.937	4.77	5.30	63.9938
5	1,3-DNB	6.790	1.6717	10.450	11.01	11.22	56.1759
6	3,5-DNA	7.300	1.3604	8.325	8.96	8.94	53.3630
7	NB	9.377	1.0502	4.914	6.92	5.27	61.8352
8	Tetryl	11.653	0.3263	1.357	2.15	1.46	32.1754
9	2,4,6-TNT	12.370	1.2943	5.494	8.53	5.90	57.4010
10	2-Am-DNT	13.123	1.2429	5.591	8.19	6.00	57.5879
11	4-Am-DNT	13.583	0.9908	4.695	6.53	5.04	45.9507
12	2,4-DNT	14.890	1.4776	7.360	9.73	7.90	60.3941
13	2,6-DNT	15.270	0.8644	4.316	5.69	4.63	59.9438
14	2-NT	18.270	0.6677	3.802	4.40	4.08	60.7078
15	4-NT	18.773	0.6784	3.528	4.47	3.79	60.6226
16	3-NT	19.727	0.7879	3.346	5.19	3.59	60.9732
Total:			**15.908**	**96.048**	**200.000**	**200.000**	

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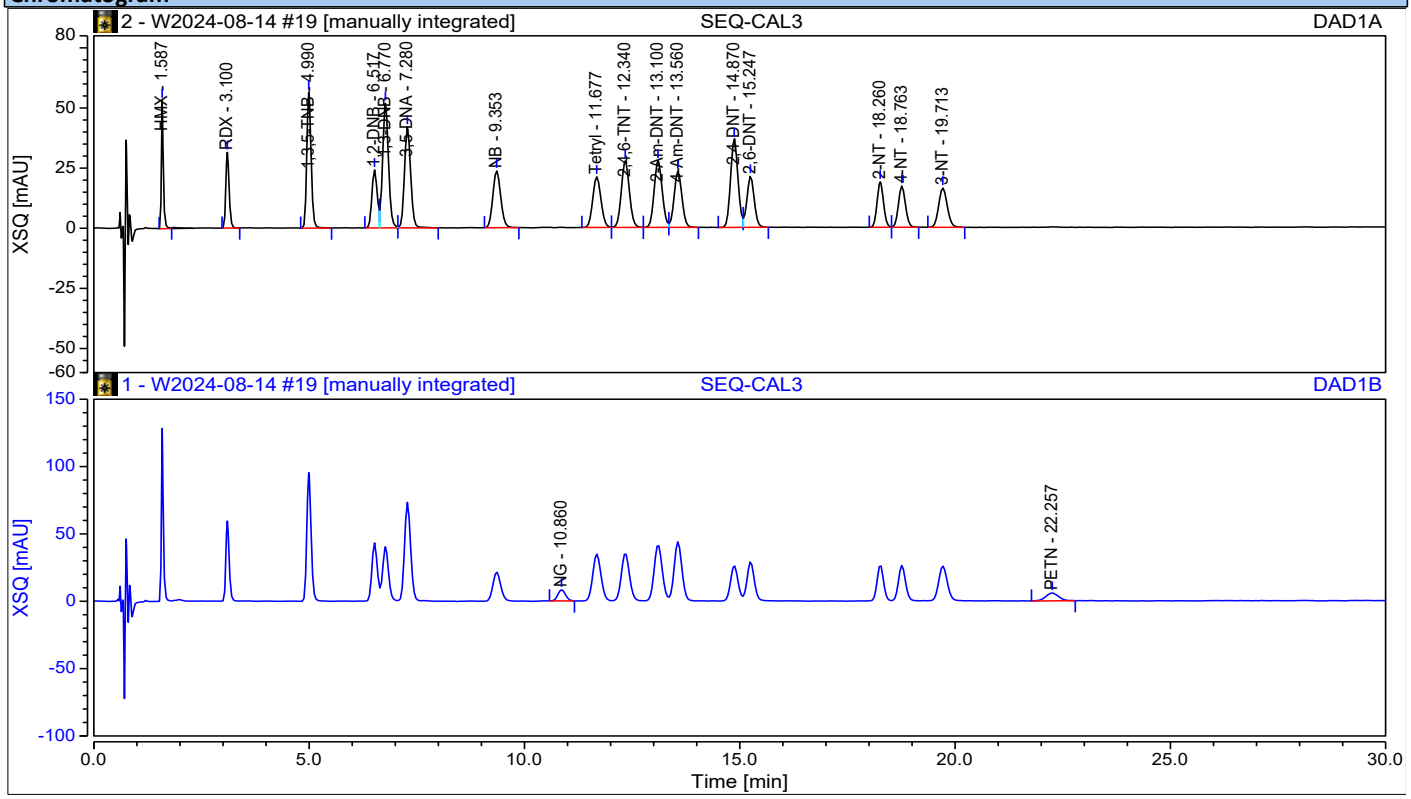
Instrument:
Sequence:W2024-08-14

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL3**	*Instrument:*	**Waldorf**
Vial Number:	**19**	*Run Time (min):*	**30.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**14/Aug/2024 18:35**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**15/Aug/2024 14:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.860	1.7189	8.286	45.74	58.51	255.6858
2	PETN	22.257	2.0395	5.876	54.26	41.49	266.0856
1	HMX	1.587	2.7161	53.263	3.42	10.81	243.4984
2	RDX	3.100	2.7617	31.492	3.48	6.39	259.9634
3	1,3,5-TNB	4.990	6.5708	56.484	8.28	11.47	255.5077
4	1,2-DNB	6.517	3.4795	24.150	4.39	4.90	263.2961
5	1,3-DNB	6.770	8.2270	51.821	10.37	10.52	259.3827
6	3,5-DNA	7.280	7.0229	41.917	8.85	8.51	260.1398
7	NB	9.353	5.0264	23.671	6.34	4.81	260.1731
8	Tetryl	11.677	4.6857	21.070	5.91	4.28	270.0324
9	2,4,6-TNT	12.340	6.0386	27.629	7.61	5.61	260.1610
10	2-Am-DNT	13.100	6.0302	27.619	7.60	5.61	260.0341
11	4-Am-DNT	13.560	4.9085	23.291	6.19	4.73	256.3657
12	2,4-DNT	14.870	7.3634	36.487	9.28	7.41	260.7468
13	2,6-DNT	15.247	4.1755	21.276	5.26	4.32	261.3397
14	2-NT	18.260	3.2741	18.891	4.13	3.84	260.4861
15	4-NT	18.763	3.2626	17.139	4.11	3.48	259.6764
16	3-NT	19.713	3.7937	16.342	4.78	3.32	261.5261
Total:			**83.095**	**506.704**	**200.000**	**200.000**	

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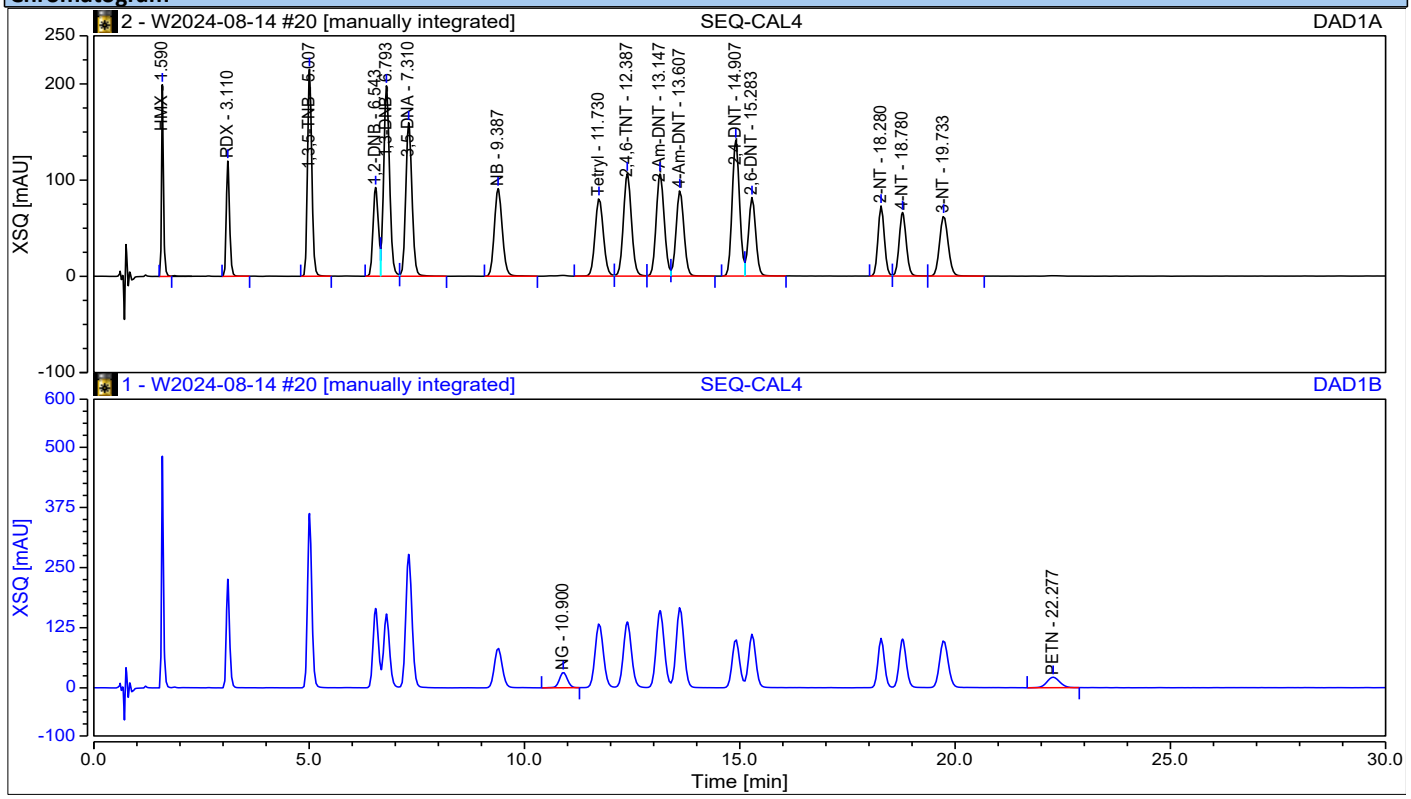
Instrument:
Sequence:W2024-08-14

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL4**	*Instrument:*	**Waldorf**
Vial Number:	**20**	*Run Time (min):*	**30.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**14/Aug/2024 19:06**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**15/Aug/2024 14:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.900	6.9167	31.947	47.71	59.38	993.6356
2	PETN	22.277	7.5803	21.852	52.29	40.62	986.4985
1	HMX	1.590	10.1154	199.345	3.33	10.59	1035.3704
2	RDX	3.110	10.5583	119.806	3.48	6.37	985.8594
3	1,3,5-TNB	5.007	24.8796	215.112	8.19	11.43	1004.1168
4	1,2-DNB	6.543	13.2740	92.219	4.37	4.90	969.3762
5	1,3-DNB	6.793	31.4477	197.927	10.35	10.52	977.0128
6	3,5-DNA	7.310	26.7775	159.604	8.81	8.48	984.5408
7	NB	9.387	19.5185	91.037	6.42	4.84	972.4846
8	Tetryl	11.730	18.1614	80.923	5.98	4.30	992.2396
9	2,4,6-TNT	12.387	23.2429	106.445	7.65	5.66	982.1185
10	2-Am-DNT	13.147	23.1172	106.232	7.61	5.65	982.5122
11	4-Am-DNT	13.607	18.7805	88.970	6.18	4.73	999.5352
12	2,4-DNT	14.907	28.1321	140.704	9.26	7.48	977.6157
13	2,6-DNT	15.283	16.0322	81.707	5.28	4.34	978.9497
14	2-NT	18.280	12.6036	72.876	4.15	3.87	975.2896
15	4-NT	18.780	12.6028	66.077	4.15	3.51	975.3726
16	3-NT	19.733	14.5691	62.566	4.80	3.33	974.8362
Total:			**318.310**	**1935.347**	**200.000**	**200.000**	

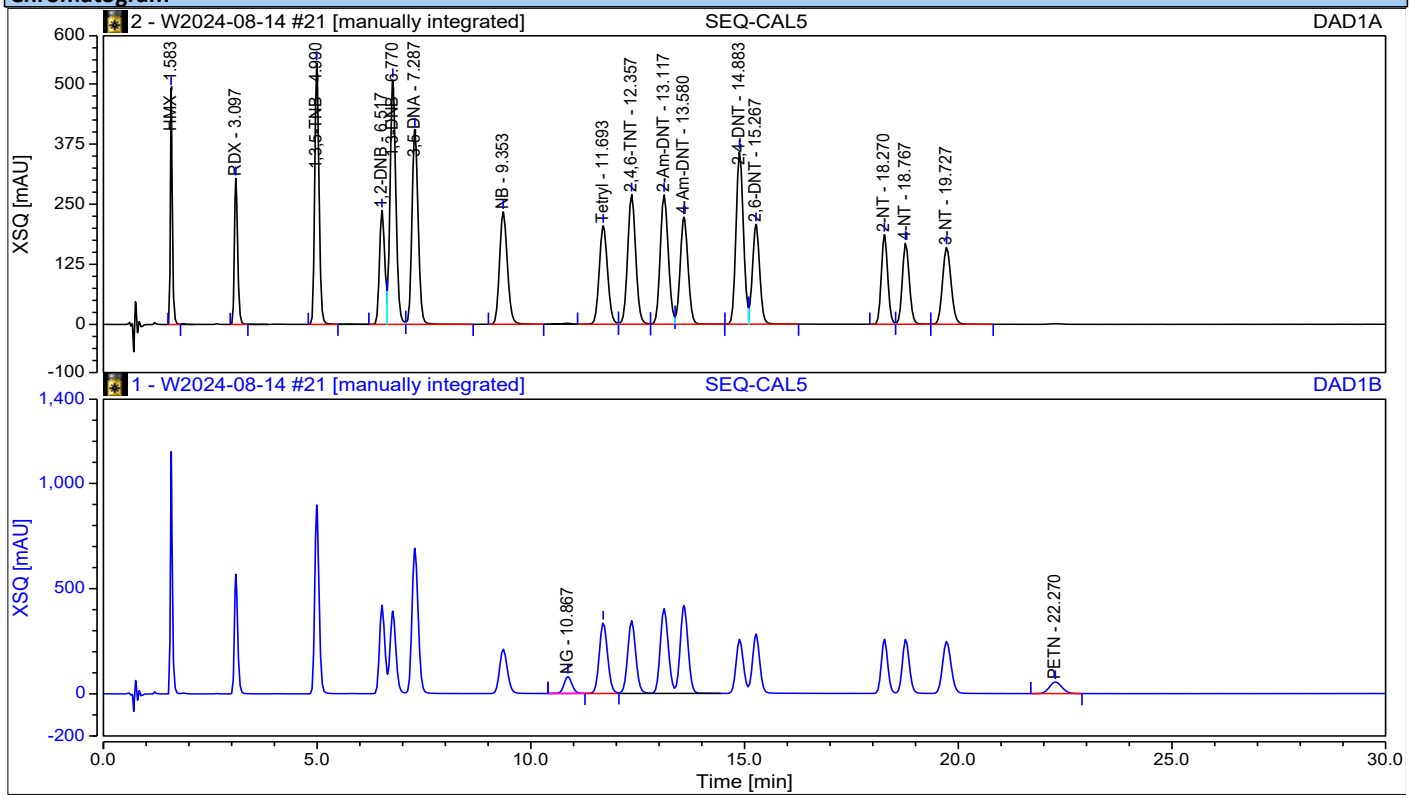
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Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL5**	*Instrument:*	**Waldorf**
Vial Number:	**21**	*Run Time (min):*	**30.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**14/Aug/2024 19:38**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**15/Aug/2024 14:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.867	17.2199	80.163	15.25	16.97	2497.4155
3	PETN	22.270	18.8964	55.000	16.74	11.65	2481.2192
1	HMX	1.583	25.0547	491.363	3.24	10.30	2618.3334
2	RDX	3.097	26.7264	303.696	3.46	6.37	2497.3613
3	1,3,5-TNB	4.990	62.7770	543.022	8.13	11.39	2551.6180
4	1,2-DNB	6.517	33.8741	237.026	4.38	4.97	2471.4745
5	1,3-DNB	6.770	79.9158	507.705	10.34	10.64	2498.5661
6	3,5-DNA	7.287	67.8554	404.896	8.78	8.49	2494.4038
7	NB	9.353	49.8467	233.681	6.45	4.90	2480.7668
8	Tetryl	11.693	46.2909	204.691	5.99	4.29	2485.6517
9	2,4,6-TNT	12.357	59.1642	269.940	7.66	5.66	2479.7568
10	2-Am-DNT	13.117	58.9543	269.160	7.63	5.64	2479.8766
11	4-Am-DNT	13.580	47.4922	222.643	6.15	4.67	2512.0488
12	2,4-DNT	14.883	71.7986	358.488	9.29	7.52	2475.6619
13	2,6-DNT	15.267	40.9522	207.739	5.30	4.36	2475.5612
14	2-NT	18.270	32.3174	186.383	4.18	3.91	2478.1888
15	4-NT	18.767	32.2296	169.076	4.17	3.54	2481.6939
16	3-NT	19.727	37.3456	159.995	4.83	3.35	2478.3358
Total:			**808.712**	**4904.669**	**131.988**	**128.619**	

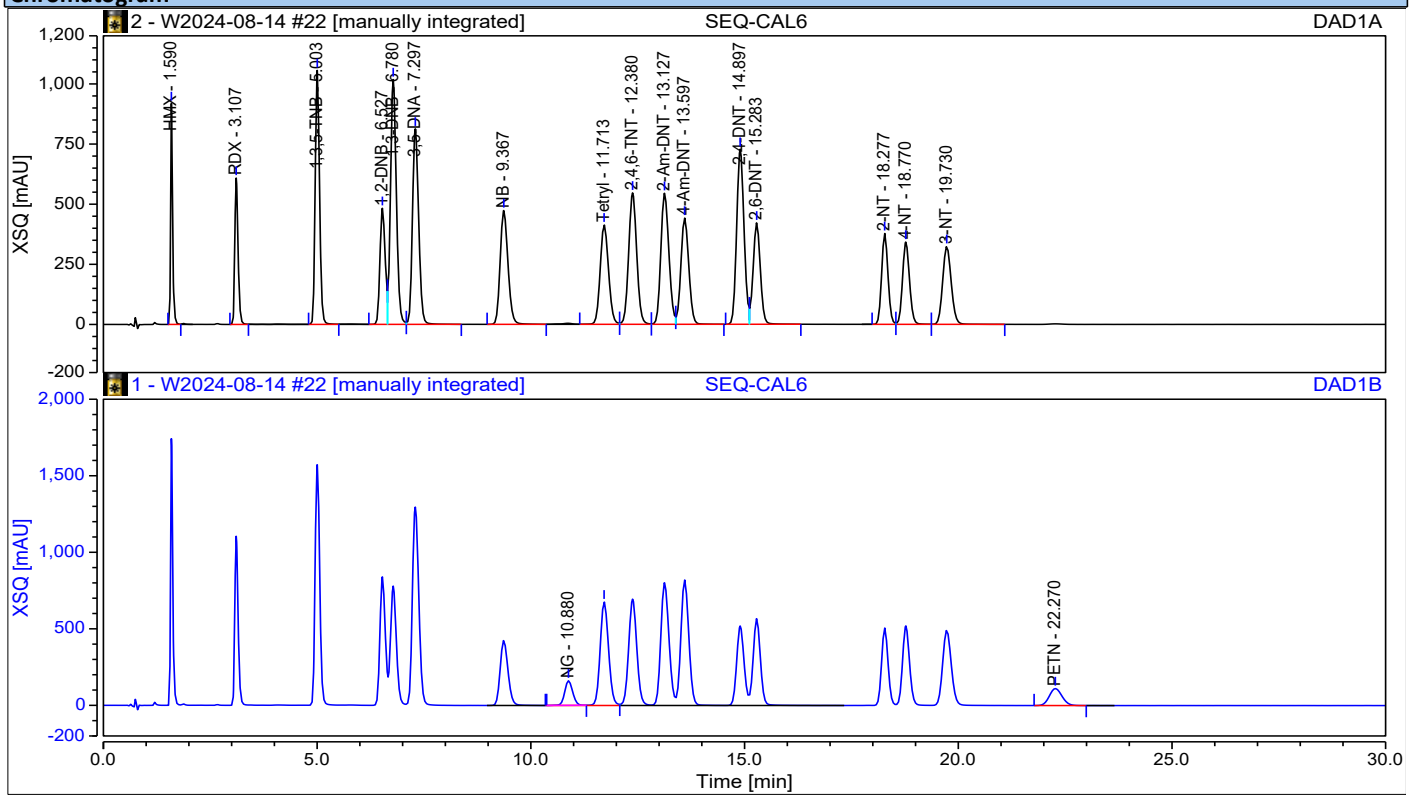
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Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL6**	*Instrument:*	**Waldorf**
Vial Number:	**22**	*Run Time (min):*	**30.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**14/Aug/2024 20:09**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**15/Aug/2024 14:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.880	34.5446	160.475	15.15	16.91	5002.2558
3	PETN	22.270	38.3771	111.108	16.83	11.71	5011.2680
1	HMX	1.590	47.9812	918.641	3.09	9.66	4934.5037
2	RDX	3.107	53.6803	608.611	3.46	6.40	5003.6229
3	1,3,5-TNB	5.003	123.8677	1056.176	7.98	11.10	4973.3308
4	1,2-DNB	6.527	68.4562	482.670	4.41	5.07	5019.5705
5	1,3-DNB	6.780	160.9872	1017.955	10.37	10.70	5004.7794
6	3,5-DNA	7.297	136.3503	812.824	8.78	8.55	5005.3471
7	NB	9.367	100.6515	473.305	6.48	4.98	5014.4824
8	Tetryl	11.713	93.6395	413.723	6.03	4.35	5007.8909
9	2,4,6-TNT	12.380	119.5108	546.504	7.70	5.75	5013.1084
10	2-Am-DNT	13.127	118.9946	544.787	7.67	5.73	5012.9746
11	4-Am-DNT	13.597	94.8642	441.975	6.11	4.65	4993.7985
12	2,4-DNT	14.897	145.0643	727.798	9.35	7.65	5015.9951
13	2,6-DNT	15.283	82.5719	421.652	5.32	4.43	5015.7546
14	2-NT	18.277	65.2669	377.992	4.20	3.97	5015.2062
15	4-NT	18.770	64.9673	342.195	4.19	3.60	5013.4793
16	3-NT	19.730	75.3108	324.387	4.85	3.41	5015.1697
Total:			**1625.086**	**9782.776**	**131.987**	**128.623**	

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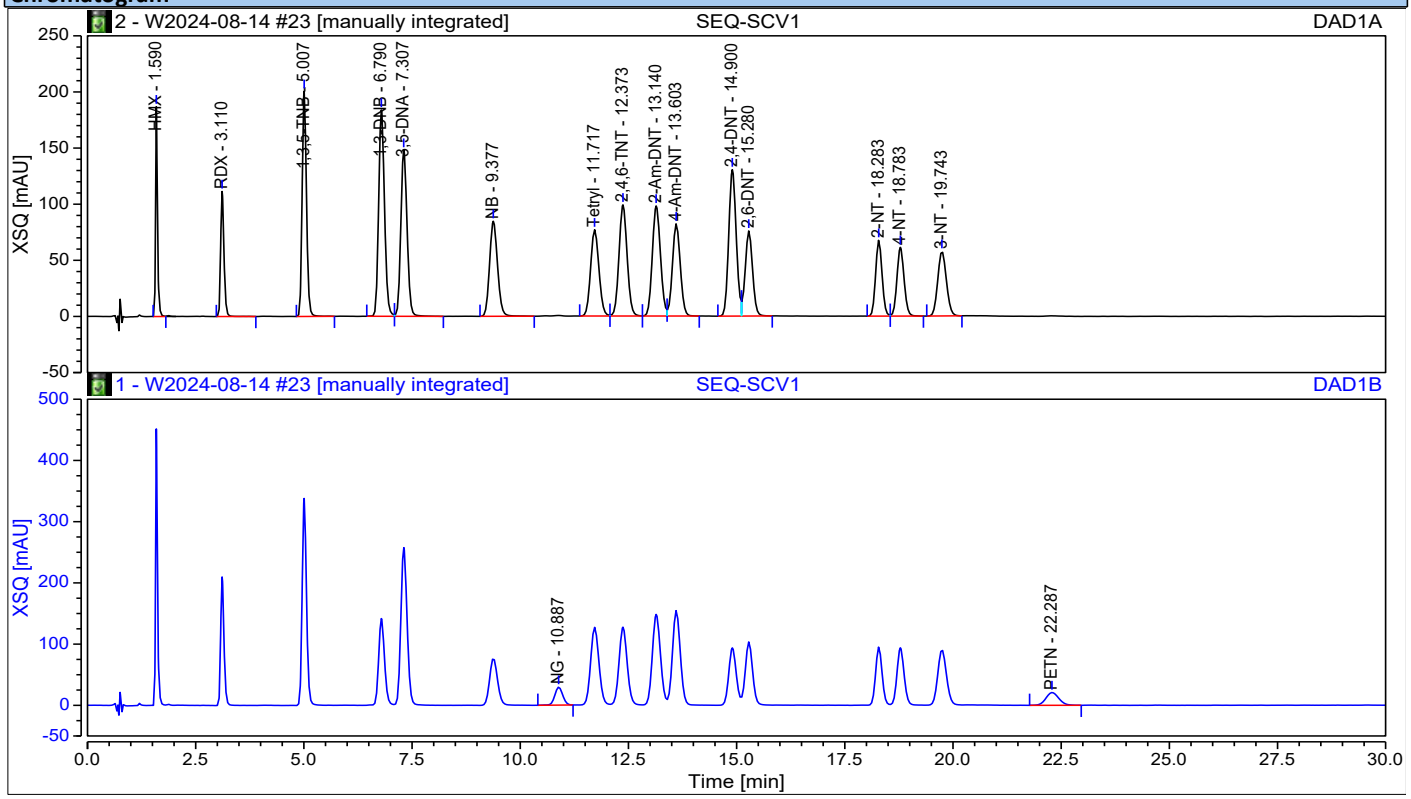
Instrument:
Sequence:W2024-08-14

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-SCV1**	*Instrument:*	**Waldorf**
Vial Number:	**23**	*Run Time (min):*	**30.00**
Injection Type:	**Check Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**14/Aug/2024 20:41**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**15/Aug/2024 14:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.887	6.2756	29.356	46.35	58.44	912.8172
2	PETN	22.287	7.2647	20.872	53.65	41.56	942.3183
1	HMX	1.590	9.4529	186.929	3.51	11.23	968.0682
2	RDX	3.110	9.8687	111.416	3.66	6.69	916.9026
3	1,3,5-TNB	5.007	23.2163	200.583	8.61	12.05	935.5536
n.a.	1,2-DNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	1,3-DNB	6.790	28.7410	183.800	10.66	11.04	907.6263
5	3,5-DNA	7.307	24.7841	148.044	9.19	8.89	913.3849
6	NB	9.377	18.1168	84.699	6.72	5.09	905.4681
7	Tetryl	11.717	17.1791	76.891	6.37	4.62	943.5852
8	2,4,6-TNT	12.373	21.5870	99.044	8.01	5.95	914.3301
9	2-Am-DNT	13.140	21.4178	98.076	7.94	5.89	907.5602
10	4-Am-DNT	13.603	17.3442	82.195	6.43	4.94	922.8750
11	2,4-DNT	14.900	26.1790	130.449	9.71	7.84	907.0745
12	2,6-DNT	15.280	14.8995	75.834	5.53	4.56	909.2090
13	2-NT	18.283	11.7446	67.639	4.36	4.06	905.9516
14	4-NT	18.783	11.6819	61.255	4.33	3.68	904.8650
15	3-NT	19.743	13.3645	57.678	4.96	3.47	899.4097
Total:			**283.118**	**1714.762**	**200.000**	**200.000**	

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INITIAL CALIBRATION STANDARDS

EPA 8330B

Laboratory:	APPL, LLC	Work Order:	24J0093
Client:	AECOM	Project:	Wingate 60517380 Task 3
Sequence:	SD04321	Instrument:	Waldorf
Calibration:	2443002		

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
24J0613	8330 - Cal 1 0.005ug/mL 10/18/24	SD04321-CAL1	W2024-10-18-004	10/18/24 13:13
24J0614	8330 - Cal 2 0.05ug/mL 10/18/24	SD04321-CAL2	W2024-10-18-005	10/18/24 13:56
24J0615	8330 - Cal 3 0.25ug/mL 10/18/24	SD04321-CAL3	W2024-10-18-006	10/18/24 14:39
24J0616	8330 - Cal 4 1.0ug/mL 10/18/24	SD04321-CAL4	W2024-10-18-007	10/18/24 15:21
24J0617	8330 - Cal 5 2.5ug/mL 10/18/24	SD04321-CAL5	W2024-10-18-008	10/18/24 16:04
24J0618	8330 - Cal 6 5.0ug/mL 10/18/24	SD04321-CAL6	W2024-10-18-009	10/18/24 16:46
24J0619	8330 - SCV 1.0ug/mL 10/18/24	SD04321-SCV1	W2024-10-18-010	10/18/24 17:29

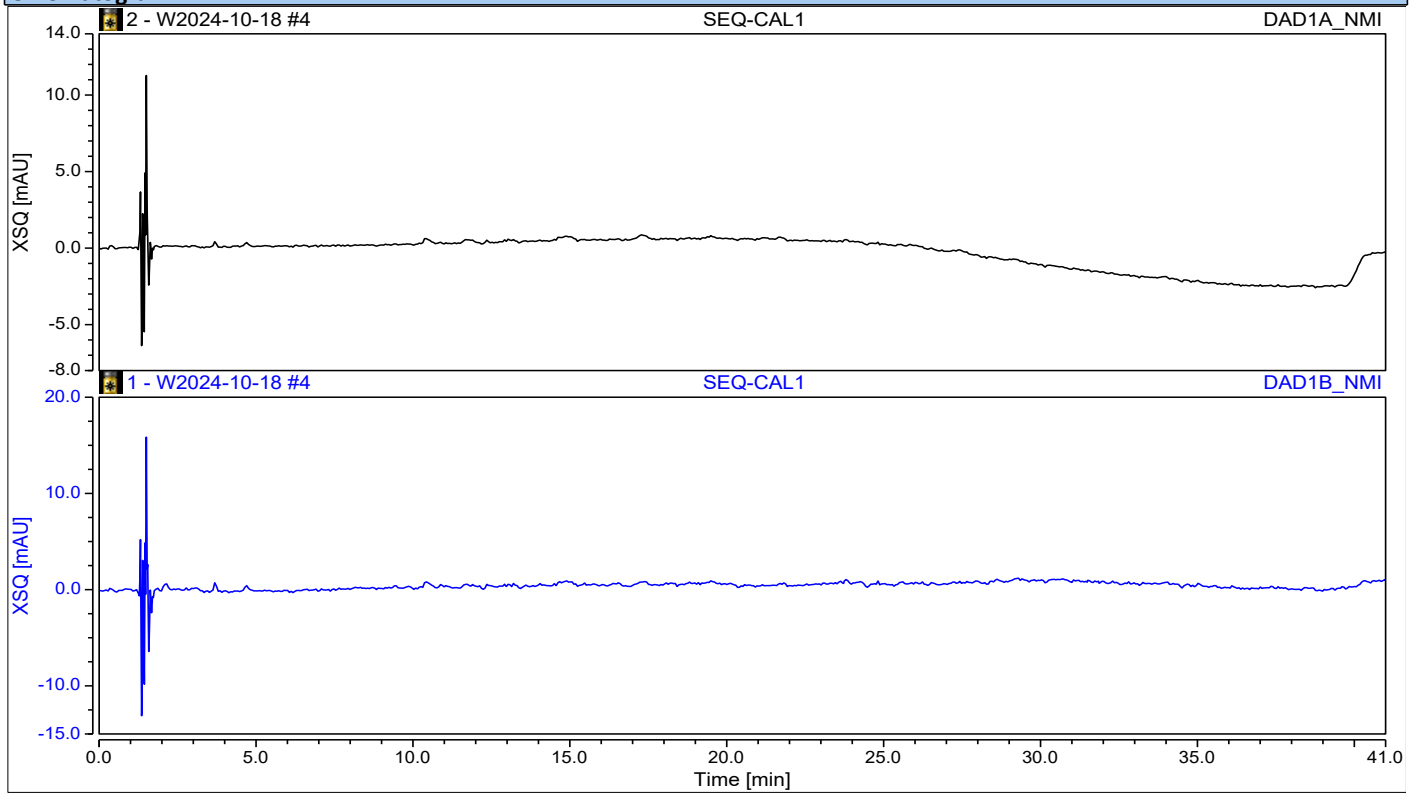
Instrument:
Sequence:W2024-10-18

Original Chromatogram

Injection Details

Injection Name:	**SEQ-CAL1**	*Instrument:*	**Waldorf**
Vial Number:	**4**	*Run Time (min):*	**41.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**18/Oct/2024 13:13**
Processing Method:	**8330 Statler 2024-10-18**	*Dilution Factor:*	**1.0000**
Last Updated:	**21/Oct/2024 07:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.407	0.0039	0.116	80.81	64.90	6.0763
2	PETN	22.167	0.0009	0.063	19.19	35.10	5.0300
1	HMX	3.687	0.0385	0.360	5.08	10.49	5.7686
2	RDX	4.700	0.0528	0.286	6.98	8.34	5.3883
3	3,5-DNA	10.403	0.0816	0.392	10.78	11.43	5.7517
4	NB	11.697	0.0878	0.275	11.61	8.03	5.5733
5	1,2-DNB	13.043	0.0114	0.161	1.51	4.68	4.9076
6	4-Am-DNT	14.653	0.0503	0.243	6.64	7.08	5.7672
7	2-Am-DNT	14.857	0.0821	0.289	10.85	8.43	5.4993
8	1,3-DNB	17.293	0.1077	0.309	14.23	9.00	5.4092
9	2-NT	19.507	0.0081	0.111	1.07	3.24	4.6053
10	4-NT	21.133	0.0347	0.114	4.59	3.33	4.8993
11	3-NT	21.717	0.0337	0.168	4.46	4.91	6.0207
12	2,6-DNT	23.763	0.0147	0.150	1.95	4.36	5.8618
13	1,3,5-TNB	25.877	0.0339	0.149	4.48	4.34	4.5507
14	2,4-DNT	27.377	0.0714	0.187	9.44	5.45	4.4901
15	Tetryl	29.140	0.0309	0.122	4.09	3.57	5.3479
16	2,4,6-TNT	33.990	0.0171	0.114	2.26	3.34	5.0668
Total:			**0.762**	**3.609**	**200.000**	**200.000**	

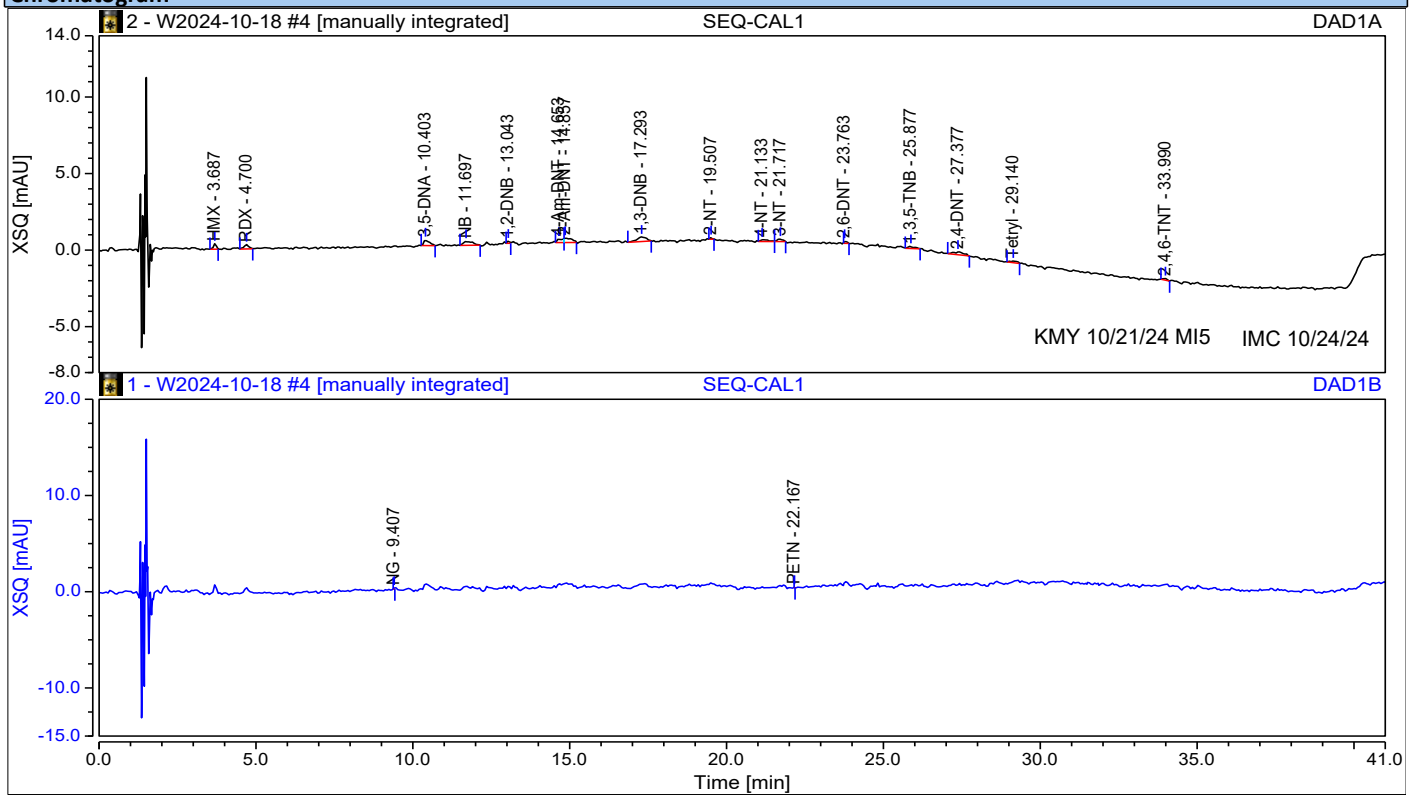
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Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL1**	*Instrument:*	**Waldorf**
Vial Number:	**4**	*Run Time (min):*	**41.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**18/Oct/2024 13:13**
Processing Method:	**8330 Statler 2024-10-18**	*Dilution Factor:*	**1.0000**
Last Updated:	**21/Oct/2024 07:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.407	0.0039	0.116	80.81	64.90	6.0763
2	PETN	22.167	0.0009	0.063	19.19	35.10	5.0300
1	HMX	3.687	0.0385	0.360	5.08	10.49	5.7686
2	RDX	4.700	0.0528	0.286	6.98	8.34	5.3883
3	3,5-DNA	10.403	0.0816	0.392	10.78	11.43	5.7517
4	NB	11.697	0.0878	0.275	11.61	8.03	5.5733
5	1,2-DNB	13.043	0.0114	0.161	1.51	4.68	4.9076
6	4-Am-DNT	14.653	0.0503	0.243	6.64	7.08	5.7672
7	2-Am-DNT	14.857	0.0821	0.289	10.85	8.43	5.4993
8	1,3-DNB	17.293	0.1077	0.309	14.23	9.00	5.4092
9	2-NT	19.507	0.0081	0.111	1.07	3.24	4.6053
10	4-NT	21.133	0.0347	0.114	4.59	3.33	4.8993
11	3-NT	21.717	0.0337	0.168	4.46	4.91	6.0207
12	2,6-DNT	23.763	0.0147	0.150	1.95	4.36	5.8618
13	1,3,5-TNB	25.877	0.0339	0.149	4.48	4.34	4.5507
14	2,4-DNT	27.377	0.0714	0.187	9.44	5.45	4.4901
15	Tetryl	29.140	0.0309	0.122	4.09	3.57	5.3479
16	2,4,6-TNT	33.990	0.0171	0.114	2.26	3.34	5.0668
Total:			**0.762**	**3.609**	**200.000**	**200.000**	

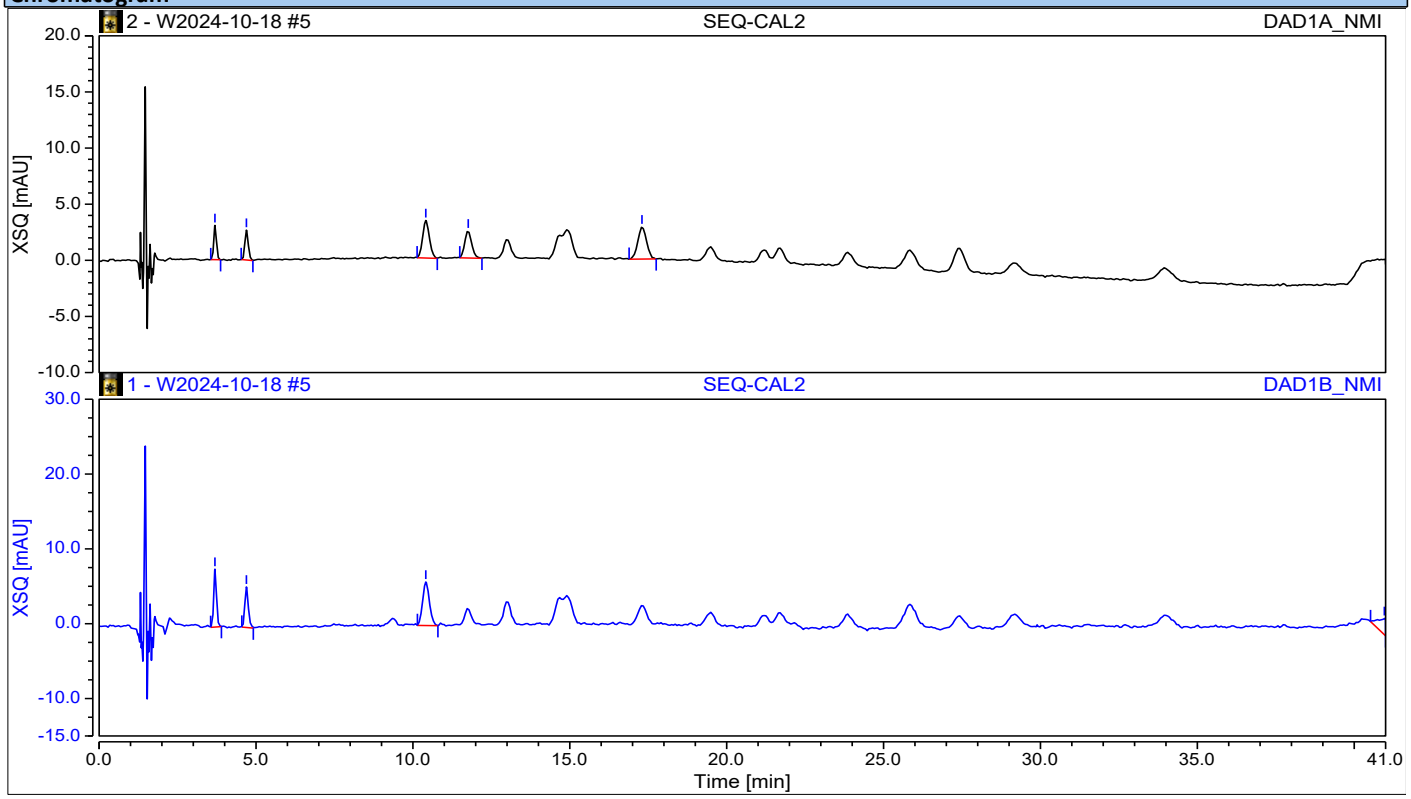
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Original Chromatogram

Injection Details

Injection Name:	**SEQ-CAL2**	*Instrument:*	**Waldorf**
Vial Number:	**5**	*Run Time (min):*	**41.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**18/Oct/2024 13:56**
Processing Method:	**8330 Statler 2024-10-18**	*Dilution Factor:*	**1.0000**
Last Updated:	**21/Oct/2024 07:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.357	0.2349	0.996	25.53	25.67	52.2704
2	PETN	22.170	0.1321	0.707	14.36	18.23	56.8046
1	HMX	3.690	0.3119	3.051	3.35	9.60	48.9160
2	RDX	4.693	0.3385	2.661	3.63	8.37	50.0945
3	3,5-DNA	10.410	0.8384	3.348	9.00	10.53	49.0975
4	NB	11.763	0.6236	2.419	6.70	7.61	48.9533
5	1,2-DNB	12.977	0.4629	1.658	4.97	5.22	50.6434
6	4-Am-DNT	14.677	0.5120	2.079	5.50	6.54	49.3470
7	2-Am-DNT	14.920	0.8199	2.579	8.80	8.12	49.0362
8	1,3-DNB	17.300	0.9280	2.877	9.97	9.05	50.4118
9	2-NT	19.487	0.4111	1.256	4.41	3.95	52.0970
10	4-NT	21.183	0.3891	1.150	4.18	3.62	49.3406
11	3-NT	21.673	0.4394	1.345	4.72	4.23	48.1101
12	2,6-DNT	23.860	0.5044	1.277	5.42	4.02	50.0225
13	1,3,5-TNB	25.823	0.7477	1.723	8.03	5.42	52.6877
14	2,4-DNT	27.390	0.8580	2.135	9.21	6.72	51.2650
15	Tetryl	29.157	0.5597	1.087	6.01	3.42	47.4963
16	2,4,6-TNT	33.947	0.5677	1.135	6.10	3.57	50.2378
Total:			**9.679**	**33.482**	**139.887**	**143.907**	

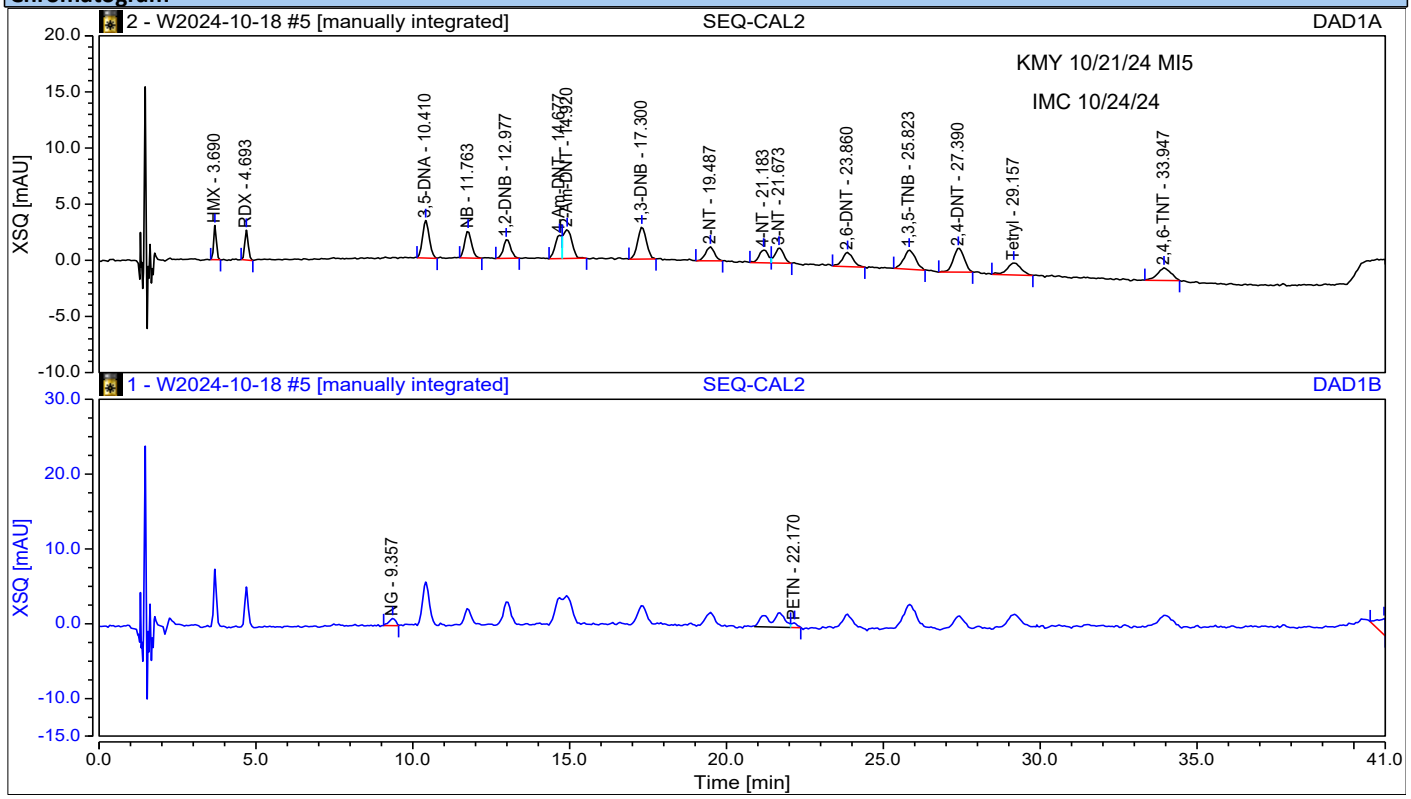
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Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL2**	*Instrument:*	**Waldorf**
Vial Number:	**5**	*Run Time (min):*	**41.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**18/Oct/2024 13:56**
Processing Method:	**8330 Statler 2024-10-18**	*Dilution Factor:*	**1.0000**
Last Updated:	**21/Oct/2024 07:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.357	0.2349	0.996	25.53	25.67	52.2704
2	PETN	22.170	0.1321	0.707	14.36	18.23	56.8046
1	HMX	3.690	0.3119	3.051	3.35	9.60	48.9160
2	RDX	4.693	0.3385	2.661	3.63	8.37	50.0945
3	3,5-DNA	10.410	0.8384	3.348	9.00	10.53	49.0975
4	NB	11.763	0.6236	2.419	6.70	7.61	48.9533
5	1,2-DNB	12.977	0.4629	1.658	4.97	5.22	50.6434
6	4-Am-DNT	14.677	0.5120	2.079	5.50	6.54	49.3470
7	2-Am-DNT	14.920	0.8199	2.579	8.80	8.12	49.0362
8	1,3-DNB	17.300	0.9280	2.877	9.97	9.05	50.4118
9	2-NT	19.487	0.4111	1.256	4.41	3.95	52.0970
10	4-NT	21.183	0.3891	1.150	4.18	3.62	49.3406
11	3-NT	21.673	0.4394	1.345	4.72	4.23	48.1101
12	2,6-DNT	23.860	0.5044	1.277	5.42	4.02	50.0225
13	1,3,5-TNB	25.823	0.7477	1.723	8.03	5.42	52.6877
14	2,4-DNT	27.390	0.8580	2.135	9.21	6.72	51.2650
15	Tetryl	29.157	0.5597	1.087	6.01	3.42	47.4963
16	2,4,6-TNT	33.947	0.5677	1.135	6.10	3.57	50.2378
Total:			**9.679**	**33.482**	**139.887**	**143.907**	

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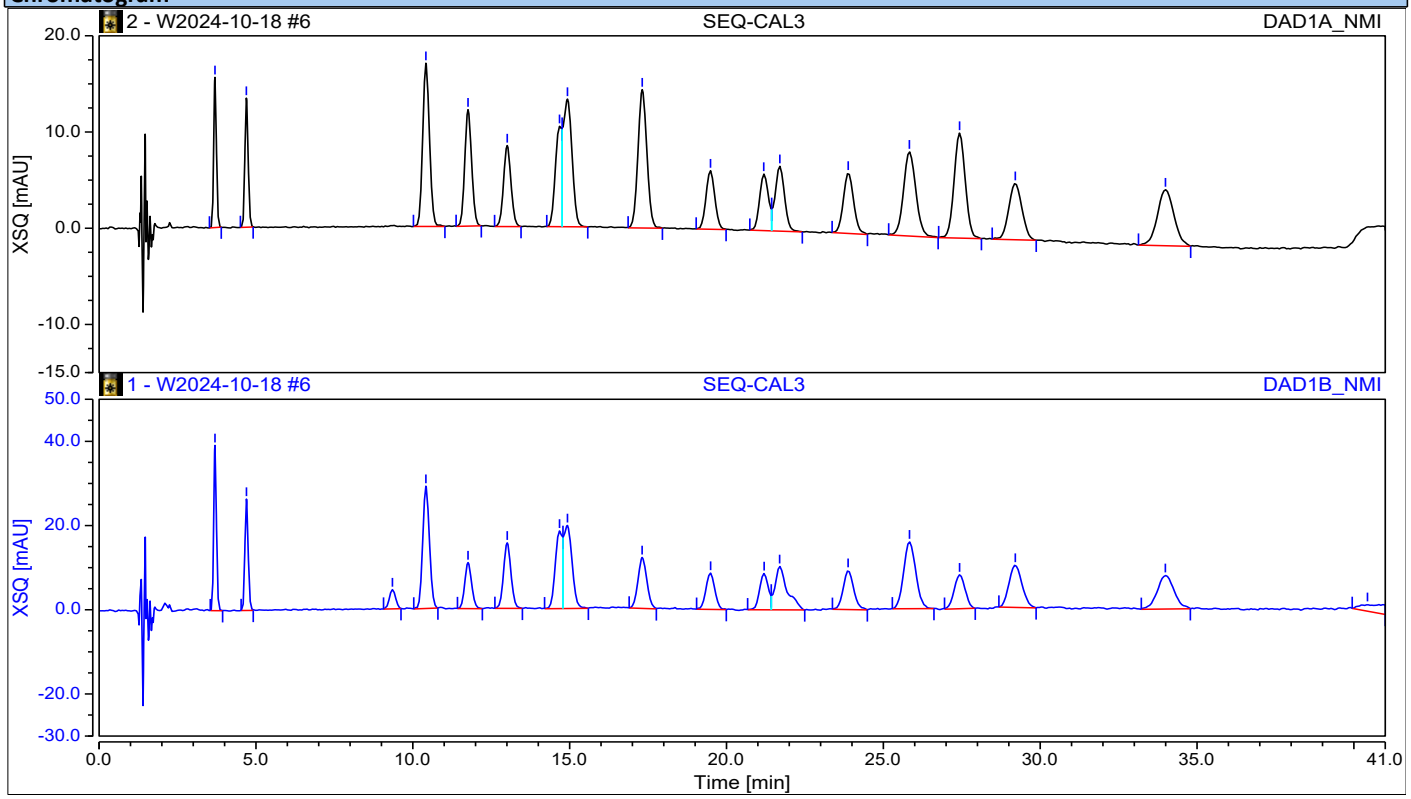
Instrument:
Sequence:W2024-10-18

Original Chromatogram

Injection Details

Injection Name:	**SEQ-CAL3**	*Instrument:*	**Waldorf**
Vial Number:	**6**	*Run Time (min):*	**41.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**18/Oct/2024 14:39**
Processing Method:	**8330 Statler 2024-10-18**	*Dilution Factor:*	**1.0000**
Last Updated:	**21/Oct/2024 07:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.350	1.0635	4.577	57.57	58.09	240.2712
2	PETN	22.033	0.7838	3.302	42.43	41.91	265.2464
1	HMX	3.693	1.5879	15.609	3.30	9.70	250.2729
2	RDX	4.693	1.6361	13.418	3.40	8.34	252.6479
3	3,5-DNA	10.417	4.2737	16.965	8.89	10.54	248.8120
4	NB	11.760	3.0787	12.098	6.41	7.52	244.8141
5	1,2-DNB	13.010	2.3185	8.421	4.83	5.23	257.2078
6	4-Am-DNT	14.677	2.4762	10.436	5.15	6.48	247.7198
7	2-Am-DNT	14.930	4.2802	13.270	8.91	8.24	252.2998
8	1,3-DNB	17.313	4.7513	14.379	9.89	8.93	251.9536
9	2-NT	19.490	1.9960	6.091	4.15	3.78	252.6803
10	4-NT	21.187	1.9364	5.880	4.03	3.65	252.3611
11	3-NT	21.700	2.3510	6.744	4.89	4.19	241.2665
12	2,6-DNT	23.880	2.3938	6.287	4.98	3.91	246.2042
13	1,3,5-TNB	25.830	4.0035	8.762	8.33	5.44	267.9033
14	2,4-DNT	27.430	4.5168	10.917	9.40	6.78	262.1200
15	Tetryl	29.207	2.8696	5.874	5.97	3.65	256.6716
16	2,4,6-TNT	33.993	3.5807	5.828	7.45	3.62	258.0325
Total:			**49.898**	**168.860**	**200.000**	**200.000**	

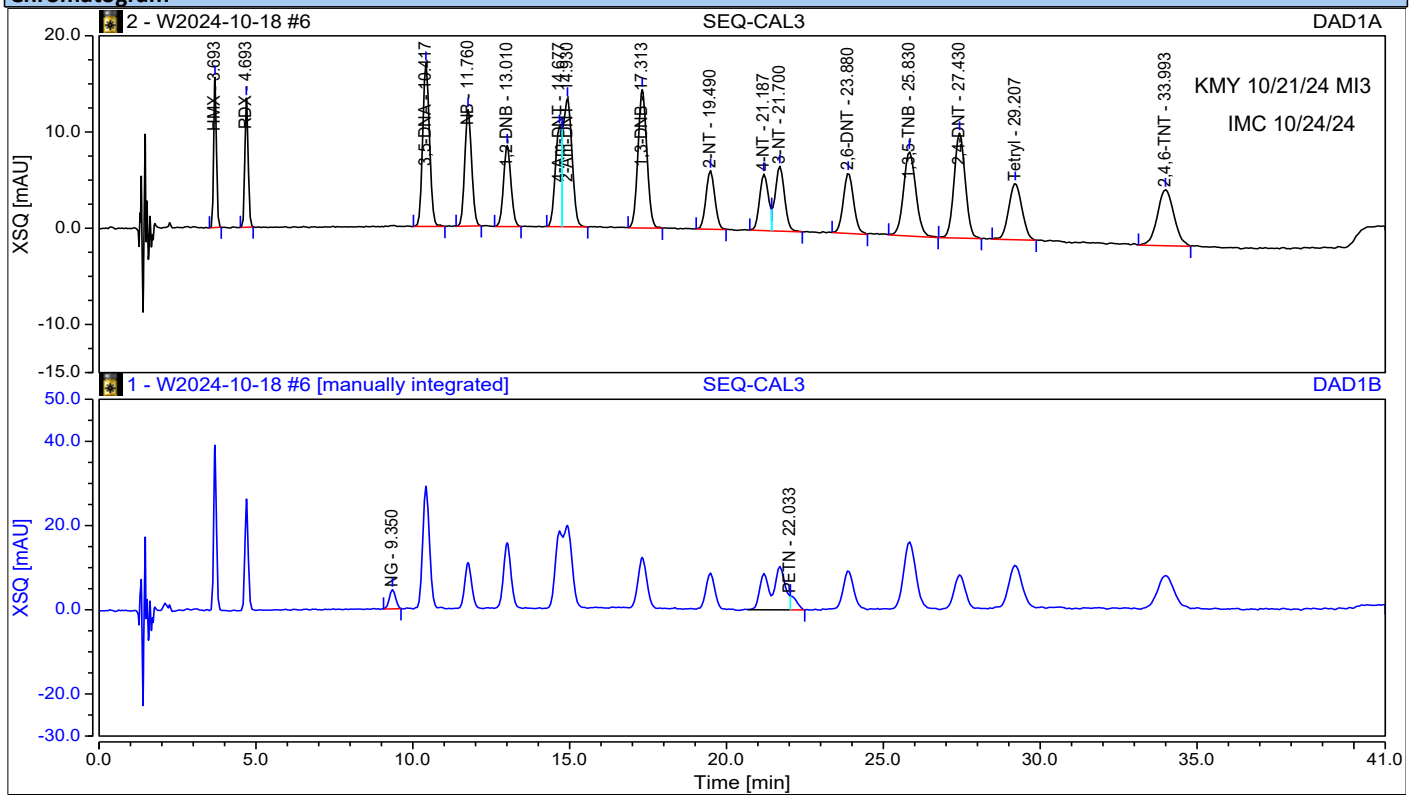
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Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL3**	*Instrument:*	**Waldorf**
Vial Number:	**6**	*Run Time (min):*	**41.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**18/Oct/2024 14:39**
Processing Method:	**8330 Statler 2024-10-18**	*Dilution Factor:*	**1.0000**
Last Updated:	**21/Oct/2024 07:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.350	1.0635	4.577	57.57	58.09	240.2712
2	PETN	22.033	0.7838	3.302	42.43	41.91	265.2464
1	HMX	3.693	1.5879	15.609	3.30	9.70	250.2729
2	RDX	4.693	1.6361	13.418	3.40	8.34	252.6479
3	3,5-DNA	10.417	4.2737	16.965	8.89	10.54	248.8120
4	NB	11.760	3.0787	12.098	6.41	7.52	244.8141
5	1,2-DNB	13.010	2.3185	8.421	4.83	5.23	257.2078
6	4-Am-DNT	14.677	2.4762	10.436	5.15	6.48	247.7198
7	2-Am-DNT	14.930	4.2802	13.270	8.91	8.24	252.2998
8	1,3-DNB	17.313	4.7513	14.379	9.89	8.93	251.9536
9	2-NT	19.490	1.9960	6.091	4.15	3.78	252.6803
10	4-NT	21.187	1.9364	5.880	4.03	3.65	252.3611
11	3-NT	21.700	2.3510	6.744	4.89	4.19	241.2665
12	2,6-DNT	23.880	2.3938	6.287	4.98	3.91	246.2042
13	1,3,5-TNB	25.830	4.0035	8.762	8.33	5.44	267.9033
14	2,4-DNT	27.430	4.5168	10.917	9.40	6.78	262.1200
15	Tetryl	29.207	2.8696	5.874	5.97	3.65	256.6716
16	2,4,6-TNT	33.993	3.5807	5.828	7.45	3.62	258.0325
Total:			**49.898**	**168.860**	**200.000**	**200.000**	

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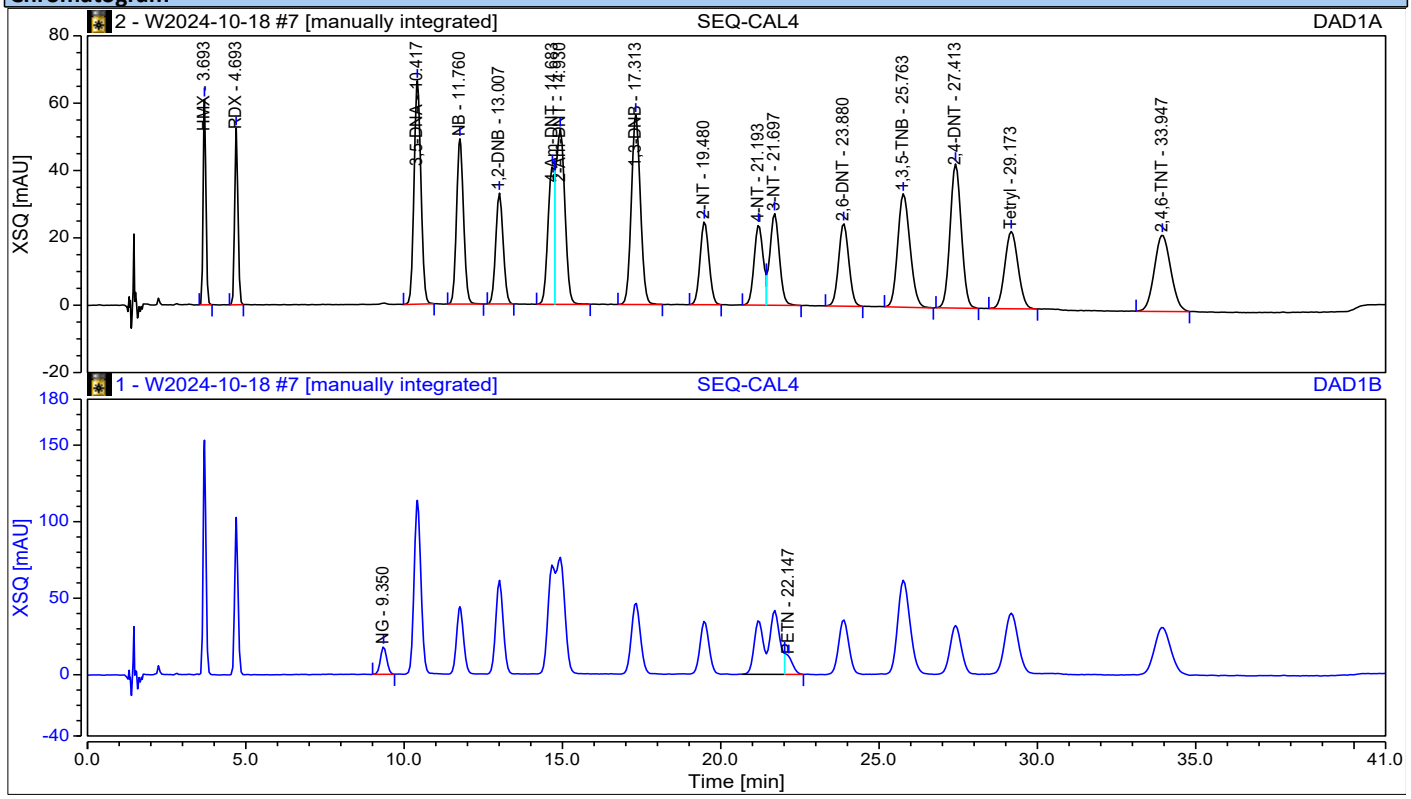
Instrument:
Sequence:W2024-10-18

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL4**	*Instrument:*	**Waldorf**
Vial Number:	**7**	*Run Time (min):*	**41.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**18/Oct/2024 15:21**
Processing Method:	**8330 Statler 2024-10-18**	*Dilution Factor:*	**1.0000**
Last Updated:	**21/Oct/2024 07:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.350	4.1959	18.063	54.47	60.46	948.2665
2	PETN	22.147	3.5073	11.813	45.53	39.54	949.0300
1	HMX	3.693	6.2103	60.995	3.30	9.63	978.0049
2	RDX	4.693	6.3870	52.440	3.39	8.28	987.3555
3	3,5-DNA	10.417	16.5992	66.355	8.81	10.47	973.1564
4	NB	11.760	12.5797	49.076	6.68	7.74	993.0620
5	1,2-DNB	13.007	8.9846	33.002	4.77	5.21	1008.0009
6	4-Am-DNT	14.683	9.7234	40.944	5.16	6.46	971.8932
7	2-Am-DNT	14.930	16.8350	51.957	8.94	8.20	987.8719
8	1,3-DNB	17.313	18.6640	56.310	9.91	8.89	986.6602
9	2-NT	19.480	8.0557	24.701	4.28	3.90	1024.7076
10	4-NT	21.193	7.8997	23.861	4.19	3.77	1024.0100
11	3-NT	21.697	9.5382	27.296	5.07	4.31	976.4561
12	2,6-DNT	23.880	9.1840	24.592	4.88	3.88	963.0933
13	1,3,5-TNB	25.763	15.2187	33.704	8.08	5.32	1030.4718
14	2,4-DNT	27.413	17.6170	42.813	9.36	6.76	1027.9043
15	Tetryl	29.173	11.1707	22.948	5.93	3.62	1002.7756
16	2,4,6-TNT	33.947	13.6469	22.708	7.25	3.58	1005.3496
Total:			**196.017**	**663.579**	**200.000**	**200.000**	

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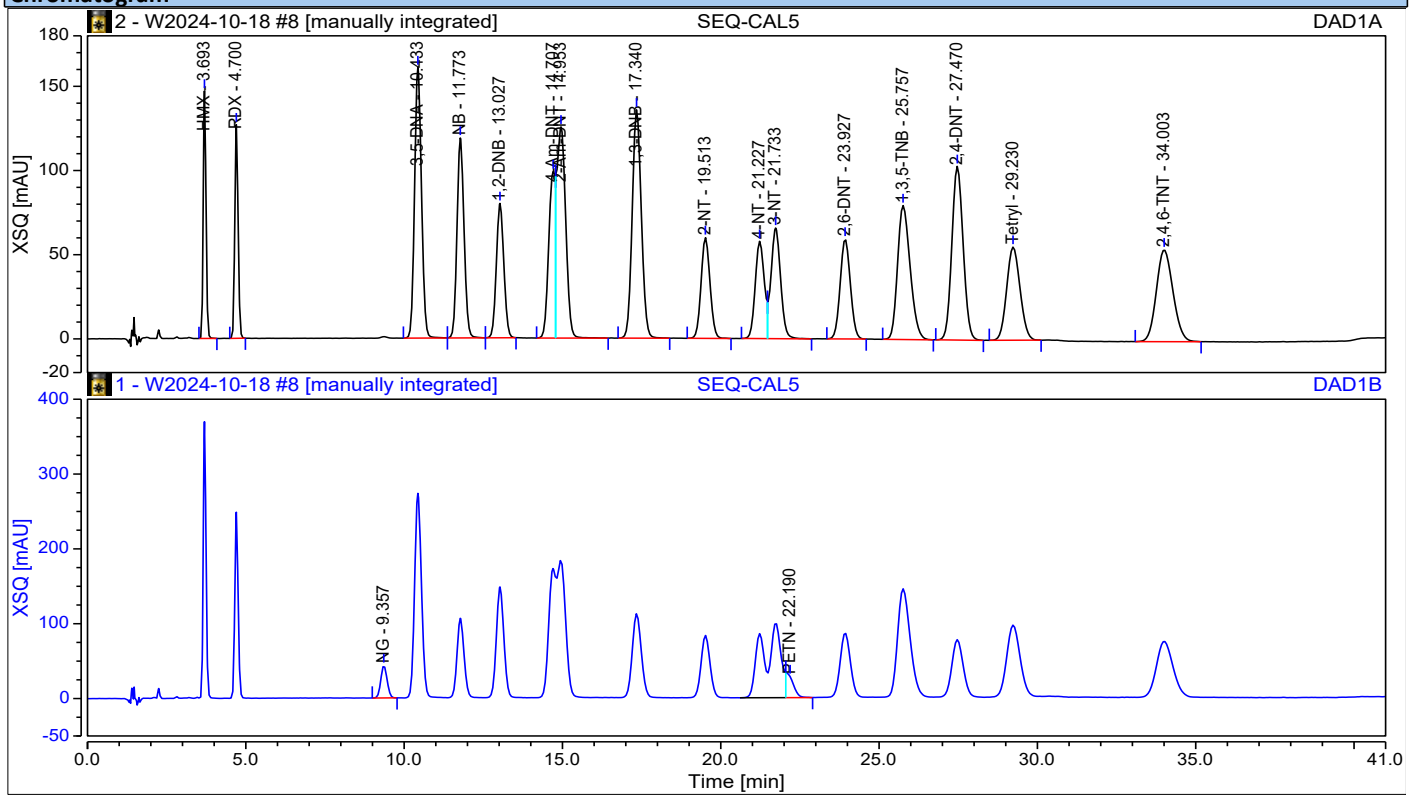
Instrument:
Sequence:W2024-10-18

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL5**	*Instrument:*	**Waldorf**
Vial Number:	**8**	*Run Time (min):*	**41.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**18/Oct/2024 16:04**
Processing Method:	**8330 Statler 2024-10-18**	*Dilution Factor:*	**1.0000**
Last Updated:	**21/Oct/2024 07:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.357	10.0159	43.390	53.63	60.64	2277.8372
2	PETN	22.190	8.6596	28.159	46.37	39.36	2262.2611
1	HMX	3.693	15.0136	146.983	3.29	9.62	2356.7351
2	RDX	4.700	15.4421	126.885	3.38	8.30	2389.0372
3	3,5-DNA	10.433	40.4364	160.652	8.86	10.51	2356.0991
4	NB	11.773	30.5150	118.757	6.68	7.77	2403.0605
5	1,2-DNB	13.027	21.8464	79.808	4.78	5.22	2437.6411
6	4-Am-DNT	14.707	23.4080	98.943	5.13	6.47	2348.6383
7	2-Am-DNT	14.953	40.9294	125.446	8.96	8.21	2385.1478
8	1,3-DNB	17.340	45.2519	135.632	9.91	8.87	2376.5203
9	2-NT	19.513	19.6480	59.909	4.30	3.92	2485.2601
10	4-NT	21.227	19.1401	57.773	4.19	3.78	2479.3919
11	3-NT	21.733	23.2227	65.729	5.09	4.30	2351.3000
12	2,6-DNT	23.927	22.0841	59.375	4.84	3.88	2325.2422
13	1,3,5-TNB	25.757	36.6656	79.581	8.03	5.21	2433.1288
14	2,4-DNT	27.470	42.6989	103.171	9.35	6.75	2477.0494
15	Tetryl	29.230	27.0575	55.337	5.93	3.62	2418.0428
16	2,4,6-TNT	34.003	33.2371	54.591	7.28	3.57	2416.9610
Total:			**475.272**	**1600.120**	**200.000**	**200.000**	

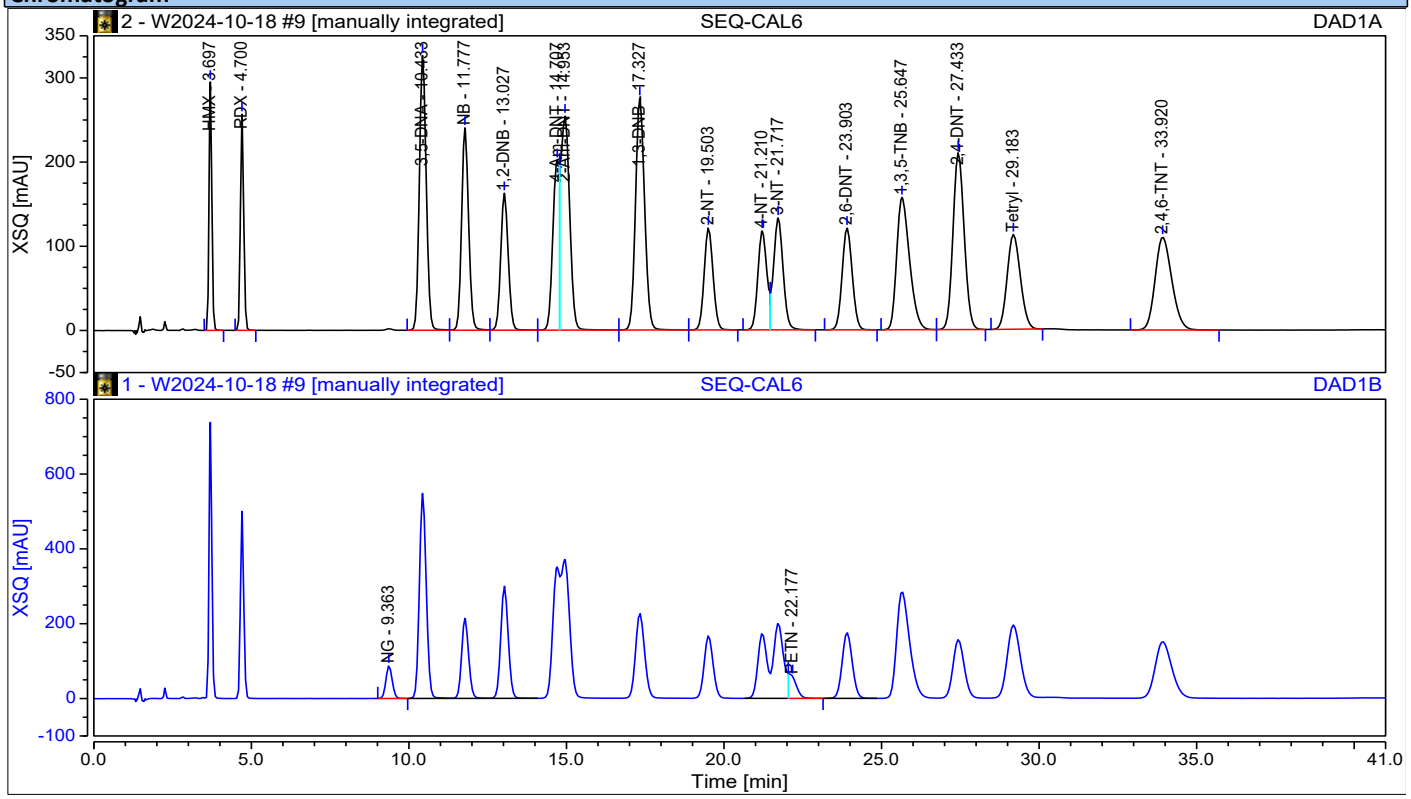
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Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CAL6**	*Instrument:*	**Waldorf**
Vial Number:	**9**	*Run Time (min):*	**41.00**
Injection Type:	**Calibration Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**18/Oct/2024 16:46**
Processing Method:	**8330 Statler 2024-10-18**	*Dilution Factor:*	**1.0000**
Last Updated:	**21/Oct/2024 07:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.363	20.4190	87.516	52.98	59.86	4594.2514
2	PETN	22.177	18.1237	58.688	47.02	40.14	4714.9644
1	HMX	3.697	30.2030	295.048	3.26	9.53	4730.8200
2	RDX	4.700	31.3093	256.761	3.38	8.29	4834.3953
3	3,5-DNA	10.433	82.0426	326.219	8.85	10.54	4784.2809
4	NB	11.777	61.9874	240.357	6.68	7.76	4863.6635
5	1,2-DNB	13.027	44.8896	162.674	4.84	5.25	4968.6660
6	4-Am-DNT	14.707	47.5982	201.664	5.13	6.51	4786.9306
7	2-Am-DNT	14.953	82.8008	254.634	8.93	8.22	4841.4167
8	1,3-DNB	17.327	92.1415	275.327	9.94	8.89	4824.2395
9	2-NT	19.503	39.7513	121.427	4.29	3.92	5037.3151
10	4-NT	21.210	38.7460	117.453	4.18	3.79	5040.5841
11	3-NT	21.717	46.8327	133.009	5.05	4.30	4758.0648
12	2,6-DNT	23.903	45.0757	121.186	4.86	3.91	4745.8992
13	1,3,5-TNB	25.647	74.4394	157.121	8.03	5.07	4803.8515
14	2,4-DNT	27.433	86.8763	210.224	9.37	6.79	5047.3371
15	Tetryl	29.183	54.9545	112.571	5.93	3.64	4919.0267
16	2,4,6-TNT	33.920	67.7499	110.407	7.31	3.57	4888.1276
Total:			**965.941**	**3242.283**	**200.000**	**200.000**	

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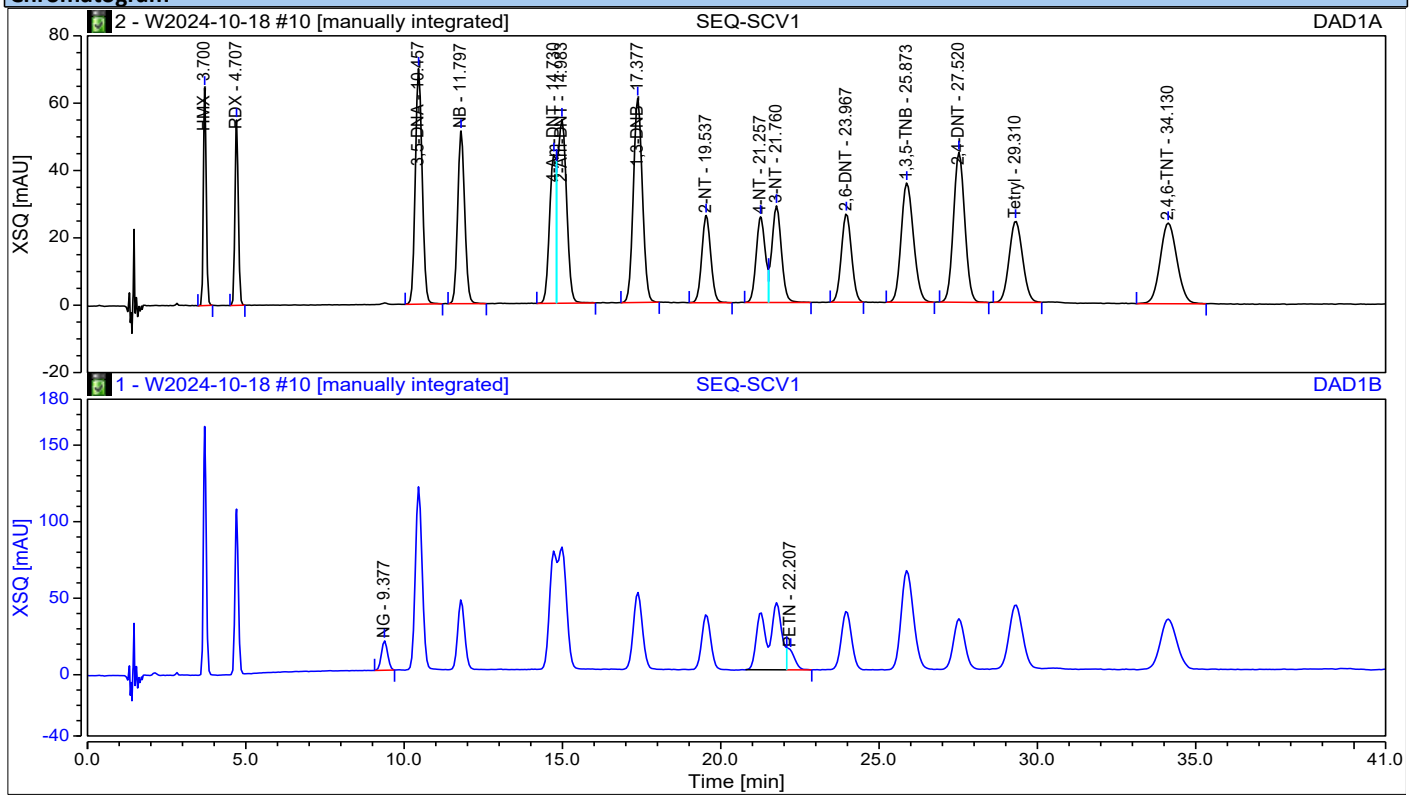
Instrument:
Sequence:W2024-10-18

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-SCV1**	*Instrument:*	**Waldorf**
Vial Number:	**10**	*Run Time (min):*	**41.00**
Injection Type:	**Check Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**18/Oct/2024 17:29**
Processing Method:	**8330 Statler 2024-10-18**	*Dilution Factor:*	**1.0000**
Last Updated:	**21/Oct/2024 07:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.377	4.4529	19.363	53.70	59.86	1016.4990
2	PETN	22.207	3.8394	12.982	46.30	40.14	1042.9418
1	HMX	3.700	6.6141	64.641	3.47	10.18	1036.4605
2	RDX	4.707	6.7086	55.043	3.52	8.67	1036.3668
3	3,5-DNA	10.457	17.5745	69.947	9.23	11.02	1025.8269
4	NB	11.797	13.1813	51.300	6.92	8.08	1038.0702
n.a.	1,2-DNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5	4-Am-DNT	14.730	10.6078	44.228	5.57	6.97	1049.8579
6	2-Am-DNT	14.983	17.7316	54.521	9.31	8.59	1036.6168
7	1,3-DNB	17.377	20.0686	60.605	10.54	9.55	1061.9105
8	2-NT	19.537	8.5419	25.932	4.49	4.08	1075.7743
9	4-NT	21.257	8.4825	25.464	4.45	4.01	1092.7898
10	3-NT	21.760	10.0615	28.707	5.28	4.52	1026.9230
11	2,6-DNT	23.967	9.7837	26.359	5.14	4.15	1032.2623
12	1,3,5-TNB	25.873	16.0616	35.444	8.43	5.58	1083.6719
13	2,4-DNT	27.520	18.4309	44.478	9.68	7.01	1067.8909
14	Tetryl	29.310	11.8786	24.180	6.24	3.81	1056.6059
15	2,4,6-TNT	34.130	14.7186	23.974	7.73	3.78	1061.4086
Total:			**198.738**	**667.167**	**200.000**	**200.000**	

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SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8330B

Laboratory:	APPL, LLC		
Client:	AECOM	Project:	Wingate 60517380 Task 3
Instrument ID:	Waldorf	Calibration:	2433019
Lab File ID:	W2024-08-14-023	Calibration Date:	08/14/24 07:00
Sequence:	SD03246	Injection Date:	08/14/24
Lab Sample ID:	SD03246-SCV1	Injection Time:	20:41

		CONC. (ng/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	LRI	1000	968	0.2047651	0.186929		-3.2	20
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	LRI	1000	917	0.1206658	0.111416		-8.3	20
1,3,5-TRINITROBENZENE	LRI	1000	936	0.2013287	0.200583		-6.4	20
1,3-DINITROBENZENE	LRI	1000	908	0.1988807	0.1838		-9.2	20
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	LRI	1000	944	6.282733E-02	0.076891		-5.6	20
NITROBENZENE	LRI	1000	905	9.565573E-02	0.084699		-9.5	20
2,4,6-TRINITROTOLUENE	LRI	1000	914	0.110253	0.099044		-8.6	20
4-AMINO-2,6-DINITROTOLUENE	LRI	1000	923	0.0887477	0.082195		-7.7	20
2-AMINO-4,6-DINITROTOLUENE	LRI	1000	908	0.1119249	0.098076		-9.2	20
2,4-DINITROTOLUENE	LRI	1000	907	0.1438011	0.130449		-9.3	20
2,6-DINITROTOLUENE	LRI	1000	909	0.0834595	0.075834		-9.1	20
2-NITROTOLUENE	LRI	1000	906	7.440527E-02	0.067639		-9.4	20
3-NITROTOLUENE	LRI	1000	899	0.0643549	0.057678		-10.1	20
4-NITROTOLUENE	LRI	1000	905	6.854373E-02	0.061255		-9.5	20
NITROGLYCERIN	LRI	1000	913	0.0339652	0.029356		-8.7	20
PENTAERYTHRITOL TETRANITRATE	LRI	1000	942	2.405293E-02	0.020872		-5.8	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

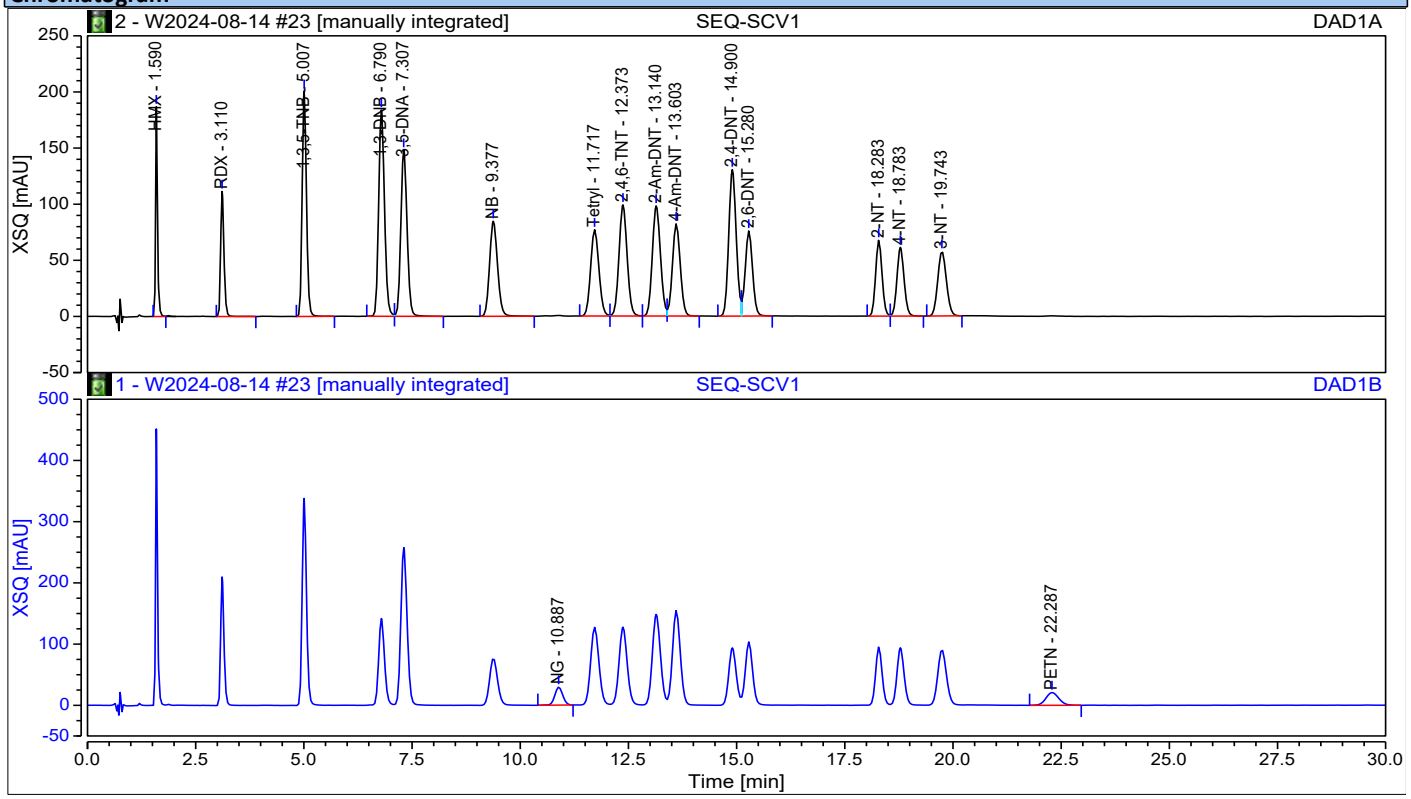
Instrument:
Sequence:W2024-08-14

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-SCV1**	*Instrument:*	**Waldorf**
Vial Number:	**23**	*Run Time (min):*	**30.00**
Injection Type:	**Check Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**14/Aug/2024 20:41**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**15/Aug/2024 14:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.887	6.2756	29.356	46.35	58.44	912.8172
2	PETN	22.287	7.2647	20.872	53.65	41.56	942.3183
1	HMX	1.590	9.4529	186.929	3.51	11.23	968.0682
2	RDX	3.110	9.8687	111.416	3.66	6.69	916.9026
3	1,3,5-TNB	5.007	23.2163	200.583	8.61	12.05	935.5536
n.a.	1,2-DNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	1,3-DNB	6.790	28.7410	183.800	10.66	11.04	907.6263
5	3,5-DNA	7.307	24.7841	148.044	9.19	8.89	913.3849
6	NB	9.377	18.1168	84.699	6.72	5.09	905.4681
7	Tetryl	11.717	17.1791	76.891	6.37	4.62	943.5852
8	2,4,6-TNT	12.373	21.5870	99.044	8.01	5.95	914.3301
9	2-Am-DNT	13.140	21.4178	98.076	7.94	5.89	907.5602
10	4-Am-DNT	13.603	17.3442	82.195	6.43	4.94	922.8750
11	2,4-DNT	14.900	26.1790	130.449	9.71	7.84	907.0745
12	2,6-DNT	15.280	14.8995	75.834	5.53	4.56	909.2090
13	2-NT	18.283	11.7446	67.639	4.36	4.06	905.9516
14	4-NT	18.783	11.6819	61.255	4.33	3.68	904.8650
15	3-NT	19.743	13.3645	57.678	4.96	3.47	899.4097
Total:			**283.118**	**1714.762**	**200.000**	**200.000**	

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SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8330B

Laboratory:	APPL, LLC		
Client:	AECOM	Project:	Wingate 60517380 Task 3
Instrument ID:	Waldorf	Calibration:	2443002
Lab File ID:	W2024-10-18-010	Calibration Date:	10/18/24 08:00
Sequence:	SD04321	Injection Date:	10/18/24
Lab Sample ID:	SD04321-SCV1	Injection Time:	17:29

		CONC. (ng/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	AVG	1000	1040	6.237563E-02	0.064641		3.6	20
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	AVG	1000	1040	5.310637E-02	0.055043		3.6	20
1,3,5-TRINITROBENZENE	AVG	1000	1080	3.271143E-02	0.035444		8.4	20
1,3-DINITROBENZENE	AVG	1000	1060	0.0570807	0.060605		6.2	20
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	AVG	1000	1060	2.287217E-02	0.02418		5.7	20
NITROBENZENE	AVG	1000	1040	0.0494037	0.0513		3.8	20
2,4,6-TRINITROTOLUENE	AVG	1000	1060	2.257297E-02	0.023974		6.2	20
4-AMINO-2,6-DINITROTOLUENE	AVG	1000	1050	4.212967E-02	0.044228		5.0	20
2-AMINO-4,6-DINITROTOLUENE	AVG	1000	1040	5.258703E-02	0.054521		3.7	20
2,4-DINITROTOLUENE	AVG	1000	1070	4.164903E-02	0.044478		6.8	20
2,6-DINITROTOLUENE	AVG	1000	1030	2.554453E-02	0.026359		3.2	20
2-NITROTOLUENE	AVG	1000	1080	2.410567E-02	0.025932		7.6	20
3-NITROTOLUENE	AVG	1000	1030	2.794423E-02	0.028707		2.7	20
4-NITROTOLUENE	AVG	1000	1090	0.0232968	0.025464		9.3	20
NITROGLYCERIN	AVG	1000	1020	1.905837E-02	0.019363		1.6	20
PENTAERYTHRITOL TETRANITRATE	AVG	1000	1040	1.246037E-02	0.012982		4.2	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

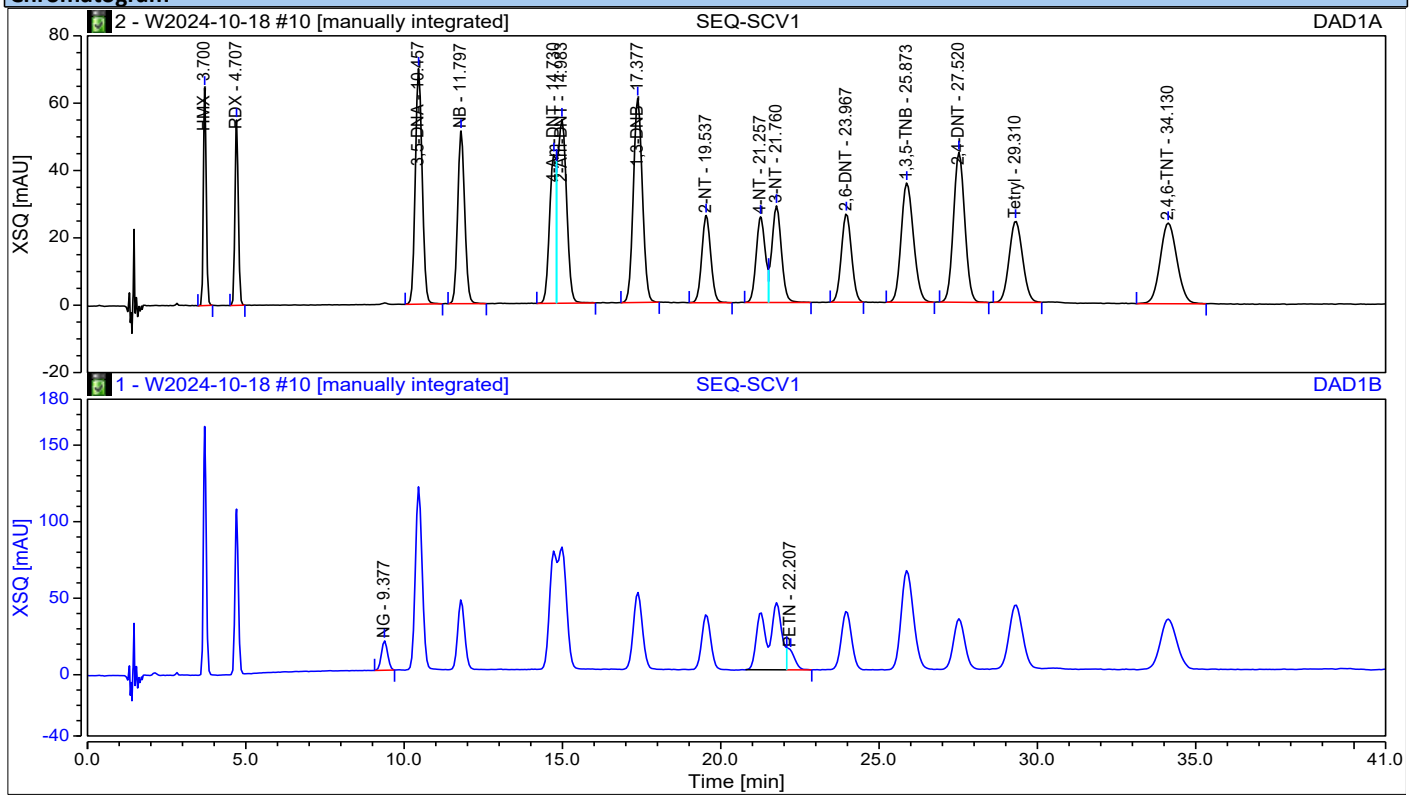
Instrument:
Sequence:W2024-10-18

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-SCV1**	*Instrument:*	**Waldorf**
Vial Number:	**10**	*Run Time (min):*	**41.00**
Injection Type:	**Check Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**18/Oct/2024 17:29**
Processing Method:	**8330 Statler 2024-10-18**	*Dilution Factor:*	**1.0000**
Last Updated:	**21/Oct/2024 07:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.377	4.4529	19.363	53.70	59.86	1016.4990
2	PETN	22.207	3.8394	12.982	46.30	40.14	1042.9418
1	HMX	3.700	6.6141	64.641	3.47	10.18	1036.4605
2	RDX	4.707	6.7086	55.043	3.52	8.67	1036.3668
3	3,5-DNA	10.457	17.5745	69.947	9.23	11.02	1025.8269
4	NB	11.797	13.1813	51.300	6.92	8.08	1038.0702
n.a.	1,2-DNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5	4-Am-DNT	14.730	10.6078	44.228	5.57	6.97	1049.8579
6	2-Am-DNT	14.983	17.7316	54.521	9.31	8.59	1036.6168
7	1,3-DNB	17.377	20.0686	60.605	10.54	9.55	1061.9105
8	2-NT	19.537	8.5419	25.932	4.49	4.08	1075.7743
9	4-NT	21.257	8.4825	25.464	4.45	4.01	1092.7898
10	3-NT	21.760	10.0615	28.707	5.28	4.52	1026.9230
11	2,6-DNT	23.967	9.7837	26.359	5.14	4.15	1032.2623
12	1,3,5-TNB	25.873	16.0616	35.444	8.43	5.58	1083.6719
13	2,4-DNT	27.520	18.4309	44.478	9.68	7.01	1067.8909
14	Tetryl	29.310	11.8786	24.180	6.24	3.81	1056.6059
15	2,4,6-TNT	34.130	14.7186	23.974	7.73	3.78	1061.4086
Total:			**198.738**	**667.167**	**200.000**	**200.000**	

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CONTINUING CALIBRATION VERIFICATION

EPA 8330B

Laboratory:	APPL, LLC	Work Order:	24J0093
Client:	AECOM	Project:	Wingate 60517380 Task 3
Instrument ID:	Waldorf	Calibration:	2443002
Lab File ID:	W2024-10-18-011	Calibration Date:	10/18/24 08:00
Sequence:	SD04325	Injection Date:	10/18/24
Lab Sample ID:	SD04325-CCV1	Injection Time:	18:11

		CONC. (ng/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	AVG	1000	960	6.237563E-02	0.059843		-4	20
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	AVG	1000	975	5.310637E-02	0.051773		-3	20
1,3,5-TRINITROBENZENE	AVG	1000	1010	3.271143E-02	0.033021		1	20
1,3-DINITROBENZENE	AVG	1000	986	0.0570807	0.056258		-1	20
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	AVG	1000	956	2.287217E-02	0.021888		-4	20
NITROBENZENE	AVG	1000	970	0.0494037	0.047925		-3	20
2,4,6-TRINITROTOLUENE	AVG	1000	970	2.257297E-02	0.021909		-3	20
4-AMINO-2,6-DINITROTOLUENE	AVG	1000	981	4.212967E-02	0.041338		-2	20
2-AMINO-4,6-DINITROTOLUENE	AVG	1000	968	5.258703E-02	0.050899		-3	20
2,4-DINITROTOLUENE	AVG	1000	998	4.164903E-02	0.041563		0	20
2,6-DINITROTOLUENE	AVG	1000	959	2.554453E-02	0.024488		-4	20
2-NITROTOLUENE	AVG	1000	997	2.410567E-02	0.024024		0	20
3-NITROTOLUENE	AVG	1000	967	2.794423E-02	0.027022		-3	20
4-NITROTOLUENE	AVG	1000	1010	0.0232968	0.023636		2	20
NITROGLYCERIN	AVG	1000	933	1.905837E-02	0.017773		-7	20
PENTAERYTHRITOL TETRANITRATE	AVG	1000	951	1.246037E-02	0.011832		-5	20
1,2-DINITROBENZENE	AVG	1000	979	3.275067E-02	0.032063		-2	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

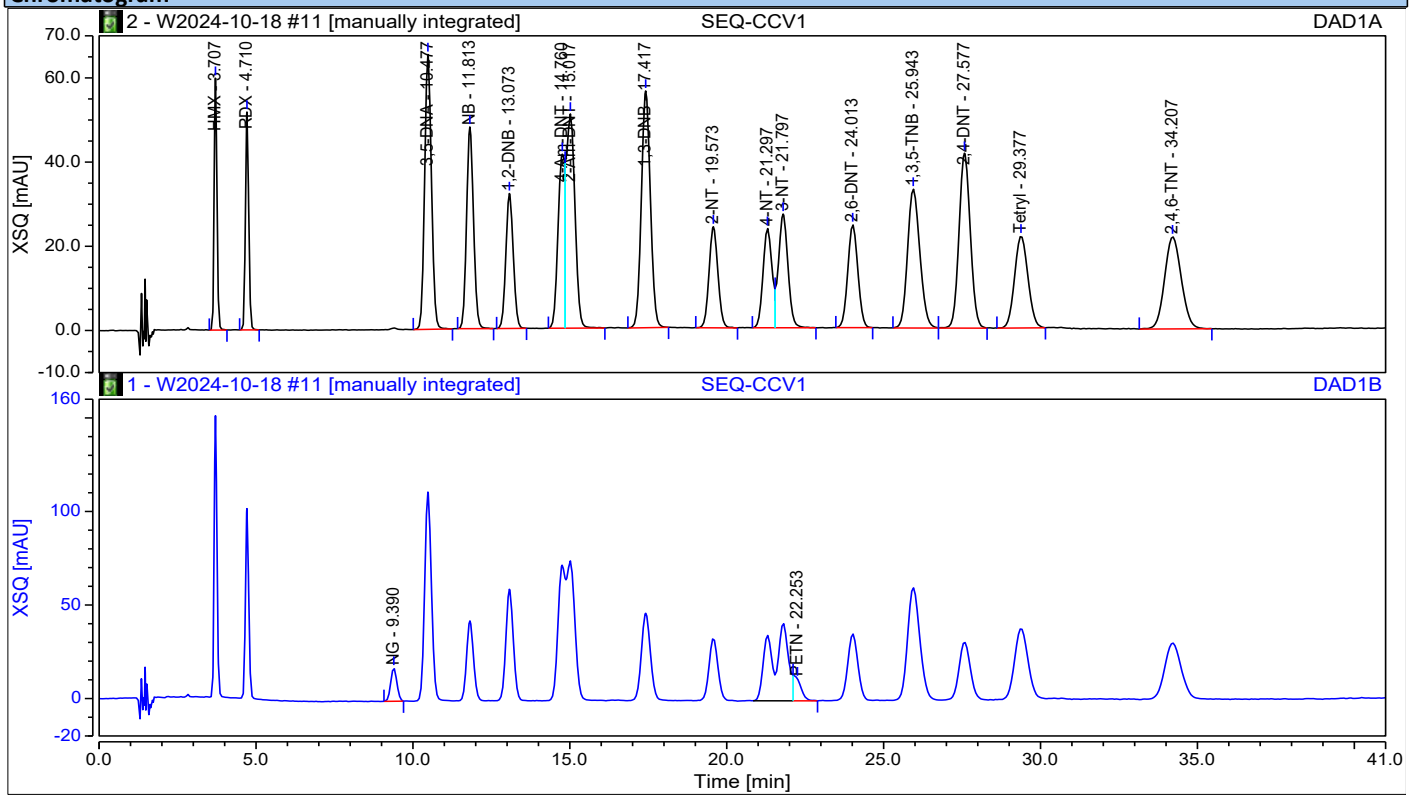
Instrument:
Sequence:W2024-10-18

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CCV1**	*Instrument:*	**Waldorf**
Vial Number:	**11**	*Run Time (min):*	**41.00**
Injection Type:	**Check Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**18/Oct/2024 18:11**
Processing Method:	**8330 Statler 2024-10-18**	*Dilution Factor:*	**1.0000**
Last Updated:	**21/Oct/2024 07:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.390	4.0767	17.773	52.43	60.03	933.0218
2	PETN	22.253	3.6993	11.832	47.57	39.97	950.5845
1	HMX	3.707	6.1294	59.843	3.29	9.61	959.5360
2	RDX	4.710	6.2909	51.773	3.38	8.31	974.8101
3	3,5-DNA	10.477	16.4091	65.302	8.82	10.48	957.7152
4	NB	11.813	12.2701	47.925	6.59	7.69	969.7687
5	1,2-DNB	13.073	8.7828	32.063	4.72	5.15	979.3302
6	4-Am-DNT	14.760	10.1440	41.338	5.45	6.64	981.2466
7	2-Am-DNT	15.017	16.3430	50.899	8.78	8.17	967.7629
8	1,3-DNB	17.417	18.7155	56.258	10.05	9.03	985.7385
9	2-NT	19.573	7.8932	24.024	4.24	3.86	996.6297
10	4-NT	21.297	7.8428	23.636	4.21	3.79	1014.3589
11	3-NT	21.797	9.5105	27.022	5.11	4.34	966.6276
12	2,6-DNT	24.013	9.1089	24.488	4.89	3.93	958.9873
13	1,3,5-TNB	25.943	15.0063	33.021	8.06	5.30	1009.5846
14	2,4-DNT	27.577	17.3706	41.563	9.33	6.67	997.9070
15	Tetryl	29.377	10.8092	21.888	5.81	3.51	956.4405
16	2,4,6-TNT	34.207	13.5078	21.909	7.26	3.52	970.0143
Total:			**193.910**	**652.558**	**200.000**	**200.000**	

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CONTINUING CALIBRATION VERIFICATION

EPA 8330B

Laboratory:	APPL, LLC	Work Order:	24J0093
Client:	AECOM	Project:	Wingate 60517380 Task 3
Instrument ID:	Waldorf	Calibration:	2443002
Lab File ID:	W2024-10-18-021	Calibration Date:	10/18/24 08:00
Sequence:	SD04325	Injection Date:	10/19/24
Lab Sample ID:	SD04325-CCV2	Injection Time:	01:17

		CONC. (ng/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	AVG	1000	940	6.237563E-02	0.058655		-6	20
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	AVG	1000	958	5.310637E-02	0.050889		-4	20
1,3,5-TRINITROBENZENE	AVG	1000	997	3.271143E-02	0.032596		0	20
1,3-DINITROBENZENE	AVG	1000	977	0.0570807	0.055733		-2	20
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	AVG	1000	941	2.287217E-02	0.021525		-6	20
NITROBENZENE	AVG	1000	937	0.0494037	0.046324		-6	20
2,4,6-TRINITROTOLUENE	AVG	1000	953	2.257297E-02	0.021518		-5	20
4-AMINO-2,6-DINITROTOLUENE	AVG	1000	970	4.212967E-02	0.040856		-3	20
2-AMINO-4,6-DINITROTOLUENE	AVG	1000	956	5.258703E-02	0.050275		-4	20
2,4-DINITROTOLUENE	AVG	1000	982	4.164903E-02	0.040918		-2	20
2,6-DINITROTOLUENE	AVG	1000	953	2.554453E-02	0.024336		-5	20
2-NITROTOLUENE	AVG	1000	956	2.410567E-02	0.023034		-4	20
3-NITROTOLUENE	AVG	1000	931	2.794423E-02	0.02602		-7	20
4-NITROTOLUENE	AVG	1000	984	0.0232968	0.022939		-2	20
NITROGLYCERIN	AVG	1000	932	1.905837E-02	0.017746		-7	20
PENTAERYTHRITOL TETRANITRATE	AVG	1000	940	1.246037E-02	0.011698		-6	20
1,2-DINITROBENZENE	AVG	1000	972	3.275067E-02	0.031822		-3	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

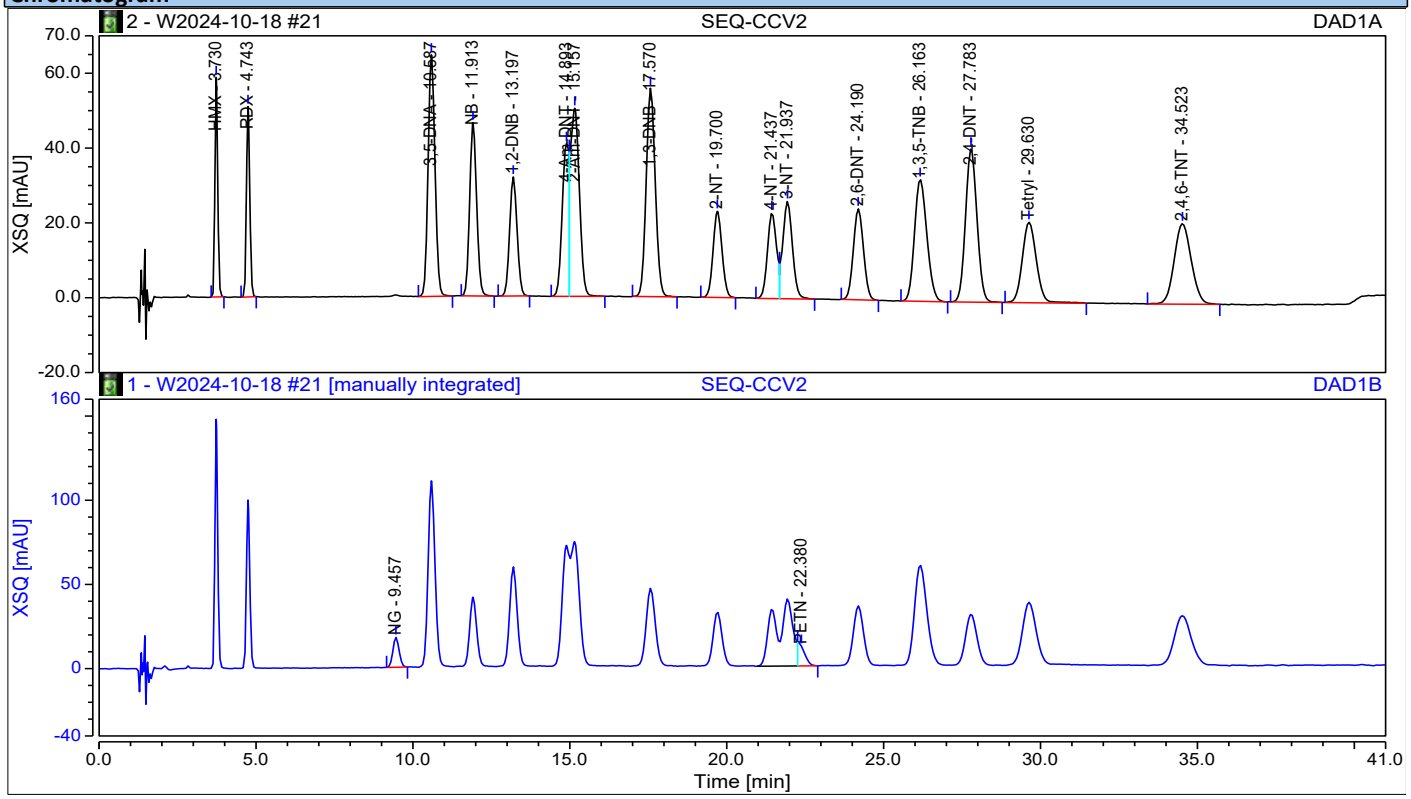
Instrument:
Sequence:W2024-10-18

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CCV2**	*Instrument:*	**Waldorf**
Vial Number:	**21**	*Run Time (min):*	**41.00**
Injection Type:	**Check Standard**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**19/Oct/2024 01:17**
Processing Method:	**8330 Statler 2024-10-18**	*Dilution Factor:*	**1.0000**
Last Updated:	**21/Oct/2024 07:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.457	4.1080	17.746	55.02	60.27	931.5866
2	PETN	22.380	3.3587	11.698	44.98	39.73	939.8122
1	HMX	3.730	6.0591	58.655	3.27	9.58	940.4753
2	RDX	4.743	6.2625	50.889	3.38	8.31	958.1515
3	3,5-DNA	10.587	16.4251	64.575	8.85	10.55	947.0556
4	NB	11.913	11.9554	46.324	6.45	7.57	937.3761
5	1,2-DNB	13.197	8.7910	31.822	4.74	5.20	971.9781
6	4-Am-DNT	14.893	10.0182	40.856	5.40	6.68	969.8180
7	2-Am-DNT	15.157	16.4787	50.275	8.88	8.21	955.8917
8	1,3-DNB	17.570	18.7511	55.733	10.11	9.11	976.5476
9	2-NT	19.700	7.6026	23.034	4.10	3.76	955.5689
10	4-NT	21.437	7.6830	22.939	4.14	3.75	984.4354
11	3-NT	21.937	9.2887	26.020	5.01	4.25	930.7944
12	2,6-DNT	24.190	9.1129	24.336	4.91	3.98	953.0399
13	1,3,5-TNB	26.163	14.8964	32.596	8.03	5.33	996.6037
14	2,4-DNT	27.783	17.3797	40.918	9.37	6.69	982.4155
15	Tetryl	29.630	11.2120	21.525	6.04	3.52	940.5795
16	2,4,6-TNT	34.523	13.5767	21.518	7.32	3.52	952.6784
Total:			**192.960**	**641.460**	**200.000**	**200.000**	

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CONTINUING CALIBRATION VERIFICATION

EPA 8330B

Laboratory:	APPL, LLC	Work Order:	24J0093
Client:	AECOM	Project:	Wingate 60517380 Task 3
Instrument ID:	Waldorf	Calibration:	2433019
Lab File ID:	W2024-10-17-004	Calibration Date:	08/14/24 07:00
Sequence:	SD04327	Injection Date:	10/17/24
Lab Sample ID:	SD04327-CCV1	Injection Time:	13:28

		CONC. (ng/mL)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	LRI	1000	942	0.2047651	0.182046		-5.8	20	
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	LRI	1000	1010	0.1206658	0.122877		1.1	20	
1,3,5-TRINITROBENZENE	LRI	1000	838	0.2013287	0.179984		-16.2	20	
1,3-DINITROBENZENE	LRI	1000	993	0.1988807	0.201173		-0.7	20	
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	LRI	1000	816	6.282733E-02	0.066336		-18.4	20	
NITROBENZENE	LRI	1000	1050	9.565573E-02	0.098057		4.7	20	
2,4,6-TRINITROTOLUENE	LRI	1000	810	0.110253	0.087677		-19.0	20	
4-AMINO-2,6-DINITROTOLUENE	LRI	1000	991	0.0887477	0.088195		-0.9	20	
2-AMINO-4,6-DINITROTOLUENE	LRI	1000	969	0.1119249	0.104761		-3.1	20	
2,4-DINITROTOLUENE	LRI	1000	918	0.1438011	0.132015		-8.2	20	
2,6-DINITROTOLUENE	LRI	1000	950	0.0834595	0.079275		-5.0	20	
2-NITROTOLUENE	LRI	1000	994	7.440527E-02	0.074265		-0.6	20	
3-NITROTOLUENE	LRI	1000	1120	0.0643549	0.072023		12.1	20	
4-NITROTOLUENE	LRI	1000	1070	6.854373E-02	0.072454		6.9	20	
NITROGLYCERIN	LRI	1000	1140	0.0339652	0.036751		14.3	20	
PENTAERYTHRITOL TETRANITRATE	LRI	1000	1300	2.405293E-02	0.028826		30.1	20	*
1,2-DINITROBENZENE	LRI	1000	1050	0.0942839	0.099602		4.6	20	

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

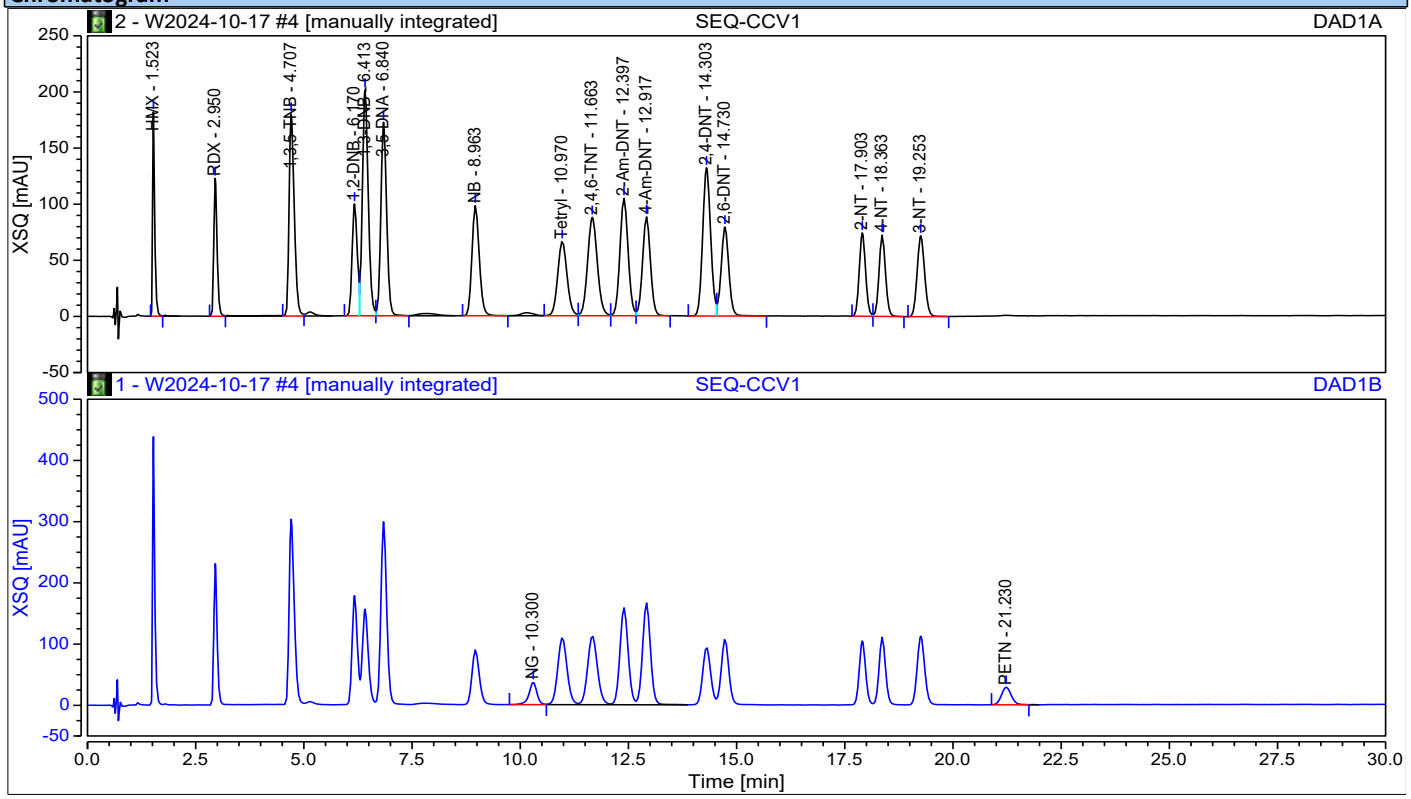
Instrument:
Sequence:W2024-10-17

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CCV1**	*Instrument:*	**Waldorf**
Vial Number:	**4**	*Run Time (min):*	**30.00**
Injection Type:	**Check Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**17/Oct/2024 13:28**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**21/Oct/2024 10:51**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.300	7.7921	36.751	50.45	56.04	1143.4746
2	PETN	21.230	7.6546	28.826	49.55	43.96	1300.9513
1	HMX	1.523	10.1229	182.046	3.34	9.93	941.6010
2	RDX	2.950	10.6798	122.877	3.53	6.70	1011.1043
3	1,3,5-TNB	4.707	24.8049	179.984	8.19	9.82	838.3417
4	1,2-DNB	6.170	13.7171	99.602	4.53	5.43	1045.9608
5	1,3-DNB	6.413	31.5803	201.173	10.43	10.97	992.9599
6	3,5-DNA	6.840	26.8376	172.443	8.86	9.41	1063.5726
7	NB	8.963	19.3874	98.057	6.40	5.35	1046.7088
8	Tetryl	10.970	16.6517	66.336	5.50	3.62	816.2225
9	2,4,6-TNT	11.663	22.9119	87.677	7.57	4.78	810.2076
10	2-Am-DNT	12.397	23.1425	104.761	7.64	5.71	968.9985
11	4-Am-DNT	12.917	18.6882	88.195	6.17	4.81	990.7613
12	2,4-DNT	14.303	28.2570	132.015	9.33	7.20	917.8450
13	2,6-DNT	14.730	16.3016	79.275	5.38	4.32	950.0728
14	2-NT	17.903	12.5722	74.265	4.15	4.05	993.6710
15	4-NT	18.363	12.5995	72.454	4.16	3.95	1068.6438
16	3-NT	19.253	14.5059	72.023	4.79	3.93	1120.7685
Total:			**318.207**	**1898.760**	**200.000**	**200.000**	

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CONTINUING CALIBRATION VERIFICATION

EPA 8330B

Laboratory:	APPL, LLC	Work Order:	24J0093
Client:	AECOM	Project:	Wingate 60517380 Task 3
Instrument ID:	Waldorf	Calibration:	2433019
Lab File ID:	W2024-10-17-014	Calibration Date:	08/14/24 07:00
Sequence:	SD04327	Injection Date:	10/17/24
Lab Sample ID:	SD04327-CCV2	Injection Time:	18:44

		CONC. (ng/mL)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	LRI	1000	933	0.2047651	0.180451		-6.7	20	
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	LRI	1000	1000	0.1206658	0.121705		0.1	20	
1,3,5-TRINITROBENZENE	LRI	1000	800	0.2013287	0.171918		-20.0	20	
1,3-DINITROBENZENE	LRI	1000	968	0.1988807	0.196162		-3.2	20	
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	LRI	1000	742	6.282733E-02	0.0602		-25.8	20	*
NITROBENZENE	LRI	1000	1010	9.565573E-02	0.095012		1.5	20	
2,4,6-TRINITROTOLUENE	LRI	1000	755	0.110253	0.081648		-24.5	20	*
4-AMINO-2,6-DINITROTOLUENE	LRI	1000	962	0.0887477	0.085631		-3.8	20	
2-AMINO-4,6-DINITROTOLUENE	LRI	1000	940	0.1119249	0.101617		-6.0	20	
2,4-DINITROTOLUENE	LRI	1000	879	0.1438011	0.126408		-12.1	20	
2,6-DINITROTOLUENE	LRI	1000	916	0.0834595	0.076384		-8.4	20	
2-NITROTOLUENE	LRI	1000	954	7.440527E-02	0.071281		-4.6	20	
3-NITROTOLUENE	LRI	1000	1090	0.0643549	0.069844		8.7	20	
4-NITROTOLUENE	LRI	1000	1030	6.854373E-02	0.070046		3.3	20	
NITROGLYCERIN	LRI	1000	1120	0.0339652	0.036157		12.5	20	
PENTAERYTHRITOL TETRANITRATE	LRI	1000	1270	2.405293E-02	0.028238		27.4	20	*
1,2-DINITROBENZENE	LRI	1000	1020	0.0942839	0.096934		1.8	20	

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

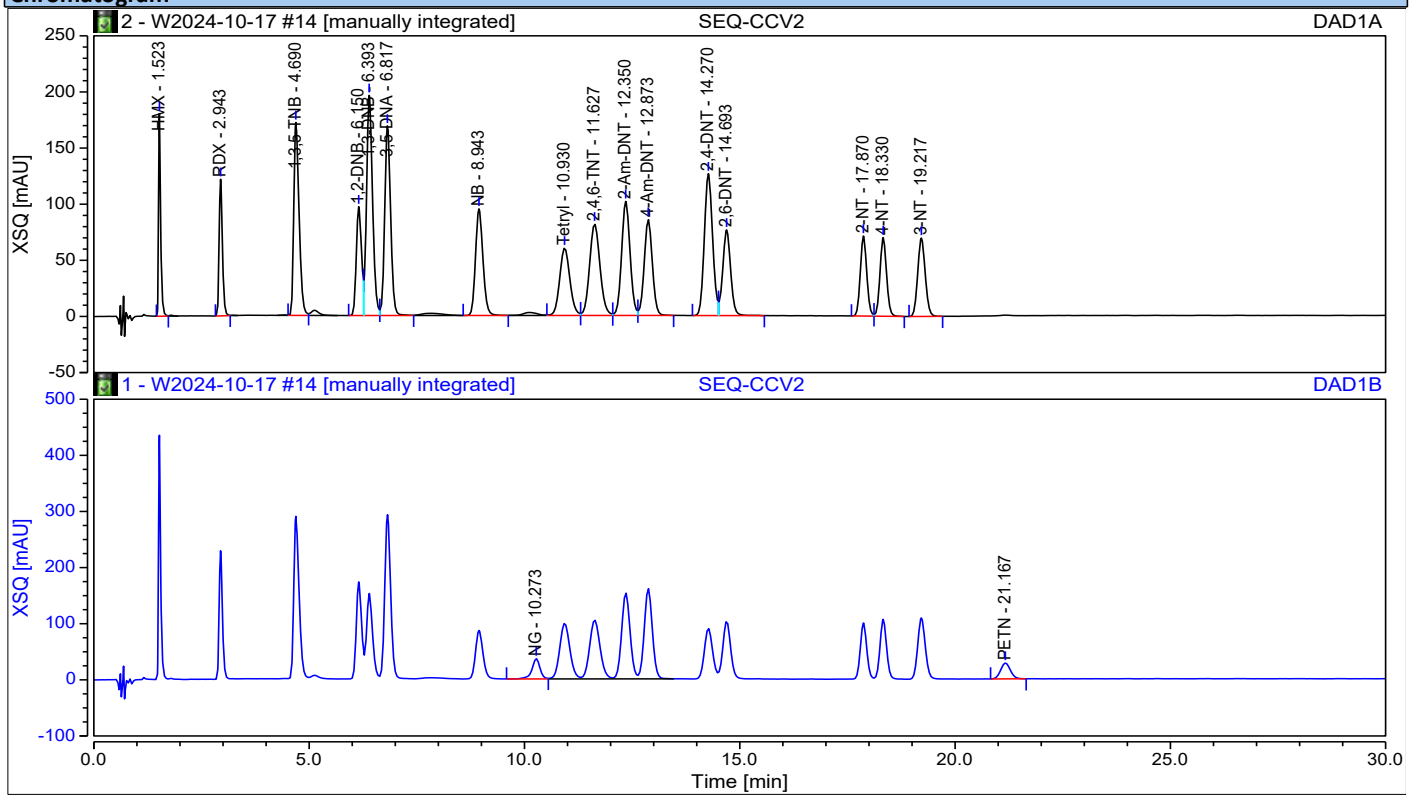
Instrument:
Sequence:W2024-10-17

Chromatogram and Results

Injection Details

Injection Name:	**SEQ-CCV2**	*Instrument:*	**Waldorf**
Vial Number:	**14**	*Run Time (min):*	**30.00**
Injection Type:	**Check Standard**	*Injection Volume:*	**40.00**
Column Type:	**Zorbax C18**	*Injection Date/Time:*	**17/Oct/2024 18:44**
Processing Method:	**8330 Waldorf 2024-08-09**	*Dilution Factor:*	**1.0000**
Last Updated:	**21/Oct/2024 10:51**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	10.273	7.9289	36.157	51.66	56.15	1124.9338
2	PETN	21.167	7.4194	28.238	48.34	43.85	1274.4560
1	HMX	1.523	10.1453	180.451	3.37	10.17	932.9523
2	RDX	2.943	10.5932	121.705	3.52	6.86	1001.4696
3	1,3,5-TNB	4.690	24.4449	171.918	8.13	9.69	800.2733
4	1,2-DNB	6.150	13.6042	96.934	4.52	5.46	1018.2872
5	1,3-DNB	6.393	31.5895	196.162	10.50	11.06	968.3458
6	3,5-DNA	6.817	26.9022	168.912	8.94	9.52	1041.8355
7	NB	8.943	19.0514	95.012	6.33	5.36	1014.5140
8	Tetryl	10.930	16.4628	60.200	5.47	3.39	742.1941
9	2,4,6-TNT	11.627	22.8578	81.648	7.60	4.60	754.9828
10	2-Am-DNT	12.350	23.1979	101.617	7.71	5.73	940.1042
11	4-Am-DNT	12.873	18.7630	85.631	6.24	4.83	961.7506
12	2,4-DNT	14.270	28.1220	126.408	9.35	7.12	879.2786
13	2,6-DNT	14.693	16.2579	76.384	5.40	4.31	915.7403
14	2-NT	17.870	12.2934	71.281	4.09	4.02	954.1624
15	4-NT	18.330	12.4083	70.046	4.12	3.95	1033.4306
16	3-NT	19.217	14.1462	69.844	4.70	3.94	1087.1530
Total:			**316.188**	**1838.549**	**200.000**	**200.000**	

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QUALITY CONTROL RAW DATA

ANALYSIS DATA SHEET

Blank

Laboratory:	APPL, LLC			Work Order:	24J0093
Client:	AECOM		Project:	Wingate 60517380 Task 3	
Matrix:	Solid	Laboratory ID:	BDJ0318-BLK1	File ID:	W2024-10-18-012
Sampled:		Prepared:	10/14/24 07:57	Analyzed:	10/18/24 18:54
Solids:		Preparation:	EPA 8330A	Dilution:	1
Batch:	BDJ0318	Sequence:	SD04325	Calibration:	2443002
Instrument:	Waldorf				
Column:	1				

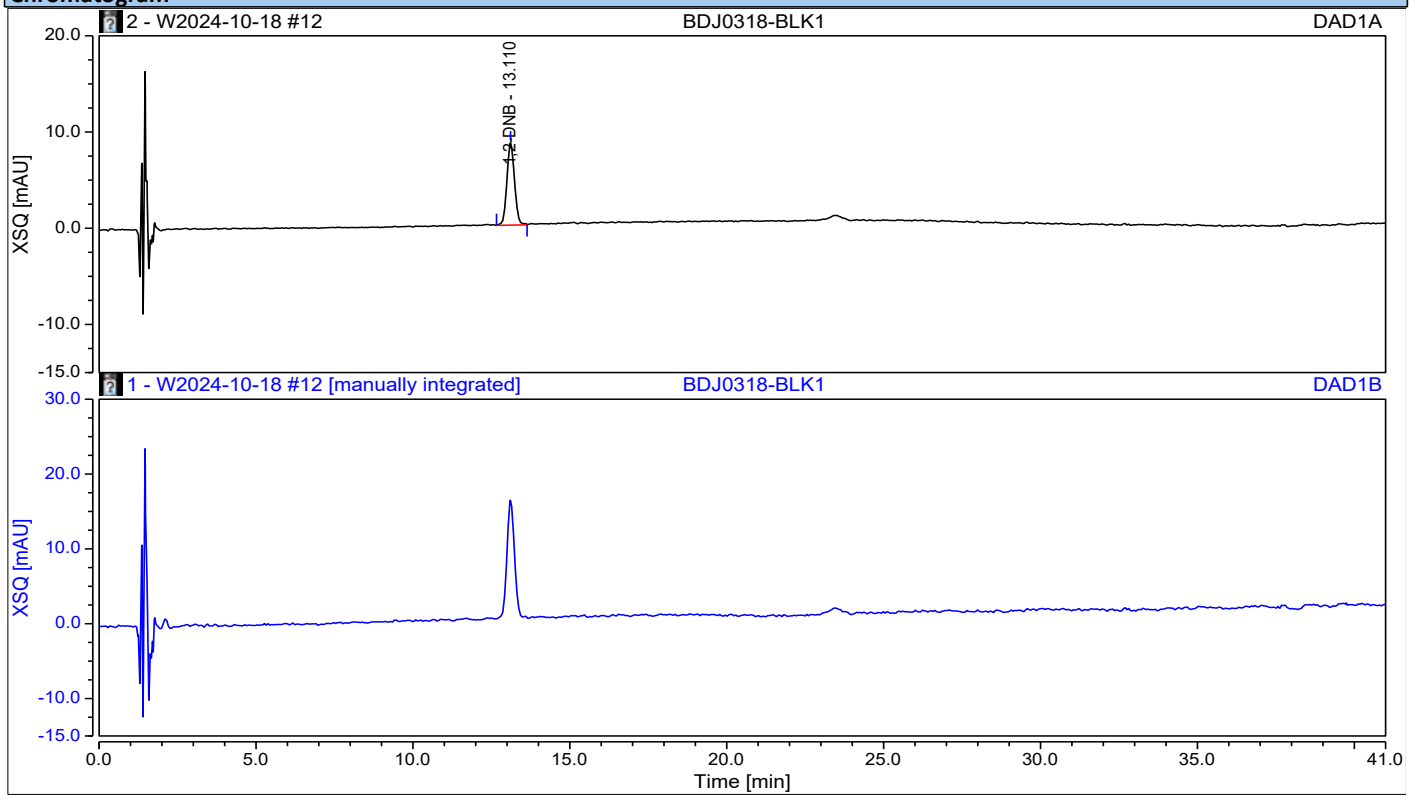
COMPOUND	CONC. (mg/kg)	LOQ	LOD	DL	Q
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	0.074 U	0.49	0.074	0.037	U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	0.074 U	0.49	0.074	0.025	U
1,3,5-TRINITROBENZENE	0.074 U	0.49	0.074	0.013	U
1,3-DINITROBENZENE	0.074 U	0.49	0.074	0.022	U
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	0.074 U	0.49	0.074	0.037	U
NITROBENZENE	0.074 U	0.49	0.074	0.028	U
2,4,6-TRINITROTOLUENE	0.074 U	0.49	0.074	0.031	U
4-AMINO-2,6-DINITROTOLUENE	0.074 U	0.49	0.074	0.034	U
2-AMINO-4,6-DINITROTOLUENE	0.074 U	0.49	0.074	0.034	U
2,4-DINITROTOLUENE	0.074 U	0.49	0.074	0.028	U
2,6-DINITROTOLUENE	0.074 U	0.49	0.074	0.031	U
2-NITROTOLUENE	0.074 U	0.49	0.074	0.037	U
3-NITROTOLUENE	0.074 U	0.49	0.074	0.037	U
4-NITROTOLUENE	0.074 U	0.49	0.074	0.037	U
NITROGLYCERIN	0.15 U	0.49	0.15	0.060	U
PENTAERYTHRITOL TETRANITRATE	0.25 U	2.5	0.25	0.11	U

Chromatogram and Results

Injection Details

Injection Name:	**BDJ0318-BLK1**	*Instrument:*	**Waldorf**
Vial Number:	**12**	*Run Time (min):*	**41.00**
Injection Type:	**Unknown**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**18/Oct/2024 18:54**
Processing Method:	**8330 Statler 2024-10-18**	*Dilution Factor:*	**1.0000**
Last Updated:	**21/Oct/2024 07:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
n.a.	NG	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	PETN	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	HMX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	RDX	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3,5-DNA	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	NB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	1,2-DNB	13.110	2.4027	8.552	100.00	100.00	261.2161
n.a.	4-Am-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2-Am-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	1,3-DNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	4-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	3-NT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2,6-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	1,3,5-TNB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2,4-DNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Tetryl	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	2,4,6-TNT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**2.403**	**8.552**	**100.000**	**100.000**	

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ANALYSIS DATA SHEET

LCS

Laboratory:	APPL, LLC			Work Order:	24J0093
Client:	AECOM		Project:	Wingate 60517380 Task 3	
Matrix:	Solid	Laboratory ID:	BDJ0318-BS1	File ID:	W2024-10-18-013
Sampled:		Prepared:	10/14/24 07:57	Analyzed:	10/18/24 19:37
Solids:		Preparation:	EPA 8330A	Dilution:	1
Batch:	BDJ0318	Sequence:	SD04325	Calibration:	2443002
Column:	1			Instrument:	Waldorf

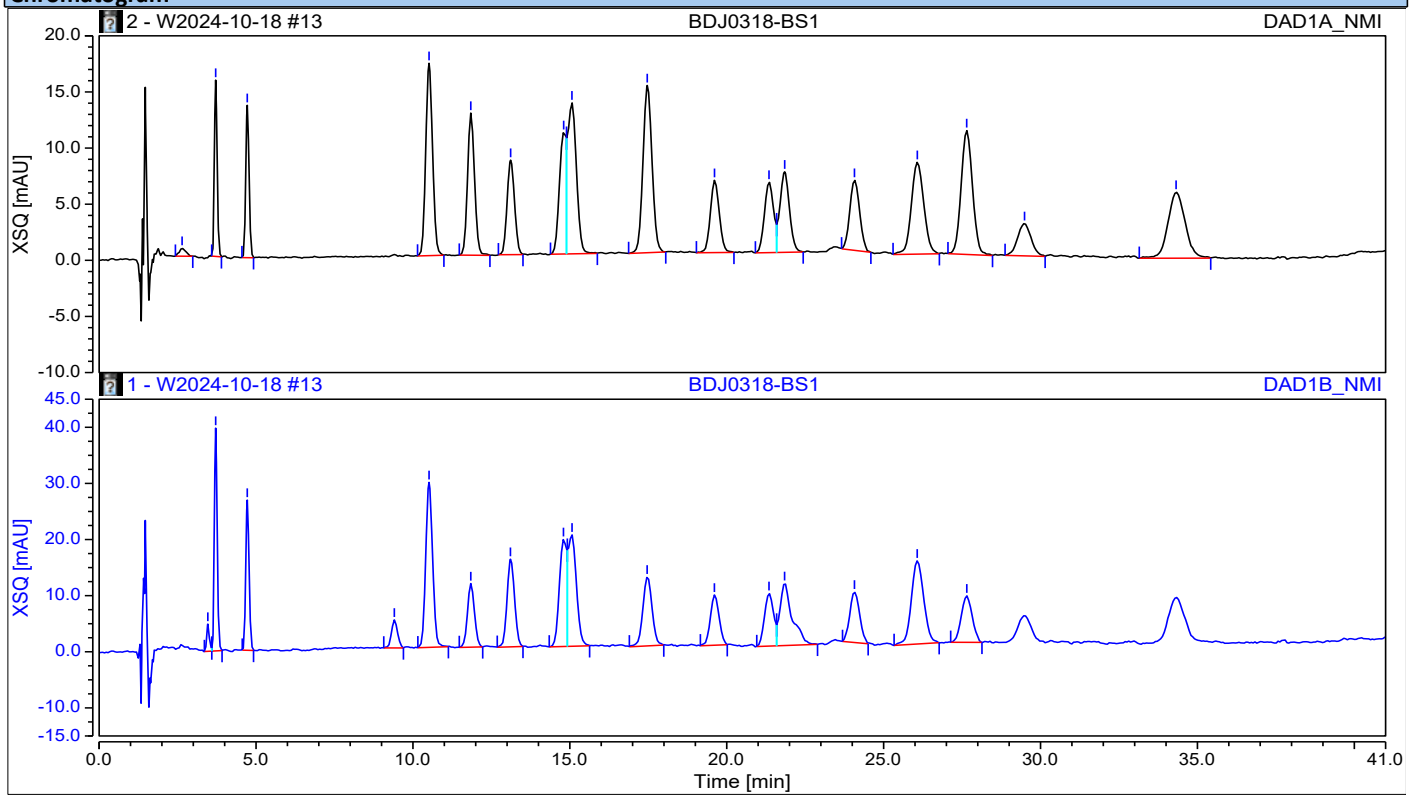
COMPOUND	CONC. (mg/kg)	LOQ	DL	Q
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	2.00	0.50	0.037	
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	2.03	0.50	0.025	
1,3,5-TRINITROBENZENE	1.99	0.50	0.013	
1,3-DINITROBENZENE	2.07	0.50	0.022	
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	1.01	0.50	0.037	BS1
NITROBENZENE	2.04	0.50	0.028	
2,4,6-TRINITROTOLUENE	2.07	0.50	0.031	
4-AMINO-2,6-DINITROTOLUENE	2.04	0.50	0.034	
2-AMINO-4,6-DINITROTOLUENE	2.03	0.50	0.034	
2,4-DINITROTOLUENE	2.11	0.50	0.028	
2,6-DINITROTOLUENE	1.95	0.50	0.031	
2-NITROTOLUENE	2.12	0.50	0.037	
3-NITROTOLUENE	2.04	0.50	0.037	
4-NITROTOLUENE	2.14	0.50	0.037	
NITROGLYCERIN	2.08	0.50	0.061	
PENTAERYTHRITOL TETRANITRATE	1.97	2.5	0.11	MI3, J

Original Chromatogram

Injection Details

Injection Name:	**BDJ0318-BS1**	*Instrument:*	**Waldorf**
Vial Number:	**13**	*Run Time (min):*	**41.00**
Injection Type:	**Unknown**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**18/Oct/2024 19:37**
Processing Method:	**8330 Statler 2024-10-18**	*Dilution Factor:*	**1.0000**
Last Updated:	**21/Oct/2024 07:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.407	1.1253	4.996	63.42	61.83	262.2575
2	PETN	22.100	0.6491	3.084	36.58	38.17	247.7360
2	HMX	3.713	1.6004	15.708	3.33	9.72	251.8704
3	RDX	4.720	1.6559	13.574	3.45	8.40	255.5774
4	3,5-DNA	10.513	4.3165	17.139	8.98	10.61	251.3528
5	NB	11.843	3.2816	12.664	6.83	7.84	256.2566
6	1,2-DNB	13.113	2.3167	8.418	4.82	5.21	257.1314
7	4-Am-DNT	14.803	2.6577	10.834	5.53	6.70	257.1667
8	2-Am-DNT	15.067	4.3649	13.463	9.08	8.33	255.9767
9	1,3-DNB	17.467	4.9858	14.901	10.38	9.22	261.0939
10	2-NT	19.610	2.1403	6.447	4.45	3.99	267.4328
11	4-NT	21.347	2.1184	6.286	4.41	3.89	269.7746
12	3-NT	21.847	2.5265	7.178	5.26	4.44	256.7884
13	2,6-DNT	24.070	2.2770	6.253	4.74	3.87	244.8675
14	1,3,5-TNB	26.073	3.7658	8.184	7.84	5.06	250.2180
15	2,4-DNT	27.647	4.6580	11.047	9.69	6.84	265.2334
16	Tetryl	29.490	1.4417	2.896	3.00	1.79	126.5266
17	2,4,6-TNT	34.320	3.7638	5.887	7.83	3.64	260.6544
Total:			**49.646**	**168.959**	**199.637**	**199.558**	

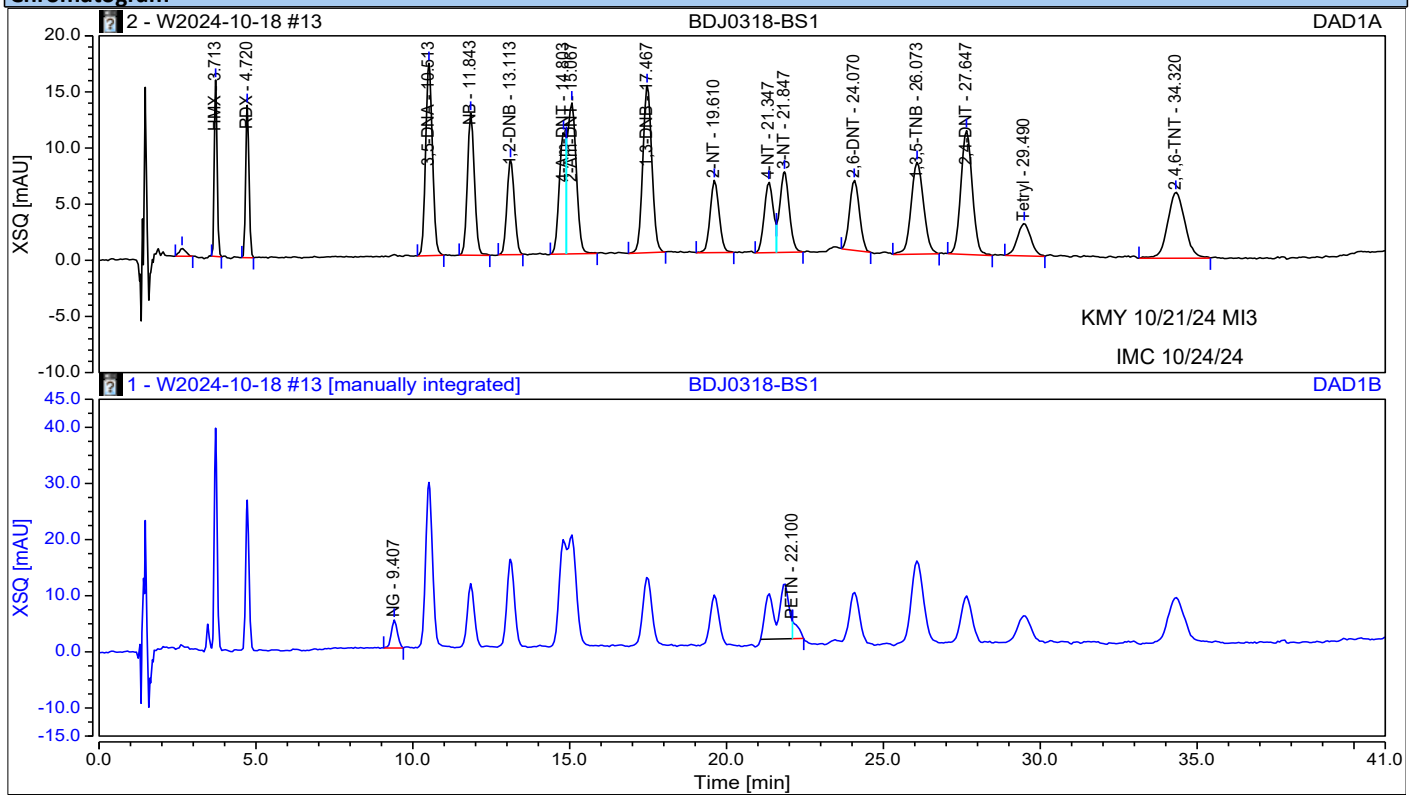
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Chromatogram and Results

Injection Details

Injection Name:	**BDJ0318-BS1**	*Instrument:*	**Waldorf**
Vial Number:	**13**	*Run Time (min):*	**41.00**
Injection Type:	**Unknown**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**18/Oct/2024 19:37**
Processing Method:	**8330 Statler 2024-10-18**	*Dilution Factor:*	**1.0000**
Last Updated:	**21/Oct/2024 07:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.407	1.1253	4.996	63.42	61.83	262.2575
2	PETN	22.100	0.6491	3.084	36.58	38.17	247.7360
2	HMX	3.713	1.6004	15.708	3.33	9.72	251.8704
3	RDX	4.720	1.6559	13.574	3.45	8.40	255.5774
4	3,5-DNA	10.513	4.3165	17.139	8.98	10.61	251.3528
5	NB	11.843	3.2816	12.664	6.83	7.84	256.2566
6	1,2-DNB	13.113	2.3167	8.418	4.82	5.21	257.1314
7	4-Am-DNT	14.803	2.6577	10.834	5.53	6.70	257.1667
8	2-Am-DNT	15.067	4.3649	13.463	9.08	8.33	255.9767
9	1,3-DNB	17.467	4.9858	14.901	10.38	9.22	261.0939
10	2-NT	19.610	2.1403	6.447	4.45	3.99	267.4328
11	4-NT	21.347	2.1184	6.286	4.41	3.89	269.7746
12	3-NT	21.847	2.5265	7.178	5.26	4.44	256.7884
13	2,6-DNT	24.070	2.2770	6.253	4.74	3.87	244.8675
14	1,3,5-TNB	26.073	3.7658	8.184	7.84	5.06	250.2180
15	2,4-DNT	27.647	4.6580	11.047	9.69	6.84	265.2334
16	Tetryl	29.490	1.4417	2.896	3.00	1.79	126.5266
17	2,4,6-TNT	34.320	3.7638	5.887	7.83	3.64	260.6544
Total:			**49.646**	**168.959**	**199.637**	**199.558**	

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ANALYSIS DATA SHEET

LCS Dup

Laboratory:	APPL, LLC			Work Order:	24J0093
Client:	AECOM		Project:	Wingate 60517380 Task 3	
Matrix:	Solid	Laboratory ID:	BDJ0318-BSD1	File ID:	W2024-10-18-014
Sampled:		Prepared:	10/14/24 07:57	Analyzed:	10/18/24 20:19
Solids:		Preparation:	EPA 8330A	Dilution:	1
Batch:	BDJ0318	Sequence:	SD04325	Calibration:	2443002
Instrument:	Waldorf				
Column:	1				

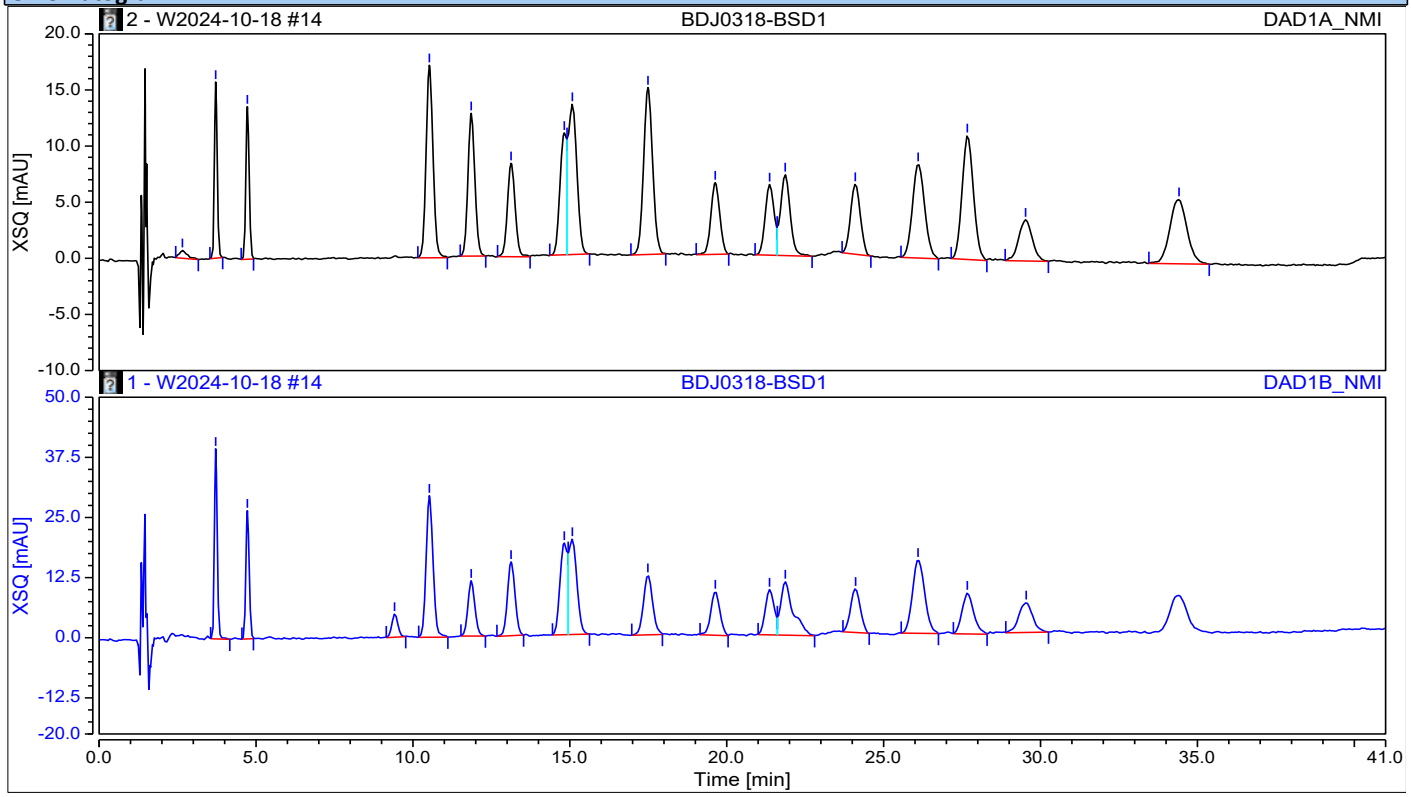
COMPOUND	CONC. (mg/kg)	LOQ	DL	Q
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	1.96	0.49	0.036	
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	2.00	0.49	0.024	
1,3,5-TRINITROBENZENE	1.99	0.49	0.013	
1,3-DINITROBENZENE	2.03	0.49	0.021	
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	1.25	0.49	0.036	BS1, BS3
NITROBENZENE	2.01	0.49	0.027	
2,4,6-TRINITROTOLUENE	1.99	0.49	0.030	
4-AMINO-2,6-DINITROTOLUENE	2.01	0.49	0.033	
2-AMINO-4,6-DINITROTOLUENE	1.99	0.49	0.033	
2,4-DINITROTOLUENE	2.07	0.49	0.027	
2,6-DINITROTOLUENE	1.91	0.49	0.030	
2-NITROTOLUENE	2.07	0.49	0.036	
3-NITROTOLUENE	2.02	0.49	0.036	
4-NITROTOLUENE	2.11	0.49	0.036	
NITROGLYCERIN	1.97	0.49	0.059	
PENTAERYTHRITOL TETRANITRATE	2.13	2.4	0.11	MI3, J

Original Chromatogram

Injection Details

Injection Name:	**BDJ0318-BSD1**	*Instrument:*	**Waldorf**
Vial Number:	**14**	*Run Time (min):*	**41.00**
Injection Type:	**Unknown**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**18/Oct/2024 20:19**
Processing Method:	**8330 Statler 2024-10-18**	*Dilution Factor:*	**1.0000**
Last Updated:	**21/Oct/2024 07:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.413	1.0826	4.825	56.68	58.64	253.2716
2	PETN	22.143	0.8274	3.403	43.32	41.36	273.4246
2	HMX	3.713	1.6205	15.698	3.34	9.67	251.7002
3	RDX	4.723	1.6686	13.592	3.44	8.37	255.9195
4	3,5-DNA	10.523	4.3941	17.154	9.06	10.57	251.5840
5	NB	11.857	3.2625	12.722	6.73	7.84	257.4419
6	1,2-DNB	13.127	2.3872	8.324	4.92	5.13	254.2315
7	4-Am-DNT	14.823	2.6431	10.859	5.45	6.69	257.7733
8	2-Am-DNT	15.080	4.3068	13.397	8.88	8.25	254.7265
9	1,3-DNB	17.490	4.9863	14.867	10.29	9.16	260.5035
10	2-NT	19.633	2.0942	6.392	4.32	3.94	265.1500
11	4-NT	21.367	2.0870	6.298	4.30	3.88	270.2961
12	3-NT	21.863	2.6019	7.228	5.37	4.45	258.5753
13	2,6-DNT	24.097	2.2656	6.248	4.67	3.85	244.6743
14	1,3,5-TNB	26.100	3.7875	8.361	7.81	5.15	255.6191
15	2,4-DNT	27.667	4.6478	11.054	9.59	6.81	265.3951
16	Tetryl	29.523	1.8470	3.675	3.81	2.26	160.5754
17	2,4,6-TNT	34.413	3.6686	5.754	7.57	3.54	254.7498
Total:			**50.179**	**169.852**	**199.563**	**199.564**	

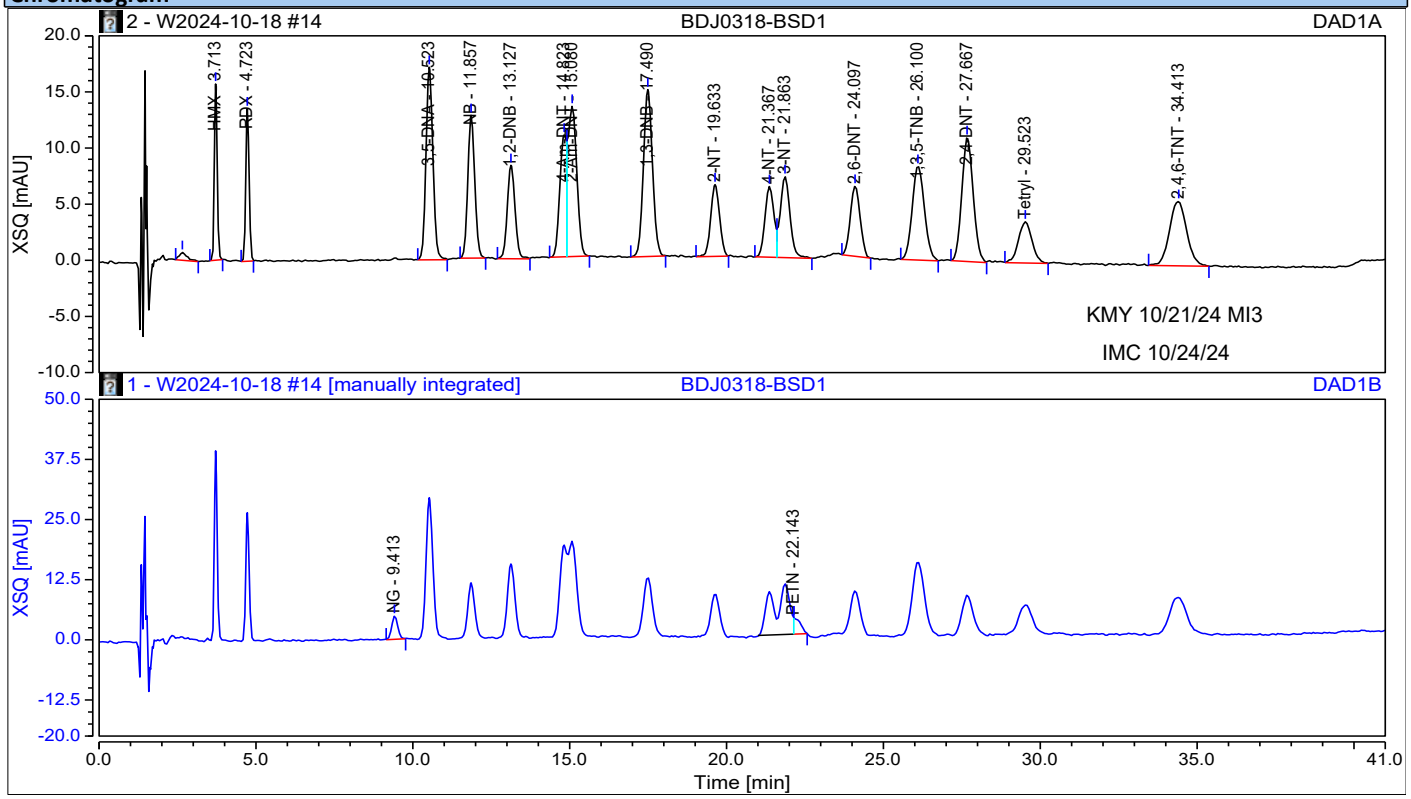
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Chromatogram and Results

Injection Details

Injection Name:	**BDJ0318-BSD1**	*Instrument:*	**Waldorf**
Vial Number:	**14**	*Run Time (min):*	**41.00**
Injection Type:	**Unknown**	*Injection Volume:*	**40.00**
Column Type:	**Kinetex Biphenyl**	*Injection Date/Time:*	**18/Oct/2024 20:19**
Processing Method:	**8330 Statler 2024-10-18**	*Dilution Factor:*	**1.0000**
Last Updated:	**21/Oct/2024 07:58**	*Operator:*	**KMY**

Chromatogram



Integration Results

No.	Peakname	RetentionTime min	Area mAU*min	Height mAU	Relative Area %	Rel.Height %	Amount ng/mL
1	NG	9.413	1.0826	4.825	56.68	58.64	253.2716
2	PETN	22.143	0.8274	3.403	43.32	41.36	273.4246
2	HMX	3.713	1.6205	15.698	3.34	9.67	251.7002
3	RDX	4.723	1.6686	13.592	3.44	8.37	255.9195
4	3,5-DNA	10.523	4.3941	17.154	9.06	10.57	251.5840
5	NB	11.857	3.2625	12.722	6.73	7.84	257.4419
6	1,2-DNB	13.127	2.3872	8.324	4.92	5.13	254.2315
7	4-Am-DNT	14.823	2.6431	10.859	5.45	6.69	257.7733
8	2-Am-DNT	15.080	4.3068	13.397	8.88	8.25	254.7265
9	1,3-DNB	17.490	4.9863	14.867	10.29	9.16	260.5035
10	2-NT	19.633	2.0942	6.392	4.32	3.94	265.1500
11	4-NT	21.367	2.0870	6.298	4.30	3.88	270.2961
12	3-NT	21.863	2.6019	7.228	5.37	4.45	258.5753
13	2,6-DNT	24.097	2.2656	6.248	4.67	3.85	244.6743
14	1,3,5-TNB	26.100	3.7875	8.361	7.81	5.15	255.6191
15	2,4-DNT	27.667	4.6478	11.054	9.59	6.81	265.3951
16	Tetryl	29.523	1.8470	3.675	3.81	2.26	160.5754
17	2,4,6-TNT	34.413	3.6686	5.754	7.57	3.54	254.7498
Total:			**50.179**	**169.852**	**199.563**	**199.564**	

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PREPARATION BATCH SUMMARY

EPA 8330B

Laboratory:	APPL, LLC			Work Order:	24J0093
Client:	AECOM			Project:	Wingate 60517380 Task 3
Batch:	BDJ0318	Batch Matrix:	Solid	Preparation:	EPA 8330A

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT g	FINAL VOL. mL
P2ARROYO-008	24J0093-01	10/14/24 07:57	10.25	80.00
P2ARROYO-008	24J0093-01RE1	10/14/24 07:57	10.25	80.00
Blank	BDJ0318-BLK1	10/14/24 07:57	10.13	80.00
LCS	BDJ0318-BS1	10/14/24 07:57	10.07	80.00
LCS Dup	BDJ0318-BSD1	10/14/24 07:57	10.26	80.00

PREPARATION BENCH SHEET
Organics

Print Date/Time: 10/18/2024 11:31 am

BDJ0318

(Continued)

Matrix: Solid

Prepared using: HPLC - EPA 8330A

Lab Number	Sample and Source ID ID Confirmed By:		Extract by	Initial (g)	Final (mL)	ul Spike 1	ul Spike 2	ul Surr 1	ul Surr 2	pH	Extraction Comments
24J0093-01 A	P2ARROYO-008	B	10/19/24	10.25	80			200			
24J0094-01 A	P3HWMU-SKPL-BOT-2986	B	10/21/24	10.23	80			200			
24J0128-01 A	P3HWMU-SKPL-BOT-2975	F	10/24/24	10.12	80			200			
24J0128-02 A	P3HWMU-SKPL-BOT-2976	F	10/24/24	10.16	80			200			
BDJ0318-BLK1	Blank			10.13	80			200			
BDJ0318-BS1	LCS			10.07	80	200		200			
BDJ0318-BSD1	LCS Dup			10.26	80	200		200			
BDJ0318-MS1	Matrix Spike [24J0094-01]			10.16	80	200		200			
BDJ0318-MSD1	Matrix Spike Dup [24J0094-01]			10.09	80	200		200			

Analyses

8330B DOD

Spiking Solution(s)

24G0088 8330 - Spike 100ug/mL 7/5/24

Surrogate Solution(s)

24I0458 8330 - 1,2-DNB SUR 100ug/mL 8/13/24

Start Date/Time _____

Stop Date/Time _____

Equipment Used:

Balances: EB1

Hotblock/Plate:

Sonic Horns:

Pipettes:

Water Baths:

Ovens:

Desiccator:

pH Probes:

Reagents

Standard	Description	LotNum
24H0153	Acetonitrile EH784-US	EH784-US

atch Comments:
piked/Witnessed By: AJV/SMW
tart Time/Date: 15:02 10/16/24
top Time/Date: : 10:49 10/17/24

Spiking Witnessed By _____ Date _____ Preparation Reviewed By _____ Date _____ Extracts Received By _____ Date _____

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INJECTION LOG - ANALYSIS SEQUENCE SUMMARY

EPA 8330B

Laboratory:	APPL, LLC	SDG:	24J0093
Client:	AECOM	Project:	Wingate 60517380 Task 3
Sequence:	SD03246	Instrument:	Waldorf
Calibration:	2433019		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	SD03246-CAL1	W2024-08-14-017	08/14/24 17:32
Cal Standard	SD03246-CAL2	W2024-08-14-018	08/14/24 18:03
Cal Standard	SD03246-CAL3	W2024-08-14-019	08/14/24 18:35
Cal Standard	SD03246-CAL4	W2024-08-14-020	08/14/24 19:06
Cal Standard	SD03246-CAL5	W2024-08-14-021	08/14/24 19:38
Cal Standard	SD03246-CAL6	W2024-08-14-022	08/14/24 20:09
Secondary Cal Check	SD03246-SCV1	W2024-08-14-023	08/14/24 20:41

INJECTION LOG - ANALYSIS SEQUENCE SUMMARY

EPA 8330B

Laboratory:	APPL, LLC	SDG:	24J0093
Client:	AECOM	Project:	Wingate 60517380 Task 3
Sequence:	SD04321	Instrument:	Waldorf
Calibration:	2443002		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	SD04321-CAL1	W2024-10-18-004	10/18/24 13:13
Cal Standard	SD04321-CAL2	W2024-10-18-005	10/18/24 13:56
Cal Standard	SD04321-CAL3	W2024-10-18-006	10/18/24 14:39
Cal Standard	SD04321-CAL4	W2024-10-18-007	10/18/24 15:21
Cal Standard	SD04321-CAL5	W2024-10-18-008	10/18/24 16:04
Cal Standard	SD04321-CAL6	W2024-10-18-009	10/18/24 16:46
Secondary Cal Check	SD04321-SCV1	W2024-10-18-010	10/18/24 17:29

INJECTION LOG - ANALYSIS SEQUENCE SUMMARY

EPA 8330B

Laboratory:	APPL, LLC	SDG:	24J0093
Client:	AECOM	Project:	Wingate 60517380 Task 3
Sequence:	SD04325	Instrument:	Waldorf
Calibration:	2443002		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	SD04325-CCV1	W2024-10-18-011	10/18/24 18:11
Blank	BDJ0318-BLK1	W2024-10-18-012	10/18/24 18:54
LCS	BDJ0318-BS1	W2024-10-18-013	10/18/24 19:37
LCS Dup	BDJ0318-BSD1	W2024-10-18-014	10/18/24 20:19
P2ARROYO-008	24J0093-01	W2024-10-18-017	10/18/24 22:27
Calibration Check	SD04325-CCV2	W2024-10-18-021	10/19/24 01:17

INJECTION LOG - ANALYSIS SEQUENCE SUMMARY

EPA 8330B

Laboratory:	APPL, LLC	SDG:	24J0093
Client:	AECOM	Project:	Wingate 60517380 Task 3
Sequence:	SD04327	Instrument:	Waldorf
Calibration:	2433019		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	SD04327-CCV1	W2024-10-17-004	10/17/24 13:28
P2ARROYO-008	24J0093-01RE1	W2024-10-17-010	10/17/24 16:37
Calibration Check	SD04327-CCV2	W2024-10-17-014	10/17/24 18:44

Solids

SAMPLE DATA
Solids

ANALYSIS DATA SHEET

P2ARROYO-008

Laboratory:	APPL, LLC	SDG:	24J0093
Client:	AECOM	Project:	Wingate 60517380 Task 3
Matrix:	Solid	Laboratory ID:	24J0093-01
Sampled:	10/05/24 11:30		
% Solids:	97.60		

Analyte	Concentration (%)	LOQ	LOD	DL	DF	Q	Batch	Analyzed	Method
% Solids	97.6	2.00	1.50	0.750	1		BDJ0255	10/10/24 12:12	ISM02.2

Analytical Standards

List of Standards

23A0023	Parent
23E0027	Parent
24D0501	Parent
24G0088	8330 - Spike 100ug/mL 7/5/24
24G0641	Parent
24H0339	Parent
24H0394	Parent
24H0395	Parent
24H0396	Parent
24H0397	8330 - Cal 1 0.005ug/mL 08/14/24
24H0398	8330 - Cal 2 0.05ug/mL 08/14/24
24H0399	8330 - Cal 3 0.25ug/mL 08/14/24
24H0400	8330 - Cal 4 1.0ug/mL 08/14/24
24H0401	8330 - Cal 5 2.5ug/mL 08/14/24
24H0402	8330 - Cal 6 5.0ug/mL 08/14/24
24H0403	8330 - SCV 1.0ug/mL 08/14/24
24I0458	8330 - 1,2-DNB SUR 100ug/mL 8/13/24
24I0469	Parent
24J0249	Parent
24J0391	8330 - CCV 1.0ug/mL 10/11/24
24J0610	Parent
24J0611	Parent
24J0612	Parent
24J0613	8330 - Cal 1 0.005ug/mL 10/18/24
24J0614	8330 - Cal 2 0.05ug/mL 10/18/24
24J0615	8330 - Cal 3 0.25ug/mL 10/18/24
24J0616	8330 - Cal 4 1.0ug/mL 10/18/24
24J0617	8330 - Cal 5 2.5ug/mL 10/18/24
24J0618	8330 - Cal 6 5.0ug/mL 10/18/24
24J0619	8330 - SCV 1.0ug/mL 10/18/24

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 33204 **Lot No.:** A0191734

Description : 8330B Nitroaromatics and Nitramine Mix

8330B Nitroaromatics and Nitramine Mix Explosives by HPLC, EPA 8330B 1000µg/mL, Acetonitrile,1mL/ampul

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

Expiration Date : November 30, 2025 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	HMX	1,004.0 µg/mL	+/- 5.9635 µg/mL	Gravimetric
	CAS # 2691-41-0 (Lot 220927JLM)		+/- 55.0021 µg/mL	Unstressed
	Purity 99%		+/- 64.1379 µg/mL	Stressed
2	RDX	1,010.0 µg/mL	+/- 5.9991 µg/mL	Gravimetric
	CAS # 121-82-4 (Lot 080220JLM)		+/- 55.3308 µg/mL	Unstressed
	Purity 99%		+/- 64.5212 µg/mL	Stressed
3	1,3,5-Trinitrobenzene	1,008.0 µg/mL	+/- 5.9872 µg/mL	Gravimetric
	CAS # 99-35-4 (Lot A6TDK)		+/- 55.2213 µg/mL	Unstressed
	Purity 99%		+/- 64.3934 µg/mL	Stressed
4	1,3-Dinitrobenzene	1,008.0 µg/mL	+/- 5.9872 µg/mL	Gravimetric
	CAS # 99-65-0 (Lot 1-DXX-24-1)		+/- 55.2213 µg/mL	Unstressed
	Purity 99%		+/- 64.3934 µg/mL	Stressed
5	3,5-Dinitroaniline	1,010.0 µg/mL	+/- 5.9991 µg/mL	Gravimetric
	CAS # 618-87-1 (Lot 10311HS)		+/- 55.3308 µg/mL	Unstressed
	Purity 99%		+/- 64.5212 µg/mL	Stressed
6	Tetryl	1,008.0 µg/mL	+/- 5.9872 µg/mL	Gravimetric
	CAS # 479-45-8 (Lot 211028JLM)		+/- 55.2213 µg/mL	Unstressed
	Purity 99%		+/- 64.3934 µg/mL	Stressed
7	Nitrobenzene	1,006.0 µg/mL	+/- 5.9753 µg/mL	Gravimetric
	CAS # 98-95-3 (Lot 10224044)		+/- 55.1117 µg/mL	Unstressed
	Purity 99%		+/- 64.2657 µg/mL	Stressed

8	2,4,6-Trinitrotoluene		1,009.0	µg/mL	+/- 5.9932	µg/mL	Gravimetric
	CAS # 118-96-7	(Lot D11836200)			+/- 55.2761	µg/mL	Unstressed
	Purity 99%				+/- 64.4573	µg/mL	Stressed
9	Nitroglycerin		1,006.0	µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 55-63-0	(Lot 200507JLM)			+/- 55.1117	µg/mL	Unstressed
	Purity 99%				+/- 64.2657	µg/mL	Stressed
10	2-Amino-4,6-dinitrotoluene		1,010.0	µg/mL	+/- 5.9991	µg/mL	Gravimetric
	CAS # 35572-78-2	(Lot A210503-001)			+/- 55.3308	µg/mL	Unstressed
	Purity 99%				+/- 64.5212	µg/mL	Stressed
11	4-Amino-2,6-dinitrotoluene		1,010.0	µg/mL	+/- 5.9991	µg/mL	Gravimetric
	CAS # 19406-51-0	(Lot ER070908-01)			+/- 55.3308	µg/mL	Unstressed
	Purity 99%				+/- 64.5212	µg/mL	Stressed
12	2,4-Dinitrotoluene		1,009.0	µg/mL	+/- 5.9932	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)			+/- 55.2761	µg/mL	Unstressed
	Purity 99%				+/- 64.4573	µg/mL	Stressed
13	2,6-Dinitrotoluene		1,010.0	µg/mL	+/- 5.9991	µg/mL	Gravimetric
	CAS # 606-20-2	(Lot BCCG1833)			+/- 55.3308	µg/mL	Unstressed
	Purity 99%				+/- 64.5212	µg/mL	Stressed
14	2-Nitrotoluene		1,010.0	µg/mL	+/- 5.9991	µg/mL	Gravimetric
	CAS # 88-72-2	(Lot BCBZ7826)			+/- 55.3308	µg/mL	Unstressed
	Purity 99%				+/- 64.5212	µg/mL	Stressed
15	4-Nitrotoluene		1,009.0	µg/mL	+/- 5.9932	µg/mL	Gravimetric
	CAS # 99-99-0	(Lot BCCB0171)			+/- 55.2761	µg/mL	Unstressed
	Purity 99%				+/- 64.4573	µg/mL	Stressed
16	3-Nitrotoluene		1,009.0	µg/mL	+/- 5.9932	µg/mL	Gravimetric
	CAS # 99-08-1	(Lot 07329LG)			+/- 55.2761	µg/mL	Unstressed
	Purity 99%				+/- 64.4573	µg/mL	Stressed
17	PETN		1,009.0	µg/mL	+/- 5.9932	µg/mL	Gravimetric
	CAS # 78-11-5	(Lot 051108JLM)			+/- 55.2761	µg/mL	Unstressed
	Purity 99%				+/- 64.4573	µg/mL	Stressed

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

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

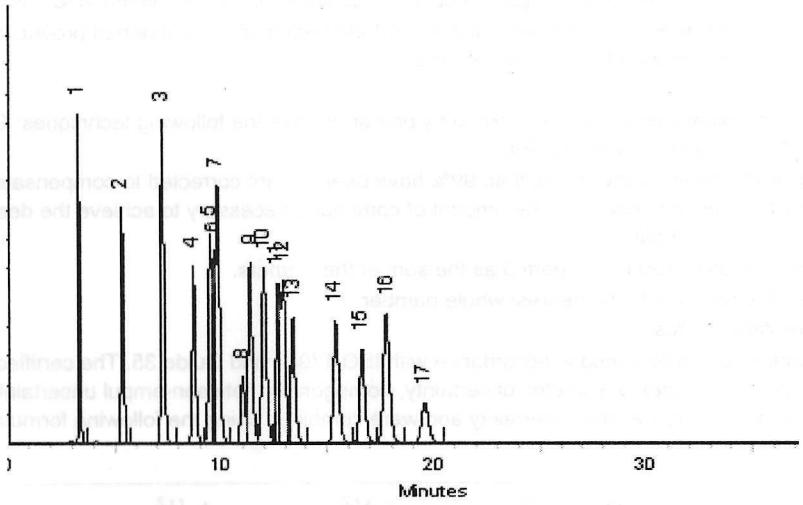
Flow Rate:
1.0 ml/min.

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

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm



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

Brittany Federinko - Operations Tech I

Date Mixed: 16-Nov-2022 **Balance:** 1128360905

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 18-Nov-2022

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

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 33204 **Lot No.:** A0188442

Description : 8330B Nitroaromatics and Nitramine Mix

8330B Nitroaromatics and Nitramine Mix Explosives by HPLC, EPA 8330B 1000µg/mL, Acetonitrile,1mL/ampul

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

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

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	HMX **CAS #** 2691-41-0 (Lot 210324JLM) **Purity** 99%	1,003.0 µg/mL	+/- 5.9575 µg/mL +/- 54.9474 µg/mL +/- 64.0740 µg/mL	Gravimetric Unstressed Stressed
2	RDX **CAS #** 121-82-4 (Lot 080220JLM) **Purity** 99%	1,004.0 µg/mL	+/- 5.9635 µg/mL +/- 55.0021 µg/mL +/- 64.1379 µg/mL	Gravimetric Unstressed Stressed
3	1,3,5-Trinitrobenzene **CAS #** 99-35-4 (Lot A6TDK) **Purity** 99%	1,008.0 µg/mL	+/- 5.9872 µg/mL +/- 55.2213 µg/mL +/- 64.3934 µg/mL	Gravimetric Unstressed Stressed
4	1,3-Dinitrobenzene **CAS #** 99-65-0 (Lot 1-DXX-24-1) **Purity** 99%	1,007.0 µg/mL	+/- 5.9813 µg/mL +/- 55.1665 µg/mL +/- 64.3295 µg/mL	Gravimetric Unstressed Stressed
5	3,5-Dinitroaniline **CAS #** 618-87-1 (Lot 10311HS) **Purity** 99%	1,008.0 µg/mL	+/- 5.9872 µg/mL +/- 55.2213 µg/mL +/- 64.3934 µg/mL	Gravimetric Unstressed Stressed
6	Tetryl **CAS #** 479-45-8 (Lot 211028JLM) **Purity** 99%	1,006.0 µg/mL	+/- 5.9753 µg/mL +/- 55.1117 µg/mL +/- 64.2657 µg/mL	Gravimetric Unstressed Stressed
7	Nitrobenzene **CAS #** 98-95-3 (Lot 10224044) **Purity** 99%	1,006.0 µg/mL	+/- 5.9753 µg/mL +/- 55.1117 µg/mL +/- 64.2657 µg/mL	Gravimetric Unstressed Stressed

8	2,4,6-Trinitrotoluene **CAS #** 118-96-7 **Purity** 99%	(Lot D13332500)	1,009.0	µg/mL	+/- 5.9932 +/- 55.2761 +/- 64.4573	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	Nitroglycerin **CAS #** 55-63-0 **Purity** 99%	(Lot 200507JLM)	1,006.0	µg/mL	+/- 5.9753 +/- 55.1117 +/- 64.2657	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	2-Amino-4,6-dinitrotoluene **CAS #** 35572-78-2 **Purity** 99%	(Lot A210503-001)	1,004.0	µg/mL	+/- 5.9635 +/- 55.0021 +/- 64.1379	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	4-Amino-2,6-dinitrotoluene **CAS #** 19406-51-0 **Purity** 99%	(Lot ER070908-01)	1,006.0	µg/mL	+/- 5.9753 +/- 55.1117 +/- 64.2657	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	2,4-Dinitrotoluene **CAS #** 121-14-2 **Purity** 99%	(Lot MKAA0690V)	1,003.0	µg/mL	+/- 5.9575 +/- 54.9474 +/- 64.0740	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	2,6-Dinitrotoluene **CAS #** 606-20-2 **Purity** 99%	(Lot BCBB8606)	1,002.0	µg/mL	+/- 5.9516 +/- 54.8926 +/- 64.0101	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	2-Nitrotoluene **CAS #** 88-72-2 **Purity** 99%	(Lot BCBZ7826)	1,009.0	µg/mL	+/- 5.9932 +/- 55.2761 +/- 64.4573	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	4-Nitrotoluene **CAS #** 99-99-0 **Purity** 99%	(Lot BCCB0171)	1,007.0	µg/mL	+/- 5.9813 +/- 55.1665 +/- 64.3295	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	3-Nitrotoluene **CAS #** 99-08-1 **Purity** 99%	(Lot 07329LG)	1,008.0	µg/mL	+/- 5.9872 +/- 55.2213 +/- 64.3934	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	PETN **CAS #** 78-11-5 **Purity** 99%	(Lot 051108JLM)	1,001.0	µg/mL	+/- 5.9456 +/- 54.8378 +/- 63.9463	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

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

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

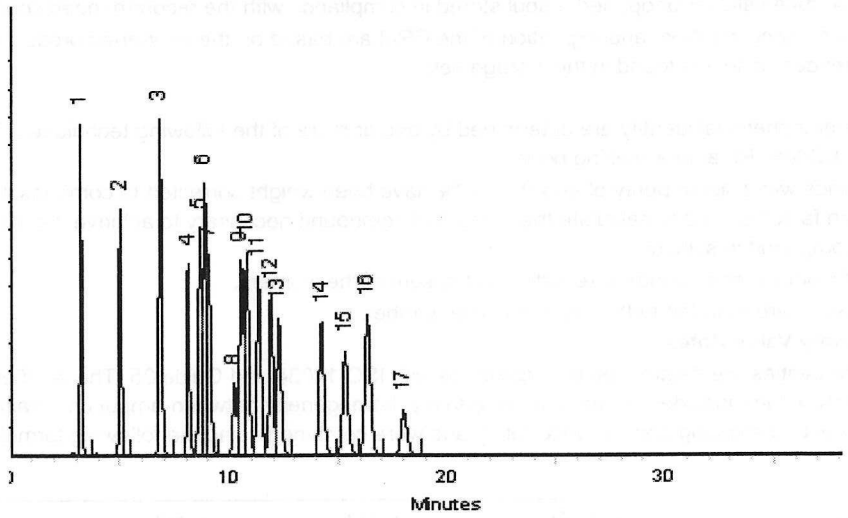
Flow Rate:
1.0 ml/min.

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

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm



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

Tom Suckar - Mix Technician **Date Mixed:** 11-Aug-2022 **Balance:** B707717271

Jennifer Pollino - Operations Tech III - ARM QC **Date Passed:** 16-Aug-2022

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

Reference Standard Data Pack

8330 Surrogate Mix

Catalog # 31453

Lot # A0205460

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RAW MATERIAL TEST INFORMATION AVAILABLE UPON REQUEST

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ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

Certificate of Analysis

chromatographic plus

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** 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.

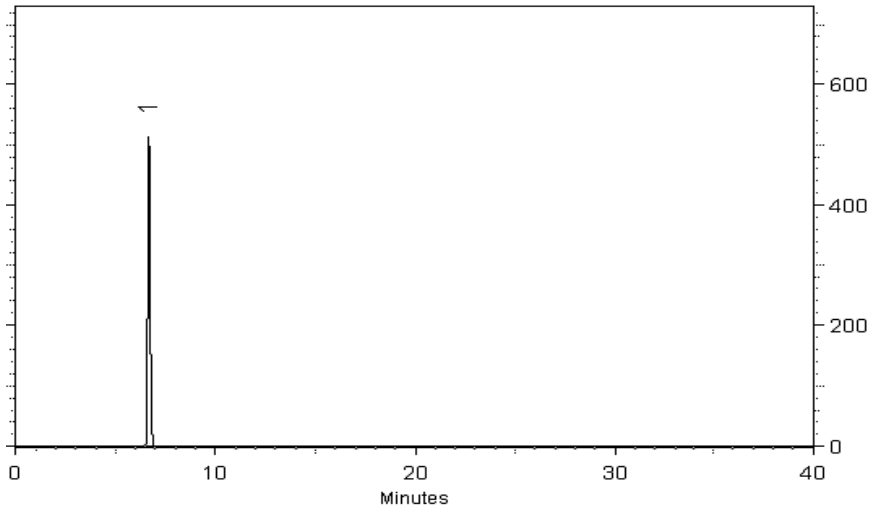
Mobile Phase A:
water:methanol (44:56 V/V)

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 Polino - 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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

RESTEK

Reference Material Batch Record
Lot #: A0205460

Catalog #: 31453	**Target:** 1000 ug/mL	
Description: 8330 Surrogate Mix		
Solvent: Methanol	**Solvent Lot:** 23H3162001	**Final Volume:** 100 ml

Made by: Malina Homan	**Date:** 12/13/2023 3:34:15PM		
Tested by: Alicia Leathers	**Date:** 12/14/2023 6:07:06AM		
Pass	**By:** Jennifer Pollino	**Date:** 12/19/2023 9:58:59AM	
Packaged by: Michael Maye1 / Malina Homan	**Date:** 12/13/2023 4:50:44F	**No. Units:** 66	**Pkg Size:** 1 mL
Balance Used: bede001743 XPE504	**Serial #:** B707717271		

Compound	CAS	Storage Location	Lot #	Purity	Target Conc(ug/mL)	Target	Actual	Calc Conc(ug/mL)
1,2-Dinitrobenzene	528-29-0	R0156	RP231117RSR	0.99	1,000.00	100.00 mg	100.40 mg	1,004.0

QA Report: 8330 Surrogate Mix (Cat.#31453)

	Runs of Lot # A0150790						Runs of Lot # A0205460							
COMPONENT	Run #1	Run #2	Run #3	AVG	STD DEV	%RSD	Run #1	Run #2	Run #3	AVG	STD DEV	%RSD	%D MEAN	P/F
1,2-Dinitrobenzene	4238059	4237731	4224314	4233368	7843	0.19	4296077	4266901	4266761	4276580	16885	0.39	-1.02	PASS

Analytical Standard Record

24G0088

Description:	8330 - Spike 100ug/mL 7/5/24	Expires:	01/01/2025
Standard Type:	Analyte Spike	Prepared:	07/05/2024
Solvent:	ACN	Prepared By:	Aaron Panduro
Final Volume (mls):	10	Department:	HPLC
Vials:	1	Last Edit:	07/05/2024 12:25 by AOP
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	23A0023	99-35-4	100	ug/mL
1,3-DINITROBENZENE	23A0023	99-65-0	100	ug/mL
2,4,6-TRINITROTOLUENE	23A0023	118-96-7	100	ug/mL
2,4-DINITROTOLUENE	23A0023	121-14-2	100	ug/mL
2,6-DINITROTOLUENE	23A0023	606-20-2	100	ug/mL
2-AMINO-4,6-DINITROTOLUENE	23A0023	35572-78-2	100	ug/mL
2-NITROTOLUENE	23A0023	88-72-2	100	ug/mL
3,5-DINITROANILINE	23A0023	618-87-1	100	ug/mL
3-NITROTOLUENE	23A0023	99-08-1	100	ug/mL
4-AMINO-2,6-DINITROTOLUENE	23A0023	19406-51-0	100	ug/mL
4-NITROTOLUENE	23A0023	99-99-0	100	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	23A0023	121-82-4	100	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	23A0023	479-45-8	100	ug/mL
NITROBENZENE	23A0023	98-95-3	100	ug/mL
NITROGLYCERIN	23A0023	55-63-0	100	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	23A0023	2691-41-0	100	ug/mL
PENTAERYTHRITOL TETRANITRATE	23A0023	78-11-5	100	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
23A0023	8330 - SSS Ampule A0191734	11/23/2022	Restek	A0191734	11/30/2025	12/04/2023 11:05	by IMC	1

Analytical Standard Record

24G0641

Description:	8330 - SSS Ampule A0212687	Expires:	01/25/2025
Standard Type:	Other	Prepared:	07/29/2024
Solvent:	ACN	Prepared By:	Ian Closser
Final Volume (mls):	1	Department:	HPLC
Vials:	3	Last Edit:	07/29/2024 10:40 by IMC
Lot Number:	A0212687		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE		99-35-4	1000	ug/mL
1,3-DINITROBENZENE		99-65-0	1000	ug/mL
2,4,6-TRINITROTOLUENE		118-96-7	1000	ug/mL
2,4-DINITROTOLUENE		121-14-2	1000	ug/mL
2,6-DINITROTOLUENE		606-20-2	1000	ug/mL
2-AMINO-4,6-DINITROTOLUENE		35572-78-2	1000	ug/mL
2-NITROTOLUENE		88-72-2	1000	ug/mL
3,5-DINITROANILINE		618-87-1	1000	ug/mL
3-NITROTOLUENE		99-08-1	1000	ug/mL
4-AMINO-2,6-DINITROTOLUENE		19406-51-0	1000	ug/mL
4-NITROTOLUENE		99-99-0	1000	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE		121-82-4	1000	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE		479-45-8	1000	ug/mL
NITROBENZENE		98-95-3	1000	ug/mL
NITROGLYCERIN		55-63-0	1000	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE		2691-41-0	1000	ug/mL
PENTAERYTHRITOL TETRANITRATE		78-11-5	1000	ug/mL

Analytical Standard Record

24H0339

Description:	8330 - 1,2-DNB SUR 100ug/mL 8/13/24	Expires:	02/09/2025
Standard Type:	Surrogate Spike	Prepared:	08/13/2024
Solvent:	ACN	Prepared By:	Kia Yang
Final Volume (mls):	10	Department:	HPLC
Vials:	1	Last Edit:	08/13/2024 12:19 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24D0501	528-29-0	100	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24D0501	8330 - 1,2-DNB SAS Ampule A0205460	04/22/2024	Restek	A0205460	12/31/2028	04/26/2024 13:46	by AOP	1

Analytical Standard Record

24H0339

Description:	8330 - 1,2-DNB SUR 100ug/mL 8/13/24	Expires:	02/09/2025
Standard Type:	Surrogate Spike	Prepared:	08/13/2024
Solvent:	ACN	Prepared By:	Kia Yang
Final Volume (mls):	10	Department:	HPLC
Vials:	1	Last Edit:	08/13/2024 12:19 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24D0501	528-29-0	100	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24D0501	8330 - 1,2-DNB SAS Ampule A0205460	04/22/2024	Restek	A0205460	12/31/2028	04/26/2024 13:46	by AOP	1

Analytical Standard Record

24H0394

Description:	8330 - SCV DSS 20ug/mL 08/14/24	Expires:	02/12/2025
Standard Type:	Other	Prepared:	08/14/2024
Solvent:	ACN	Prepared By:	Kia Yang
Final Volume (mls):	1	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:33 by KMY1
Lot Number:	-		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	23E0027	99-35-4	20	ug/mL
1,3-DINITROBENZENE	23E0027	99-65-0	20	ug/mL
2,4,6-TRINITROTOLUENE	23E0027	118-96-7	20	ug/mL
2,4-DINITROTOLUENE	23E0027	121-14-2	20	ug/mL
2,6-DINITROTOLUENE	23E0027	606-20-2	20	ug/mL
2-AMINO-4,6-DINITROTOLUENE	23E0027	35572-78-2	20	ug/mL
2-NITROTOLUENE	23E0027	88-72-2	20	ug/mL
3,5-DINITROANILINE	23E0027	618-87-1	20	ug/mL
3-NITROTOLUENE	23E0027	99-08-1	20	ug/mL
4-AMINO-2,6-DINITROTOLUENE	23E0027	19406-51-0	20	ug/mL
4-NITROTOLUENE	23E0027	99-99-0	20	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	23E0027	121-82-4	20	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	23E0027	479-45-8	20	ug/mL
NITROBENZENE	23E0027	98-95-3	20	ug/mL
NITROGLYCERIN	23E0027	55-63-0	20	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	23E0027	2691-41-0	20	ug/mL
PENTAERYTHRITOL TETRANITRATE	23E0027	78-11-5	20	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
23E0027	8330 - SSS Ampule A0188442	04/18/2023	Restek	A0188442	08/31/2025	12/04/2023 11:05	by IMC	0.02

Analytical Standard Record

24H0394

Description:	8330 - SCV DSS 20ug/mL 08/14/24	Expires:	02/12/2025
Standard Type:	Other	Prepared:	08/14/2024
Solvent:	ACN	Prepared By:	Kia Yang
Final Volume (mls):	1	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:33 by KMY1
Lot Number:	-		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	23E0027	99-35-4	20	ug/mL
1,3-DINITROBENZENE	23E0027	99-65-0	20	ug/mL
2,4,6-TRINITROTOLUENE	23E0027	118-96-7	20	ug/mL
2,4-DINITROTOLUENE	23E0027	121-14-2	20	ug/mL
2,6-DINITROTOLUENE	23E0027	606-20-2	20	ug/mL
2-AMINO-4,6-DINITROTOLUENE	23E0027	35572-78-2	20	ug/mL
2-NITROTOLUENE	23E0027	88-72-2	20	ug/mL
3,5-DINITROANILINE	23E0027	618-87-1	20	ug/mL
3-NITROTOLUENE	23E0027	99-08-1	20	ug/mL
4-AMINO-2,6-DINITROTOLUENE	23E0027	19406-51-0	20	ug/mL
4-NITROTOLUENE	23E0027	99-99-0	20	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	23E0027	121-82-4	20	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	23E0027	479-45-8	20	ug/mL
NITROBENZENE	23E0027	98-95-3	20	ug/mL
NITROGLYCERIN	23E0027	55-63-0	20	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	23E0027	2691-41-0	20	ug/mL
PENTAERYTHRITOL TETRANITRATE	23E0027	78-11-5	20	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
23E0027	8330 - SSS Ampule A0188442	04/18/2023	Restek	A0188442	08/31/2025	12/04/2023 11:05	by IMC	0.02

Analytical Standard Record

24H0395

Description:	8330 - Cal Std 20ug/mL 08/14/24	Expires:	10/12/2024
Standard Type:	Other	Prepared:	08/14/2024
Solvent:	ACN	Prepared By:	Kia Yang
Final Volume (mls):	1	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:23 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	24G0088	99-35-4	20	ug/mL
1,3-DINITROBENZENE	24G0088	99-65-0	20	ug/mL
2,4,6-TRINITROTOLUENE	24G0088	118-96-7	20	ug/mL
2,4-DINITROTOLUENE	24G0088	121-14-2	20	ug/mL
2,6-DINITROTOLUENE	24G0088	606-20-2	20	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24G0088	35572-78-2	20	ug/mL
2-NITROTOLUENE	24G0088	88-72-2	20	ug/mL
3,5-DINITROANILINE	24G0088	618-87-1	20	ug/mL
3-NITROTOLUENE	24G0088	99-08-1	20	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24G0088	19406-51-0	20	ug/mL
4-NITROTOLUENE	24G0088	99-99-0	20	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24G0088	121-82-4	20	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24G0088	479-45-8	20	ug/mL
NITROBENZENE	24G0088	98-95-3	20	ug/mL
NITROGLYCERIN	24G0088	55-63-0	20	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24G0088	2691-41-0	20	ug/mL
PENTAERYTHRITOL TETRANITRATE	24G0088	78-11-5	20	ug/mL
1,2-DINITROBENZENE	24H0339	528-29-0	20	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24G0088	8330 - Spike 100ug/mL 7/5/24	07/05/2024	In house	x	01/01/2025	07/05/2024 12:26	by AOP	0.2
24H0339	8330 - 1,2-DNB SUR 100ug/mL 8/13/24	08/13/2024	In house	x	02/09/2025	08/13/2024 12:19	by KMY1	0.2

Analytical Standard Record

24H0396

Description:	8330 - Cal Std 0.2ug/mL 08/14/24	Expires:	09/16/2024
Standard Type:	Other	Prepared:	08/14/2024
Solvent:	ACN	Prepared By:	Kia Yang
Final Volume (mls):	1	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:24 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24H0395	528-29-0	0.2	ug/mL
1,3,5-TRINITROBENZENE	24H0395	99-35-4	0.2	ug/mL
1,3-DINITROBENZENE	24H0395	99-65-0	0.2	ug/mL
2,4,6-TRINITROTOLUENE	24H0395	118-96-7	0.2	ug/mL
2,4-DINITROTOLUENE	24H0395	121-14-2	0.2	ug/mL
2,6-DINITROTOLUENE	24H0395	606-20-2	0.2	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24H0395	35572-78-2	0.2	ug/mL
2-NITROTOLUENE	24H0395	88-72-2	0.2	ug/mL
3,5-DINITROANILINE	24H0395	618-87-1	0.2	ug/mL
3-NITROTOLUENE	24H0395	99-08-1	0.2	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24H0395	19406-51-0	0.2	ug/mL
4-NITROTOLUENE	24H0395	99-99-0	0.2	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24H0395	121-82-4	0.2	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24H0395	479-45-8	0.2	ug/mL
NITROBENZENE	24H0395	98-95-3	0.2	ug/mL
NITROGLYCERIN	24H0395	55-63-0	0.2	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24H0395	2691-41-0	0.2	ug/mL
PENTAERYTHRITOL TETRANITRATE	24H0395	78-11-5	0.2	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24H0395	8330 - Cal Std 20ug/mL 08/14/24	08/14/2024	In house	x	10/12/2024	08/16/2024 07:23	by KMY1	0.01

Analytical Standard Record

24H0397

Description:	8330 - Cal 1 0.005ug/mL 08/14/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	08/14/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Kia Yang
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:53 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24H0396	528-29-0	0.005	ug/mL
1,3,5-TRINITROBENZENE	24H0396	99-35-4	0.005	ug/mL
1,3-DINITROBENZENE	24H0396	99-65-0	0.005	ug/mL
2,4,6-TRINITROTOLUENE	24H0396	118-96-7	0.005	ug/mL
2,4-DINITROTOLUENE	24H0396	121-14-2	0.005	ug/mL
2,6-DINITROTOLUENE	24H0396	606-20-2	0.005	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24H0396	35572-78-2	0.005	ug/mL
2-NITROTOLUENE	24H0396	88-72-2	0.005	ug/mL
3,5-DINITROANILINE	24H0396	618-87-1	0.005	ug/mL
3-NITROTOLUENE	24H0396	99-08-1	0.005	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24H0396	19406-51-0	0.005	ug/mL
4-NITROTOLUENE	24H0396	99-99-0	0.005	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24H0396	121-82-4	0.005	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24H0396	479-45-8	0.005	ug/mL
NITROBENZENE	24H0396	98-95-3	0.005	ug/mL
NITROGLYCERIN	24H0396	55-63-0	0.005	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24H0396	2691-41-0	0.005	ug/mL
PENTAERYTHRITOL TETRANITRATE	24H0396	78-11-5	0.005	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24H0396	8330 - Cal Std 0.2ug/mL 08/14/24	08/14/2024	In house	x	09/16/2024	08/16/2024 07:24	by KMY1	0.02

Analytical Standard Record

24H0398

Description:	8330 - Cal 2 0.05ug/mL 08/14/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	08/14/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Kia Yang
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:53 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24H0396	528-29-0	0.05	ug/mL
1,3,5-TRINITROBENZENE	24H0396	99-35-4	0.05	ug/mL
1,3-DINITROBENZENE	24H0396	99-65-0	0.05	ug/mL
2,4,6-TRINITROTOLUENE	24H0396	118-96-7	0.05	ug/mL
2,4-DINITROTOLUENE	24H0396	121-14-2	0.05	ug/mL
2,6-DINITROTOLUENE	24H0396	606-20-2	0.05	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24H0396	35572-78-2	0.05	ug/mL
2-NITROTOLUENE	24H0396	88-72-2	0.05	ug/mL
3,5-DINITROANILINE	24H0396	618-87-1	0.05	ug/mL
3-NITROTOLUENE	24H0396	99-08-1	0.05	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24H0396	19406-51-0	0.05	ug/mL
4-NITROTOLUENE	24H0396	99-99-0	0.05	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24H0396	121-82-4	0.05	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24H0396	479-45-8	0.05	ug/mL
NITROBENZENE	24H0396	98-95-3	0.05	ug/mL
NITROGLYCERIN	24H0396	55-63-0	0.05	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24H0396	2691-41-0	0.05	ug/mL
PENTAERYTHRITOL TETRANITRATE	24H0396	78-11-5	0.05	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24H0396	8330 - Cal Std 0.2ug/mL 08/14/24	08/14/2024	In house	x	09/16/2024	08/16/2024 07:24	by KMY1	0.2

Analytical Standard Record

24H0399

Description:	8330 - Cal 3 0.25ug/mL 08/14/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	08/14/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Kia Yang
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:25 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24H0395	528-29-0	0.25	ug/mL
1,3,5-TRINITROBENZENE	24H0395	99-35-4	0.25	ug/mL
1,3-DINITROBENZENE	24H0395	99-65-0	0.25	ug/mL
2,4,6-TRINITROTOLUENE	24H0395	118-96-7	0.25	ug/mL
2,4-DINITROTOLUENE	24H0395	121-14-2	0.25	ug/mL
2,6-DINITROTOLUENE	24H0395	606-20-2	0.25	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24H0395	35572-78-2	0.25	ug/mL
2-NITROTOLUENE	24H0395	88-72-2	0.25	ug/mL
3,5-DINITROANILINE	24H0395	618-87-1	0.25	ug/mL
3-NITROTOLUENE	24H0395	99-08-1	0.25	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24H0395	19406-51-0	0.25	ug/mL
4-NITROTOLUENE	24H0395	99-99-0	0.25	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24H0395	121-82-4	0.25	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24H0395	479-45-8	0.25	ug/mL
NITROBENZENE	24H0395	98-95-3	0.25	ug/mL
NITROGLYCERIN	24H0395	55-63-0	0.25	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24H0395	2691-41-0	0.25	ug/mL
PENTAERYTHRITOL TETRANITRATE	24H0395	78-11-5	0.25	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24H0395	8330 - Cal Std 20ug/mL 08/14/24	08/14/2024	In house	x	10/12/2024	08/16/2024 07:23	by KMY1	0.01

Analytical Standard Record

24H0400

Description:	8330 - Cal 4 1.0ug/mL 08/14/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	08/14/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Kia Yang
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:26 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24H0395	528-29-0	1	ug/mL
1,3,5-TRINITROBENZENE	24H0395	99-35-4	1	ug/mL
1,3-DINITROBENZENE	24H0395	99-65-0	1	ug/mL
2,4,6-TRINITROTOLUENE	24H0395	118-96-7	1	ug/mL
2,4-DINITROTOLUENE	24H0395	121-14-2	1	ug/mL
2,6-DINITROTOLUENE	24H0395	606-20-2	1	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24H0395	35572-78-2	1	ug/mL
2-NITROTOLUENE	24H0395	88-72-2	1	ug/mL
3,5-DINITROANILINE	24H0395	618-87-1	1	ug/mL
3-NITROTOLUENE	24H0395	99-08-1	1	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24H0395	19406-51-0	1	ug/mL
4-NITROTOLUENE	24H0395	99-99-0	1	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24H0395	121-82-4	1	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24H0395	479-45-8	1	ug/mL
NITROBENZENE	24H0395	98-95-3	1	ug/mL
NITROGLYCERIN	24H0395	55-63-0	1	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24H0395	2691-41-0	1	ug/mL
PENTAERYTHRITOL TETRANITRATE	24H0395	78-11-5	1	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24H0395	8330 - Cal Std 20ug/mL 08/14/24	08/14/2024	In house	x	10/12/2024	08/16/2024 07:23	by KMY1	0.04

Analytical Standard Record

24H0401

Description:	8330 - Cal 5 2.5ug/mL 08/14/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	08/14/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Kia Yang
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:26 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24H0395	528-29-0	2.5	ug/mL
1,3,5-TRINITROBENZENE	24H0395	99-35-4	2.5	ug/mL
1,3-DINITROBENZENE	24H0395	99-65-0	2.5	ug/mL
2,4,6-TRINITROTOLUENE	24H0395	118-96-7	2.5	ug/mL
2,4-DINITROTOLUENE	24H0395	121-14-2	2.5	ug/mL
2,6-DINITROTOLUENE	24H0395	606-20-2	2.5	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24H0395	35572-78-2	2.5	ug/mL
2-NITROTOLUENE	24H0395	88-72-2	2.5	ug/mL
3,5-DINITROANILINE	24H0395	618-87-1	2.5	ug/mL
3-NITROTOLUENE	24H0395	99-08-1	2.5	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24H0395	19406-51-0	2.5	ug/mL
4-NITROTOLUENE	24H0395	99-99-0	2.5	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24H0395	121-82-4	2.5	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24H0395	479-45-8	2.5	ug/mL
NITROBENZENE	24H0395	98-95-3	2.5	ug/mL
NITROGLYCERIN	24H0395	55-63-0	2.5	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24H0395	2691-41-0	2.5	ug/mL
PENTAERYTHRITOL TETRANITRATE	24H0395	78-11-5	2.5	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24H0395	8330 - Cal Std 20ug/mL 08/14/24	08/14/2024	In house	x	10/12/2024	08/16/2024 07:23	by KMY1	0.1

Analytical Standard Record

24H0402

Description:	8330 - Cal 6 5.0ug/mL 08/14/24	Expires:	09/16/2024
Standard Type:	Calibration Standard	Prepared:	08/14/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Kia Yang
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:26 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24H0395	528-29-0	5	ug/mL
1,3,5-TRINITROBENZENE	24H0395	99-35-4	5	ug/mL
1,3-DINITROBENZENE	24H0395	99-65-0	5	ug/mL
2,4,6-TRINITROTOLUENE	24H0395	118-96-7	5	ug/mL
2,4-DINITROTOLUENE	24H0395	121-14-2	5	ug/mL
2,6-DINITROTOLUENE	24H0395	606-20-2	5	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24H0395	35572-78-2	5	ug/mL
2-NITROTOLUENE	24H0395	88-72-2	5	ug/mL
3,5-DINITROANILINE	24H0395	618-87-1	5	ug/mL
3-NITROTOLUENE	24H0395	99-08-1	5	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24H0395	19406-51-0	5	ug/mL
4-NITROTOLUENE	24H0395	99-99-0	5	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24H0395	121-82-4	5	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24H0395	479-45-8	5	ug/mL
NITROBENZENE	24H0395	98-95-3	5	ug/mL
NITROGLYCERIN	24H0395	55-63-0	5	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24H0395	2691-41-0	5	ug/mL
PENTAERYTHRITOL TETRANITRATE	24H0395	78-11-5	5	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24H0395	8330 - Cal Std 20ug/mL 08/14/24	08/14/2024	In house	x	10/12/2024	08/16/2024 07:23	by KMY1	0.2

Analytical Standard Record

24H0403

Description:	8330 - SCV 1.0ug/mL 08/14/24	Expires:	02/12/2025
Standard Type:	Calibration Standard	Prepared:	08/14/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Kia Yang
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	08/16/2024 07:33 by KMY1
Lot Number:	-		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	24H0394	99-35-4	1	ug/mL
1,3-DINITROBENZENE	24H0394	99-65-0	1	ug/mL
2,4,6-TRINITROTOLUENE	24H0394	118-96-7	1	ug/mL
2,4-DINITROTOLUENE	24H0394	121-14-2	1	ug/mL
2,6-DINITROTOLUENE	24H0394	606-20-2	1	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24H0394	35572-78-2	1	ug/mL
2-NITROTOLUENE	24H0394	88-72-2	1	ug/mL
3,5-DINITROANILINE	24H0394	618-87-1	1	ug/mL
3-NITROTOLUENE	24H0394	99-08-1	1	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24H0394	19406-51-0	1	ug/mL
4-NITROTOLUENE	24H0394	99-99-0	1	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24H0394	121-82-4	1	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24H0394	479-45-8	1	ug/mL
NITROBENZENE	24H0394	98-95-3	1	ug/mL
NITROGLYCERIN	24H0394	55-63-0	1	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24H0394	2691-41-0	1	ug/mL
PENTAERYTHRITOL TETRANITRATE	24H0394	78-11-5	1	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24H0394	8330 - SCV DSS 20ug/mL 08/14/24	08/14/2024	-	-	02/12/2025	08/16/2024 07:33	by KMY1	0.04

Analytical Standard Record

24I0458

Description:	8330 - 1,2-DNB SUR 100ug/mL 8/13/24	Expires:	03/23/2025
Standard Type:	Surrogate Spike	Prepared:	09/24/2024
Solvent:	ACN	Prepared By:	Kia Yang
Final Volume (mls):	10	Department:	HPLC
Vials:	1	Last Edit:	09/24/2024 10:22 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24D0501	528-29-0	100	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24D0501	8330 - 1,2-DNB SAS Ampule A0205460	04/22/2024	Restek	A0205460	12/31/2028	04/26/2024 13:46	by AOP	1

Analytical Standard Record

24I0469

Description:	8330 - CCV DSS 10ug/mL 09/24/24	Expires:	03/23/2025
Standard Type:	Analyte Spike	Prepared:	09/24/2024
Solvent:	ACN	Prepared By:	Kia Yang
Final Volume (mls):	10	Department:	HPLC
Vials:	1	Last Edit:	09/24/2024 10:51 by KMY1
Lot Number:	*		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	23A0023	99-35-4	10	ug/mL
1,3-DINITROBENZENE	23A0023	99-65-0	10	ug/mL
2,4,6-TRINITROTOLUENE	23A0023	118-96-7	10	ug/mL
2,4-DINITROTOLUENE	23A0023	121-14-2	10	ug/mL
2,6-DINITROTOLUENE	23A0023	606-20-2	10	ug/mL
2-AMINO-4,6-DINITROTOLUENE	23A0023	35572-78-2	10	ug/mL
2-NITROTOLUENE	23A0023	88-72-2	10	ug/mL
3,5-DINITROANILINE	23A0023	618-87-1	10	ug/mL
3-NITROTOLUENE	23A0023	99-08-1	10	ug/mL
4-AMINO-2,6-DINITROTOLUENE	23A0023	19406-51-0	10	ug/mL
4-NITROTOLUENE	23A0023	99-99-0	10	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	23A0023	121-82-4	10	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	23A0023	479-45-8	10	ug/mL
NITROBENZENE	23A0023	98-95-3	10	ug/mL
NITROGLYCERIN	23A0023	55-63-0	10	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	23A0023	2691-41-0	10	ug/mL
PENTAERYTHRITOL TETRANITRATE	23A0023	78-11-5	10	ug/mL
1,2-DINITROBENZENE	24D0501	528-29-0	10	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
23A0023	8330 - SSS Ampule A0191734	11/23/2022	Restek	A0191734	11/30/2025	12/04/2023 11:05	by IMC	0.1
24D0501	8330 - 1,2-DNB SAS Ampule A0205460	04/22/2024	Restek	A0205460	12/31/2028	04/26/2024 13:46	by AOP	0.1

Analytical Standard Record

24J0249

Description:	8330 - Spike 100ug/mL 10/9/24	Expires:	01/25/2025
Standard Type:	Analyte Spike	Prepared:	10/09/2024
Solvent:	ACN	Prepared By:	Kia Yang
Final Volume (mls):	10	Department:	HPLC
Vials:	1	Last Edit:	10/09/2024 08:13 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	24G0641	99-35-4	100	ug/mL
1,3-DINITROBENZENE	24G0641	99-65-0	100	ug/mL
2,4,6-TRINITROTOLUENE	24G0641	118-96-7	100	ug/mL
2,4-DINITROTOLUENE	24G0641	121-14-2	100	ug/mL
2,6-DINITROTOLUENE	24G0641	606-20-2	100	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24G0641	35572-78-2	100	ug/mL
2-NITROTOLUENE	24G0641	88-72-2	100	ug/mL
3,5-DINITROANILINE	24G0641	618-87-1	100	ug/mL
3-NITROTOLUENE	24G0641	99-08-1	100	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24G0641	19406-51-0	100	ug/mL
4-NITROTOLUENE	24G0641	99-99-0	100	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24G0641	121-82-4	100	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24G0641	479-45-8	100	ug/mL
NITROBENZENE	24G0641	98-95-3	100	ug/mL
NITROGLYCERIN	24G0641	55-63-0	100	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24G0641	2691-41-0	100	ug/mL
PENTAERYTHRITOL TETRANITRATE	24G0641	78-11-5	100	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24G0641	8330 - SSS Ampule A0212687	07/29/2024	Restek	A0212687	01/25/2025	07/29/2024 10:40	by IMC	1

Analytical Standard Record

24J0391

Description:	8330 - CCV 1.0ug/mL 10/11/24	Expires:	03/23/2025
Standard Type:	Calibration Standard	Prepared:	10/11/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Kia Yang
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	10/11/2024 14:10 by KMY1
Lot Number:	*		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24I0469	528-29-0	1	ug/mL
1,3,5-TRINITROBENZENE	24I0469	99-35-4	1	ug/mL
1,3-DINITROBENZENE	24I0469	99-65-0	1	ug/mL
2,4,6-TRINITROTOLUENE	24I0469	118-96-7	1	ug/mL
2,4-DINITROTOLUENE	24I0469	121-14-2	1	ug/mL
2,6-DINITROTOLUENE	24I0469	606-20-2	1	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24I0469	35572-78-2	1	ug/mL
2-NITROTOLUENE	24I0469	88-72-2	1	ug/mL
3,5-DINITROANILINE	24I0469	618-87-1	1	ug/mL
3-NITROTOLUENE	24I0469	99-08-1	1	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24I0469	19406-51-0	1	ug/mL
4-NITROTOLUENE	24I0469	99-99-0	1	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24I0469	121-82-4	1	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24I0469	479-45-8	1	ug/mL
NITROBENZENE	24I0469	98-95-3	1	ug/mL
NITROGLYCERIN	24I0469	55-63-0	1	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24I0469	2691-41-0	1	ug/mL
PENTAERYTHRITOL TETRANITRATE	24I0469	78-11-5	1	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24I0469	8330 - CCV DSS 10ug/mL 09/24/24	09/24/2024	*	*	03/23/2025	09/24/2024 10:51	by KMY1	0.08

Analytical Standard Record

24J0610

Description:	8330 - SCV DSS 20ug/mL 10/18/24	Expires:	04/18/2025
Standard Type:	Other	Prepared:	10/18/2024
Solvent:	ACN	Prepared By:	Kia Yang
Final Volume (mls):	1	Department:	HPLC
Vials:	1	Last Edit:	10/21/2024 10:08 by KMY1
Lot Number:	-		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	23E0027	99-35-4	20	ug/mL
1,3-DINITROBENZENE	23E0027	99-65-0	20	ug/mL
2,4,6-TRINITROTOLUENE	23E0027	118-96-7	20	ug/mL
2,4-DINITROTOLUENE	23E0027	121-14-2	20	ug/mL
2,6-DINITROTOLUENE	23E0027	606-20-2	20	ug/mL
2-AMINO-4,6-DINITROTOLUENE	23E0027	35572-78-2	20	ug/mL
2-NITROTOLUENE	23E0027	88-72-2	20	ug/mL
3,5-DINITROANILINE	23E0027	618-87-1	20	ug/mL
3-NITROTOLUENE	23E0027	99-08-1	20	ug/mL
4-AMINO-2,6-DINITROTOLUENE	23E0027	19406-51-0	20	ug/mL
4-NITROTOLUENE	23E0027	99-99-0	20	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	23E0027	121-82-4	20	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	23E0027	479-45-8	20	ug/mL
NITROBENZENE	23E0027	98-95-3	20	ug/mL
NITROGLYCERIN	23E0027	55-63-0	20	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	23E0027	2691-41-0	20	ug/mL
PENTAERYTHRITOL TETRANITRATE	23E0027	78-11-5	20	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
23E0027	8330 - SSS Ampule A0188442	04/18/2023	Restek	A0188442	08/31/2025	12/04/2023 11:05	by IMC	0.02

Analytical Standard Record

24J0611

Description:	8330 - Cal Std 20ug/mL 10/18/24	Expires:	04/19/2025
Standard Type:	Other	Prepared:	10/18/2024
Solvent:	ACN	Prepared By:	Kia Yang
Final Volume (mls):	1	Department:	HPLC
Vials:	1	Last Edit:	10/21/2024 10:08 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24H0339	528-29-0	20	ug/mL
1,3,5-TRINITROBENZENE	24J0249	99-35-4	20	ug/mL
1,3-DINITROBENZENE	24J0249	99-65-0	20	ug/mL
2,4,6-TRINITROTOLUENE	24J0249	118-96-7	20	ug/mL
2,4-DINITROTOLUENE	24J0249	121-14-2	20	ug/mL
2,6-DINITROTOLUENE	24J0249	606-20-2	20	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24J0249	35572-78-2	20	ug/mL
2-NITROTOLUENE	24J0249	88-72-2	20	ug/mL
3,5-DINITROANILINE	24J0249	618-87-1	20	ug/mL
3-NITROTOLUENE	24J0249	99-08-1	20	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24J0249	19406-51-0	20	ug/mL
4-NITROTOLUENE	24J0249	99-99-0	20	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24J0249	121-82-4	20	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24J0249	479-45-8	20	ug/mL
NITROBENZENE	24J0249	98-95-3	20	ug/mL
NITROGLYCERIN	24J0249	55-63-0	20	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24J0249	2691-41-0	20	ug/mL
PENTAERYTHRITOL TETRANITRATE	24J0249	78-11-5	20	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24H0339	8330 - 1,2-DNB SUR 100ug/mL 8/13/24	08/13/2024	In house	x	02/09/2025	08/13/2024 12:19	by KMY1	0.2
24J0249	8330 - Spike 100ug/mL 10/9/24	10/09/2024	In house	x	01/25/2025	10/09/2024 08:13	by KMY1	0.2

Analytical Standard Record

24J0612

Description:	8330 - Cal Std 0.2ug/mL 10/18/24	Expires:	04/18/2025
Standard Type:	Other	Prepared:	10/18/2024
Solvent:	ACN	Prepared By:	Kia Yang
Final Volume (mls):	1	Department:	HPLC
Vials:	1	Last Edit:	10/21/2024 10:08 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24J0611	528-29-0	0.2	ug/mL
1,3,5-TRINITROBENZENE	24J0611	99-35-4	0.2	ug/mL
1,3-DINITROBENZENE	24J0611	99-65-0	0.2	ug/mL
2,4,6-TRINITROTOLUENE	24J0611	118-96-7	0.2	ug/mL
2,4-DINITROTOLUENE	24J0611	121-14-2	0.2	ug/mL
2,6-DINITROTOLUENE	24J0611	606-20-2	0.2	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24J0611	35572-78-2	0.2	ug/mL
2-NITROTOLUENE	24J0611	88-72-2	0.2	ug/mL
3,5-DINITROANILINE	24J0611	618-87-1	0.2	ug/mL
3-NITROTOLUENE	24J0611	99-08-1	0.2	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24J0611	19406-51-0	0.2	ug/mL
4-NITROTOLUENE	24J0611	99-99-0	0.2	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24J0611	121-82-4	0.2	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24J0611	479-45-8	0.2	ug/mL
NITROBENZENE	24J0611	98-95-3	0.2	ug/mL
NITROGLYCERIN	24J0611	55-63-0	0.2	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24J0611	2691-41-0	0.2	ug/mL
PENTAERYTHRITOL TETRANITRATE	24J0611	78-11-5	0.2	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24J0611	8330 - Cal Std 20ug/mL 10/18/24	10/18/2024	In house	x	04/19/2025	10/21/2024 10:08	by KMY1	0.01

Analytical Standard Record

24J0613

Description:	8330 - Cal 1 0.005ug/mL 10/18/24	Expires:	04/18/2025
Standard Type:	Calibration Standard	Prepared:	10/18/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Kia Yang
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	10/21/2024 10:09 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24J0612	528-29-0	0.005	ug/mL
1,3,5-TRINITROBENZENE	24J0612	99-35-4	0.005	ug/mL
1,3-DINITROBENZENE	24J0612	99-65-0	0.005	ug/mL
2,4,6-TRINITROTOLUENE	24J0612	118-96-7	0.005	ug/mL
2,4-DINITROTOLUENE	24J0612	121-14-2	0.005	ug/mL
2,6-DINITROTOLUENE	24J0612	606-20-2	0.005	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24J0612	35572-78-2	0.005	ug/mL
2-NITROTOLUENE	24J0612	88-72-2	0.005	ug/mL
3,5-DINITROANILINE	24J0612	618-87-1	0.005	ug/mL
3-NITROTOLUENE	24J0612	99-08-1	0.005	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24J0612	19406-51-0	0.005	ug/mL
4-NITROTOLUENE	24J0612	99-99-0	0.005	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24J0612	121-82-4	0.005	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24J0612	479-45-8	0.005	ug/mL
NITROBENZENE	24J0612	98-95-3	0.005	ug/mL
NITROGLYCERIN	24J0612	55-63-0	0.005	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24J0612	2691-41-0	0.005	ug/mL
PENTAERYTHRITOL TETRANITRATE	24J0612	78-11-5	0.005	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24J0612	8330 - Cal Std 0.2ug/mL 10/18/24	10/18/2024	In house	x	04/18/2025	10/21/2024 10:08	by KMY1	0.02

Analytical Standard Record

24J0614

Description:	8330 - Cal 2 0.05ug/mL 10/18/24	Expires:	04/18/2025
Standard Type:	Calibration Standard	Prepared:	10/18/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Kia Yang
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	10/21/2024 10:08 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24J0612	528-29-0	0.05	ug/mL
1,3,5-TRINITROBENZENE	24J0612	99-35-4	0.05	ug/mL
1,3-DINITROBENZENE	24J0612	99-65-0	0.05	ug/mL
2,4,6-TRINITROTOLUENE	24J0612	118-96-7	0.05	ug/mL
2,4-DINITROTOLUENE	24J0612	121-14-2	0.05	ug/mL
2,6-DINITROTOLUENE	24J0612	606-20-2	0.05	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24J0612	35572-78-2	0.05	ug/mL
2-NITROTOLUENE	24J0612	88-72-2	0.05	ug/mL
3,5-DINITROANILINE	24J0612	618-87-1	0.05	ug/mL
3-NITROTOLUENE	24J0612	99-08-1	0.05	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24J0612	19406-51-0	0.05	ug/mL
4-NITROTOLUENE	24J0612	99-99-0	0.05	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24J0612	121-82-4	0.05	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24J0612	479-45-8	0.05	ug/mL
NITROBENZENE	24J0612	98-95-3	0.05	ug/mL
NITROGLYCERIN	24J0612	55-63-0	0.05	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24J0612	2691-41-0	0.05	ug/mL
PENTAERYTHRITOL TETRANITRATE	24J0612	78-11-5	0.05	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24J0612	8330 - Cal Std 0.2ug/mL 10/18/24	10/18/2024	In house	x	04/18/2025	10/21/2024 10:08	by KMY1	0.2

Analytical Standard Record

24J0615

Description:	8330 - Cal 3 0.25ug/mL 10/18/24	Expires:	04/18/2025
Standard Type:	Calibration Standard	Prepared:	10/18/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Kia Yang
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	10/21/2024 10:08 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24J0611	528-29-0	0.25	ug/mL
1,3,5-TRINITROBENZENE	24J0611	99-35-4	0.25	ug/mL
1,3-DINITROBENZENE	24J0611	99-65-0	0.25	ug/mL
2,4,6-TRINITROTOLUENE	24J0611	118-96-7	0.25	ug/mL
2,4-DINITROTOLUENE	24J0611	121-14-2	0.25	ug/mL
2,6-DINITROTOLUENE	24J0611	606-20-2	0.25	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24J0611	35572-78-2	0.25	ug/mL
2-NITROTOLUENE	24J0611	88-72-2	0.25	ug/mL
3,5-DINITROANILINE	24J0611	618-87-1	0.25	ug/mL
3-NITROTOLUENE	24J0611	99-08-1	0.25	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24J0611	19406-51-0	0.25	ug/mL
4-NITROTOLUENE	24J0611	99-99-0	0.25	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24J0611	121-82-4	0.25	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24J0611	479-45-8	0.25	ug/mL
NITROBENZENE	24J0611	98-95-3	0.25	ug/mL
NITROGLYCERIN	24J0611	55-63-0	0.25	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24J0611	2691-41-0	0.25	ug/mL
PENTAERYTHRITOL TETRANITRATE	24J0611	78-11-5	0.25	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24J0611	8330 - Cal Std 20ug/mL 10/18/24	10/18/2024	In house	x	04/19/2025	10/21/2024 10:08	by KMY1	0.01

Analytical Standard Record

24J0616

Description:	8330 - Cal 4 1.0ug/mL 10/18/24	Expires:	04/18/2025
Standard Type:	Calibration Standard	Prepared:	10/18/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Kia Yang
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	10/21/2024 10:08 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24J0611	528-29-0	1	ug/mL
1,3,5-TRINITROBENZENE	24J0611	99-35-4	1	ug/mL
1,3-DINITROBENZENE	24J0611	99-65-0	1	ug/mL
2,4,6-TRINITROTOLUENE	24J0611	118-96-7	1	ug/mL
2,4-DINITROTOLUENE	24J0611	121-14-2	1	ug/mL
2,6-DINITROTOLUENE	24J0611	606-20-2	1	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24J0611	35572-78-2	1	ug/mL
2-NITROTOLUENE	24J0611	88-72-2	1	ug/mL
3,5-DINITROANILINE	24J0611	618-87-1	1	ug/mL
3-NITROTOLUENE	24J0611	99-08-1	1	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24J0611	19406-51-0	1	ug/mL
4-NITROTOLUENE	24J0611	99-99-0	1	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24J0611	121-82-4	1	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24J0611	479-45-8	1	ug/mL
NITROBENZENE	24J0611	98-95-3	1	ug/mL
NITROGLYCERIN	24J0611	55-63-0	1	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24J0611	2691-41-0	1	ug/mL
PENTAERYTHRITOL TETRANITRATE	24J0611	78-11-5	1	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24J0611	8330 - Cal Std 20ug/mL 10/18/24	10/18/2024	In house	x	04/19/2025	10/21/2024 10:08	by KMY1	0.04

Analytical Standard Record

24J0617

Description:	8330 - Cal 5 2.5ug/mL 10/18/24	Expires:	04/18/2025
Standard Type:	Calibration Standard	Prepared:	10/18/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Kia Yang
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	10/21/2024 10:08 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24J0611	528-29-0	2.5	ug/mL
1,3,5-TRINITROBENZENE	24J0611	99-35-4	2.5	ug/mL
1,3-DINITROBENZENE	24J0611	99-65-0	2.5	ug/mL
2,4,6-TRINITROTOLUENE	24J0611	118-96-7	2.5	ug/mL
2,4-DINITROTOLUENE	24J0611	121-14-2	2.5	ug/mL
2,6-DINITROTOLUENE	24J0611	606-20-2	2.5	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24J0611	35572-78-2	2.5	ug/mL
2-NITROTOLUENE	24J0611	88-72-2	2.5	ug/mL
3,5-DINITROANILINE	24J0611	618-87-1	2.5	ug/mL
3-NITROTOLUENE	24J0611	99-08-1	2.5	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24J0611	19406-51-0	2.5	ug/mL
4-NITROTOLUENE	24J0611	99-99-0	2.5	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24J0611	121-82-4	2.5	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24J0611	479-45-8	2.5	ug/mL
NITROBENZENE	24J0611	98-95-3	2.5	ug/mL
NITROGLYCERIN	24J0611	55-63-0	2.5	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24J0611	2691-41-0	2.5	ug/mL
PENTAERYTHRITOL TETRANITRATE	24J0611	78-11-5	2.5	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24J0611	8330 - Cal Std 20ug/mL 10/18/24	10/18/2024	In house	x	04/19/2025	10/21/2024 10:08	by KMY1	0.1

Analytical Standard Record

24J0618

Description:	8330 - Cal 6 5.0ug/mL 10/18/24	Expires:	04/18/2025
Standard Type:	Calibration Standard	Prepared:	10/18/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Kia Yang
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	10/21/2024 10:08 by KMY1
Lot Number:	x		

Analyte	Parent	CAS Number	Concentration	Units
1,2-DINITROBENZENE	24J0611	528-29-0	5	ug/mL
1,3,5-TRINITROBENZENE	24J0611	99-35-4	5	ug/mL
1,3-DINITROBENZENE	24J0611	99-65-0	5	ug/mL
2,4,6-TRINITROTOLUENE	24J0611	118-96-7	5	ug/mL
2,4-DINITROTOLUENE	24J0611	121-14-2	5	ug/mL
2,6-DINITROTOLUENE	24J0611	606-20-2	5	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24J0611	35572-78-2	5	ug/mL
2-NITROTOLUENE	24J0611	88-72-2	5	ug/mL
3,5-DINITROANILINE	24J0611	618-87-1	5	ug/mL
3-NITROTOLUENE	24J0611	99-08-1	5	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24J0611	19406-51-0	5	ug/mL
4-NITROTOLUENE	24J0611	99-99-0	5	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24J0611	121-82-4	5	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24J0611	479-45-8	5	ug/mL
NITROBENZENE	24J0611	98-95-3	5	ug/mL
NITROGLYCERIN	24J0611	55-63-0	5	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24J0611	2691-41-0	5	ug/mL
PENTAERYTHRITOL TETRANITRATE	24J0611	78-11-5	5	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24J0611	8330 - Cal Std 20ug/mL 10/18/24	10/18/2024	In house	x	04/19/2025	10/21/2024 10:08	by KMY1	0.2

Analytical Standard Record

24J0619

Description:	8330 - SCV 1.0ug/mL 10/18/24	Expires:	04/18/2025
Standard Type:	Calibration Standard	Prepared:	10/18/2024
Solvent:	3:1 H2O:ACN	Prepared By:	Kia Yang
Final Volume (mls):	0.8	Department:	HPLC
Vials:	1	Last Edit:	10/21/2024 10:08 by KMY1
Lot Number:	-		

Analyte	Parent	CAS Number	Concentration	Units
1,3,5-TRINITROBENZENE	24J0610	99-35-4	1	ug/mL
1,3-DINITROBENZENE	24J0610	99-65-0	1	ug/mL
2,4,6-TRINITROTOLUENE	24J0610	118-96-7	1	ug/mL
2,4-DINITROTOLUENE	24J0610	121-14-2	1	ug/mL
2,6-DINITROTOLUENE	24J0610	606-20-2	1	ug/mL
2-AMINO-4,6-DINITROTOLUENE	24J0610	35572-78-2	1	ug/mL
2-NITROTOLUENE	24J0610	88-72-2	1	ug/mL
3,5-DINITROANILINE	24J0610	618-87-1	1	ug/mL
3-NITROTOLUENE	24J0610	99-08-1	1	ug/mL
4-AMINO-2,6-DINITROTOLUENE	24J0610	19406-51-0	1	ug/mL
4-NITROTOLUENE	24J0610	99-99-0	1	ug/mL
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	24J0610	121-82-4	1	ug/mL
METHYL-2,4,6-TRINITROPHENYLNITRAMINE	24J0610	479-45-8	1	ug/mL
NITROBENZENE	24J0610	98-95-3	1	ug/mL
NITROGLYCERIN	24J0610	55-63-0	1	ug/mL
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	24J0610	2691-41-0	1	ug/mL
PENTAERYTHRITOL TETRANITRATE	24J0610	78-11-5	1	ug/mL

Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
24J0610	8330 - SCV DSS 20ug/mL 10/18/24	10/18/2024	-	-	04/18/2025	10/21/2024 10:08	by KMY1	0.04

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ANALYTICAL REPORT

PREPARED FOR

Attn: Brian Rothmeyer
AECOM Technical Services Inc
7595 Technology Way
Denver CO 80237

Generated 12/9/2024 1:06 PM

JOB DESCRIPTION

Fort Wingate Depot Activity (FWDA)

JOB NUMBER

280-200203-1

Eurofins Denver
4955 Yarrow Street
Arvada CO 80002

See page two for job notes and contact information.

my EOL

Eurofins Denver

Job Notes

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Authorized for release by
Shelby R McCabe, Project Manager I
Shelby.McCabe@et.eurofinsus.com
303 736-0165

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Qualifiers

HPLC/IC

Qualifier	Qualifier Description
D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.
D	The reported value is from a dilution.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
M	Manual integrated compound.
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

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
280-200203-1

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 12/3/2024 9:25 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 1.8°C.

Method 8330B MOD - Nitroaromatics and Nitramines (HPLC)
Samples P3HWMU-CONTAM-001-002 (280-200203-1), P3HWMU-CONTAM-003-002 (280-200203-2) and P2-ARROYO-005-002 (280-200203-3) were analyzed for Nitroaromatics and Nitramines (HPLC). The samples were prepared on 12/3/2024 and analyzed on 12/4/2024, 12/5/2024 and 12/6/2024.

Sample P2-ARROYO-005-002 (280-200203-3)[200x] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

A deviation from the Standard Operating Procedure (SOP) occurred. Details are as follows: Per the quoted scope of work, the samples were treated as discrete samples where they were aliquotted, but did not have ISM performed: P3HWMU-CONTAM-001-002 (280-200203-1), P3HWMU-CONTAM-003-002 (280-200203-2), P2-ARROYO-005-002 (280-200203-3), (280-200203-A-2 DU), (280-200203-A-2 MS), (280-200203-A-2 MSD) and (280-200203-A-2 TRL). The prep for these samples deviated from SOP as they were not ISM aliquotted as required by DV-OP-0013 section 10.6 and did not have an ISM pre-prep as required by DV-OP-0018 section 1.3.1.

The following sample in preparation batch 280-677232 and analytical batch 280-677520 required a dilution due to the nature of the sample matrix and to bring the concentration of target analytes within the calibration range: P2-ARROYO-005-002 (280-200203-3). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

The sample duplicate/sample triplicate (DUP/TRL) precision for preparation batch 280-677232 and analytical batch 280-677391 was outside control limits for 2,4,6-Trinitrotoluene. Sample matrix interference and/or non-homogeneity are suspected. The following samples are impacted: P3HWMU-CONTAM-003-002 (280-200203-2), (280-200203-A-2-D DU) and (280-200203-A-2-E TRL).

Method Moisture - Percent Moisture
Samples P3HWMU-CONTAM-001-002 (280-200203-1), P3HWMU-CONTAM-003-002 (280-200203-2) and P2-ARROYO-005-002 (280-200203-3) were analyzed for Percent Moisture. The samples were analyzed on 12/5/2024.

Detection Summary

Client: AECOM Technical Services Inc
Job ID: 280-200203-1
Project/Site: Fort Wingate Depot Activity (FWDA)

Client Sample ID: P3HWMU-CONTAM-001-002 — Lab Sample ID: 280-200203-1

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
2,4,6-Trinitrotoluene	0.44		0.11	0.033	mg/Kg	1	☼	8330B MOD	Total/NA
2-Amino-4,6-dinitrotoluene	0.24		0.11	0.036	mg/Kg	1	☼	8330B MOD	Total/NA
4-Amino-2,6-dinitrotoluene	0.19		0.11	0.032	mg/Kg	1	☼	8330B MOD	Total/NA
HMX	0.36	M	0.11	0.025	mg/Kg	1	☼	8330B MOD	Total/NA
RDX	1.4		0.22	0.047	mg/Kg	1	☼	8330B MOD	Total/NA

Client Sample ID: P3HWMU-CONTAM-003-002 — Lab Sample ID: 280-200203-2

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
2,4,6-Trinitrotoluene	0.64	M	0.11	0.032	mg/Kg	1	☼	8330B MOD	Total/NA
2-Amino-4,6-dinitrotoluene	0.10	J M	0.11	0.035	mg/Kg	1	☼	8330B MOD	Total/NA
4-Amino-2,6-dinitrotoluene	0.15	M	0.11	0.032	mg/Kg	1	☼	8330B MOD	Total/NA
HMX	0.19	M	0.11	0.024	mg/Kg	1	☼	8330B MOD	Total/NA
RDX	0.47		0.21	0.045	mg/Kg	1	☼	8330B MOD	Total/NA

Client Sample ID: P2-ARROYO-005-002 — Lab Sample ID: 280-200203-3

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
2,4,6-Trinitrotoluene	830	D	21	6.3	mg/Kg	200	☼	8330B MOD	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: P3HWMU-CONTAM-001-002
Lab Sample ID: 280-200203-1
Date Collected: 12/02/24 11:53
Matrix: Solid
Date Received: 12/03/24 09:25

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**8.4**		0.1	0.1	%			12/05/24 12:53	1

Client Sample ID: P3HWMU-CONTAM-001-002
Lab Sample ID: 280-200203-1
Date Collected: 12/02/24 11:53
Matrix: Solid
Date Received: 12/03/24 09:25
Percent Solids: 91.6

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.043	U	0.11	0.015	mg/Kg	☼	12/03/24 17:54	12/04/24 21:23	1
1,3-Dinitrobenzene	0.043	U	0.11	0.018	mg/Kg	☼	12/03/24 17:54	12/04/24 21:23	1
2,4,6-Trinitrotoluene	**0.44**		0.11	0.033	mg/Kg	☼	12/03/24 17:54	12/04/24 21:23	1
2,4-Dinitrotoluene	0.043	U	0.11	0.016	mg/Kg	☼	12/03/24 17:54	12/04/24 21:23	1
2,6-Dinitrotoluene	0.043	U	0.11	0.021	mg/Kg	☼	12/03/24 17:54	12/04/24 21:23	1
2-Amino-4,6-dinitrotoluene	**0.24**		0.11	0.036	mg/Kg	☼	12/03/24 17:54	12/04/24 21:23	1
o-Nitrotoluene	0.11	U	0.22	0.051	mg/Kg	☼	12/03/24 17:54	12/04/24 21:23	1
m-Nitrotoluene	0.16	U	0.22	0.069	mg/Kg	☼	12/03/24 17:54	12/04/24 21:23	1
4-Amino-2,6-dinitrotoluene	**0.19**		0.11	0.032	mg/Kg	☼	12/03/24 17:54	12/04/24 21:23	1
p-Nitrotoluene	0.11	U	0.22	0.039	mg/Kg	☼	12/03/24 17:54	12/04/24 21:23	1
Nitrobenzene	0.22	U	0.32	0.092	mg/Kg	☼	12/03/24 17:54	12/04/24 21:23	1
Nitroglycerin	0.76	U	2.2	0.23	mg/Kg	☼	12/03/24 17:54	12/04/24 21:23	1
HMX	**0.36**	**M**	0.11	0.025	mg/Kg	☼	12/03/24 17:54	12/04/24 21:23	1
PETN	1.1	U	2.2	0.53	mg/Kg	☼	12/03/24 17:54	12/04/24 21:23	1
RDX	**1.4**		0.22	0.047	mg/Kg	☼	12/03/24 17:54	12/04/24 21:23	1
Tetryl	0.11	U	0.22	0.047	mg/Kg	☼	12/03/24 17:54	12/04/24 21:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene (Surr)	*99*	*M*	*78 - 119*	*12/03/24 17:54*	*12/04/24 21:23*	*1*
1,2-Dinitrobenzene (Surr)	*92*		*78 - 119*	*12/03/24 17:54*	*12/05/24 19:53*	*1*

Client Sample ID: P3HWMU-CONTAM-003-002
Lab Sample ID: 280-200203-2
Date Collected: 12/02/24 12:44
Matrix: Solid
Date Received: 12/03/24 09:25

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**8.1**		0.1	0.1	%			12/05/24 12:53	1

Client Sample ID: P3HWMU-CONTAM-003-002
Lab Sample ID: 280-200203-2
Date Collected: 12/02/24 12:44
Matrix: Solid
Date Received: 12/03/24 09:25
Percent Solids: 91.9

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.042	U	0.11	0.015	mg/Kg	☼	12/03/24 17:54	12/04/24 21:45	1
1,3-Dinitrobenzene	0.042	U	0.11	0.018	mg/Kg	☼	12/03/24 17:54	12/04/24 21:45	1
2,4,6-Trinitrotoluene	**0.64**	**M**	0.11	0.032	mg/Kg	☼	12/03/24 17:54	12/04/24 21:45	1
2,4-Dinitrotoluene	0.042	U	0.11	0.016	mg/Kg	☼	12/03/24 17:54	12/04/24 21:45	1
2,6-Dinitrotoluene	0.042	U	0.11	0.020	mg/Kg	☼	12/03/24 17:54	12/04/24 21:45	1
2-Amino-4,6-dinitrotoluene	**0.10**	**J M**	0.11	0.035	mg/Kg	☼	12/03/24 17:54	12/04/24 21:45	1
o-Nitrotoluene	0.11	U	0.21	0.050	mg/Kg	☼	12/03/24 17:54	12/04/24 21:45	1
m-Nitrotoluene	0.16	U	0.21	0.068	mg/Kg	☼	12/03/24 17:54	12/04/24 21:45	1

Client Sample ID: P3HWMU-CONTAM-003-002
Lab Sample ID: 280-200203-2
Date Collected: 12/02/24 12:44
Matrix: Solid
Date Received: 12/03/24 09:25
Percent Solids: 91.9

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
4-Amino-2,6-dinitrotoluene	**0.15**	**M**	0.11	0.032	mg/Kg	☼	12/03/24 17:54	12/04/24 21:45	1
p-Nitrotoluene	0.11	U	0.21	0.039	mg/Kg	☼	12/03/24 17:54	12/04/24 21:45	1
Nitrobenzene	0.21	U	0.32	0.090	mg/Kg	☼	12/03/24 17:54	12/04/24 21:45	1
Nitroglycerin	0.74	U	2.1	0.23	mg/Kg	☼	12/03/24 17:54	12/04/24 21:45	1
HMX	**0.19**	**M**	0.11	0.024	mg/Kg	☼	12/03/24 17:54	12/04/24 21:45	1
PETN	1.1	U	2.1	0.52	mg/Kg	☼	12/03/24 17:54	12/04/24 21:45	1
RDX	**0.47**		0.21	0.045	mg/Kg	☼	12/03/24 17:54	12/04/24 21:45	1
Tetryl	0.11	U	0.21	0.046	mg/Kg	☼	12/03/24 17:54	12/04/24 21:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene (Surr)	*102*		*78 - 119*	*12/03/24 17:54*	*12/04/24 21:45*	*1*
1,2-Dinitrobenzene (Surr)	*90*	*M*	*78 - 119*	*12/03/24 17:54*	*12/06/24 16:28*	*1*

Client Sample ID: P2-ARROYO-005-002
Lab Sample ID: 280-200203-3
Date Collected: 12/02/24 11:14
Matrix: Solid
Date Received: 12/03/24 09:25

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**6.9**		0.1	0.1	%			12/05/24 12:53	1

Client Sample ID: P2-ARROYO-005-002
Lab Sample ID: 280-200203-3
Date Collected: 12/02/24 11:14
Matrix: Solid
Date Received: 12/03/24 09:25
Percent Solids: 93.1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	8.2	U	21	2.8	mg/Kg	☼	12/03/24 17:54	12/05/24 17:02	200
1,3-Dinitrobenzene	8.2	U	21	3.4	mg/Kg	☼	12/03/24 17:54	12/05/24 17:02	200
2,4,6-Trinitrotoluene	**830**	**D**	21	6.3	mg/Kg	☼	12/03/24 17:54	12/05/24 17:02	200
2,4-Dinitrotoluene	8.2	U	21	3.0	mg/Kg	☼	12/03/24 17:54	12/05/24 17:02	200
2,6-Dinitrotoluene	8.2	U	21	3.9	mg/Kg	☼	12/03/24 17:54	12/05/24 17:02	200
2-Amino-4,6-dinitrotoluene	14	U	21	6.8	mg/Kg	☼	12/03/24 17:54	12/05/24 17:02	200
o-Nitrotoluene	21	U	41	9.7	mg/Kg	☼	12/03/24 17:54	12/05/24 17:02	200
m-Nitrotoluene	31	U	41	13	mg/Kg	☼	12/03/24 17:54	12/05/24 17:02	200
4-Amino-2,6-dinitrotoluene	14	U	21	6.1	mg/Kg	☼	12/03/24 17:54	12/05/24 17:02	200
p-Nitrotoluene	21	U	41	7.5	mg/Kg	☼	12/03/24 17:54	12/05/24 17:02	200
Nitrobenzene	41	U	62	17	mg/Kg	☼	12/03/24 17:54	12/05/24 17:02	200
Nitroglycerin	140	U	410	44	mg/Kg	☼	12/03/24 17:54	12/05/24 17:02	200
HMX	14	U	21	4.7	mg/Kg	☼	12/03/24 17:54	12/05/24 17:02	200
PETN	210	U	410	100	mg/Kg	☼	12/03/24 17:54	12/05/24 17:02	200
RDX	21	U	41	8.8	mg/Kg	☼	12/03/24 17:54	12/05/24 17:02	200
Tetryl	21	U	41	9.0	mg/Kg	☼	12/03/24 17:54	12/05/24 17:02	200

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene (Surr)	*0*	*D Q*	*78 - 119*	*12/03/24 17:54*	*12/05/24 17:02*	*200*
1,2-Dinitrobenzene (Surr)	*0*	*M D Q*	*78 - 119*	*12/03/24 17:54*	*12/05/24 23:29*	*200*

Default Detection Limits

Client: AECOM Technical Services Inc
Job ID: 280-200203-1
Project/Site: Fort Wingate Depot Activity (FWDA)

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

Prep: 8330B

Analyte	LOQ	DL	Units
1,3,5-Trinitrobenzene	0.10	0.014	mg/Kg
1,3-Dinitrobenzene	0.10	0.017	mg/Kg
2,4,6-Trinitrotoluene	0.10	0.031	mg/Kg
2,4-Dinitrotoluene	0.10	0.015	mg/Kg
2,6-Dinitrotoluene	0.10	0.019	mg/Kg
2-Amino-4,6-dinitrotoluene	0.10	0.033	mg/Kg
4-Amino-2,6-dinitrotoluene	0.10	0.030	mg/Kg
HMX	0.10	0.023	mg/Kg
m-Nitrotoluene	0.20	0.064	mg/Kg
Nitrobenzene	0.30	0.085	mg/Kg
Nitroglycerin	2.0	0.22	mg/Kg
o-Nitrotoluene	0.20	0.047	mg/Kg
PETN	2.0	0.49	mg/Kg
p-Nitrotoluene	0.20	0.037	mg/Kg
RDX	0.20	0.043	mg/Kg
Tetryl	0.20	0.044	mg/Kg

General Chemistry

Analyte	LOQ	DL	Units
Percent Moisture	0.1	0.1	%

Surrogate Summary

Client: AECOM Technical Services Inc
Job ID: 280-200203-1
Project/Site: Fort Wingate Depot Activity (FWDA)

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	12DNB1 (78-119)
280-200203-1	P3HWMU-CONTAM-001-002	99 M
280-200203-2	P3HWMU-CONTAM-003-002	102
280-200203-2 DU	P3HWMU-CONTAM-003-002	100
280-200203-2 MS	P3HWMU-CONTAM-003-002	99
280-200203-2 MSD	P3HWMU-CONTAM-003-002	97
280-200203-2 TRL	P3HWMU-CONTAM-003-002	99
280-200203-3	P2-ARROYO-005-002	0 D Q
LCS 280-677232/2-A	Lab Control Sample	102
MB 280-677232/1-A	Method Blank	105

Surrogate Legend

12DNB = 1,2-Dinitrobenzene (Surr)

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	12DNB2 (78-119)
280-200203-1	P3HWMU-CONTAM-001-002	92
280-200203-2	P3HWMU-CONTAM-003-002	90 M
280-200203-3	P2-ARROYO-005-002	0 M D Q

Surrogate Legend

12DNB = 1,2-Dinitrobenzene (Surr)

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

Lab Sample ID: MB 280-677232/1-A
Matrix: Solid
Analysis Batch: 677391

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 677232

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.040	U	0.10	0.014	mg/Kg		12/03/24 17:54	12/04/24 20:39	1
1,3-Dinitrobenzene	0.040	U	0.10	0.017	mg/Kg		12/03/24 17:54	12/04/24 20:39	1
2,4,6-Trinitrotoluene	0.070	U	0.10	0.031	mg/Kg		12/03/24 17:54	12/04/24 20:39	1
2,4-Dinitrotoluene	0.040	U	0.10	0.015	mg/Kg		12/03/24 17:54	12/04/24 20:39	1
2,6-Dinitrotoluene	0.040	U	0.10	0.019	mg/Kg		12/03/24 17:54	12/04/24 20:39	1
2-Amino-4,6-dinitrotoluene	0.070	U	0.10	0.033	mg/Kg		12/03/24 17:54	12/04/24 20:39	1
o-Nitrotoluene	0.10	U	0.20	0.047	mg/Kg		12/03/24 17:54	12/04/24 20:39	1
m-Nitrotoluene	0.15	U	0.20	0.064	mg/Kg		12/03/24 17:54	12/04/24 20:39	1
4-Amino-2,6-dinitrotoluene	0.070	U	0.10	0.030	mg/Kg		12/03/24 17:54	12/04/24 20:39	1
p-Nitrotoluene	0.10	U	0.20	0.037	mg/Kg		12/03/24 17:54	12/04/24 20:39	1
Nitrobenzene	0.20	U	0.30	0.085	mg/Kg		12/03/24 17:54	12/04/24 20:39	1
Nitroglycerin	0.70	U	2.0	0.22	mg/Kg		12/03/24 17:54	12/04/24 20:39	1
HMX	0.070	U M	0.10	0.023	mg/Kg		12/03/24 17:54	12/04/24 20:39	1
PETN	1.0	U	2.0	0.49	mg/Kg		12/03/24 17:54	12/04/24 20:39	1
RDX	0.10	U	0.20	0.043	mg/Kg		12/03/24 17:54	12/04/24 20:39	1
Tetryl	0.10	U	0.20	0.044	mg/Kg		12/03/24 17:54	12/04/24 20:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene (Surr)	*105*		*78 - 119*	*12/03/24 17:54*	*12/04/24 20:39*	*1*

Lab Sample ID: LCS 280-677232/2-A
Matrix: Solid
Analysis Batch: 677391

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 677232

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,3,5-Trinitrobenzene	1.00	1.05		mg/Kg		105	80 - 116
1,3-Dinitrobenzene	1.00	1.06		mg/Kg		106	73 - 119
2,4,6-Trinitrotoluene	1.00	1.02		mg/Kg		102	71 - 120
2,4-Dinitrotoluene	1.00	1.03		mg/Kg		103	75 - 121
2,6-Dinitrotoluene	1.00	1.06		mg/Kg		106	79 - 117
2-Amino-4,6-dinitrotoluene	1.00	1.05		mg/Kg		105	71 - 123
o-Nitrotoluene	1.00	1.02	M	mg/Kg		102	70 - 124
m-Nitrotoluene	1.00	1.01	M	mg/Kg		101	67 - 129
4-Amino-2,6-dinitrotoluene	1.00	1.07		mg/Kg		107	64 - 127
p-Nitrotoluene	1.00	1.02	M	mg/Kg		102	71 - 124
Nitrobenzene	1.00	1.07		mg/Kg		107	67 - 129
Nitroglycerin	10.0	10.9		mg/Kg		109	73 - 124
HMX	1.00	0.941		mg/Kg		94	74 - 124
PETN	10.0	10.9		mg/Kg		109	72 - 128
RDX	1.00	1.01		mg/Kg		101	67 - 129
Tetryl	1.00	1.03		mg/Kg		103	68 - 135

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dinitrobenzene (Surr)	*102*		*78 - 119*

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

Lab Sample ID: 280-200203-2 MS
Client Sample ID: P3HWMU-CONTAM-003-002
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 677391
Prep Batch: 677232

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,3,5-Trinitrobenzene	0.042	U	1.08	1.10		mg/Kg	☼	102	80 - 116
1,3-Dinitrobenzene	0.042	U	1.08	1.11		mg/Kg	☼	103	73 - 119
2,4,6-Trinitrotoluene	0.64	M	1.08	1.65		mg/Kg	☼	94	71 - 120
2,4-Dinitrotoluene	0.042	U	1.08	1.10		mg/Kg	☼	102	75 - 121
2,6-Dinitrotoluene	0.042	U	1.08	1.09		mg/Kg	☼	101	79 - 117
2-Amino-4,6-dinitrotoluene	0.10	J M	1.08	1.19		mg/Kg	☼	101	71 - 123
o-Nitrotoluene	0.11	U	1.08	1.10		mg/Kg	☼	102	70 - 124
m-Nitrotoluene	0.16	U	1.08	1.25		mg/Kg	☼	116	67 - 129
4-Amino-2,6-dinitrotoluene	0.15	M	1.08	1.22		mg/Kg	☼	98	64 - 127
p-Nitrotoluene	0.11	U	1.08	1.15		mg/Kg	☼	106	71 - 124
Nitrobenzene	0.21	U	1.08	1.12		mg/Kg	☼	104	67 - 129
Nitroglycerin	0.74	U	10.8	11.6		mg/Kg	☼	107	73 - 124
HMX	0.19	M	1.08	1.14	M	mg/Kg	☼	88	74 - 124
PETN	1.1	U	10.8	11.4		mg/Kg	☼	106	72 - 128
RDX	0.47		1.08	1.40		mg/Kg	☼	86	67 - 129
Tetryl	0.11	U	1.08	1.08		mg/Kg	☼	100	68 - 135

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dinitrobenzene (Surr)	*99*		*78 - 119*

Lab Sample ID: 280-200203-2 MSD
Client Sample ID: P3HWMU-CONTAM-003-002
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 677391
Prep Batch: 677232

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,3,5-Trinitrobenzene	0.042	U	1.00	1.02		mg/Kg	☼	102	80 - 116	8	20
1,3-Dinitrobenzene	0.042	U	1.00	1.03		mg/Kg	☼	102	73 - 119	8	20
2,4,6-Trinitrotoluene	0.64	M	1.00	1.47		mg/Kg	☼	83	71 - 120	12	20
2,4-Dinitrotoluene	0.042	U	1.00	1.01		mg/Kg	☼	101	75 - 121	8	20
2,6-Dinitrotoluene	0.042	U	1.00	1.00		mg/Kg	☼	100	79 - 117	9	20
2-Amino-4,6-dinitrotoluene	0.10	J M	1.00	1.11		mg/Kg	☼	100	71 - 123	7	20
o-Nitrotoluene	0.11	U	1.00	1.02		mg/Kg	☼	102	70 - 124	7	20
m-Nitrotoluene	0.16	U	1.00	1.17		mg/Kg	☼	117	67 - 129	7	20
4-Amino-2,6-dinitrotoluene	0.15	M	1.00	1.16		mg/Kg	☼	100	64 - 127	5	20
p-Nitrotoluene	0.11	U	1.00	1.07		mg/Kg	☼	106	71 - 124	7	20
Nitrobenzene	0.21	U	1.00	1.03		mg/Kg	☼	103	67 - 129	8	20
Nitroglycerin	0.74	U	10.0	10.7		mg/Kg	☼	107	73 - 124	8	20
HMX	0.19	M	1.00	1.04	M	mg/Kg	☼	84	74 - 124	9	20
PETN	1.1	U	10.0	10.6		mg/Kg	☼	106	72 - 128	8	20
RDX	0.47		1.00	1.31		mg/Kg	☼	84	67 - 129	7	20
Tetryl	0.11	U	1.00	0.963		mg/Kg	☼	96	68 - 135	11	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dinitrobenzene (Surr)	*97*		*78 - 119*

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

Lab Sample ID: 280-200203-2 DU
Matrix: Solid
Analysis Batch: 677391

Client Sample ID: P3HWMU-CONTAM-003-002
Prep Type: Total/NA
Prep Batch: 677232

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
1,3,5-Trinitrobenzene	0.042	U		0.043	U	mg/Kg	☼			NC	20
1,3-Dinitrobenzene	0.042	U		0.043	U	mg/Kg	☼			NC	20
2,4,6-Trinitrotoluene	0.64	M		0.616	M	mg/Kg	☼			3	20
2,4-Dinitrotoluene	0.042	U		0.043	U	mg/Kg	☼			NC	20
2,6-Dinitrotoluene	0.042	U		0.043	U	mg/Kg	☼			NC	20
2-Amino-4,6-dinitrotoluene	0.10	J M		0.111		mg/Kg	☼			6	20
o-Nitrotoluene	0.11	U		0.11	U	mg/Kg	☼			NC	20
m-Nitrotoluene	0.16	U		0.16	U	mg/Kg	☼			NC	20
4-Amino-2,6-dinitrotoluene	0.15	M		0.133	M	mg/Kg	☼			14	20
p-Nitrotoluene	0.11	U		0.11	U	mg/Kg	☼			NC	20
Nitrobenzene	0.21	U		0.22	U	mg/Kg	☼			NC	20
Nitroglycerin	0.74	U		0.75	U	mg/Kg	☼			NC	20
HMX	0.19	M		0.203	M	mg/Kg	☼			4	20
PETN	1.1	U		1.1	U	mg/Kg	☼			NC	20
RDX	0.47			0.445		mg/Kg	☼			5	20
Tetryl	0.11	U		0.11	U	mg/Kg	☼			NC	20

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
1,2-Dinitrobenzene (Surr)	*100*		*78 - 119*

Lab Sample ID: 280-200203-2 TRL
Matrix: Solid
Analysis Batch: 677391

Client Sample ID: P3HWMU-CONTAM-003-002
Prep Type: Total/NA
Prep Batch: 677232

Analyte	Sample Result	Sample Qualifier		TRL Result	TRL Qualifier	Unit	D			RSD	RSD Limit
1,3,5-Trinitrobenzene	0.042	U		0.042	U	mg/Kg	☼			NC	20
1,3-Dinitrobenzene	0.042	U		0.042	U	mg/Kg	☼			NC	20
2,4,6-Trinitrotoluene	0.64	M		4.96	M J1	mg/Kg	☼			121	20
2,4-Dinitrotoluene	0.042	U		0.042	U	mg/Kg	☼			NC	20
2,6-Dinitrotoluene	0.042	U		0.042	U	mg/Kg	☼			NC	20
2-Amino-4,6-dinitrotoluene	0.10	J M		0.123	J1	mg/Kg	☼			8	20
o-Nitrotoluene	0.11	U		0.11	U	mg/Kg	☼			NC	20
m-Nitrotoluene	0.16	U		0.16	U	mg/Kg	☼			NC	20
4-Amino-2,6-dinitrotoluene	0.15	M		0.143	M	mg/Kg	☼			7	20
p-Nitrotoluene	0.11	U		0.11	U	mg/Kg	☼			NC	20
Nitrobenzene	0.21	U		0.21	U	mg/Kg	☼			NC	20
Nitroglycerin	0.74	U		0.74	U	mg/Kg	☼			NC	20
HMX	0.19	M		0.219	M	mg/Kg	☼			6	20
PETN	1.1	U		1.1	U	mg/Kg	☼			NC	20
RDX	0.47			0.422		mg/Kg	☼			5	20
Tetryl	0.11	U		0.11	U	mg/Kg	☼			NC	20

Surrogate	*TRL %Recovery*	*TRL Qualifier*	*Limits*
1,2-Dinitrobenzene (Surr)	*99*		*78 - 119*

Method: Moisture - Percent Moisture

Lab Sample ID: 280-200203-1 DU
Client Sample ID: P3HWMU-CONTAM-001-002
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 677519

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	8.4			8.4		%				0.2	20

HPLC/IC

Prep Batch: 677232

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-200203-1	P3HWMU-CONTAM-001-002	Total/NA	Solid	8330B	
280-200203-2	P3HWMU-CONTAM-003-002	Total/NA	Solid	8330B	
280-200203-3	P2-ARROYO-005-002	Total/NA	Solid	8330B	
MB 280-677232/1-A	Method Blank	Total/NA	Solid	8330B	
LCS 280-677232/2-A	Lab Control Sample	Total/NA	Solid	8330B	
280-200203-2 MS	P3HWMU-CONTAM-003-002	Total/NA	Solid	8330B	
280-200203-2 MSD	P3HWMU-CONTAM-003-002	Total/NA	Solid	8330B	
280-200203-2 DU	P3HWMU-CONTAM-003-002	Total/NA	Solid	8330B	
280-200203-2 TRL	P3HWMU-CONTAM-003-002	Total/NA	Solid	8330B	

Analysis Batch: 677391

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-200203-1	P3HWMU-CONTAM-001-002	Total/NA	Solid	8330B MOD	677232
280-200203-2	P3HWMU-CONTAM-003-002	Total/NA	Solid	8330B MOD	677232
MB 280-677232/1-A	Method Blank	Total/NA	Solid	8330B MOD	677232
LCS 280-677232/2-A	Lab Control Sample	Total/NA	Solid	8330B MOD	677232
280-200203-2 MS	P3HWMU-CONTAM-003-002	Total/NA	Solid	8330B MOD	677232
280-200203-2 MSD	P3HWMU-CONTAM-003-002	Total/NA	Solid	8330B MOD	677232
280-200203-2 DU	P3HWMU-CONTAM-003-002	Total/NA	Solid	8330B MOD	677232
280-200203-2 TRL	P3HWMU-CONTAM-003-002	Total/NA	Solid	8330B MOD	677232

Analysis Batch: 677520

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-200203-3	P2-ARROYO-005-002	Total/NA	Solid	8330B MOD	677232

Analysis Batch: 677524

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-200203-1	P3HWMU-CONTAM-001-002	Total/NA	Solid	8330B MOD	677232
280-200203-3	P2-ARROYO-005-002	Total/NA	Solid	8330B MOD	677232

Analysis Batch: 677657

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-200203-2	P3HWMU-CONTAM-003-002	Total/NA	Solid	8330B MOD	677232

General Chemistry

Analysis Batch: 677519

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-200203-1	P3HWMU-CONTAM-001-002	Total/NA	Solid	Moisture	
280-200203-2	P3HWMU-CONTAM-003-002	Total/NA	Solid	Moisture	
280-200203-3	P2-ARROYO-005-002	Total/NA	Solid	Moisture	
280-200203-1 DU	P3HWMU-CONTAM-001-002	Total/NA	Solid	Moisture	

Client Sample ID: P3HWMU-CONTAM-001-002
Lab Sample ID: 280-200203-1
Date Collected: 12/02/24 11:53
Matrix: Solid
Date Received: 12/03/24 09:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			677519	12/05/24 12:53	EL	EET DEN

Client Sample ID: P3HWMU-CONTAM-001-002
Lab Sample ID: 280-200203-1
Date Collected: 12/02/24 11:53
Matrix: Solid
Date Received: 12/03/24 09:25
Percent Solids: 91.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8330B			+10.09 g	40 mL	677232	12/03/24 17:54	DCL	EET DEN
Total/NA	Analysis	8330B MOD		1	1 mL	1 mL	677524	12/05/24 19:53	JZ	EET DEN
Total/NA	Prep	8330B			+10.09 g	40 mL	677232	12/03/24 17:54	DCL	EET DEN
Total/NA	Analysis	8330B MOD		1	1 mL	1 mL	677391	12/04/24 21:23	JZ	EET DEN

Client Sample ID: P3HWMU-CONTAM-003-002
Lab Sample ID: 280-200203-2
Date Collected: 12/02/24 12:44
Matrix: Solid
Date Received: 12/03/24 09:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			677519	12/05/24 12:53	EL	EET DEN

Client Sample ID: P3HWMU-CONTAM-003-002
Lab Sample ID: 280-200203-2
Date Collected: 12/02/24 12:44
Matrix: Solid
Date Received: 12/03/24 09:25
Percent Solids: 91.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8330B			+10.30 g	40 mL	677232	12/03/24 17:54	DCL	EET DEN
Total/NA	Analysis	8330B MOD		1	1 mL	1 mL	677657	12/06/24 16:28	JZ	EET DEN
Total/NA	Prep	8330B			+10.30 g	40 mL	677232	12/03/24 17:54	DCL	EET DEN
Total/NA	Analysis	8330B MOD		1	1 mL	1 mL	677391	12/04/24 21:45	JZ	EET DEN

Client Sample ID: P2-ARROYO-005-002
Lab Sample ID: 280-200203-3
Date Collected: 12/02/24 11:14
Matrix: Solid
Date Received: 12/03/24 09:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			677519	12/05/24 12:53	EL	EET DEN

Client Sample ID: P2-ARROYO-005-002
Lab Sample ID: 280-200203-3
Date Collected: 12/02/24 11:14
Matrix: Solid
Date Received: 12/03/24 09:25
Percent Solids: 93.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8330B			+10.46 g	40 mL	677232	12/03/24 17:54	DCL	EET DEN
Total/NA	Analysis	8330B MOD		200	1 mL	1 mL	677524	12/05/24 23:29	JZ	EET DEN
Total/NA	Prep	8330B			+10.46 g	40 mL	677232	12/03/24 17:54	DCL	EET DEN
Total/NA	Analysis	8330B MOD		200	1 mL	1 mL	677520	12/05/24 17:02	JZ	EET DEN

Laboratory References:

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

Accreditation/Certification Summary

Client: AECOM Technical Services Inc
Job ID: 280-200203-1
Project/Site: Fort Wingate Depot Activity (FWDA)

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	12-31-24

Method Summary

Client: AECOM Technical Services Inc
Job ID: 280-200203-1
Project/Site: Fort Wingate Depot Activity (FWDA)

Method	Method Description	Protocol	Laboratory
8330B MOD	Nitroaromatics and Nitramines (HPLC)	EPA	EET DEN
Moisture	Percent Moisture	EPA	EET DEN
8330B	Sonication Extraction (Explosives)	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: AECOM Technical Services Inc
Job ID: 280-200203-1
Project/Site: Fort Wingate Depot Activity (FWDA)

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-200203-1	P3HWMU-CONTAM-001-002	Solid	12/02/24 11:53	12/03/24 09:25
280-200203-2	P3HWMU-CONTAM-003-002	Solid	12/02/24 12:44	12/03/24 09:25
280-200203-3	P2-ARROYO-005-002	Solid	12/02/24 11:14	12/03/24 09:25

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Analysis Batch Number: 650851

Lab Sample ID: IC 280-650851/10 Client Sample ID:

Date Analyzed: 04/24/24 21:28 Lab File ID: 04240010.D GC Column: Luna-phenylh ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,4,6-Trinitrophenol	8.38	Peak assignment corrected	LV5D	04/25/24 13:10
Nitroglycerin	14.88	Baseline	LV5D	04/25/24 13:10

Lab Sample ID: IC 280-650851/11 Client Sample ID:

Date Analyzed: 04/24/24 22:04 Lab File ID: 04240011.D GC Column: Luna-phenylh ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitroglycerin	14.92	Baseline	LV5D	04/25/24 13:11
2,4,6-Trinitrotoluene	22.86	Baseline	LV5D	04/25/24 13:37

Lab Sample ID: IC 280-650851/12 Client Sample ID:

Date Analyzed: 04/24/24 22:40 Lab File ID: 04240012.D GC Column: Luna-phenylh ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitroglycerin	14.94	Baseline	LV5D	04/25/24 13:19
2,4,6-Trinitrotoluene	22.87	Baseline	LV5D	04/25/24 13:37

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Analysis Batch Number: 650851

Lab Sample ID: IC 280-650851/13 Client Sample ID:

Date Analyzed: 04/24/24 23:16 Lab File ID: 04240013.D GC Column: Luna-phenylh ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
3,5-Dinitroaniline	14.18	Baseline	LV5D	04/25/24 13:21
1,3-Dinitrobenzene	14.47	Baseline	LV5D	04/25/24 13:21
Nitroglycerin	14.92	Baseline	LV5D	04/25/24 13:19
o-Nitrotoluene	15.51	Baseline	LV5D	04/25/24 13:21
p-Nitrotoluene	15.74	Baseline	LV5D	04/25/24 13:21
4-Amino-2,6-dinitrotoluene	16.24	Baseline	LV5D	04/25/24 13:21
m-Nitrotoluene	16.57	Baseline	LV5D	04/25/24 13:21
2-Amino-4,6-dinitrotoluene	17.05	Baseline	LV5D	04/25/24 13:21
1,3,5-Trinitrobenzene	17.27	Baseline	LV5D	04/25/24 13:21
2,6-Dinitrotoluene	18.35	Baseline	LV5D	04/25/24 13:21
2,4-Dinitrotoluene	18.81	Baseline	LV5D	04/25/24 13:21
2,4,6-Trinitrotoluene	22.87	Baseline	LV5D	04/25/24 13:37

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Analysis Batch Number: 650851

Lab Sample ID: IC 280-650851/14 Client Sample ID:

Date Analyzed: 04/24/24 23:51 Lab File ID: 04240014.D GC Column: Luna-phenylh ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
3,5-Dinitroaniline	14.19	Baseline	LV5D	04/25/24 13:21
1,3-Dinitrobenzene	14.48	Baseline	LV5D	04/25/24 13:21
Nitroglycerin	14.92	Baseline	LV5D	04/25/24 13:19
o-Nitrotoluene	15.51	Baseline	LV5D	04/25/24 13:21
p-Nitrotoluene	15.74	Baseline	LV5D	04/25/24 13:21
4-Amino-2,6-dinitrotoluene	16.25	Baseline	LV5D	04/25/24 13:21
m-Nitrotoluene	16.58	Baseline	LV5D	04/25/24 13:21
2-Amino-4,6-dinitrotoluene	17.06	Baseline	LV5D	04/25/24 13:21
1,3,5-Trinitrobenzene	17.27	Baseline	LV5D	04/25/24 13:21
2,6-Dinitrotoluene	18.37	Baseline	LV5D	04/25/24 13:21
2,4-Dinitrotoluene	18.82	Baseline	LV5D	04/25/24 13:21
2,4,6-Trinitrotoluene	22.88	Baseline	LV5D	04/25/24 13:37
PETN	24.03	Baseline	LV5D	04/25/24 13:39

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Analysis Batch Number: 650851

Lab Sample ID: IC 280-650851/15 Client Sample ID:

Date Analyzed: 04/25/24 00:27 Lab File ID: 04240015.D GC Column: Luna-phenylh ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
3,5-Dinitroaniline	14.21	Baseline	LV5D	04/25/24 13:24
1,3-Dinitrobenzene	14.49	Baseline	LV5D	04/25/24 13:21
Nitroglycerin	14.95	Baseline	LV5D	04/25/24 13:20
o-Nitrotoluene	15.53	Baseline	LV5D	04/25/24 13:24
p-Nitrotoluene	15.76	Baseline	LV5D	04/25/24 13:21
4-Amino-2,6-dinitrotoluene	16.27	Baseline	LV5D	04/25/24 13:21
m-Nitrotoluene	16.60	Baseline	LV5D	04/25/24 13:21
2-Amino-4,6-dinitrotoluene	17.08	Baseline	LV5D	04/25/24 13:21
1,3,5-Trinitrobenzene	17.29	Baseline	LV5D	04/25/24 13:24
2,6-Dinitrotoluene	18.38	Baseline	LV5D	04/25/24 13:24
2,4-Dinitrotoluene	18.84	Baseline	LV5D	04/25/24 13:21
2,4,6-Trinitrotoluene	22.91	Baseline	LV5D	04/25/24 13:36

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Analysis Batch Number: 650851

Lab Sample ID: IC 280-650851/16 Client Sample ID:

Date Analyzed: 04/25/24 01:03 Lab File ID: 04240016.D GC Column: Luna-phenylh ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.71	Baseline	LV5D	04/25/24 13:32
3,5-Dinitroaniline	14.20	Baseline	LV5D	04/25/24 13:25
1,3-Dinitrobenzene	14.50	Baseline	LV5D	04/25/24 13:25
Nitroglycerin	14.94	Baseline	LV5D	04/25/24 13:20
o-Nitrotoluene	15.52	Baseline	LV5D	04/25/24 13:25
p-Nitrotoluene	15.74	Baseline	LV5D	04/25/24 13:25
4-Amino-2,6-dinitrotoluene	16.25	Baseline	LV5D	04/25/24 13:35
m-Nitrotoluene	16.58	Baseline	LV5D	04/25/24 13:25
2-Amino-4,6-dinitrotoluene	17.06	Baseline	LV5D	04/25/24 13:25
1,3,5-Trinitrobenzene	17.28	Baseline	LV5D	04/25/24 13:25
Tetryl	22.02	Baseline	LV5D	04/25/24 13:25
2,4,6-Trinitrotoluene	22.88	Baseline	LV5D	04/25/24 13:25
PETN	24.02	Baseline	LV5D	04/25/24 13:39

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Analysis Batch Number: 650851

Lab Sample ID: IC 280-650851/17 Client Sample ID:

Date Analyzed: 04/25/24 01:39 Lab File ID: 04240017.D GC Column: Luna-phenylh ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.71	Baseline	LV5D	04/25/24 13:31
2,4,6-Trinitrophenol	8.73	Baseline	LV5D	04/25/24 13:32
RDX	8.95	Baseline	LV5D	04/25/24 13:32
Nitrobenzene	11.46	Baseline	LV5D	04/25/24 13:26
1,2-Dinitrobenzene (Surr)	12.39	Baseline	LV5D	04/25/24 13:26
3,5-Dinitroaniline	14.23	Baseline	LV5D	04/25/24 13:26
1,3-Dinitrobenzene	14.52	Baseline	LV5D	04/25/24 13:26
Nitroglycerin	14.98	Baseline	LV5D	04/25/24 13:20
o-Nitrotoluene	15.56	Baseline	LV5D	04/25/24 13:35
p-Nitrotoluene	15.77	Baseline	LV5D	04/25/24 13:35
4-Amino-2,6-dinitrotoluene	16.29	Baseline	LV5D	04/25/24 13:35
m-Nitrotoluene	16.62	Baseline	LV5D	04/25/24 13:35
2-Amino-4,6-dinitrotoluene	17.10	Baseline	LV5D	04/25/24 13:35
1,3,5-Trinitrobenzene	17.31	Baseline	LV5D	04/25/24 13:35
2,6-Dinitrotoluene	18.39	Baseline	LV5D	04/25/24 13:26
2,4-Dinitrotoluene	18.85	Baseline	LV5D	04/25/24 13:26
Tetryl	22.07	Baseline	LV5D	04/25/24 13:26
2,4,6-Trinitrotoluene	22.93	Baseline	LV5D	04/25/24 13:27

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Analysis Batch Number: 650851

Lab Sample ID: IC 280-650851/18 Client Sample ID:

Date Analyzed: 04/25/24 02:15 Lab File ID: 04240018.D GC Column: Luna-phenylh ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.71	Baseline	LV5D	04/25/24 13:31
Nitrobenzene	11.43	Baseline	LV5D	04/25/24 13:27
1,2-Dinitrobenzene (Surr)	12.36	Baseline	LV5D	04/25/24 13:28
3,5-Dinitroaniline	14.20	Baseline	LV5D	04/25/24 13:29
1,3-Dinitrobenzene	14.49	Baseline	LV5D	04/25/24 13:28
Nitroglycerin	14.94	Baseline	LV5D	04/25/24 13:20
o-Nitrotoluene	15.53	Baseline	LV5D	04/25/24 13:29
p-Nitrotoluene	15.75	Baseline	LV5D	04/25/24 13:29
4-Amino-2,6-dinitrotoluene	16.26	Baseline	LV5D	04/25/24 13:29
m-Nitrotoluene	16.59	Baseline	LV5D	04/25/24 13:29
2-Amino-4,6-dinitrotoluene	17.09	Baseline	LV5D	04/25/24 13:29
1,3,5-Trinitrobenzene	17.29	Baseline	LV5D	04/25/24 13:29
2,6-Dinitrotoluene	18.38	Baseline	LV5D	04/25/24 13:29
2,4-Dinitrotoluene	18.83	Baseline	LV5D	04/25/24 13:29
2,4,6-Trinitrotoluene	22.90	Baseline	LV5D	04/25/24 13:38

Lab Sample ID: ICV 280-650851/19 Client Sample ID:

Date Analyzed: 04/25/24 02:51 Lab File ID: 04240019.D GC Column: Luna-phenylh ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitroglycerin	14.93	Baseline	LV5D	04/25/24 13:30

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Analysis Batch Number: 677524

Lab Sample ID: 280-200203-3 Client Sample ID: P2-ARROYO-005-002

Date Analyzed: 12/05/24 23:29 Lab File ID: 12050018.D GC Column: Luna-phenylh ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dinitrobenzene (Surr)		Invalid Compound ID	LV5D	12/06/24 12:35

Lab Sample ID: CCV 280-677524/19 Client Sample ID:

Date Analyzed: 12/06/24 00:05 Lab File ID: 12050019.D GC Column: Luna-phenylh ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PETN	23.71	Peak assignment corrected	LV5D	12/06/24 10:41

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Analysis Batch Number: 677657

Lab Sample ID: 280-200203-2 Client Sample ID: P3HWMU-CONTAM-003-002

Date Analyzed: 12/06/24 16:28 Lab File ID: 12060010.D GC Column: Luna-phenylh ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
RDX	8.66	Baseline	LV5D	12/06/24 17:09
1,2-Dinitrobenzene (Surr)	12.08	Baseline	LV5D	12/06/24 17:09

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200203-1

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.: 280-200203-1

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
2,4,6-Trinitrophenol	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
o-Nitrotoluene	11.85	Baseline	LV5D	10/08/24 13:03
p-Nitrotoluene	12.22	Baseline	LV5D	10/08/24 13:03
m-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 Denver Job No.: 280-200203-1

SDG No.:

Instrument ID: CHHPLC_X3 Analysis Batch Number: 669870

Lab Sample ID: IC 280-669870/17 Client Sample ID:

Date Analyzed: 10/04/24 19:11 Lab File ID: 10040017.D GC 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
2,4,6-Trinitrophenol	7.94	Baseline	LV5D	10/08/24 13:04
1,2-Dinitrobenzene (Surr)	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 19:33 Lab File ID: 10040018.D GC 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
2,4,6-Trinitrophenol	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.: 280-200203-1

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
o-Nitrotoluene	11.84	Baseline	LV5D	10/08/24 13:06
m-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.: 280-200203-1

SDG No.:

Instrument ID: CHHPLC_X3 Analysis Batch Number: 677391

Lab Sample ID: CCV 280-677391/20 Client Sample ID:

Date Analyzed: 12/04/24 20:17 Lab File ID: 12040020.D GC Column: UltraCarb5uO ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
o-Nitrotoluene	11.82	Baseline	LV5D	12/05/24 11:07
p-Nitrotoluene	12.17	Baseline	LV5D	12/05/24 11:07
m-Nitrotoluene	12.66	Baseline	LV5D	12/05/24 11:07

Lab Sample ID: MB 280-677232/1-A Client Sample ID:

Date Analyzed: 12/04/24 20:39 Lab File ID: 12040021.D GC Column: UltraCarb5uO ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.63	Baseline	LV5D	12/05/24 11:07

Lab Sample ID: LCS 280-677232/2-A Client Sample ID:

Date Analyzed: 12/04/24 21:01 Lab File ID: 12040022.D GC Column: UltraCarb5uO ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
o-Nitrotoluene	11.80	Baseline	LV5D	12/05/24 11:08
p-Nitrotoluene	12.16	Baseline	LV5D	12/05/24 11:08
m-Nitrotoluene	12.64	Baseline	LV5D	12/05/24 11:08

Lab Sample ID: 280-200203-1 Client Sample ID: P3HWMU-CONTAM-001-002

Date Analyzed: 12/04/24 21:23 Lab File ID: 12040023.D GC Column: UltraCarb5uO ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.64	Baseline	LV5D	12/05/24 11:08
1,2-Dinitrobenzene (Surr)	8.41	Baseline	LV5D	12/05/24 11:08

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Instrument ID: CHHPLC_X3 Analysis Batch Number: 677391

Lab Sample ID: 280-200203-2 Client Sample ID: P3HWMU-CONTAM-003-002

Date Analyzed: 12/04/24 21:45 Lab File ID: 12040024.D GC Column: UltraCarb5uO ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.64	Baseline	LV5D	12/05/24 11:08
2,4,6-Trinitrotoluene	10.47	Baseline	LV5D	12/05/24 11:09
4-Amino-2,6-dinitrotoluene	10.60	Baseline	LV5D	12/05/24 11:09
2-Amino-4,6-dinitrotoluene	10.83	Baseline	LV5D	12/05/24 11:09

Lab Sample ID: 280-200203-2 MS Client Sample ID: P3HWMU-CONTAM-003-002 MS

Date Analyzed: 12/04/24 22:06 Lab File ID: 12040025.D GC Column: UltraCarb5uO ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.64	Baseline	LV5D	12/05/24 11:09

Lab Sample ID: 280-200203-2 MSD Client Sample ID: P3HWMU-CONTAM-003-002 MSD

Date Analyzed: 12/04/24 22:28 Lab File ID: 12040026.D GC Column: UltraCarb5uO ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.64	Baseline	LV5D	12/05/24 11:09

Lab Sample ID: 280-200203-2 DU Client Sample ID: P3HWMU-CONTAM-003-002 DU

Date Analyzed: 12/04/24 22:50 Lab File ID: 12040027.D GC Column: UltraCarb5uO ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.64	Baseline	LV5D	12/05/24 11:09
2,4,6-Trinitrotoluene	10.48	Baseline	LV5D	12/05/24 11:09
4-Amino-2,6-dinitrotoluene	10.60	Baseline	LV5D	12/05/24 11:09

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Instrument ID: CHHPLC_X3 Analysis Batch Number: 677391

Lab Sample ID: 280-200203-2 TRL Client Sample ID: P3HWMU-CONTAM-003-002 TRL

Date Analyzed: 12/04/24 23:12 Lab File ID: 12040028.D GC Column: UltraCarb5uO ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.64	Baseline	LV5D	12/05/24 11:10
2,4,6-Trinitrotoluene	10.46	Baseline	LV5D	12/05/24 11:10
4-Amino-2,6-dinitrotoluene	10.58	Baseline	LV5D	12/05/24 11:10

Lab Sample ID: CCV 280-677391/30 Client Sample ID:

Date Analyzed: 12/04/24 23:56 Lab File ID: 12040030.D GC Column: UltraCarb5uO ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
o-Nitrotoluene	11.82	Baseline	LV5D	12/05/24 11:10
p-Nitrotoluene	12.17	Baseline	LV5D	12/05/24 11:10
m-Nitrotoluene	12.66	Baseline	LV5D	12/05/24 11:11

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Instrument ID: CHHPLC_X3 Analysis Batch Number: 677520

Lab Sample ID: CCV 280-677520/7 Client Sample ID:

Date Analyzed: 12/05/24 16:40 Lab File ID: 12050007.D GC Column: UltraCarb5uO ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.64	Baseline	LV5D	12/05/24 17:55
2,4,6-Trinitrotoluene	10.46	Baseline	LV5D	12/05/24 17:55
4-Amino-2,6-dinitrotoluene	10.58	Baseline	LV5D	12/05/24 17:55
2-Amino-4,6-dinitrotoluene	10.81	Baseline	LV5D	12/05/24 17:55
2,6-Dinitrotoluene	10.96	Baseline	LV5D	12/05/24 17:55
2,4-Dinitrotoluene	11.11	Baseline	LV5D	12/05/24 17:55
o-Nitrotoluene	11.78	Baseline	LV5D	12/05/24 17:55
p-Nitrotoluene	12.13	Baseline	LV5D	12/05/24 17:55
m-Nitrotoluene	12.61	Baseline	LV5D	12/05/24 17:55
PETN	13.60	Baseline	LV5D	12/06/24 11:28

Lab Sample ID: CCV 280-677520/12 Client Sample ID:

Date Analyzed: 12/05/24 17:24 Lab File ID: 12050012.D GC Column: UltraCarb5uO ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.64	Baseline	LV5D	12/05/24 17:55
2,4,6-Trinitrotoluene	10.46	Baseline	LV5D	12/05/24 17:55
4-Amino-2,6-dinitrotoluene	10.59	Baseline	LV5D	12/05/24 17:55
2-Amino-4,6-dinitrotoluene	10.82	Baseline	LV5D	12/05/24 17:55
2,6-Dinitrotoluene	10.96	Baseline	LV5D	12/05/24 17:55
2,4-Dinitrotoluene	11.12	Baseline	LV5D	12/05/24 17:55
o-Nitrotoluene	11.79	Baseline	LV5D	12/05/24 17:56
p-Nitrotoluene	12.14	Baseline	LV5D	12/05/24 17:56
m-Nitrotoluene	12.63	Baseline	LV5D	12/05/24 17:56
PETN	13.62	Baseline	LV5D	12/06/24 11:28

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200203-1

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_00134	08/29/24	02/29/24	Acetonitrile, Lot Acetonitrile_00086	100 mL	8330 LCSMix2_00113	1 mL	2,6-Dinitrotoluene	10 ug/mL
							2-Amino-4,6-dinitrotoluene	10 ug/mL
							4-Amino-2,6-dinitrotoluene	10 ug/mL
							m-Nitrotoluene	10 ug/mL
							o-Nitrotoluene	10 ug/mL
							p-Nitrotoluene	10 ug/mL
							Tetryl	10 ug/mL
					8330_NG_Stk_00145	1 mL	Nitroglycerin	100 ug/mL
					8330_NG_Stk_00147	1 mL	Nitroglycerin	100 ug/mL
					8330_PETN_Stk_00152	1 mL	PETN	100 ug/mL
					8330_PETN_Stk_00153	1 mL	PETN	100 ug/mL
					8330LCSMix1_00151	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_00113	02/28/25		Restek, Lot A199657		(Purchased Reagent)		2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							m-Nitrotoluene	1000 ug/mL
							o-Nitrotoluene	1000 ug/mL
							p-Nitrotoluene	1000 ug/mL
							Tetryl	1000 ug/mL
.8330_NG_Stk_00145	02/28/25		Restek, Lot A0201048		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_NG_Stk_00147	02/28/25		Restek, Lot A0201048		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_PETN_Stk_00152	02/28/25		Restek, Lot A0198972		(Purchased Reagent)		PETN	5000 ug/mL
.8330_PETN_Stk_00153	02/28/25		Restek, Lot A0198972		(Purchased Reagent)		PETN	5000 ug/mL
.8330LCSMix1_00151	02/28/25		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	8330 LCSMix2_00118	1 mL	2,6-Dinitrotoluene	10 ug/mL
							2-Amino-4,6-dinitrotoluene	10 ug/mL

Lab Name: Eurofins Denver Job No.: 280-200203-1

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	10 ug/mL
							m-Nitrotoluene	10 ug/mL
							o-Nitrotoluene	10 ug/mL
							p-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
.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
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							m-Nitrotoluene	1000 ug/mL
							o-Nitrotoluene	1000 ug/mL
							p-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
8330 LCS_00138	04/17/25	10/17/24	Acetonitrile, Lot Acetonitrile_00098	100 mL	3,5-DNA Stock_00059	1 mL	3,5-Dinitroaniline	10 ug/mL
					8330 LCSMix2_00120	1 mL	2,6-Dinitrotoluene	10 ug/mL
							2-Amino-4,6-dinitrotoluene	10 ug/mL
							4-Amino-2,6-dinitrotoluene	10 ug/mL
							m-Nitrotoluene	10 ug/mL
							o-Nitrotoluene	10 ug/mL
							p-Nitrotoluene	10 ug/mL
							Tetryl	10 ug/mL
					8330_NG_Stk_00154	1 mL	Nitroglycerin	100 ug/mL
					8330_NG_Stk_00155	1 mL	Nitroglycerin	100 ug/mL
					8330_PETN_Stk_00161	1 mL	PETN	100 ug/mL
					8330_PETN_Stk_00162	1 mL	PETN	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					8330LCSMix1_00157	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_00131	1 mL	2,4,6-Trinitrophenol	10 ug/mL
							Ammonium Picrate	10.74 ug/mL
.3,5-DNA Stock_00059	10/17/25		Restek, Lot A0206250		(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
.8330 LCSMix2_00120	10/17/25		Restek, Lot A199657		(Purchased Reagent)		2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							m-Nitrotoluene	1000 ug/mL
							o-Nitrotoluene	1000 ug/mL
							p-Nitrotoluene	1000 ug/mL
							Tetryl	1000 ug/mL
.8330_NG_Stk_00154	10/17/25		Restek, Lot A0211998		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_NG_Stk_00155	10/17/25		Restek, Lot A0211998		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_PETN_Stk_00161	10/17/25		Restek, Lot A0205209		(Purchased Reagent)		PETN	5000 ug/mL
.8330_PETN_Stk_00162	10/17/25		Restek, Lot A0205209		(Purchased Reagent)		PETN	5000 ug/mL
.8330LCSMix1_00157	10/17/25		Restek, Lot A0196548		(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_00131	10/17/25		Restek, Lot A0212297		(Purchased Reagent)		2,4,6-Trinitrophenol	1000 ug/mL
							Ammonium Picrate	1074 ug/mL
8330IntermStk_00080	05/14/24	04/17/24	Acetonitrile, Lot 223272	10 mL	8330_NG1000_00012	1 mL	Nitroglycerin	100 ug/mL
					8330_PETN1000_00016	1 mL	PETN	100 ug/mL
					833035DNAStk_00059	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
							2,4-Dinitrotoluene	10 ug/mL
							2,6-Dinitrotoluene	10 ug/mL
							2-Amino-4,6-dinitrotoluene	10 ug/mL
							4-Amino-2,6-dinitrotoluene	10 ug/mL
							HMX	10 ug/mL
							m-Nitrotoluene	10 ug/mL
							Nitrobenzene	10 ug/mL
							o-Nitrotoluene	10 ug/mL
							p-Nitrotoluene	10 ug/mL
							RDX	10 ug/mL

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Tetryl	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330PAStkPS_00075	1 mL	2,4,6-Trinitrophenol	10 ug/mL
.8330_NG1000_00012	04/17/25		Restek, Lot A0197032		(Purchased Reagent)		Nitroglycerin	1000 ug/mL
.8330_PETN1000_00016	04/17/25		Restek, Lot A0198747		(Purchased Reagent)		PETN	1000 ug/mL
.833035DNAStk_00059	05/14/24		Accustandard, Lot 223041214		(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
							4-Amino-2,6-dinitrotoluene	100 ug/mL
							HMX	100 ug/mL
							m-Nitrotoluene	100 ug/mL
							Nitrobenzene	100 ug/mL
							o-Nitrotoluene	100 ug/mL
							p-Nitrotoluene	100 ug/mL
							RDX	100 ug/mL
							Tetryl	100 ug/mL
					8330SurrStock_00173	1 mL	1,2-Dinitrobenzene (Surr)	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
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							m-Nitrotoluene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							o-Nitrotoluene	1000 ug/mL
							p-Nitrotoluene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..8330SurrStock_00173	01/23/25		AccuStandard, Lot 219051500		(Purchased Reagent)		1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330PAStkPS_00075	04/12/25		AccuStandard, Lot 223041157		(Purchased Reagent)		2,4,6-Trinitrophenol	100 ug/mL
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

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Amino-4,6-dinitrotoluene	10 ug/mL
							4-Amino-2,6-dinitrotoluene	10 ug/mL
							HMX	10 ug/mL
							m-Nitrotoluene	10 ug/mL
							Nitrobenzene	10 ug/mL
							o-Nitrotoluene	10 ug/mL
							p-Nitrotoluene	10 ug/mL
							RDX	10 ug/mL
							Tetryl	10 ug/mL
							1,2-Dinitrobenzene (Surr)	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
							4-Amino-2,6-dinitrotoluene	100 ug/mL
							HMX	100 ug/mL
							m-Nitrotoluene	100 ug/mL
							Nitrobenzene	100 ug/mL
							o-Nitrotoluene	100 ug/mL
							p-Nitrotoluene	100 ug/mL
							RDX	100 ug/mL
							Tetryl	100 ug/mL
					8330SurrStock_00174	1 mL	1,2-Dinitrobenzene (Surr)	100 ug/mL
..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
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							m-Nitrotoluene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							o-Nitrotoluene	1000 ug/mL
							p-Nitrotoluene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..8330SurrStock_00174	10/04/25		AccuStandard, Lot 219051500		(Purchased Reagent)		1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330PAStkPS_00078	10/04/25		AccuStandard, Lot 223031306-01		(Purchased Reagent)		2,4,6-Trinitrophenol	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
8330Surrogate_00154	09/01/24	03/01/24	Acetonitrile, Lot Acetonitrile_00086	500 mL	8330SurrStkSS_00310	1 mL	1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00311	1 mL	1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00312	1 mL	1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00314	1 mL	1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00315	1 mL	1,2-Dinitrobenzene (Surr)	10 ug/mL
.8330SurrStkSS_00310	03/01/25		Restek, Lot A0200577		(Purchased Reagent)		1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00311	03/01/25		Restek, Lot A0200577		(Purchased Reagent)		1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00312	03/01/25		Restek, Lot A0200577		(Purchased Reagent)		1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00314	03/01/25		Restek, Lot A0200577		(Purchased Reagent)		1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00315	03/01/25		Restek, Lot A0200577		(Purchased Reagent)		1,2-Dinitrobenzene (Surr)	1000 ug/mL
8330Surrogate_00159	03/19/25	09/19/24	Acetonitrile, Lot Acetonitrile_00092	500 mL	8330SurrStkSS_00329	1 mL	1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00336	1 mL	1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00337	1 mL	1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00339	1 mL	1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00340	1 mL	1,2-Dinitrobenzene (Surr)	10 ug/mL
.8330SurrStkSS_00329	09/19/25		Restek, Lot A0205460		(Purchased Reagent)		1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00336	09/19/25		Restek, Lot A0211455		(Purchased Reagent)		1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00337	09/19/25		Restek, Lot A0211455		(Purchased Reagent)		1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00339	09/19/25		Restek, Lot A0211455		(Purchased Reagent)		1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00340	09/19/25		Restek, Lot A0211455		(Purchased Reagent)		1,2-Dinitrobenzene (Surr)	1000 ug/mL
8330Surrogate_00160	05/12/25	11/12/24	Acetonitrile, Lot Acetonitrile_00100	500 mL	8330SurrStkSS_00330	1 mL	1,2-Dinitrobenzene (Surr)	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00331	1 mL	1,2-Dinitrobenzene (Surr)	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00338	1 mL	1,2-Dinitrobenzene (Surr)	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00341	1 mL	1,2-Dinitrobenzene (Surr)	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00342	1 mL	1,2-Dinitrobenzene (Surr)	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
.8330SurrStkSS_00330	11/12/25		Restek, Lot A0205460		(Purchased Reagent)		1,2-Dinitrobenzene (Surr)	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00331	11/12/25		Restek, Lot A0205460		(Purchased Reagent)		1,2-Dinitrobenzene (Surr)	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00338	11/12/25		Restek, Lot A0211455		(Purchased Reagent)		1,2-Dinitrobenzene (Surr)	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00341	11/12/25		Restek, Lot A0211455		(Purchased Reagent)		1,2-Dinitrobenzene (Surr)	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00342	11/12/25		Restek, Lot A0211455		(Purchased Reagent)		1,2-Dinitrobenzene (Surr)	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL

Reagent

3,5-DNA Stock_00059

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31661 **Lot No.:** A0206250

Description : 3,5-Dinitroaniline Standard

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

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

Expiration Date : August 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	3,5-Dinitroaniline	618-87-1	10311HS	99%	1,004.0 µg/mL	+/- 37.4502

* 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.

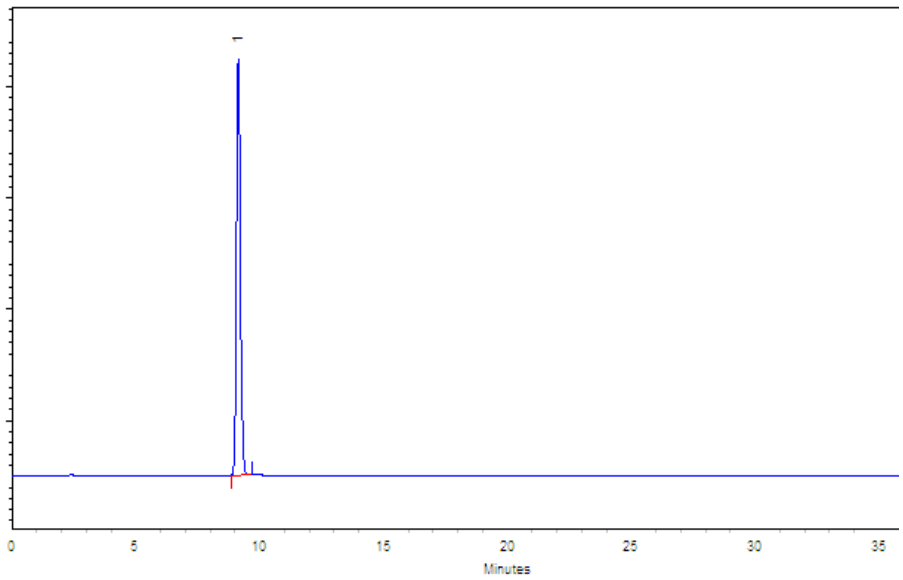
Mobile Phase A:
water:methanol (44:56 V/V)

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.

Morgan Craighead - Mix Technician

Date Mixed: 04-Jan-2024 **Balance Serial #** B345965662

Christie Mills - Operations Lead Tech - ARM QC

Date Passed: 08-Jan-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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330 LCS_00134

Preliminary Report

Eurofins Denver

LCS, Lab Control Sample Report

Sample Path: \\chromfs\Denver\ChromData\CHHPLC_X\20240301-130735.b\03010011.D

Lims ID: 8330 LCS_00134 Inj. Date: 01-Mar-2024 12:30:35

Worklist ID: 280-0130735-011 Instrument: CHHPLC_X3

Method: 8330_X3

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 0B_Sonc_	Limits 2 3535
4 HMX	0.5000	0.4367	87.3	66-115	65-135
8 RDX	0.5000	0.4730	94.6	69-122	68-130
9 2,4,6-Trinitrophenol	0.5000	0.5271	105.4	63-135	80-120
11 1,3,5-Trinitrobenzene	0.5000	0.5189	103.8	62-127	73-125
12 1,3-Dinitrobenzene	0.5000	0.5073	101.5	59-131	78-120
13 Nitrobenzene	0.5000	0.5288	105.8	46-144	65-134
14 3,5-Dinitroaniline	0.5000	0.5048	101.0	55-119	71-117
15 Tetryl	0.5000	0.4891	97.8	56-131	64-128
16 Nitroglycerin	5.00	5.39	107.8	70-125	74-127
17 2,4,6-Trinitrotoluene	0.5000	0.4808	96.2	46-139	71-123
18 4-Amino-2,6-dinitrotolu	0.5000	0.4971	99.4	43-120	76-125
19 2-Amino-4,6-dinitrotolu	0.5000	0.4882	97.6	46-124	79-120
20 2,6-Dinitrotoluene	0.5000	0.4971	99.4	51-130	77-127
21 2,4-Dinitrotoluene	0.5000	0.4832	96.6	53-127	78-120
22 o-Nitrotoluene	0.5000	0.5062	101.2	37-138	70-127
23 p-Nitrotoluene	0.5000	0.5029	100.6	41-137	71-127
24 m-Nitrotoluene	0.5000	0.5100	102.0	31-140	73-125
25 PETN	5.00	5.09	101.7	67-127	73-127

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

280-188024-A-1-A 280-188024-A-2-A 280-188024-A-3-A

280-188024-A-4-A 280-188024-A-5-A

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

410-161632-D-1-A 410-161632-D-2-A 410-161632-D-4-A

410-161632-D-6-A 410-161632-A-7-A 410-161632-A-8-A

Reagent

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

8330 LCS_00138

Preliminary Report

Eurofins Denver

LCS, Lab Control Sample Report

Sample Path: \\chromfs\Denver\ChromData\CHHPLC_X\20241017-138730.b\8330LCS138002.D

Lims ID: 8330LCS138 Inj. Date: 17-Oct-2024 18:17:24

Worklist ID: 280-0138730-072 Instrument: CHHPLC_X3

Method: 8330_X3

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 0B_Sonc_
4 HMX	0.5000	0.4255	85.1	74-124
8 RDX	0.5000	0.4697	93.9	67-129
9 2,4,6-Trinitrophenol	0.5000	0.5416	108.3	38-154
11 1,3,5-Trinitrobenzene	0.5000	0.4836	96.7	80-116
12 1,3-Dinitrobenzene	0.5000	0.4948	99.0	73-119
13 Nitrobenzene	0.5000	0.5006	100.1	67-129
14 3,5-Dinitroaniline	0.5000	0.4922	98.4	86-118
15 Tetryl	0.5000	0.4716	94.3	68-135
16 Nitroglycerin	5.00	5.10	102.1	73-124
17 2,4,6-Trinitrotoluene	0.5000	0.4755	95.1	71-120
18 4-Amino-2,6-dinitrotolu	0.5000	0.5208	104.2	64-127
19 2-Amino-4,6-dinitrotolu	0.5000	0.4862	97.2	71-123
20 2,6-Dinitrotoluene	0.5000	0.5009	100.2	79-117
21 2,4-Dinitrotoluene	0.5000	0.4848	97.0	75-121
22 o-Nitrotoluene	0.5000	0.4959	99.2	70-124
23 p-Nitrotoluene	0.5000	0.4962	99.2	71-124
24 m-Nitrotoluene	0.5000	0.5013	100.3	67-129
25 PETN	5.00	5.07	101.5	72-128

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

280-197465-A-1-G
280-197621-A-48-C
280-197621-A-49-C
280-197621-A-50-C
280-197621-A-51-C
280-197621-A-52-C
280-197621-A-53-C
280-197621-A-54-K
280-197621-A-55-C
280-197621-A-59-C
280-197621-A-60-C
280-197621-A-61-C
280-197621-A-62-C
280-197621-A-63-C
280-197621-A-64-C
280-197621-A-65-F
280-197621-A-66-B
280-197621-A-67-B
280-197621-A-68-B
280-197621-A-69-B
280-197621-A-70-B
280-197621-A-71-B
280-197621-A-72-B
280-197621-A-73-B
280-197621-A-74-B
280-197621-A-75-B
280-197621-A-76-B
280-197621-A-77-B

Reagent

8330 LCSMix2_00113

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

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

ilac-MRA A2LA ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 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.

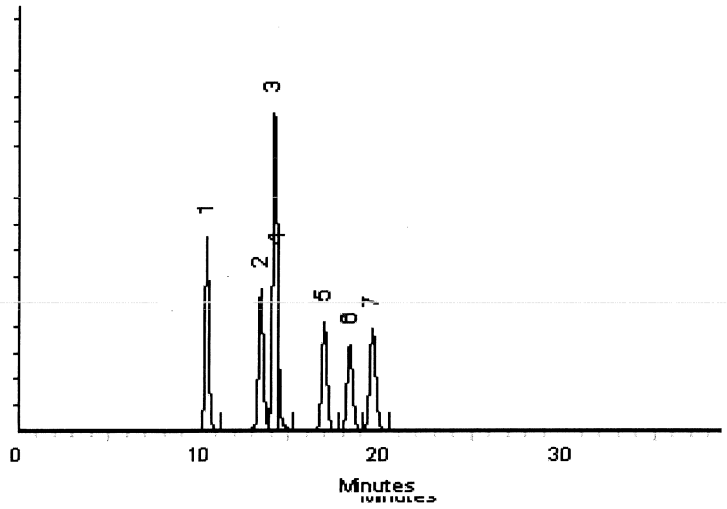
Mobile Phase A:
water:methanol (44:56 V/V)

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:

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

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330 LCSMix2_00118

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 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.

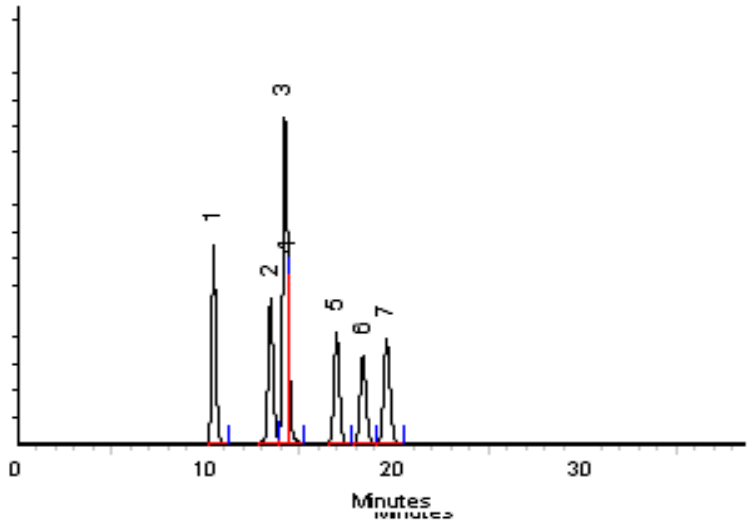
Mobile Phase A:
water:methanol (44:56 V/V)

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330 LCSMix2_00120

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 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.

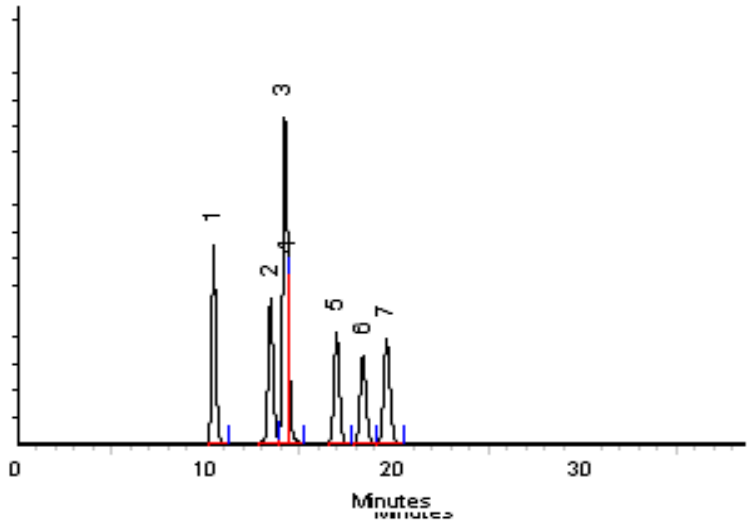
Mobile Phase A:
water:methanol (44:56 V/V)

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330 Stock_TS_00024

Agilent

Trusted Answers

ISO 17034

Reference Material Certificate

Product Information Sheet

Product Name: Stock Standard

Product Number: NAIM-833E-1

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

Lot Number: 0006684308

Lot Issue Date: 01-Jun-2022

Expiration Date: 30-Jun-2025

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

Matrix: acetonitrile

Description:

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

Traceability:

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

Homogeneity:

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

Instructions for Use:

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

Reagent

8330 Stock_TS_00025

Agilent

Trusted Answers

ISO 17034

Reference Material Certificate

Product Information Sheet

Product Name: Stock Standard

Product Number: NAIM-833E-1

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

Lot Number: 0006684308

Lot Issue Date: 01-Jun-2022

Expiration Date: 30-Jun-2025

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

Matrix: acetonitrile

Description:

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

Traceability:

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

Homogeneity:

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

Instructions for Use:

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

Reagent

8330_NG_Stk_00145

RESTEK

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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

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568871 **Lot No.:** A0201048

Description : Custom Nitroglycerin Standard

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

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

Expiration Date : August 31, 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%	5,008.0 µg/mL	+/- 236.3643

* 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.

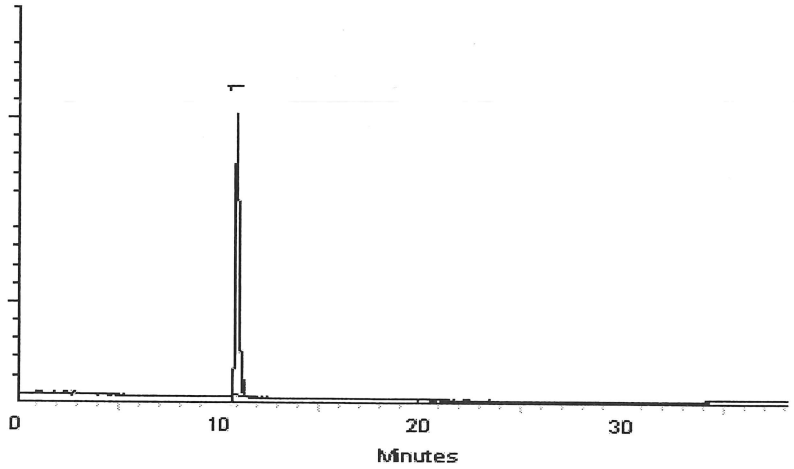
Mobile Phase A:
water:methanol (44:56 V/V)

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.

Kylie Struble - Operations Technician I

Jennifer Pollino - Operations Tech III - ARM QC

Date Mixed: 16-Aug-2023 **Balance Serial #** 1128360905

Date Passed: 25-Aug-2023

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330_NG_Stk_00147

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Bellefonte, PA 16823-8812
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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568871 **Lot No.:** A0201048

Description : Custom Nitroglycerin Standard

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

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

Expiration Date : August 31, 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%	5,008.0 µg/mL	+/- 236.3643

* 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.

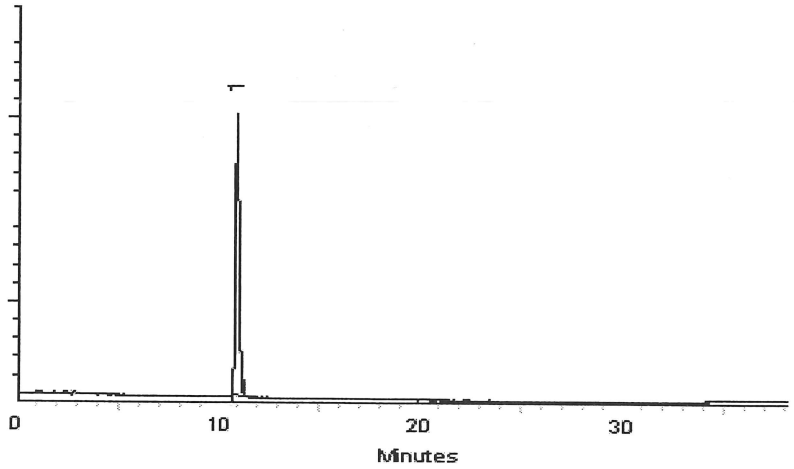
Mobile Phase A:
water:methanol (44:56 V/V)

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.

Kylie Struble - Operations Technician I

Jennifer Pollino - Operations Tech III - ARM QC

Date Mixed: 16-Aug-2023 **Balance Serial #** 1128360905

Date Passed: 25-Aug-2023

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330_NG_Stk_00152

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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

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

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

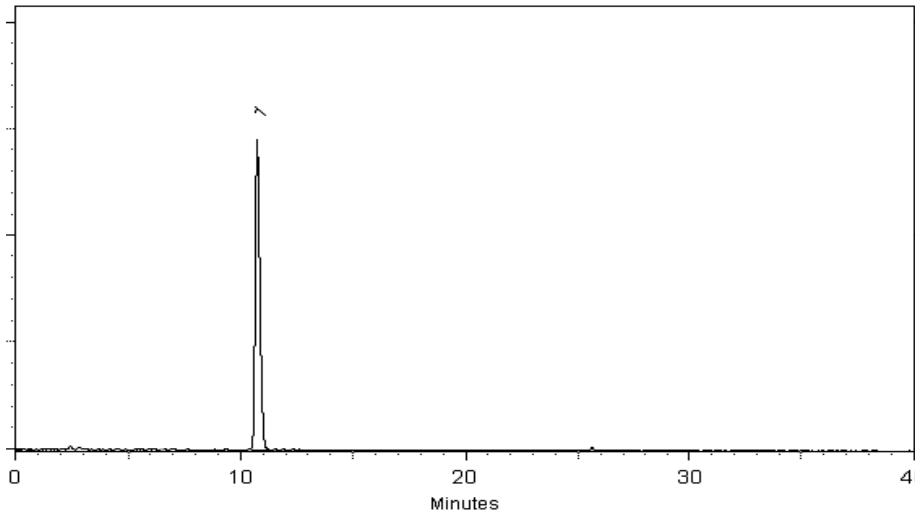
Mobile Phase A:
water:methanol (44:56 V/V)

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330_NG_Stk_00153

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

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

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.

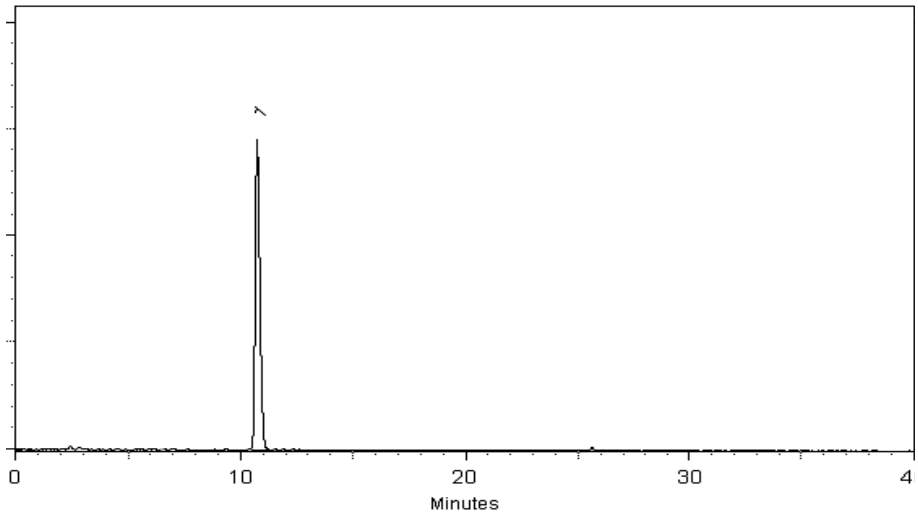
Mobile Phase A:
water:methanol (44:56 V/V)

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330_NG_Stk_00154

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

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

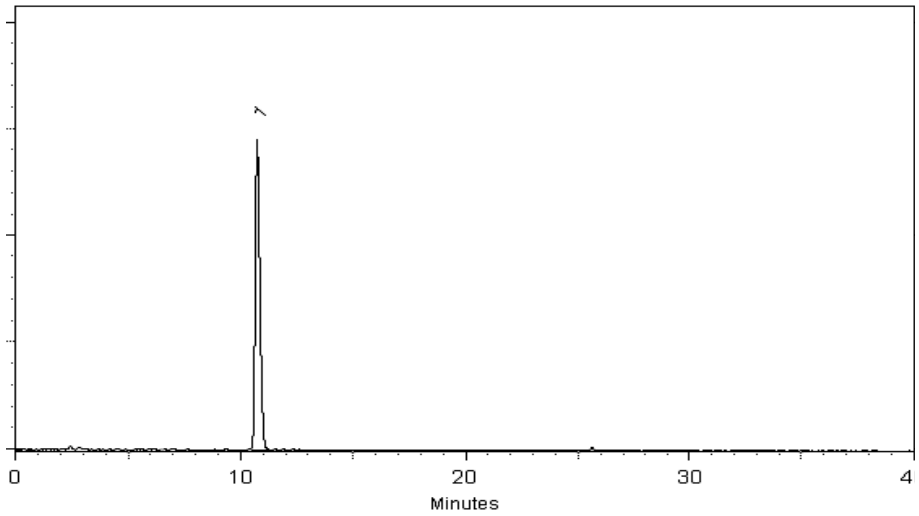
Mobile Phase A:
water:methanol (44:56 V/V)

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.
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Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

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Handling Notes:

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

Reagent

8330_NG_Stk_00155

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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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.

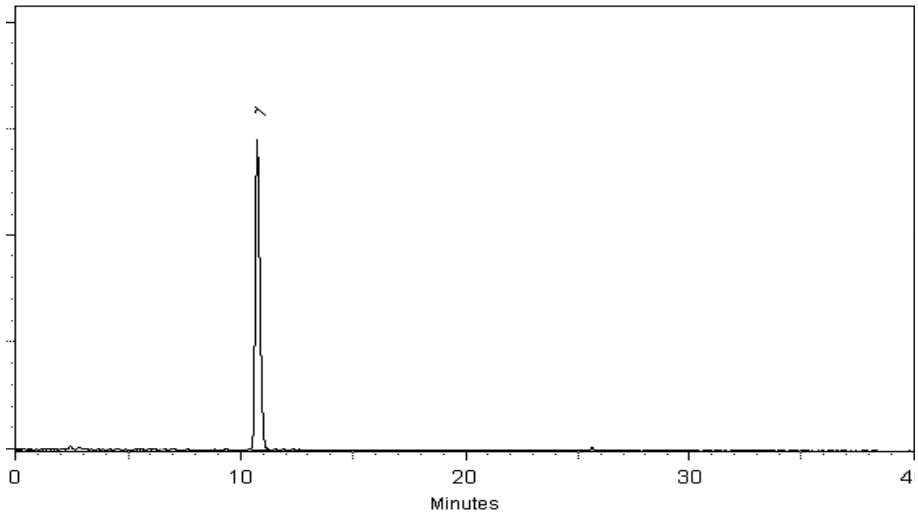
Mobile Phase A:
water:methanol (44:56 V/V)

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330_NG1000_00012

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

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31498 **Lot No.:** A0197032

Description : Nitroglycerin Standard

Nitroglycerin Standard 1,000µg/mL, Methanol, 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	Nitroglycerin	55-63-0	200507JLM	99%	1,006.0 µg/mL	+/- 46.9317

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

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330_NG1000_00017

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 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.

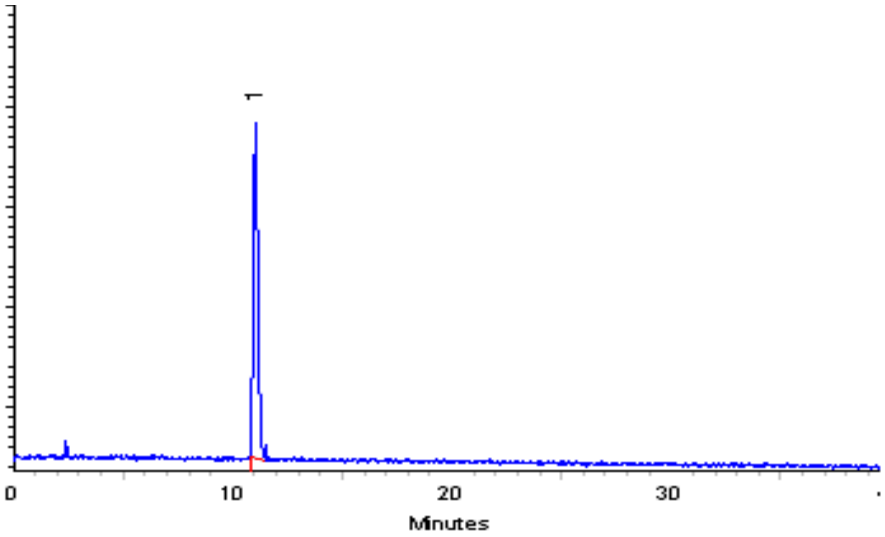
Mobile Phase A:
water:methanol (44:56 V/V)

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330_PETN_Stk_00152

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

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.:** A0198972

Description : Custom PETN Standard

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

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

Expiration Date : June 30, 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%	5,012.0 µg/mL	+/- 236.5531

* 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.

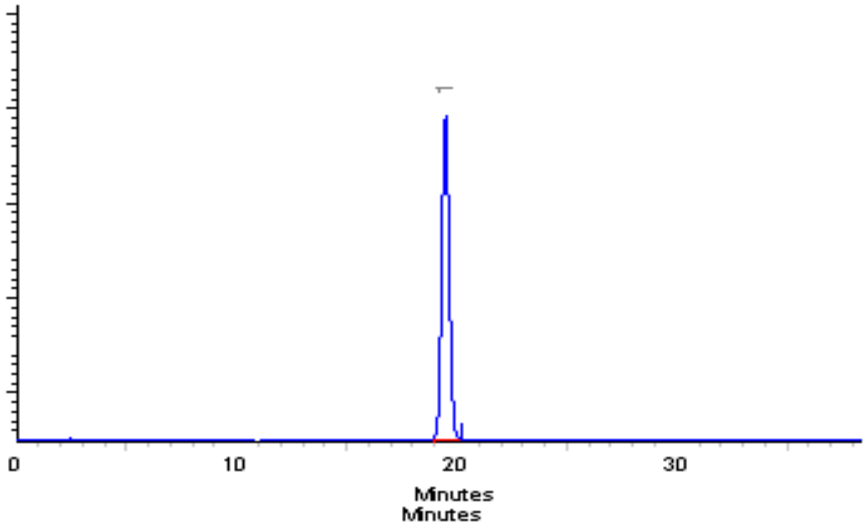
Mobile Phase A:
water:methanol (44:56 V/V)

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.

Bryan Snyder - Operations Tech I

Date Mixed: 14-Jun-2023 **Balance Serial #** 1128342314

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 16-Jun-2023

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330_PETN_Stk_00153

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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

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568872 **Lot No.:** A0198972

Description : Custom PETN Standard

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

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

Expiration Date : June 30, 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%	5,012.0 µg/mL	+/- 236.5531

* 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.

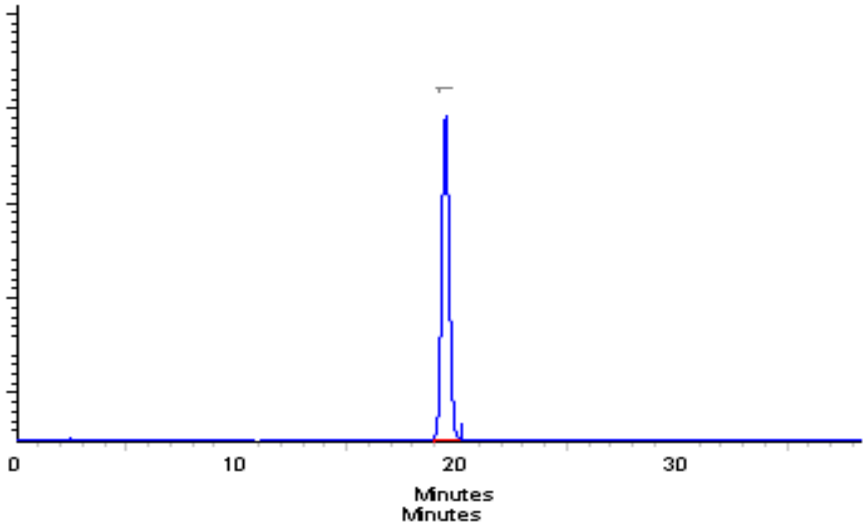
Mobile Phase A:
water:methanol (44:56 V/V)

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.

Bryan Snyder - Operations Tech I

Date Mixed: 14-Jun-2023 **Balance Serial #** 1128342314

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 16-Jun-2023

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330_PETN_Stk_00159

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Fax: 1-814-353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

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.

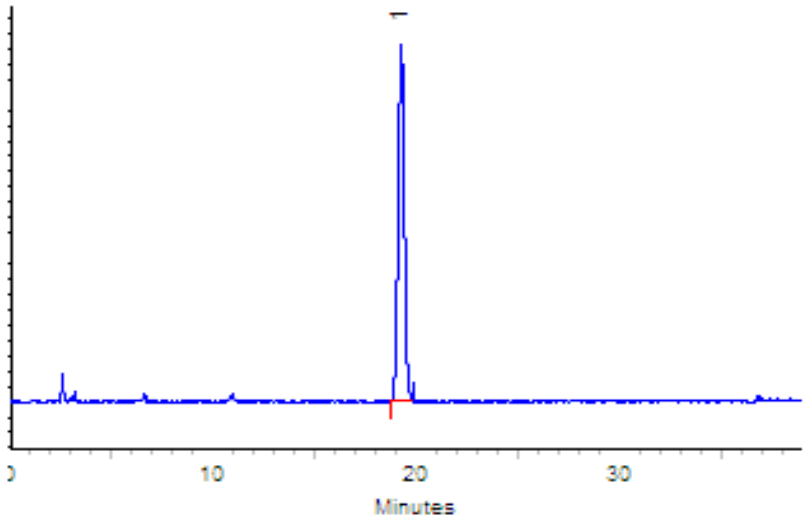
Mobile Phase A:
water:methanol (44:56 V/V)

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330_PETN_Stk_00160

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

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

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

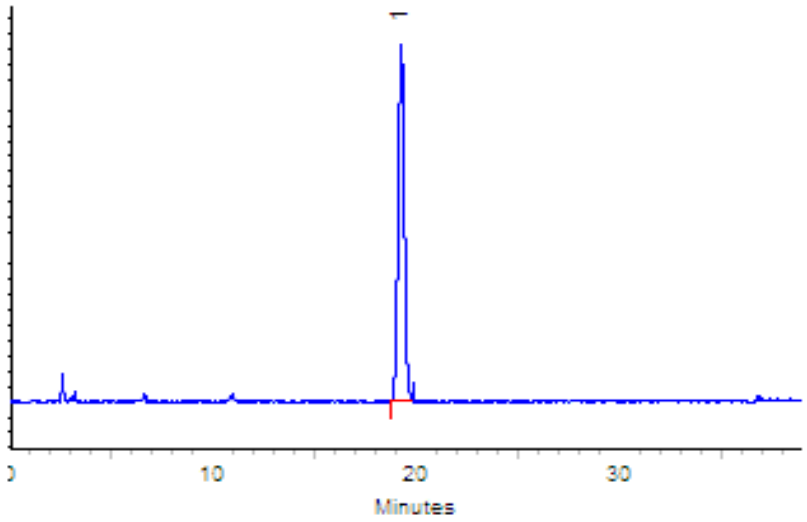
Mobile Phase A:
water:methanol (44:56 V/V)

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

REVIEWED

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330_PETN_Stk_00161

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 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.

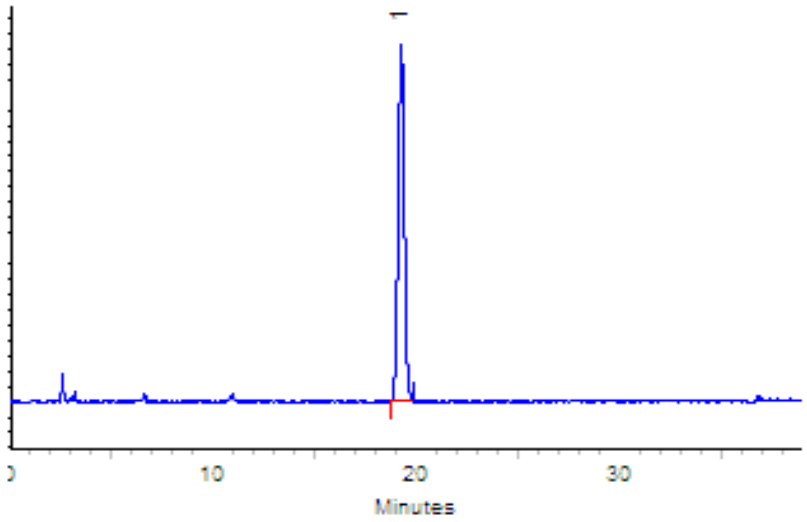
Mobile Phase A:
water:methanol (44:56 V/V)

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

REVIEWED

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330_PETN_Stk_00162

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 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.

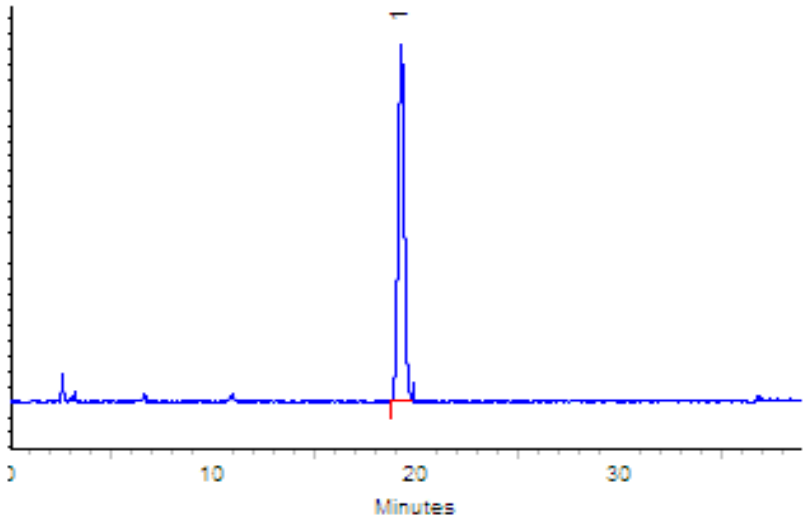
Mobile Phase A:
water:methanol (44:56 V/V)

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

REVIEWED

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330_PETN1000_00016

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

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31600 **Lot No.:** A0198747

Description : PETN Standard

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

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

Expiration Date : June 30, 2028 **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%	1,003.0 µg/mL	+/- 46.7917

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

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330_PETN1000_00020

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 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.

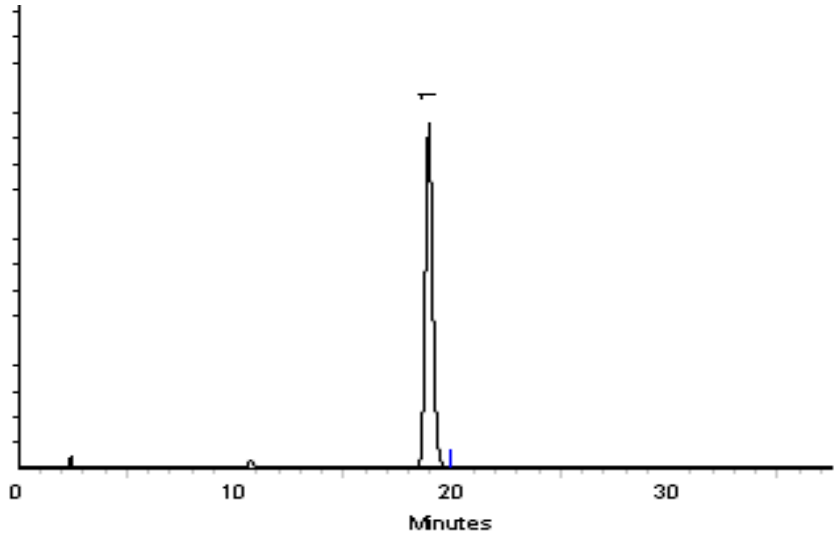
Mobile Phase A:
water:methanol (44:56 V/V)

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 - Operations Tech I

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

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

833035DNAStk_00059

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

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

CERTIFICATE OF ANALYSIS

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



Signal Word: Danger

Date Certified: Apr 14, 2023
Expiration: May 14, 2024
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity[3] %	Prepared Concentration[2] (µg/mL)	Certified Analyte Concentration[1] (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.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

[3] 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

For use in routine laboratory analysis.

Reagent

833035DNAStk_00064

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

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

CERTIFICATE OF ANALYSIS

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



Signal Word: Danger

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

Certified Reference Material

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

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

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

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±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.

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

[3] 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

For use in routine laboratory analysis.

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

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: $u_a = \sqrt{(u(\mathrm{V}))^2 + (u(\mathrm{m}))^2 + (u(\mathrm{IV}))^2 + (u(\mathrm{RO}))^2}$ 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

8330LCSMix1_00151

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

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CERTIFIED REFERENCE MATERIAL

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

ilac-MRA
ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

Certificate of Analysis

chromatographic plus

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 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.

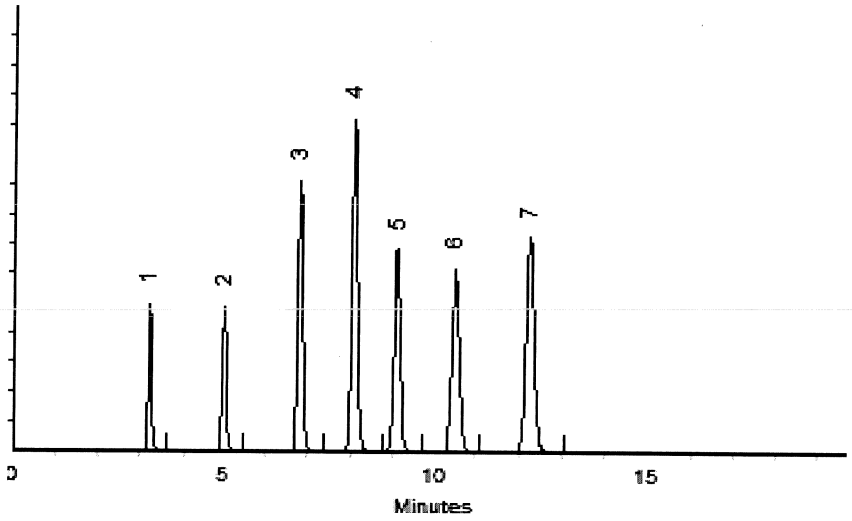
Mobile Phase A:
water:methanol (44:56 V/V)

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 - Operations Tech I

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

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330LCSMix1_00154

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

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

ilac-MRA
ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

Certificate of Analysis

chromatographic plus

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 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.

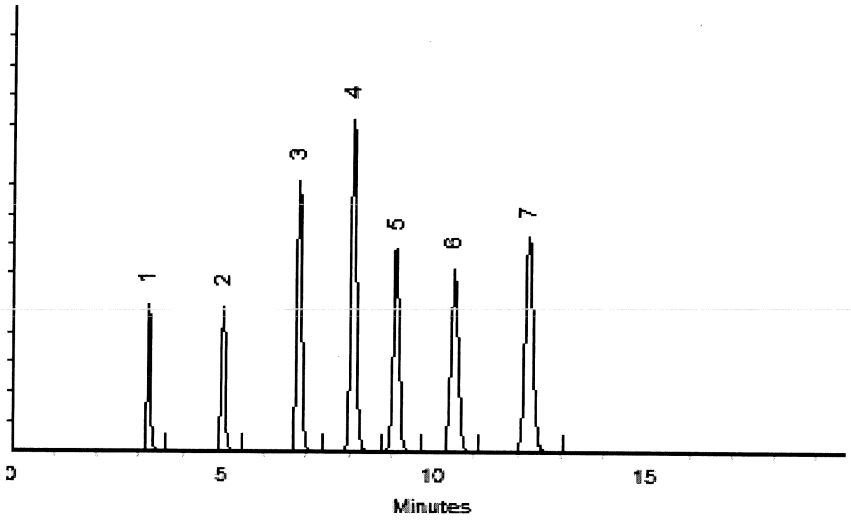
Mobile Phase A:
water:methanol (44:56 V/V)

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 - Operations Tech I

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

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330LCSMix1_00157

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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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
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* 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.

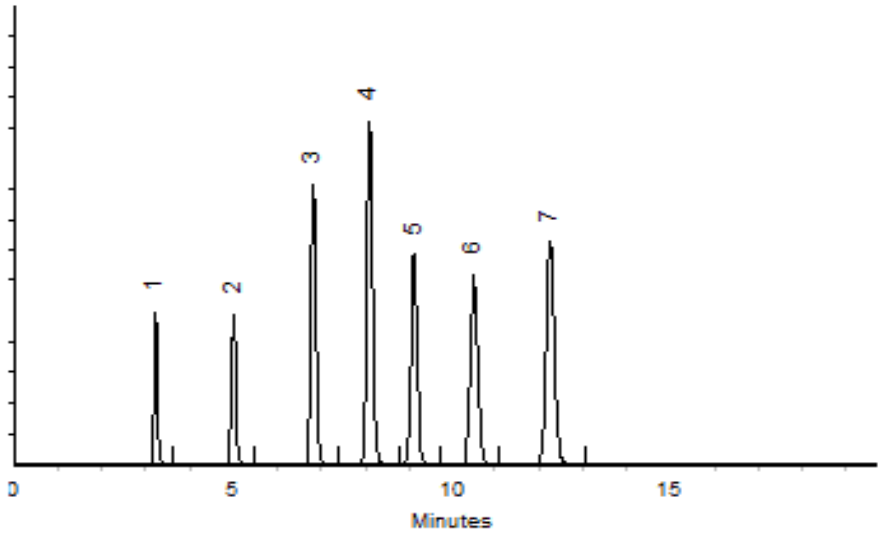
Mobile Phase A:
water:methanol (44:56 V/V)

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 - Operations Tech I

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

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

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

Reagent

8330PAStkPS_00075

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

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

CERTIFICATE OF ANALYSIS

Catalog No: M-8330-ADD-3
Description: Picric acid
Lot: 223041157
Solvent: Acetonitrile (50%)
Methanol (50%)
Hazards: *Refer to SDS for complete safety information*



Signal Word: Danger

Date Certified: Apr 12, 2023
Expiration: May 12, 2025
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER
AR-1463

ilac-MRA

Component	CAS #	Purity³ %	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
Picric acid	88-89-1	99.1	100.3	99.4

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.

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

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

³ 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

For use in routine laboratory analysis.

Reagent

8330PAStkPS_00078

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

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

CERTIFICATE OF ANALYSIS

Catalog No: M-8330-ADD-3
Description: Picric acid
Lot: 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

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity[3] %	Prepared Concentration[2] (µg/mL)	Certified Analyte Concentration[1] (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.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

[3] 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

For use in routine laboratory analysis.

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: $u_a = \sqrt{(u(\mathrm{V}))^2 + (u(\mathrm{m}))^2 + (u(\mathrm{IV}))^2 + (u(\mathrm{RO}))^2}$ 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

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 0B_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

8330Surrogate_00160

Preliminary Report

Eurofins Denver

LCS, Lab Control Sample Report

Sample Path: \\chromfs\Denver\ChromData\CHHPLC_X\20241112-139735.b\11120011.D

Lims ID: 8330Surr160 Inj. Date: 12-Nov-2024 16:34:44

Worklist ID: 280-0139735-011 Instrument: CHHPLC_X3

Method: 8330_X3

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 3535	Limits 2 3535	Limits 3 3535
$ 10 1,2-Dinitrobenzene	0.5000	0.5025	100.5	63-127	83-119	75-118

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

400-265472-G-1-A 400-265472-G-2-A 860-86234-C-1-A
570-205687-H-3-A 570-205687-H-4-A 570-205687-C-12-A
570-205687-C-13-A 400-265472-F-4-A 400-265472-F-5-A
400-265494-B-1-A 400-265494-B-2-A 400-265534-AD-1-A
400-265534-AD-2-A 400-265534-AD-3-A 400-265534-AC-4-A
400-265534-R-5-A

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

280-199123-A-21-A 280-199123-A-22-A 280-199123-A-23-A
280-199123-A-24-A 280-199123-A-25-A 280-199123-A-26-A
280-199123-B-27-A 280-199123-B-28-A 280-199123-B-29-A
280-199123-B-30-A 280-199130-B-2-A 280-199130-B-3-A
280-199130-B-6-A 280-199130-A-15-A 280-199130-A-16-A
280-199130-A-23-A 680-258167-A-2-A 680-258167-B-3-A
680-258167-B-4-A

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

410-194755-B-1-A

Reagent

8330SurrStkSS_00310

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** A0200577

Description : 8330 Surrogate Mix

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

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

Expiration Date : August 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	RP230428	99%	1,003.0 µg/mL	+/- 56.3574

* 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.

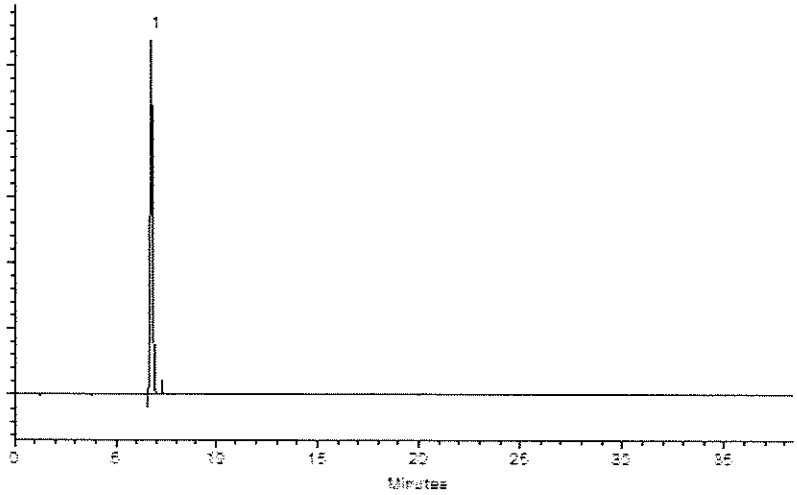
Mobile Phase A:
water:methanol (44:56 V/V)

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.

Laith Clemente - Operations Technician I

Date Mixed: 03-Aug-2023 **Balance Serial #** B707717271

Jennifer Polino - Operations Tech III - ARM QC

Date Passed: 21-Aug-2023

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330SurrStkSS_00311

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** A0200577

Description : 8330 Surrogate Mix

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

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

Expiration Date : August 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	RP230428	99%	1,003.0 µg/mL	+/- 56.3574

* 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.

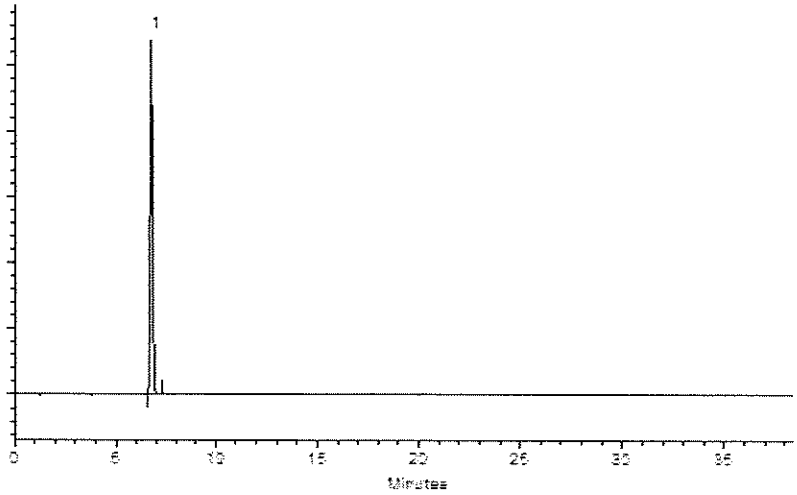
Mobile Phase A:
water:methanol (44:56 V/V)

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.

Laith Clemente - Operations Technician I

Date Mixed: 03-Aug-2023 **Balance Serial #** B707717271

Jennifer Polino - Operations Tech III - ARM QC

Date Passed: 21-Aug-2023

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330SurrStkSS_00312

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

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

ilac-MRA A2LA ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** A0200577

Description : 8330 Surrogate Mix

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

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

Expiration Date : August 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	RP230428	99%	1,003.0 µg/mL	+/- 56.3574

* 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.

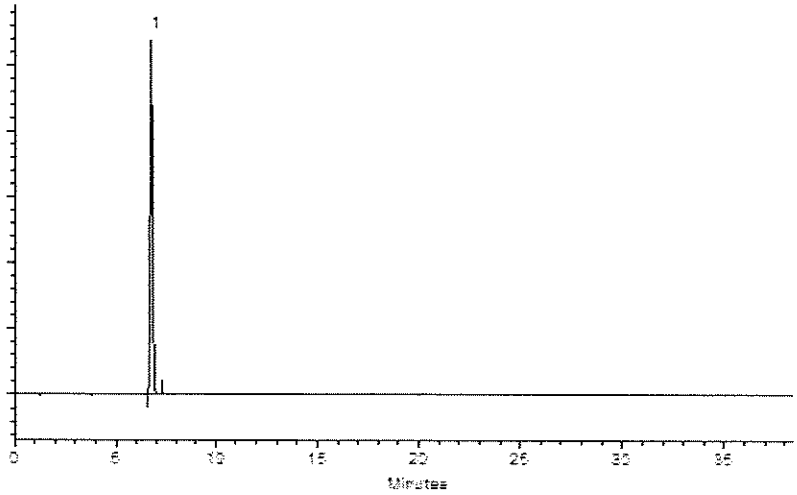
Mobile Phase A:
water:methanol (44:56 V/V)

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.

Laith Clemente - Operations Technician I **Date Mixed:** 03-Aug-2023 **Balance Serial #** B707717271

Jennifer Polino - Operations Tech III - ARM QC **Date Passed:** 21-Aug-2023

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330SurrStkSS_00314

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** A0200577

Description : 8330 Surrogate Mix

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

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

Expiration Date : August 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	RP230428	99%	1,003.0 µg/mL	+/- 56.3574

* 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.

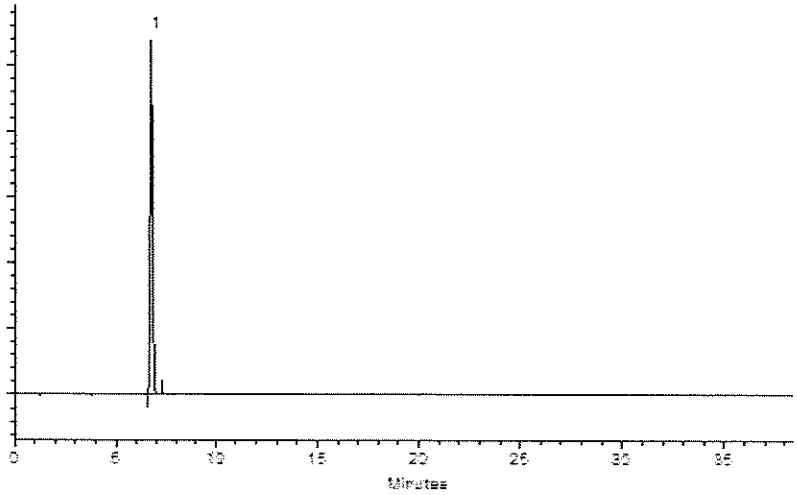
Mobile Phase A:
water:methanol (44:56 V/V)

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.

Laith Clemente - Operations Technician I

Date Mixed: 03-Aug-2023 **Balance Serial #** B707717271

Jennifer Polino - Operations Tech III - ARM QC

Date Passed: 21-Aug-2023

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330SurrStkSS_00315

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** A0200577

Description : 8330 Surrogate Mix

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

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

Expiration Date : August 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	RP230428	99%	1,003.0 µg/mL	+/- 56.3574

* 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.

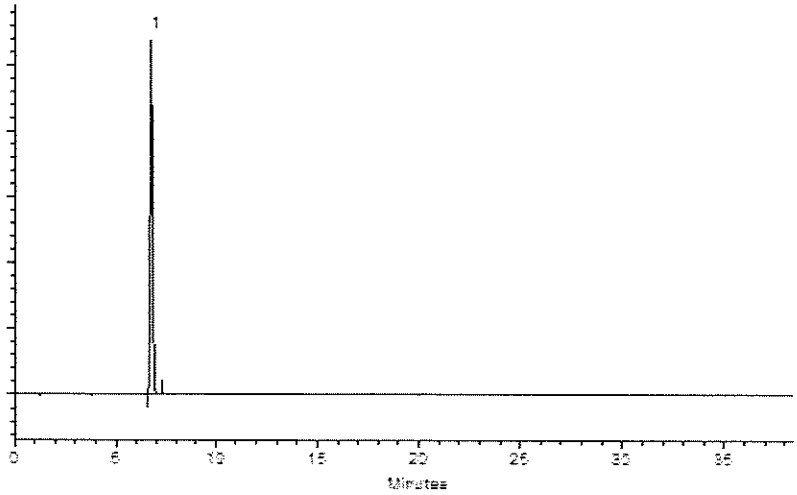
Mobile Phase A:
water:methanol (44:56 V/V)

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.

Laith Clemente - Operations Technician I

Date Mixed: 03-Aug-2023 **Balance Serial #** B707717271

Jennifer Polino - Operations Tech III - ARM QC

Date Passed: 21-Aug-2023

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330SurrStkSS_00329

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** 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.

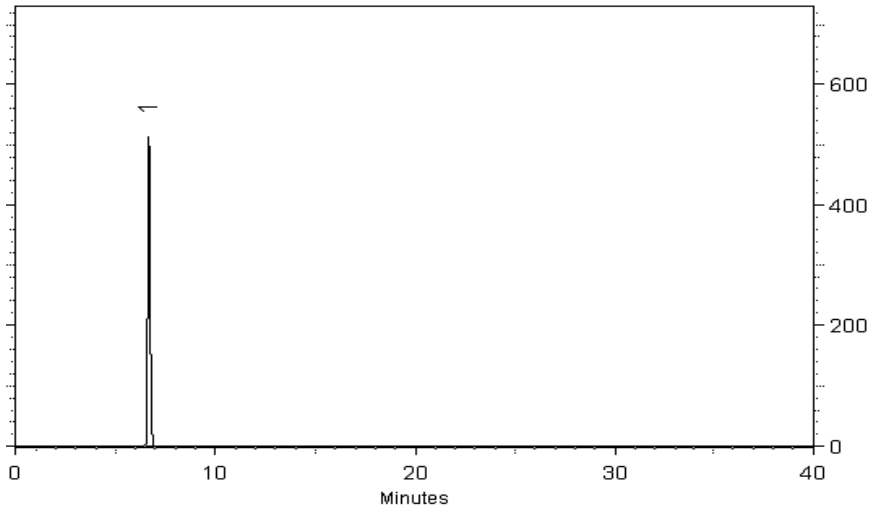
Mobile Phase A:
water:methanol (44:56 V/V)

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330SurrStkSS_00330

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** 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.

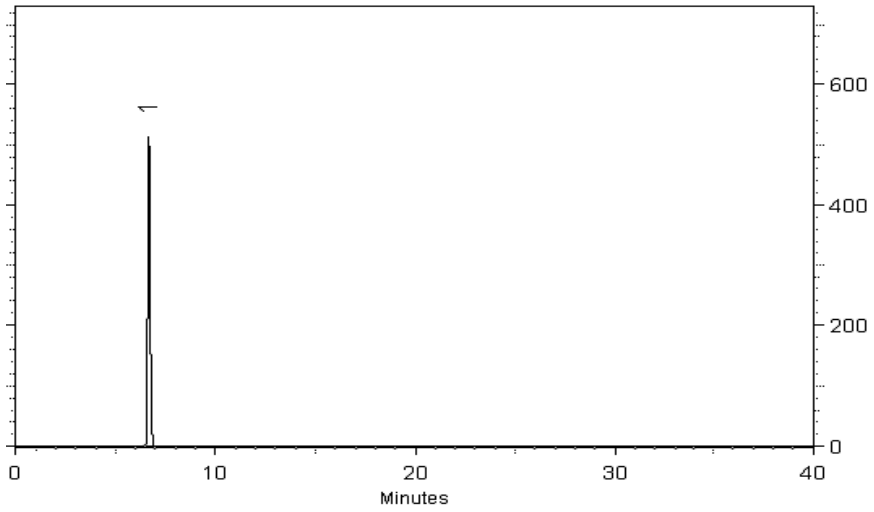
Mobile Phase A:
water:methanol (44:56 V/V)

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330SurrStkSS_00331

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** 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.

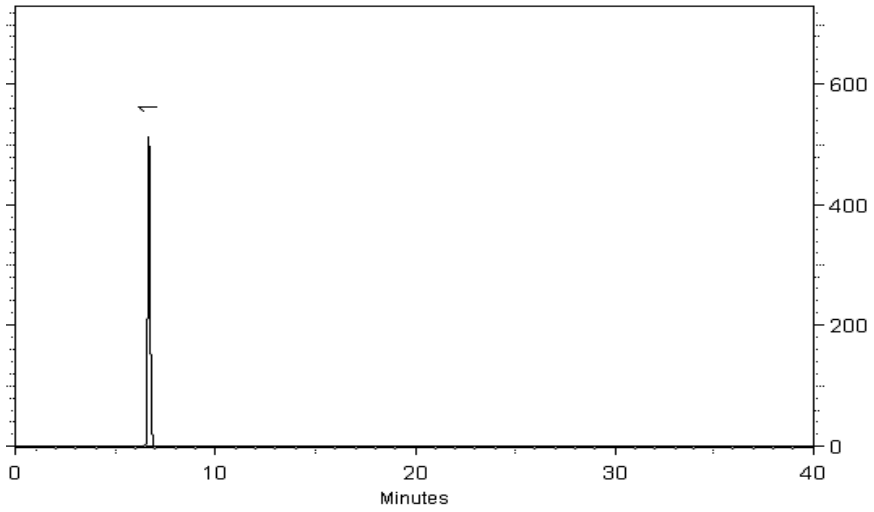
Mobile Phase A:
water:methanol (44:56 V/V)

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330SurrStkSS_00336

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** 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.

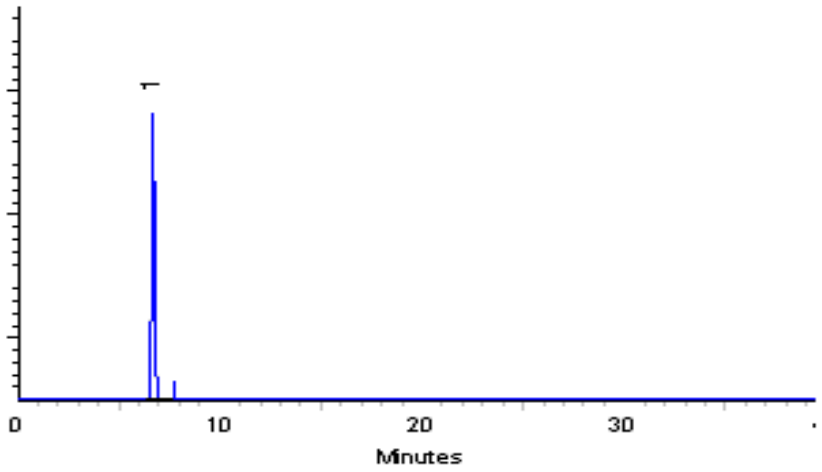
Mobile Phase A:
water:methanol (44:56 V/V)

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 - Operation Tech I

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

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330SurrStkSS_00337

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** 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.

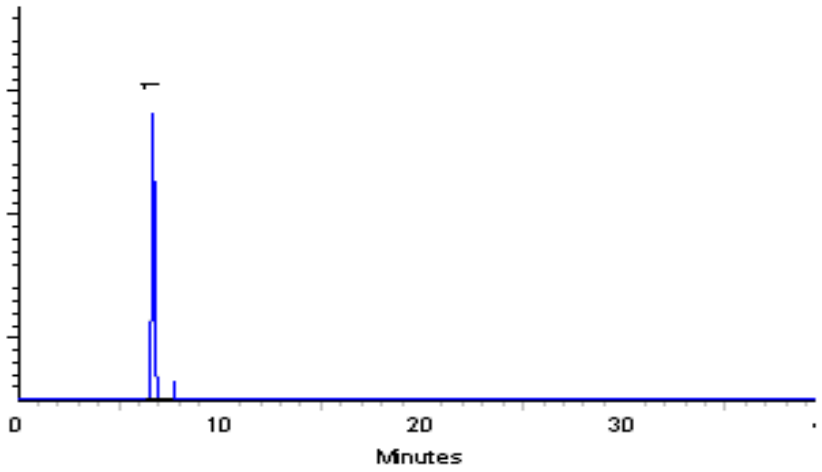
Mobile Phase A:
water:methanol (44:56 V/V)

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 - Operation Tech I

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

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330SurrStkSS_00338

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** 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.

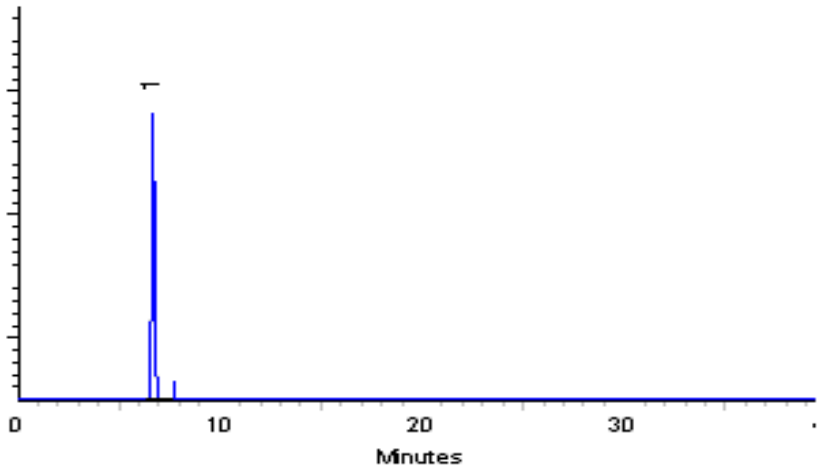
Mobile Phase A:
water:methanol (44:56 V/V)

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 - Operation Tech I

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

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330SurrStkSS_00339

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** 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.

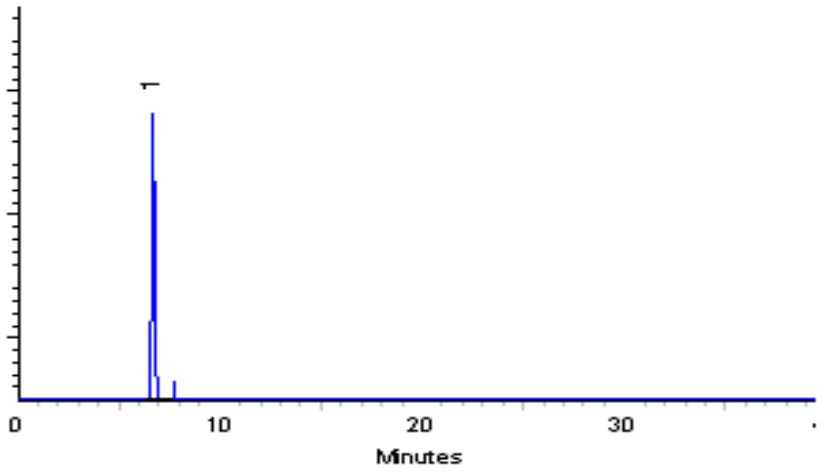
Mobile Phase A:
water:methanol (44:56 V/V)

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 - Operation Tech I

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

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330SurrStkSS_00340

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** 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.

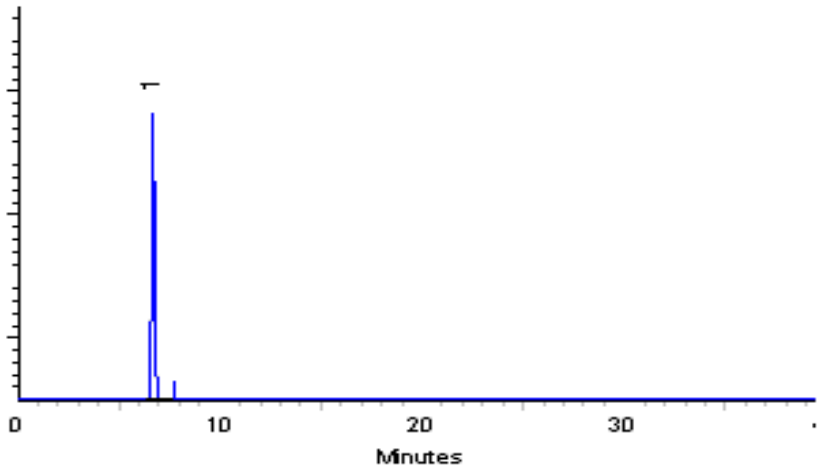
Mobile Phase A:
water:methanol (44:56 V/V)

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 - Operation Tech I

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

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330SurrStkSS_00341

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** 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.

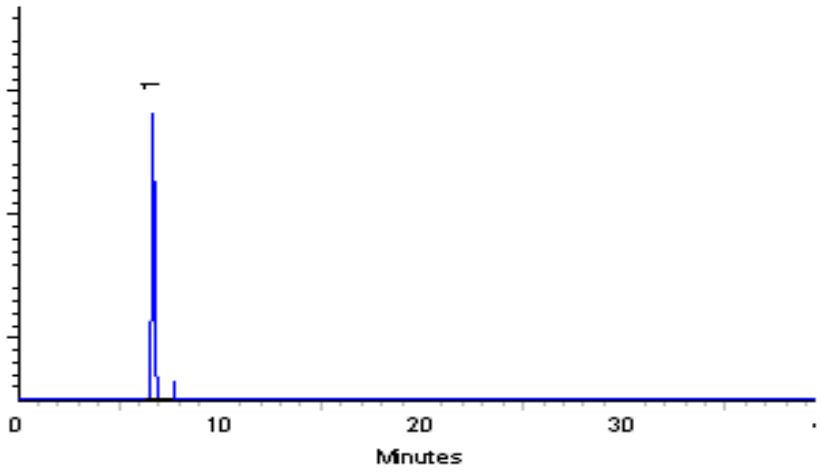
Mobile Phase A:
water:methanol (44:56 V/V)

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 - Operation Tech I

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

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330SurrStkSS_00342

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** 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.

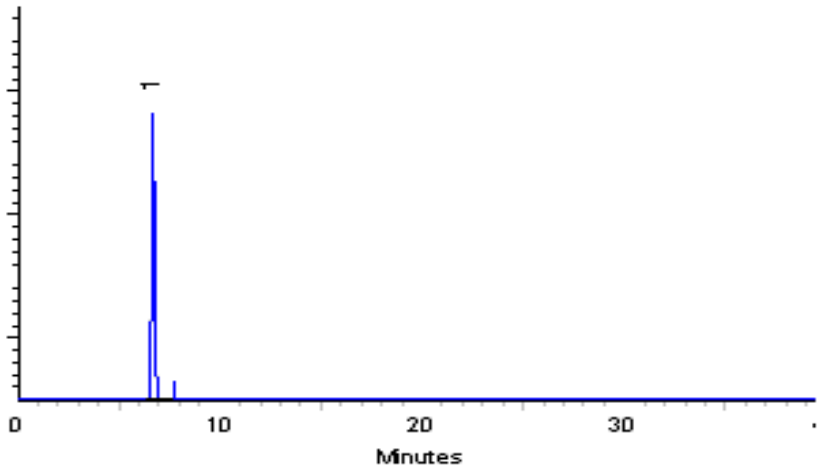
Mobile Phase A:
water:methanol (44:56 V/V)

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 - Operation Tech I

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

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330SurrStock_00173

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

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

CERTIFICATE OF ANALYSIS

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



Signal Word: Danger

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

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/FID)	Prepared Concentration[2] (µg/mL)	Certified Analyte Concentration[1] (µg/mL)
1,2-Dinitrobenzene	528-29-0	100.0	1002	1002

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

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

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

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

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

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

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

Reagent

8330SurrStock_00174

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

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

CERTIFICATE OF ANALYSIS

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



Signal Word: Danger

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

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ILAC-MRA

Component	CAS #	Purity % (GC/FID)	Prepared Concentration[2] (µg/mL)	Certified Analyte Concentration[1] (µg/mL)
1,2-Dinitrobenzene	528-29-0	100.0	1002	1002

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

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

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

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

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

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

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

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

Reagent

MNX,TNX,DNX_00118

Agilent
Trusted Answers

ISO 17034

Reference Material Certificate

Product Information Sheet

Product Name: Custom Standard

Product Number: CUS-23984

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

Lot Number: 0006801479

Lot Issue Date: 21-Jun-2024

Expiration Date: 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 20ºC to 25ºC immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Safety:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this analytical reference material.

Intended Use:
This analytical reference 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.

Agilent
Trusted Answers

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

Sample lot approver:



Monica Bourgeois
QMS Representative

Reagent

PicricARestek_00131

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

ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31499 **Lot No.:** A0212297

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 : 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	Picric Acid	88-89-1	06130CU	99%	1,000.0 µg/mL	+/- 47.3560

* 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.

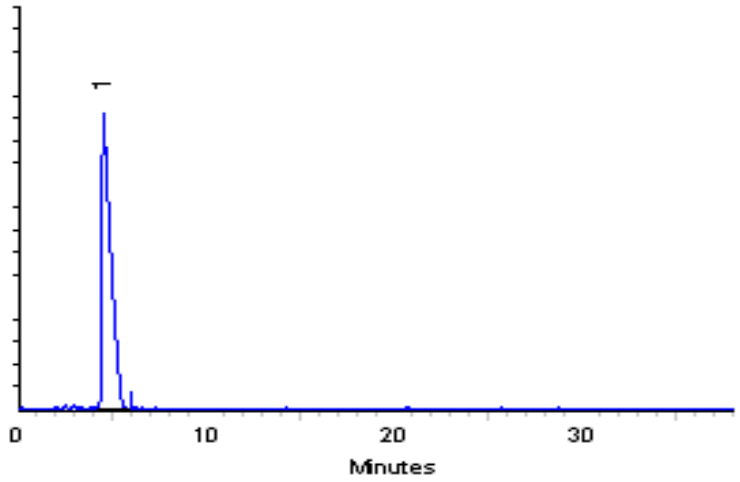
Mobile Phase A:
water:methanol (44:56 V/V)

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.

Jess Hoy - Operations Tech I

Date Mixed: 31-May-2024 **Balance Serial #** 1128342314

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 05-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.
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- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

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

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  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

8330B_D5_DryWt

Nitroaromatics and Nitramines (HPLC)

FORM II
HPLC/IC SURROGATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Matrix: Solid 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 #
P3HWMU-CONTAM-001-002	280-200203-1		92
P3HWMU-CONTAM-001-002	280-200203-1	99 M	
P3HWMU-CONTAM-003-002	280-200203-2		90 M
P3HWMU-CONTAM-003-002	280-200203-2	102	
P2-ARROYO-005-002	280-200203-3		0 M D Q
P2-ARROYO-005-002	280-200203-3	0 D Q	
	MB 280-677232/1-A	105	
	LCS 280-677232/2-A	102	
P3HWMU-CONTAM-003-002 MS	280-200203-2 MS	99	
P3HWMU-CONTAM-003-002 MSD	280-200203-2 MSD	97	
P3HWMU-CONTAM-003-002 DU	280-200203-2 DU	100	
P3HWMU-CONTAM-003-002 TRL	280-200203-2 TRL	99	

	QC LIMITS
12DNB = 1,2-Dinitrobenzene (Surr)	78-119

Column to be used to flag recovery values

FORM II 8330B MOD

FORM III
HPLC/IC LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: 12040022.D

Lab ID: LCS 280-677232/2-A Client ID:

COMPOUND	SPIKE ADDED (mg/Kg)	LCS CONCENTRATION (mg/Kg)	LCS % REC	QC LIMITS REC	#
1,3,5-Trinitrobenzene	1.00	1.05	105	80-116	
1,3-Dinitrobenzene	1.00	1.06	106	73-119	
2,4,6-Trinitrotoluene	1.00	1.02	102	71-120	
2,4-Dinitrotoluene	1.00	1.03	103	75-121	
2,6-Dinitrotoluene	1.00	1.06	106	79-117	
2-Amino-4,6-dinitrotoluene	1.00	1.05	105	71-123	
o-Nitrotoluene	1.00	1.02	102	70-124	M
m-Nitrotoluene	1.00	1.01	101	67-129	M
4-Amino-2,6-dinitrotoluene	1.00	1.07	107	64-127	
p-Nitrotoluene	1.00	1.02	102	71-124	M
Nitrobenzene	1.00	1.07	107	67-129	
Nitroglycerin	10.0	10.9	109	73-124	
HMX	1.00	0.941	94	74-124	
PETN	10.0	10.9	109	72-128	
RDX	1.00	1.01	101	67-129	
Tetryl	1.00	1.03	103	68-135	

Column to be used to flag recovery and RPD values

FORM III 8330B MOD

FORM III
HPLC/IC MATRIX SPIKE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: 12040025.D

Lab ID: 280-200203-2 MS Client ID: P3HWMU-CONTAM-003-002 MS

COMPOUND	SPIKE ADDED (mg/Kg)	SAMPLE CONCENTRATION (mg/Kg)	MS CONCENTRATION (mg/Kg)	MS % REC	QC LIMITS REC	#
1,3,5-Trinitrobenzene	1.08	0.042 U	1.10	102	80-116	
1,3-Dinitrobenzene	1.08	0.042 U	1.11	103	73-119	
2,4,6-Trinitrotoluene	1.08	0.64	1.65	94	71-120	
2,4-Dinitrotoluene	1.08	0.042 U	1.10	102	75-121	
2,6-Dinitrotoluene	1.08	0.042 U	1.09	101	79-117	
2-Amino-4,6-dinitrotoluene	1.08	0.10 J	1.19	101	71-123	
o-Nitrotoluene	1.08	0.11 U	1.10	102	70-124	
m-Nitrotoluene	1.08	0.16 U	1.25	116	67-129	
4-Amino-2,6-dinitrotoluene	1.08	0.15	1.22	98	64-127	
p-Nitrotoluene	1.08	0.11 U	1.15	106	71-124	
Nitrobenzene	1.08	0.21 U	1.12	104	67-129	
Nitroglycerin	10.8	0.74 U	11.6	107	73-124	
HMX	1.08	0.19	1.14	88	74-124	M
PETN	10.8	1.1 U	11.4	106	72-128	
RDX	1.08	0.47	1.40	86	67-129	
Tetryl	1.08	0.11 U	1.08	100	68-135	

Column to be used to flag recovery and RPD values

FORM III 8330B MOD

FORM III
HPLC/IC MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: 12040026.D

Lab ID: 280-200203-2 MSD Client ID: P3HWMU-CONTAM-003-002 MSD

COMPOUND	SPIKE ADDED (mg/Kg)	MSD CONCENTRATION (mg/Kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,3,5-Trinitrobenzene	1.00	1.02	102	8	20	80-116	
1,3-Dinitrobenzene	1.00	1.03	102	8	20	73-119	
2,4,6-Trinitrotoluene	1.00	1.47	83	12	20	71-120	
2,4-Dinitrotoluene	1.00	1.01	101	8	20	75-121	
2,6-Dinitrotoluene	1.00	1.00	100	9	20	79-117	
2-Amino-4,6-dinitrotoluene	1.00	1.11	100	7	20	71-123	
o-Nitrotoluene	1.00	1.02	102	7	20	70-124	
m-Nitrotoluene	1.00	1.17	117	7	20	67-129	
4-Amino-2,6-dinitrotoluene	1.00	1.16	100	5	20	64-127	
p-Nitrotoluene	1.00	1.07	106	7	20	71-124	
Nitrobenzene	1.00	1.03	103	8	20	67-129	
Nitroglycerin	10.0	10.7	107	8	20	73-124	
HMX	1.00	1.04	84	9	20	74-124	M
PETN	10.0	10.6	106	8	20	72-128	
RDX	1.00	1.31	84	7	20	67-129	
Tetryl	1.00	0.963	96	11	20	68-135	

Column to be used to flag recovery and RPD values

FORM III 8330B MOD

HPLC/IC DUPLICATE SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: 12040027.D

Lab ID: 280-200203-2 DU Client ID: P3HWMU-CONTAM-003-002 DU

COMPOUND	SAMPLE CONCENTRATION (mg/Kg)	DUPLICATE CONCENTRATION (mg/Kg)	%RPD	%RPD LIMIT	#
1,3,5-Trinitrobenzene	0.042 U	0.043 U	NC	20	
1,3-Dinitrobenzene	0.042 U	0.043 U	NC	20	
2,4,6-Trinitrotoluene	0.64	0.616	3	20	
2,4-Dinitrotoluene	0.042 U	0.043 U	NC	20	
2,6-Dinitrotoluene	0.042 U	0.043 U	NC	20	
2-Amino-4,6-dinitrotoluene	0.10 J	0.111	6	20	
o-Nitrotoluene	0.11 U	0.11 U	NC	20	
m-Nitrotoluene	0.16 U	0.16 U	NC	20	
4-Amino-2,6-dinitrotoluene	0.15	0.133	14	20	
p-Nitrotoluene	0.11 U	0.11 U	NC	20	
Nitrobenzene	0.21 U	0.22 U	NC	20	
Nitroglycerin	0.74 U	0.75 U	NC	20	
HMX	0.19	0.203	4	20	
PETN	1.1 U	1.1 U	NC	20	
RDX	0.47	0.445	5	20	
Tetryl	0.11 U	0.11 U	NC	20	

Column to be used to flag %RPD values

8330B MOD

HPLC/IC TRIPLICATE SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: 12040028.D

Lab ID: 280-200203-2 TRL Client ID: P3HWMU-CONTAM-003-002 TRL

COMPOUND	SAMPLE CONC. (mg/Kg)	DUPLICATE CONC. (mg/Kg)	TRIPLICATE CONC. (mg/Kg)	%RSD	%RSD LIMIT	#
1,3,5-Trinitrobenzene	0.042 U	0.043 U	0.042 U	NC	20	
1,3-Dinitrobenzene	0.042 U	0.043 U	0.042 U	NC	20	
2,4,6-Trinitrotoluene	0.64	0.616	4.96	121	20	M J1
2,4-Dinitrotoluene	0.042 U	0.043 U	0.042 U	NC	20	
2,6-Dinitrotoluene	0.042 U	0.043 U	0.042 U	NC	20	
2-Amino-4,6-dinitrotoluene	0.10 J	0.111	0.123	8	20	
o-Nitrotoluene	0.11 U	0.11 U	0.11 U	NC	20	
m-Nitrotoluene	0.16 U	0.16 U	0.16 U	NC	20	
4-Amino-2,6-dinitrotoluene	0.15	0.133	0.143	7	20	
p-Nitrotoluene	0.11 U	0.11 U	0.11 U	NC	20	
Nitrobenzene	0.21 U	0.22 U	0.21 U	NC	20	
Nitroglycerin	0.74 U	0.75 U	0.74 U	NC	20	
HMX	0.19	0.203	0.219	6	20	
PETN	1.1 U	1.1 U	1.1 U	NC	20	
RDX	0.47	0.445	0.422	5	20	
Tetryl	0.11 U	0.11 U	0.11 U	NC	20	

Column to be used to flag %RSD

8330B MOD

FORM IV
HPLC/IC METHOD BLANK SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Lab Sample ID: MB 280-677232/1-A

Matrix: Solid Date Extracted: 12/03/2024 17:54

Lab File ID:(1) 12040021.D Lab File ID:(2)

Date Analyzed:(1) 12/04/2024 20:39 Date Analyzed:(2)

Instrument ID:(1) CHHPLC_X3 Instrument ID:(2) CHHPLC_G2_LUNA

GC Column:(1) UltraCarb5uO ID: 4.6(mm) GC Column:(2) Luna-phenylh ID: 4.6(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 280-677232/2-A	12/04/2024 21:01	
P3HWMU-CONTAM-001-002	280-200203-1	12/04/2024 21:23	12/05/2024 19:53
P3HWMU-CONTAM-003-002	280-200203-2	12/04/2024 21:45	12/06/2024 16:28
P3HWMU-CONTAM-003-002 MS	280-200203-2 MS	12/04/2024 22:06	
P3HWMU-CONTAM-003-002 MSD	280-200203-2 MSD	12/04/2024 22:28	
P3HWMU-CONTAM-003-002 DU	280-200203-2 DU	12/04/2024 22:50	
P3HWMU-CONTAM-003-002 TRL	280-200203-2 TRL	12/04/2024 23:12	
P2-ARROYO-005-002	280-200203-3	12/05/2024 17:02	12/05/2024 23:29

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Client Sample ID: P3HWMU-CONTAM-001-002 Lab Sample ID: 280-200203-1

Instrument ID (1): CHHPLC_X3 Instrument ID (2): CHHPLC_G2_LUNA

Date Analyzed (1): 12/04/2024 21:23 Date Analyzed (2): 12/05/2024 19:53

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		6.64	6.50	6.80	0.36		2.3
	2		6.52	6.41	6.71	0.37		
RDX	1		7.56	7.43	7.73	1.4		6.9
	2		8.67	8.58	8.88	1.3		
2,4,6-Trinitrotoluene	1		10.45	10.39	10.59	0.44		1.9
	2		22.53	22.36	22.66	0.43		
4-Amino-2,6-dinitrotoluene	1		10.58	10.52	10.72	0.19		7.6
	2		15.94	15.83	16.13	0.21		
2-Amino-4,6-dinitrotoluene	1		10.81	10.75	10.95	0.24		1.6
	2		16.73	16.60	16.90	0.24		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Client Sample ID: P3HWMU-CONTAM-003-002 Lab Sample ID: 280-200203-2

Instrument ID (1): CHHPLC_X3 Instrument ID (2): CHHPLC_G2_LUNA

Date Analyzed (1): 12/04/2024 21:45 Date Analyzed (2): 12/06/2024 16:28

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		6.64	6.50	6.80	0.19		3.4
	2		6.52	6.42	6.72	0.20		
RDX	1		7.57	7.43	7.73	0.47		14.4
	2		8.66	8.58	8.88	0.41		
2,4,6-Trinitrotoluene	1		10.47	10.39	10.59	0.64		1.3
	2		22.48	22.33	22.63	0.63		
4-Amino-2,6-dinitrotoluene	1		10.60	10.52	10.72	0.15		12.5
	2		15.90	15.79	16.09	0.17		
2-Amino-4,6-dinitrotoluene	1		10.83	10.75	10.95	0.10		4.6
	2		16.68	16.56	16.86	0.10		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Client Sample ID: P2-ARROYO-005-002 Lab Sample ID: 280-200203-3

Instrument ID (1): CHHPLC_X3 Instrument ID (2): CHHPLC_G2_LUNA

Date Analyzed (1): 12/05/2024 17:02 Date Analyzed (2): 12/05/2024 23:29

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	
2,4,6-Trinitrotoluene	1		10.47	10.36	10.56	830		2.5
	2		22.59	22.36	22.66	810		

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-200203-1

SDG No.:

Client Sample ID: P3HWMU-CONTAM-001-002 | Lab Sample ID: 280-200203-1

Matrix: Solid | Lab File ID: 12040023.D

Analysis Method: 8330B MOD | Date Collected: 12/02/2024 11:53

Extraction Method: 8330B | Date Extracted: 12/03/2024 17:54

Sample wt/vol: +10.09(g) | Date Analyzed: 12/04/2024 21:23

Con. Extract Vol.: 40(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: 8.4 % Solids: 91.6 | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 677391 | Units: mg/Kg

Preparation Batch No.: 677232 | Instrument ID: CHHPLC_X3

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	0.043	U	0.11	0.043	0.015
99-65-0	1,3-Dinitrobenzene	0.043	U	0.11	0.043	0.018
118-96-7	2,4,6-Trinitrotoluene	0.44		0.11	0.076	0.033
121-14-2	2,4-Dinitrotoluene	0.043	U	0.11	0.043	0.016
606-20-2	2,6-Dinitrotoluene	0.043	U	0.11	0.043	0.021
35572-78-2	2-Amino-4,6-dinitrotoluene	0.24		0.11	0.076	0.036
88-72-2	o-Nitrotoluene	0.11	U	0.22	0.11	0.051
99-08-1	m-Nitrotoluene	0.16	U	0.22	0.16	0.069
19406-51-0	4-Amino-2,6-dinitrotoluene	0.19		0.11	0.076	0.032
99-99-0	p-Nitrotoluene	0.11	U	0.22	0.11	0.039
98-95-3	Nitrobenzene	0.22	U	0.32	0.22	0.092
55-63-0	Nitroglycerin	0.76	U	2.2	0.76	0.23
2691-41-0	HMX	0.36	M	0.11	0.076	0.025
78-11-5	PETN	1.1	U	2.2	1.1	0.53
121-82-4	RDX	1.4		0.22	0.11	0.047
479-45-8	Tetryl	0.11	U	0.22	0.11	0.047

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene (Surr)	99	M	78-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20241204-140455.b\12040023.D
Lims ID: 280-200203-A-1-A
Client ID: P3HWMU-CONTAM-001-002
Sample Type: Client
Inject. Date: 04-Dec-2024 21:23:13 ALS Bottle#: 23 Worklist Smp#: 23
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-200203-A-1-A
Operator ID: JZ Instrument ID: CHHPLC_X3

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20241204-140455.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 05-Dec-2024 11:14:25 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: CTX1637

First Level Reviewer: LV5D Date: 05-Dec-2024 11:08:37

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/mL	Flags
	1 Triamine Trinitrobenzene	1		2.444			ND	
	2 2,6-diamino-4-nitrotoluene	1		6.501			ND	7
	3 TNX	1		6.511			ND	
	4 HMX	1	6.638	6.649	-0.011	7973	0.0825	M
	5 2,4-diamino-6-nitrotoluene	1		6.681			ND	
	6 DNX	1		6.824			ND	
	7 MNX	1	7.211	7.224	-0.013	1402	0.0105	
	8 RDX	1	7.558	7.576	-0.018	34161	0.3242	
	9 2,4,6-Trinitrophenol	1		7.949			ND	
$	10 1,2-Dinitrobenzene	1	8.405	8.436	-0.031	32261	0.2474	M
	11 1,3,5-Trinitrobenzene	1		8.543			ND	
	12 1,3-Dinitrobenzene	1		9.089			ND	
	13 Nitrobenzene	1		9.402			ND	
	14 3,5-Dinitroaniline	1	9.558	9.589	-0.031	1281	0.005827	
	15 Tetryl	1		9.702			ND	
	16 Nitroglycerin	2		10.142			ND	
	17 2,4,6-Trinitrotoluene	1	10.451	10.489	-0.038	22263	0.1025	
	18 4-Amino-2,6-dinitrotoluene	1	10.578	10.622	-0.044	7093	0.0450	
	19 2-Amino-4,6-dinitrotoluene	1	10.805	10.849	-0.044	11376	0.0556	
	20 2,6-Dinitrotoluene	1		10.989			ND	
	21 2,4-Dinitrotoluene	1		11.142			ND	
	22 o-Nitrotoluene	1		11.816			ND	
	23 p-Nitrotoluene	1		12.169			ND	
	24 m-Nitrotoluene	1		12.662			ND	
	25 PETN	2		13.669			ND	
	26 Ammonium Picrate	1		0.000			ND	

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection

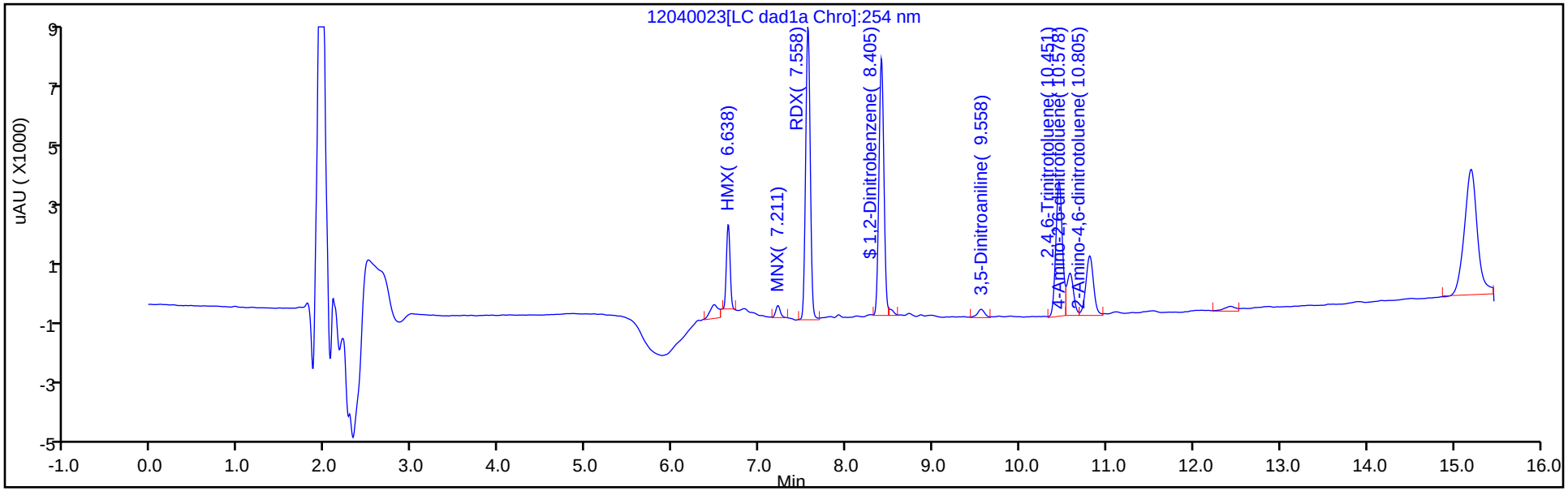
Review Flags
M - Manually Integrated

Report Date: 05-Dec-2024 11:14:28 Chrom Revision: 2.3 12-Nov-2024 16:55:22

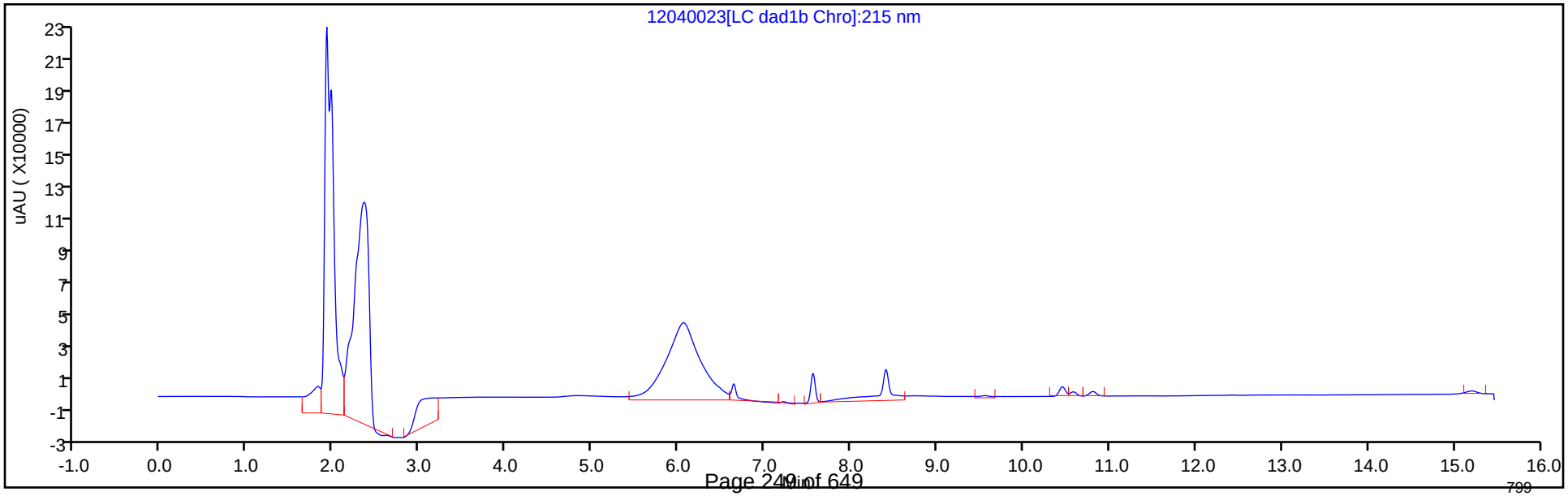
Eurofins Denver

Data File:	\\chromfs\denver\chromdata\chhplc_x\20241204-140455.b\12040023.d				
Injection Date:	04-Dec-2024 21:23:13	Instrument ID:	CHHPLC_X3	Operator ID:	JZ
Lims ID:	280-200203-A-1-A	Lab Sample ID:	280-200203-1	Worklist Smp#:	23
Client ID:	P3HWMU-CONTAM-001-002				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



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\20241204-140455.b\12040023.D				
Lims ID:	280-200203-A-1-A				
Client ID:	P3HWMU-CONTAM-001-002				
Sample Type:	Client				
Inject. Date:	04-Dec-2024 21:23:13	ALS Bottle#:	23	Worklist Smp#:	23
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-200203-A-1-A				
Operator ID:	JZ	Instrument ID:	CHHPLC_X3		
Method:	\\chromfs\Denver\ChromData\CHHPLC_X\20241204-140455.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	05-Dec-2024 11:14:25	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:	CTX1637				

First Level Reviewer: LV5D Date: 05-Dec-2024 11:08:37

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2500	0.2474	98.95

Manual Integration/User Assign Peak Report

Eurofins Denver

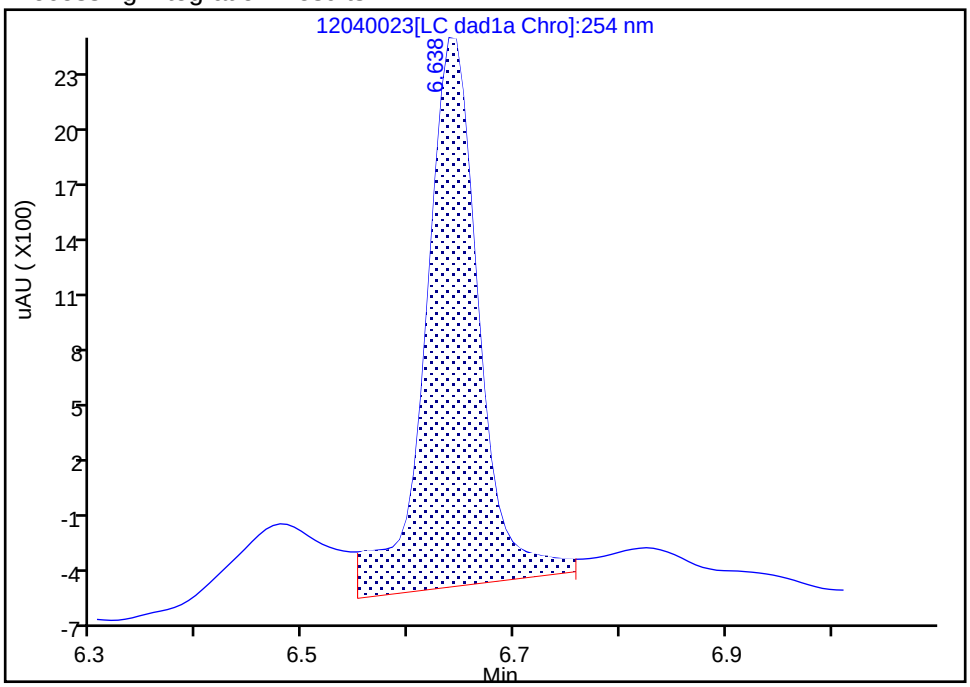
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Injection Date:	04-Dec-2024 21:23:13	Instrument ID:	CHHPLC_X3		
Lims ID:	280-200203-A-1-A	Lab Sample ID:	280-200203-1		
Client ID:	P3HWMU-CONTAM-001-002				
Operator ID:	JZ	ALS Bottle#:	23	Worklist Smp#:	23
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

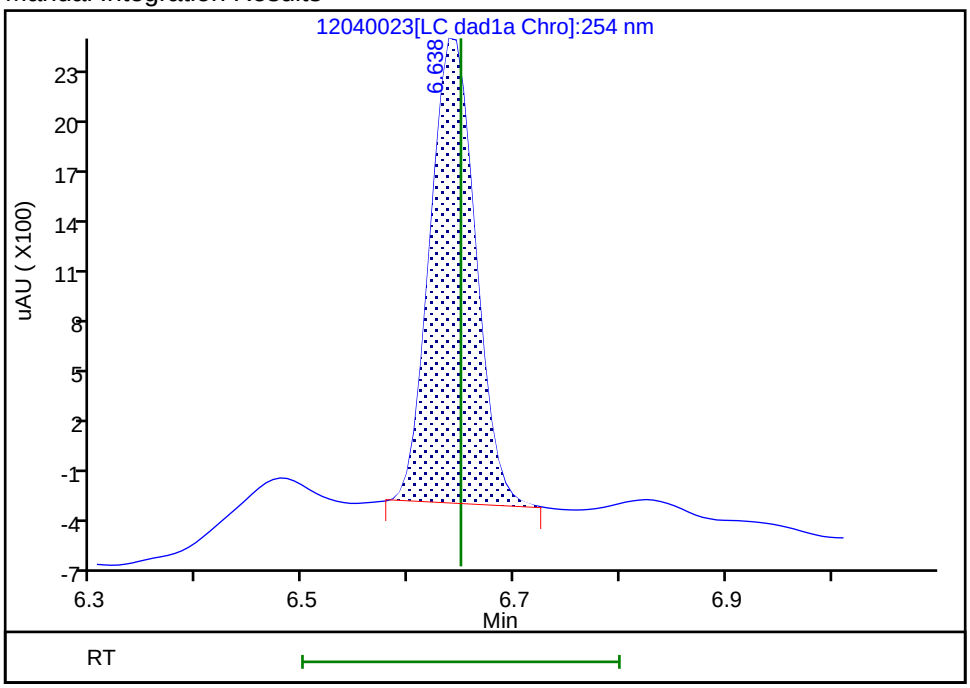
Processing Integration Results

RT: 6.64
Area: 10075
Amount: 0.104239
Amount Units: ug/mL



Manual Integration Results

RT: 6.64
Area: 7973
Amount: 0.082491
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 11:08:21 -07:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

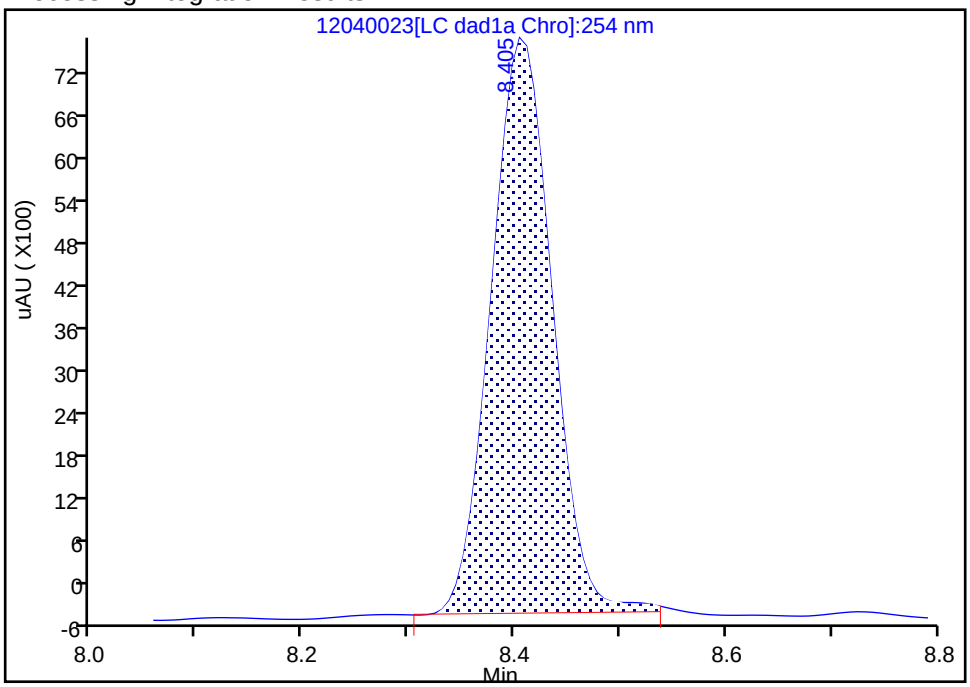
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Injection Date:	04-Dec-2024 21:23:13	Instrument ID:	CHHPLC_X3		
Lims ID:	280-200203-A-1-A	Lab Sample ID:	280-200203-1		
Client ID:	P3HWMU-CONTAM-001-002				
Operator ID:	JZ	ALS Bottle#:	23	Worklist Smp#:	23
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

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

Signal: 1

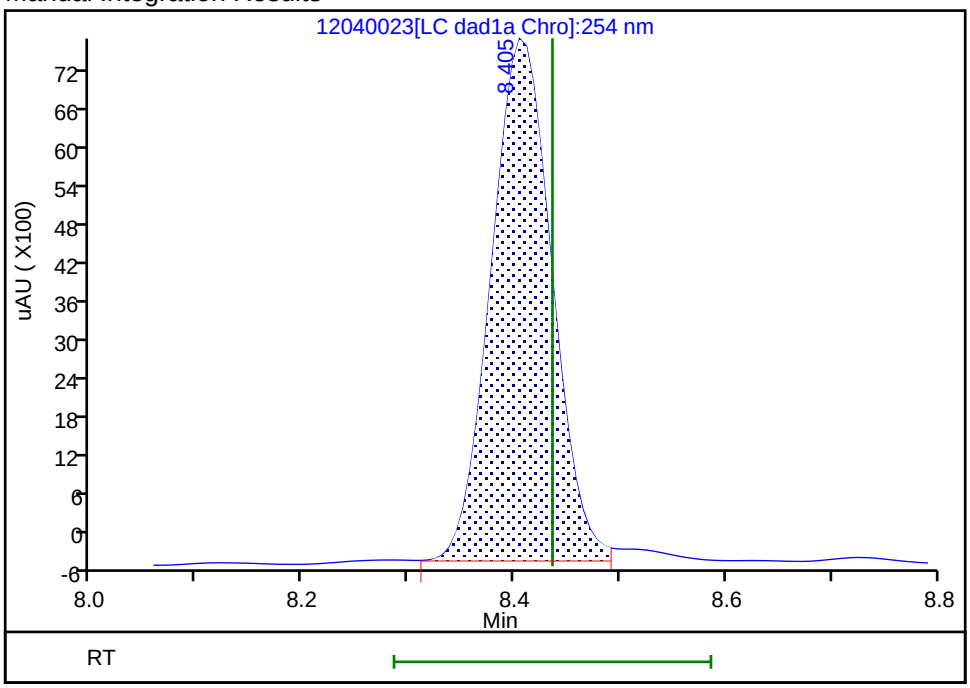
Processing Integration Results

RT: 8.40
Area: 32313
Amount: 0.247780
Amount Units: ug/mL



Manual Integration Results

RT: 8.40
Area: 32261
Amount: 0.247382
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 11:08:31 -07:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Baseline

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-200203-1

SDG No.:

Client Sample ID: P3HWMU-CONTAM-001-002 | Lab Sample ID: 280-200203-1

Matrix: Solid | Lab File ID: 12050012.D

Analysis Method: 8330B MOD | Date Collected: 12/02/2024 11:53

Extraction Method: 8330B | Date Extracted: 12/03/2024 17:54

Sample wt/vol: +10.09(g) | Date Analyzed: 12/05/2024 19:53

Con. Extract Vol.: 40(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: Luna-phenylhex ID: 4.6(mm)

% Moisture: 8.4 % Solids: 91.6 | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 677524 | Units: mg/Kg

Preparation Batch No.: 677232 | Instrument ID: CHHPLC_G2_LUNA

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene (Surr)	92		78-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\G2_LUNA\20241205-140496.b\12050012.D
Lims ID: 280-200203-A-1-A
Client ID: P3HWMU-CONTAM-001-002
Sample Type: Client
Inject. Date: 05-Dec-2024 19:53:59 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-200203-A-1-A
Operator ID: JZ Instrument ID: CHHPLC_G2_LUNA

Method: \\chromfs\Denver\ChromData\G2_LUNA\20241205-140496.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 06-Dec-2024 12:41:24 Calib Date: 25-Apr-2024 07:39:21
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\G2_LUNA\20240424-132624.b\04240027.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX1606

First Level Reviewer: LV5D Date: 06-Dec-2024 12:35:23

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1	2,6-diamino-4-nitrotoluene	1		4.182			ND	7
2	2,4-diamino-6-nitrotoluene	1		4.695			ND	
3	TNX	1		5.169			ND	
4	DNX	1		5.969			ND	
6	HMX	1	6.520	6.558	-0.038	14700	0.0844	
7	MNX	1	7.333	7.402	-0.069	2121	0.008038	
5	2,4,6-Trinitrophenol	1		7.898			ND	
8	RDX	1	8.673	8.725	-0.052	62785	0.3027	
9	Nitrobenzene	1		11.291			ND	
$ 10	1,2-Dinitrobenzene	1	12.107	12.151	-0.044	59713	0.2308	
11	3,5-Dinitroaniline	1		13.924			ND	7
12	1,3-Dinitrobenzene	1		14.271			ND	
13	Nitroglycerin	2		14.664			ND	
14	o-Nitrotoluene	1		15.324			ND	7
15	p-Nitrotoluene	1		15.551			ND	
16	4-Amino-2,6-dinitrotoluene	1	15.940	15.978	-0.038	13834	0.0486	
17	m-Nitrotoluene	1		16.378			ND	
18	2-Amino-4,6-dinitrotoluene	1	16.727	16.751	-0.024	22191	0.0547	
19	1,3,5-Trinitrobenzene	1		17.038			ND	
26	Triamine Trinitrobenzene	1		17.233			ND	
20	2,6-Dinitrotoluene	1		18.104			ND	
21	2,4-Dinitrotoluene	1		18.538			ND	
22	Tetryl	1		21.585			ND	7
23	2,4,6-Trinitrotoluene	1	22.527	22.505	0.022	40180	0.1005	
24	PETN	2		23.551			ND	
25	Ammonium Picrate	1		0.000			ND	

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection

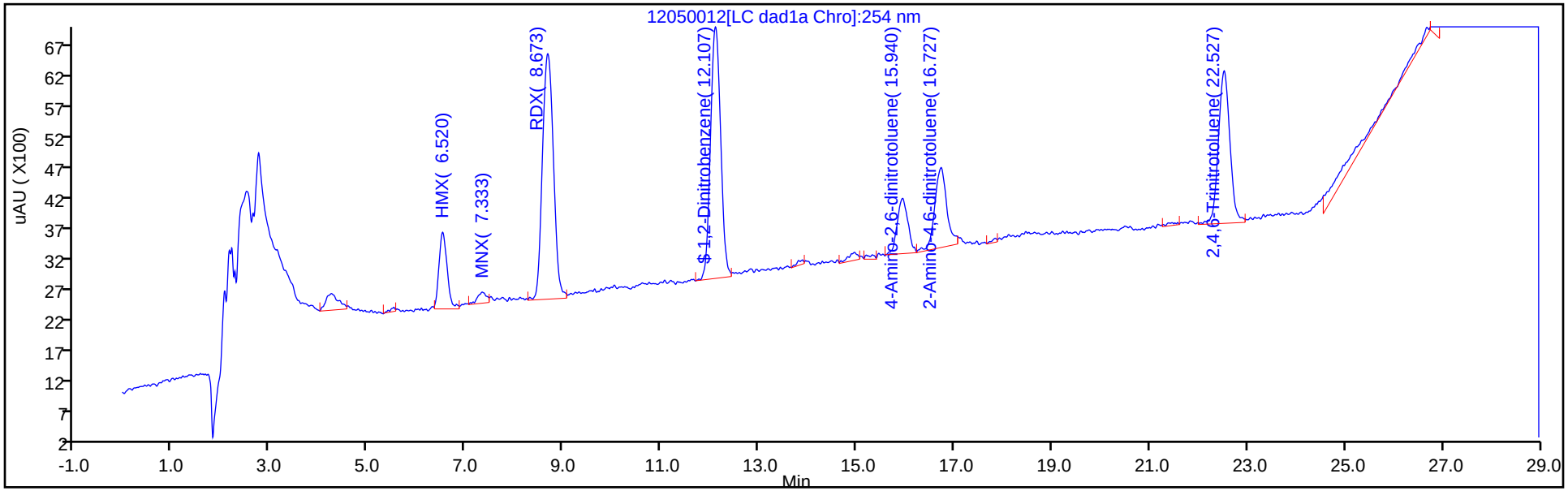
Report Date: 06-Dec-2024 12:41:27 Chrom Revision: 2.3 12-Nov-2024 16:55:22

Eurofins Denver

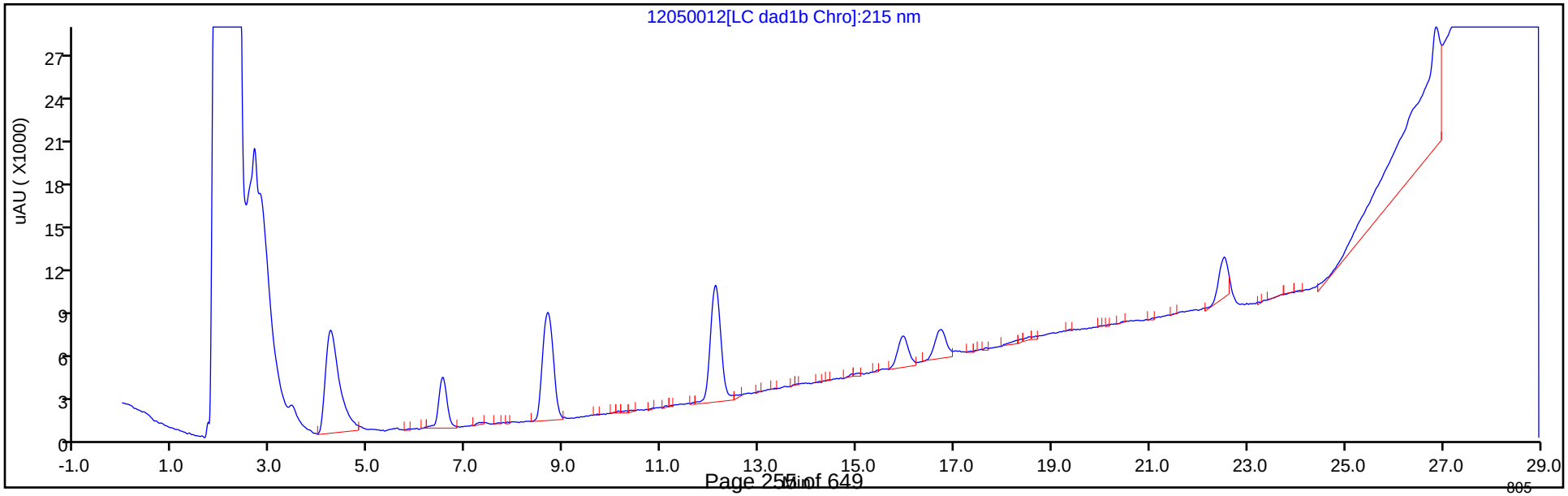
Data File: \\chromfs\denver\chromdata\g2_luna\20241205-140496.b\12050012.d

Injection Date:	05-Dec-2024 19:53:59	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	JZ
Lims ID:	280-200203-A-1-A	Lab Sample ID:	280-200203-1	Worklist Smp#:	12
Client ID:	P3HWMU-CONTAM-001-002				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



805

Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\G2_LUNA\20241205-140496.b\12050012.D				
Lims ID:	280-200203-A-1-A				
Client ID:	P3HWMU-CONTAM-001-002				
Sample Type:	Client				
Inject. Date:	05-Dec-2024 19:53:59	ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-200203-A-1-A				
Operator ID:	JZ	Instrument ID:	CHHPLC_G2_LUNA		
Method:	\\chromfs\Denver\ChromData\G2_LUNA\20241205-140496.b\G2_8330_Luna.m				
Limit Group:	GCSV - 8330				
Last Update:	06-Dec-2024 12:41:24	Calib Date:	25-Apr-2024 07:39:21		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\G2_LUNA\20240424-132624.b\04240027.D				
Column 1 :	Luna-Phenyl hexyl (4.60 mm)		Det: LC DAD1A, 254 nm		
Process Host:	CTX1606				

First Level Reviewer: LV5D Date: 06-Dec-2024 12:35:23

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2500	0.2308	92.33

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-200203-1

SDG No.:

Client Sample ID: P3HWMU-CONTAM-003-002 | Lab Sample ID: 280-200203-2

Matrix: Solid | Lab File ID: 12040024.D

Analysis Method: 8330B MOD | Date Collected: 12/02/2024 12:44

Extraction Method: 8330B | Date Extracted: 12/03/2024 17:54

Sample wt/vol: +10.30(g) | Date Analyzed: 12/04/2024 21:45

Con. Extract Vol.: 40(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: 8.1 % Solids: 91.9 | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 677391 | Units: mg/Kg

Preparation Batch No.: 677232 | Instrument ID: CHHPLC_X3

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	0.042	U	0.11	0.042	0.015
99-65-0	1,3-Dinitrobenzene	0.042	U	0.11	0.042	0.018
118-96-7	2,4,6-Trinitrotoluene	0.64	M	0.11	0.074	0.032
121-14-2	2,4-Dinitrotoluene	0.042	U	0.11	0.042	0.016
606-20-2	2,6-Dinitrotoluene	0.042	U	0.11	0.042	0.020
35572-78-2	2-Amino-4,6-dinitrotoluene	0.10	J M	0.11	0.074	0.035
88-72-2	o-Nitrotoluene	0.11	U	0.21	0.11	0.050
99-08-1	m-Nitrotoluene	0.16	U	0.21	0.16	0.068
19406-51-0	4-Amino-2,6-dinitrotoluene	0.15	M	0.11	0.074	0.032
99-99-0	p-Nitrotoluene	0.11	U	0.21	0.11	0.039
98-95-3	Nitrobenzene	0.21	U	0.32	0.21	0.090
55-63-0	Nitroglycerin	0.74	U	2.1	0.74	0.23
2691-41-0	HMX	0.19	M	0.11	0.074	0.024
78-11-5	PETN	1.1	U	2.1	1.1	0.52
121-82-4	RDX	0.47		0.21	0.11	0.045
479-45-8	Tetryl	0.11	U	0.21	0.11	0.046

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene (Surr)	102		78-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20241204-140455.b\12040024.D
Lims ID: 280-200203-A-2-A
Client ID: P3HWMU-CONTAM-003-002
Sample Type: Client
Inject. Date: 04-Dec-2024 21:45:03 ALS Bottle#: 24 Worklist Smp#: 24
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-200203-A-2-A
Operator ID: JZ Instrument ID: CHHPLC_X3

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20241204-140455.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 05-Dec-2024 11:14:25 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: CTX1637

First Level Reviewer: LV5D Date: 05-Dec-2024 11:09:06

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/mL	Flags
	1 Triamine Trinitrobenzene	1		2.444			ND	
	2 2,6-diamino-4-nitrotoluene	1	6.474	6.501	-0.027	1255	-0.008224	7M
	3 TNX	1		6.511			ND	
	4 HMX	1	6.641	6.649	-0.008	4449	0.0460	M
	5 2,4-diamino-6-nitrotoluene	1		6.681			ND	
	6 DNX	1		6.824			ND	
	7 MNX	1	7.221	7.224	-0.003	835	0.006281	
	8 RDX	1	7.568	7.576	-0.008	11800	0.1109	
	9 2,4,6-Trinitrophenol	1		7.949			ND	
$	10 1,2-Dinitrobenzene	1	8.421	8.436	-0.015	33181	0.2544	
	11 1,3,5-Trinitrobenzene	1		8.543			ND	
	12 1,3-Dinitrobenzene	1		9.089			ND	
	13 Nitrobenzene	1		9.402			ND	
	14 3,5-Dinitroaniline	1	9.574	9.589	-0.015	802	0.003773	
	15 Tetryl	1		9.702			ND	
	16 Nitroglycerin	2		10.142			ND	
	17 2,4,6-Trinitrotoluene	1	10.474	10.489	-0.015	32740	0.1507	M
	18 4-Amino-2,6-dinitrotoluene	1	10.601	10.622	-0.021	5870	0.0365	M
	19 2-Amino-4,6-dinitrotoluene	1	10.827	10.849	-0.022	5059	0.0247	M
	20 2,6-Dinitrotoluene	1		10.989			ND	
	21 2,4-Dinitrotoluene	1		11.142			ND	
	22 o-Nitrotoluene	1		11.816			ND	
	23 p-Nitrotoluene	1		12.169			ND	
	24 m-Nitrotoluene	1		12.662			ND	
	25 PETN	2		13.669			ND	
	26 Ammonium Picrate	1		0.000			ND	

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection

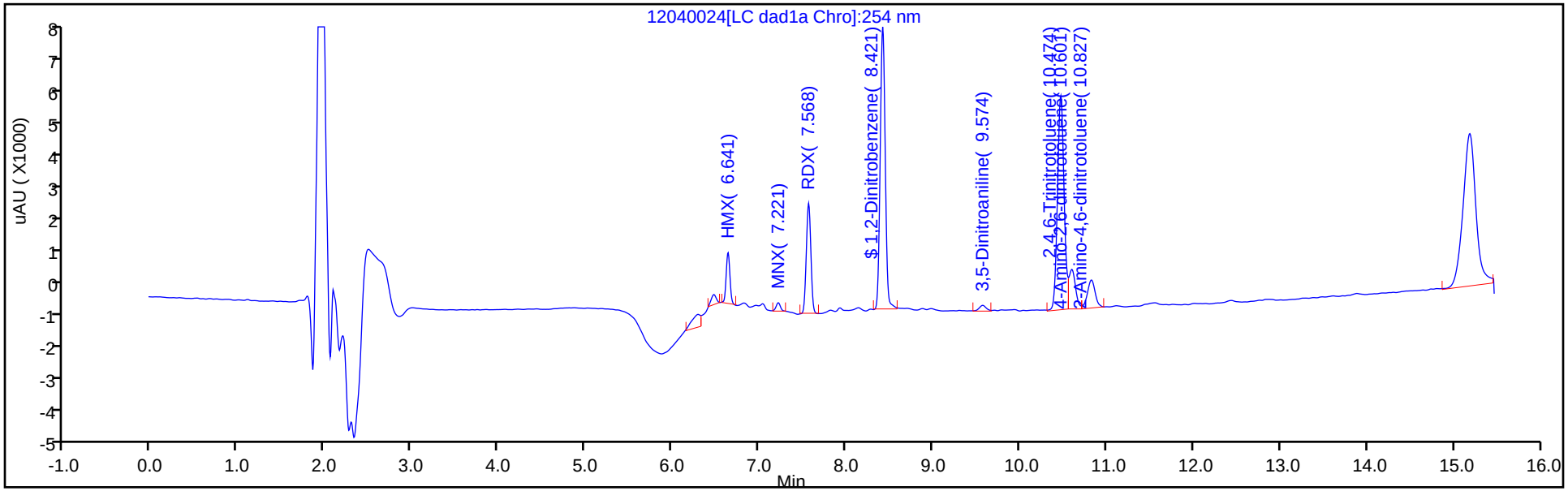
Review Flags
M - Manually Integrated

Report Date: 05-Dec-2024 11:14:29 Chrom Revision: 2.3 12-Nov-2024 16:55:22

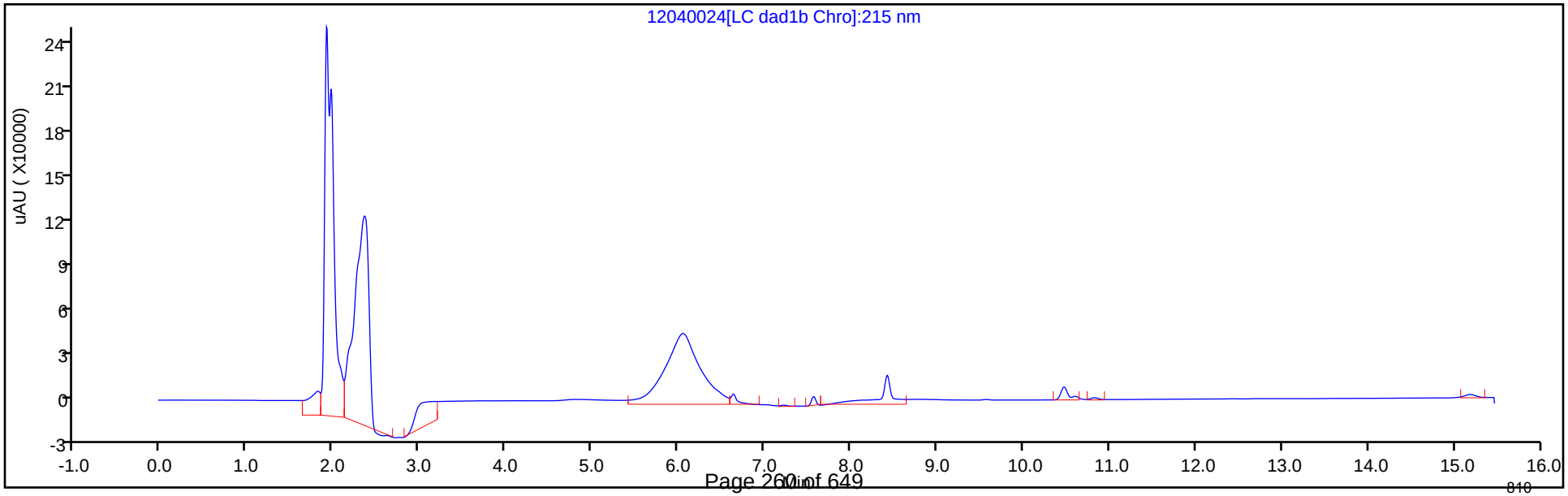
Eurofins Denver

Data File:	\\chromfs\denver\chromdata\chhplc_x\20241204-140455.b\12040024.d				
Injection Date:	04-Dec-2024 21:45:03	Instrument ID:	CHHPLC_X3	Operator ID:	JZ
Lims ID:	280-200203-A-2-A	Lab Sample ID:	280-200203-2	Worklist Smp#:	24
Client ID:	P3HWMU-CONTAM-003-002				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



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\20241204-140455.b\12040024.D				
Lims ID:	280-200203-A-2-A				
Client ID:	P3HWMU-CONTAM-003-002				
Sample Type:	Client				
Inject. Date:	04-Dec-2024 21:45:03	ALS Bottle#:	24	Worklist Smp#:	24
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-200203-A-2-A				
Operator ID:	JZ	Instrument ID:	CHHPLC_X3		
Method:	\\chromfs\Denver\ChromData\CHHPLC_X\20241204-140455.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	05-Dec-2024 11:14:25	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:	CTX1637				

First Level Reviewer: LV5D Date: 05-Dec-2024 11:09:06

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2500	0.2544	101.77

Manual Integration/User Assign Peak Report

Eurofins Denver

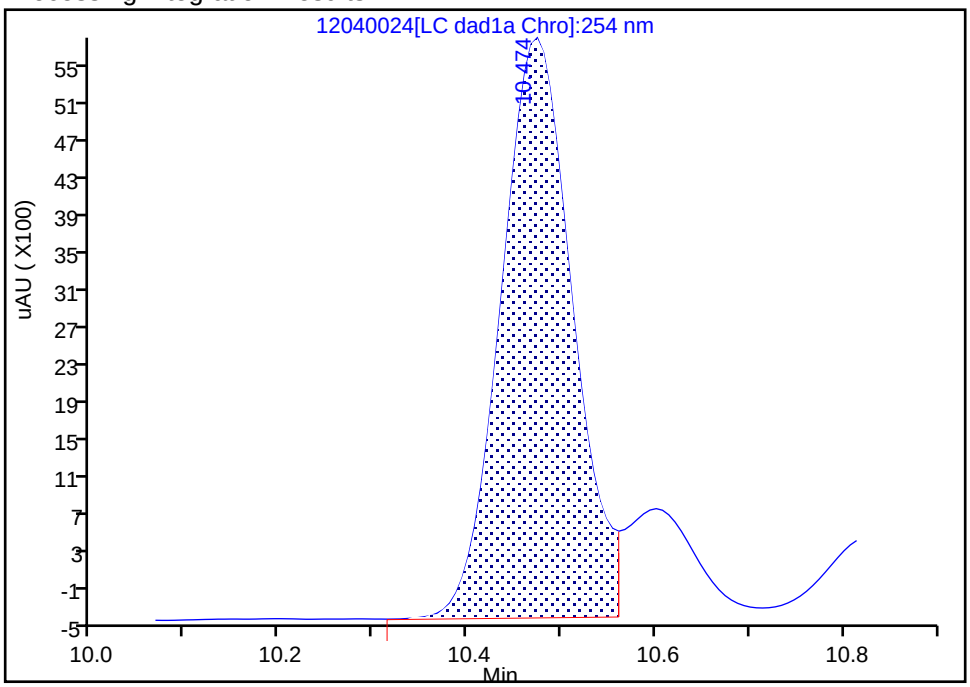
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241204-140455.b\12040024.d				
Injection Date:	04-Dec-2024 21:45:03	Instrument ID:	CHHPLC_X3		
Lims ID:	280-200203-A-2-A	Lab Sample ID:	280-200203-2		
Client ID:	P3HWMU-CONTAM-003-002				
Operator ID:	JZ	ALS Bottle#:	24	Worklist Smp#:	24
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

17 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

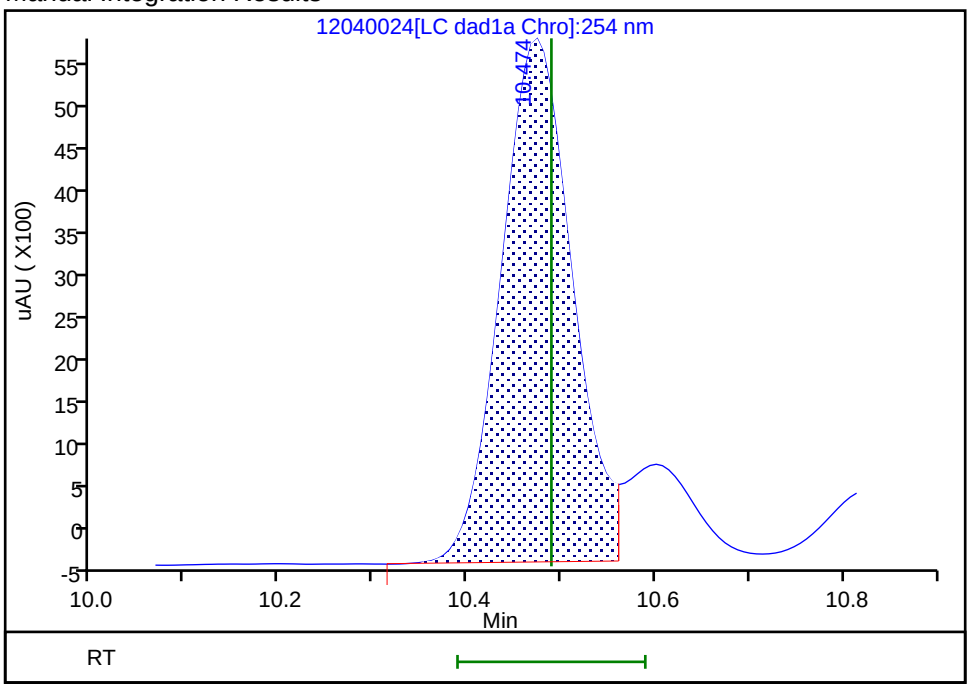
Processing Integration Results

RT: 10.47
Area: 32733
Amount: 0.150636
Amount Units: ug/mL



Manual Integration Results

RT: 10.47
Area: 32740
Amount: 0.150668
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 11:09:04 -07:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Eurofins Denver

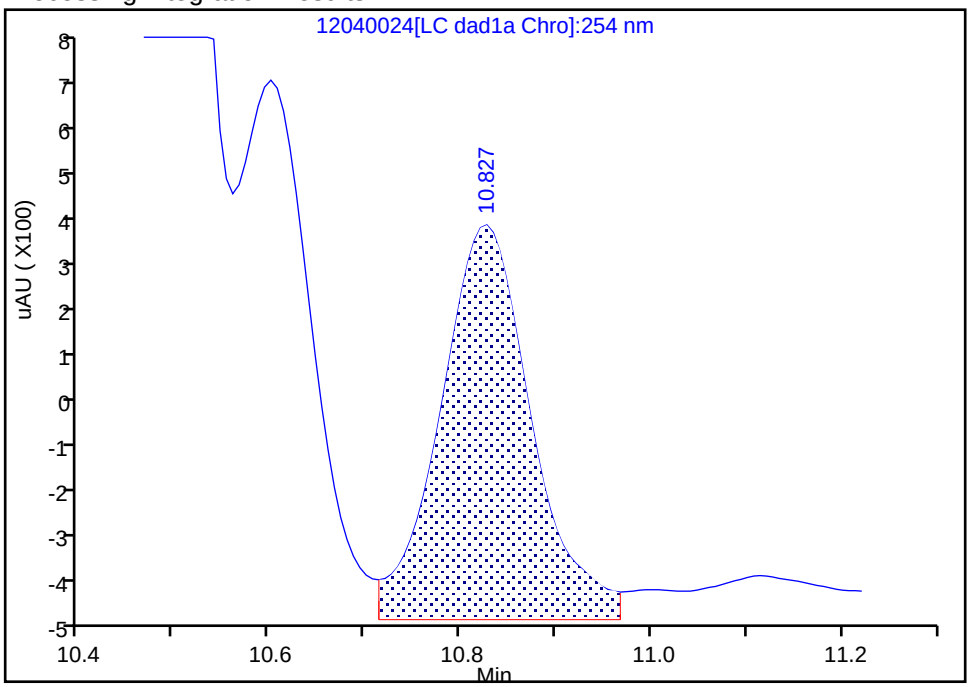
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241204-140455.b\12040024.d				
Injection Date:	04-Dec-2024 21:45:03	Instrument ID:	CHHPLC_X3		
Lims ID:	280-200203-A-2-A	Lab Sample ID:	280-200203-2		
Client ID:	P3HWMU-CONTAM-003-002				
Operator ID:	JZ	ALS Bottle#:	24	Worklist Smp#:	24
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

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

Signal: 1

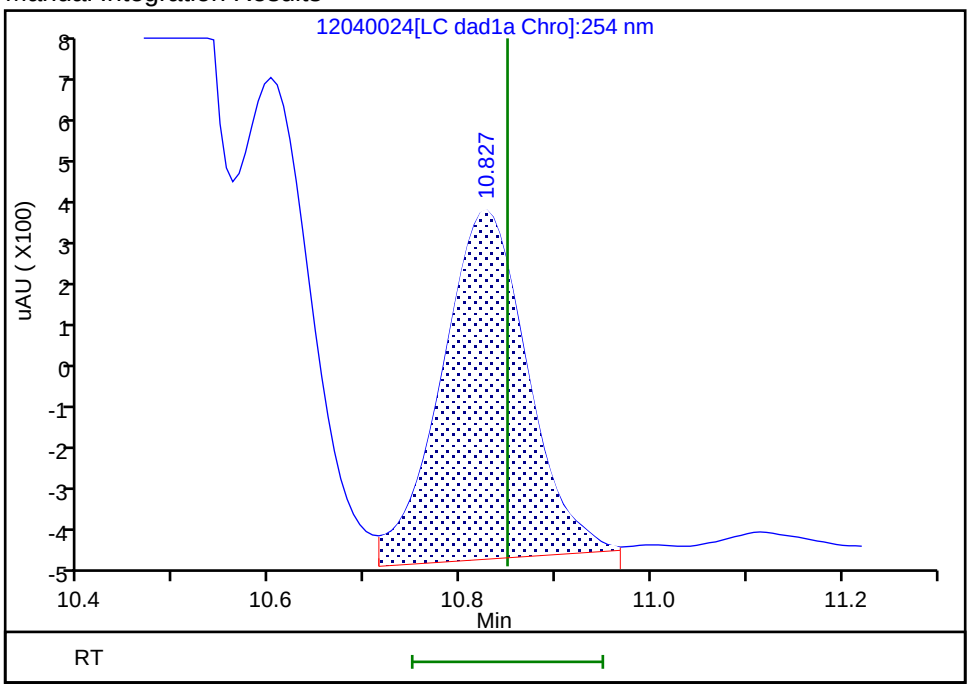
Processing Integration Results

RT: 10.83
Area: 5568
Amount: 0.027223
Amount Units: ug/mL



Manual Integration Results

RT: 10.83
Area: 5059
Amount: 0.024735
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 11:09:04 -07:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

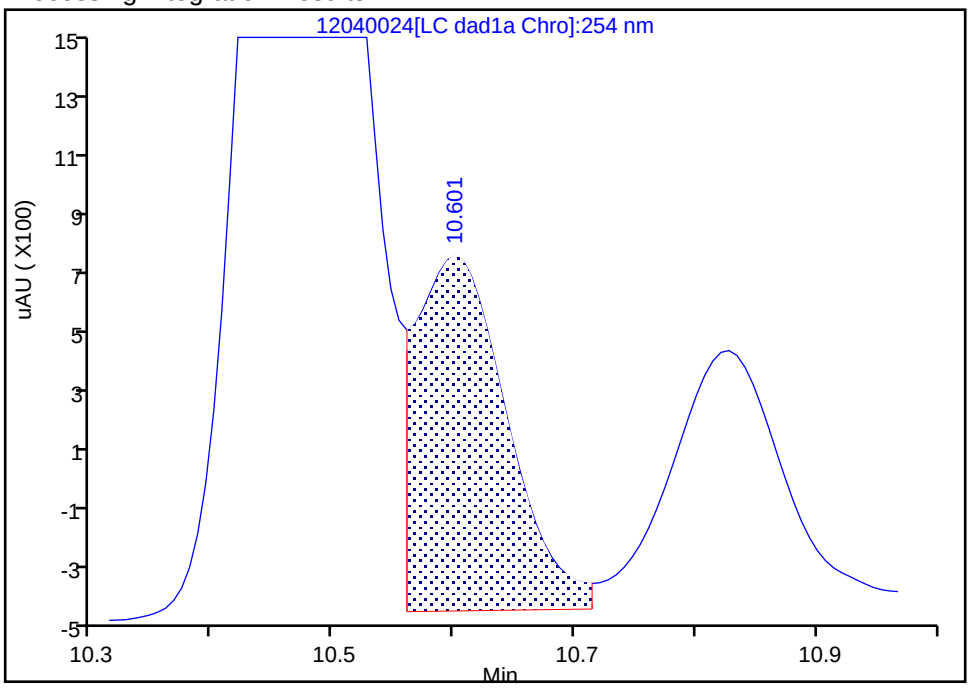
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241204-140455.b\12040024.d				
Injection Date:	04-Dec-2024 21:45:03	Instrument ID:	CHHPLC_X3		
Lims ID:	280-200203-A-2-A	Lab Sample ID:	280-200203-2		
Client ID:	P3HWMU-CONTAM-003-002				
Operator ID:	JZ	ALS Bottle#:	24	Worklist Smp#:	24
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

18 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

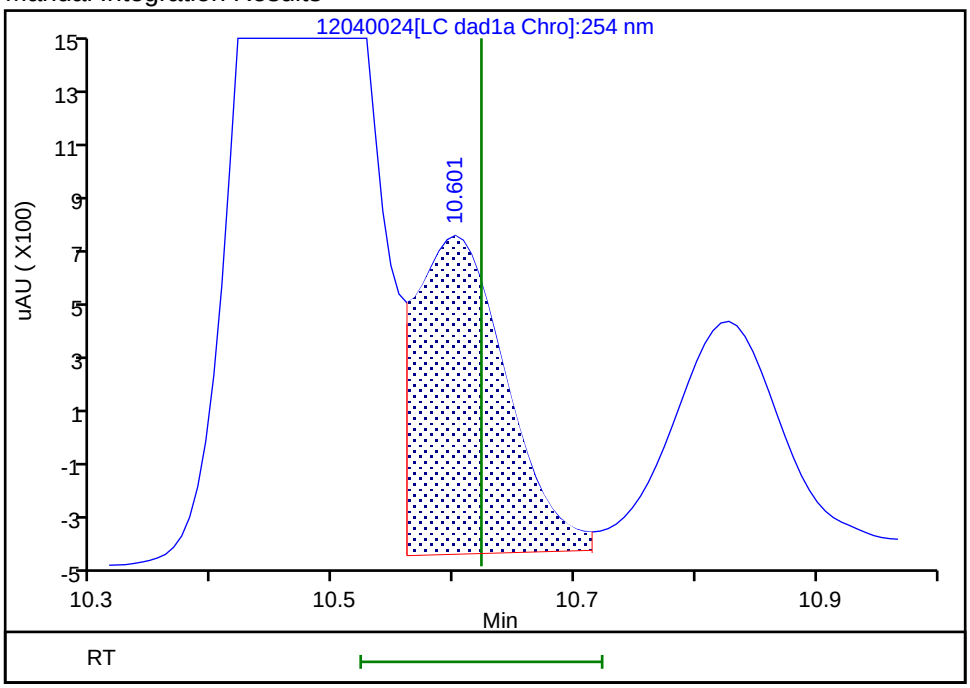
Processing Integration Results

RT: 10.60
Area: 5944
Amount: 0.037007
Amount Units: ug/mL



Manual Integration Results

RT: 10.60
Area: 5870
Amount: 0.036492
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 11:09:04 -07:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

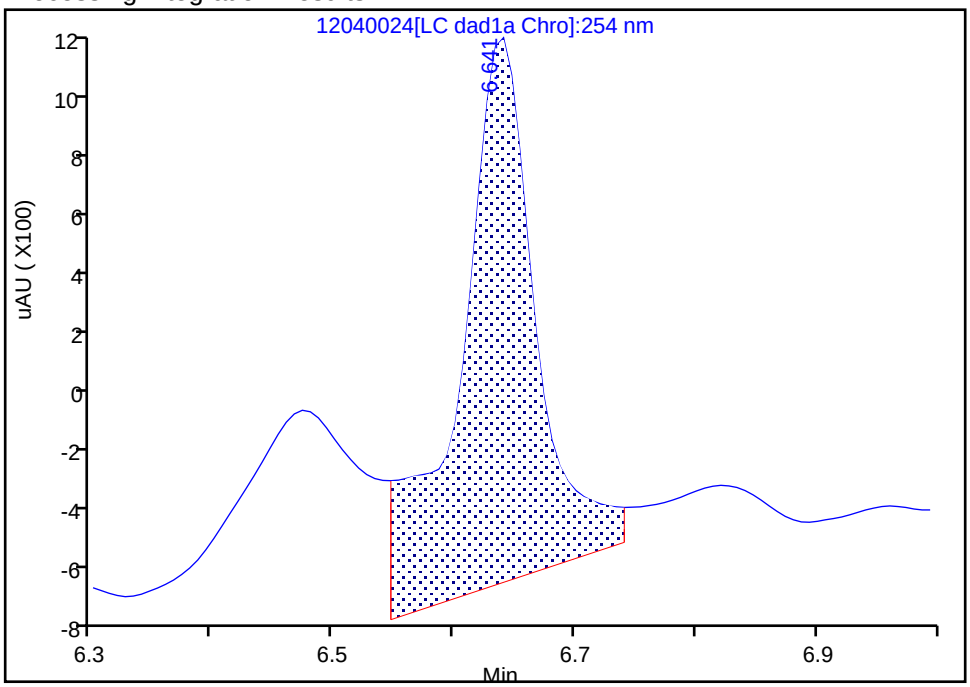
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241204-140455.b\12040024.d				
Injection Date:	04-Dec-2024 21:45:03	Instrument ID:	CHHPLC_X3		
Lims ID:	280-200203-A-2-A	Lab Sample ID:	280-200203-2		
Client ID:	P3HWMU-CONTAM-003-002				
Operator ID:	JZ	ALS Bottle#:	24	Worklist Smp#:	24
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

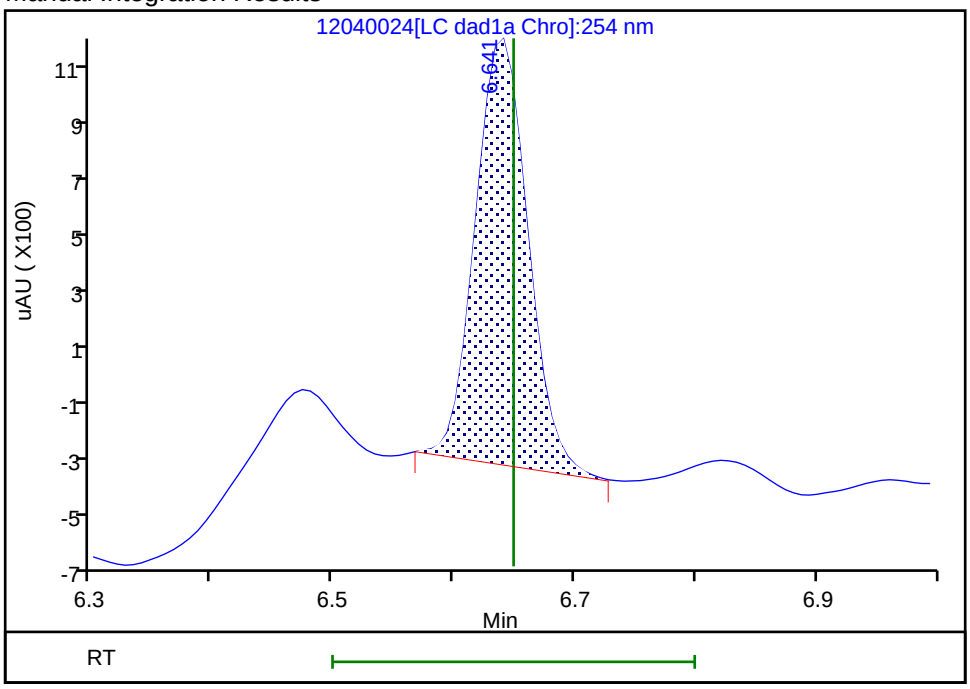
Processing Integration Results

RT: 6.64
Area: 7883
Amount: 0.081560
Amount Units: ug/mL



Manual Integration Results

RT: 6.64
Area: 4449
Amount: 0.046031
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 11:08:50 -07:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-200203-1

SDG No.:

Client Sample ID: P3HWMU-CONTAM-003-002 | Lab Sample ID: 280-200203-2

Matrix: Solid | Lab File ID: 12060010.D

Analysis Method: 8330B MOD | Date Collected: 12/02/2024 12:44

Extraction Method: 8330B | Date Extracted: 12/03/2024 17:54

Sample wt/vol: +10.30(g) | Date Analyzed: 12/06/2024 16:28

Con. Extract Vol.: 40(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: Luna-phenylhex ID: 4.6(mm)

% Moisture: 8.1 % Solids: 91.9 | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 677657 | Units: mg/Kg

Preparation Batch No.: 677232 | Instrument ID: CHHPLC_G2_LUNA

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene (Surr)	90	*M*	78-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\G2_LUNA\20241206-140534.b\12060010.D
Lims ID: 280-200203-A-2-A
Client ID: P3HWMU-CONTAM-003-002
Sample Type: Client
Inject. Date: 06-Dec-2024 16:28:50 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-200203-A-2-A
Operator ID: JZ Instrument ID: CHHPLC_G2_LUNA

Method: \\chromfs\Denver\ChromData\G2_LUNA\20241206-140534.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 06-Dec-2024 20:12:13 Calib Date: 25-Apr-2024 07:39:21
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\G2_LUNA\20240424-132624.b\04240027.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX1606

First Level Reviewer: LV5D Date: 06-Dec-2024 17:09:13

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1	2,6-diamino-4-nitrotoluene	1		4.182			ND	7
2	2,4-diamino-6-nitrotoluene	1		4.695			ND	
3	TNX	1		5.169			ND	
4	DNX	1		5.969			ND	
6	HMX	1	6.522	6.567	-0.045	8294	0.0476	
7	MNX	1		7.402			ND	U
5	2,4,6-Trinitrophenol	1		7.840			ND	
8	RDX	1	8.656	8.734	-0.078	20278	0.0960	M
9	Nitrobenzene	1		11.293			ND	
$ 10	1,2-Dinitrobenzene	1	12.082	12.140	-0.058	58255	0.2252	M
11	3,5-Dinitroaniline	1		13.893			ND	
12	1,3-Dinitrobenzene	1		14.247			ND	7
13	Nitroglycerin	2		14.633			ND	7
14	o-Nitrotoluene	1		15.300			ND	
15	p-Nitrotoluene	1		15.520			ND	
16	4-Amino-2,6-dinitrotoluene	1	15.902	15.940	-0.038	11889	0.0414	
17	m-Nitrotoluene	1		16.347			ND	
18	2-Amino-4,6-dinitrotoluene	1	16.682	16.713	-0.031	9578	0.0236	
19	1,3,5-Trinitrobenzene	1		17.013			ND	
26	Triamine Trinitrobenzene	1		17.233			ND	
20	2,6-Dinitrotoluene	1		18.067			ND	
21	2,4-Dinitrotoluene	1		18.507			ND	
22	Tetryl	1		21.554			ND	
23	2,4,6-Trinitrotoluene	1	22.482	22.480	0.002	59459	0.1487	
24	PETN	2		23.527			ND	7
25	Ammonium Picrate	1		0.000			ND	

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection

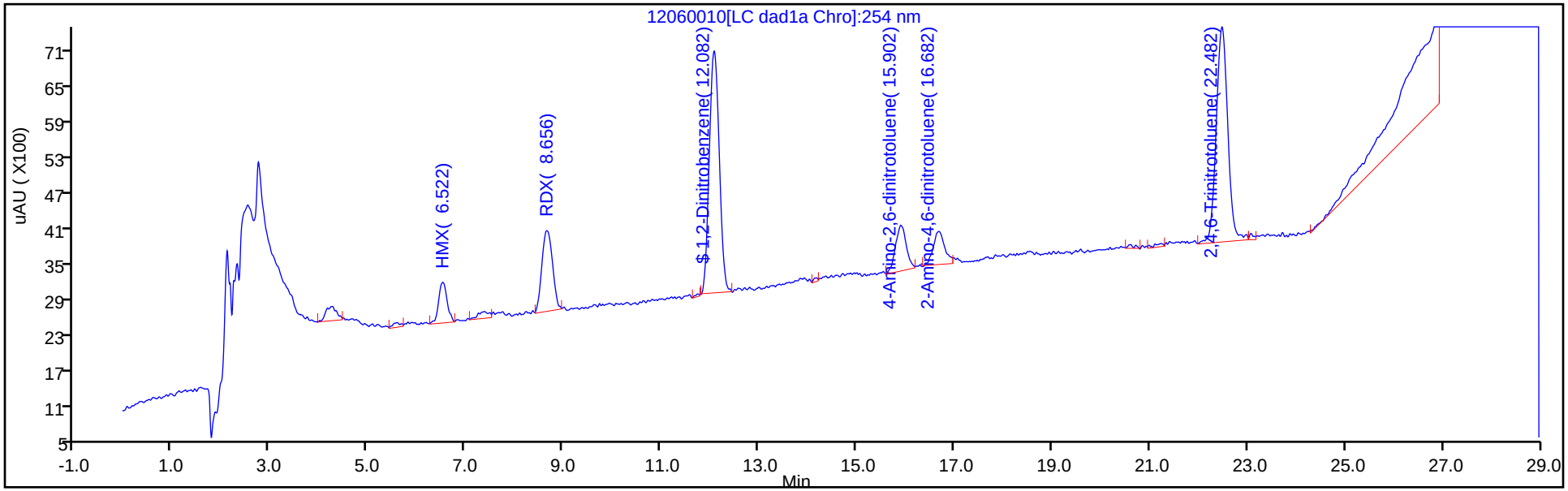
Review Flags
M - Manually Integrated
U - Marked Undetected

Report Date: 06-Dec-2024 20:12:13 Chrom Revision: 2.3 12-Nov-2024 16:55:22

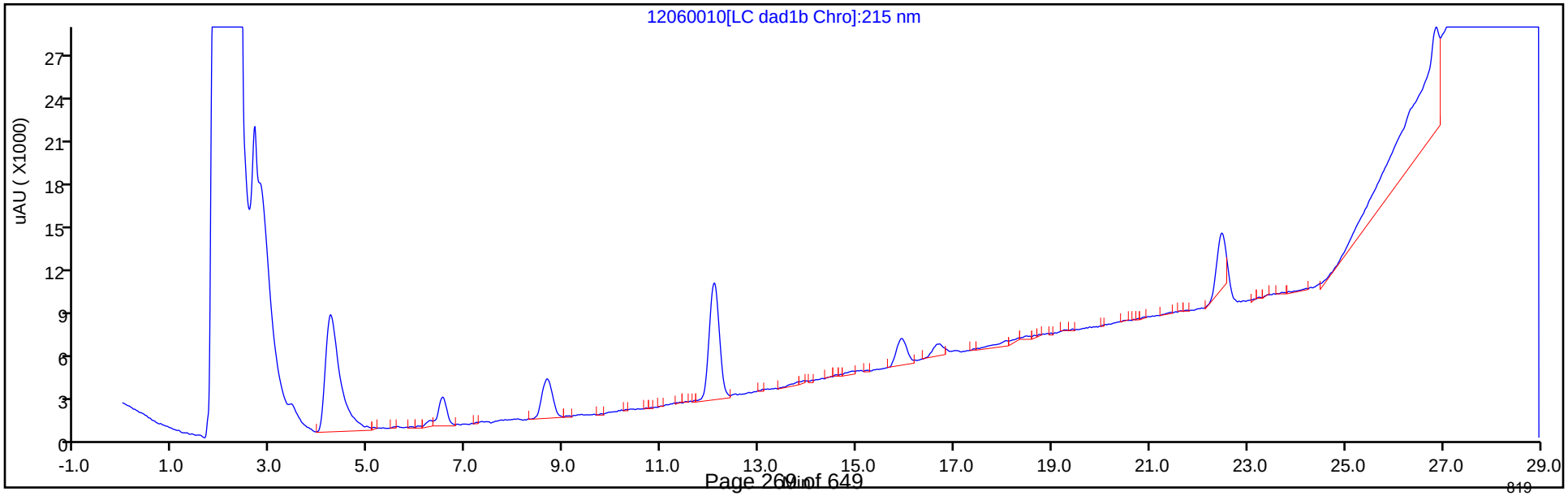
Eurofins Denver

Data File:	\\chromfs\denver\chromdata\g2_luna\20241206-140534.b\12060010.d				
Injection Date:	06-Dec-2024 16:28:50	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	JZ
Lims ID:	280-200203-A-2-A	Lab Sample ID:	280-200203-2	Worklist Smp#:	10
Client ID:	P3HWMU-CONTAM-003-002				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\G2_LUNA\20241206-140534.b\12060010.D				
Lims ID:	280-200203-A-2-A				
Client ID:	P3HWMU-CONTAM-003-002				
Sample Type:	Client				
Inject. Date:	06-Dec-2024 16:28:50	ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-200203-A-2-A				
Operator ID:	JZ	Instrument ID:	CHHPLC_G2_LUNA		
Method:	\\chromfs\Denver\ChromData\G2_LUNA\20241206-140534.b\G2_8330_Luna.m				
Limit Group:	GCSV - 8330				
Last Update:	06-Dec-2024 20:12:13	Calib Date:	25-Apr-2024 07:39:21		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\G2_LUNA\20240424-132624.b\04240027.D				
Column 1 :	Luna-Phenyl hexyl (4.60 mm)		Det: LC DAD1A, 254 nm		
Process Host:	CTX1606				
First Level Reviewer: LV5D		Date:	06-Dec-2024 17:09:13		

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2500	0.2252	90.08

Manual Integration/User Assign Peak Report

Eurofins Denver

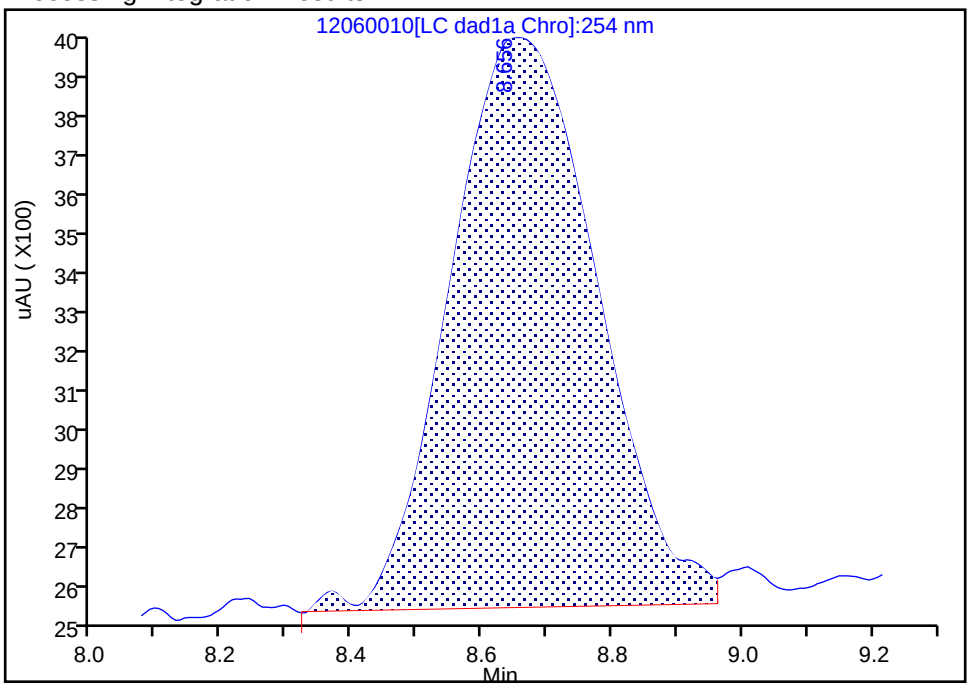
Data File:	\\chromfs\denver\chromdata\g2_luna\20241206-140534.b\12060010.d				
Injection Date:	06-Dec-2024 16:28:50	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-200203-A-2-A	Lab Sample ID:	280-200203-2		
Client ID:	P3HWMU-CONTAM-003-002				
Operator ID:	JZ	ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

8 RDX, CAS: 121-82-4

Signal: 1

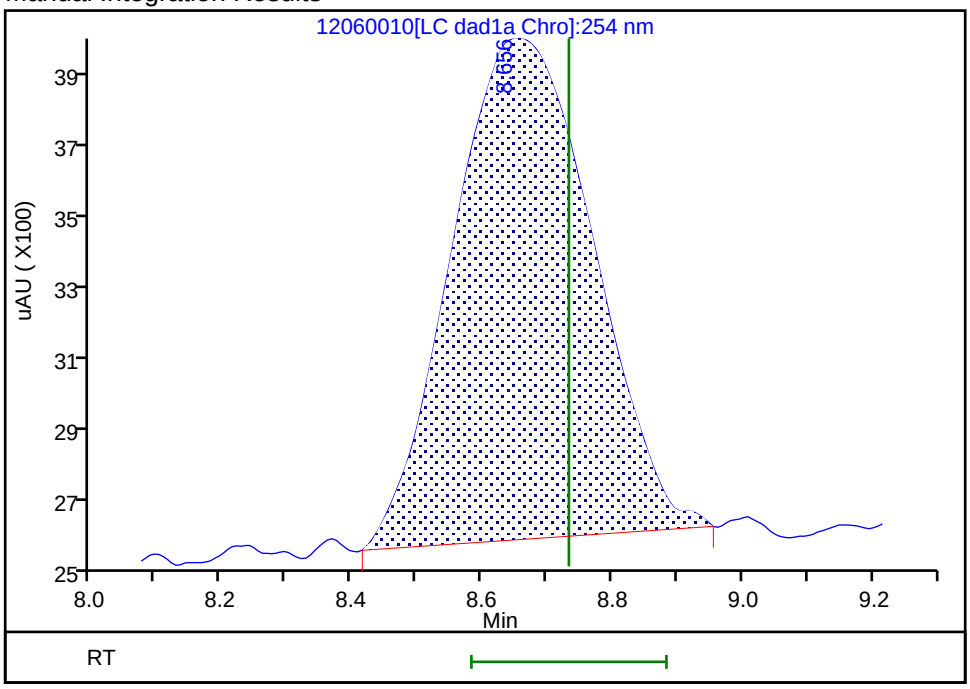
Processing Integration Results

RT: 8.66
Area: 21756
Amount: 0.103169
Amount Units: ug/ml



Manual Integration Results

RT: 8.66
Area: 20278
Amount: 0.095982
Amount Units: ug/ml



Reviewer: LV5D, 06-Dec-2024 17:09:02 -07:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

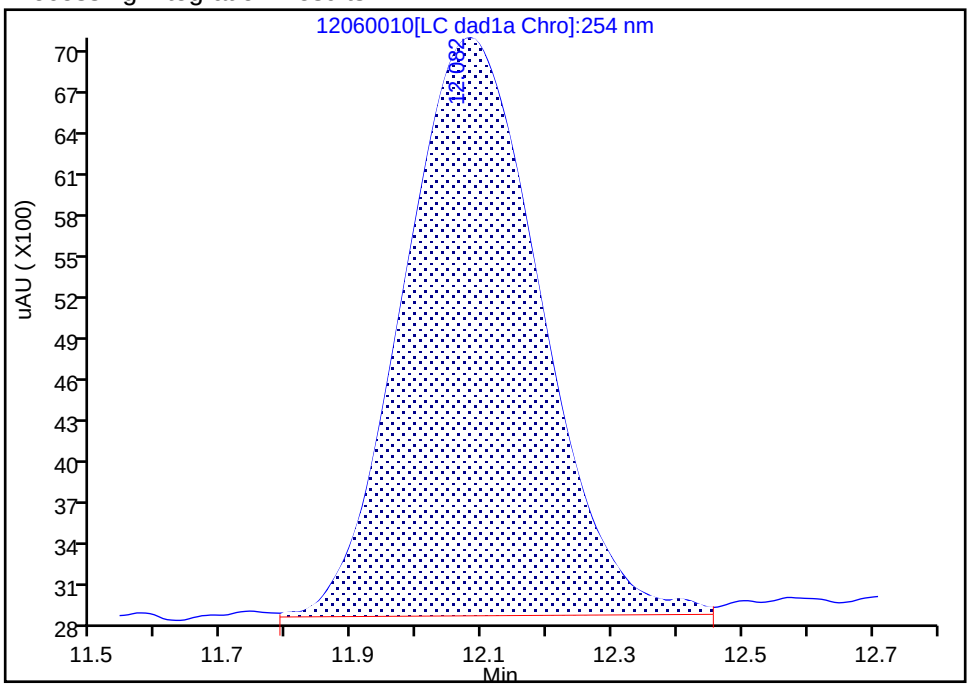
Data File:	\\chromfs\denver\chromdata\g2_luna\20241206-140534.b\12060010.d				
Injection Date:	06-Dec-2024 16:28:50	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-200203-A-2-A	Lab Sample ID:	280-200203-2		
Client ID:	P3HWMU-CONTAM-003-002				
Operator ID:	JZ	ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

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

Signal: 1

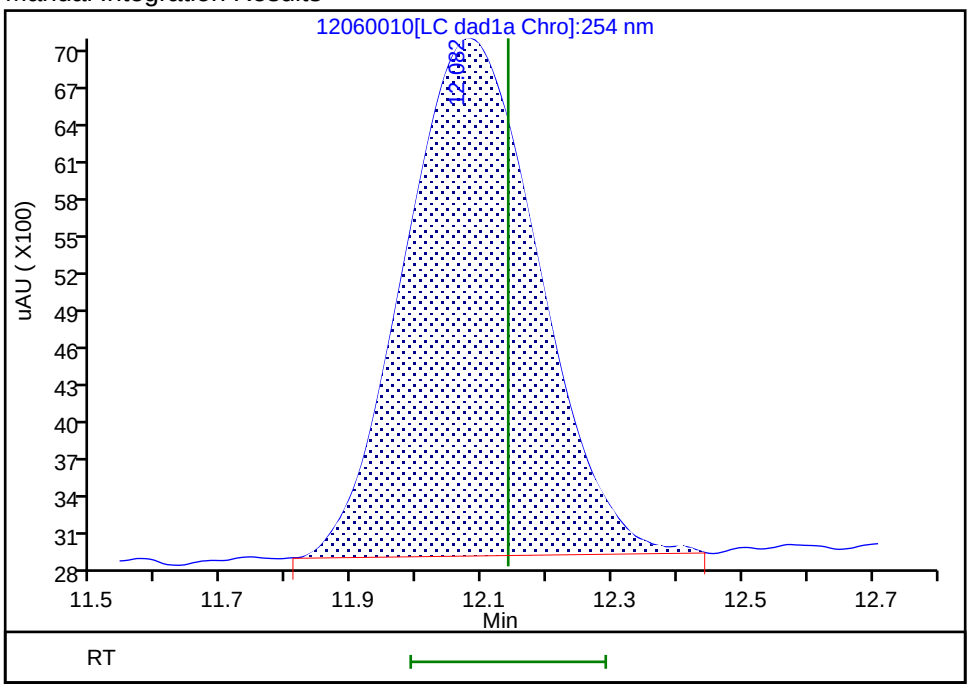
Processing Integration Results

RT: 12.08
Area: 60377
Amount: 0.233396
Amount Units: ug/ml



Manual Integration Results

RT: 12.08
Area: 58255
Amount: 0.225193
Amount Units: ug/ml



Reviewer: LV5D, 06-Dec-2024 17:09:06 -07:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-200203-1

SDG No.:

Client Sample ID: P2-ARROYO-005-002 | Lab Sample ID: 280-200203-3

Matrix: Solid | Lab File ID: 12050011.D

Analysis Method: 8330B MOD | Date Collected: 12/02/2024 11:14

Extraction Method: 8330B | Date Extracted: 12/03/2024 17:54

Sample wt/vol: +10.46(g) | Date Analyzed: 12/05/2024 17:02

Con. Extract Vol.: 40(mL) | Dilution Factor: 200

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: 6.9 % Solids: 93.1 | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 677520 | Units: mg/Kg

Preparation Batch No.: 677232 | Instrument ID: CHHPLC_X3

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	8.2	U	21	8.2	2.8
99-65-0	1,3-Dinitrobenzene	8.2	U	21	8.2	3.4
118-96-7	2,4,6-Trinitrotoluene	830	D	21	14	6.3
121-14-2	2,4-Dinitrotoluene	8.2	U	21	8.2	3.0
606-20-2	2,6-Dinitrotoluene	8.2	U	21	8.2	3.9
35572-78-2	2-Amino-4,6-dinitrotoluene	14	U	21	14	6.8
88-72-2	o-Nitrotoluene	21	U	41	21	9.7
99-08-1	m-Nitrotoluene	31	U	41	31	13
19406-51-0	4-Amino-2,6-dinitrotoluene	14	U	21	14	6.1
99-99-0	p-Nitrotoluene	21	U	41	21	7.5
98-95-3	Nitrobenzene	41	U	62	41	17
55-63-0	Nitroglycerin	140	U	410	140	44
2691-41-0	HMX	14	U	21	14	4.7
78-11-5	PETN	210	U	410	210	100
121-82-4	RDX	21	U	41	21	8.8
479-45-8	Tetryl	21	U	41	21	9.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene (Surr)	0	D Q	78-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20241205-140494.b\12050011.D
Lims ID: 280-200203-A-3-A
Client ID: P2-ARROYO-005-002
Sample Type: Client
Inject. Date: 05-Dec-2024 17:02:53 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 100.0 ul Dil. Factor: 200.0000
Sample Info: 280-200203-A-3-A
Operator ID: JZ Instrument ID: CHHPLC_X3

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20241205-140494.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 06-Dec-2024 11:32:02 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: CTX1606

First Level Reviewer: LV5D Date: 05-Dec-2024 17:55:45

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/mL	Flags
1	Triamine Trinitrobenzene	1		2.444			ND	
2	2,6-diamino-4-nitrotoluene	1		6.501			ND	
3	TNX	1		6.511			ND	U
4	HMX	1		6.642			ND	
5	2,4-diamino-6-nitrotoluene	1		6.681			ND	
6	DNX	1		6.824			ND	
7	MNX	1		7.224			ND	
8	RDX	1		7.568			ND	
9	2,4,6-Trinitrophenol	1		7.928			ND	
$ 10	1,2-Dinitrobenzene	1		8.422			ND	
11	1,3,5-Trinitrobenzene	1		8.528			ND	
12	1,3-Dinitrobenzene	1		9.075			ND	
13	Nitrobenzene	1		9.382			ND	
14	3,5-Dinitroaniline	1		9.568			ND	
15	Tetryl	1		9.675			ND	
16	Nitroglycerin	2		10.108			ND	
17	2,4,6-Trinitrotoluene	1	10.471	10.462	0.009	220208	1.01	
18	4-Amino-2,6-dinitrotoluene	1		10.582			ND	
19	2-Amino-4,6-dinitrotoluene	1		10.808			ND	
20	2,6-Dinitrotoluene	1		10.955			ND	
21	2,4-Dinitrotoluene	1		11.108			ND	
22	o-Nitrotoluene	1		11.775			ND	
23	p-Nitrotoluene	1		12.128			ND	
24	m-Nitrotoluene	1		12.608			ND	
25	PETN	2		13.595			ND	
26	Ammonium Picrate	1		0.000			ND	

QC Flag Legend
Processing Flags

Review Flags
U - Marked Undetected

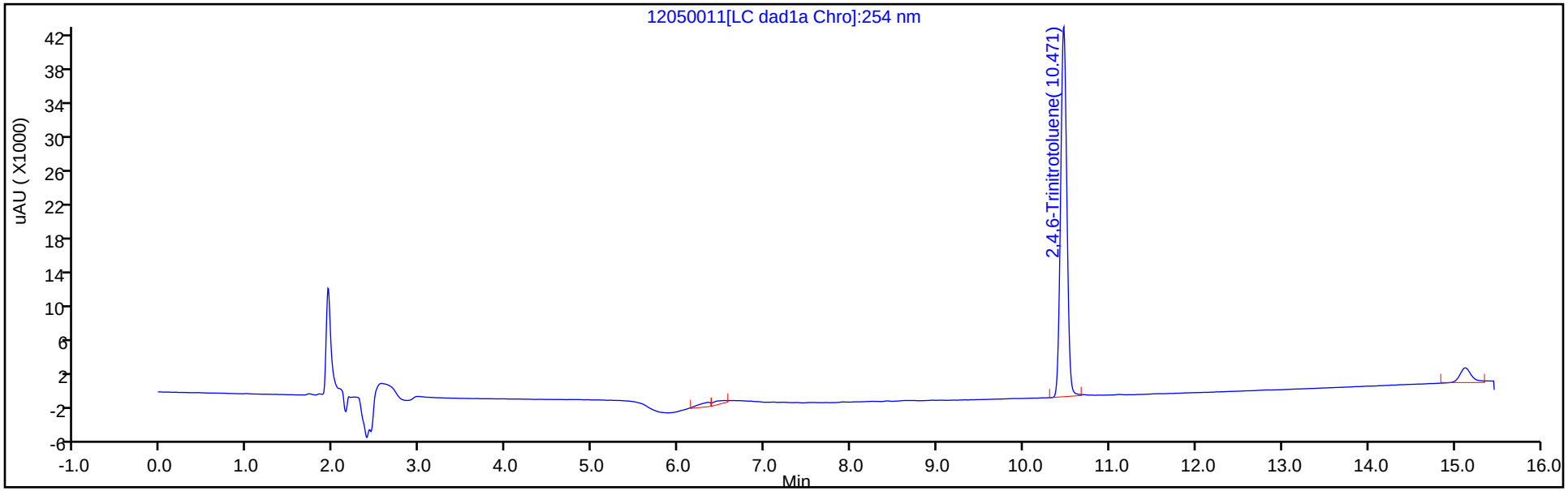
Report Date: 06-Dec-2024 11:32:03 Chrom Revision: 2.3 12-Nov-2024 16:55:22

Eurofins Denver

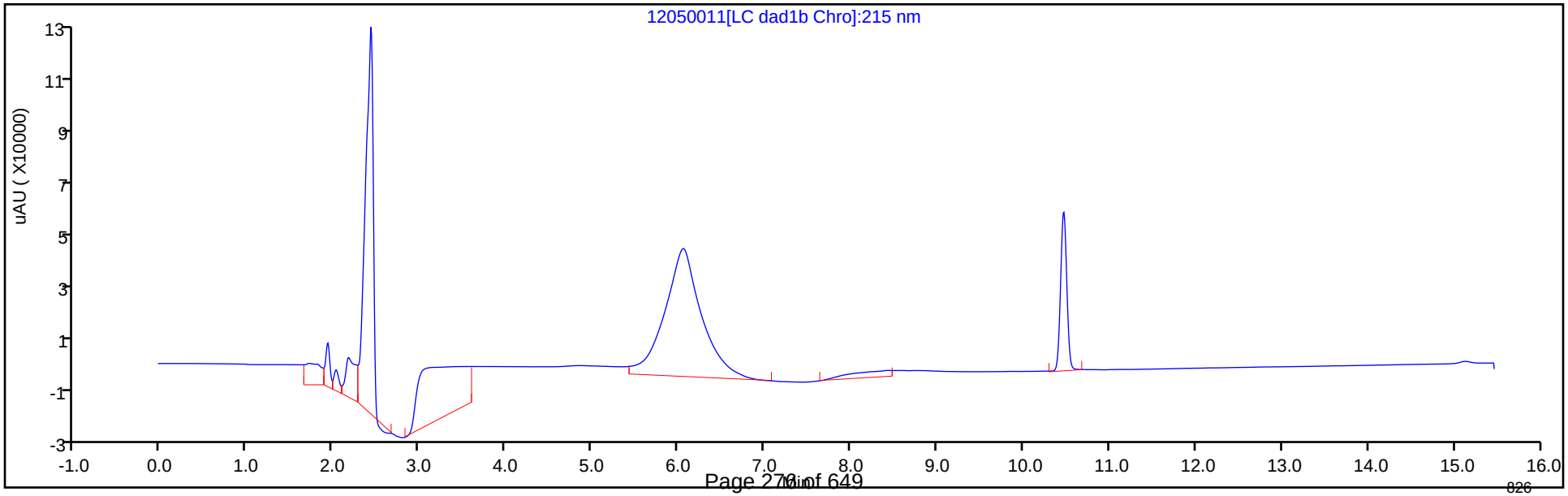
Data File: \\chromfs\denver\chromdata\chhplc_x\20241205-140494.b\12050011.d

Injection Date:	05-Dec-2024 17:02:53	Instrument ID:	CHHPLC_X3	Operator ID:	JZ
Lims ID:	280-200203-A-3-A	Lab Sample ID:	280-200203-3	Worklist Smp#:	11
Client ID:	P2-ARROYO-005-002				
Injection Vol:	100.0 ul	Dil. Factor:	200.0000	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



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-200203-1

SDG No.:

Client Sample ID: P2-ARROYO-005-002 | Lab Sample ID: 280-200203-3

Matrix: Solid | Lab File ID: 12050018.D

Analysis Method: 8330B MOD | Date Collected: 12/02/2024 11:14

Extraction Method: 8330B | Date Extracted: 12/03/2024 17:54

Sample wt/vol: +10.46(g) | Date Analyzed: 12/05/2024 23:29

Con. Extract Vol.: 40(mL) | Dilution Factor: 200

Injection Volume: 100(uL) | GC Column: Luna-phenylhex ID: 4.6(mm)

% Moisture: 6.9 % Solids: 93.1 | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 677524 | Units: mg/Kg

Preparation Batch No.: 677232 | Instrument ID: CHHPLC_G2_LUNA

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene (Surr)	0	*M D Q*	78-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\G2_LUNA\20241205-140496.b\12050018.D
Lims ID: 280-200203-A-3-A
Client ID: P2-ARROYO-005-002
Sample Type: Client
Inject. Date: 05-Dec-2024 23:29:32 ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 100.0 ul Dil. Factor: 200.0000
Sample Info: 280-200203-A-3-A
Operator ID: JZ Instrument ID: CHHPLC_G2_LUNA

Method: \\chromfs\Denver\ChromData\G2_LUNA\20241205-140496.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 06-Dec-2024 12:40:59 Calib Date: 25-Apr-2024 07:39:21
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\G2_LUNA\20240424-132624.b\04240027.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX1606

First Level Reviewer: LV5D Date: 06-Dec-2024 12:35:31

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1	2,6-diamino-4-nitrotoluene	1		4.182			ND	7
2	2,4-diamino-6-nitrotoluene	1		4.695			ND	
3	TNX	1		5.169			ND	
4	DNX	1		5.969			ND	
6	HMX	1		6.558			ND	7
7	MNX	1		7.402			ND	
5	2,4,6-Trinitrophenol	1		7.898			ND	
8	RDX	1		8.725			ND	
9	Nitrobenzene	1		11.291			ND	
$ 10	1,2-Dinitrobenzene	1		12.151			ND	U
11	3,5-Dinitroaniline	1		13.924			ND	
12	1,3-Dinitrobenzene	1		14.271			ND	
13	Nitroglycerin	2		14.664			ND	7
14	o-Nitrotoluene	1		15.324			ND	
15	p-Nitrotoluene	1		15.551			ND	
16	4-Amino-2,6-dinitrotoluene	1		15.978			ND	
17	m-Nitrotoluene	1		16.378			ND	
18	2-Amino-4,6-dinitrotoluene	1		16.751			ND	
19	1,3,5-Trinitrobenzene	1		17.038			ND	
26	Triamine Trinitrobenzene	1		17.233			ND	
20	2,6-Dinitrotoluene	1		18.104			ND	
21	2,4-Dinitrotoluene	1		18.538			ND	7
22	Tetryl	1		21.585			ND	
23	2,4,6-Trinitrotoluene	1	22.592	22.505	0.087	395037	0.9882	
24	PETN	2		23.551			ND	7
25	Ammonium Picrate	1		0.000			ND	

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection

Review Flags
U - Marked Undetected

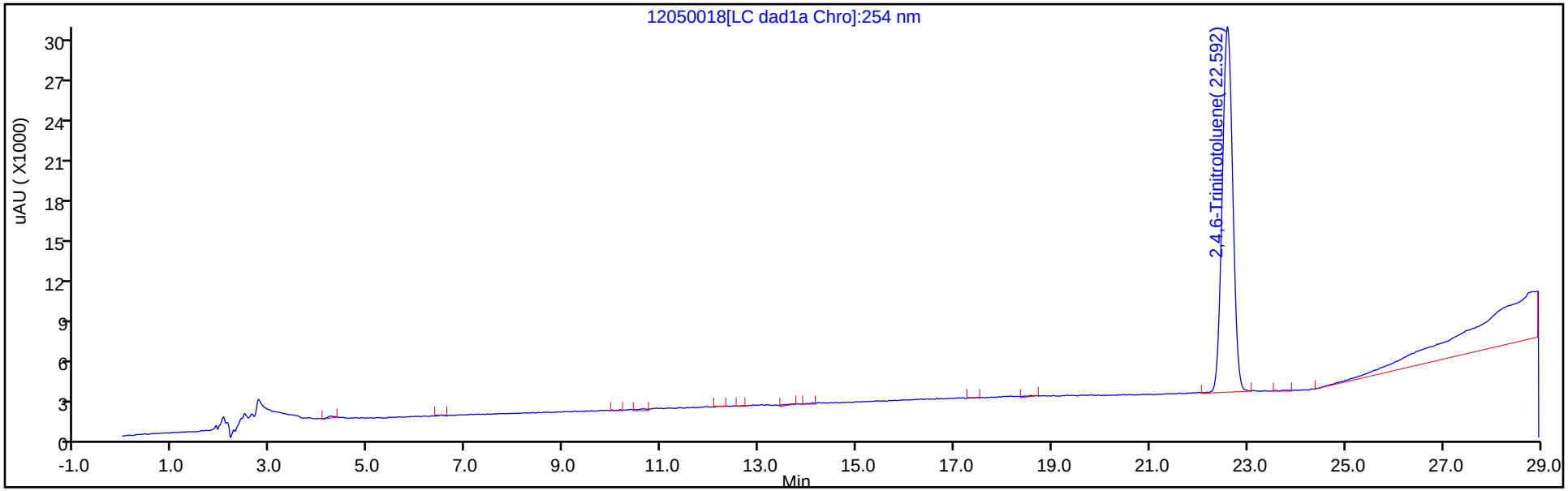
Report Date: 06-Dec-2024 12:41:10 Chrom Revision: 2.3 12-Nov-2024 16:55:22

Eurofins Denver

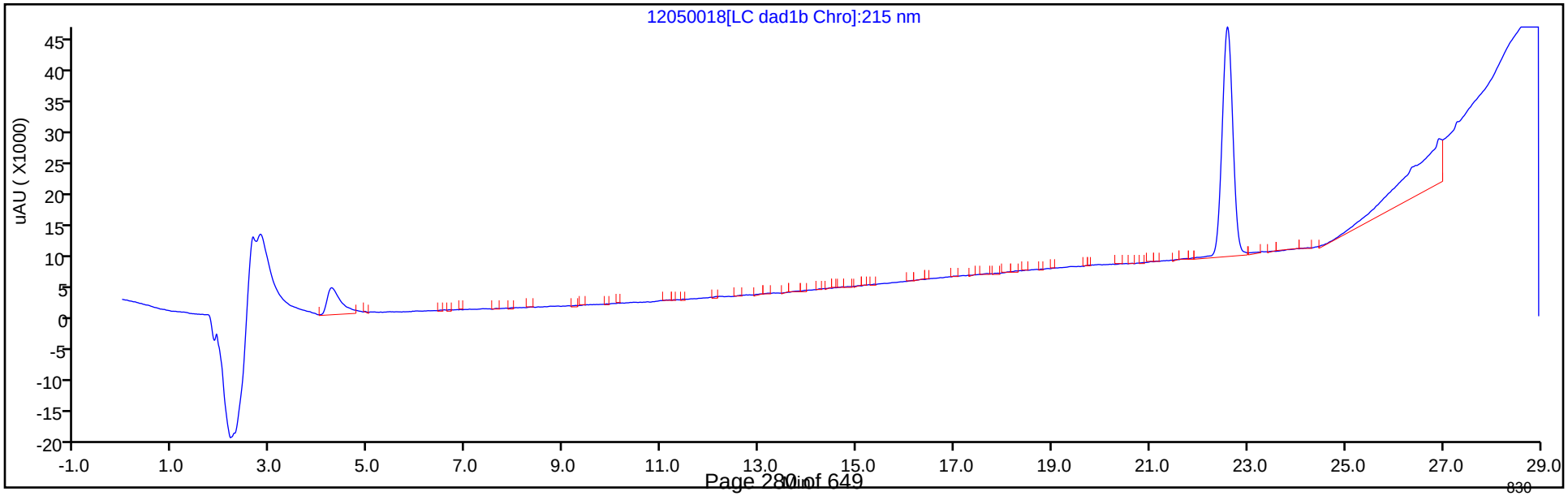
Data File: \\chromfs\denver\chromdata\g2_luna\20241205-140496.b\12050018.d

Injection Date:	05-Dec-2024 23:29:32	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	JZ
Lims ID:	280-200203-A-3-A	Lab Sample ID:	280-200203-3	Worklist Smp#:	18
Client ID:	P2-ARROYO-005-002				
Injection Vol:	100.0 ul	Dil. Factor:	200.0000	ALS Bottle#:	18
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



830

User Disabled Compound Report

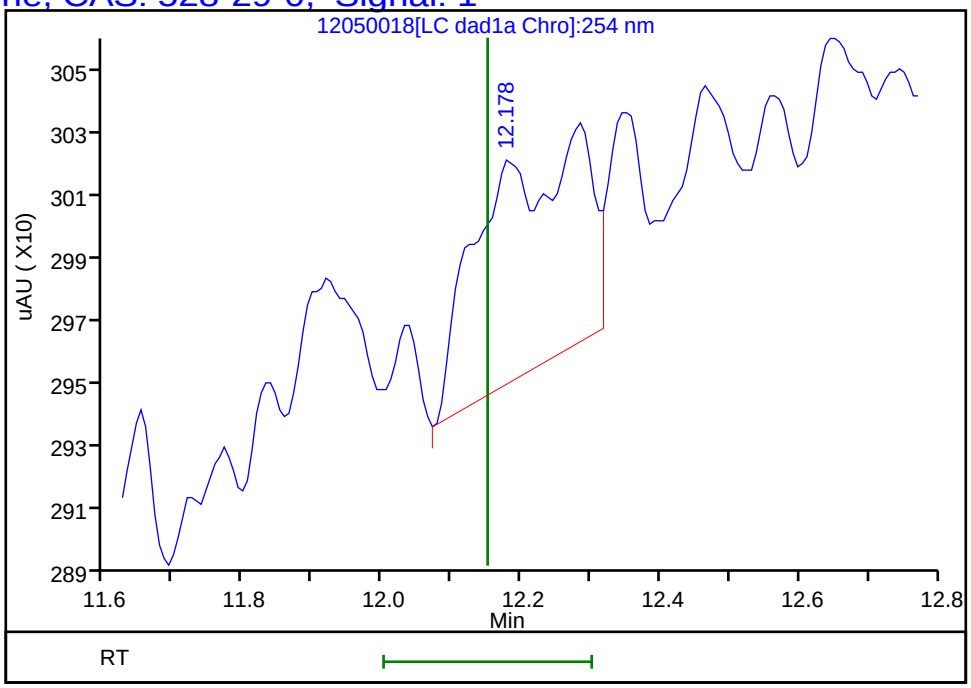
Eurofins Denver

Data File: \\chromfs\denver\chromdata\g2_luna\20241205-140496.b\12050018.d

Injection Date:	05-Dec-2024 23:29:32	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	280-200203-A-3-A	Lab Sample ID:	280-200203-3		
Client ID:	P2-ARROYO-005-002				
Operator ID:	JZ	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	200.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

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

RT: 12.18
Response: 696
Amount: 0.002690



Reviewer: LV5D, 06-Dec-2024 12:35:31
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.: 280-200203-1 | Analy Batch No.: 650851

SDG No.:

Instrument ID: CHHPLC_G2_LUNA | GC Column: Luna-phenyl ID: 4.6(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/24/2024 21:28 | Calibration End Date: 04/25/2024 02:15 | Calibration ID: 92631

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-650851/18	04240018.D
Level 2	IC 280-650851/17	04240017.D
Level 3	IC 280-650851/16	04240016.D
Level 4	IC 280-650851/15	04240015.D
Level 5	IC 280-650851/14	04240014.D
Level 6	IC 280-650851/13	04240013.D
Level 7	IC 280-650851/12	04240012.D
Level 8	IC 280-650851/11	04240011.D
Level 9	IC 280-650851/10	04240010.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	6.713	6.712	6.709	6.706	6.705	6.700	6.693	6.703	6.661		6.555 - 6.855	6.700
2,4,6-Trinitrophenol	8.700	8.726	8.663	8.659	8.612	8.587	8.553	8.523	8.381		8.462 - 8.762	8.600
RDX	8.953	8.952	8.943	8.946	8.938	8.927	8.927	8.923	8.874		8.788 - 9.088	8.931
Nitrobenzene	11.426	11.459	11.436	11.452	11.425	11.420	11.426	11.416	11.374		11.275 - 11.575	11.426
3,5-Dinitroaniline	14.200	14.232	14.203	14.205	14.185	14.180	14.186	14.169	14.127		14.035 - 14.335	14.187
1,3-Dinitrobenzene	14.493	14.519	14.496	14.492	14.478	14.473	14.480	14.469	14.427		14.328 - 14.628	14.481
Nitroglycerin	14.940	14.979	14.943	14.945	14.918	14.920	14.940	14.916	14.880		14.768 - 15.068	14.931
o-Nitrotoluene	+++++	15.559	15.523	15.532	15.505	15.507	15.526	15.502	15.467		15.355 - 15.655	15.515
p-Nitrotoluene	+++++	15.772	15.743	15.759	15.738	15.740	15.753	15.729	15.694		15.588 - 15.888	15.741
4-Amino-2,6-dinitrotoluene	16.260	16.286	16.249	16.265	16.245	16.240	16.253	16.229	16.194		16.095 - 16.395	16.247
m-Nitrotoluene	16.586	16.619	16.583	16.599	16.578	16.573	16.586	16.569	16.527		16.428 - 16.728	16.580
2-Amino-4,6-dinitrotoluene	17.086	17.099	17.063	17.079	17.058	17.053	17.066	17.042	17.000		16.908 - 17.208	17.061
1,3,5-Trinitrobenzene	17.286	17.306	17.283	17.285	17.272	17.267	17.280	17.262	17.227		17.122 - 17.422	17.274
2,6-Dinitrotoluene	18.380	18.386	18.369	18.379	18.365	18.353	18.373	18.349	18.314		18.215 - 18.515	18.363
2,4-Dinitrotoluene	18.833	18.846	18.823	18.839	18.818	18.807	18.826	18.802	18.767		18.668 - 18.968	18.818
Tetryl	22.027	22.072	22.023	22.052	22.025	22.007	22.020	22.003	21.987		21.875 - 22.175	22.024
2,4,6-Trinitrotoluene	22.900	22.926	22.876	22.912	22.878	22.874	22.873	22.863	22.841		22.728 - 23.028	22.883
PETN	24.033	24.046	24.016	24.046	24.032	24.014	24.013	24.009	23.987		23.882 - 24.182	24.022
1,2-Dinitrobenzene (Surr)	12.360	12.392	12.356	12.372	12.345	12.340	12.346	12.336	12.294		12.195 - 12.495	12.349

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

Lab Name: Eurofins Denver Job No.: 280-200203-1 Analy Batch No.: 650851

SDG No.:

Instrument ID: CHHPLC_G2_LUNA GC Column: Luna-phenyl ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/24/2024 21:28 Calibration End Date: 04/25/2024 02:15 Calibration ID: 92631

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-650851/18	04240018.D
Level 2	IC 280-650851/17	04240017.D
Level 3	IC 280-650851/16	04240016.D
Level 4	IC 280-650851/15	04240015.D
Level 5	IC 280-650851/14	04240014.D
Level 6	IC 280-650851/13	04240013.D
Level 7	IC 280-650851/12	04240012.D
Level 8	IC 280-650851/11	04240011.D
Level 9	IC 280-650851/10	04240010.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	167700 173948 174202	178900 175808	170180 173424	179770 172751	Ave		174075.821				2.2		20.0			
2,4,6-Trinitrophenol	154900 148172 153137	165100 151088	140280 150487	148590 150820	Ave		151397.094				4.3		20.0			
RDX	256200 210828 204073	239550 207963	213080 202951	216090 202193	Lin2	539.023112	205652.806							0.9990		0.9900
Nitrobenzene	381800 372900 381987	405050 384143	363860 378609	394890 375845	Ave		382120.319				3.2		20.0			
3,5-Dinitroaniline	524500 432092 431274	473150 439350	449620 432267	436700 431522	Lin2	918.687014	430726.783							1.0000		0.9900
1,3-Dinitrobenzene	633200 572076 577399	615900 578140	611920 570583	575920 569625	Ave		589418.117				4.1		20.0			
Nitroglycerin	104310 123840 119273	119385 124108	118260 120549	126558 119260	Ave		119504.765				5.3		20.0			
o-Nitrotoluene	+++++ 235764 241788	251200 242098	264940 241561	237990 241414	Ave		244594.366				3.8		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.: 280-200203-1 Analy Batch No.: 650851

SDG No.:

Instrument ID: CHHPLC_G2_LUNA GC Column: Luna-phenyl ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/24/2024 21:28 Calibration End Date: 04/25/2024 02:15 Calibration ID: 92631

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								
p-Nitrotoluene	+++++ 216520 219653	263900 223335	236500 221201	225490 217154	Lin2	917.736717	217721.690							1.0000		0.9900
4-Amino-2,6-dinitrotoluene	336600 268460 268565	323700 274928	279100 270943	274490 269382	Lin2	742.452757	269511.071							0.9990		0.9900
m-Nitrotoluene	367200 274236 277226	334250 280190	298820 277211	281030 273569	Lin2	968.906840	275587.809							1.0000		0.9900
2-Amino-4,6-dinitrotoluene	502200 380328 379416	436650 390780	394700 386620	398530 380835	Ave		405562.156				9.9		20.0			
1,3,5-Trinitrobenzene	521000 404268 412363	458350 407038	387160 405177	411770 403965	Ave		423454.494				9.8		20.0			
2,6-Dinitrotoluene	301600 266156 268633	305650 268168	283940 267447	274870 265267	Ave		277970.049				5.6		20.0			
2,4-Dinitrotoluene	576400 534316 545101	600250 542238	571780 541644	542940 536407	Ave		554563.998				4.1		20.0			
Tetryl	367500 316916 314923	313400 314733	312600 312921	329200 310388	Lin2	448.108744	311971.216							0.9990		0.9900
2,4,6-Trinitrotoluene	370300 401348 408571	398450 400180	402620 398954	418610 398830	Ave		399762.610				3.2		20.0			
PETN	105310 121971 123890	112970 123201	121232 123587	121831 122809	Lin2	-1863.2605	123564.211							1.0000		0.9900
1,2-Dinitrobenzene (Surr)	223700 257724 258500	273700 261405	266480 257347	273700 255644	Ave		258688.949				5.7		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.: 280-200203-1 | Analy Batch No.: 650851

SDG No.:

Instrument ID: CHHPLC_G2_LUNA | GC Column: Luna-pheny ID: 4.6(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/24/2024 21:28 | Calibration End Date: 04/25/2024 02:15 | Calibration ID: 92631

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-650851/18	04240018.D
Level 2	IC 280-650851/17	04240017.D
Level 3	IC 280-650851/16	04240016.D
Level 4	IC 280-650851/15	04240015.D
Level 5	IC 280-650851/14	04240014.D
Level 6	IC 280-650851/13	04240013.D
Level 7	IC 280-650851/12	04240012.D
Level 8	IC 280-650851/11	04240011.D
Level 9	IC 280-650851/10	04240010.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
HMX	Ave	1677 70323	3578 121397	8509 172751	17977 435504	43487	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
2,4,6-Trinitrophenol	Ave	1549 60435	3302 105341	7014 150820	14859 382843	37043	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
RDX	Lin2	2562 83185	4791 142066	10654 202193	21609 510182	52707	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
Nitrobenzene	Ave	3818 153657	8101 265026	18193 375845	39489 954967	93225	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
3,5-Dinitroaniline	Lin2	5245 175740	9463 302587	22481 431522	43670 1078184	108023	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
1,3-Dinitrobenzene	Ave	6332 231256	12318 399408	30596 569625	57592 1443498	143019	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
Nitroglycerin	Ave	10431 496432	23877 843844	59130 1192597	126558 2981826	309600	0.100 4.00	0.200 7.00	0.500 10.0	1.00 25.0	2.50
o-Nitrotoluene	Ave	+++++ 96839	5024 169093	13247 241414	23799 604470	58941	+++++ 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
p-Nitrotoluene	Lin2	+++++ 89334	5278 154841	11825 217154	22549 549133	54130	+++++ 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
4-Amino-2,6-dinitrotoluene	Lin2	3366 109971	6474 189660	13955 269382	27449 671412	67115	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
m-Nitrotoluene	Lin2	3672 112076	6685 194048	14941 273569	28103 693064	68559	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
2-Amino-4,6-dinitrotoluene	Ave	5022 156312	8733 270634	19735 380835	39853 948541	95082	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
1,3,5-Trinitrobenzene	Ave	5210 162815	9167 283624	19358 403965	41177 1030907	101067	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
2,6-Dinitrotoluene	Ave	3016 107267	6113 187213	14197 265267	27487 671582	66539	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
2,4-Dinitrotoluene	Ave	5764	12005	28589	54294	133579	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.: 280-200203-1 | Analy Batch No.: 650851

SDG No.:

Instrument ID: CHHPLC_G2_LUNA | GC Column: Luna-pheny ID: 4.6(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/24/2024 21:28 | Calibration End Date: 04/25/2024 02:15 | Calibration ID: 92631

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
		216895	379151	536407	1362753		0.400	0.700	1.00	2.50	
Tetryl	Lin2	3675 125893	6268 219045	15630 310388	32920 787307	79229	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
2,4,6-Trinitrotoluene	Ave	3703 160072	7969 279268	20131 398830	41861 1021428	100337	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
PETN	Lin2	10531 492803	22594 865110	60616 1228090	121831 3097249	304928	0.100 4.00	0.200 7.00	0.500 10.0	1.00 25.0	2.50
1,2-Dinitrobenzene (Surr)	Ave	2237 104562	5474 180143	13324 255644	27370 646251	64431	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250

Curve Type Legend:

Ave = Average
Lin2 = Linear 1/conc^2

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\G2_LUNA\20240424-132624.b\04240010.D
Lims ID: IC INT 9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 24-Apr-2024 21:28:13 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC INT 9
Operator ID: JZ/JG Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub16

Method: \\chromfs\Denver\ChromData\G2_LUNA\20240424-132624.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 25-Apr-2024 14:30:09 Calib Date: 25-Apr-2024 07:39:21
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\G2_LUNA\20240424-132624.b\04240027.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX1684

First Level Reviewer: LV5D Date: 25-Apr-2024 13:10:30

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
6 HMX	1	6.661	6.705	-0.044	435504	2.50	2.50	
5 2,4,6-Trinitrophenol	1	8.381	8.612	-0.231	382843	2.50	2.53	a
8 RDX	1	8.874	8.938	-0.064	510182	2.50	2.48	
9 Nitrobenzene	1	11.374	11.425	-0.051	954967	2.50	2.50	
$ 10 1,2-Dinitrobenzene	1	12.294	12.345	-0.051	646251	2.50	2.50	
11 3,5-Dinitroaniline	1	14.127	14.185	-0.058	1078184	2.50	2.50	
12 1,3-Dinitrobenzene	1	14.427	14.478	-0.051	1443498	2.50	2.45	
13 Nitroglycerin	2	14.880	14.918	-0.038	2981826	25.0	25.0	M
14 o-Nitrotoluene	1	15.467	15.505	-0.038	604470	2.50	2.47	
15 p-Nitrotoluene	1	15.694	15.738	-0.044	549133	2.50	2.52	
16 4-Amino-2,6-dinitrotoluene	1	16.194	16.245	-0.051	671412	2.50	2.49	
17 m-Nitrotoluene	1	16.527	16.578	-0.051	693064	2.50	2.51	
18 2-Amino-4,6-dinitrotoluene	1	17.000	17.058	-0.058	948541	2.50	2.34	
19 1,3,5-Trinitrobenzene	1	17.227	17.272	-0.045	1030907	2.50	2.43	
20 2,6-Dinitrotoluene	1	18.314	18.365	-0.051	671582	2.50	2.42	
21 2,4-Dinitrotoluene	1	18.767	18.818	-0.051	1362753	2.50	2.46	
22 Tetryl	1	21.987	22.025	-0.038	787307	2.50	2.52	
23 2,4,6-Trinitrotoluene	1	22.841	22.878	-0.037	1021428	2.50	2.56	
24 PETN	2	23.987	24.032	-0.045	3097249	25.0	25.1	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

8330IntermStk_00080 Amount Added: 250.00 Units: uL

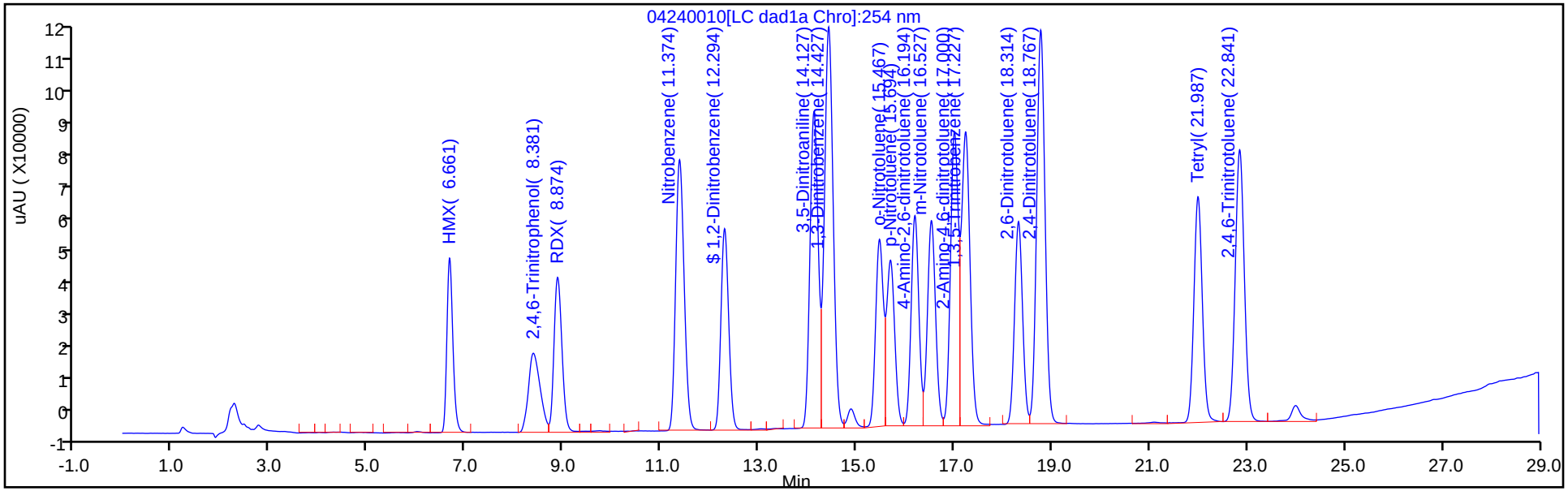
Report Date: 25-Apr-2024 14:30:09 Chrom Revision: 2.3 09-Apr-2024 17:43:44

Eurofins Denver

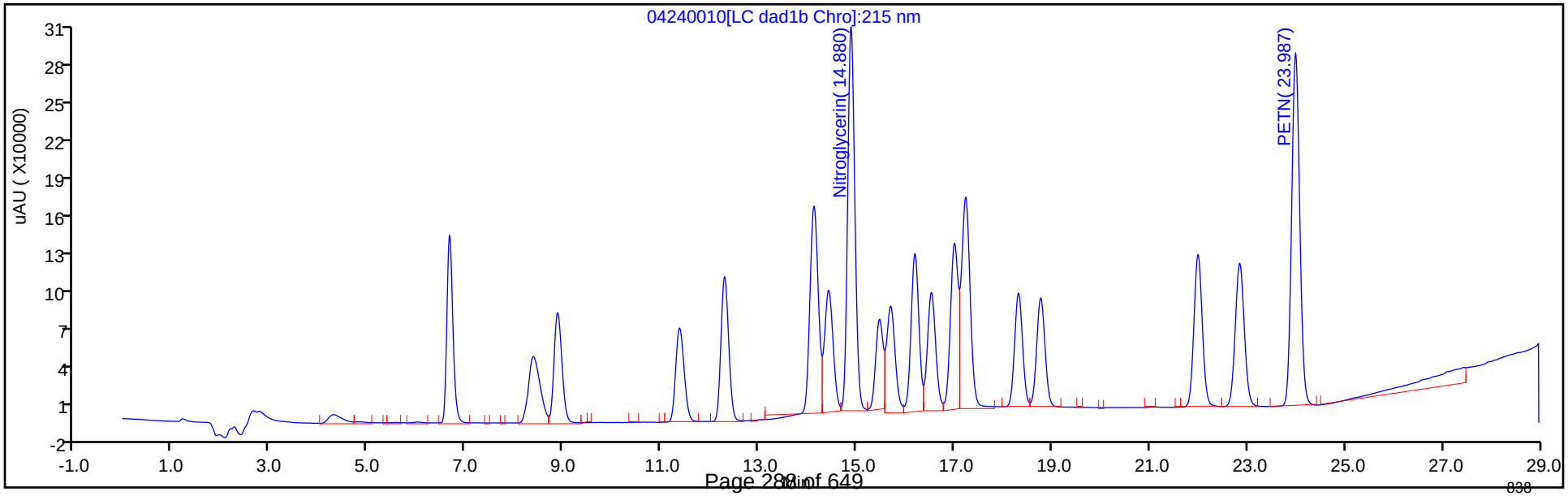
Data File: \\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240010.d

Injection Date:	24-Apr-2024 21:28:13	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	JZ/JG
Lims ID:	IC INT 9			Worklist Smp#:	10
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

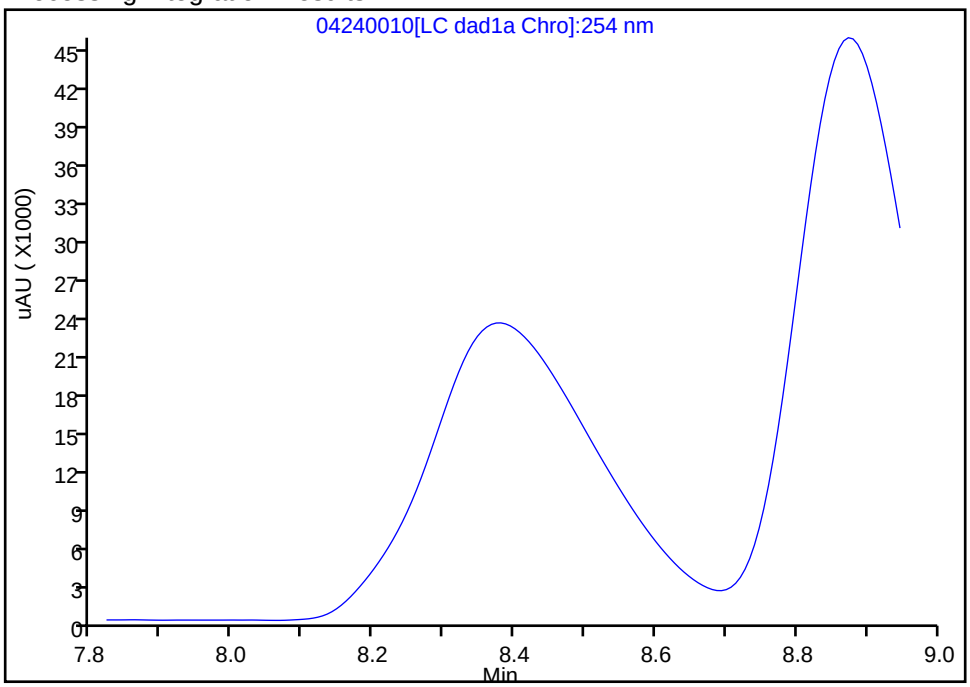
Data File:	\\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240010.d				
Injection Date:	24-Apr-2024 21:28:13	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 9				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

5 2,4,6-Trinitrophenol, CAS: 88-89-1

Signal: 1

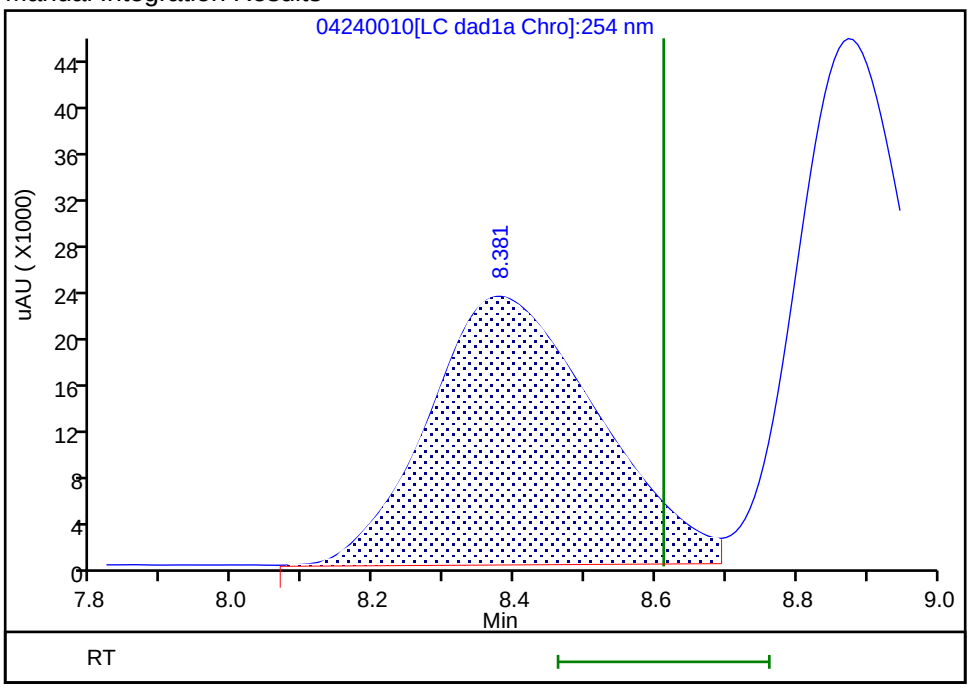
Not Detected
Expected RT: 8.61

Processing Integration Results



Manual Integration Results

RT: 8.38
Area: 382843
Amount: 2.528734
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:10:11 -06:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Denver

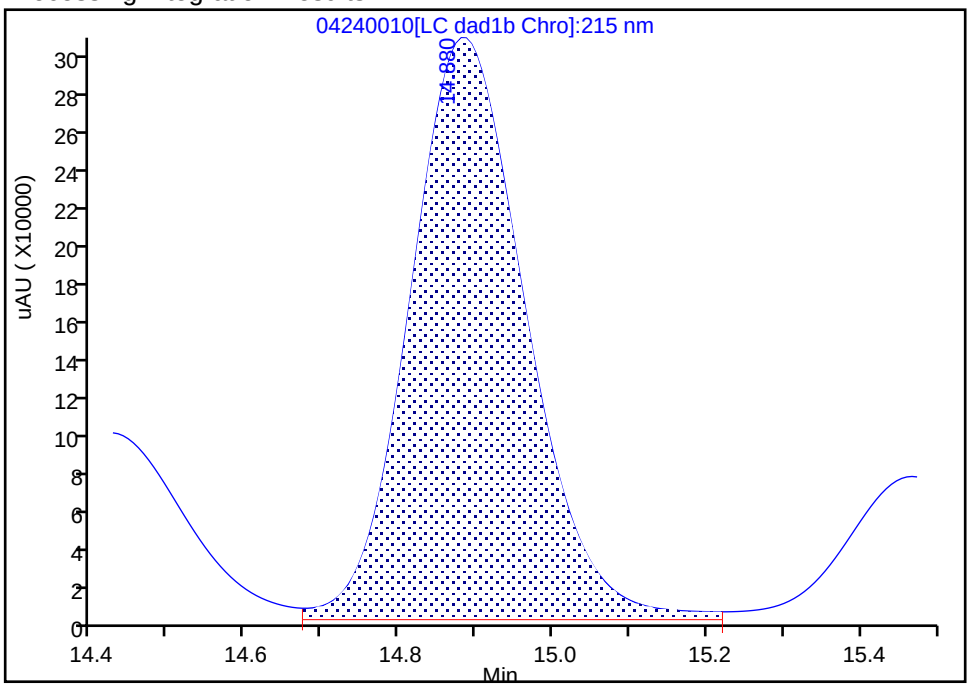
Data File:	\\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240010.d				
Injection Date:	24-Apr-2024 21:28:13	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 9				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1B, 215 nm		

13 Nitroglycerin, CAS: 55-63-0

Signal: 1

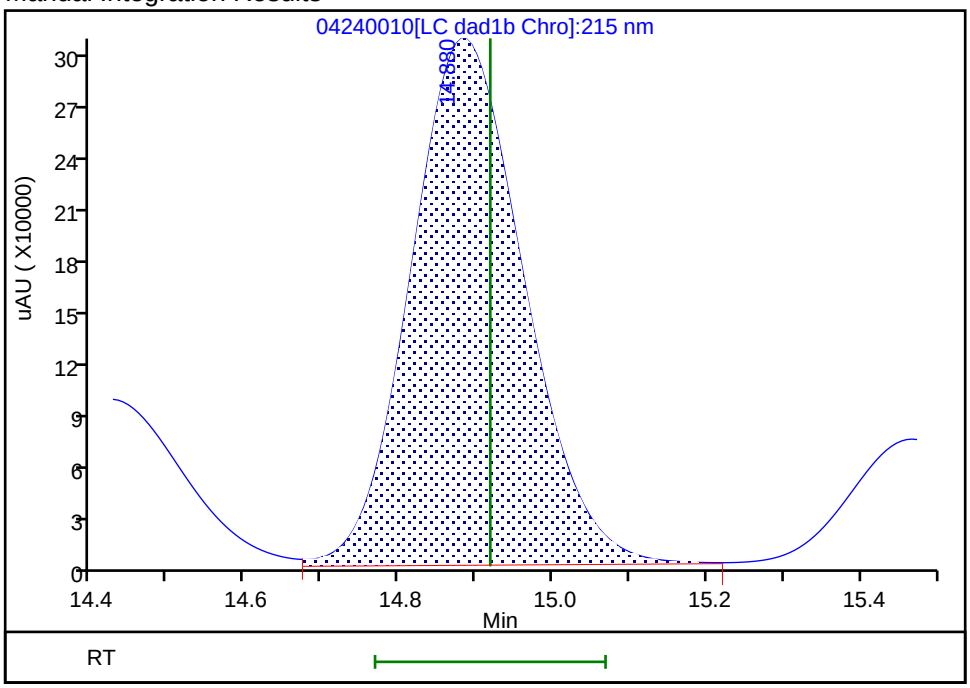
Processing Integration Results

RT: 14.88
Area: 3082817
Amount: 11.814701
Amount Units: ug/ml



Manual Integration Results

RT: 14.88
Area: 2981826
Amount: 24.951524
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:10:26 -06:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\G2_LUNA\20240424-132624.b\04240011.D
Lims ID: IC INT 8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 24-Apr-2024 22:04:12 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC INT 8
Operator ID: JZ/JG Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub16

Method: \\chromfs\Denver\ChromData\G2_LUNA\20240424-132624.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 25-Apr-2024 14:30:10 Calib Date: 25-Apr-2024 07:39:21
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\G2_LUNA\20240424-132624.b\04240027.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX1684

First Level Reviewer: LV5D Date: 25-Apr-2024 13:18:58

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
6 HMX	1	6.703	6.705	-0.002	172751	1.00	0.99	
5 2,4,6-Trinitrophenol	1	8.523	8.612	-0.089	150820	1.00	1.00	
8 RDX	1	8.923	8.938	-0.015	202193	1.00	0.9806	
9 Nitrobenzene	1	11.416	11.425	-0.009	375845	1.00	0.9836	
$ 10 1,2-Dinitrobenzene	1	12.336	12.345	-0.009	255644	1.00	0.9882	
11 3,5-Dinitroaniline	1	14.169	14.185	-0.016	431522	1.00	1.00	
12 1,3-Dinitrobenzene	1	14.469	14.478	-0.009	569625	1.00	0.9664	
13 Nitroglycerin	2	14.916	14.918	-0.002	1192597	10.0	9.98	M
14 o-Nitrotoluene	1	15.502	15.505	-0.003	241414	1.00	0.9870	
15 p-Nitrotoluene	1	15.729	15.738	-0.009	217154	1.00	0.99	
16 4-Amino-2,6-dinitrotoluene	1	16.229	16.245	-0.016	269382	1.00	1.00	
17 m-Nitrotoluene	1	16.569	16.578	-0.009	273569	1.00	0.9892	
18 2-Amino-4,6-dinitrotoluene	1	17.042	17.058	-0.016	380835	1.00	0.9390	
19 1,3,5-Trinitrobenzene	1	17.262	17.272	-0.010	403965	1.00	0.9540	
20 2,6-Dinitrotoluene	1	18.349	18.365	-0.016	265267	1.00	0.9543	
21 2,4-Dinitrotoluene	1	18.802	18.818	-0.016	536407	1.00	0.9673	
22 Tetryl	1	22.003	22.025	-0.022	310388	1.00	0.99	
23 2,4,6-Trinitrotoluene	1	22.863	22.878	-0.015	398830	1.00	1.00	M
24 PETN	2	24.009	24.032	-0.023	1228090	10.0	9.95	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00080 Amount Added: 100.00 Units: uL

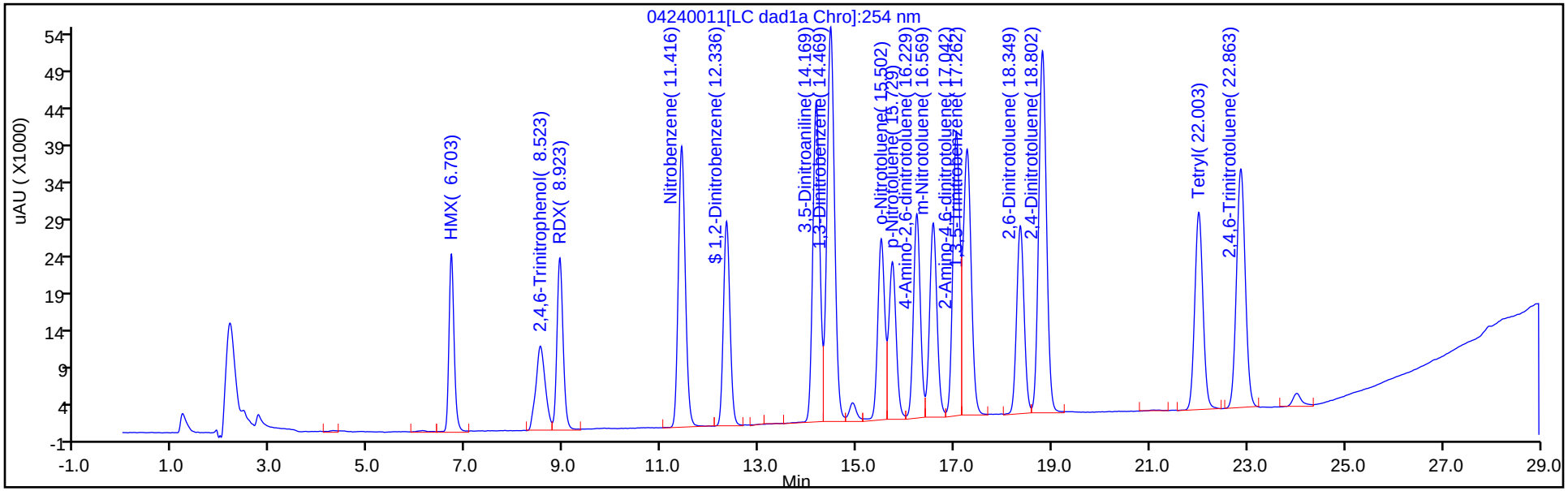
Report Date: 25-Apr-2024 14:30:10 Chrom Revision: 2.3 09-Apr-2024 17:43:44

Eurofins Denver

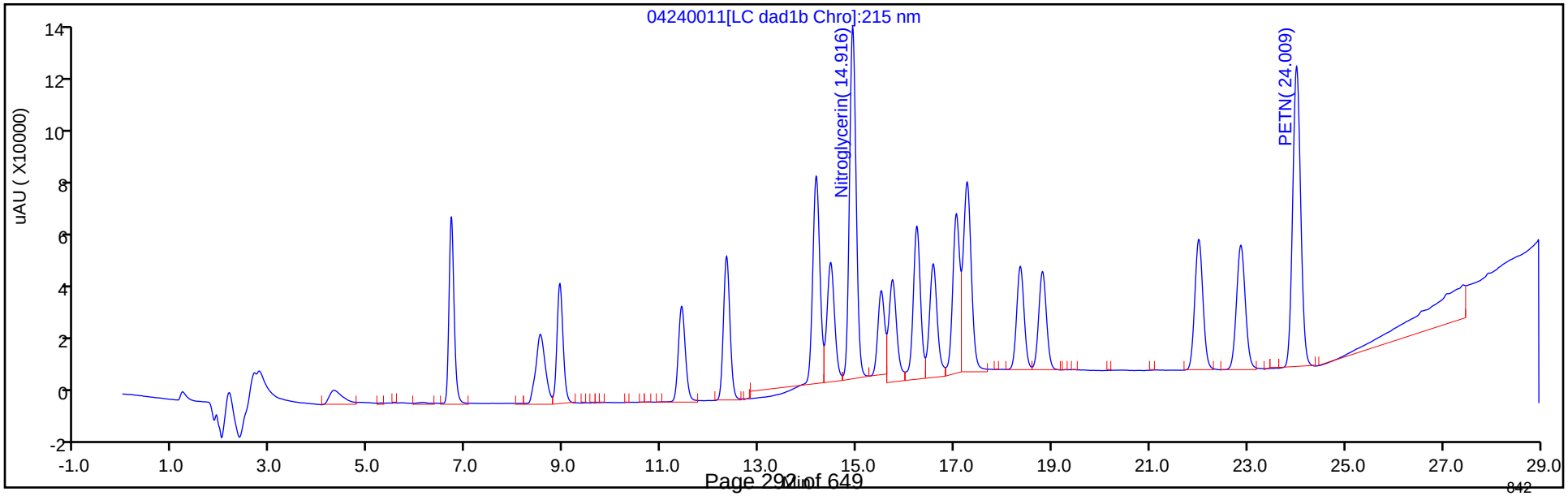
Data File: \\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240011.d

Injection Date:	24-Apr-2024 22:04:12	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	JZ/JG
Lims ID:	IC INT 8			Worklist Smp#:	11
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

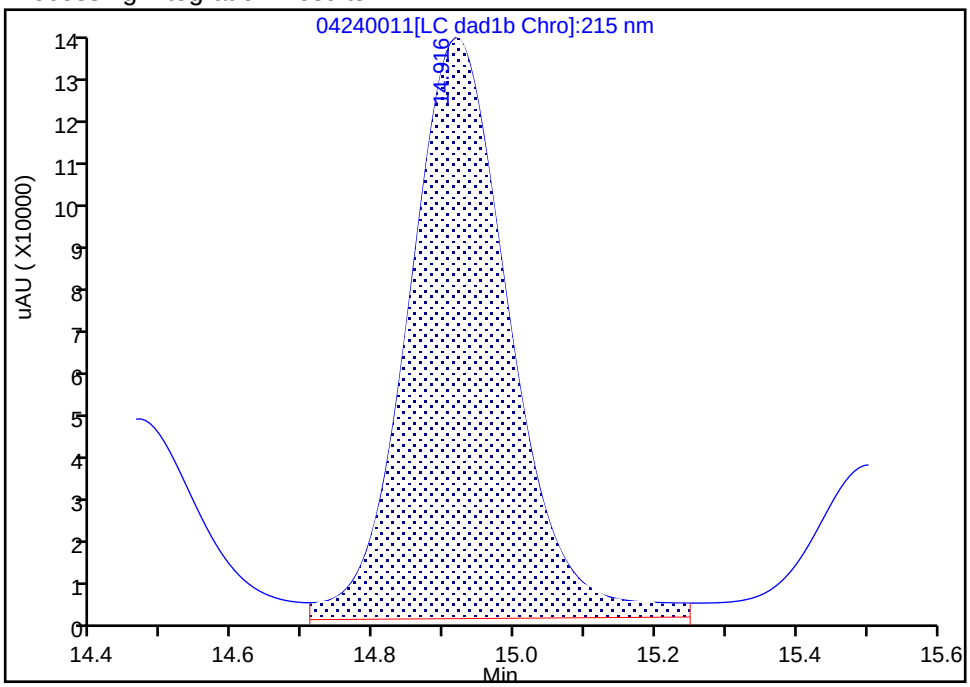
Data File:	\\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240011.d				
Injection Date:	24-Apr-2024 22:04:12	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 8				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1B, 215 nm		

13 Nitroglycerin, CAS: 55-63-0

Signal: 1

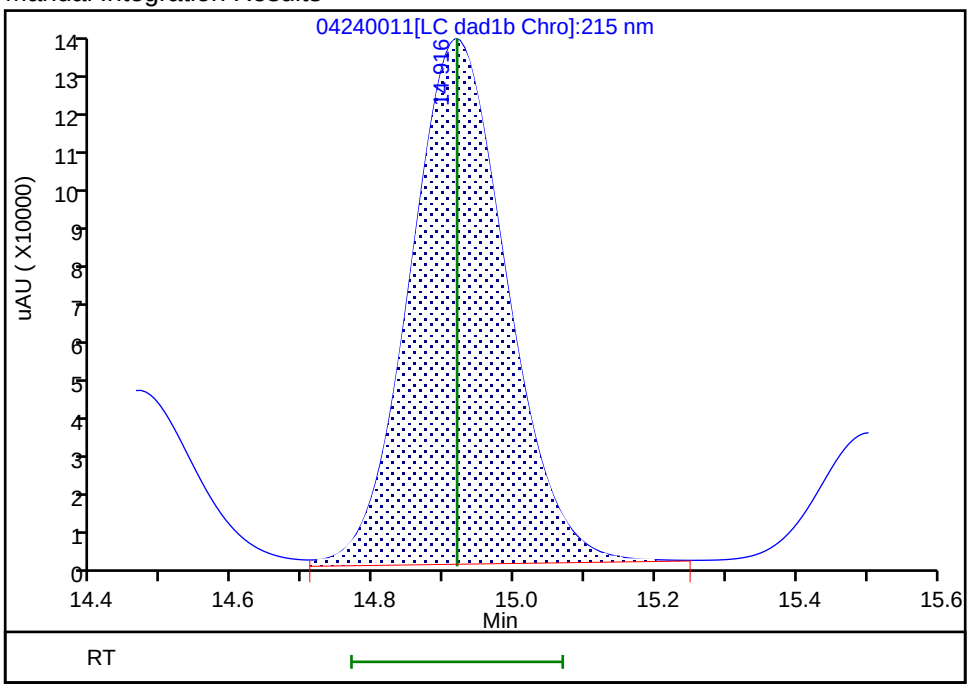
Processing Integration Results

RT: 14.92
Area: 1281389
Amount: 4.919304
Amount Units: ug/ml



Manual Integration Results

RT: 14.92
Area: 1192597
Amount: 9.979493
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:11:13 -06:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Eurofins Denver

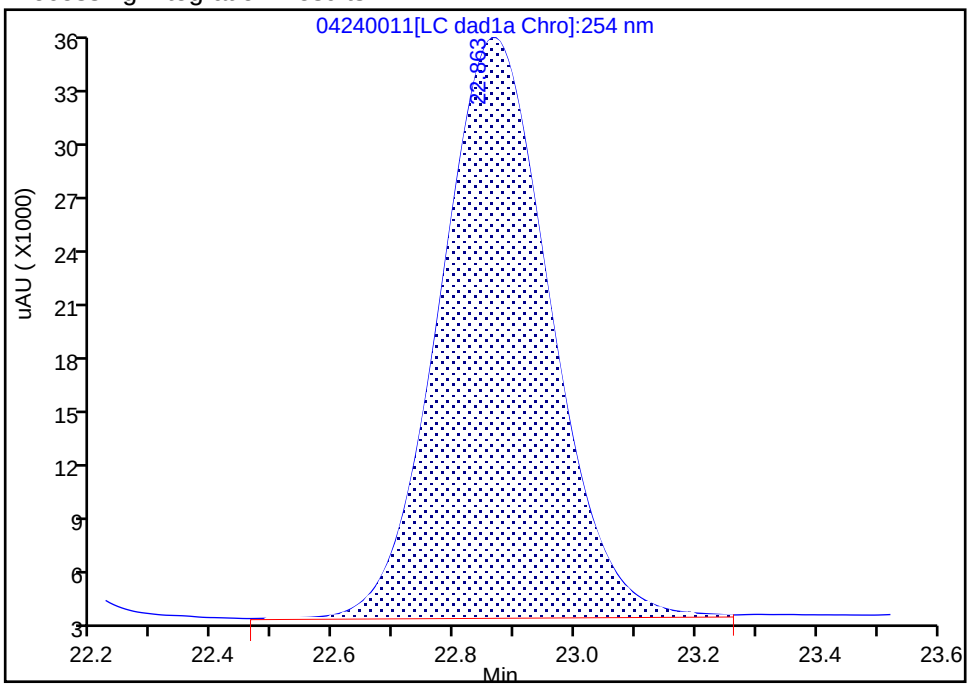
Data File:	\\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240011.d				
Injection Date:	24-Apr-2024 22:04:12	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 8				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

23 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

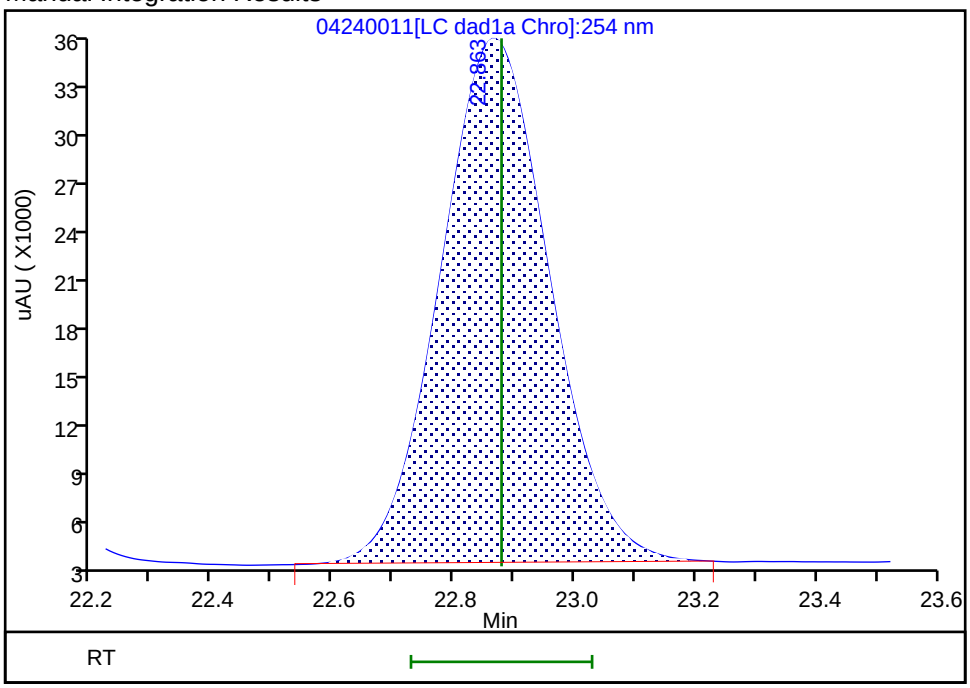
Processing Integration Results

RT: 22.86
Area: 406074
Amount: 1.007347
Amount Units: ug/ml



Manual Integration Results

RT: 22.86
Area: 398830
Amount: 0.997667
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:37:30 -06:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\G2_LUNA\20240424-132624.b\04240012.D
Lims ID: IC INT 7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 24-Apr-2024 22:40:07 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC INT 7
Operator ID: JZ/JG Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub16

Method: \\chromfs\Denver\ChromData\G2_LUNA\20240424-132624.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 25-Apr-2024 14:30:11 Calib Date: 25-Apr-2024 07:39:21
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\G2_LUNA\20240424-132624.b\04240027.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX1684

First Level Reviewer: LV5D Date: 25-Apr-2024 13:19:19

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
6 HMX	1	6.693	6.705	-0.012	121397	0.7000	0.6974	
5 2,4,6-Trinitrophenol	1	8.553	8.612	-0.059	105341	0.7000	0.6958	
8 RDX	1	8.927	8.938	-0.011	142066	0.7000	0.6882	
9 Nitrobenzene	1	11.426	11.425	0.001	265026	0.7000	0.6936	
$ 10 1,2-Dinitrobenzene	1	12.346	12.345	0.001	180143	0.7000	0.6964	
11 3,5-Dinitroaniline	1	14.186	14.185	0.001	302587	0.7000	0.7004	
12 1,3-Dinitrobenzene	1	14.480	14.478	0.002	399408	0.7000	0.6776	
13 Nitroglycerin	2	14.940	14.918	0.022	843844	7.00	7.06	M
14 o-Nitrotoluene	1	15.526	15.505	0.021	169093	0.7000	0.6913	
15 p-Nitrotoluene	1	15.753	15.738	0.015	154841	0.7000	0.7070	
16 4-Amino-2,6-dinitrotoluene	1	16.253	16.245	0.008	189660	0.7000	0.7010	
17 m-Nitrotoluene	1	16.586	16.578	0.008	194048	0.7000	0.7006	
18 2-Amino-4,6-dinitrotoluene	1	17.066	17.058	0.008	270634	0.7000	0.6673	
19 1,3,5-Trinitrobenzene	1	17.280	17.272	0.008	283624	0.7000	0.6698	
20 2,6-Dinitrotoluene	1	18.373	18.365	0.008	187213	0.7000	0.6735	
21 2,4-Dinitrotoluene	1	18.826	18.818	0.008	379151	0.7000	0.6837	
22 Tetryl	1	22.020	22.025	-0.005	219045	0.7000	0.7007	
23 2,4,6-Trinitrotoluene	1	22.873	22.878	-0.005	279268	0.7000	0.6986	M
24 PETN	2	24.013	24.032	-0.019	865110	7.00	7.02	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00080 Amount Added: 70.00 Units: uL

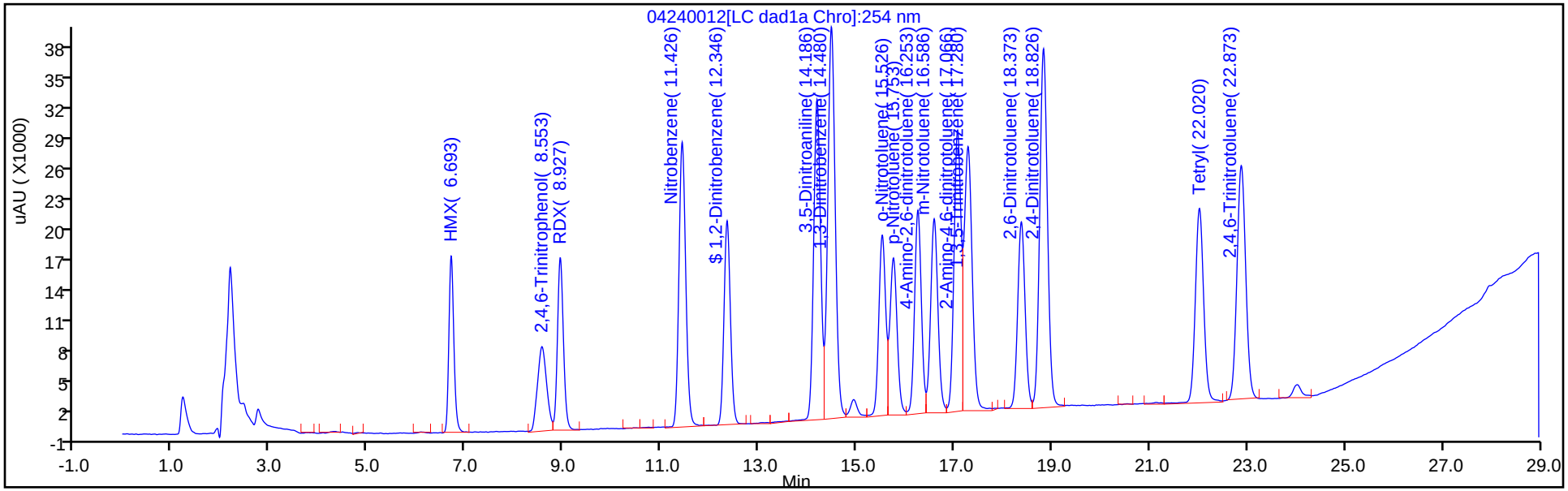
Report Date: 25-Apr-2024 14:30:11 Chrom Revision: 2.3 09-Apr-2024 17:43:44

Eurofins Denver

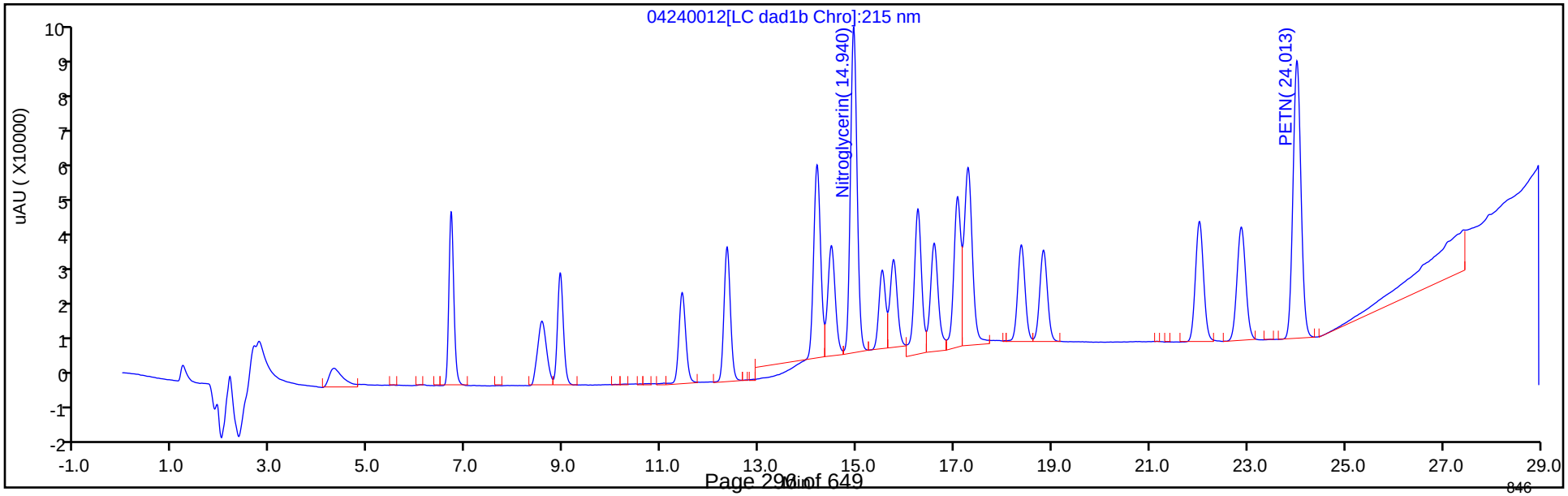
Data File: \\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240012.d

Injection Date:	24-Apr-2024 22:40:07	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	JZ/JG
Lims ID:	IC INT 7			Worklist Smp#:	12
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

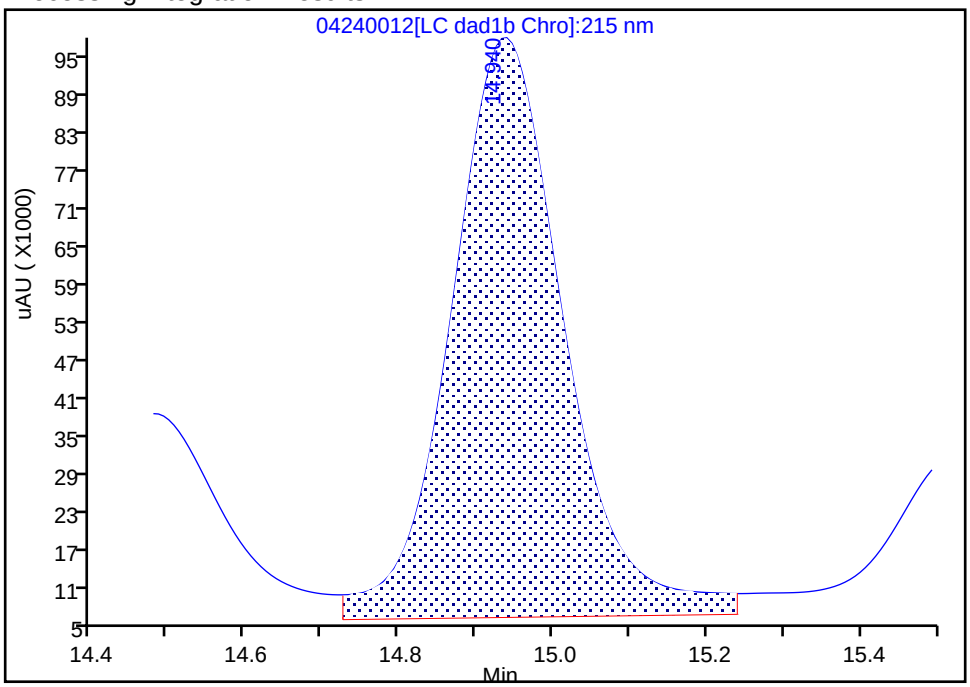
Data File:	\\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240012.d				
Injection Date:	24-Apr-2024 22:40:07	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 7				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1B, 215 nm		

13 Nitroglycerin, CAS: 55-63-0

Signal: 1

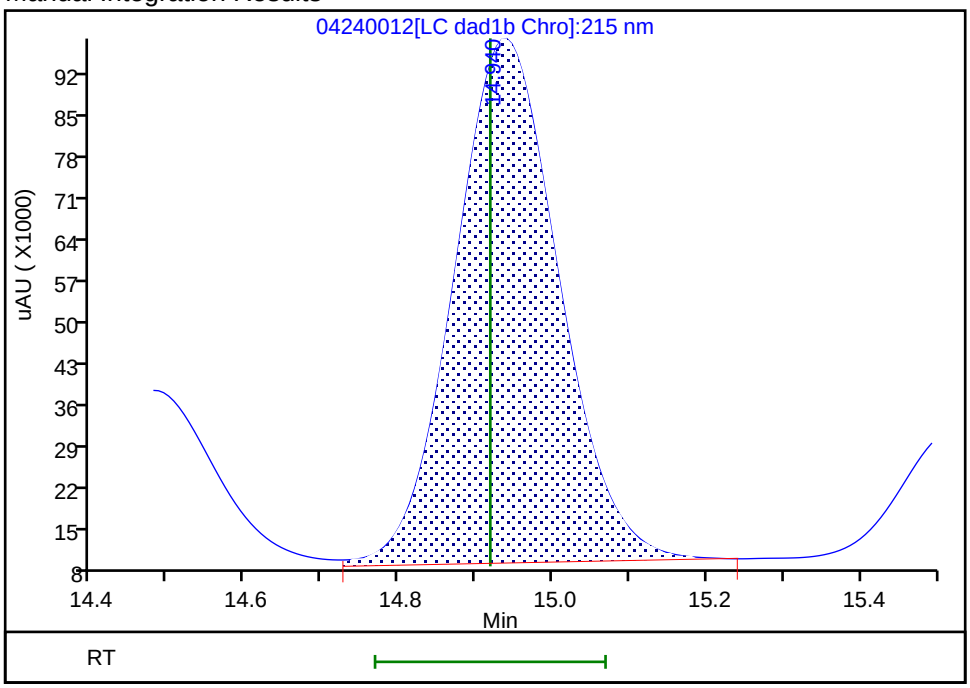
Processing Integration Results

RT: 14.94
Area: 942019
Amount: 3.630198
Amount Units: ug/ml



Manual Integration Results

RT: 14.94
Area: 843844
Amount: 7.061175
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:19:17 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

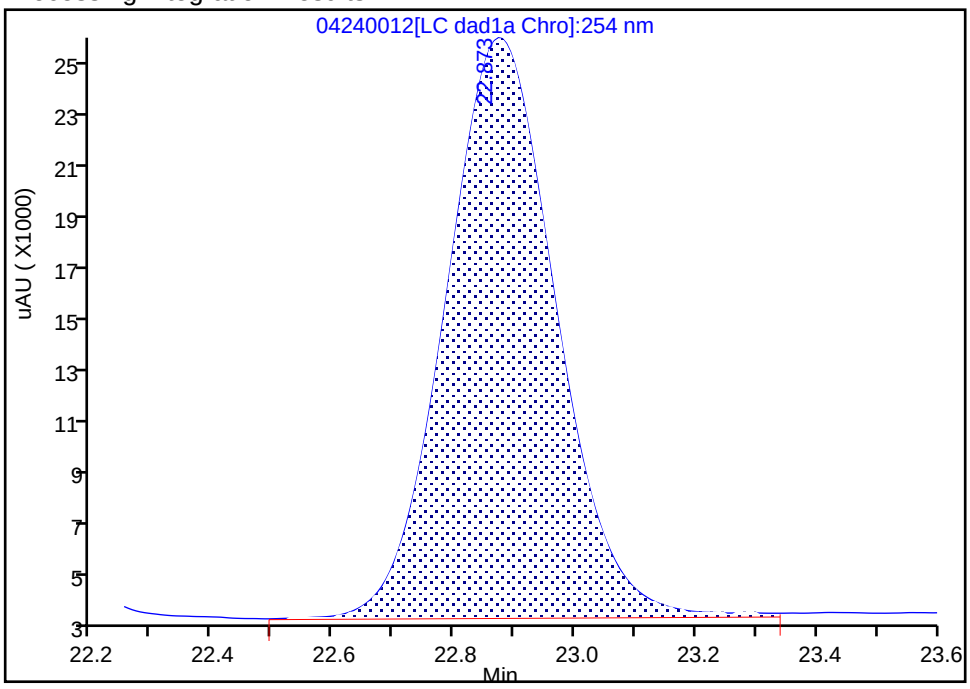
Data File:	\\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240012.d				
Injection Date:	24-Apr-2024 22:40:07	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 7				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

23 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

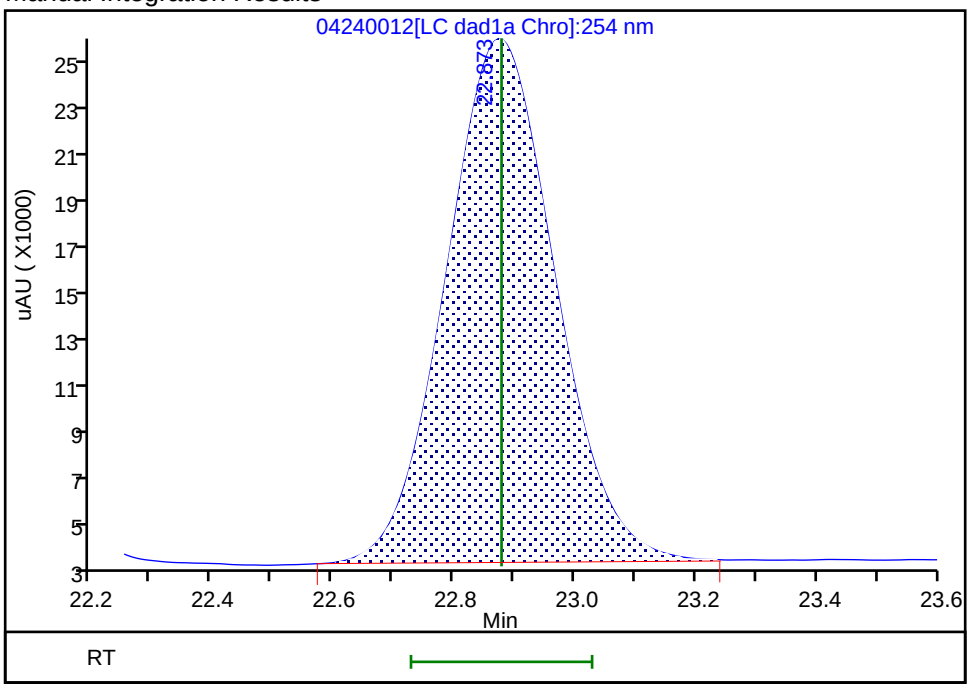
Processing Integration Results

RT: 22.87
Area: 285759
Amount: 0.707074
Amount Units: ug/ml



Manual Integration Results

RT: 22.87
Area: 279268
Amount: 0.698585
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:37:19 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Report Date: 25-Apr-2024 14:30:12 Chrom Revision: 2.3 09-Apr-2024 17:43:44

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\G2_LUNA\20240424-132624.b\04240013.D
Lims ID: IC INT 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 24-Apr-2024 23:16:01 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC INT 6
Operator ID: JZ/JG Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub16

Method: \\chromfs\Denver\ChromData\G2_LUNA\20240424-132624.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 25-Apr-2024 14:30:12 Calib Date: 25-Apr-2024 07:39:21
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\G2_LUNA\20240424-132624.b\04240027.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX1684

First Level Reviewer: LV5D Date: 25-Apr-2024 13:19:49

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
6 HMX	1	6.700	6.705	-0.005	70323	0.4000	0.4040	
5 2,4,6-Trinitrophenol	1	8.587	8.612	-0.025	60435	0.4000	0.3992	
8 RDX	1	8.927	8.938	-0.011	83185	0.4000	0.4019	
9 Nitrobenzene	1	11.420	11.425	-0.005	153657	0.4000	0.4021	
$ 10 1,2-Dinitrobenzene	1	12.340	12.345	-0.005	104562	0.4000	0.4042	
11 3,5-Dinitroaniline	1	14.180	14.185	-0.005	175740	0.4000	0.4059	M
12 1,3-Dinitrobenzene	1	14.473	14.478	-0.005	231256	0.4000	0.3923	M
13 Nitroglycerin	2	14.920	14.918	0.002	496432	4.00	4.15	M
14 o-Nitrotoluene	1	15.507	15.505	0.002	96839	0.4000	0.3959	M
15 p-Nitrotoluene	1	15.740	15.738	0.002	89334	0.4000	0.4061	M
16 4-Amino-2,6-dinitrotoluene	1	16.240	16.245	-0.005	109971	0.4000	0.4053	M
17 m-Nitrotoluene	1	16.573	16.578	-0.005	112076	0.4000	0.4032	M
18 2-Amino-4,6-dinitrotoluene	1	17.053	17.058	-0.005	156312	0.4000	0.3854	M
19 1,3,5-Trinitrobenzene	1	17.267	17.272	-0.005	162815	0.4000	0.3845	M
20 2,6-Dinitrotoluene	1	18.353	18.365	-0.012	107267	0.4000	0.3859	M
21 2,4-Dinitrotoluene	1	18.807	18.818	-0.011	216895	0.4000	0.3911	M
22 Tetryl	1	22.007	22.025	-0.018	125893	0.4000	0.4021	
23 2,4,6-Trinitrotoluene	1	22.874	22.878	-0.004	160072	0.4000	0.4004	M
24 PETN	2	24.014	24.032	-0.018	492803	4.00	4.00	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00080 Amount Added: 40.00 Units: uL

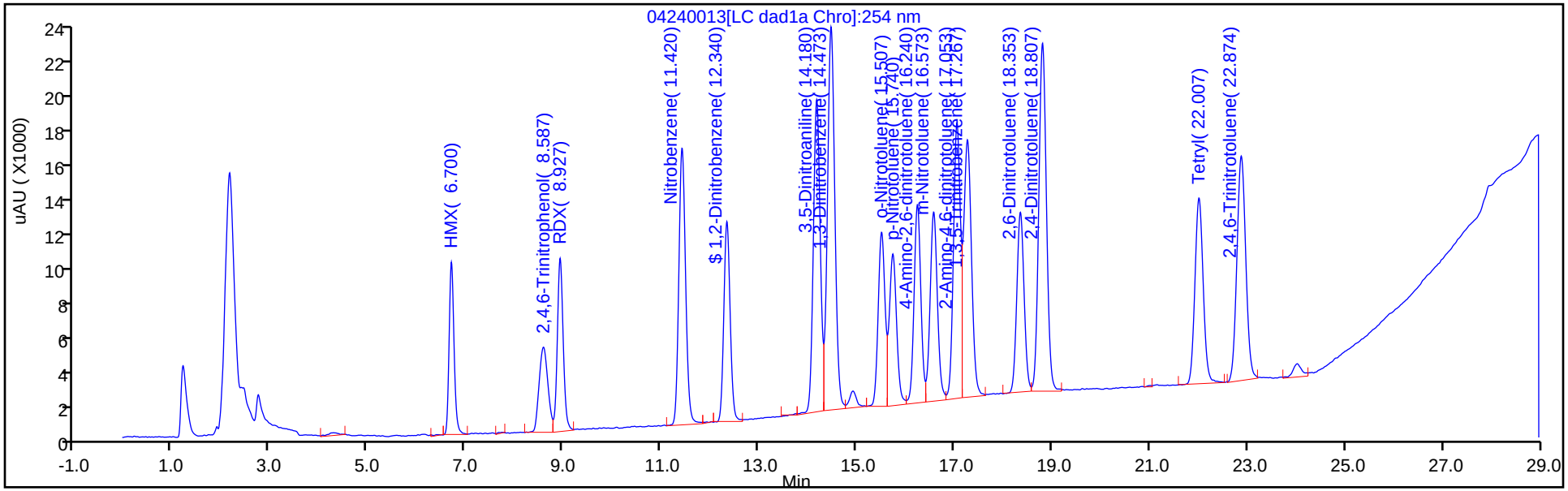
Report Date: 25-Apr-2024 14:30:12 Chrom Revision: 2.3 09-Apr-2024 17:43:44

Eurofins Denver

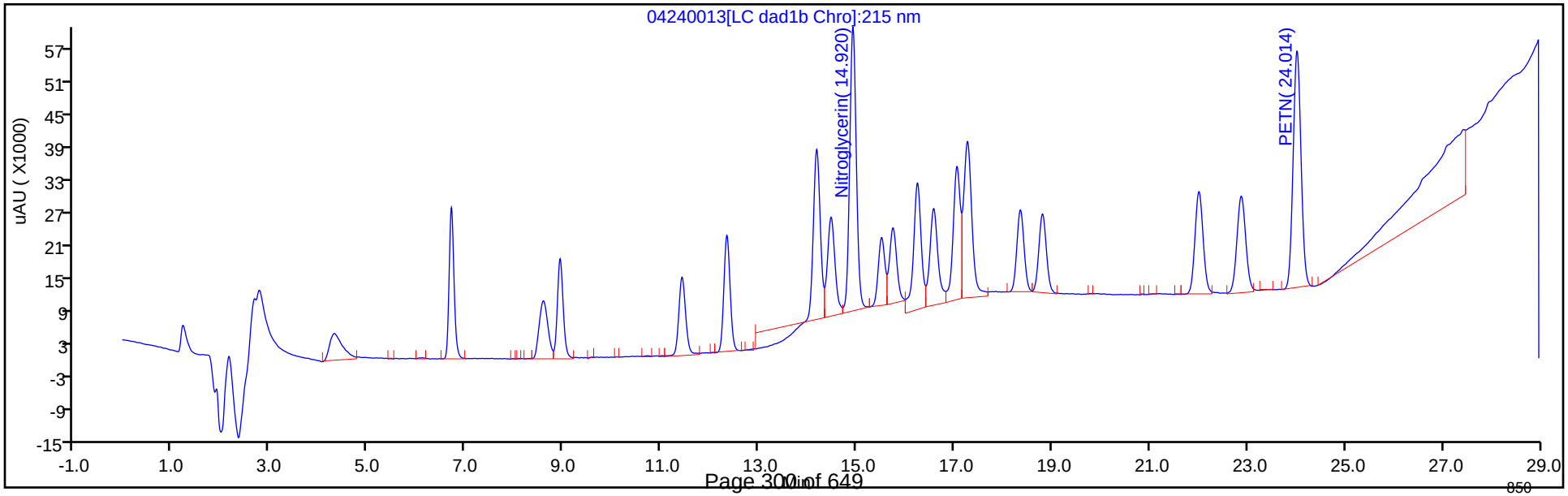
Data File: \\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240013.d

Injection Date:	24-Apr-2024 23:16:01	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	JZ/JG
Lims ID:	IC INT 6			Worklist Smp#:	13
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



850

Manual Integration/User Assign Peak Report

Eurofins Denver

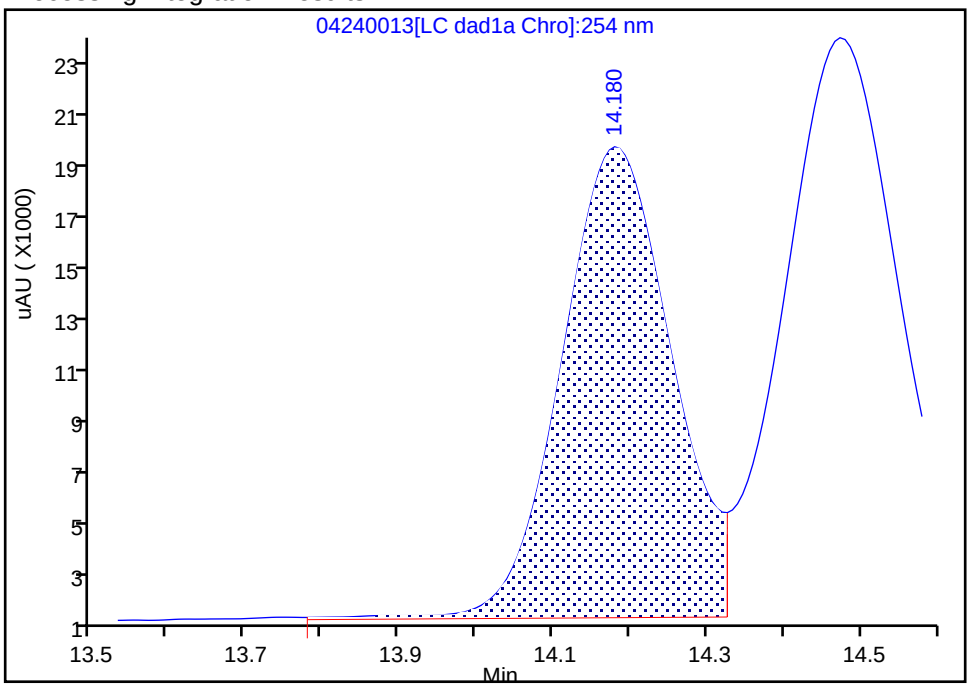
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Lims ID:	IC INT 6				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

11 3,5-Dinitroaniline, CAS: 618-87-1

Signal: 1

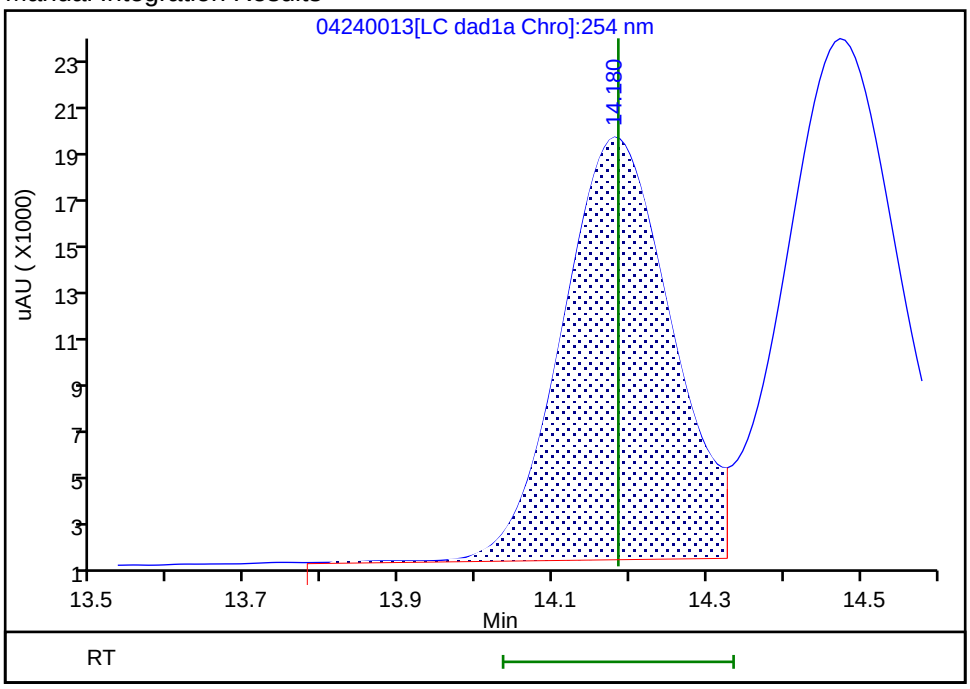
Processing Integration Results

RT: 14.18
Area: 177544
Amount: 0.403629
Amount Units: ug/ml



Manual Integration Results

RT: 14.18
Area: 175740
Amount: 0.405875
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:21:18 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

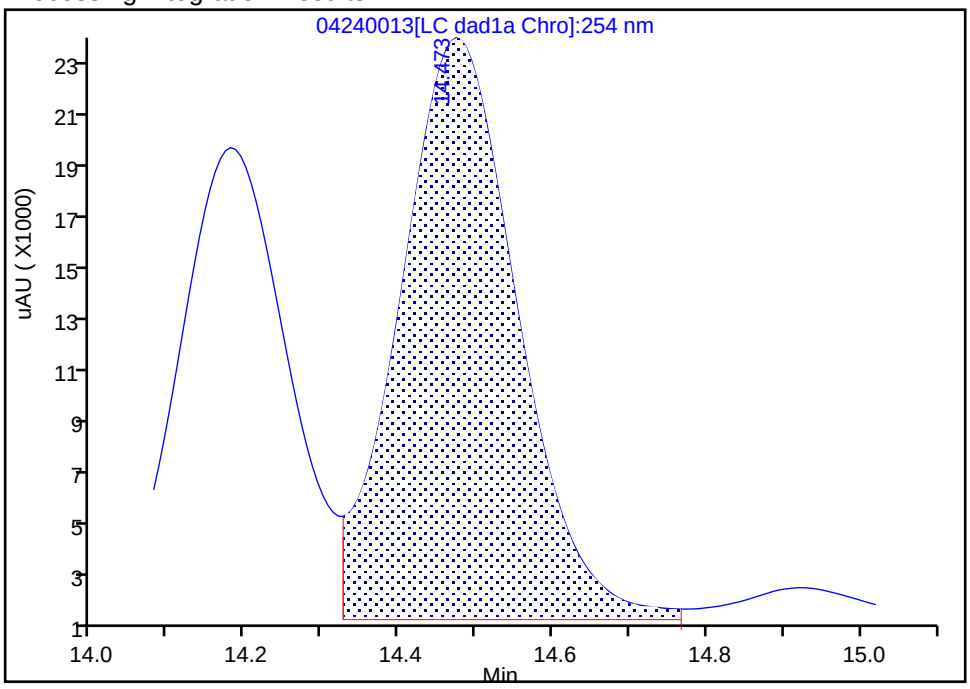
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Lims ID:	IC INT 6				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

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

Signal: 1

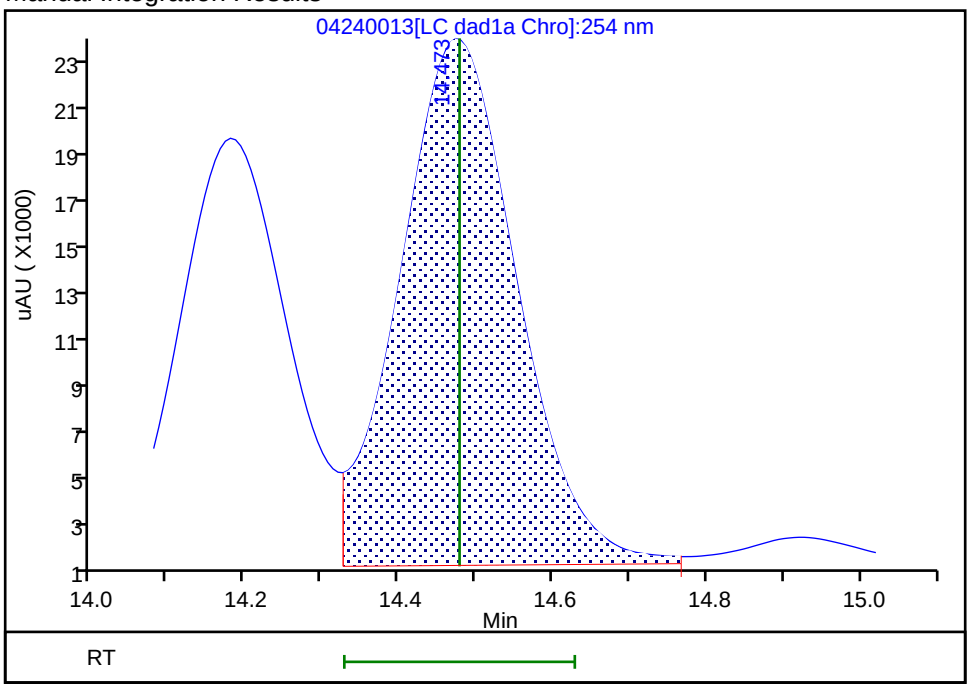
Processing Integration Results

RT: 14.47
Area: 233896
Amount: 0.368762
Amount Units: ug/ml



Manual Integration Results

RT: 14.47
Area: 231256
Amount: 0.392346
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:21:18 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

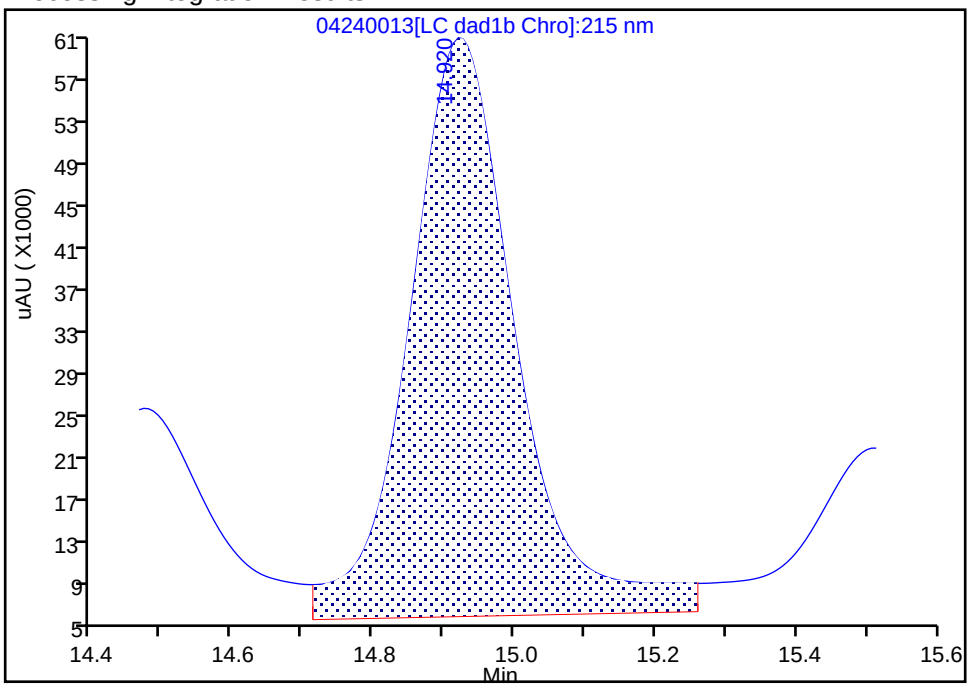
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Lims ID:	IC INT 6				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1B, 215 nm		

13 Nitroglycerin, CAS: 55-63-0

Signal: 1

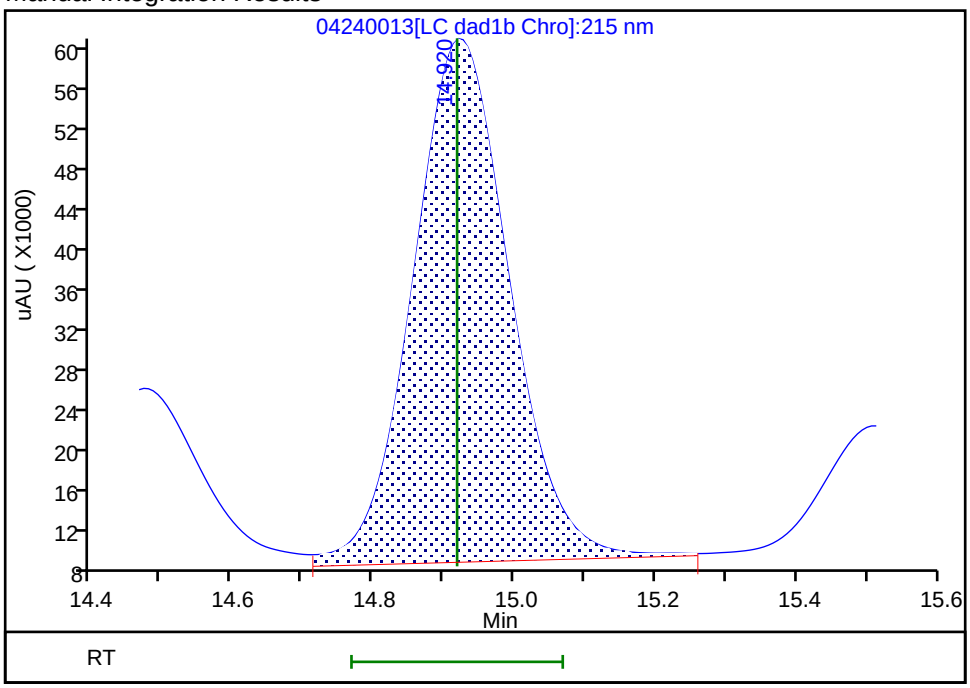
Processing Integration Results

RT: 14.92
Area: 575135
Amount: 2.229751
Amount Units: ug/ml



Manual Integration Results

RT: 14.92
Area: 496432
Amount: 4.154077
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:19:46 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

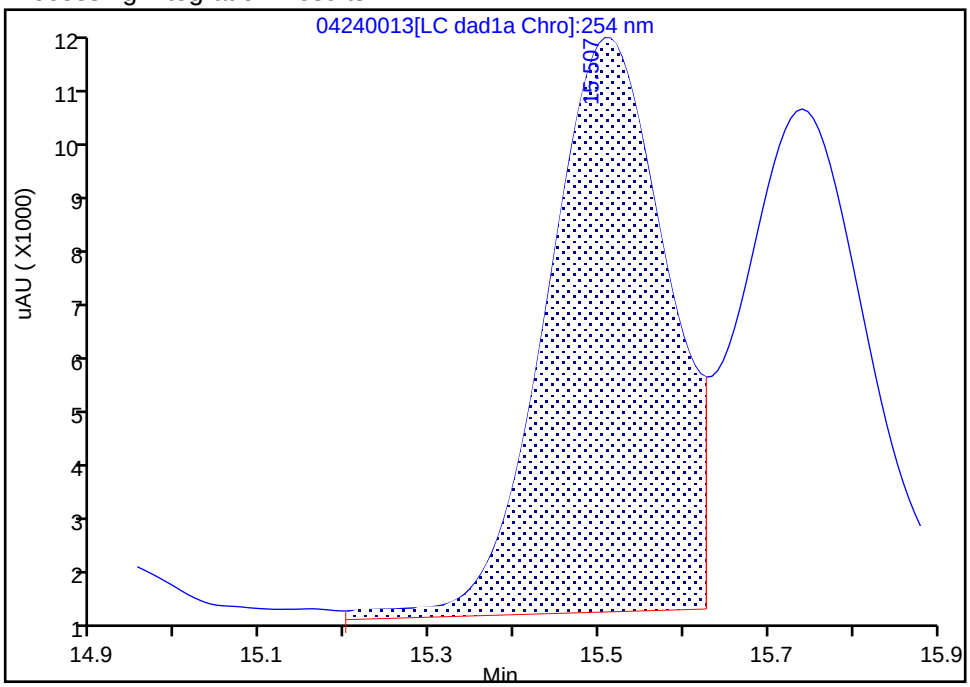
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Lims ID:	IC INT 6				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

14 o-Nitrotoluene, CAS: 88-72-2

Signal: 1

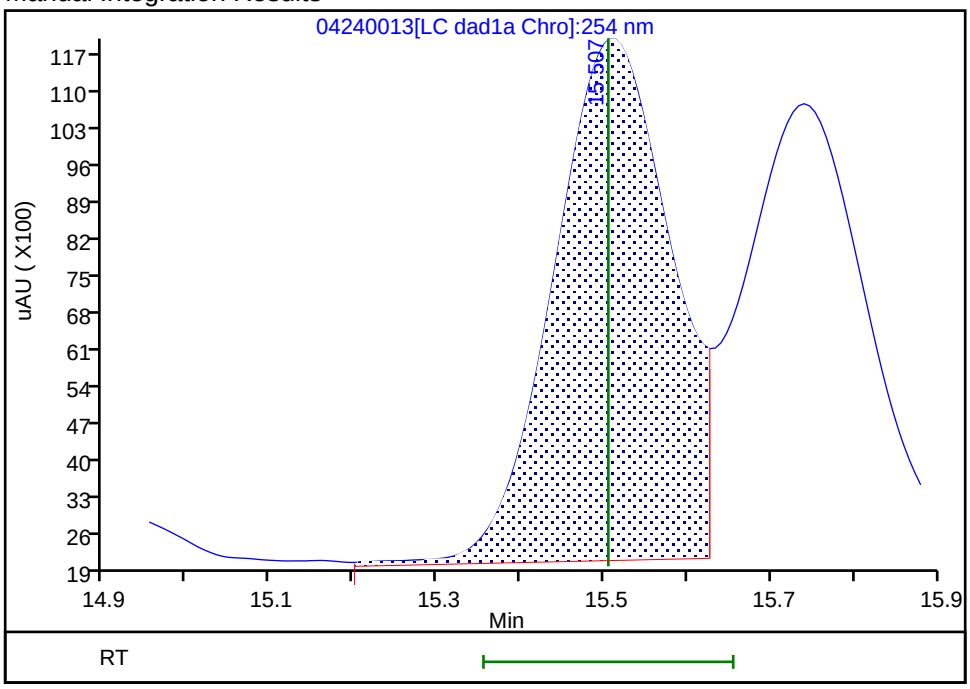
Processing Integration Results

RT: 15.51
Area: 98708
Amount: 0.357016
Amount Units: ug/ml



Manual Integration Results

RT: 15.51
Area: 96839
Amount: 0.395917
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:21:18 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

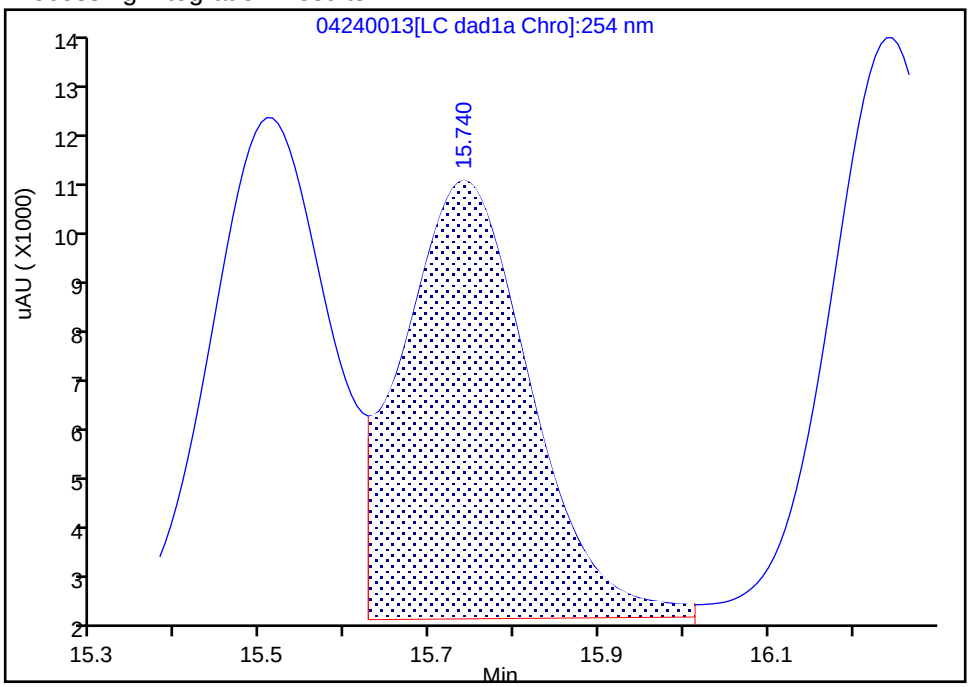
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Lims ID:	IC INT 6				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

15 p-Nitrotoluene, CAS: 99-99-0

Signal: 1

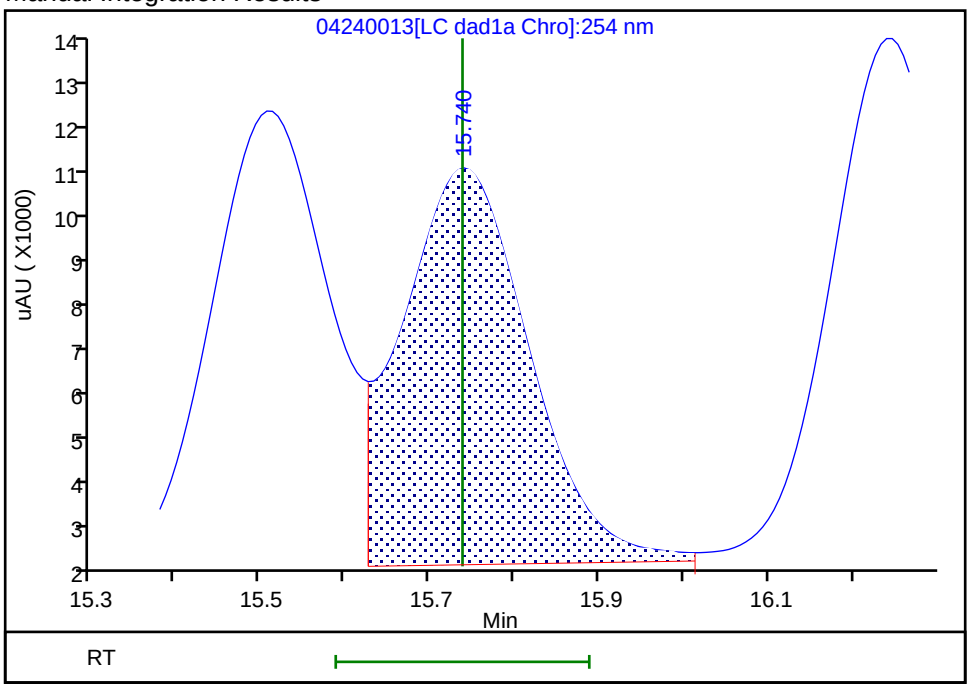
Processing Integration Results

RT: 15.74
Area: 90760
Amount: 0.406111
Amount Units: ug/ml



Manual Integration Results

RT: 15.74
Area: 89334
Amount: 0.406098
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:21:18 -06:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

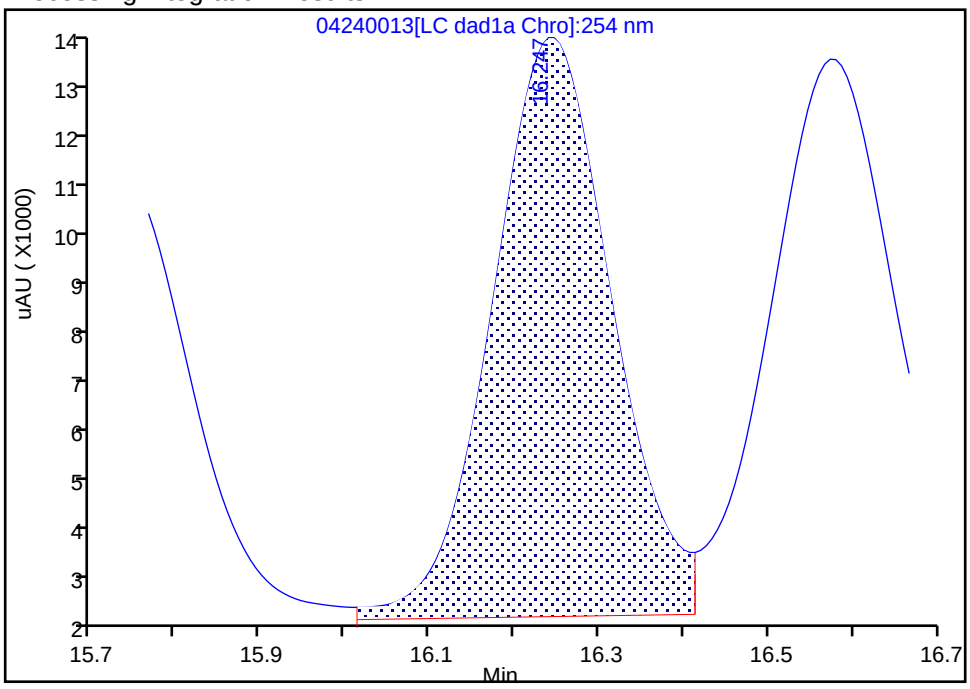
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Lims ID:	IC INT 6				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

16 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

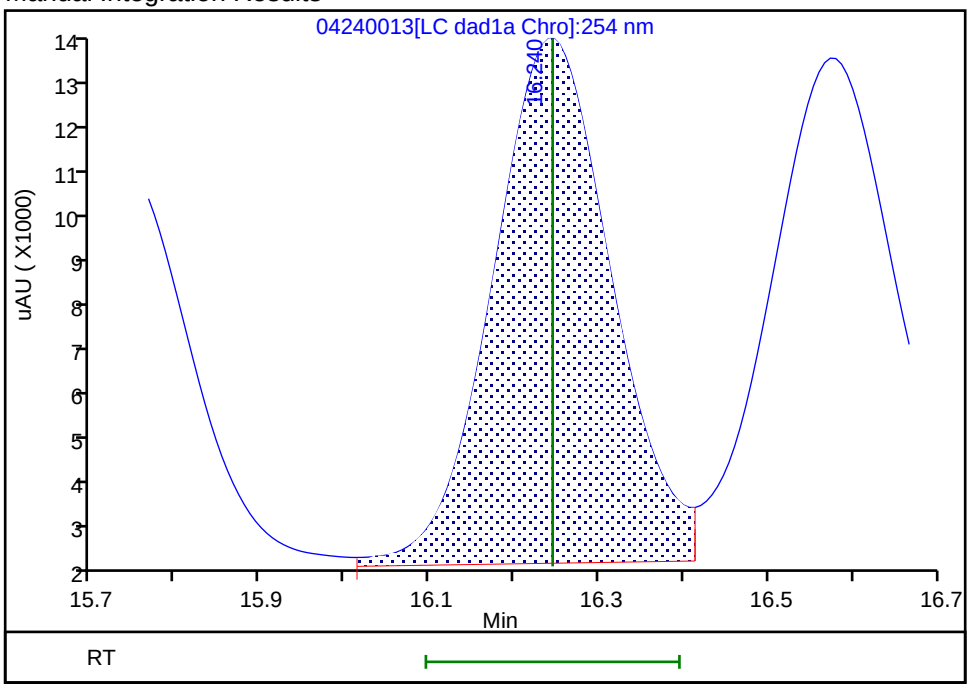
Processing Integration Results

RT: 16.25
Area: 111651
Amount: 0.405375
Amount Units: ug/ml



Manual Integration Results

RT: 16.24
Area: 109971
Amount: 0.405284
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:21:18 -06:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

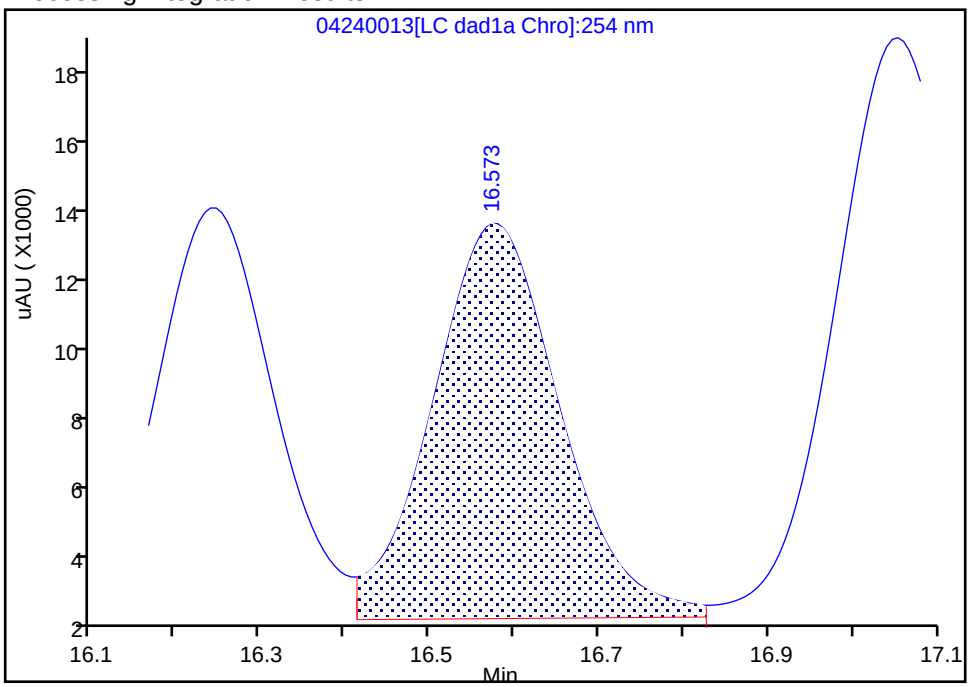
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Lims ID:	IC INT 6				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

17 m-Nitrotoluene, CAS: 99-08-1

Signal: 1

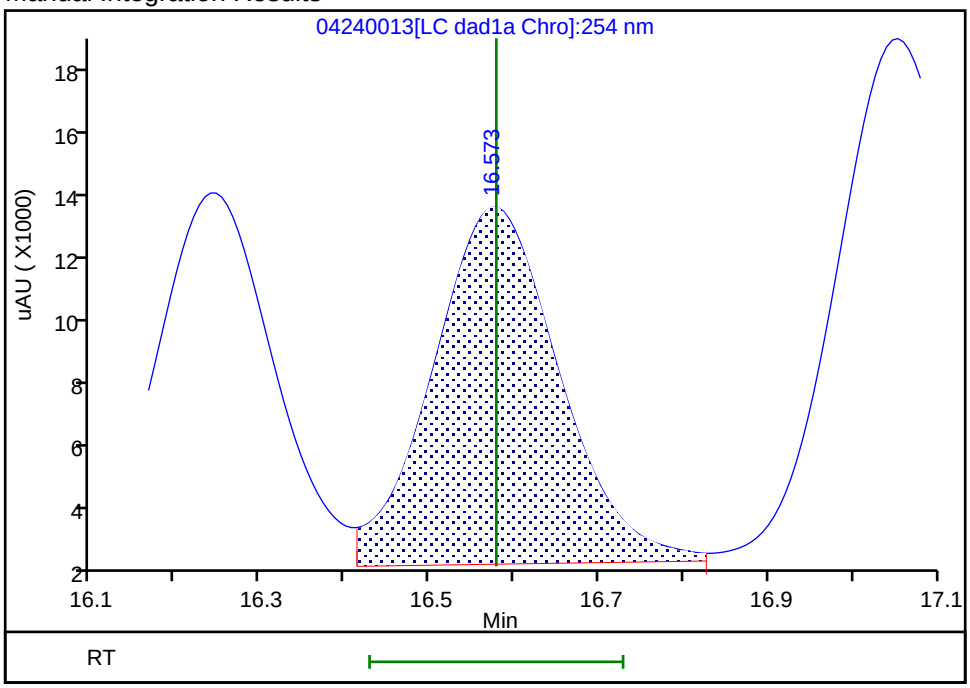
Processing Integration Results

RT: 16.57
Area: 113378
Amount: 0.394279
Amount Units: ug/ml



Manual Integration Results

RT: 16.57
Area: 112076
Amount: 0.403164
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:21:18 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

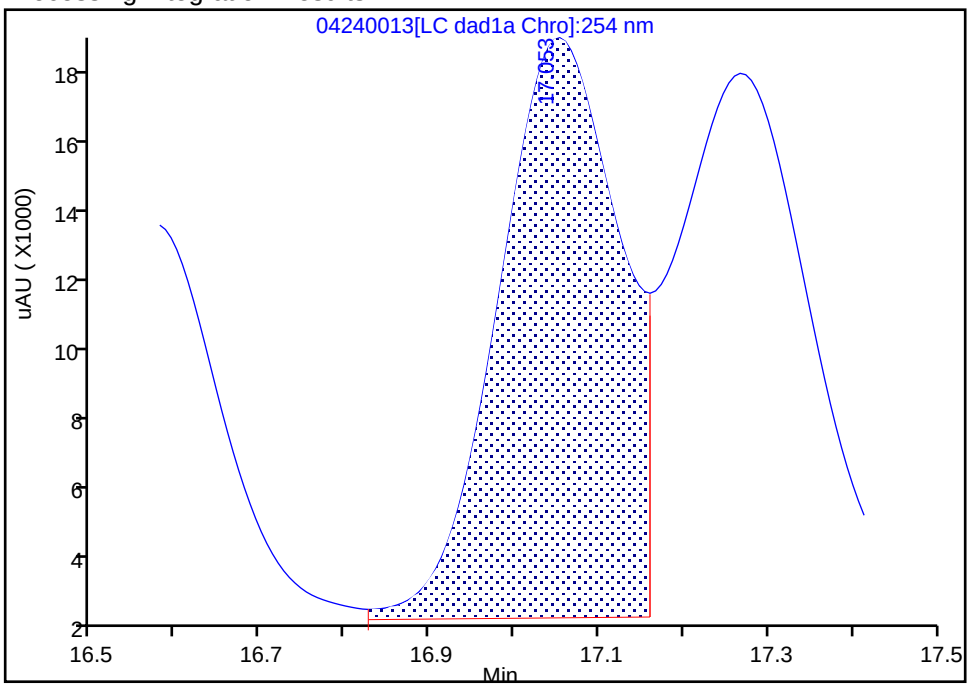
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Lims ID:	IC INT 6				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

18 2-Amino-4,6-dinitrotoluene, CAS: 35572-78-2

Signal: 1

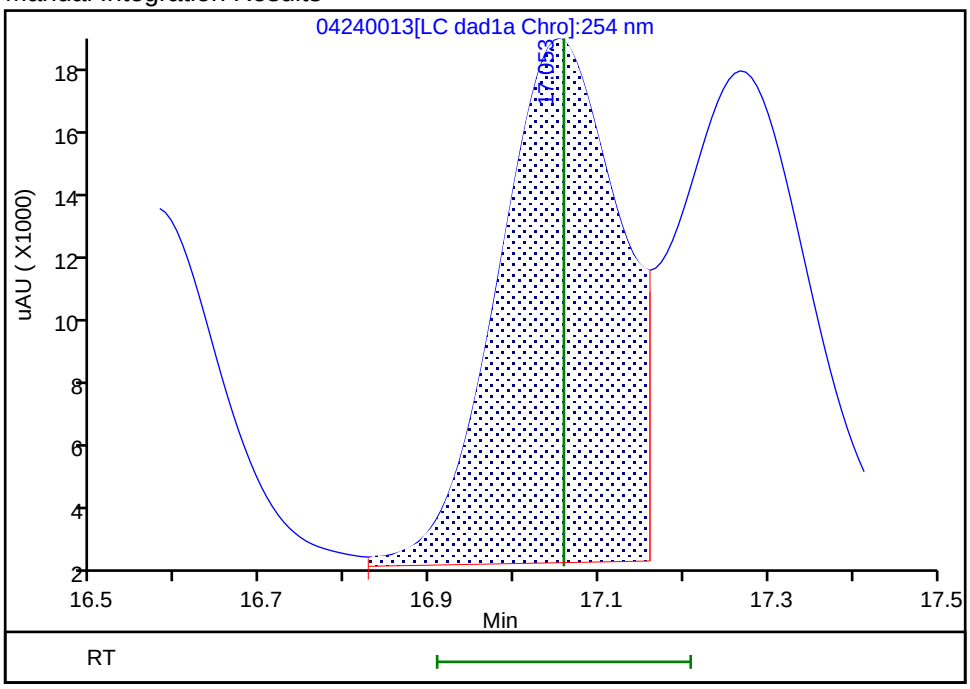
Processing Integration Results

RT: 17.05
Area: 157172
Amount: 0.405879
Amount Units: ug/ml



Manual Integration Results

RT: 17.05
Area: 156312
Amount: 0.385421
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:21:18 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

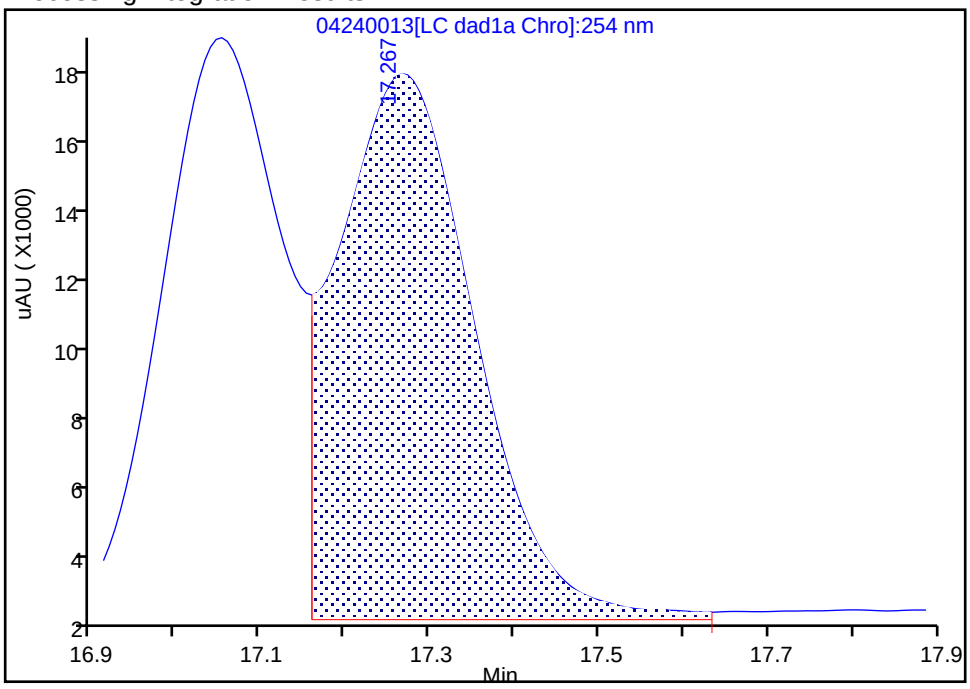
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Lims ID: IC INT 6
Client ID:
Operator ID: JZ/JG ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

19 1,3,5-Trinitrobenzene, CAS: 99-35-4

Signal: 1

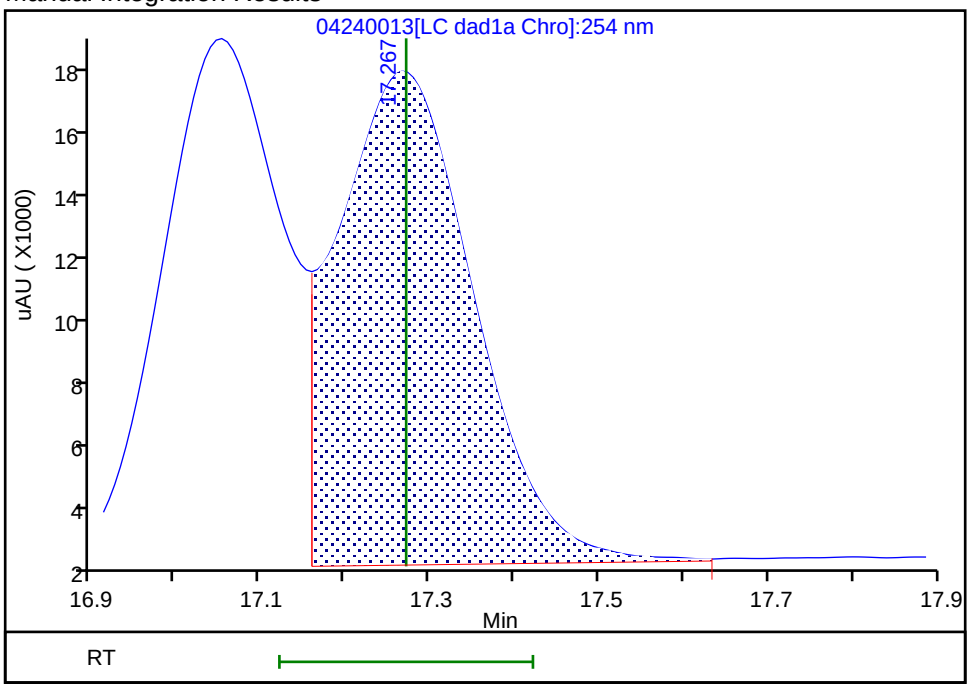
Processing Integration Results

RT: 17.27
Area: 165257
Amount: 0.352733
Amount Units: ug/ml



Manual Integration Results

RT: 17.27
Area: 162815
Amount: 0.384492
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:21:18 -06:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

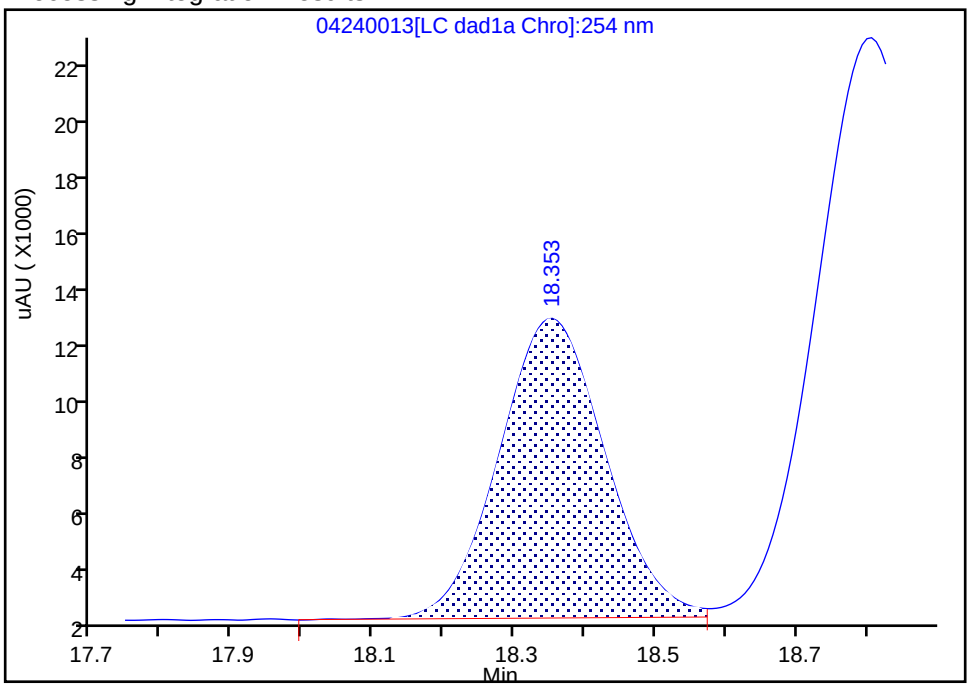
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Lims ID:	IC INT 6				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

20 2,6-Dinitrotoluene, CAS: 606-20-2

Signal: 1

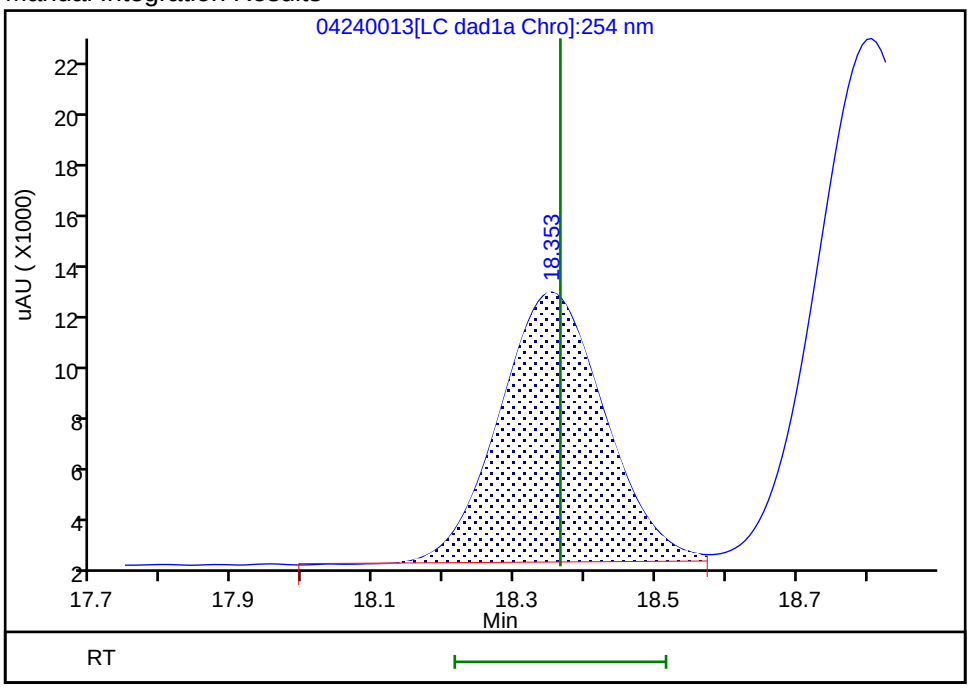
Processing Integration Results

RT: 18.35
Area: 107632
Amount: 0.396872
Amount Units: ug/ml



Manual Integration Results

RT: 18.35
Area: 107267
Amount: 0.385894
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:21:20 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Eurofins Denver

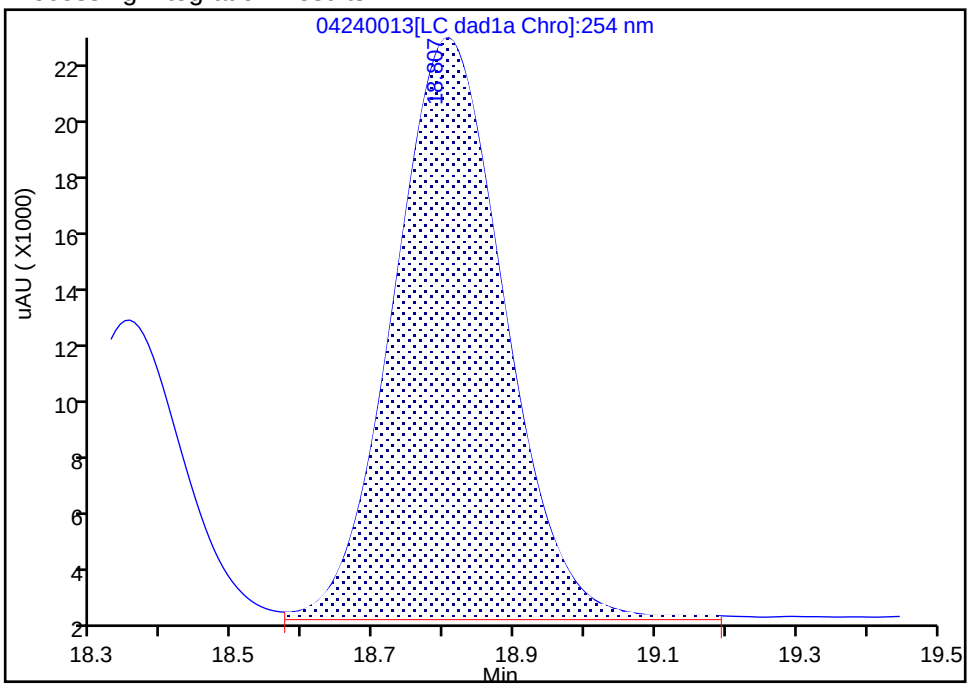
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Lims ID:	IC INT 6				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

21 2,4-Dinitrotoluene, CAS: 121-14-2

Signal: 1

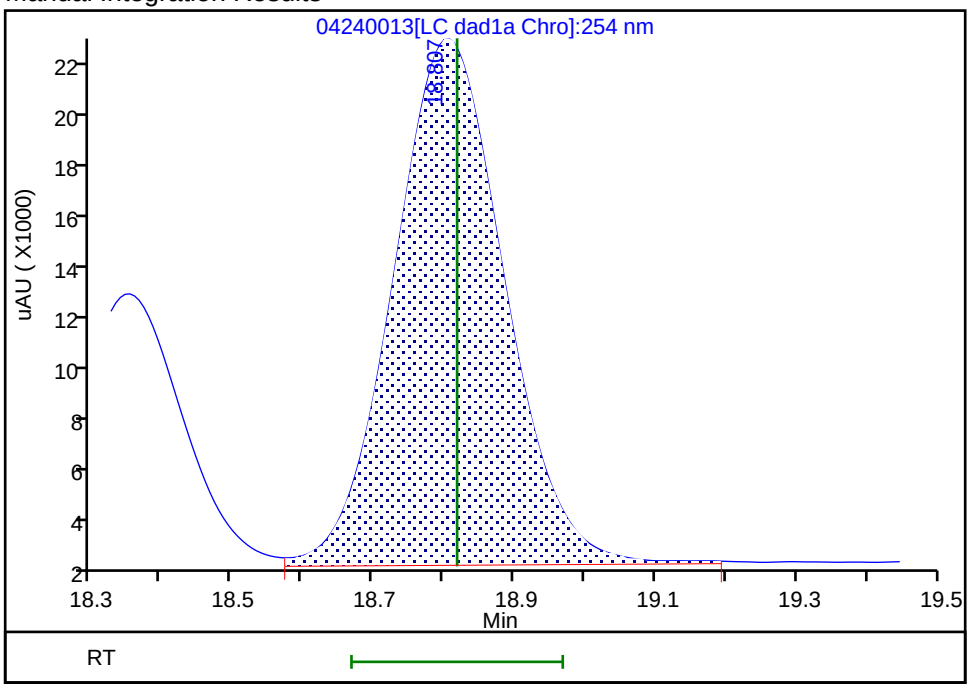
Processing Integration Results

RT: 18.81
Area: 218104
Amount: 0.366137
Amount Units: ug/ml



Manual Integration Results

RT: 18.81
Area: 216895
Amount: 0.391109
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:21:20 -06:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Eurofins Denver

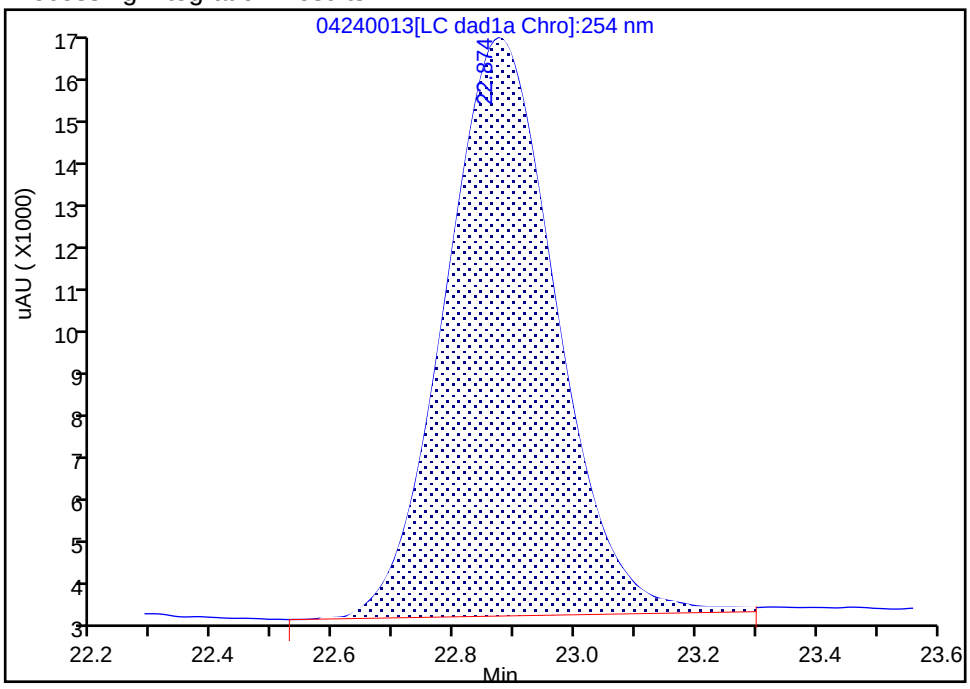
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Injection Date:	24-Apr-2024 23:16:01	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 6				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

23 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

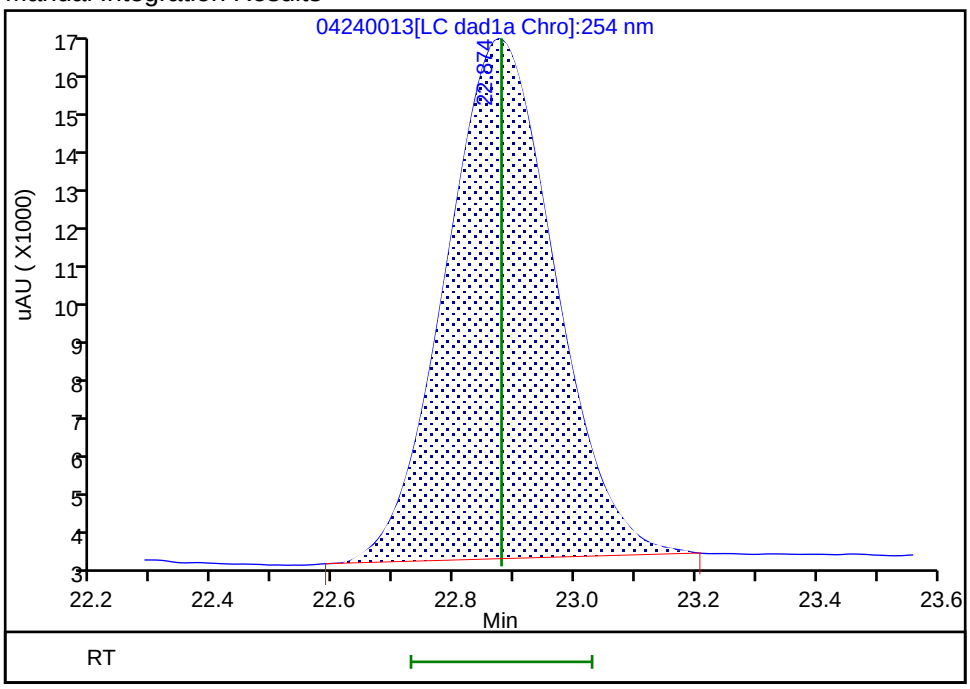
Processing Integration Results

RT: 22.87
Area: 164610
Amount: 0.409165
Amount Units: ug/ml



Manual Integration Results

RT: 22.87
Area: 160072
Amount: 0.400418
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:37:39 -06:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\G2_LUNA\20240424-132624.b\04240014.D
Lims ID: IC INT 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 24-Apr-2024 23:51:59 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC INT 5
Operator ID: JZ/JG Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub16

Method: \\chromfs\Denver\ChromData\G2_LUNA\20240424-132624.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 25-Apr-2024 14:30:13 Calib Date: 25-Apr-2024 07:39:21
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\G2_LUNA\20240424-132624.b\04240027.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX1684

First Level Reviewer: LV5D Date: 25-Apr-2024 13:19:57

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
6 HMX	1	6.705	6.705	0.000	43487	0.2500	0.2498	
5 2,4,6-Trinitrophenol	1	8.612	8.612	0.000	37043	0.2500	0.2447	
8 RDX	1	8.938	8.938	0.000	52707	0.2500	0.2537	
9 Nitrobenzene	1	11.425	11.425	0.000	93225	0.2500	0.2440	
$ 10 1,2-Dinitrobenzene	1	12.345	12.345	0.000	64431	0.2500	0.2491	
11 3,5-Dinitroaniline	1	14.185	14.185	0.000	108023	0.2500	0.2487	M
12 1,3-Dinitrobenzene	1	14.478	14.478	0.000	143019	0.2500	0.2426	M
13 Nitroglycerin	2	14.918	14.918	0.000	309600	2.50	2.59	M
14 o-Nitrotoluene	1	15.505	15.505	0.000	58941	0.2500	0.2410	M
15 p-Nitrotoluene	1	15.738	15.738	0.000	54130	0.2500	0.2444	M
16 4-Amino-2,6-dinitrotoluene	1	16.245	16.245	0.000	67115	0.2500	0.2463	M
17 m-Nitrotoluene	1	16.578	16.578	0.000	68559	0.2500	0.2453	M
18 2-Amino-4,6-dinitrotoluene	1	17.058	17.058	0.000	95082	0.2500	0.2344	M
19 1,3,5-Trinitrobenzene	1	17.272	17.272	0.000	101067	0.2500	0.2387	M
20 2,6-Dinitrotoluene	1	18.365	18.365	0.000	66539	0.2500	0.2394	M
21 2,4-Dinitrotoluene	1	18.818	18.818	0.000	133579	0.2500	0.2409	M
22 Tetryl	1	22.025	22.025	0.000	79229	0.2500	0.2525	
23 2,4,6-Trinitrotoluene	1	22.878	22.878	0.000	100337	0.2500	0.2510	M
24 PETN	2	24.032	24.032	0.000	304928	2.50	2.48	M

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00080 Amount Added: 25.00 Units: uL

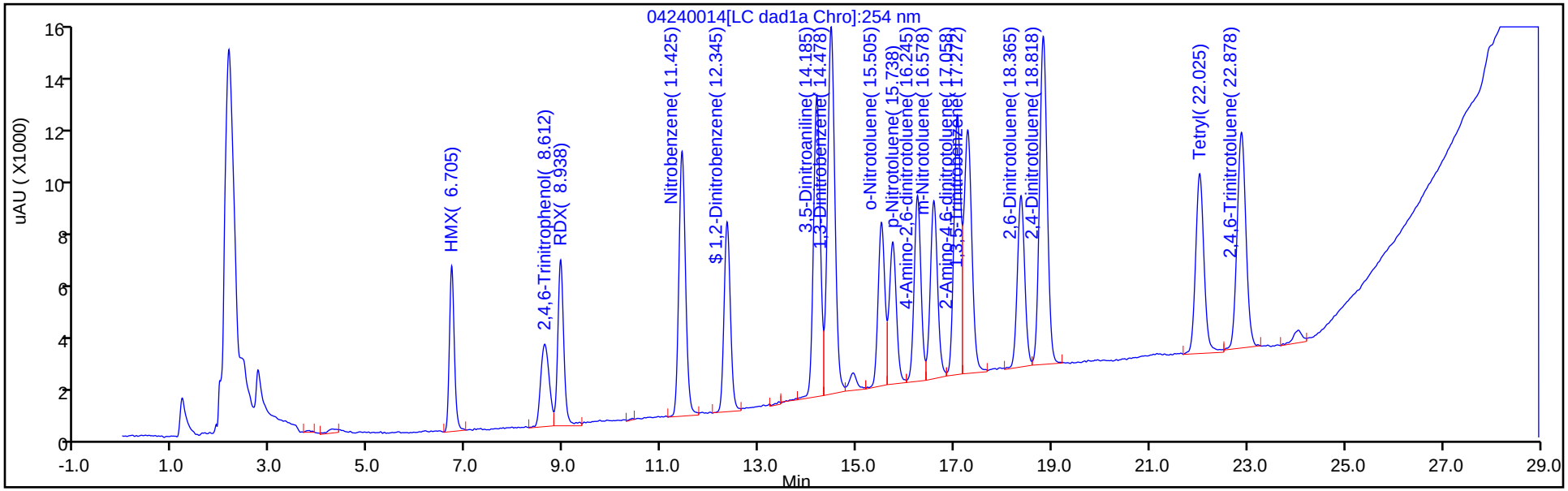
Report Date: 25-Apr-2024 14:30:13 Chrom Revision: 2.3 09-Apr-2024 17:43:44

Eurofins Denver

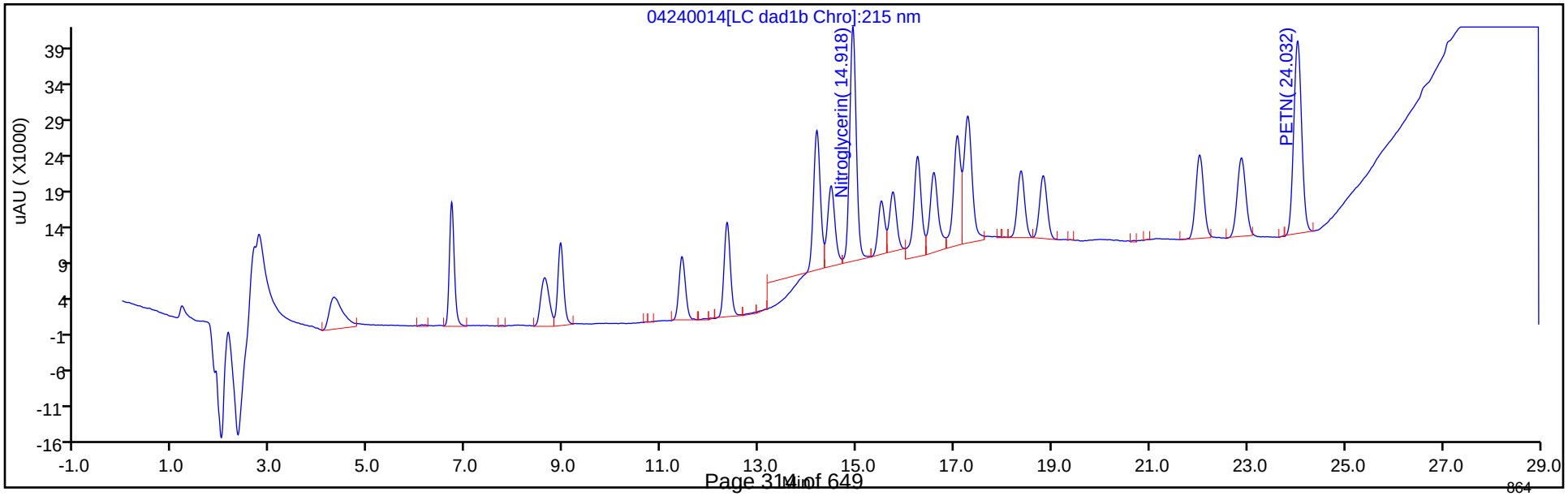
Data File: \\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240014.d

Injection Date:	24-Apr-2024 23:51:59	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	JZ/JG
Lims ID:	IC INT 5			Worklist Smp#:	14
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

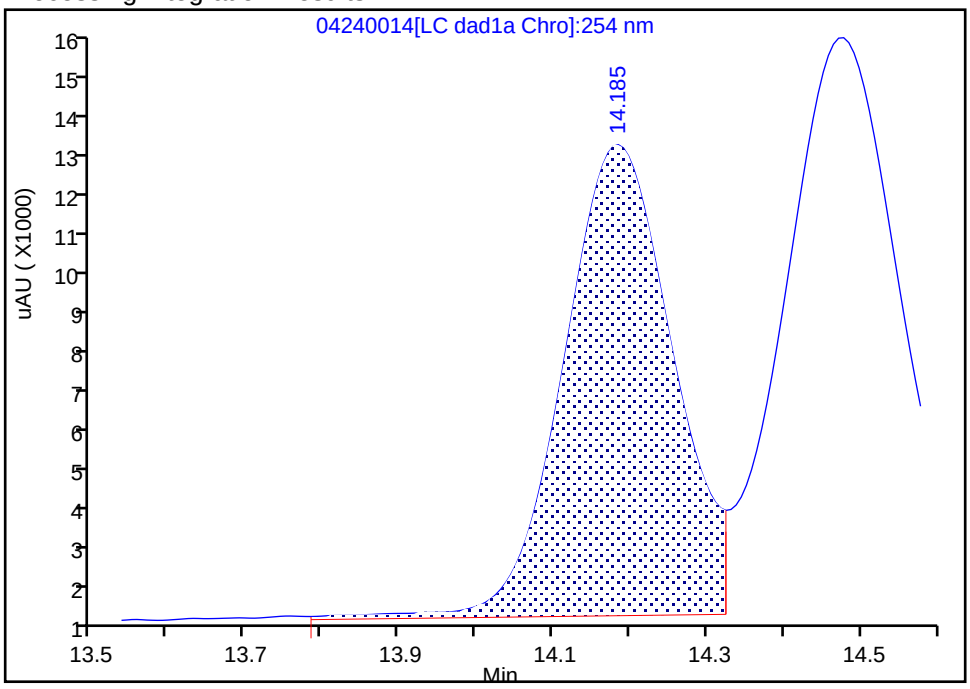
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Injection Date:	24-Apr-2024 23:51:59	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 5				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

11 3,5-Dinitroaniline, CAS: 618-87-1

Signal: 1

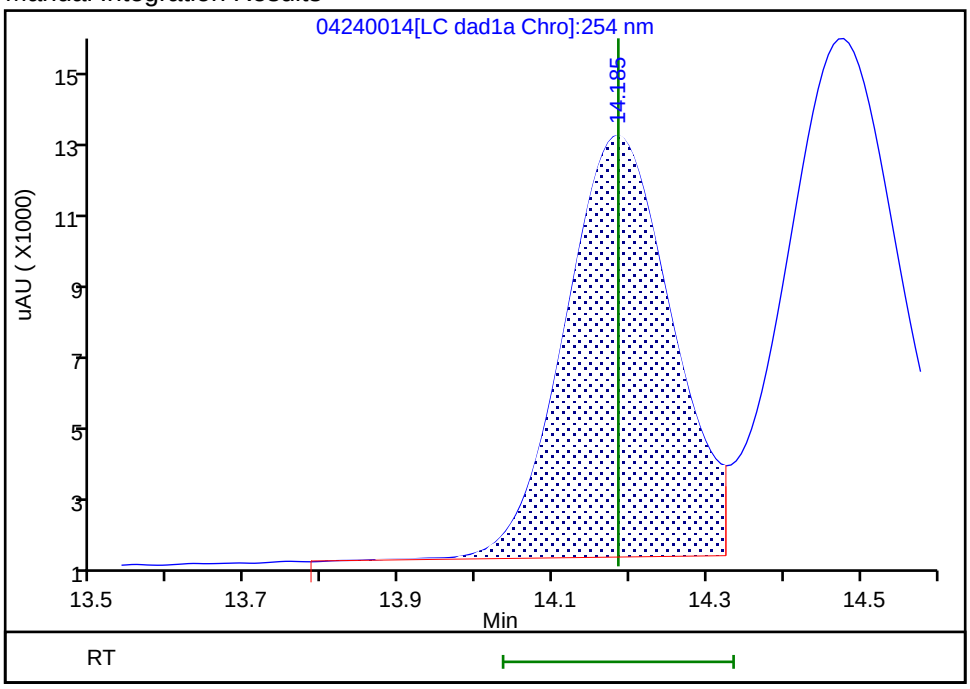
Processing Integration Results

RT: 14.18
Area: 111068
Amount: 0.250808
Amount Units: ug/ml



Manual Integration Results

RT: 14.18
Area: 108023
Amount: 0.248660
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:21:34 -06:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

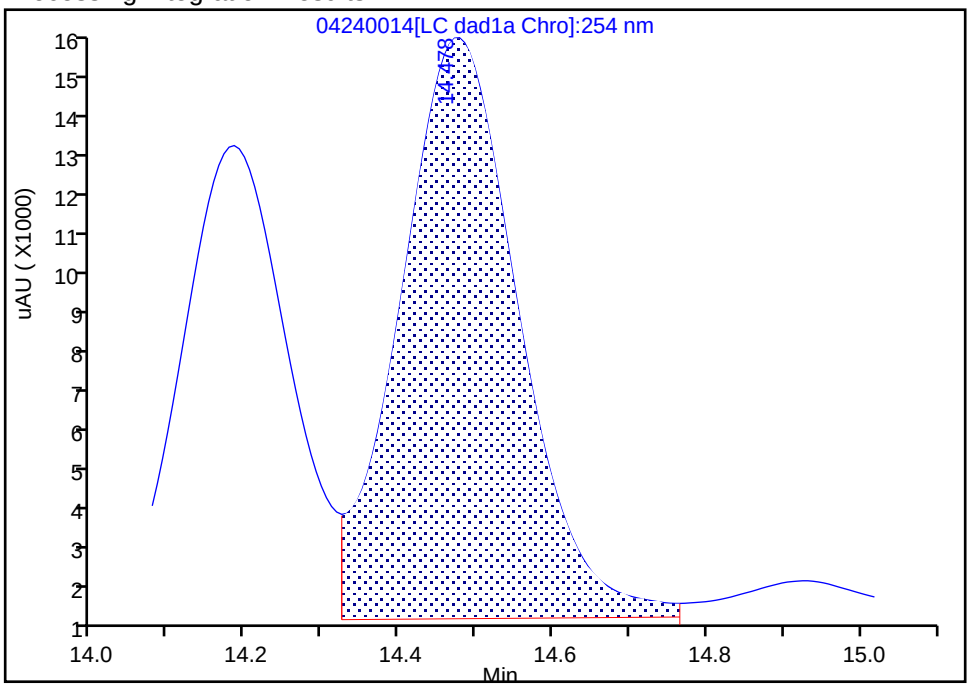
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Injection Date: 24-Apr-2024 23:51:59 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC INT 5
Client ID:
Operator ID: JZ/JG ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

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

Signal: 1

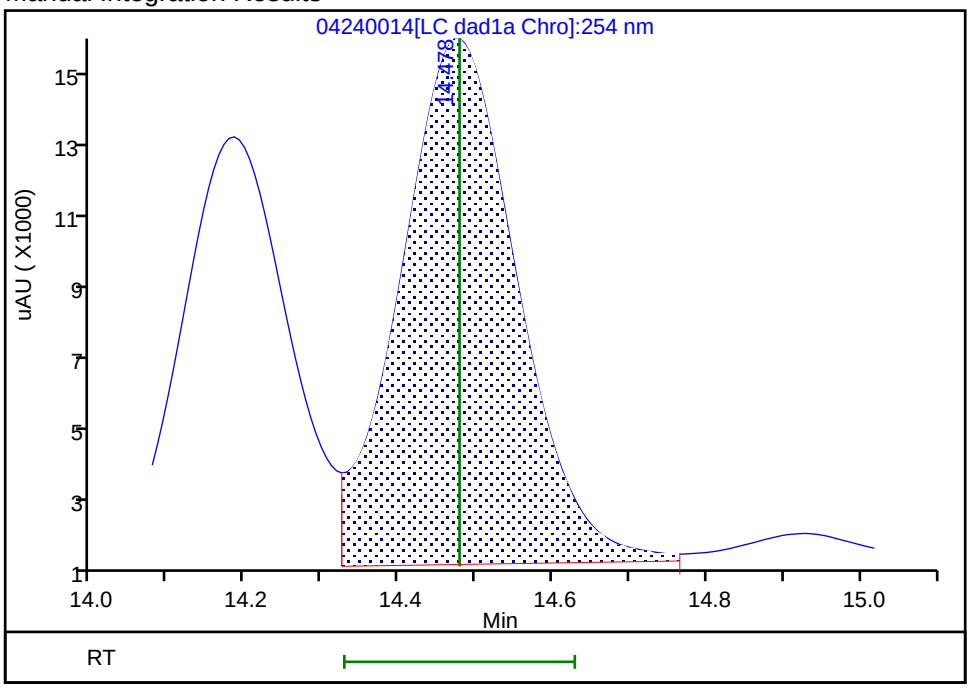
Processing Integration Results

RT: 14.48
Area: 146583
Amount: 0.231371
Amount Units: ug/ml



Manual Integration Results

RT: 14.48
Area: 143019
Amount: 0.242644
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:21:34 -06:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Eurofins Denver

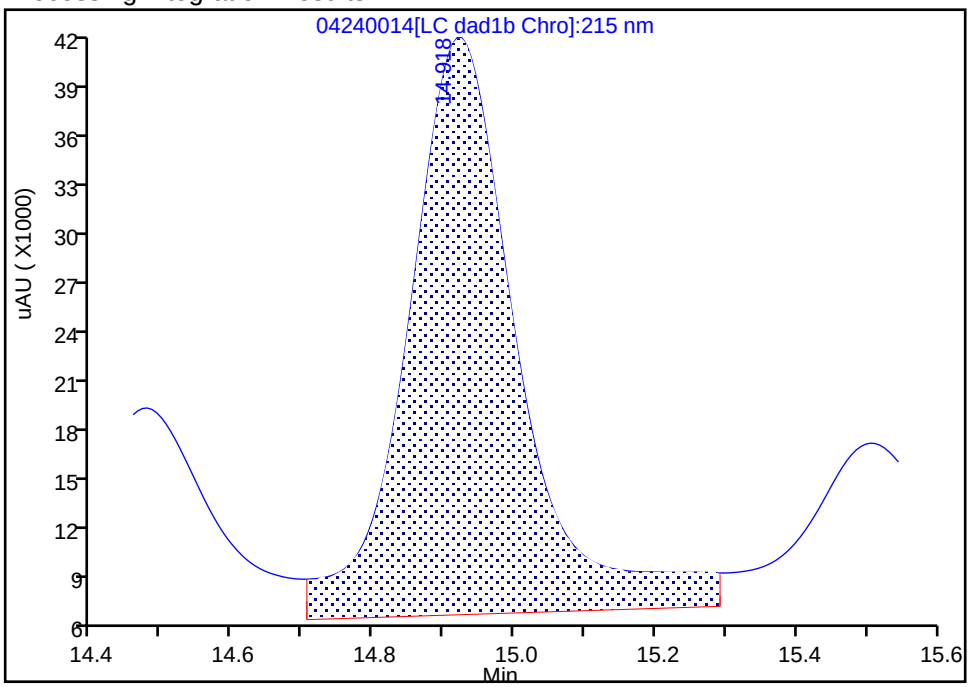
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Injection Date:	24-Apr-2024 23:51:59	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 5				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1B, 215 nm		

13 Nitroglycerin, CAS: 55-63-0

Signal: 1

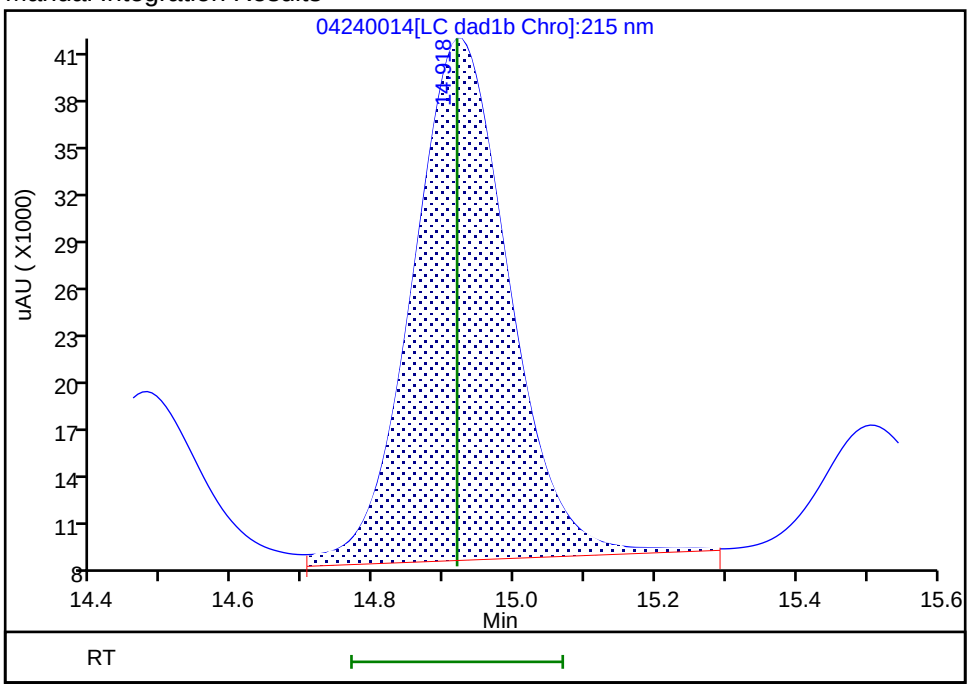
Processing Integration Results

RT: 14.92
Area: 374650
Amount: 1.464903
Amount Units: ug/ml



Manual Integration Results

RT: 14.92
Area: 309600
Amount: 2.590692
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:19:56 -06:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

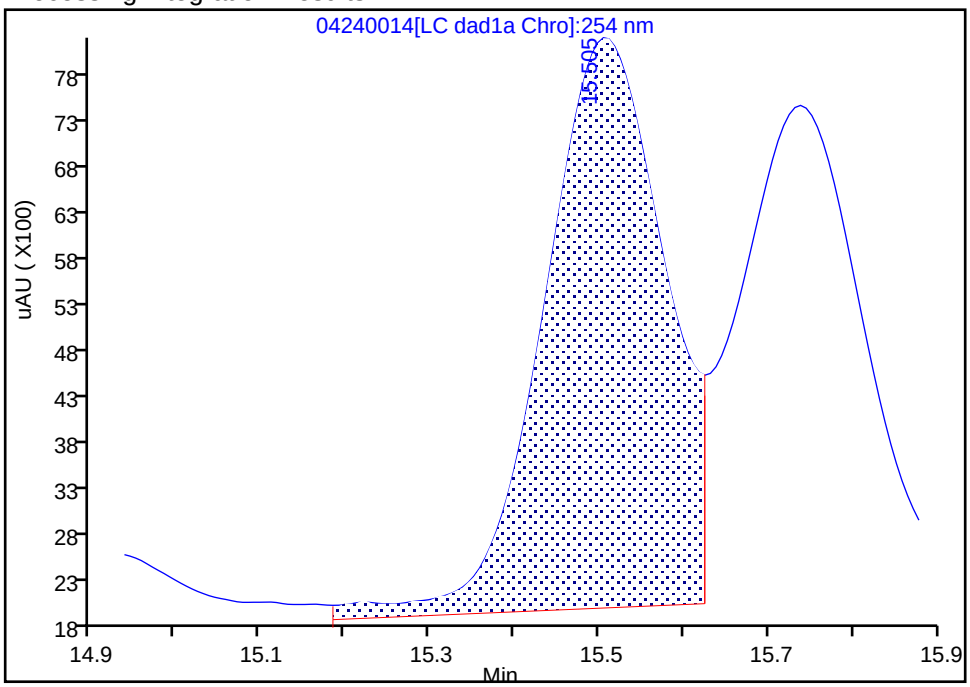
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Lims ID:	IC INT 5				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

14 o-Nitrotoluene, CAS: 88-72-2

Signal: 1

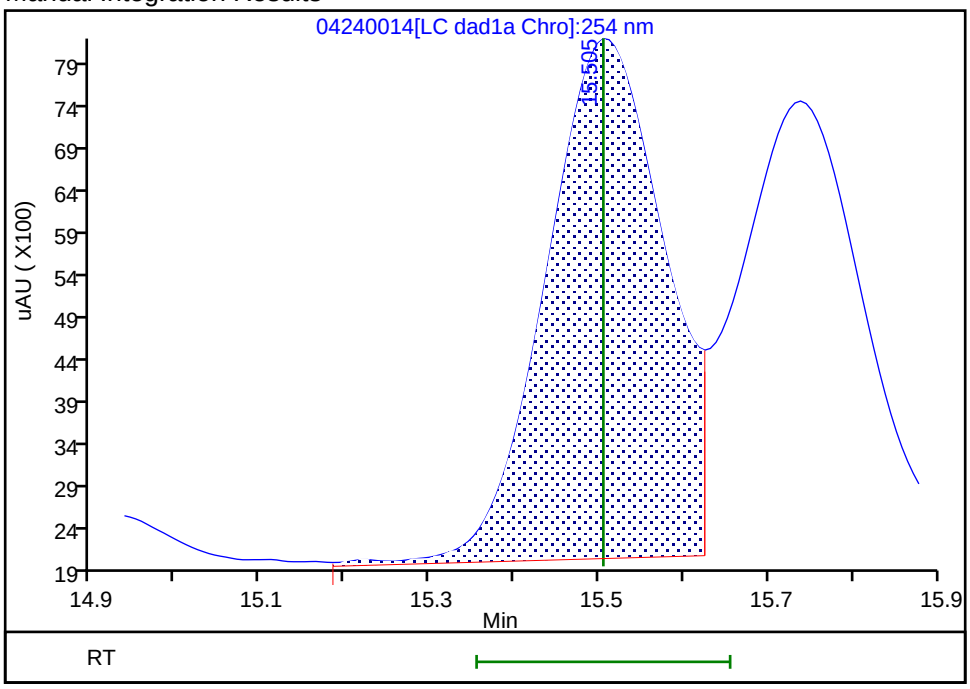
Processing Integration Results

RT: 15.50
Area: 61475
Amount: 0.222767
Amount Units: ug/ml



Manual Integration Results

RT: 15.50
Area: 58941
Amount: 0.240974
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:21:34 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

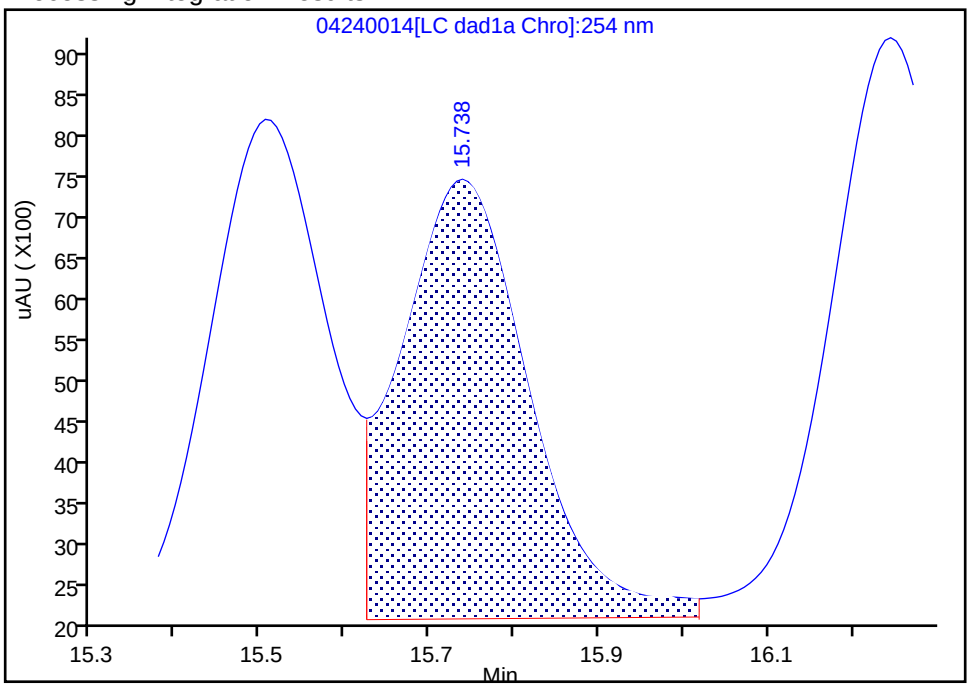
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Injection Date:	24-Apr-2024 23:51:59	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 5				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

15 p-Nitrotoluene, CAS: 99-99-0

Signal: 1

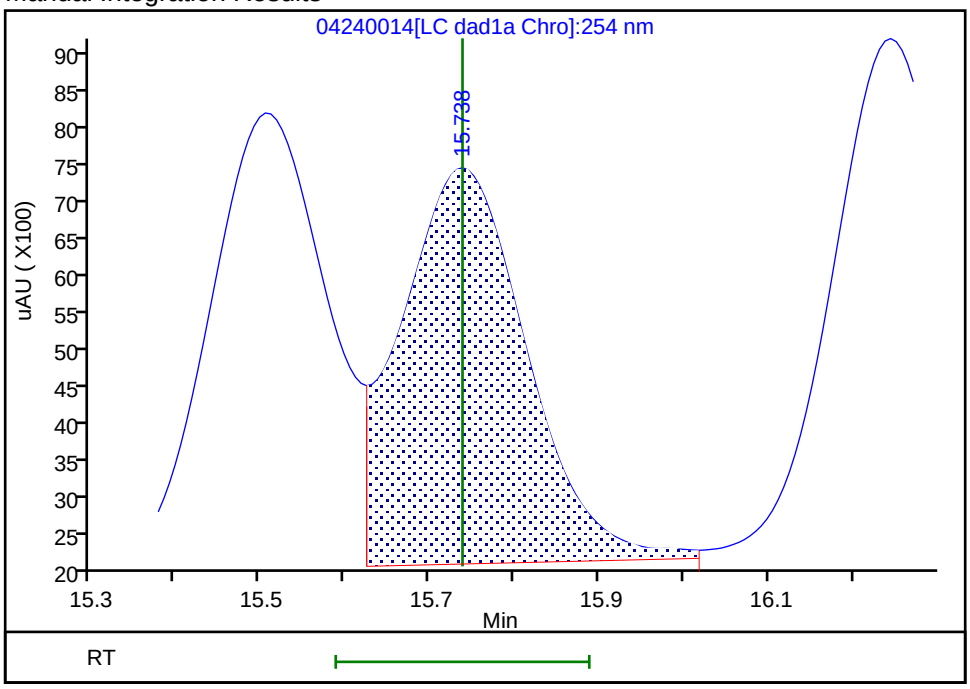
Processing Integration Results

RT: 15.74
Area: 56218
Amount: 0.248629
Amount Units: ug/ml



Manual Integration Results

RT: 15.74
Area: 54130
Amount: 0.244405
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:21:34 -06:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

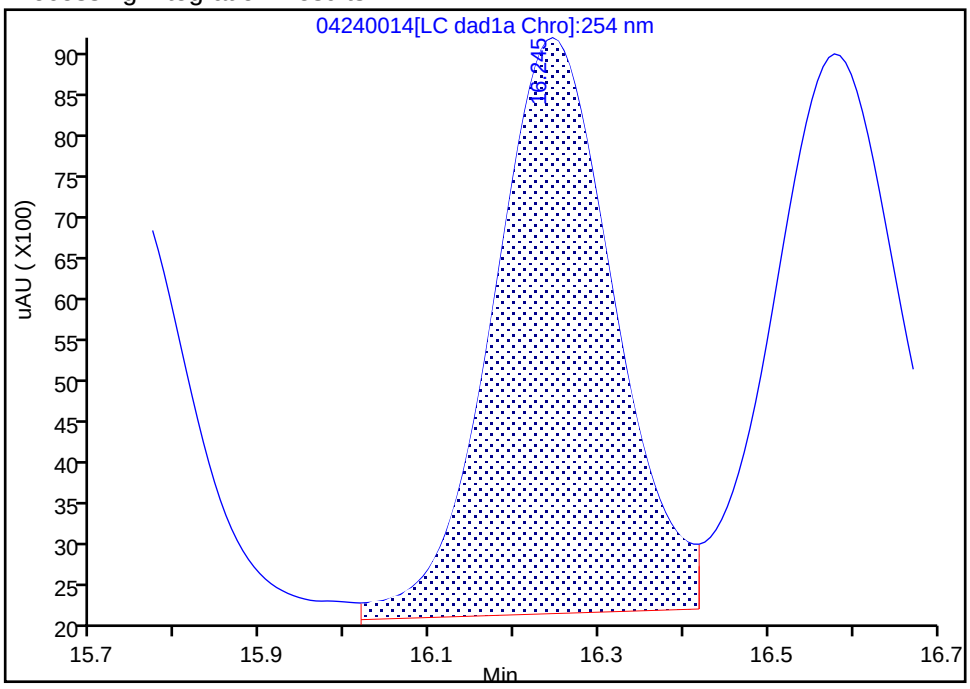
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Injection Date:	24-Apr-2024 23:51:59	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 5				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

16 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

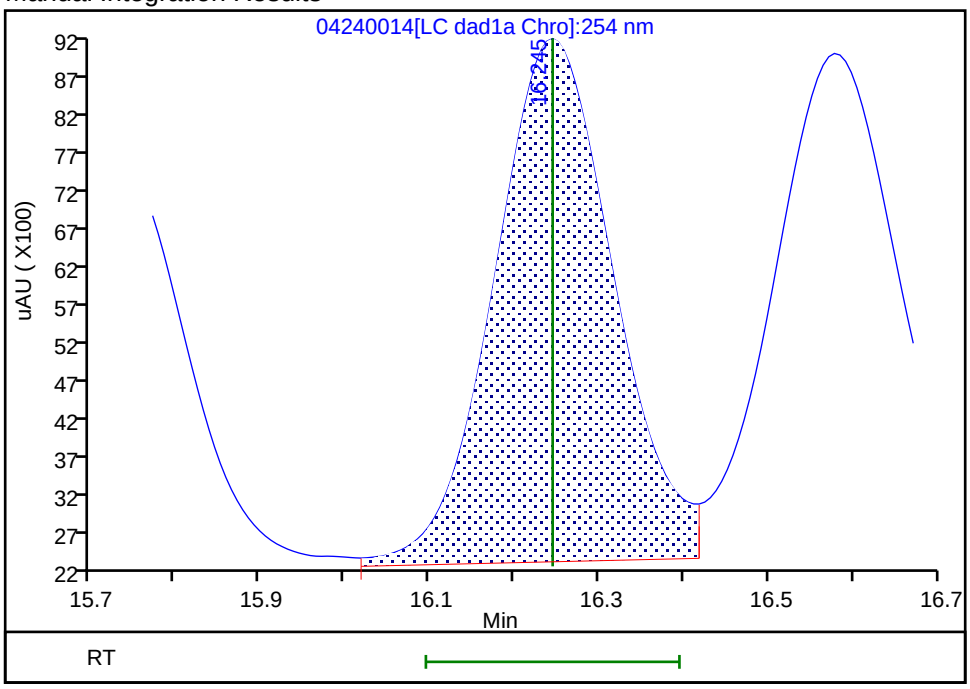
Processing Integration Results

RT: 16.24
Area: 69455
Amount: 0.247954
Amount Units: ug/ml



Manual Integration Results

RT: 16.24
Area: 67115
Amount: 0.246270
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:21:34 -06:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

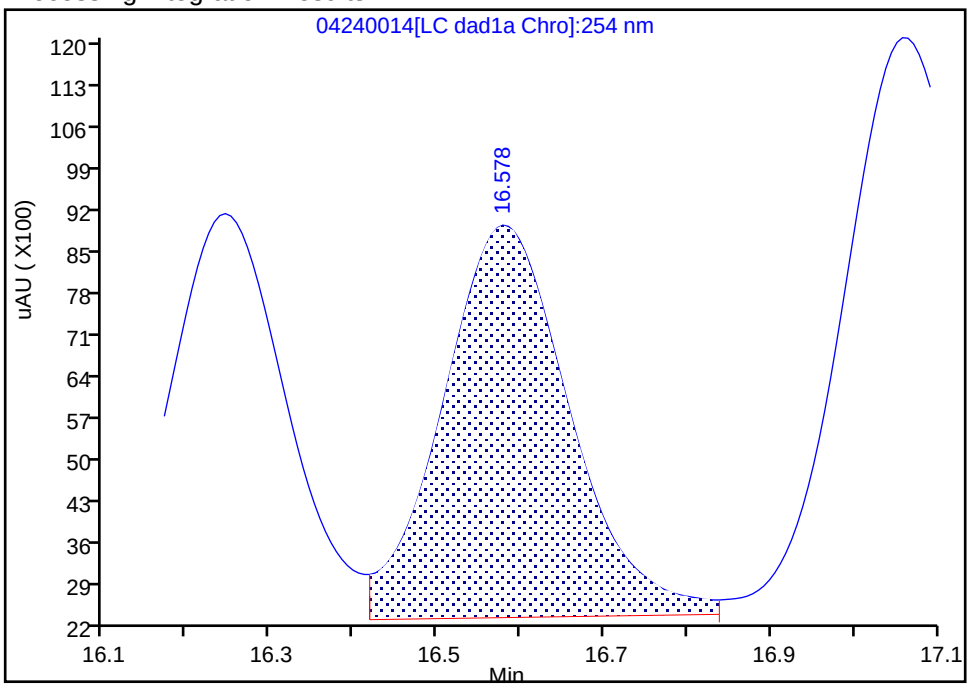
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Injection Date:	24-Apr-2024 23:51:59	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 5				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

17 m-Nitrotoluene, CAS: 99-08-1

Signal: 1

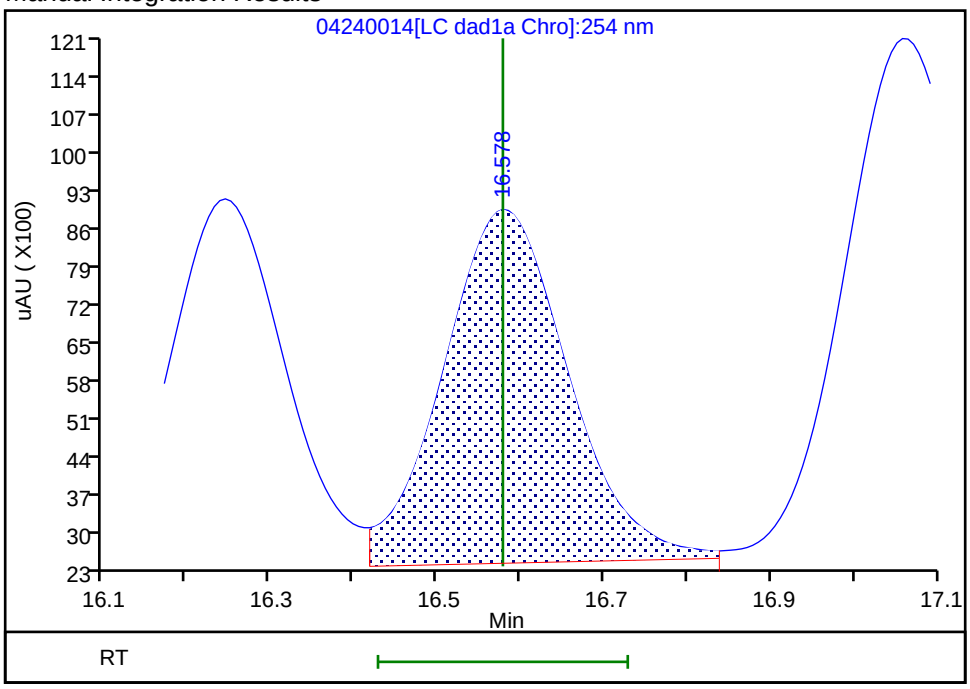
Processing Integration Results

RT: 16.58
Area: 70537
Amount: 0.242628
Amount Units: ug/ml



Manual Integration Results

RT: 16.58
Area: 68559
Amount: 0.245258
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:21:34 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

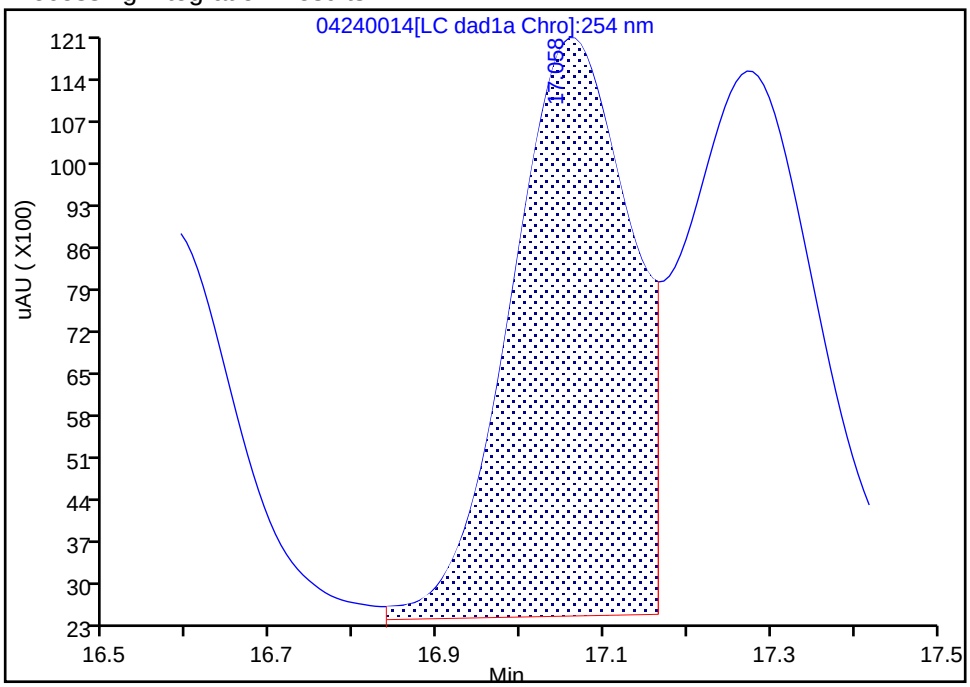
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Lims ID:	IC INT 5				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

18 2-Amino-4,6-dinitrotoluene, CAS: 35572-78-2

Signal: 1

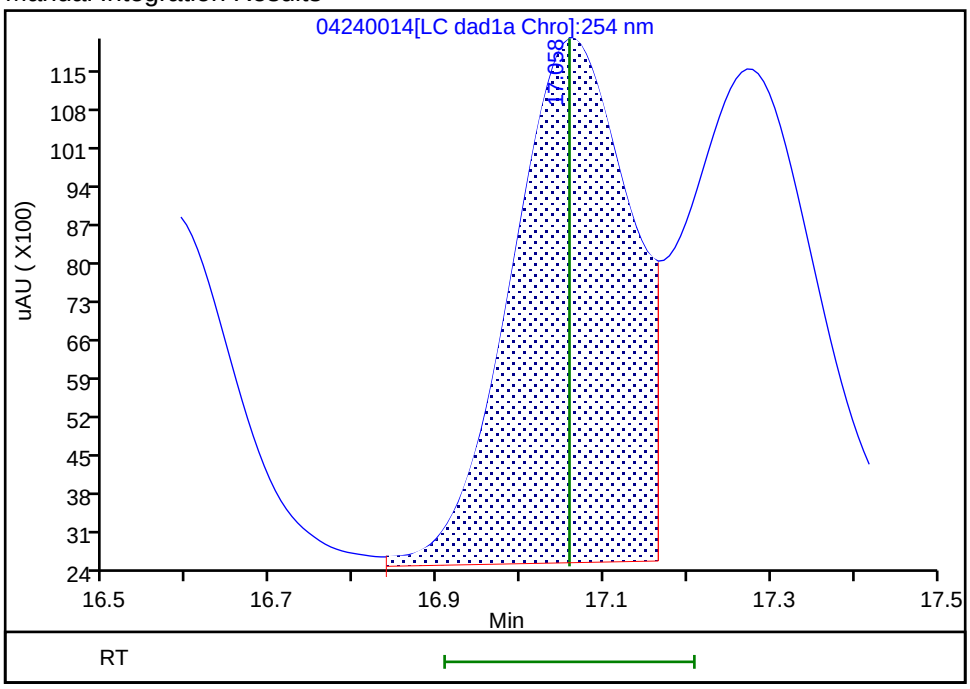
Processing Integration Results

RT: 17.06
Area: 96415
Amount: 0.246197
Amount Units: ug/ml



Manual Integration Results

RT: 17.06
Area: 95082
Amount: 0.234445
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:21:34 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Eurofins Denver

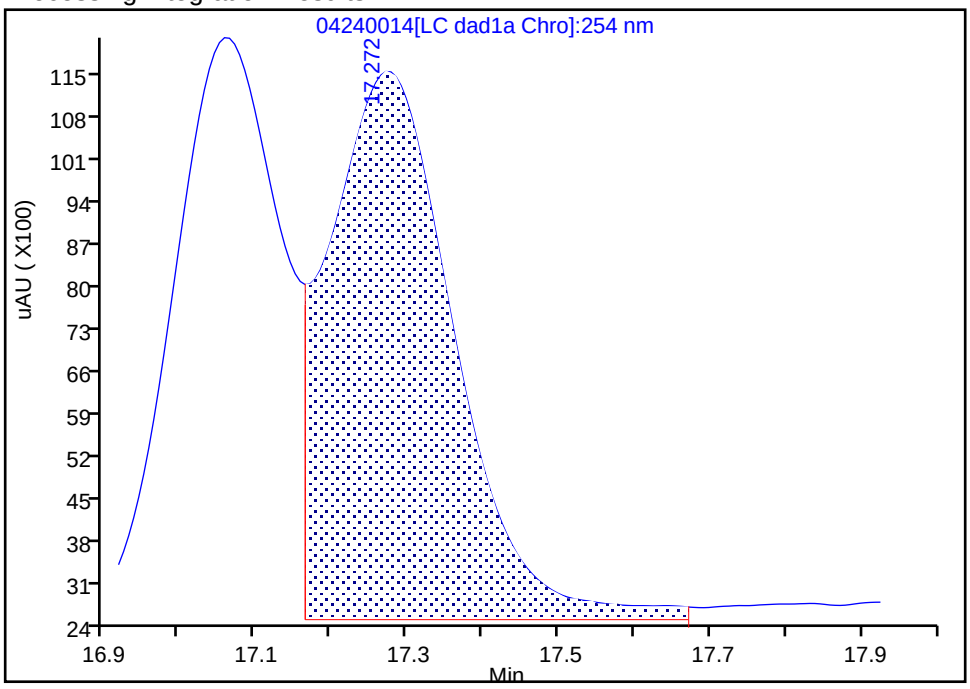
Data File:	\\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240014.d				
Injection Date:	24-Apr-2024 23:51:59	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 5				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

19 1,3,5-Trinitrobenzene, CAS: 99-35-4

Signal: 1

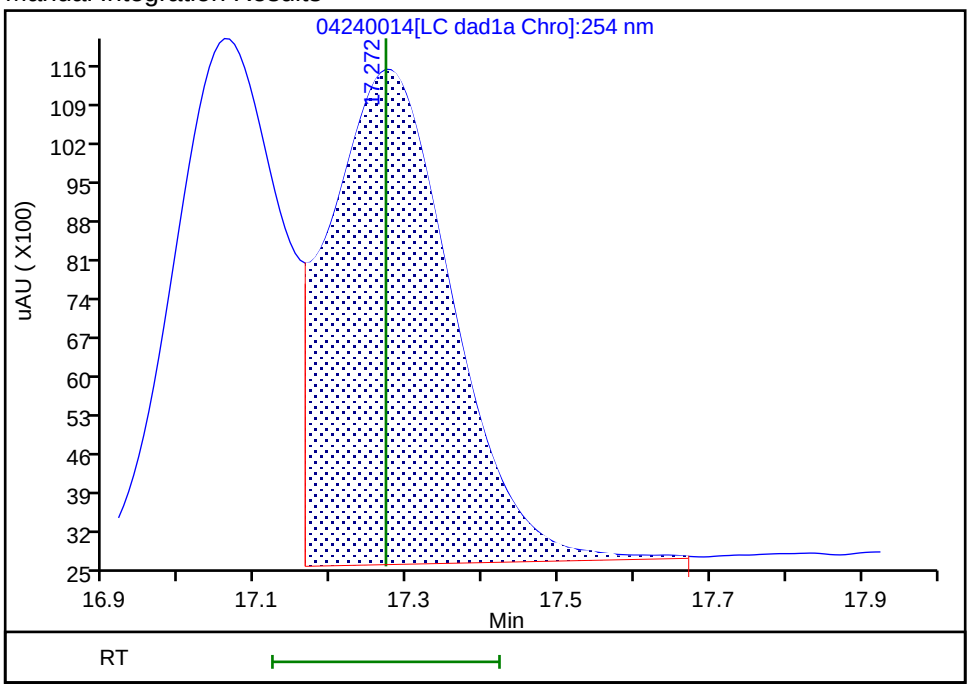
Processing Integration Results

RT: 17.27
Area: 104518
Amount: 0.223412
Amount Units: ug/ml



Manual Integration Results

RT: 17.27
Area: 101067
Amount: 0.238673
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:21:34 -06:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

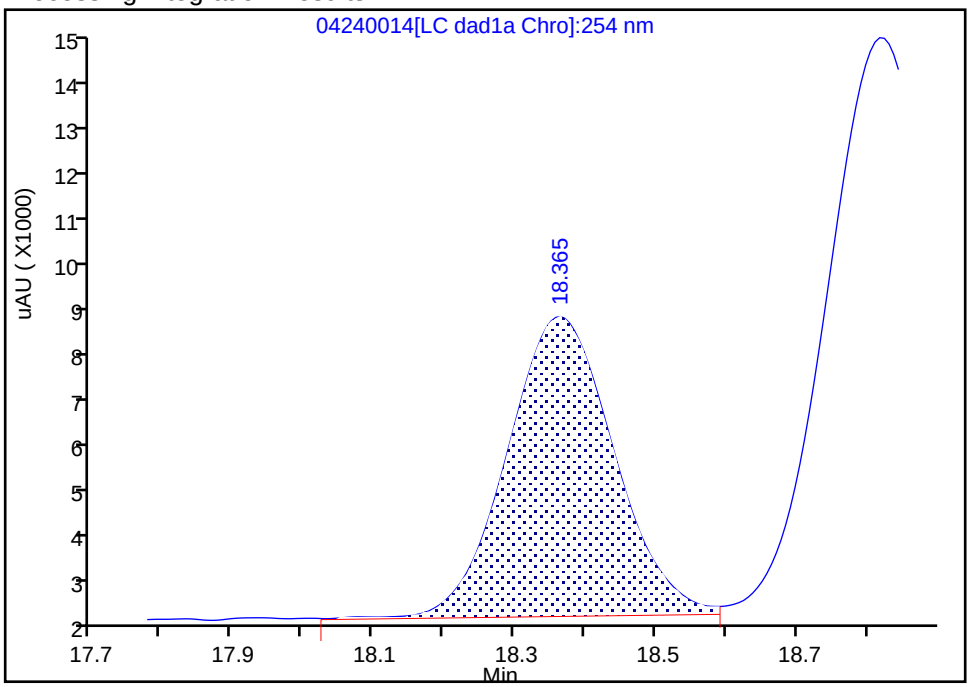
Data File:	\\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240014.d				
Injection Date:	24-Apr-2024 23:51:59	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 5				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

20 2,6-Dinitrotoluene, CAS: 606-20-2

Signal: 1

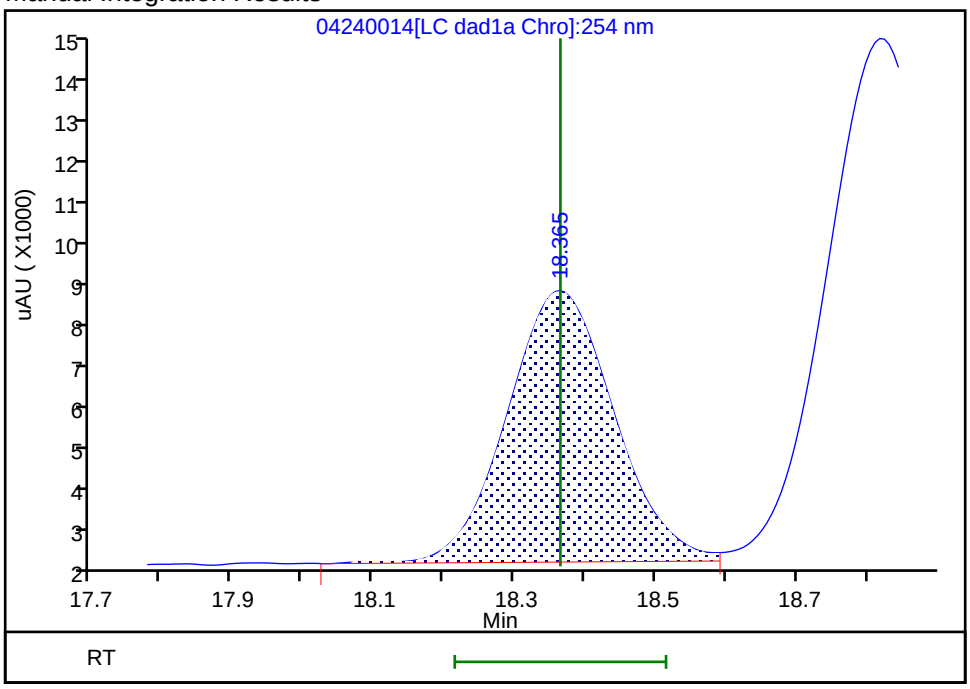
Processing Integration Results

RT: 18.36
Area: 66386
Amount: 0.242219
Amount Units: ug/ml



Manual Integration Results

RT: 18.36
Area: 66539
Amount: 0.239375
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:21:38 -06:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

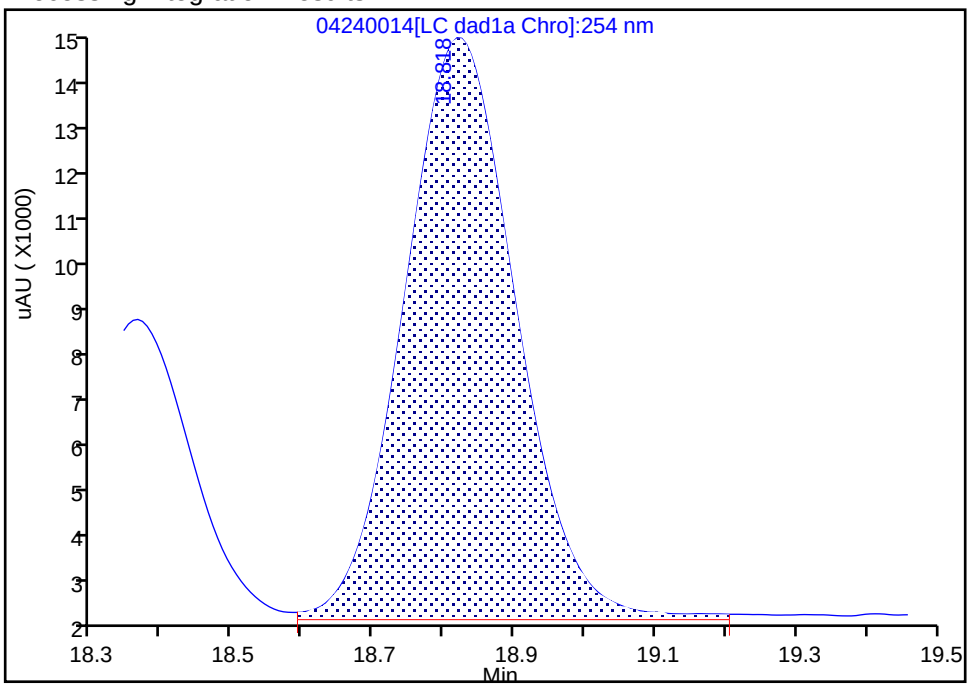
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Injection Date:	24-Apr-2024 23:51:59	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 5				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

21 2,4-Dinitrotoluene, CAS: 121-14-2

Signal: 1

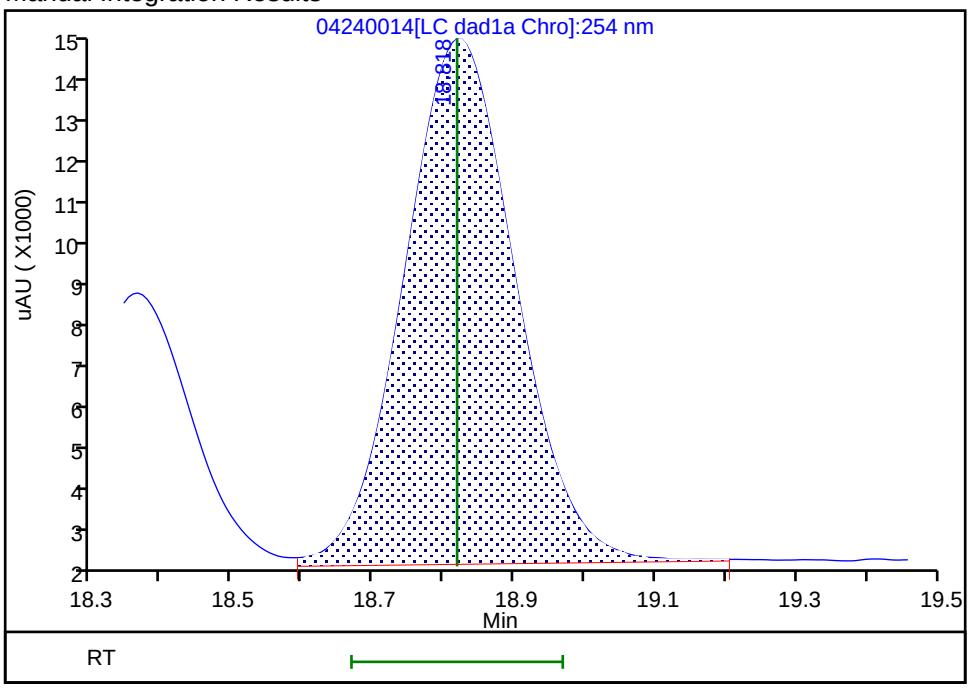
Processing Integration Results

RT: 18.82
Area: 134462
Amount: 0.225853
Amount Units: ug/ml



Manual Integration Results

RT: 18.82
Area: 133579
Amount: 0.240872
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:21:38 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

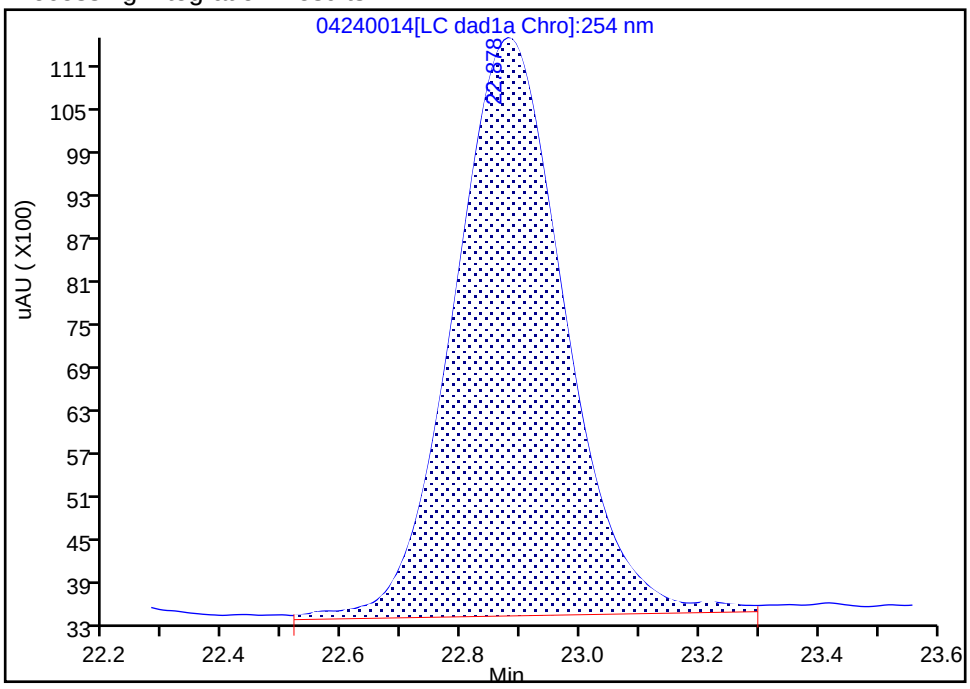
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Injection Date:	24-Apr-2024 23:51:59	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 5				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

23 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

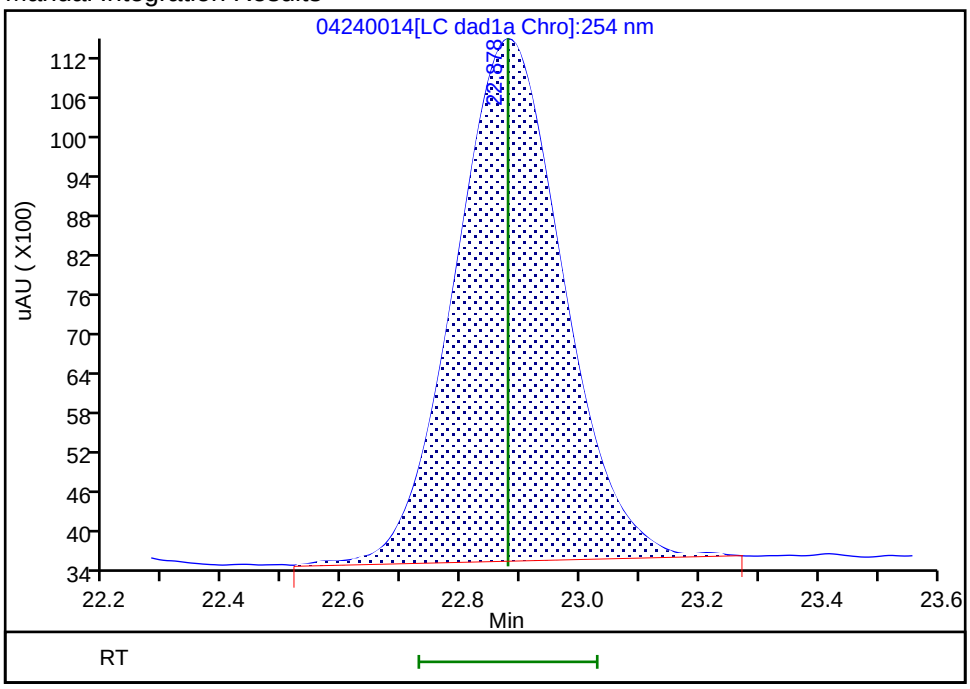
Processing Integration Results

RT: 22.88
Area: 104402
Amount: 0.260324
Amount Units: ug/ml



Manual Integration Results

RT: 22.88
Area: 100337
Amount: 0.250991
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:37:49 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

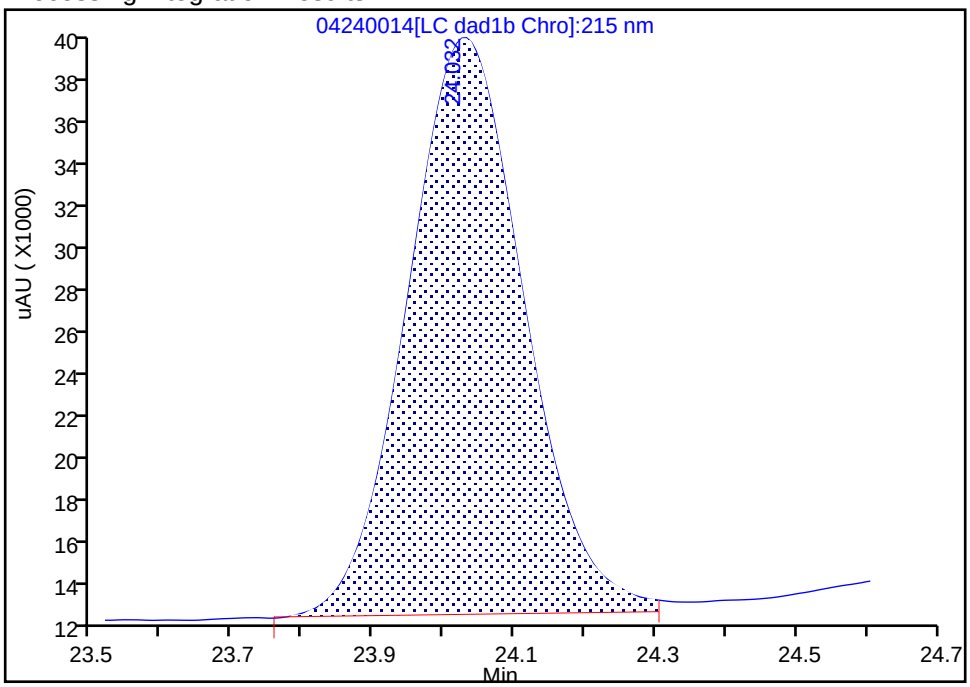
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Injection Date:	24-Apr-2024 23:51:59	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 5				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1B, 215 nm		

24 PETN, CAS: 78-11-5

Signal: 1

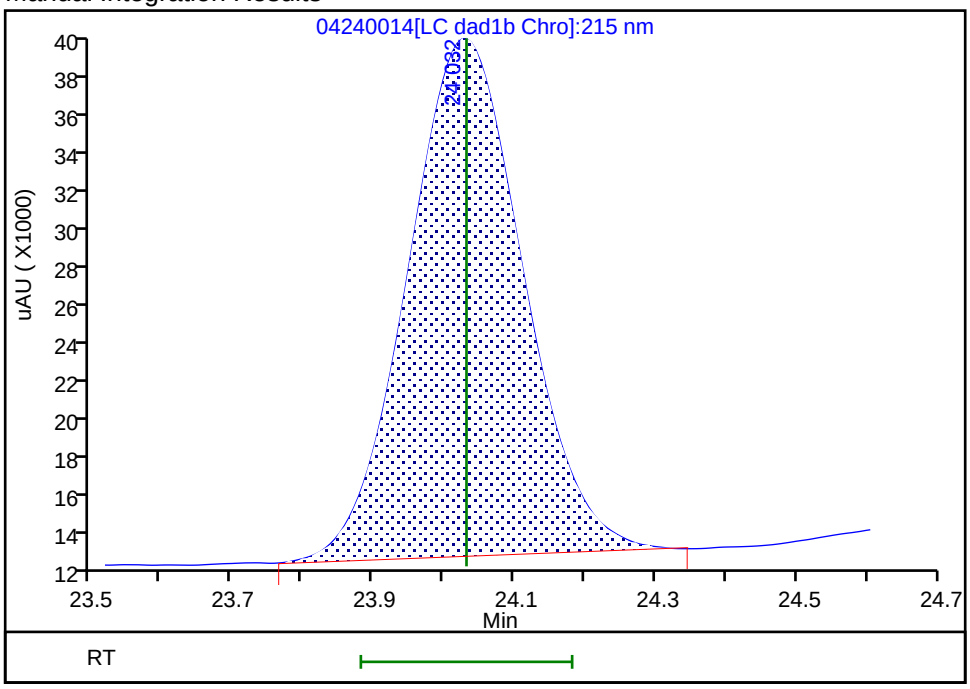
Processing Integration Results

RT: 24.03
Area: 310832
Amount: 2.589148
Amount Units: ug/ml



Manual Integration Results

RT: 24.03
Area: 304928
Amount: 2.482849
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:39:03 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\G2_LUNA\20240424-132624.b\04240015.D
Lims ID: IC INT 4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 25-Apr-2024 00:27:59 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC INT 4
Operator ID: JZ/JG Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub16

Method: \\chromfs\Denver\ChromData\G2_LUNA\20240424-132624.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 25-Apr-2024 14:30:14 Calib Date: 25-Apr-2024 07:39:21
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\G2_LUNA\20240424-132624.b\04240027.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX1684

First Level Reviewer: LV5D Date: 25-Apr-2024 13:20:06

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
6 HMX	1	6.706	6.705	0.001	17977	0.1000	0.1033	
5 2,4,6-Trinitrophenol	1	8.659	8.612	0.047	14859	0.1000	0.0981	
8 RDX	1	8.946	8.938	0.008	21609	0.1000	0.1025	
9 Nitrobenzene	1	11.452	11.425	0.027	39489	0.1000	0.1033	
$ 10 1,2-Dinitrobenzene	1	12.372	12.345	0.027	27370	0.1000	0.1058	
11 3,5-Dinitroaniline	1	14.205	14.185	0.020	43670	0.1000	0.0993	M
12 1,3-Dinitrobenzene	1	14.492	14.478	0.014	57592	0.1000	0.0977	M
13 Nitroglycerin	2	14.945	14.918	0.027	126558	1.00	1.06	M
14 o-Nitrotoluene	1	15.532	15.505	0.027	23799	0.1000	0.0973	M
15 p-Nitrotoluene	1	15.759	15.738	0.021	22549	0.1000	0.0994	M
16 4-Amino-2,6-dinitrotoluene	1	16.265	16.245	0.020	27449	0.1000	0.0991	M
17 m-Nitrotoluene	1	16.599	16.578	0.021	28103	0.1000	0.0985	M
18 2-Amino-4,6-dinitrotoluene	1	17.079	17.058	0.021	39853	0.1000	0.0983	M
19 1,3,5-Trinitrobenzene	1	17.285	17.272	0.013	41177	0.1000	0.0972	M
20 2,6-Dinitrotoluene	1	18.379	18.365	0.014	27487	0.1000	0.0989	M
21 2,4-Dinitrotoluene	1	18.839	18.818	0.021	54294	0.1000	0.0979	M
22 Tetryl	1	22.052	22.025	0.027	32920	0.1000	0.1041	
23 2,4,6-Trinitrotoluene	1	22.912	22.878	0.034	41861	0.1000	0.1047	M
24 PETN	2	24.046	24.032	0.014	121831	1.00	1.00	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00080 Amount Added: 10.00 Units: uL

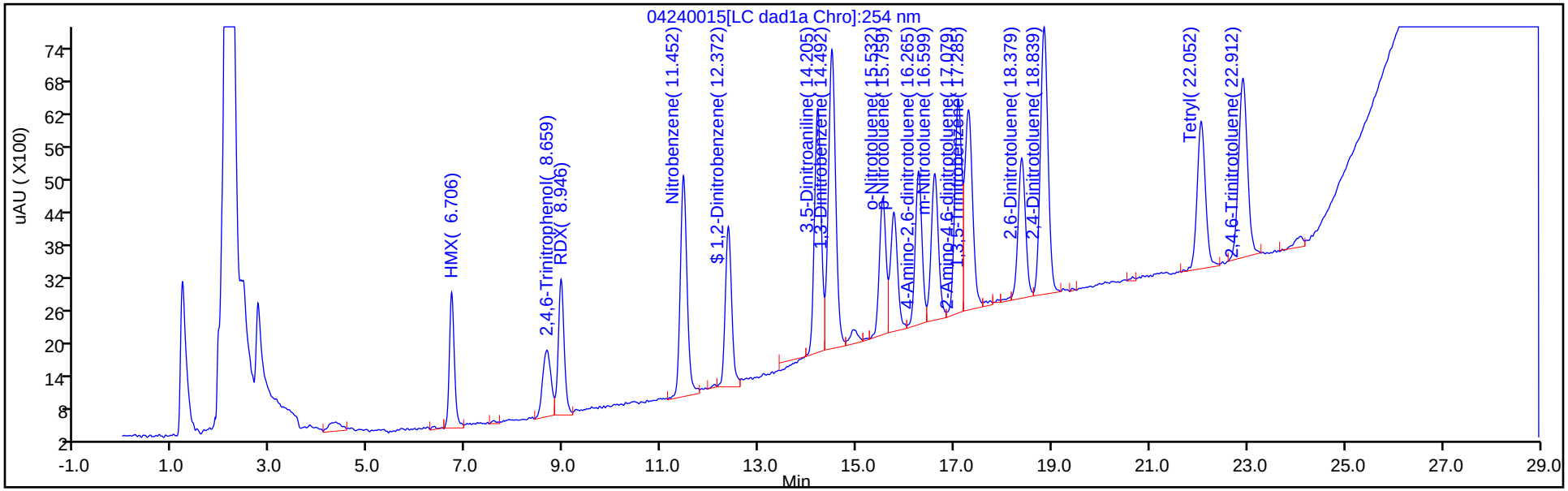
Report Date: 25-Apr-2024 14:30:15 Chrom Revision: 2.3 09-Apr-2024 17:43:44

Eurofins Denver

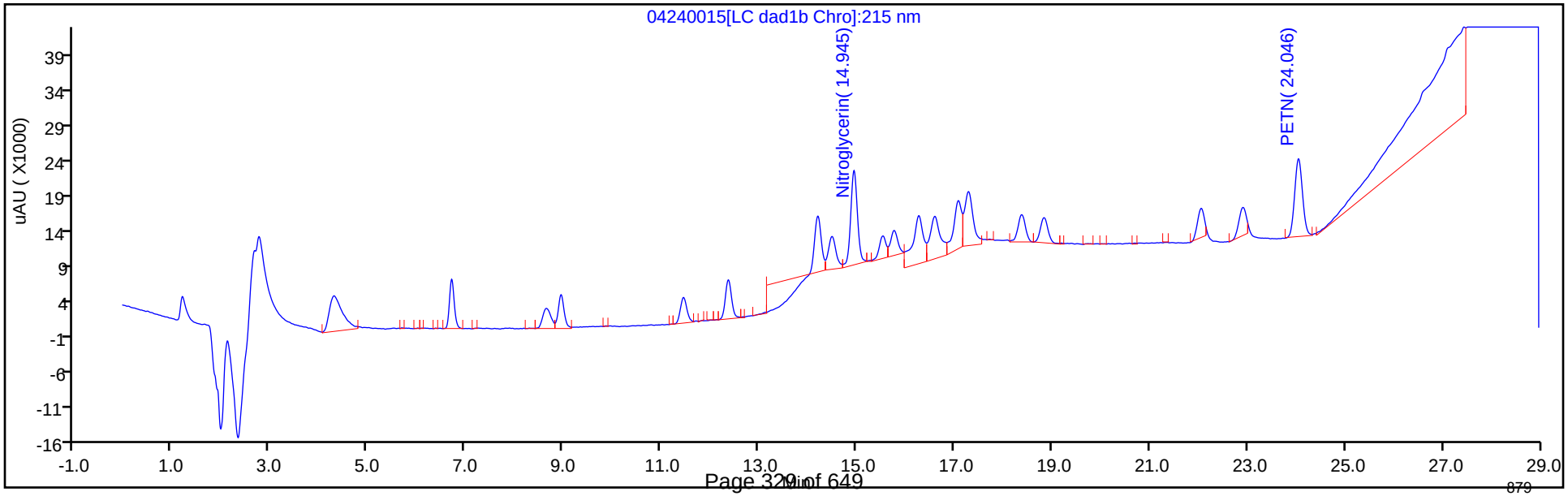
Data File: \\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240015.d

Injection Date:	25-Apr-2024 00:27:59	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	JZ/JG
Lims ID:	IC INT 4			Worklist Smp#:	15
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

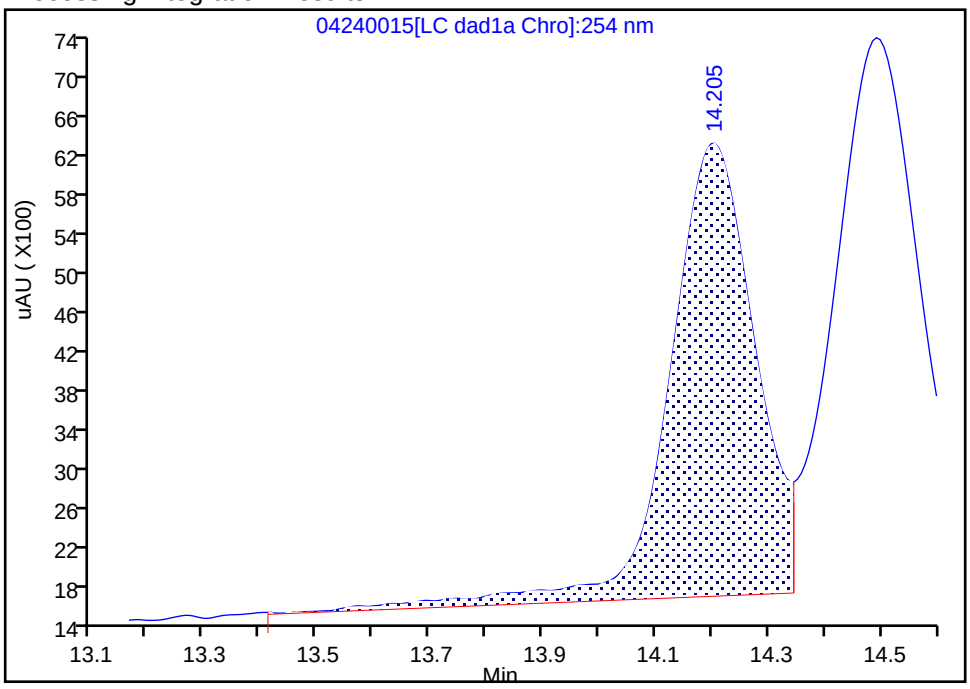
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Injection Date:	25-Apr-2024 00:27:59	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 4				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

11 3,5-Dinitroaniline, CAS: 618-87-1

Signal: 1

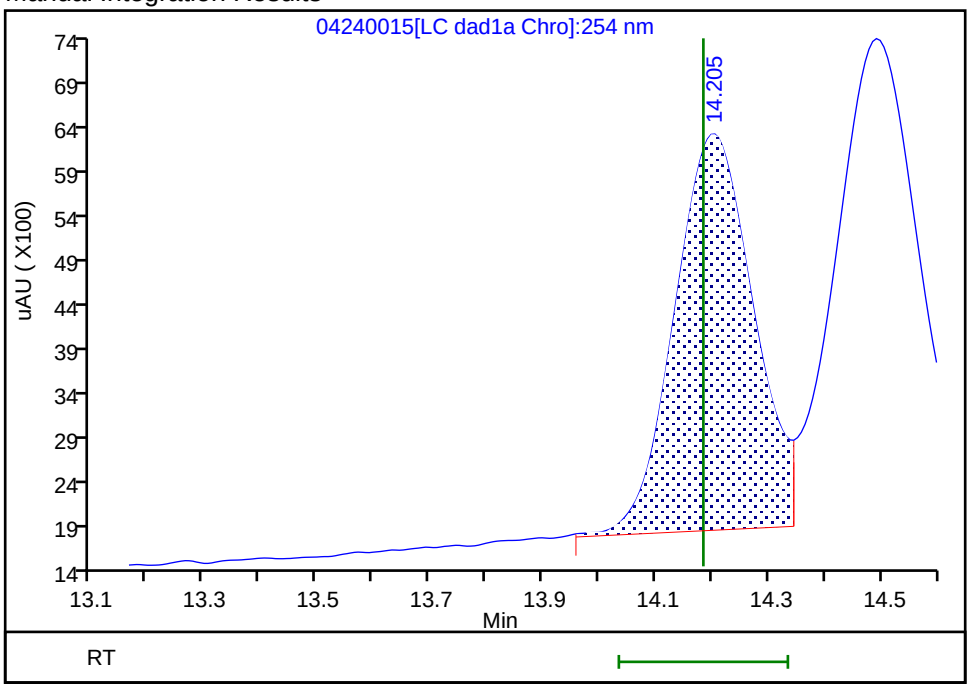
Processing Integration Results

RT: 14.21
Area: 48990
Amount: 0.107916
Amount Units: ug/ml



Manual Integration Results

RT: 14.21
Area: 43670
Amount: 0.099254
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:24:42 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

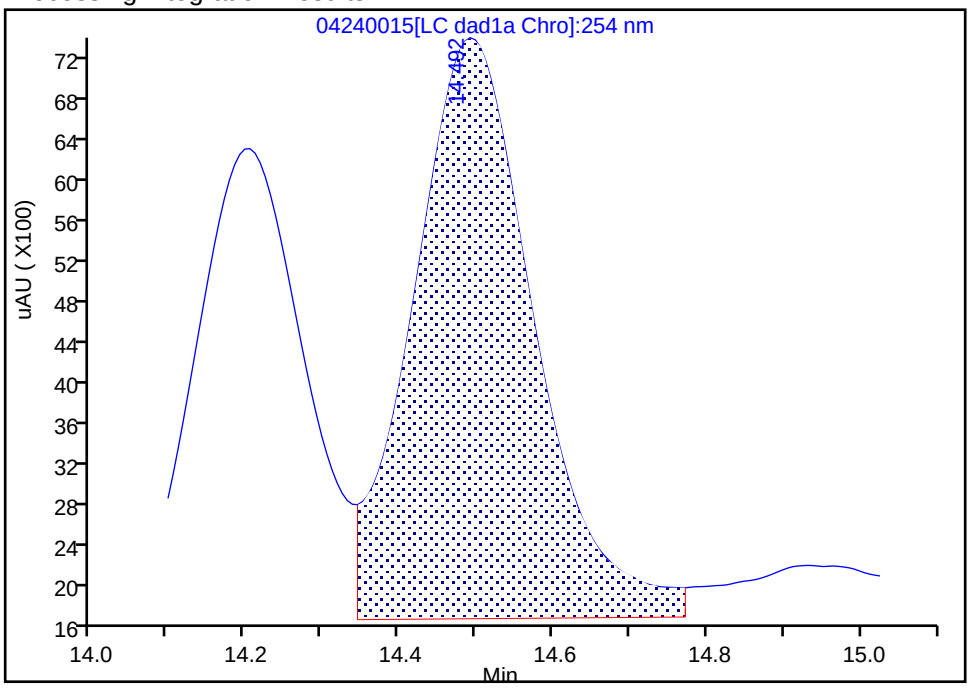
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Injection Date:	25-Apr-2024 00:27:59	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 4				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

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

Signal: 1

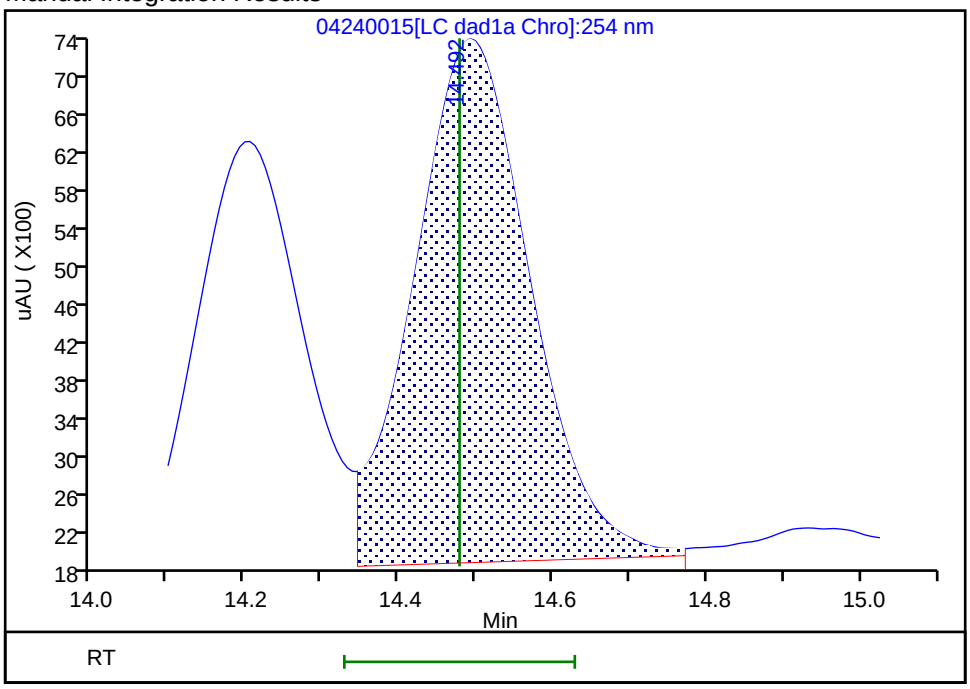
Processing Integration Results

RT: 14.49
Area: 62136
Amount: 0.098323
Amount Units: ug/ml



Manual Integration Results

RT: 14.49
Area: 57592
Amount: 0.097710
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:21:52 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

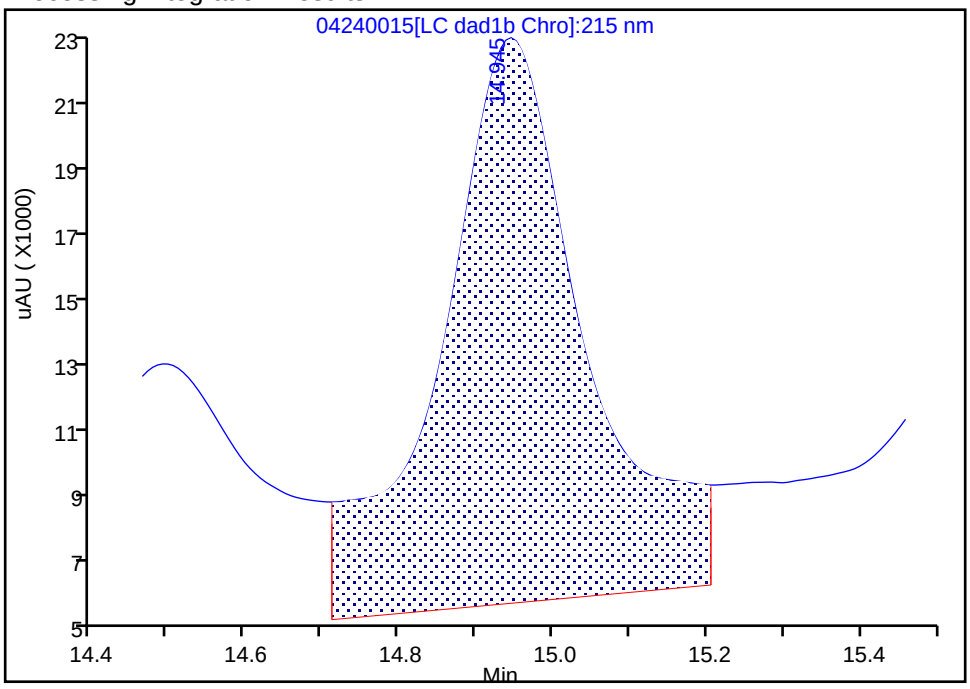
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Injection Date:	25-Apr-2024 00:27:59	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 4				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1B, 215 nm		

13 Nitroglycerin, CAS: 55-63-0

Signal: 1

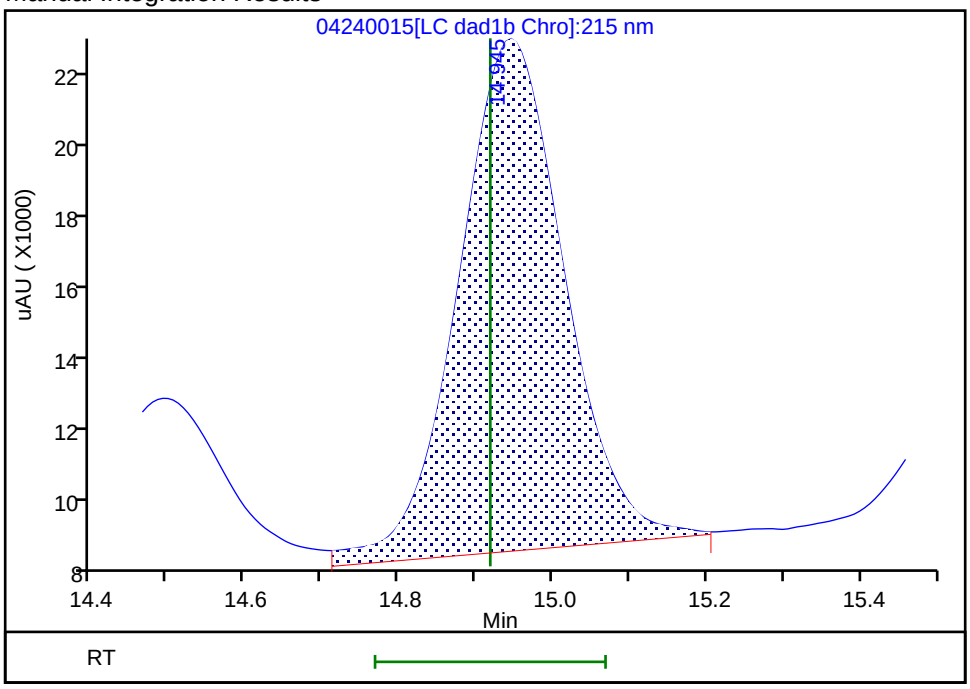
Processing Integration Results

RT: 14.95
Area: 211924
Amount: 0.838110
Amount Units: ug/ml



Manual Integration Results

RT: 14.95
Area: 126558
Amount: 1.059021
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:20:05 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

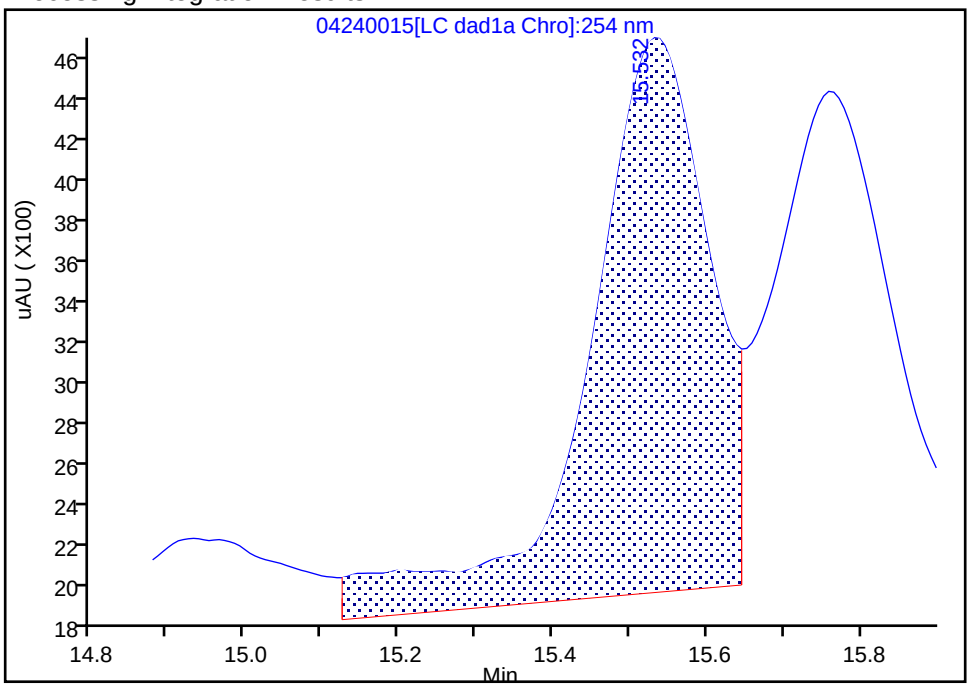
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Lims ID:	IC INT 4				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

14 o-Nitrotoluene, CAS: 88-72-2

Signal: 1

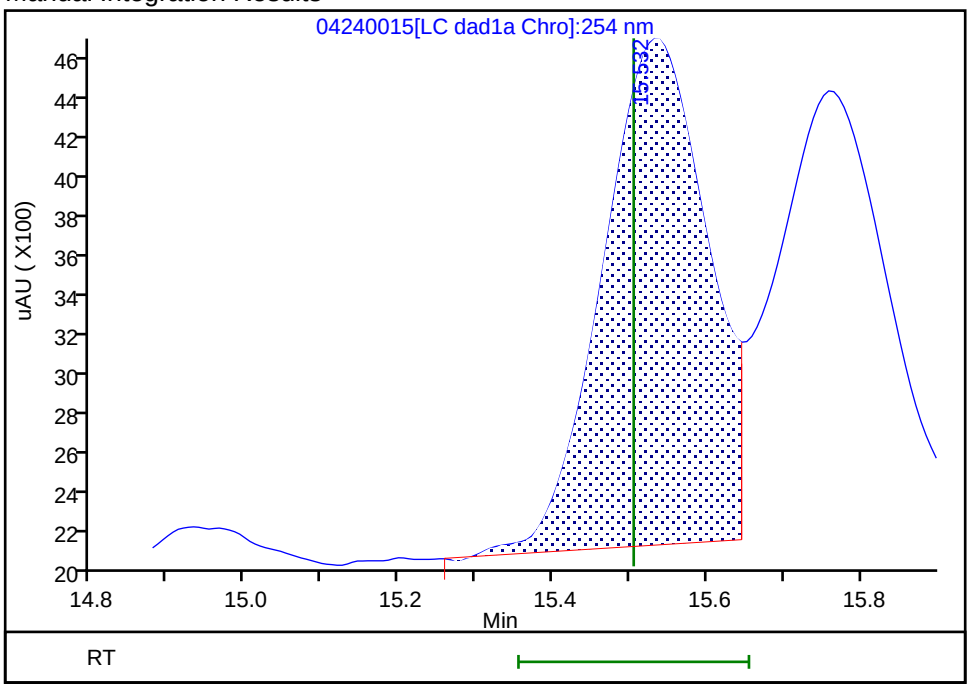
Processing Integration Results

RT: 15.53
Area: 29559
Amount: 0.107552
Amount Units: ug/ml



Manual Integration Results

RT: 15.53
Area: 23799
Amount: 0.097300
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:24:52 -06:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

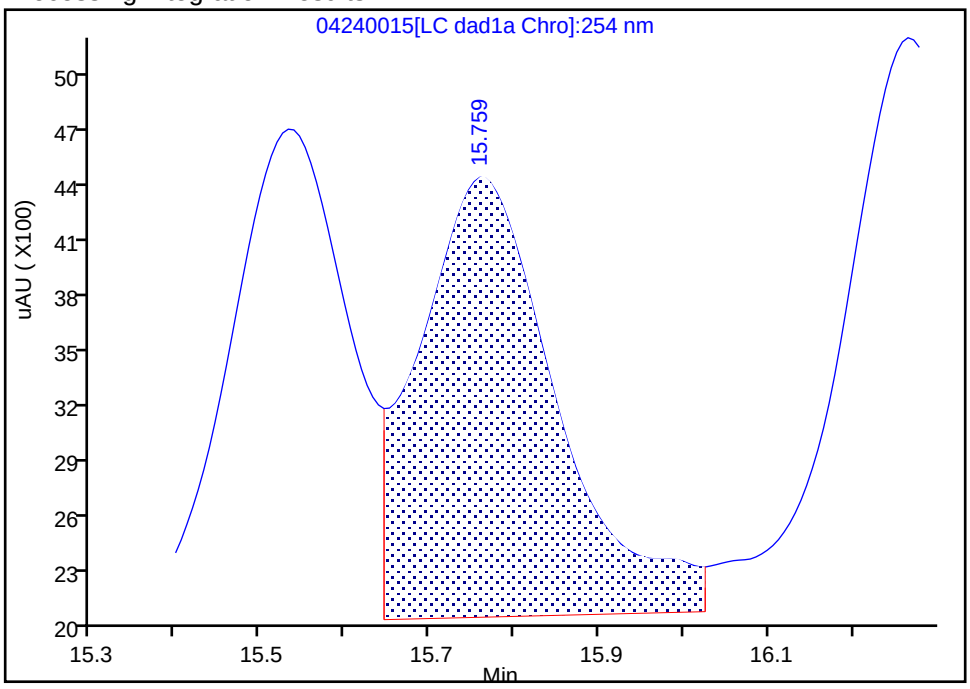
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Injection Date: 25-Apr-2024 00:27:59 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC INT 4
Client ID:
Operator ID: JZ/JG ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

15 p-Nitrotoluene, CAS: 99-99-0

Signal: 1

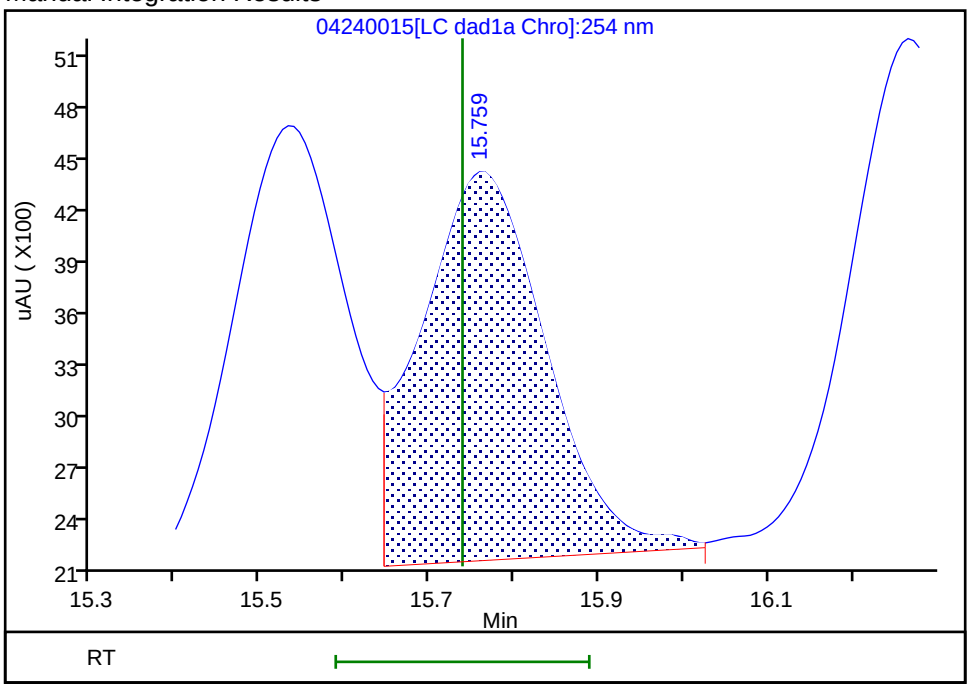
Processing Integration Results

RT: 15.76
Area: 26801
Amount: 0.114371
Amount Units: ug/ml



Manual Integration Results

RT: 15.76
Area: 22549
Amount: 0.099353
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:21:52 -06:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

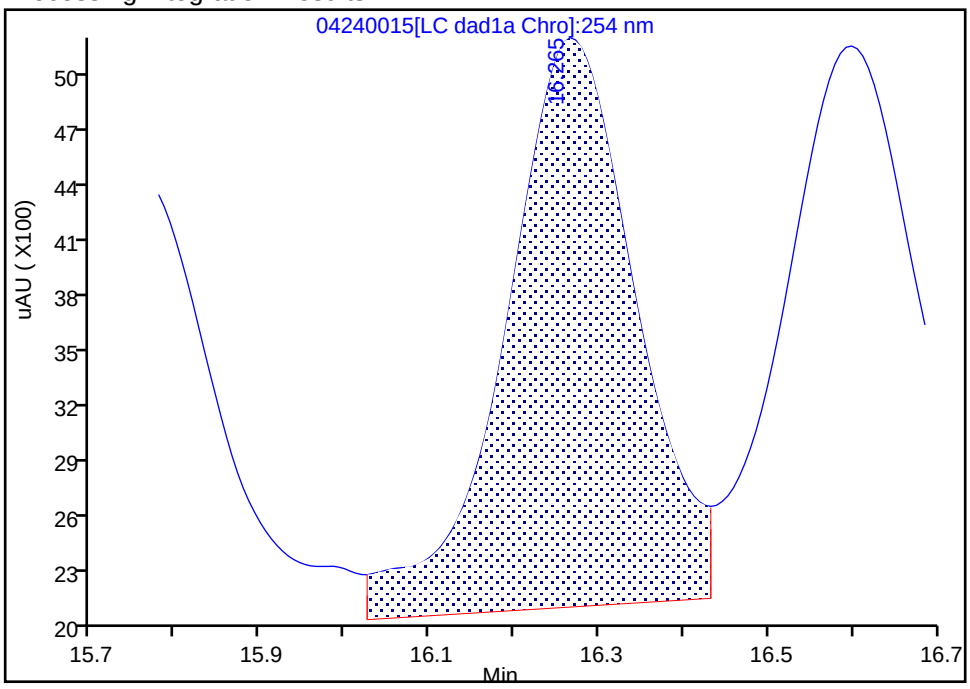
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Lims ID:	IC INT 4				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

16 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

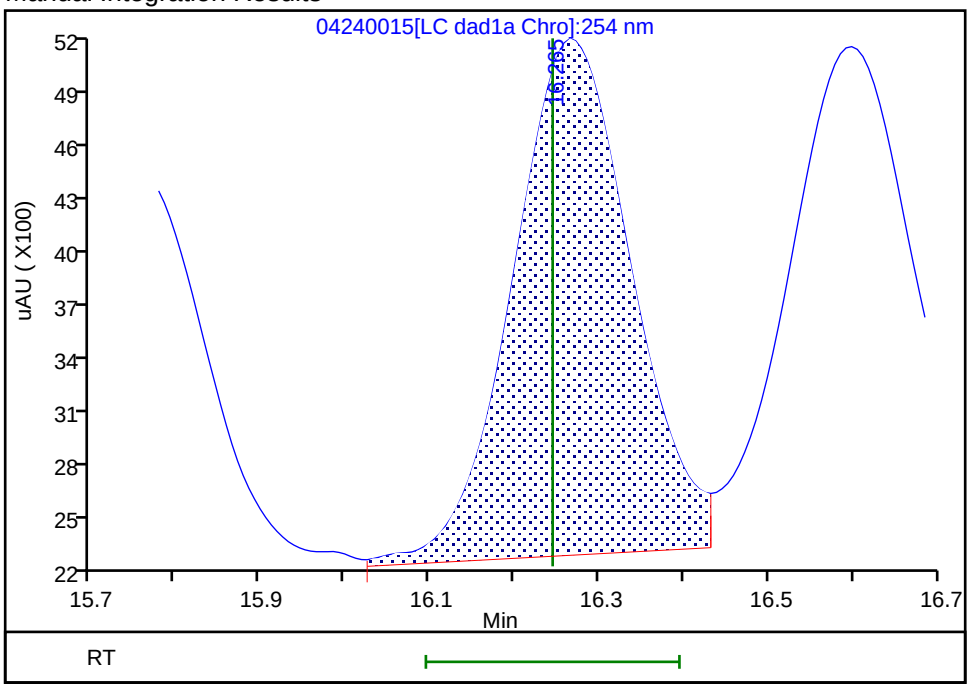
Processing Integration Results

RT: 16.27
Area: 32402
Amount: 0.109550
Amount Units: ug/ml



Manual Integration Results

RT: 16.27
Area: 27449
Amount: 0.099093
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:21:52 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

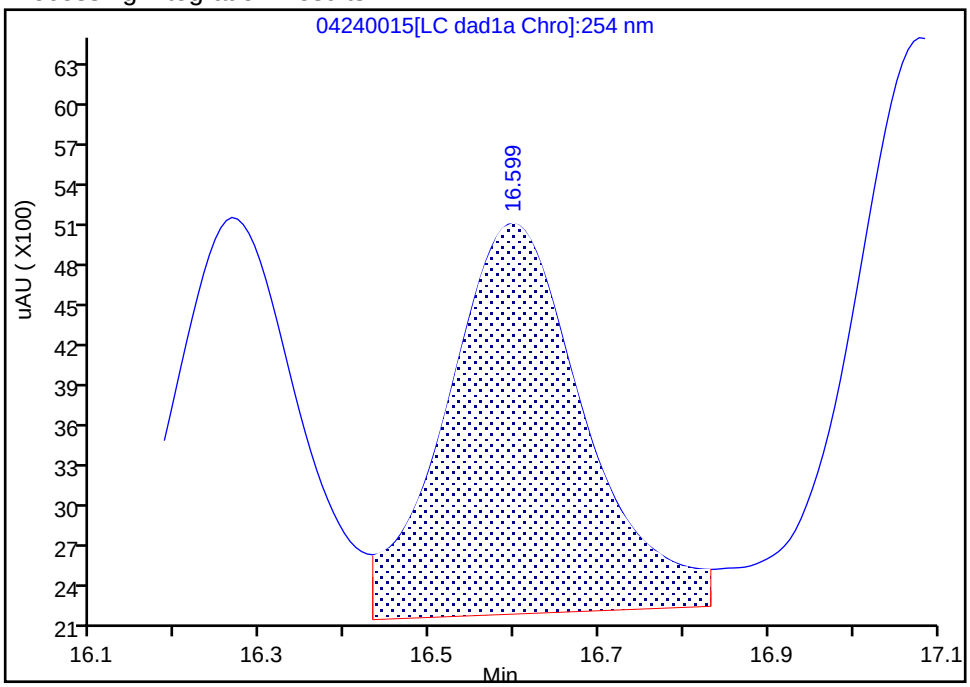
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Injection Date:	25-Apr-2024 00:27:59	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 4				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

17 m-Nitrotoluene, CAS: 99-08-1

Signal: 1

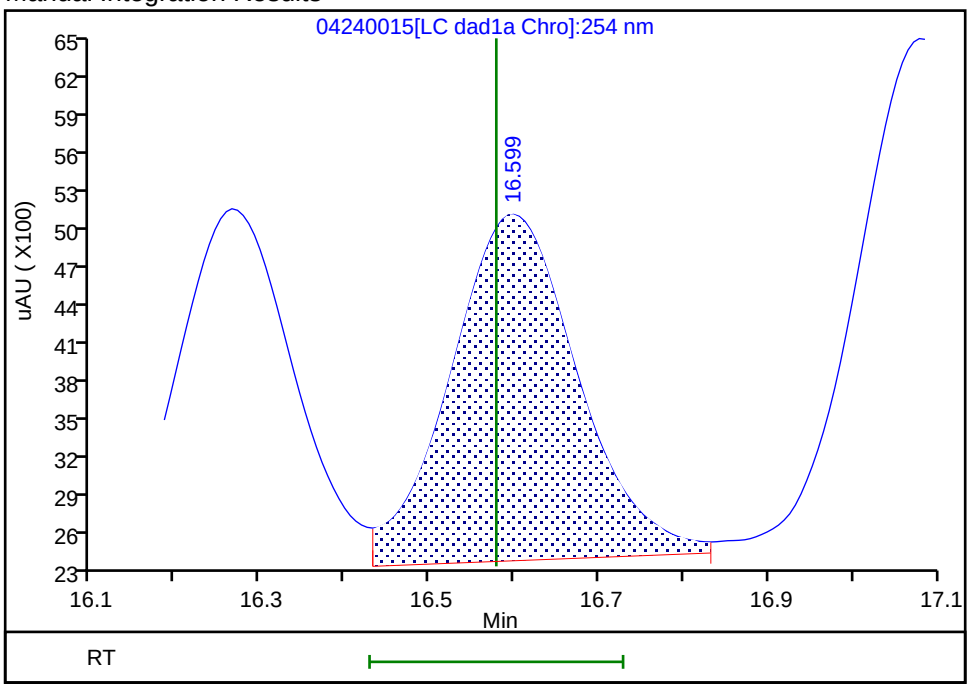
Processing Integration Results

RT: 16.60
Area: 32735
Amount: 0.108622
Amount Units: ug/ml



Manual Integration Results

RT: 16.60
Area: 28103
Amount: 0.098459
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:21:52 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

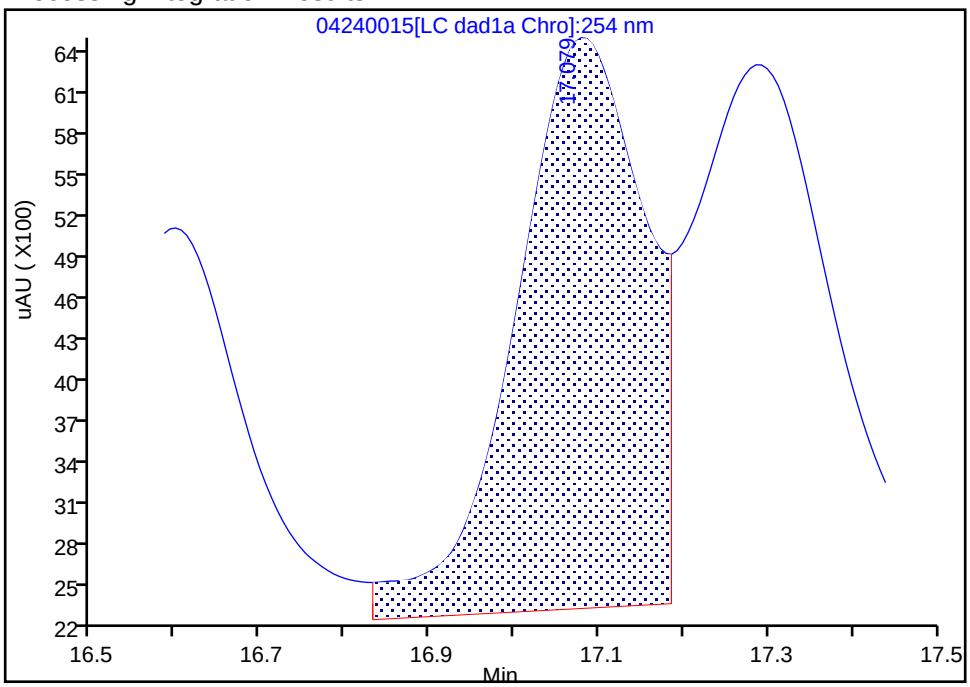
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Lims ID:	IC INT 4				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

18 2-Amino-4,6-dinitrotoluene, CAS: 35572-78-2

Signal: 1

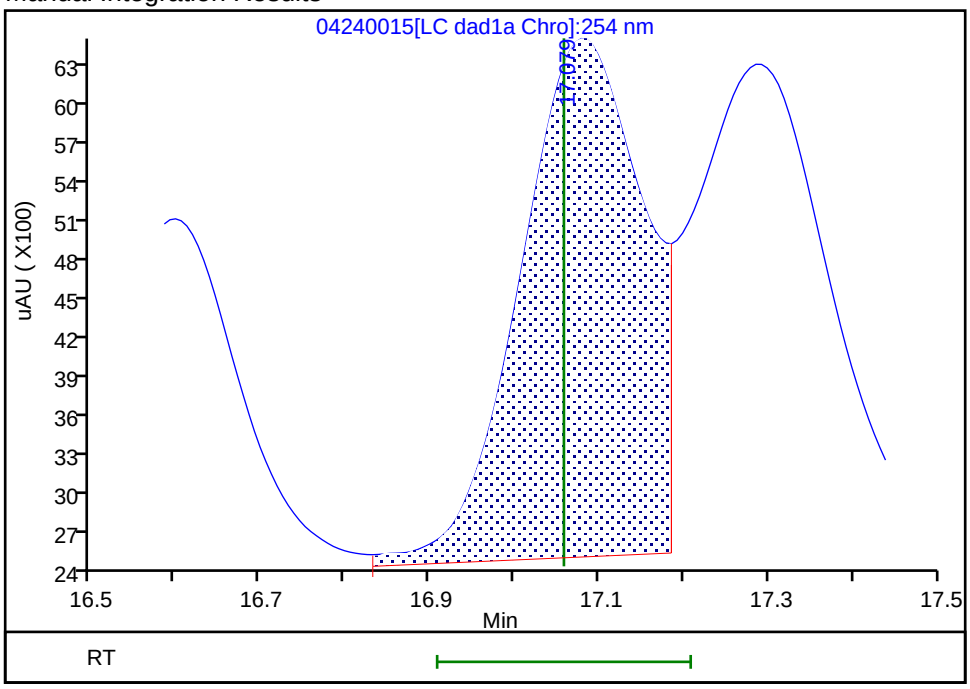
Processing Integration Results

RT: 17.08
Area: 43679
Amount: 0.107499
Amount Units: ug/ml



Manual Integration Results

RT: 17.08
Area: 39853
Amount: 0.098266
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:21:52 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

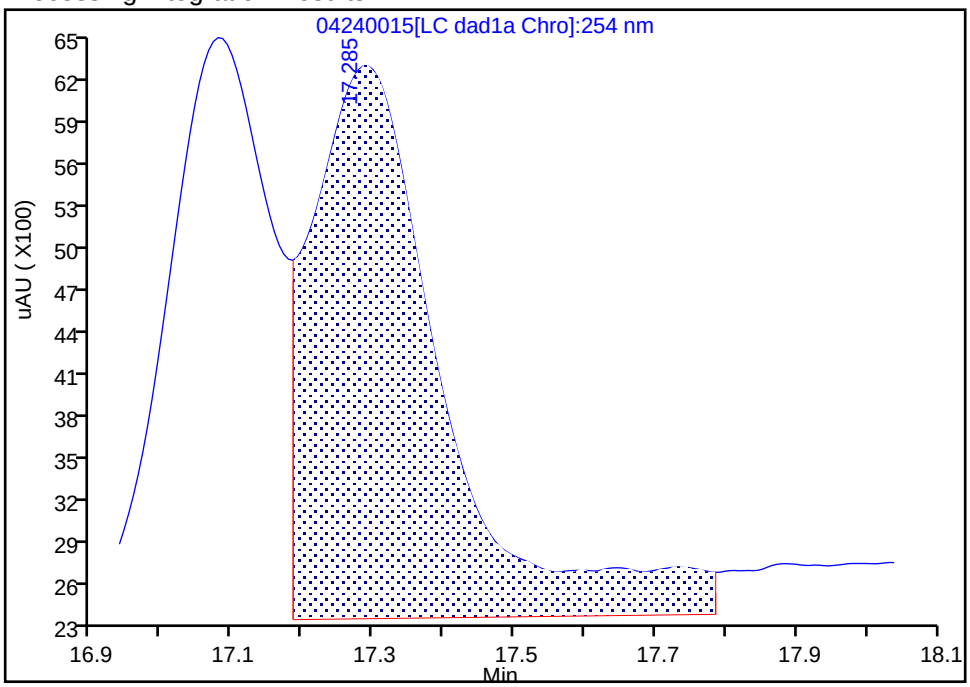
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Lims ID:	IC INT 4				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

19 1,3,5-Trinitrobenzene, CAS: 99-35-4

Signal: 1

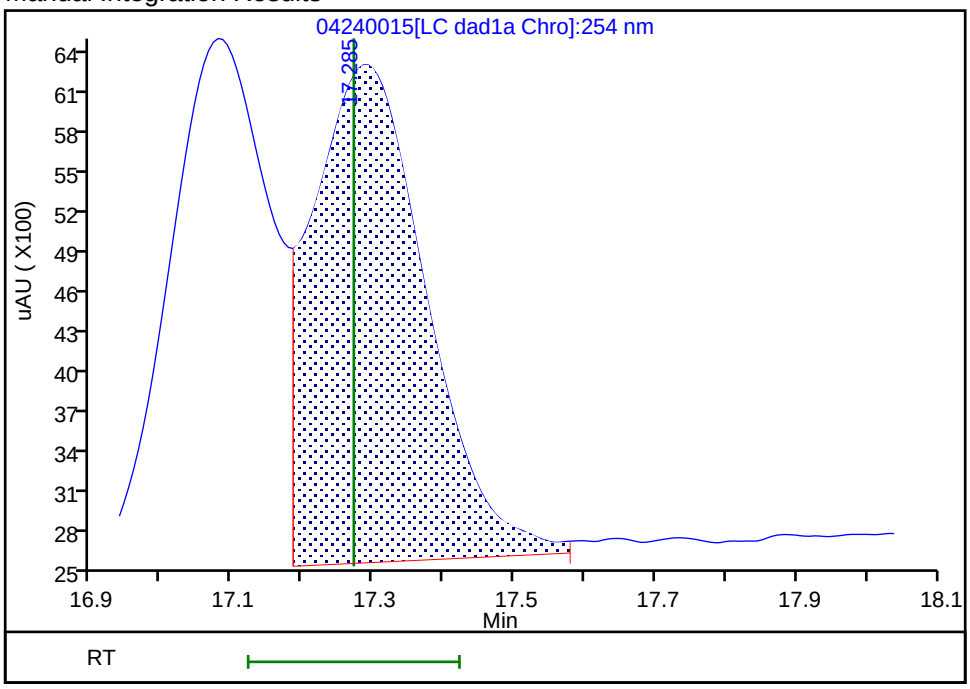
Processing Integration Results

RT: 17.29
Area: 49937
Amount: 0.107094
Amount Units: ug/ml



Manual Integration Results

RT: 17.29
Area: 41177
Amount: 0.097241
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:24:54 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

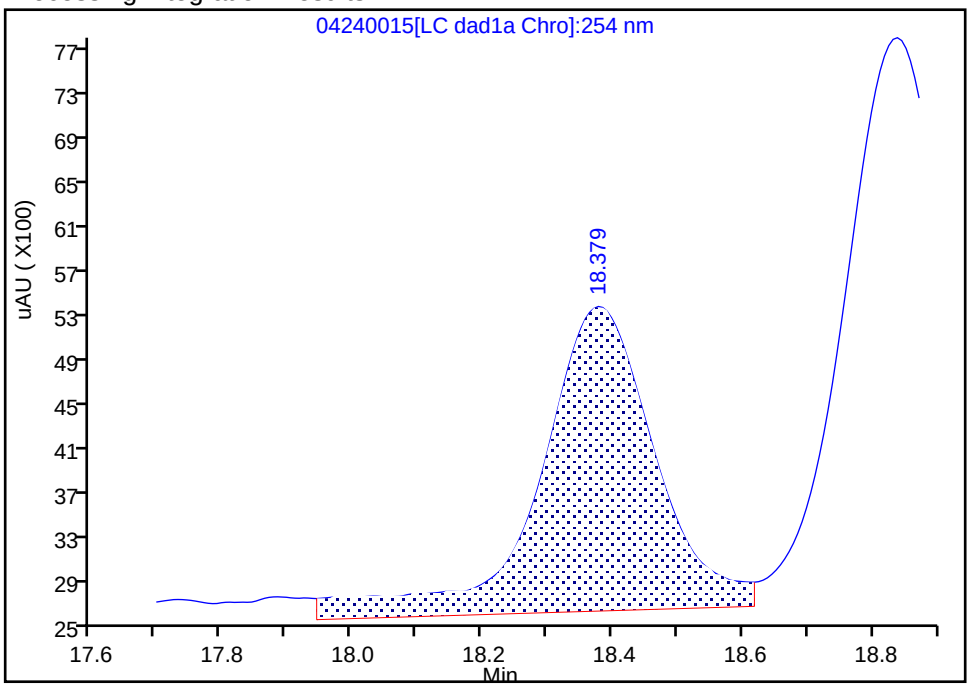
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Injection Date:	25-Apr-2024 00:27:59	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 4				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

20 2,6-Dinitrotoluene, CAS: 606-20-2

Signal: 1

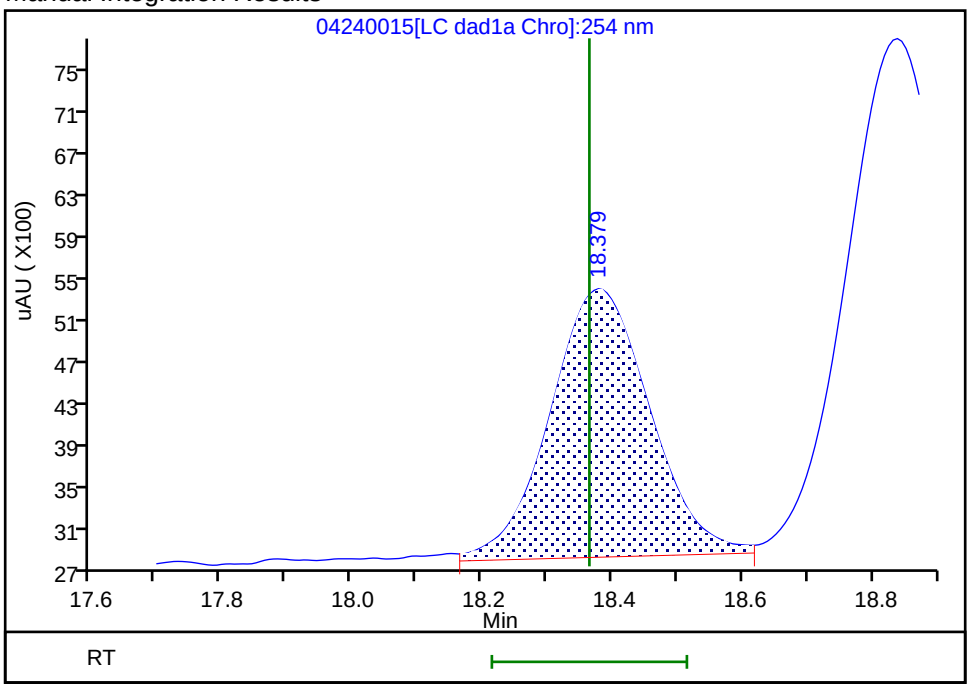
Processing Integration Results

RT: 18.38
Area: 34293
Amount: 0.121780
Amount Units: ug/ml



Manual Integration Results

RT: 18.38
Area: 27487
Amount: 0.098885
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:24:55 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

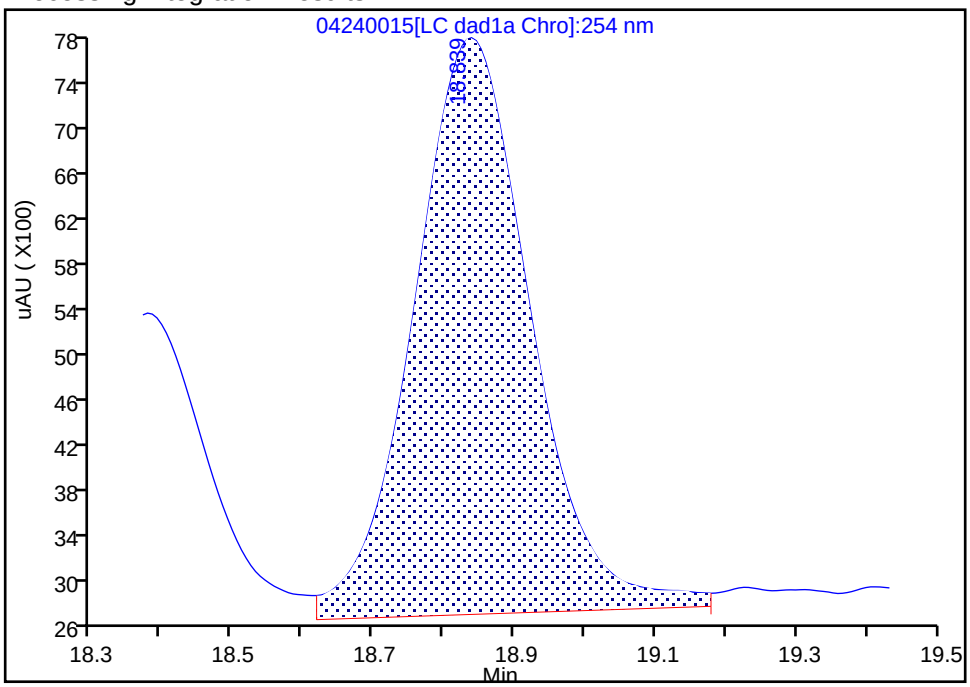
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Injection Date:	25-Apr-2024 00:27:59	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 4				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

21 2,4-Dinitrotoluene, CAS: 121-14-2

Signal: 1

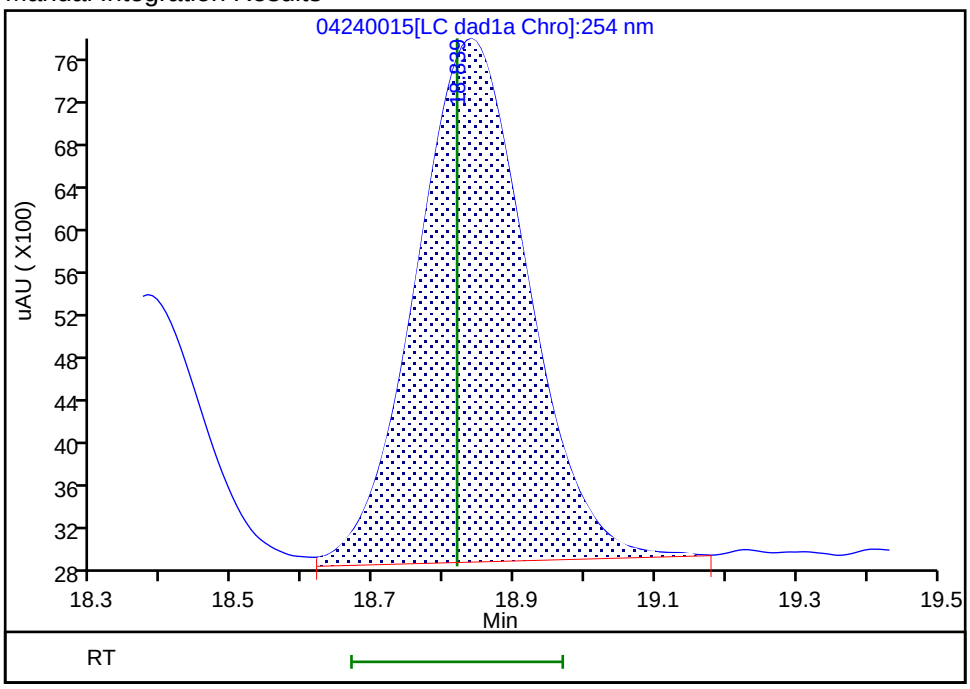
Processing Integration Results

RT: 18.84
Area: 58511
Amount: 0.098344
Amount Units: ug/ml



Manual Integration Results

RT: 18.84
Area: 54294
Amount: 0.097904
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:21:54 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Eurofins Denver

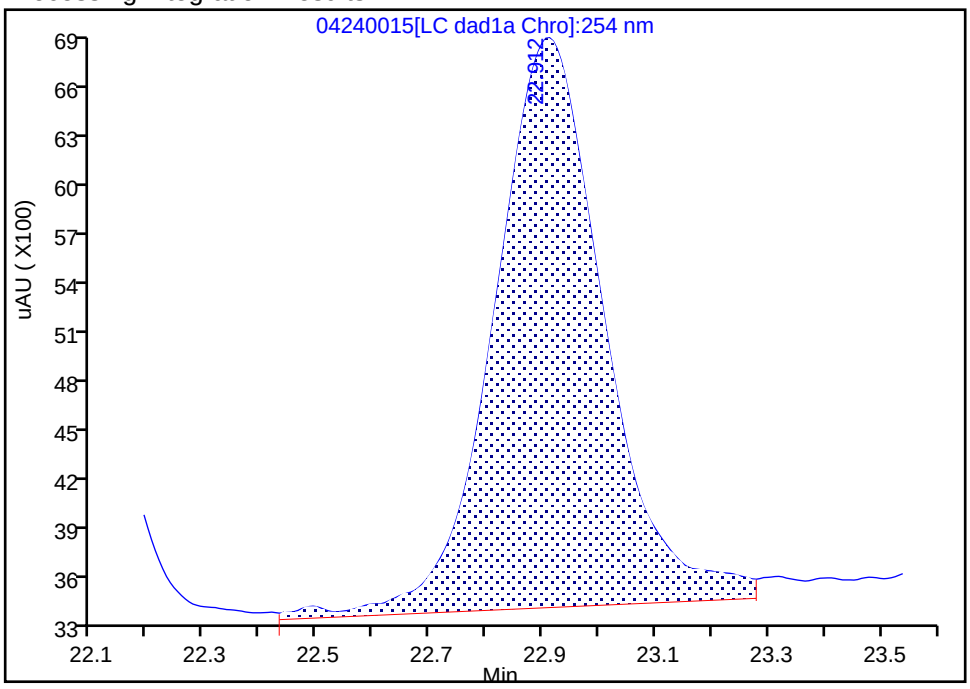
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Injection Date:	25-Apr-2024 00:27:59	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 4				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

23 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

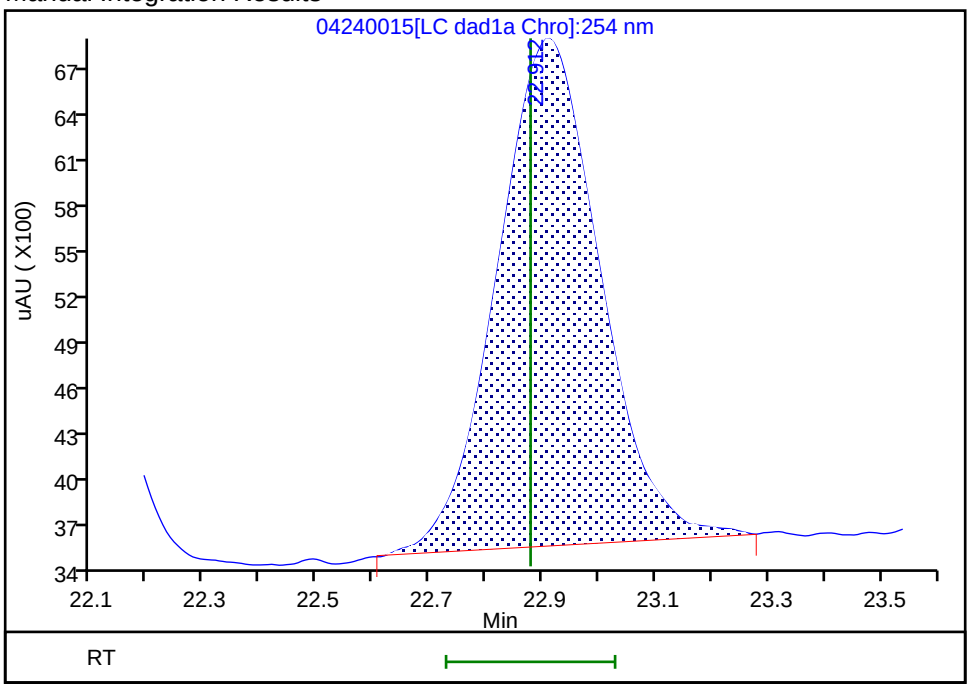
Processing Integration Results

RT: 22.91
Area: 46193
Amount: 0.112953
Amount Units: ug/ml



Manual Integration Results

RT: 22.91
Area: 41861
Amount: 0.104715
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:36:56 -06:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\G2_LUNA\20240424-132624.b\04240016.D
Lims ID: IC INT 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 25-Apr-2024 01:03:56 ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC INT 3
Operator ID: JZ/JG Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub16

Method: \\chromfs\Denver\ChromData\G2_LUNA\20240424-132624.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 25-Apr-2024 14:30:16 Calib Date: 25-Apr-2024 07:39:21
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\G2_LUNA\20240424-132624.b\04240027.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX1684

First Level Reviewer: LV5D Date: 25-Apr-2024 13:20:15

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
6 HMX	1	6.709	6.705	0.004	8509	0.0500	0.0489	M
5 2,4,6-Trinitrophenol	1	8.663	8.612	0.051	7014	0.0500	0.0463	
8 RDX	1	8.943	8.938	0.005	10654	0.0500	0.0492	
9 Nitrobenzene	1	11.436	11.425	0.011	18193	0.0500	0.0476	
$ 10 1,2-Dinitrobenzene	1	12.356	12.345	0.011	13324	0.0500	0.0515	
11 3,5-Dinitroaniline	1	14.203	14.185	0.018	22481	0.0500	0.0501	M
12 1,3-Dinitrobenzene	1	14.496	14.478	0.018	30596	0.0500	0.0519	M
13 Nitroglycerin	2	14.943	14.918	0.025	59130	0.5000	0.4948	M
14 o-Nitrotoluene	1	15.523	15.505	0.018	13247	0.0500	0.0542	M
15 p-Nitrotoluene	1	15.743	15.738	0.005	11825	0.0500	0.0501	M
16 4-Amino-2,6-dinitrotoluene	1	16.249	16.245	0.004	13955	0.0500	0.0490	M
17 m-Nitrotoluene	1	16.583	16.578	0.005	14941	0.0500	0.0507	M
18 2-Amino-4,6-dinitrotoluene	1	17.063	17.058	0.005	19735	0.0500	0.0487	M
19 1,3,5-Trinitrobenzene	1	17.283	17.272	0.011	19358	0.0500	0.0457	M
20 2,6-Dinitrotoluene	1	18.369	18.365	0.004	14197	0.0500	0.0511	
21 2,4-Dinitrotoluene	1	18.823	18.818	0.005	28589	0.0500	0.0516	
22 Tetryl	1	22.023	22.025	-0.002	15630	0.0500	0.0487	M
23 2,4,6-Trinitrotoluene	1	22.876	22.878	-0.002	20131	0.0500	0.0504	M
24 PETN	2	24.016	24.032	-0.016	60616	0.5000	0.5056	M

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00080 Amount Added: 5.00 Units: uL

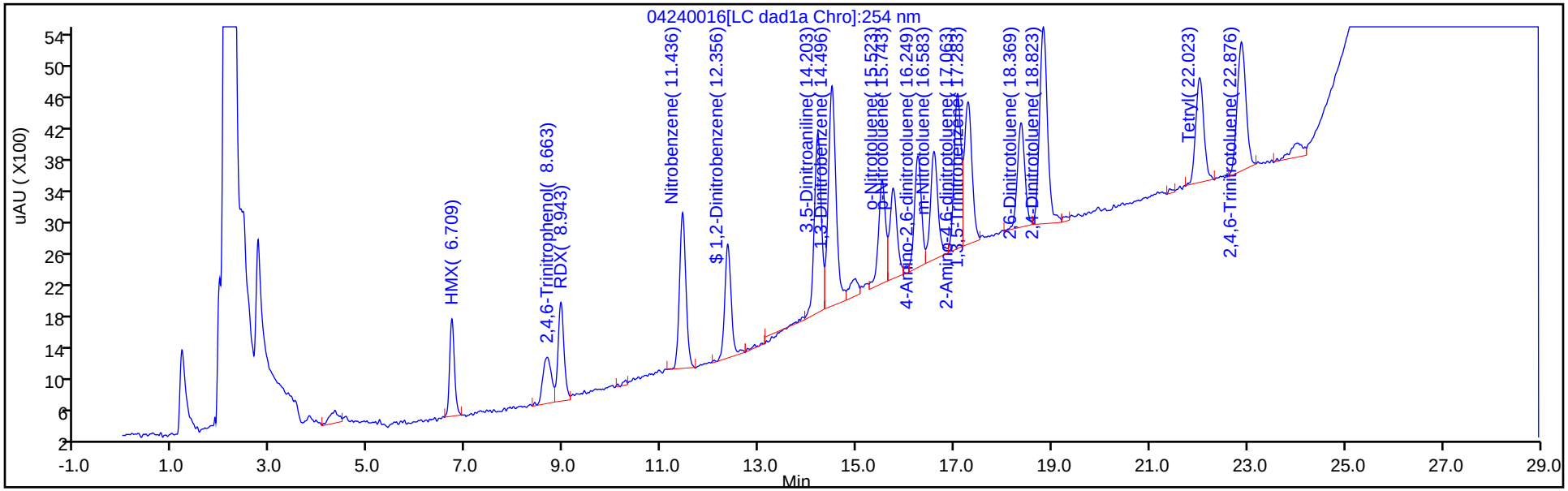
Report Date: 25-Apr-2024 14:30:16 Chrom Revision: 2.3 09-Apr-2024 17:43:44

Eurofins Denver

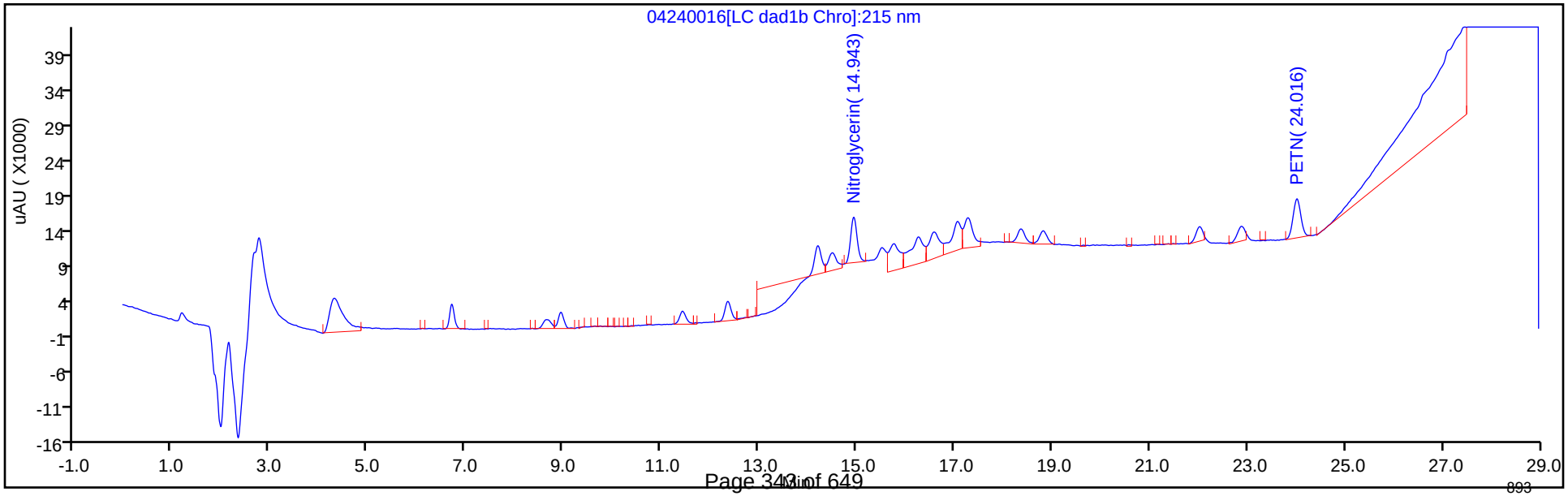
Data File: \\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240016.d

Injection Date:	25-Apr-2024 01:03:56	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	JZ/JG
Lims ID:	IC INT 3			Worklist Smp#:	16
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

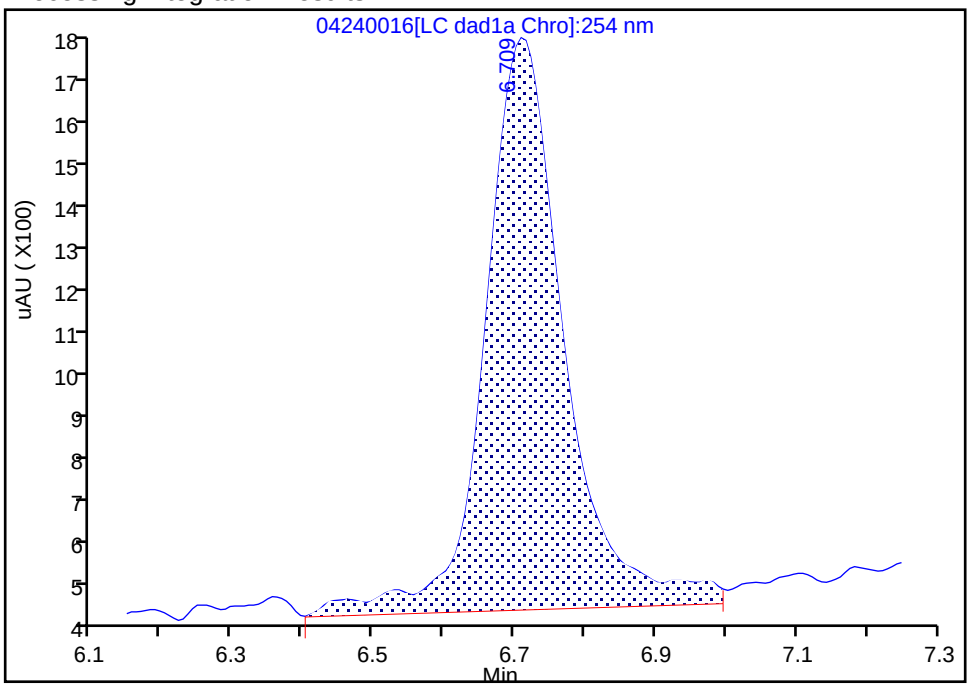
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Lims ID:	IC INT 3				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

6 HMX, CAS: 2691-41-0

Signal: 1

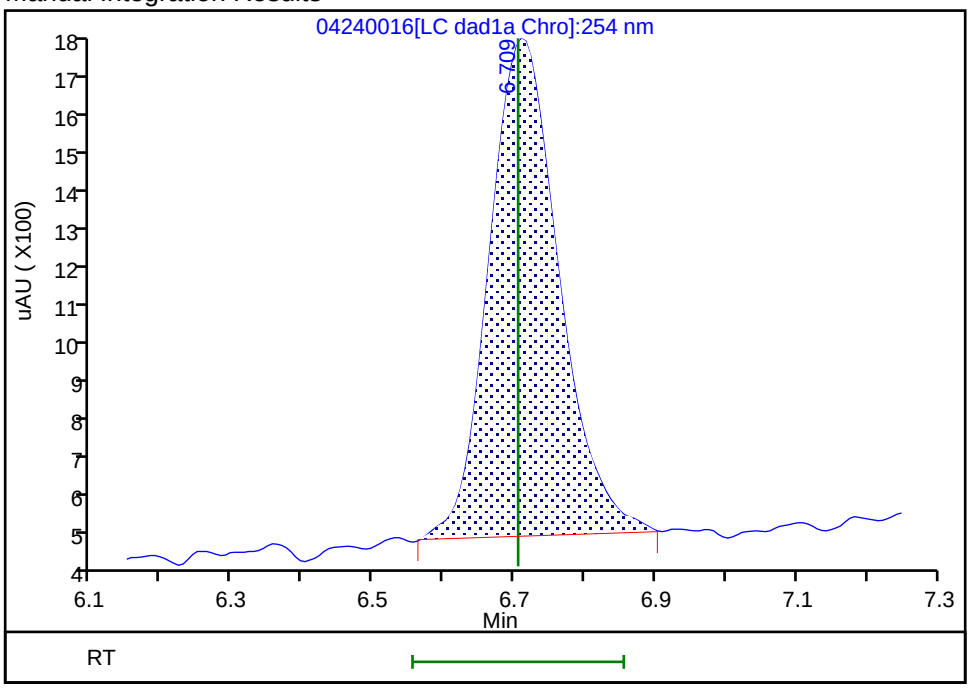
Processing Integration Results

RT: 6.71
Area: 10052
Amount: 0.056576
Amount Units: ug/ml



Manual Integration Results

RT: 6.71
Area: 8509
Amount: 0.048881
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:32:05 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

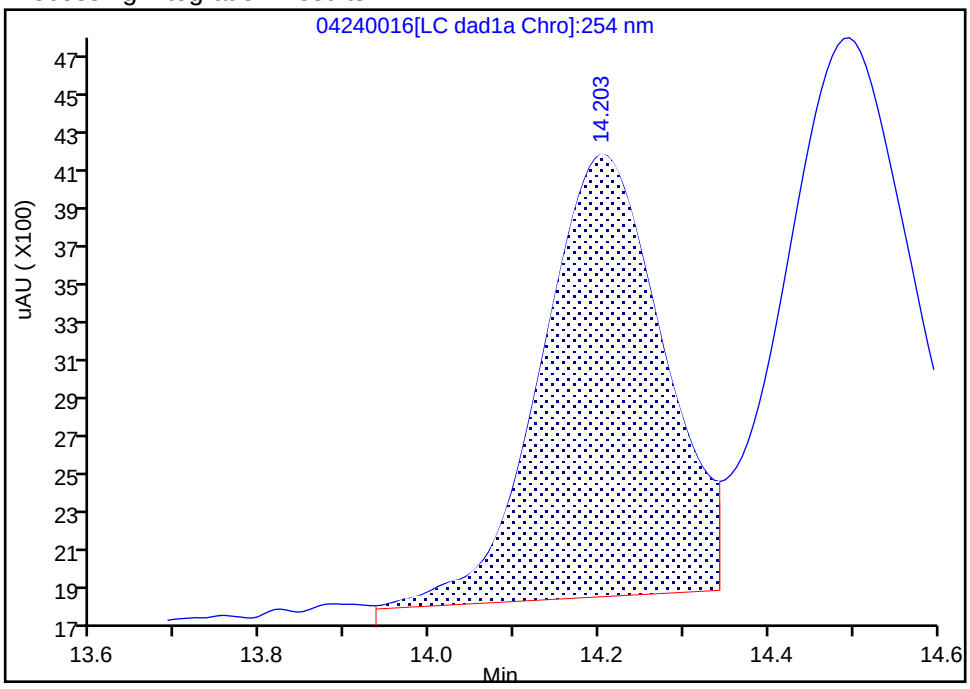
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Injection Date:	25-Apr-2024 01:03:56	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 3				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

11 3,5-Dinitroaniline, CAS: 618-87-1

Signal: 1

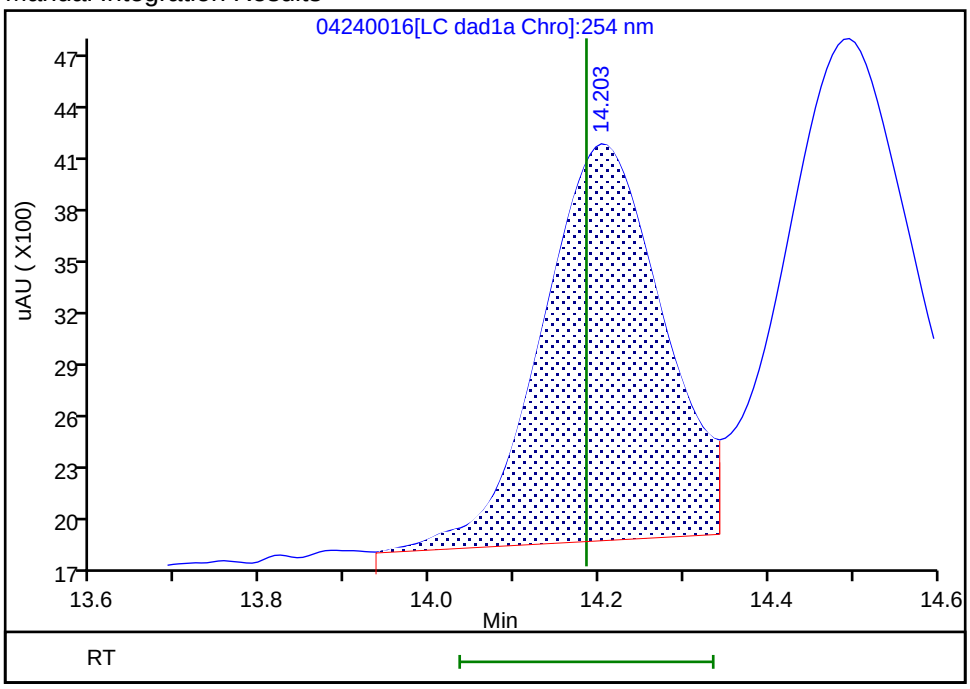
Processing Integration Results

RT: 14.20
Area: 22811
Amount: 0.047887
Amount Units: ug/ml



Manual Integration Results

RT: 14.20
Area: 22481
Amount: 0.050060
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:25:16 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

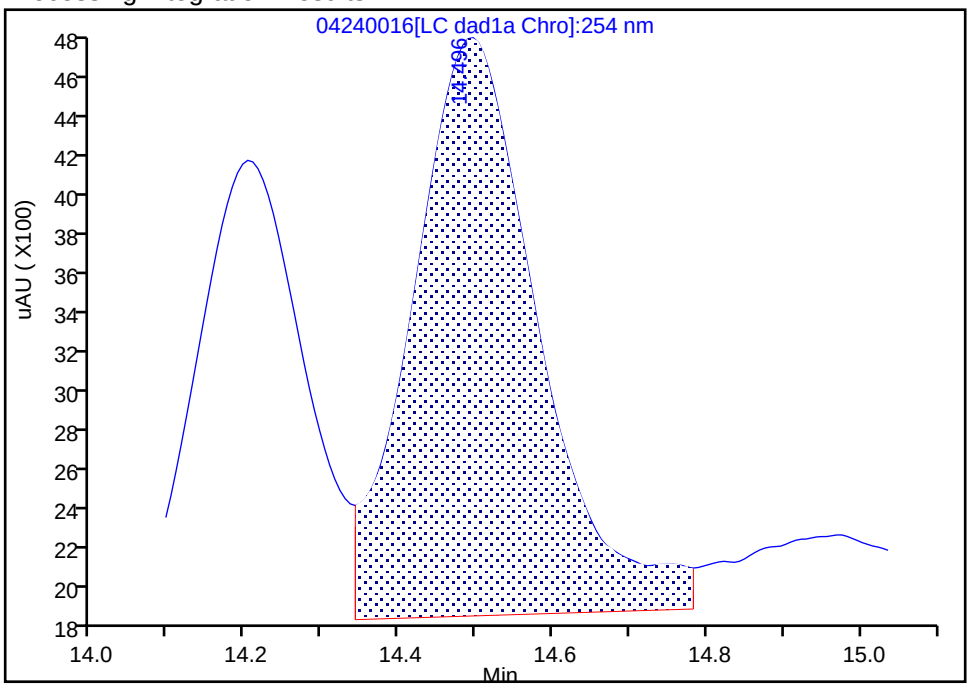
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Injection Date:	25-Apr-2024 01:03:56	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 3				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

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

Signal: 1

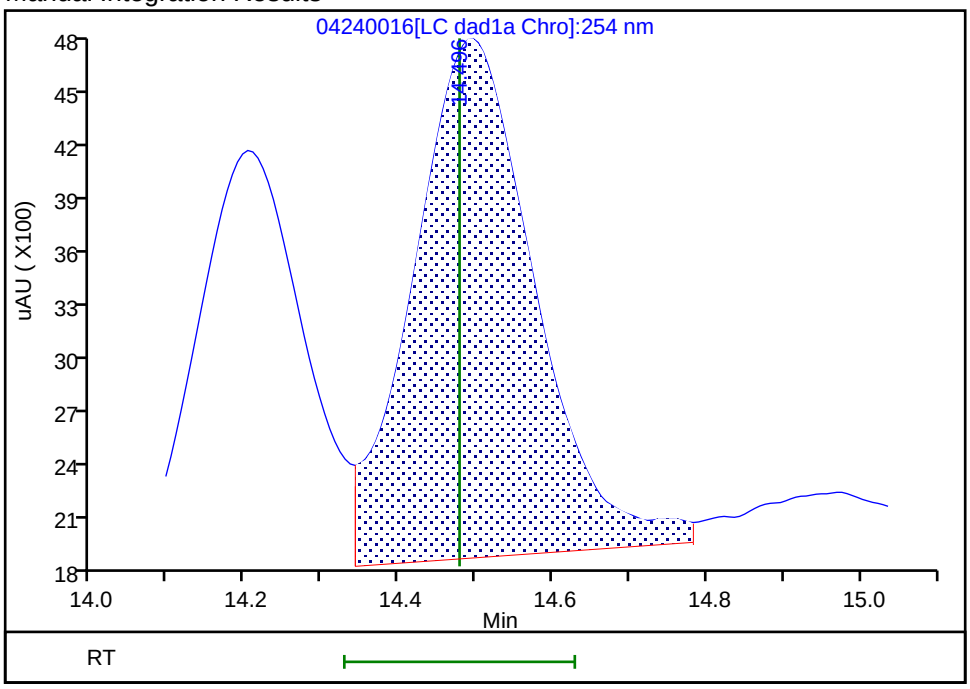
Processing Integration Results

RT: 14.50
Area: 32206
Amount: 0.051373
Amount Units: ug/ml



Manual Integration Results

RT: 14.50
Area: 30596
Amount: 0.051909
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:25:16 -06:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

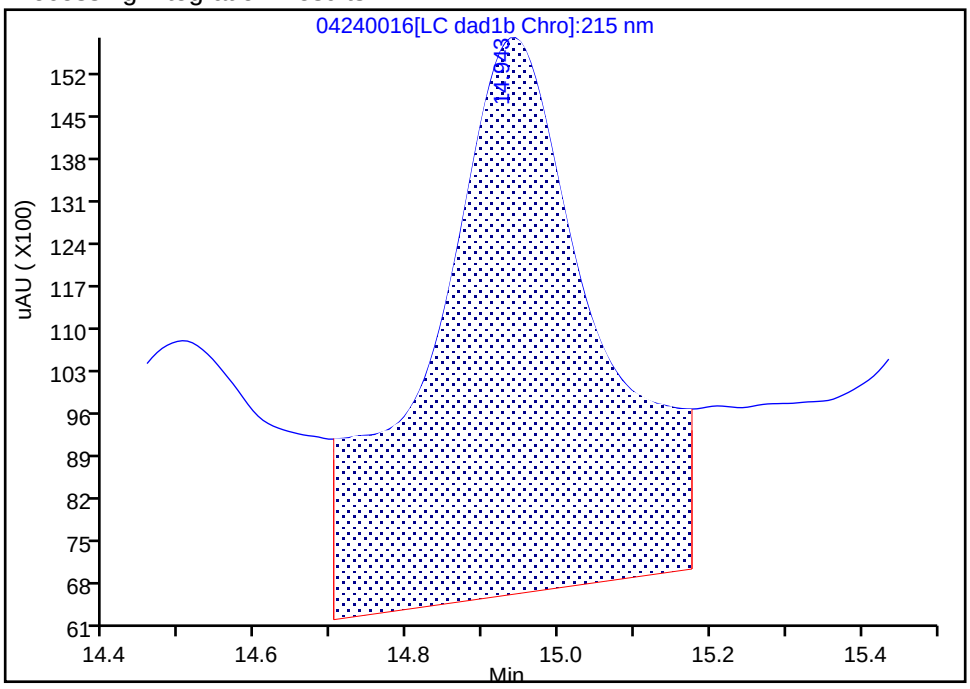
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Lims ID:	IC INT 3				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1B, 215 nm		

13 Nitroglycerin, CAS: 55-63-0

Signal: 1

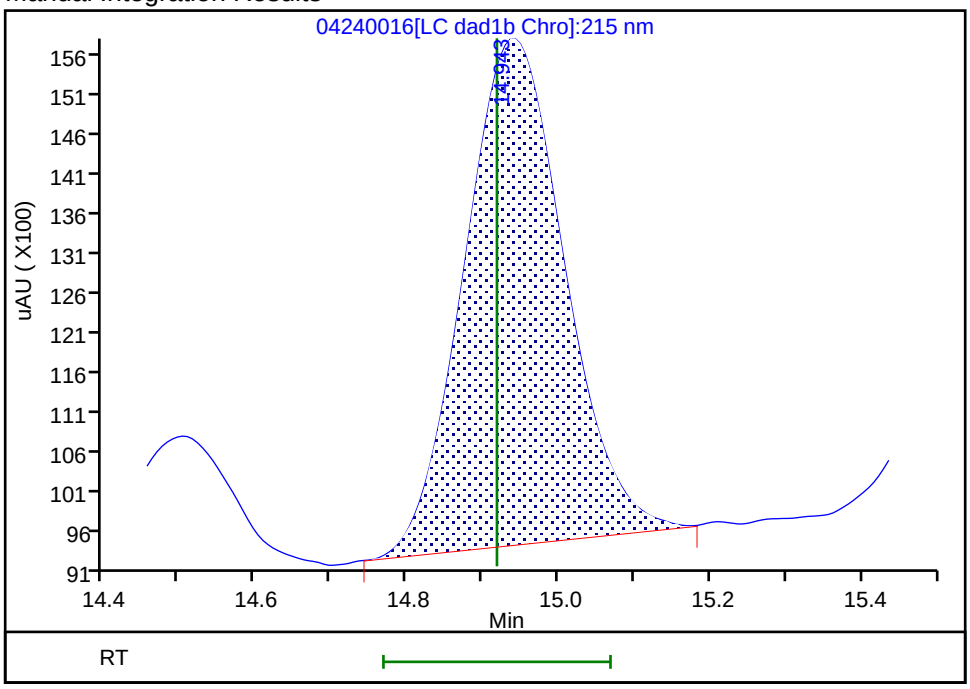
Processing Integration Results

RT: 14.94
Area: 139941
Amount: 0.575003
Amount Units: ug/ml



Manual Integration Results

RT: 14.94
Area: 59130
Amount: 0.494792
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:20:51 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

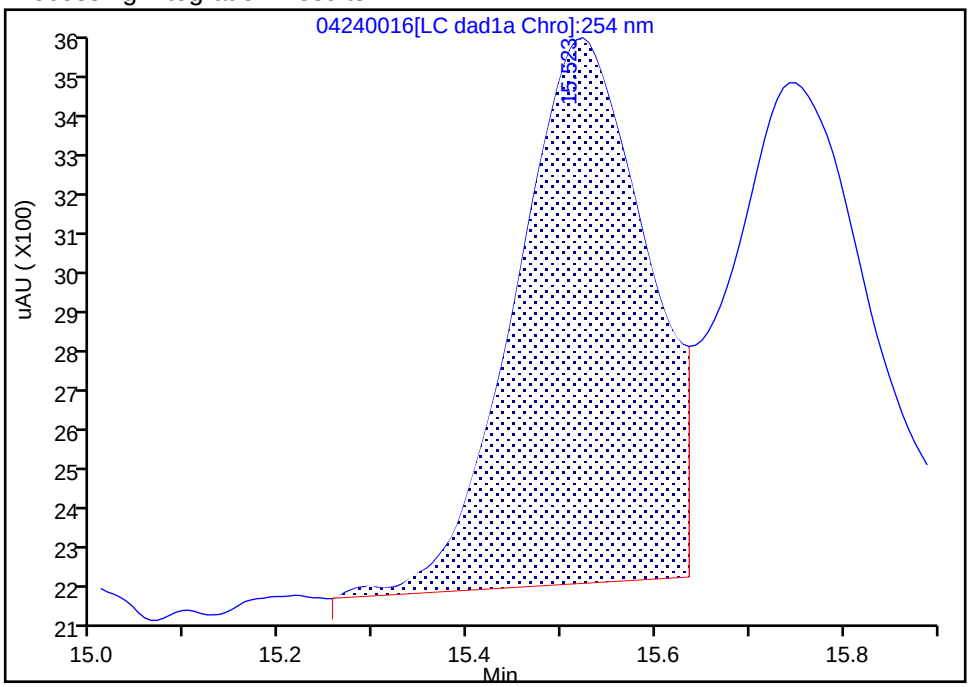
Data File:	\\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240016.d				
Injection Date:	25-Apr-2024 01:03:56	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 3				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

14 o-Nitrotoluene, CAS: 88-72-2

Signal: 1

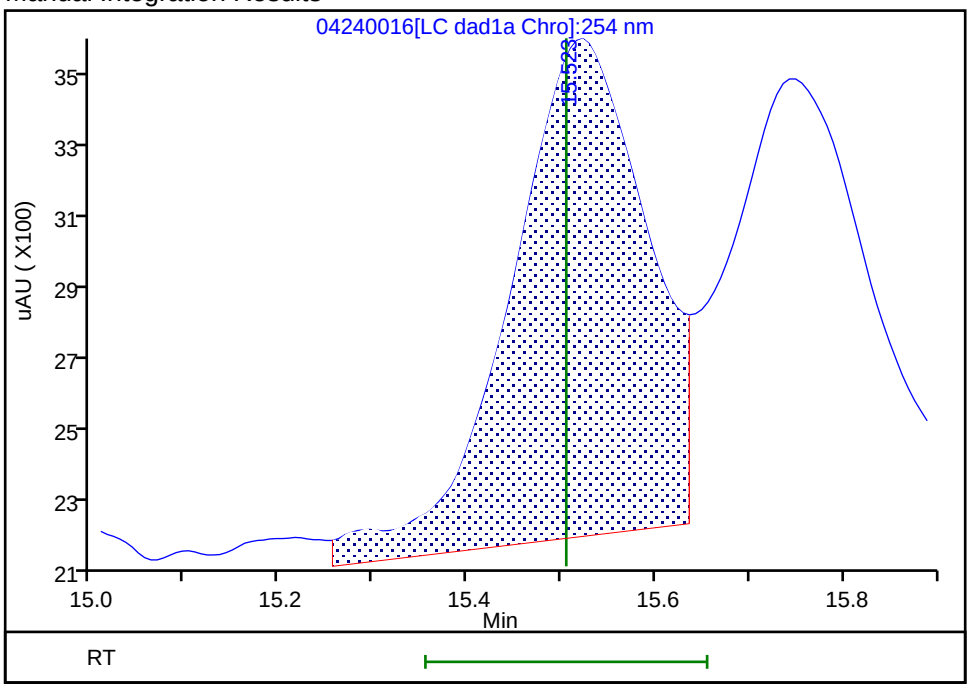
Processing Integration Results

RT: 15.52
Area: 12415
Amount: 0.046079
Amount Units: ug/ml



Manual Integration Results

RT: 15.52
Area: 13247
Amount: 0.054159
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:25:16 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

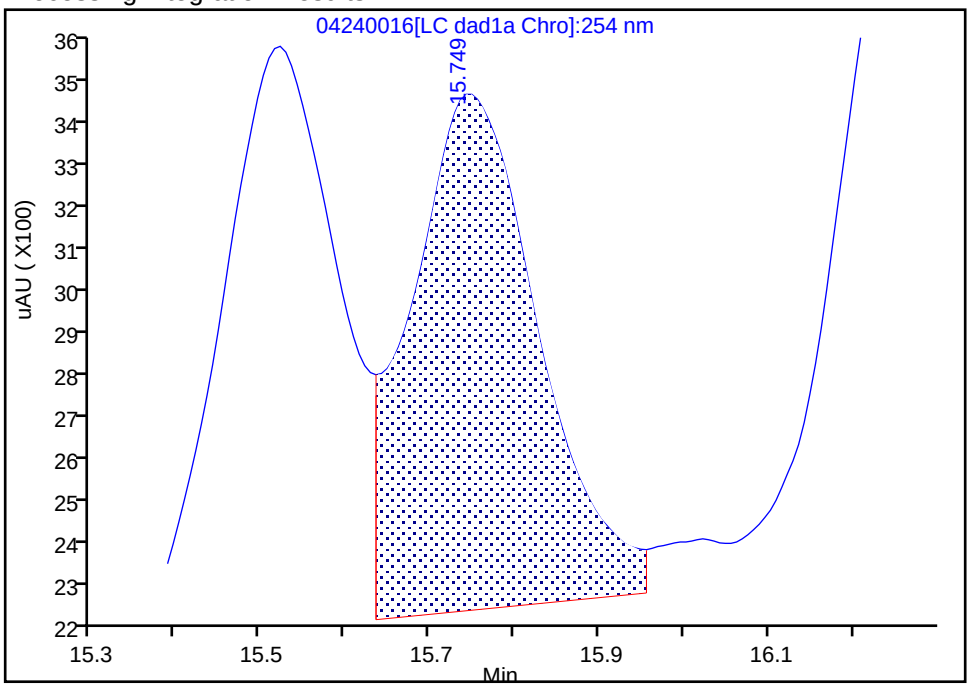
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Injection Date:	25-Apr-2024 01:03:56	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 3				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

15 p-Nitrotoluene, CAS: 99-99-0

Signal: 1

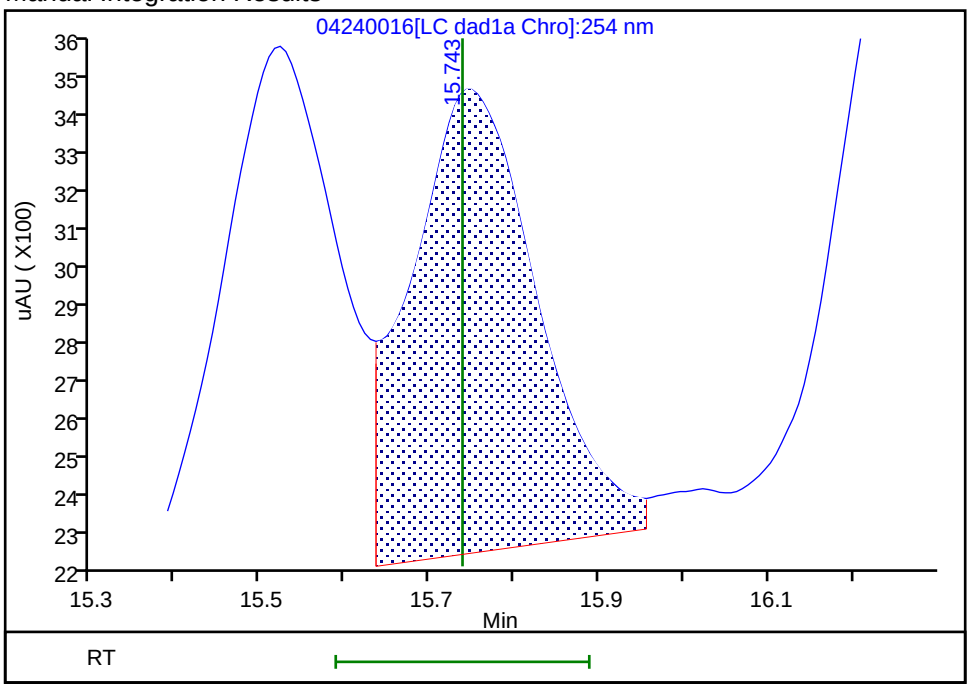
Processing Integration Results

RT: 15.75
Area: 11979
Amount: 0.047481
Amount Units: ug/ml



Manual Integration Results

RT: 15.74
Area: 11825
Amount: 0.050097
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:25:16 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

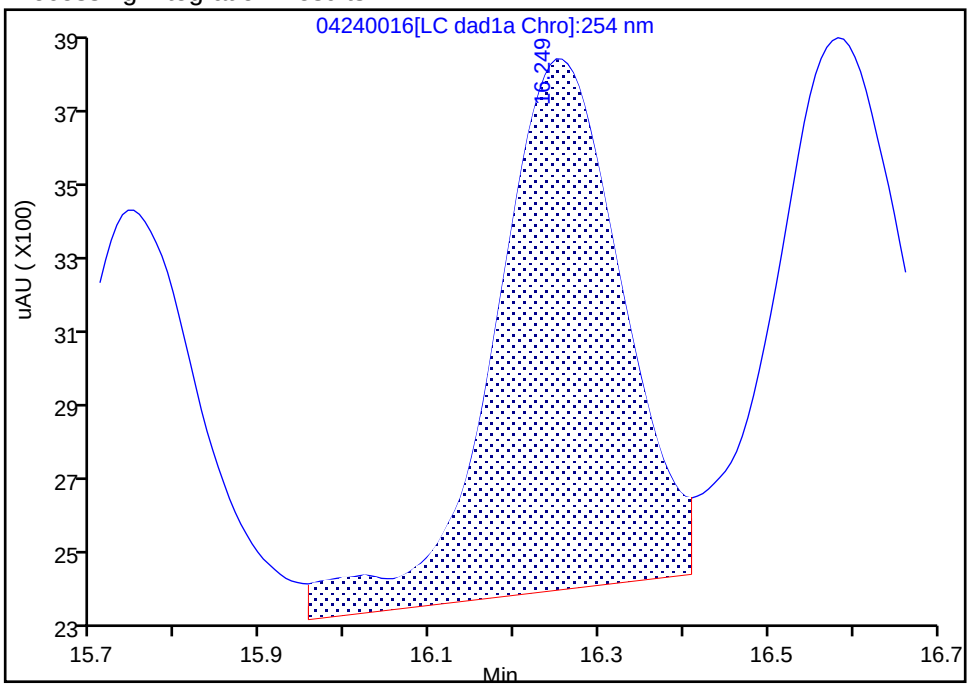
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Injection Date:	25-Apr-2024 01:03:56	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 3				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

16 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

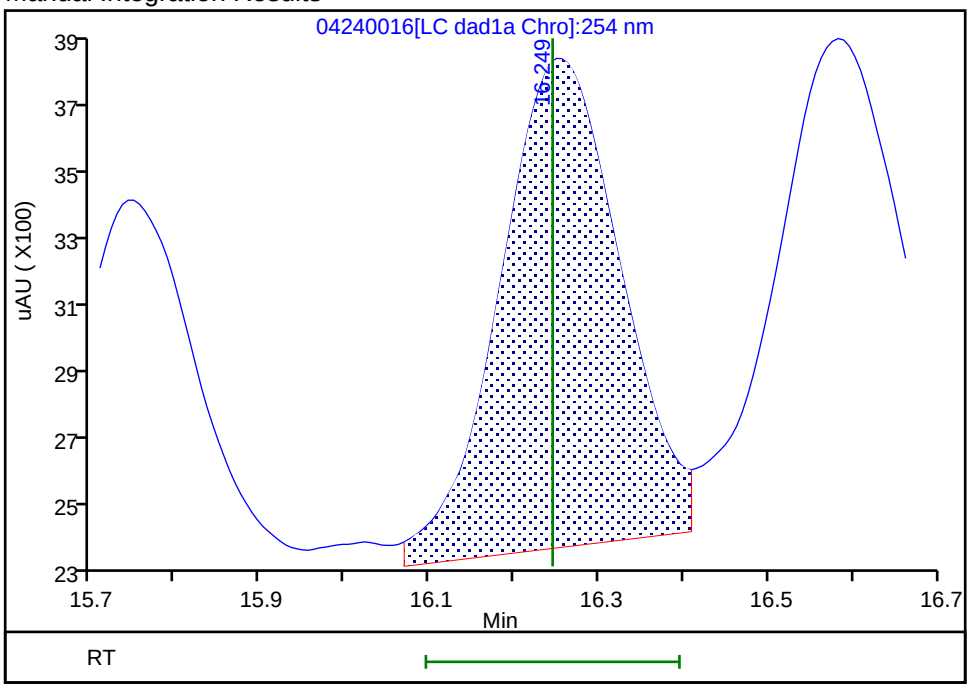
Processing Integration Results

RT: 16.25
Area: 15163
Amount: 0.045904
Amount Units: ug/ml



Manual Integration Results

RT: 16.25
Area: 13955
Amount: 0.049024
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:35:16 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

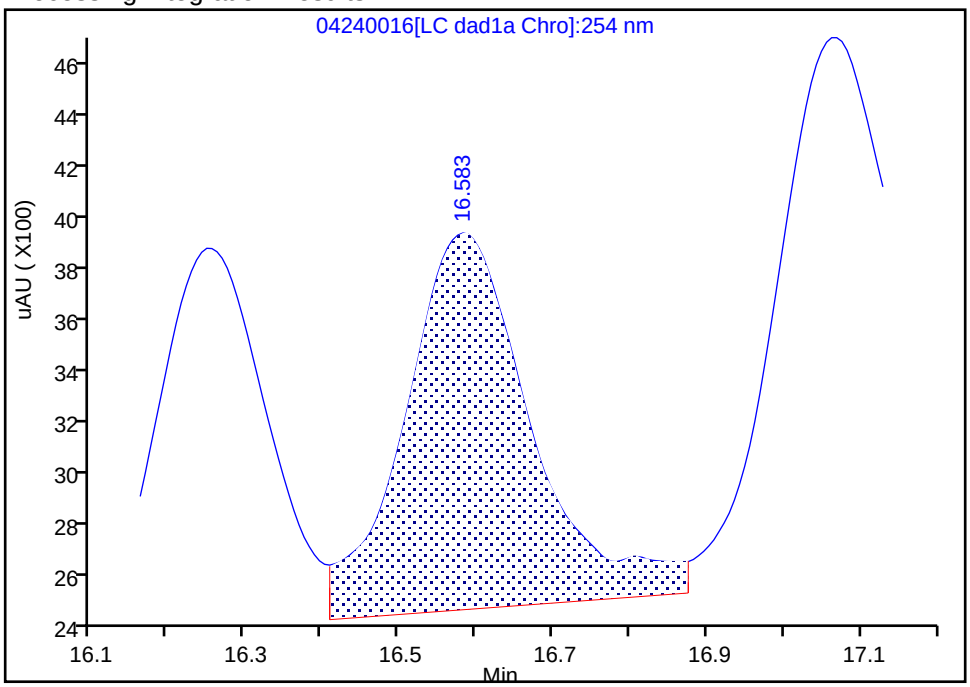
Data File:	\\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240016.d				
Injection Date:	25-Apr-2024 01:03:56	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 3				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

17 m-Nitrotoluene, CAS: 99-08-1

Signal: 1

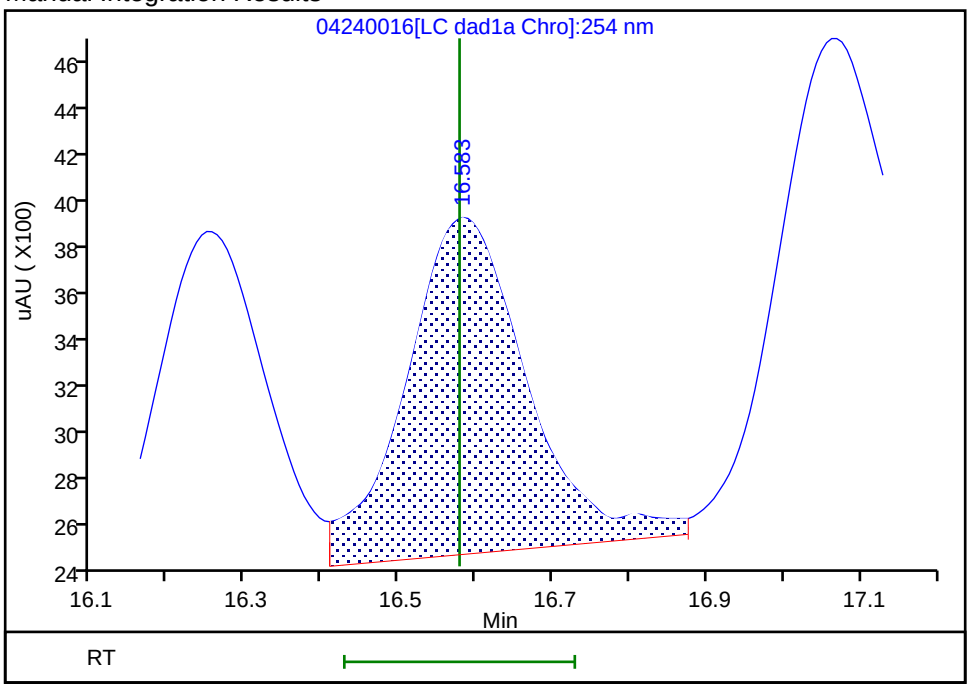
Processing Integration Results

RT: 16.58
Area: 16173
Amount: 0.050420
Amount Units: ug/ml



Manual Integration Results

RT: 16.58
Area: 14941
Amount: 0.050699
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:25:16 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

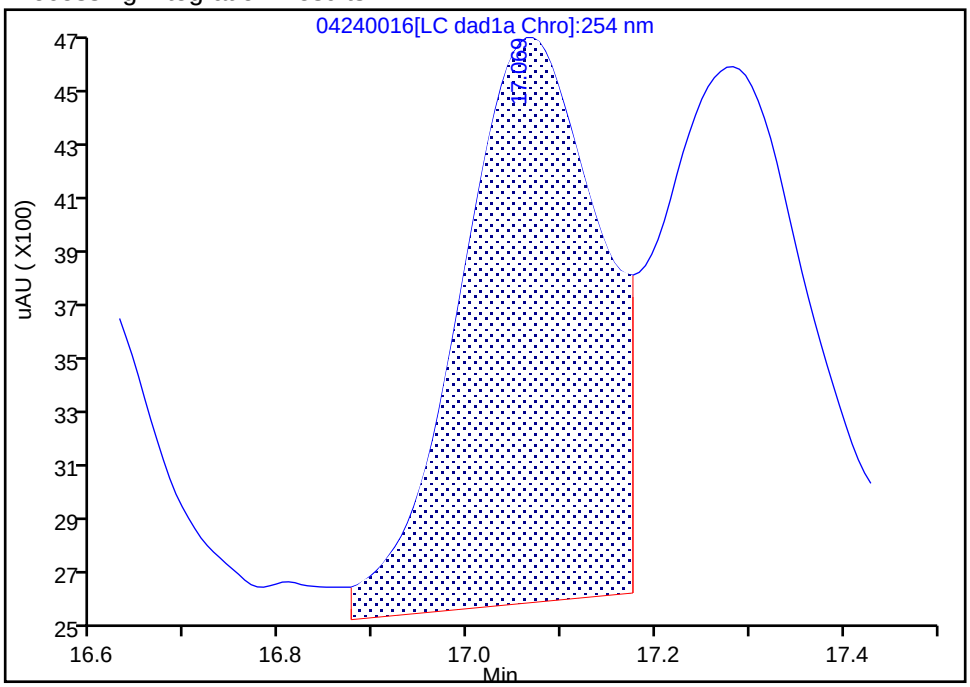
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Injection Date:	25-Apr-2024 01:03:56	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 3				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

18 2-Amino-4,6-dinitrotoluene, CAS: 35572-78-2

Signal: 1

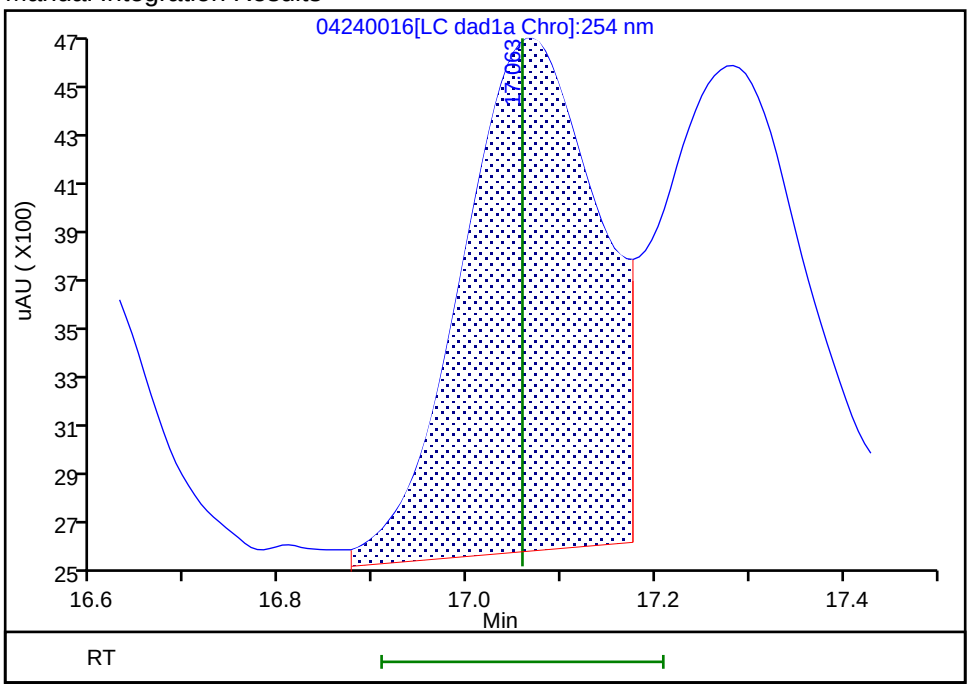
Processing Integration Results

RT: 17.07
Area: 20716
Amount: 0.047421
Amount Units: ug/ml



Manual Integration Results

RT: 17.06
Area: 19735
Amount: 0.048661
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:25:16 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

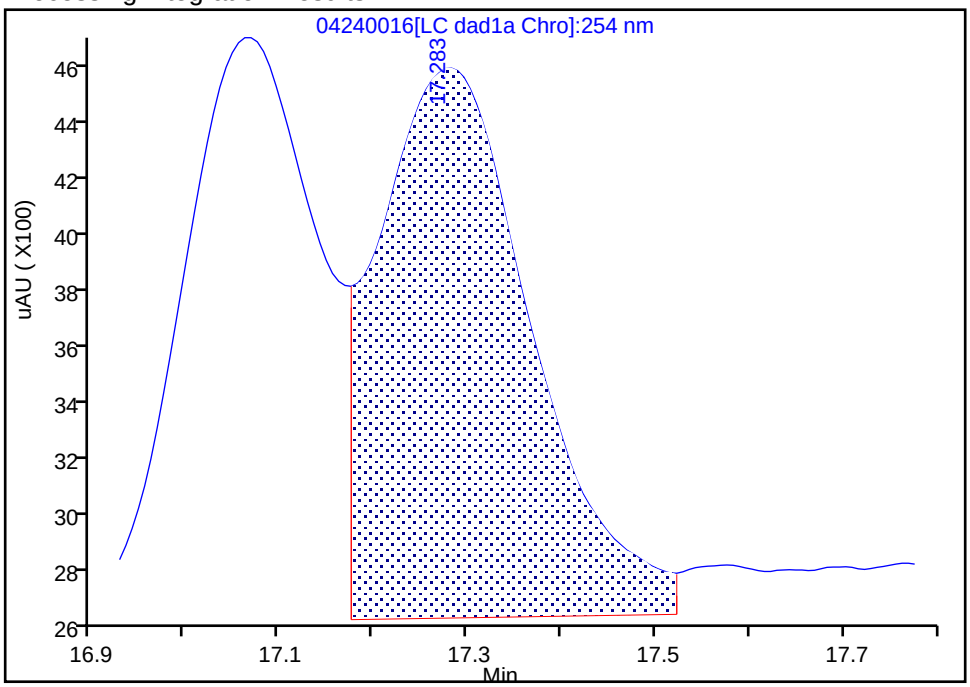
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Injection Date:	25-Apr-2024 01:03:56	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 3				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

19 1,3,5-Trinitrobenzene, CAS: 99-35-4

Signal: 1

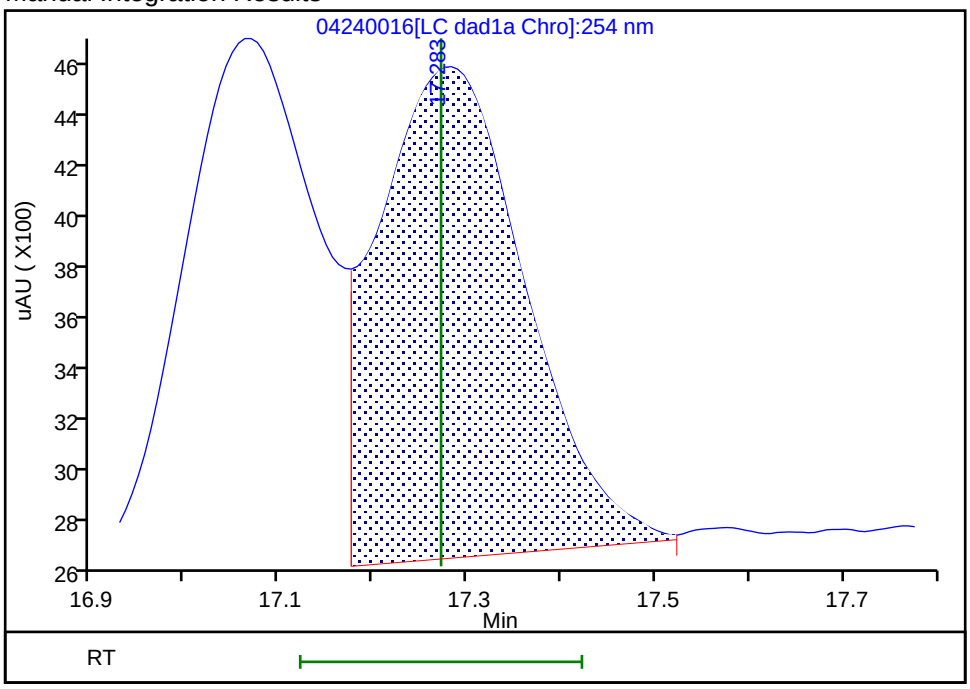
Processing Integration Results

RT: 17.28
Area: 21240
Amount: 0.046378
Amount Units: ug/ml



Manual Integration Results

RT: 17.28
Area: 19358
Amount: 0.045714
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:25:16 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

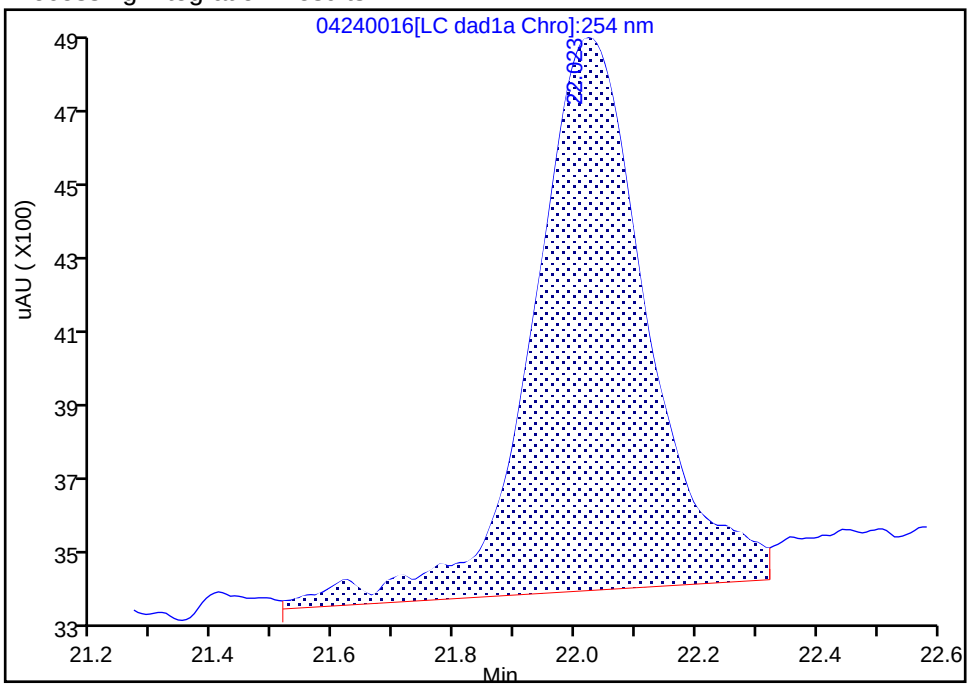
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Injection Date:	25-Apr-2024 01:03:56	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 3				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

22 Tetryl, CAS: 479-45-8

Signal: 1

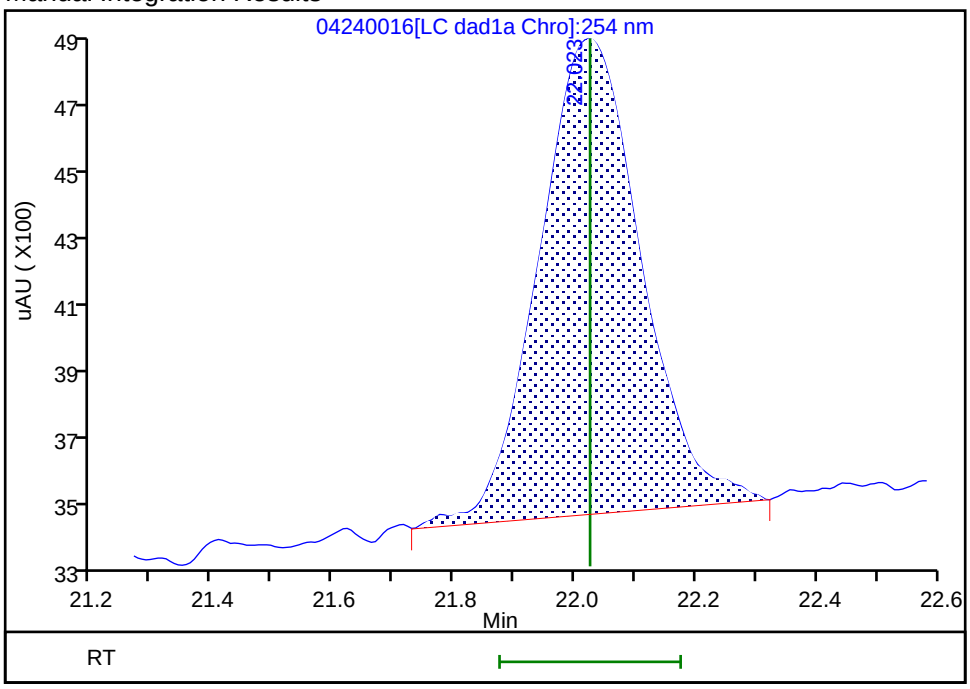
Processing Integration Results

RT: 22.02
Area: 18537
Amount: 0.055520
Amount Units: ug/ml



Manual Integration Results

RT: 22.02
Area: 15630
Amount: 0.048664
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:25:28 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

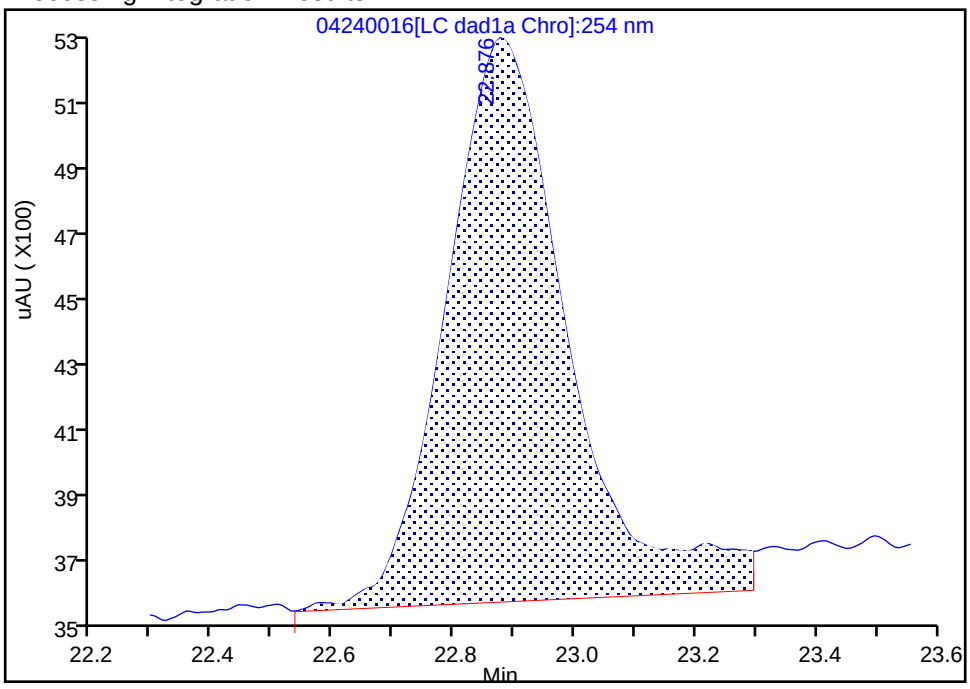
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Injection Date:	25-Apr-2024 01:03:56	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 3				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

23 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

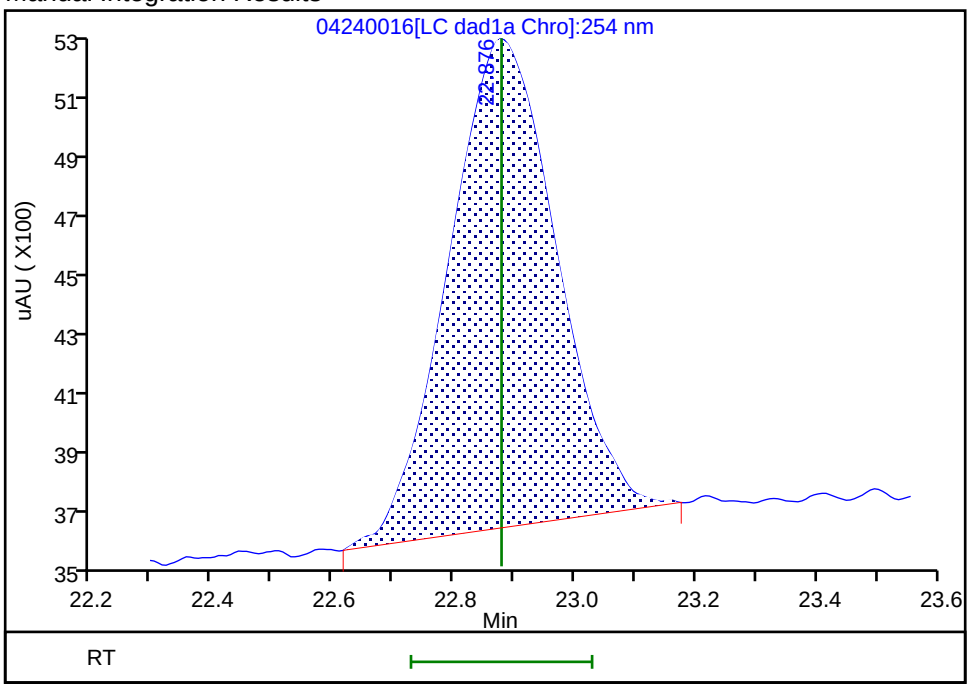
Processing Integration Results

RT: 22.88
Area: 23576
Amount: 0.051829
Amount Units: ug/ml



Manual Integration Results

RT: 22.88
Area: 20131
Amount: 0.050357
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:25:31 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

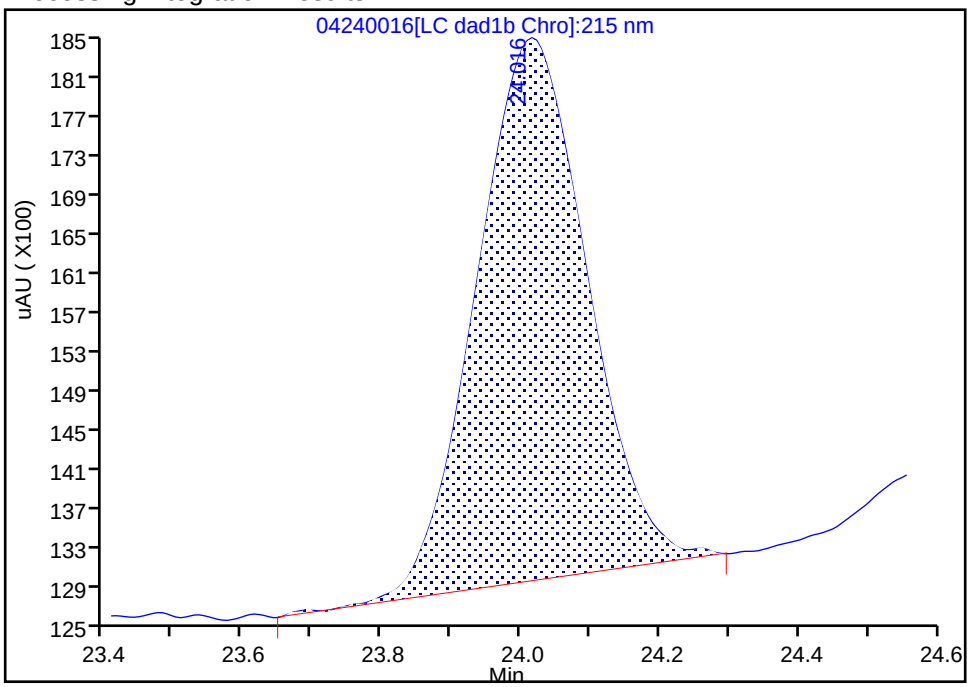
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Injection Date:	25-Apr-2024 01:03:56	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 3				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1B, 215 nm		

24 PETN, CAS: 78-11-5

Signal: 1

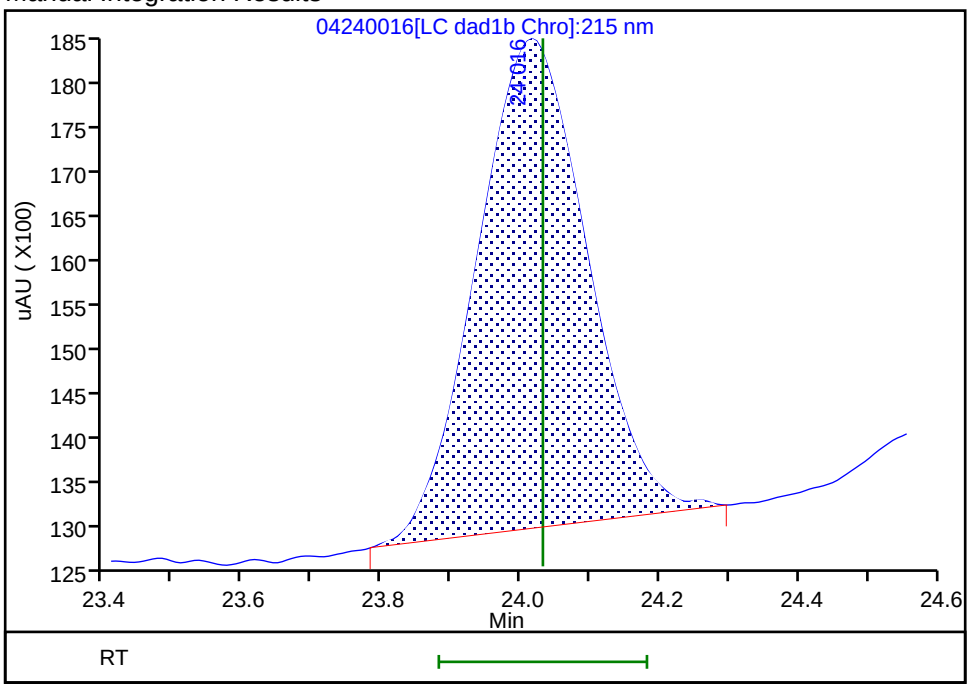
Processing Integration Results

RT: 24.02
Area: 61268
Amount: 0.511464
Amount Units: ug/ml



Manual Integration Results

RT: 24.02
Area: 60616
Amount: 0.505642
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:39:12 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\G2_LUNA\20240424-132624.b\04240017.D
Lims ID: IC INT 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 25-Apr-2024 01:39:50 ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC INT 2
Operator ID: JZ/JG Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub16

Method: \\chromfs\Denver\ChromData\G2_LUNA\20240424-132624.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 25-Apr-2024 14:30:17 Calib Date: 25-Apr-2024 07:39:21
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\G2_LUNA\20240424-132624.b\04240027.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX1684

First Level Reviewer: LV5D Date: 25-Apr-2024 13:20:24

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
6 HMX	1	6.712	6.705	0.007	3578	0.0200	0.0206	M
5 2,4,6-Trinitrophenol	1	8.726	8.612	0.114	3302	0.0200	0.0218	M
8 RDX	1	8.952	8.938	0.014	4791	0.0200	0.0207	M
9 Nitrobenzene	1	11.459	11.425	0.034	8101	0.0200	0.0212	M
$ 10 1,2-Dinitrobenzene	1	12.392	12.345	0.047	5474	0.0200	0.0212	M
11 3,5-Dinitroaniline	1	14.232	14.185	0.047	9463	0.0200	0.0198	M
12 1,3-Dinitrobenzene	1	14.519	14.478	0.041	12318	0.0200	0.0209	M
13 Nitroglycerin	2	14.979	14.918	0.061	23877	0.2000	0.1998	M
14 o-Nitrotoluene	1	15.559	15.505	0.054	5024	0.0200	0.0205	M
15 p-Nitrotoluene	1	15.772	15.738	0.034	5278	0.0200	0.0200	M
16 4-Amino-2,6-dinitrotoluene	1	16.286	16.245	0.041	6474	0.0200	0.0213	M
17 m-Nitrotoluene	1	16.619	16.578	0.041	6685	0.0200	0.0207	M
18 2-Amino-4,6-dinitrotoluene	1	17.099	17.058	0.041	8733	0.0200	0.0215	M
19 1,3,5-Trinitrobenzene	1	17.306	17.272	0.034	9167	0.0200	0.0216	M
20 2,6-Dinitrotoluene	1	18.386	18.365	0.021	6113	0.0200	0.0220	M
21 2,4-Dinitrotoluene	1	18.846	18.818	0.028	12005	0.0200	0.0216	M
22 Tetryl	1	22.072	22.025	0.047	6268	0.0200	0.0187	M
23 2,4,6-Trinitrotoluene	1	22.926	22.878	0.048	7969	0.0200	0.0199	M
24 PETN	2	24.046	24.032	0.014	22594	0.2000	0.1979	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00080 Amount Added: 2.00 Units: uL

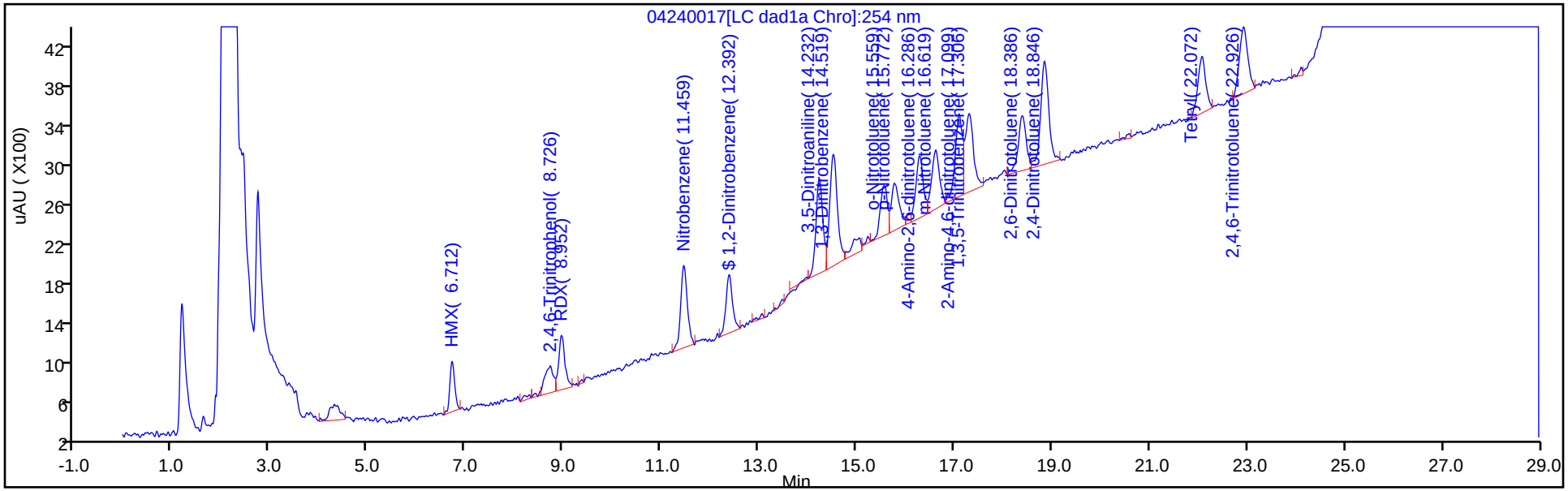
Report Date: 25-Apr-2024 14:30:17 Chrom Revision: 2.3 09-Apr-2024 17:43:44

Eurofins Denver

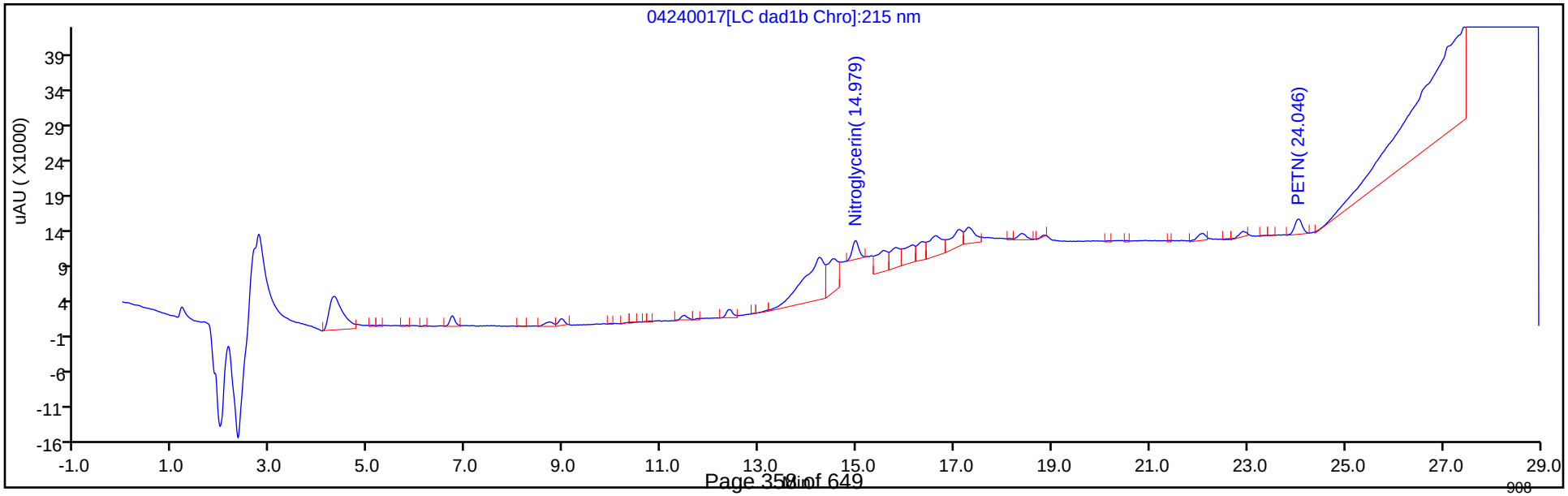
Data File: \\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240017.d

Injection Date:	25-Apr-2024 01:39:50	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	JZ/JG
Lims ID:	IC INT 2			Worklist Smp#:	17
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

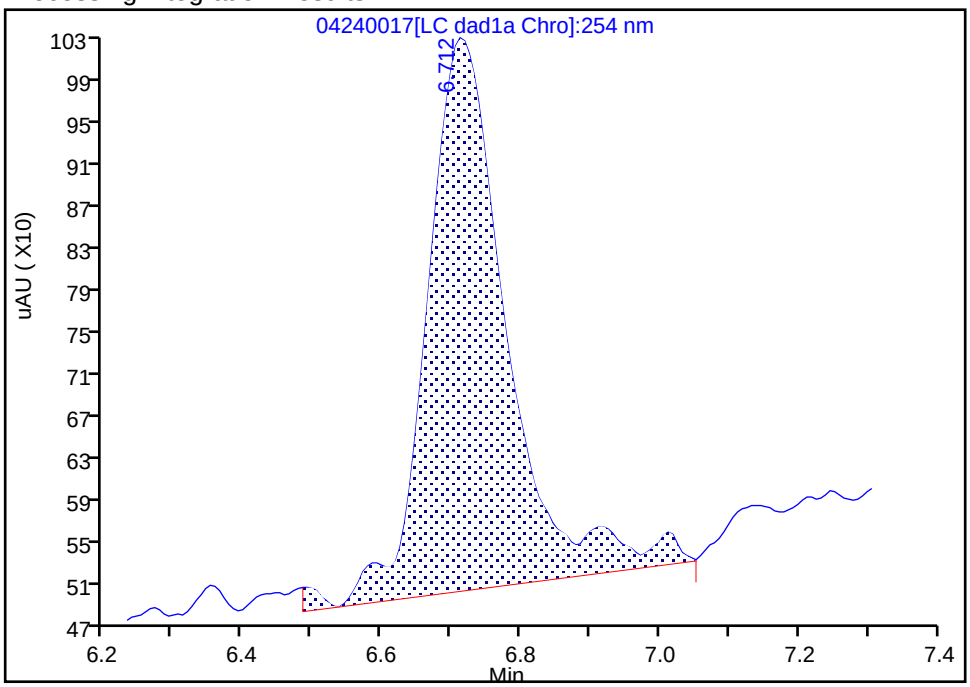
Data File:	\\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240017.d				
Injection Date:	25-Apr-2024 01:39:50	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 2				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

6 HMX, CAS: 2691-41-0

Signal: 1

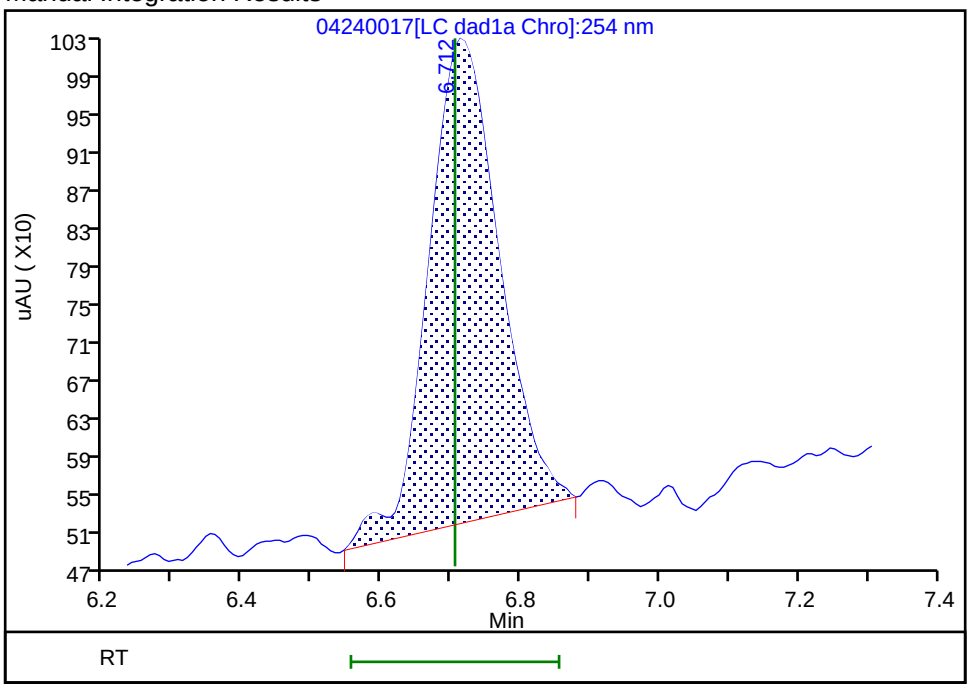
Processing Integration Results

RT: 6.71
Area: 4168
Amount: 0.022927
Amount Units: ug/ml



Manual Integration Results

RT: 6.71
Area: 3578
Amount: 0.020554
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:31:57 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

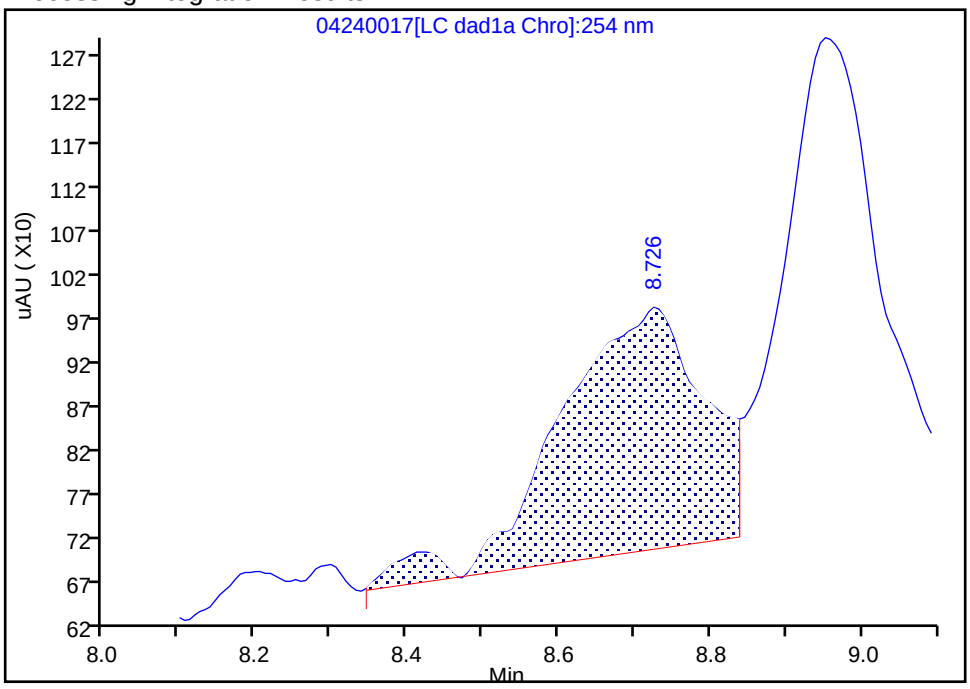
Data File:	\\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240017.d				
Injection Date:	25-Apr-2024 01:39:50	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 2				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

5 2,4,6-Trinitrophenol, CAS: 88-89-1

Signal: 1

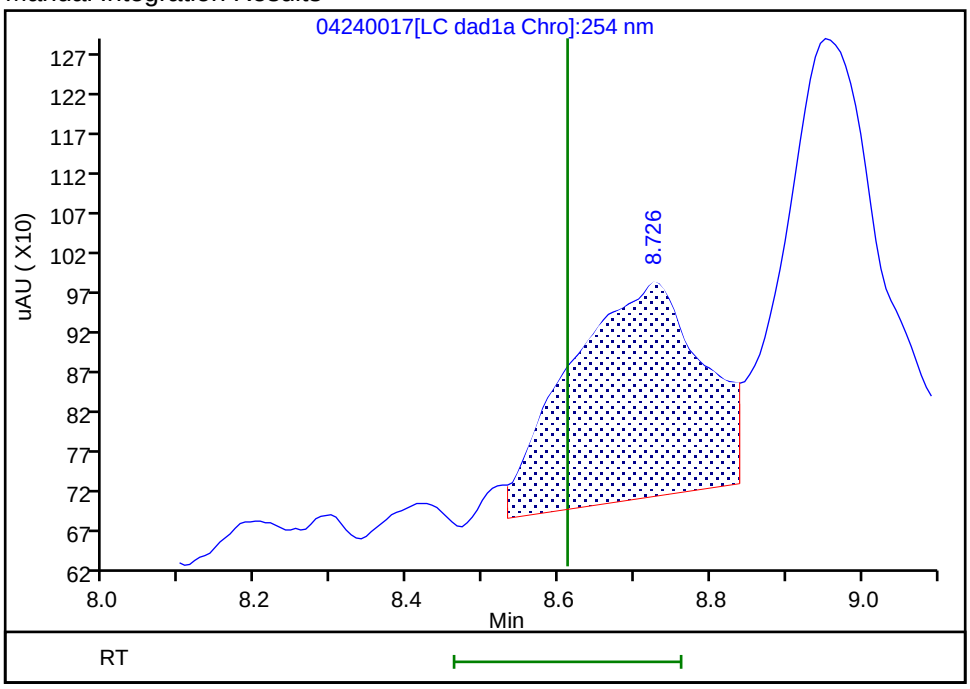
Processing Integration Results

RT: 8.73
Area: 3653
Amount: 0.023822
Amount Units: ug/ml



Manual Integration Results

RT: 8.73
Area: 3302
Amount: 0.021810
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:32:48 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

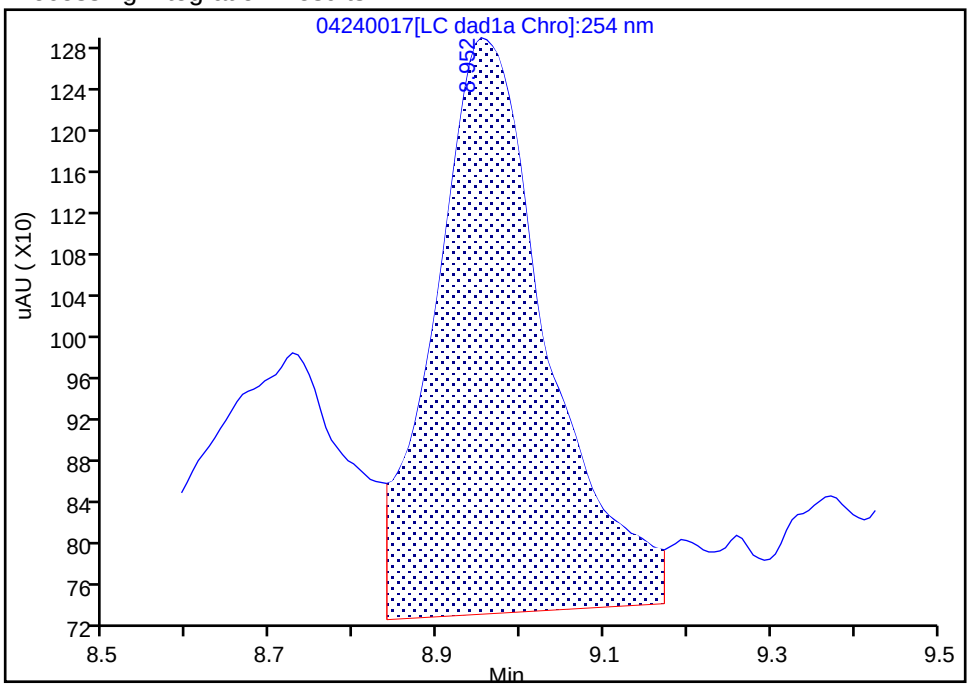
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Injection Date:	25-Apr-2024 01:39:50	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 2				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

8 RDX, CAS: 121-82-4

Signal: 1

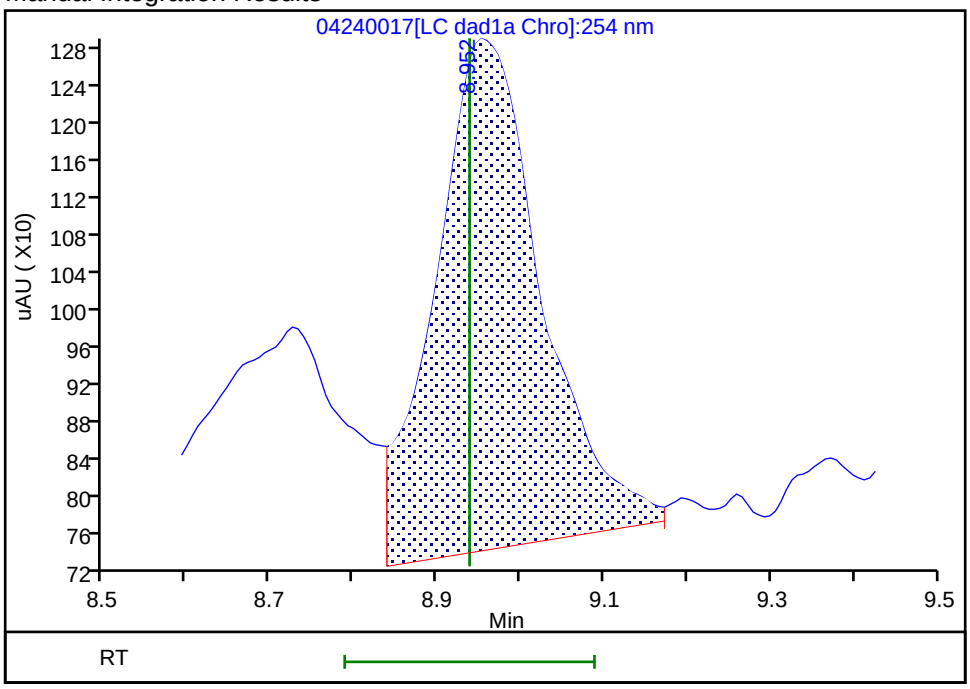
Processing Integration Results

RT: 8.95
Area: 5221
Amount: 0.023799
Amount Units: ug/ml



Manual Integration Results

RT: 8.95
Area: 4791
Amount: 0.020676
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:32:43 -06:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

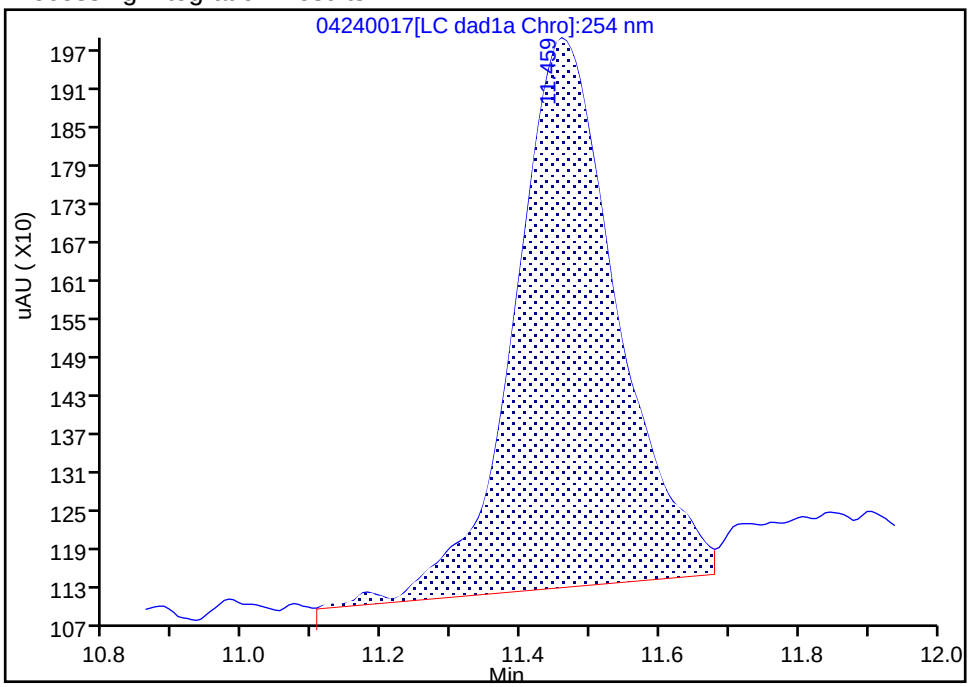
Data File:	\\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240017.d				
Injection Date:	25-Apr-2024 01:39:50	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 2				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

9 Nitrobenzene, CAS: 98-95-3

Signal: 1

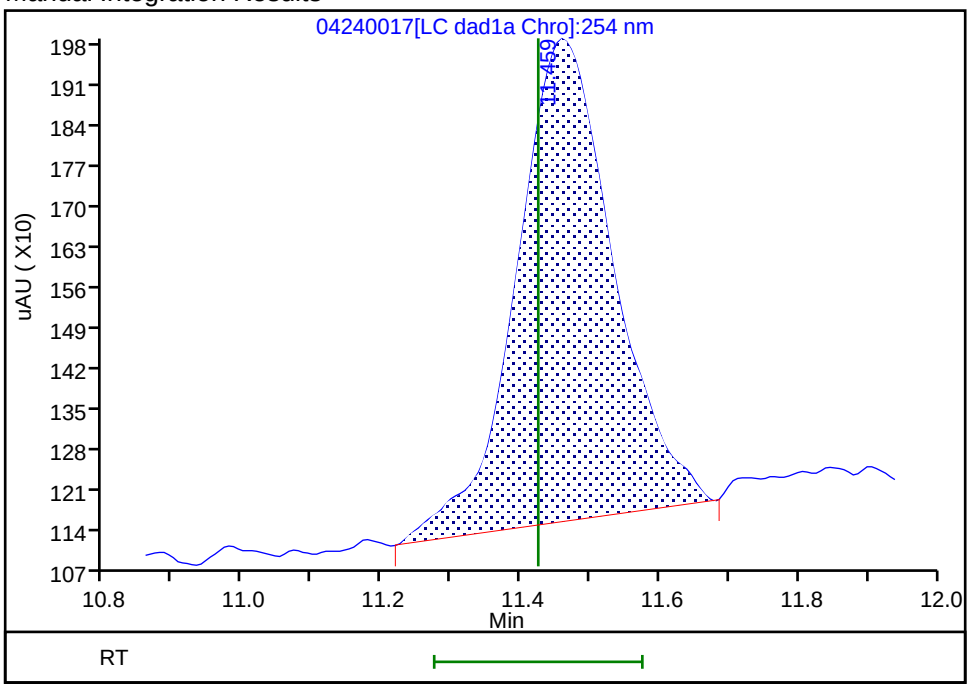
Processing Integration Results

RT: 11.46
Area: 8748
Amount: 0.022033
Amount Units: ug/ml



Manual Integration Results

RT: 11.46
Area: 8101
Amount: 0.021200
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:26:13 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

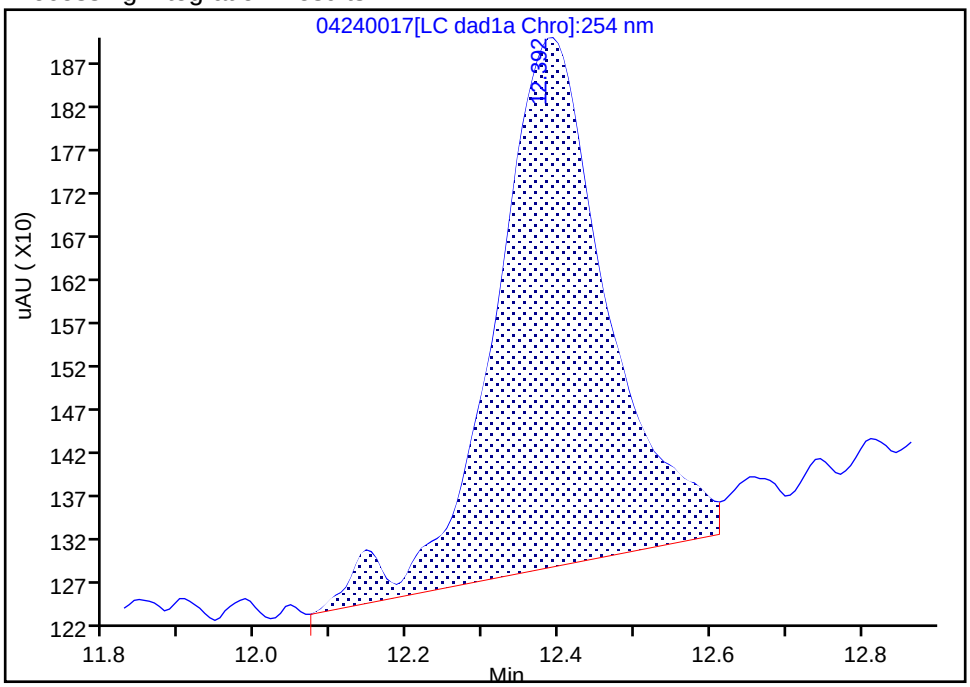
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Injection Date:	25-Apr-2024 01:39:50	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 2				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

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

Signal: 1

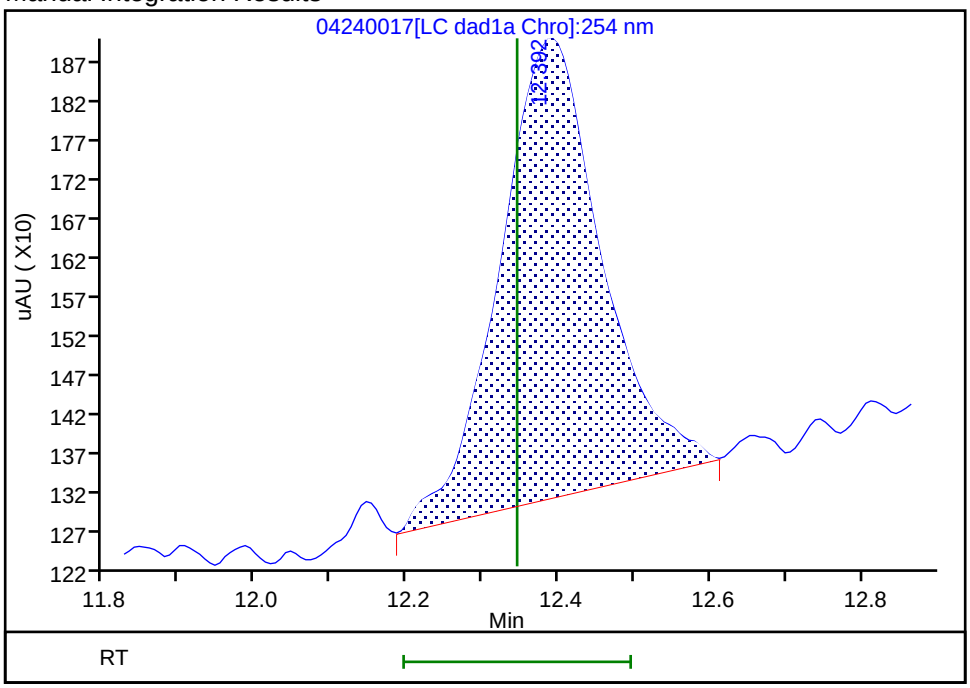
Processing Integration Results

RT: 12.39
Area: 6341
Amount: 0.022761
Amount Units: ug/ml



Manual Integration Results

RT: 12.39
Area: 5474
Amount: 0.021161
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:26:19 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

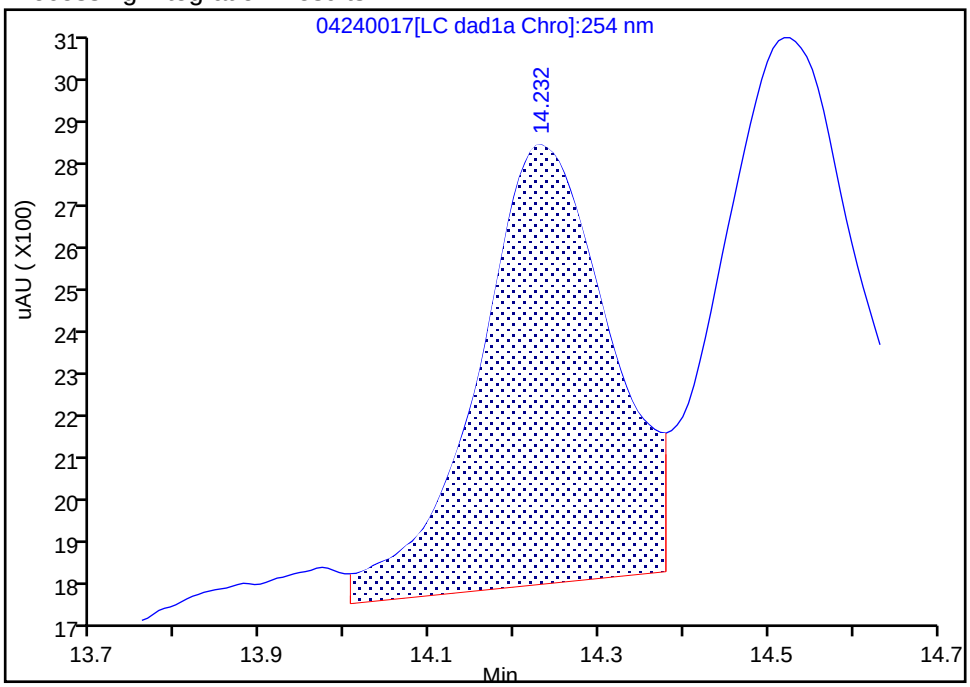
Data File:	\\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240017.d				
Injection Date:	25-Apr-2024 01:39:50	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 2				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

11 3,5-Dinitroaniline, CAS: 618-87-1

Signal: 1

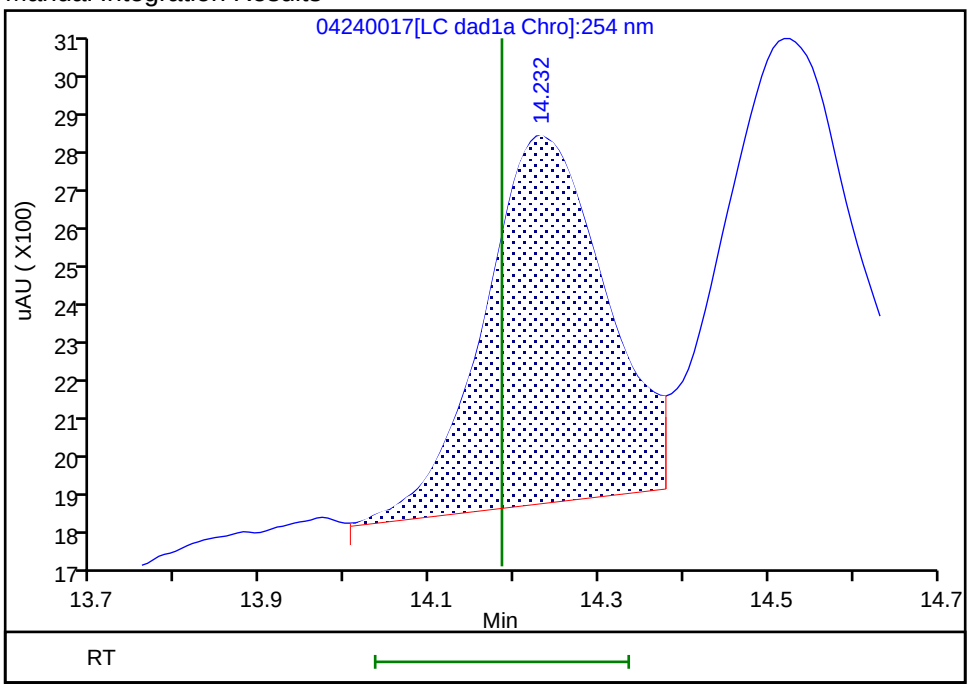
Processing Integration Results

RT: 14.23
Area: 11110
Amount: 0.020331
Amount Units: ug/ml



Manual Integration Results

RT: 14.23
Area: 9463
Amount: 0.019837
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:26:29 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

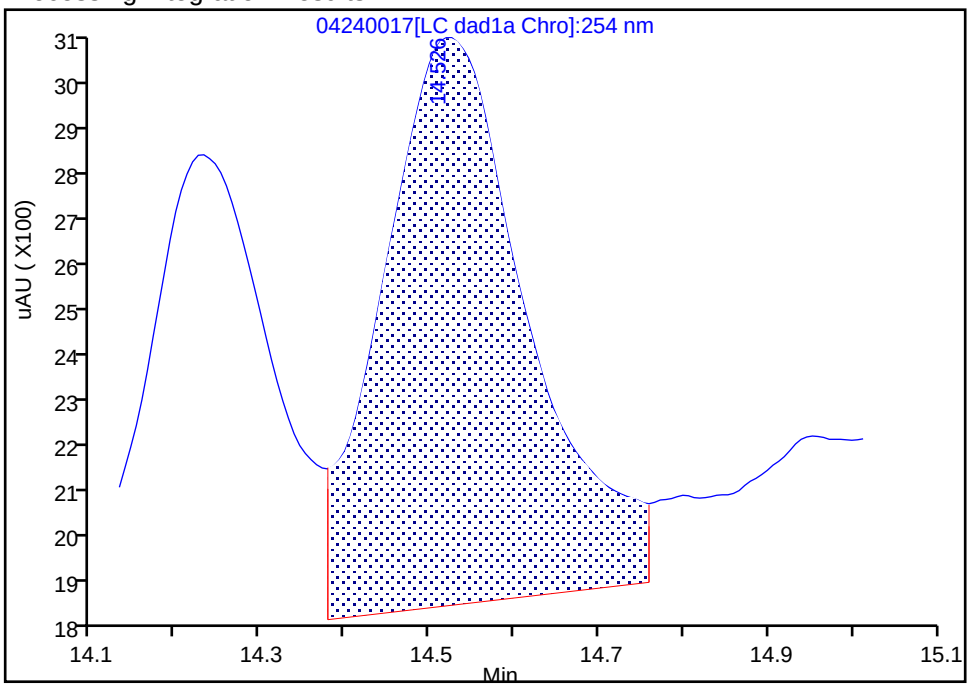
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Injection Date:	25-Apr-2024 01:39:50	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 2				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

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

Signal: 1

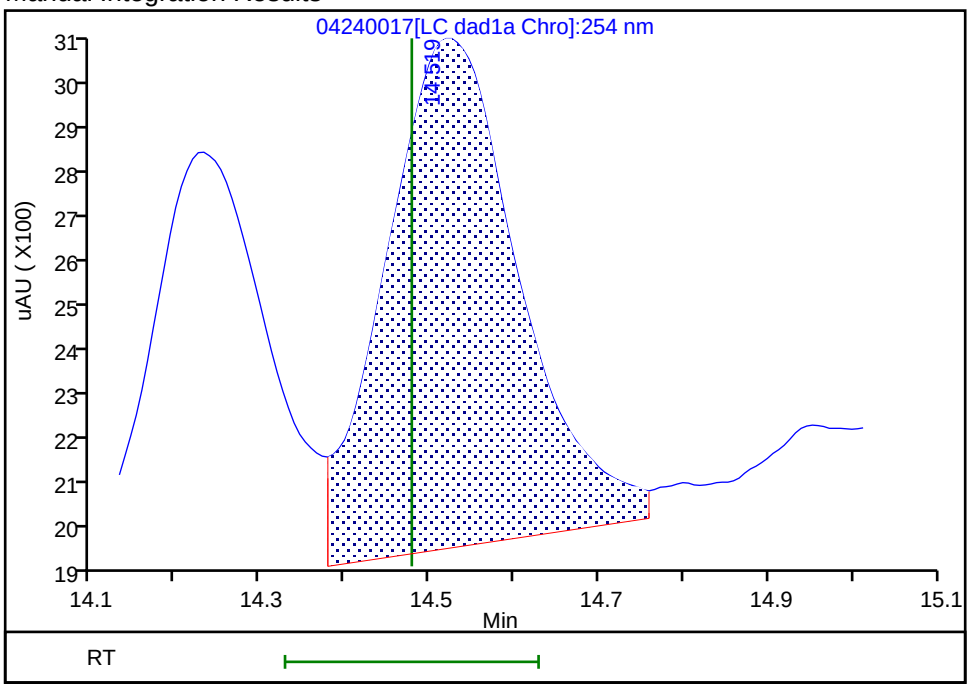
Processing Integration Results

RT: 14.53
Area: 14484
Amount: 0.023237
Amount Units: ug/ml



Manual Integration Results

RT: 14.52
Area: 12318
Amount: 0.020899
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:26:29 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

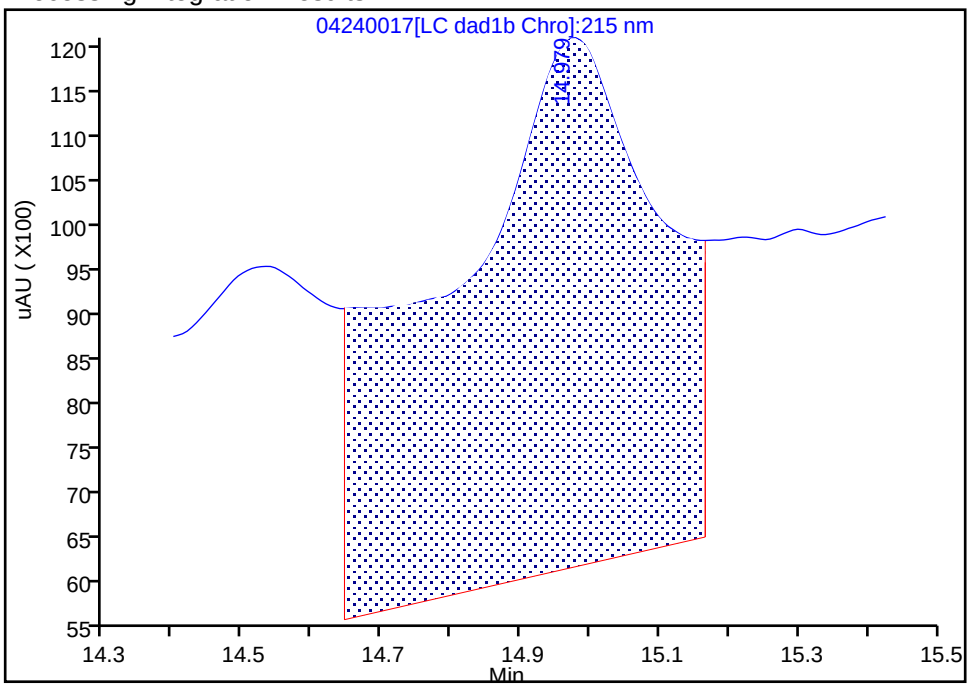
Data File:	\\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240017.d				
Injection Date:	25-Apr-2024 01:39:50	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 2				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1B, 215 nm		

13 Nitroglycerin, CAS: 55-63-0

Signal: 1

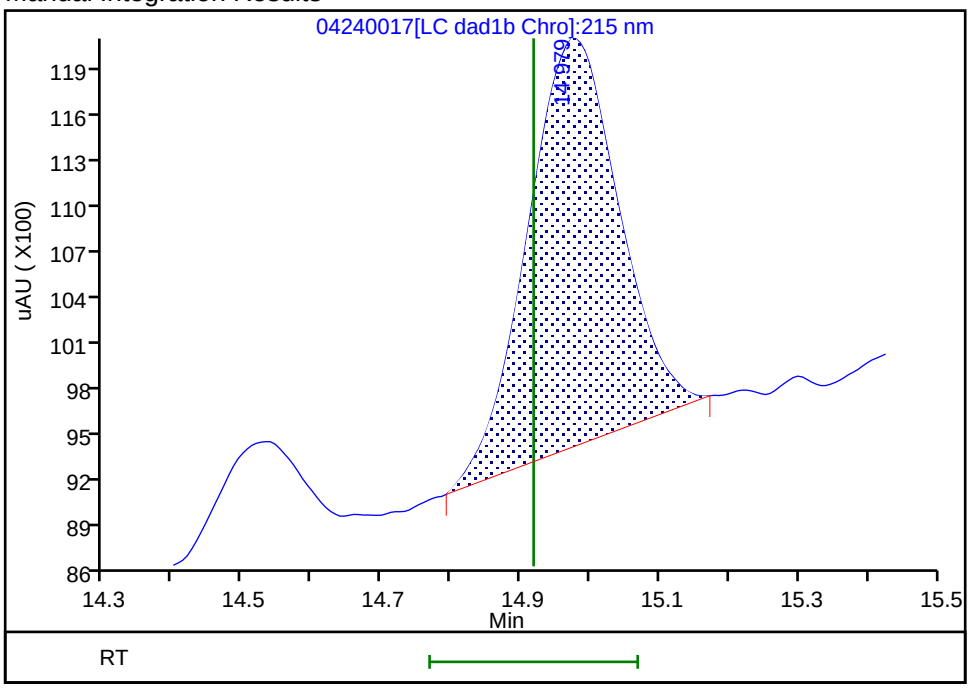
Processing Integration Results

RT: 14.98
Area: 128754
Amount: 0.566536
Amount Units: ug/ml



Manual Integration Results

RT: 14.98
Area: 23877
Amount: 0.199800
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:20:23 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

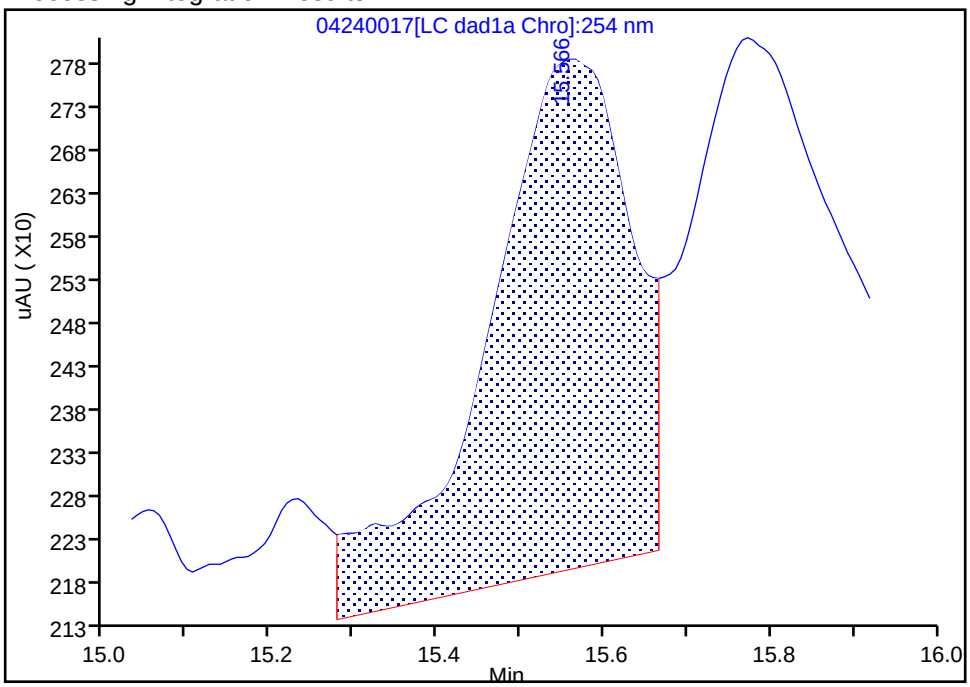
Data File:	\\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240017.d				
Injection Date:	25-Apr-2024 01:39:50	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 2				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

14 o-Nitrotoluene, CAS: 88-72-2

Signal: 1

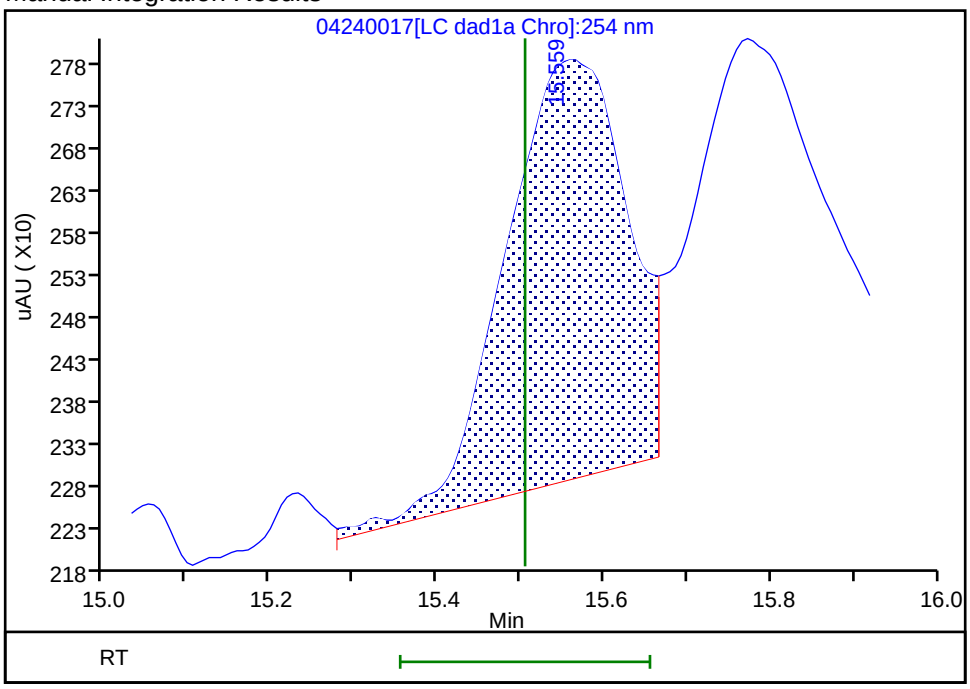
Processing Integration Results

RT: 15.57
Area: 7194
Amount: 0.026616
Amount Units: ug/ml



Manual Integration Results

RT: 15.56
Area: 5024
Amount: 0.020540
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:35:41 -06:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

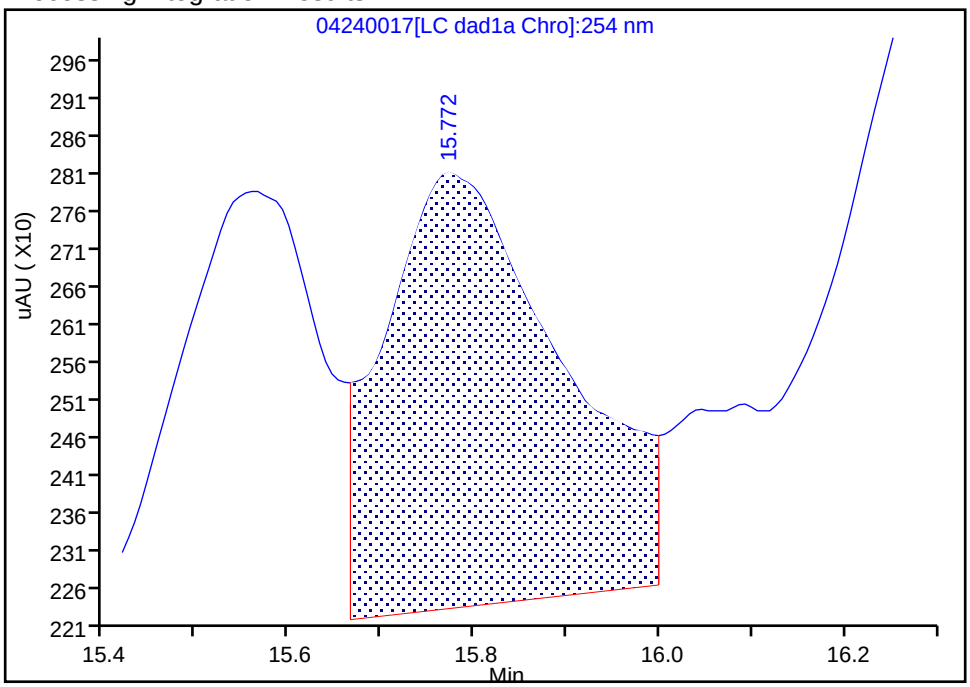
Data File:	\\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240017.d				
Injection Date:	25-Apr-2024 01:39:50	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 2				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

15 p-Nitrotoluene, CAS: 99-99-0

Signal: 1

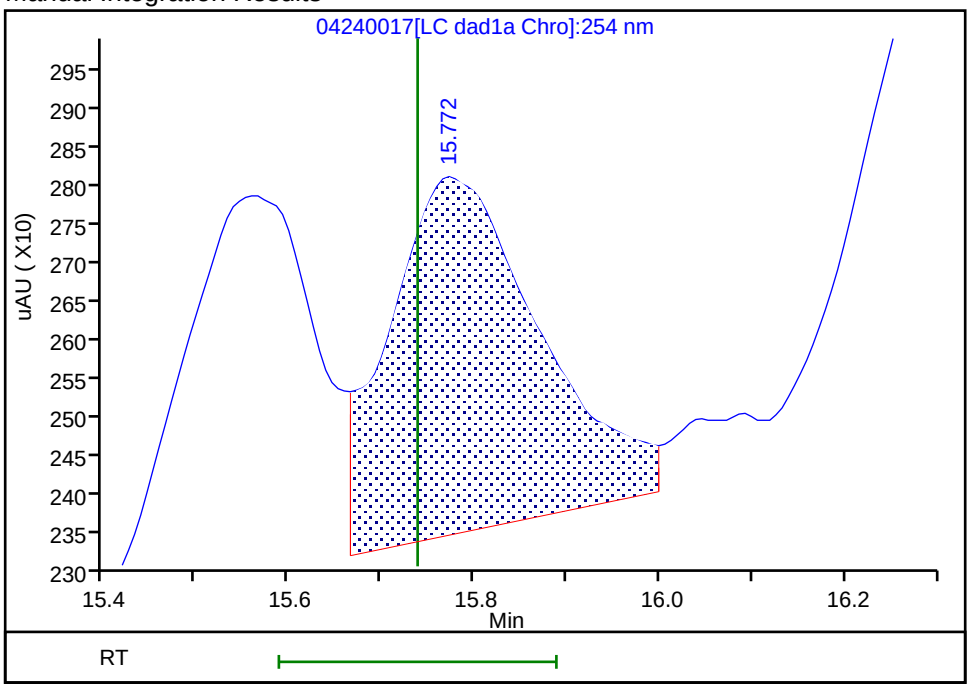
Processing Integration Results

RT: 15.77
Area: 7658
Amount: 0.027712
Amount Units: ug/ml



Manual Integration Results

RT: 15.77
Area: 5278
Amount: 0.020027
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:35:41 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

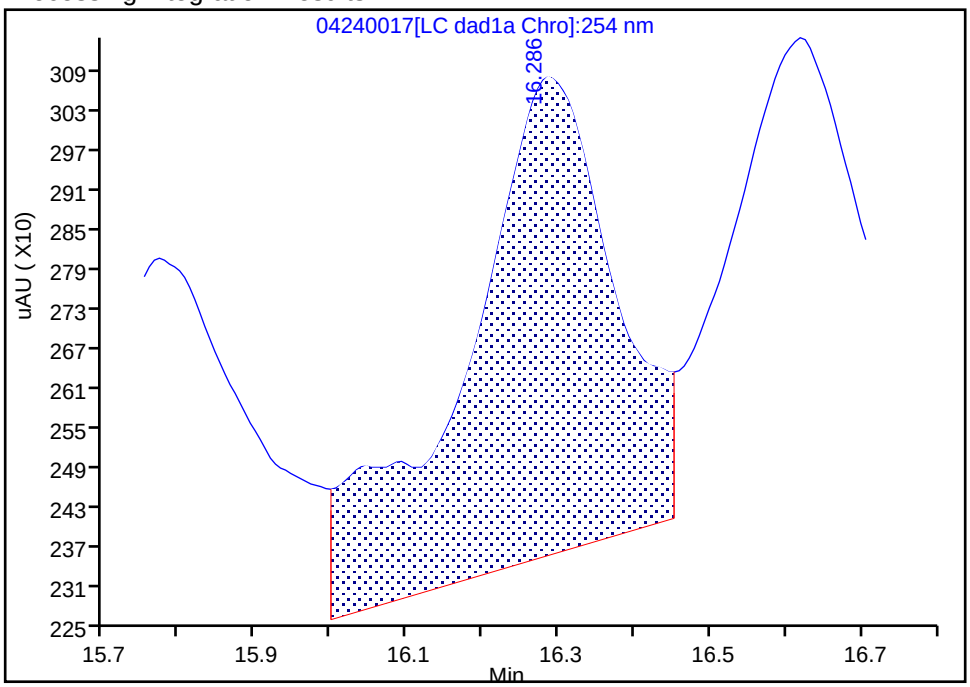
Data File:	\\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240017.d				
Injection Date:	25-Apr-2024 01:39:50	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 2				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

16 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

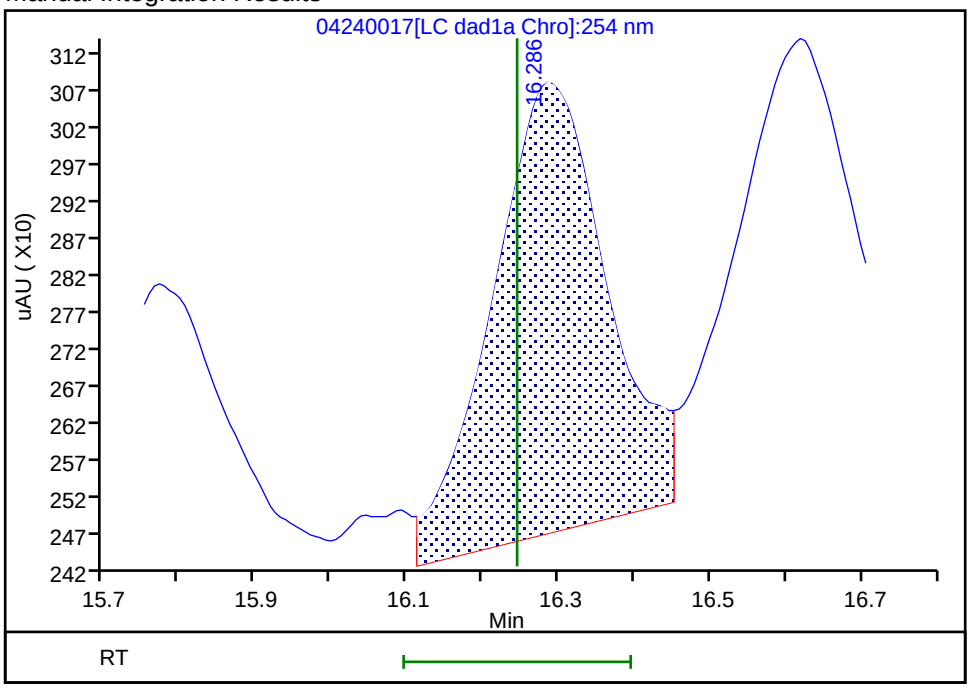
Processing Integration Results

RT: 16.29
Area: 10165
Amount: 0.027414
Amount Units: ug/ml



Manual Integration Results

RT: 16.29
Area: 6474
Amount: 0.021266
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:35:41 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

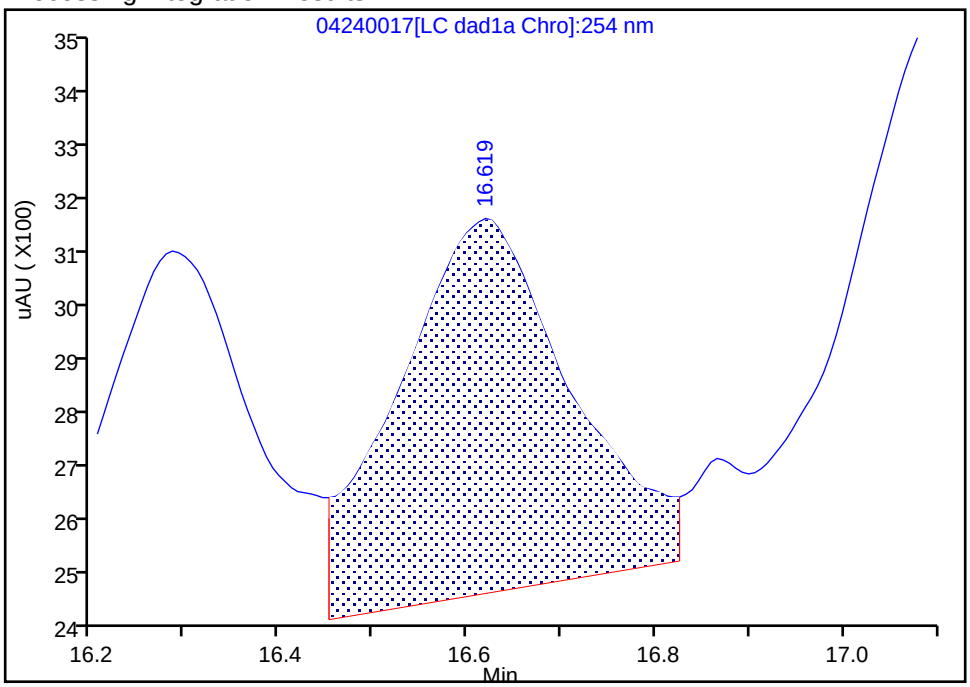
Data File:	\\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240017.d				
Injection Date:	25-Apr-2024 01:39:50	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 2				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

17 m-Nitrotoluene, CAS: 99-08-1

Signal: 1

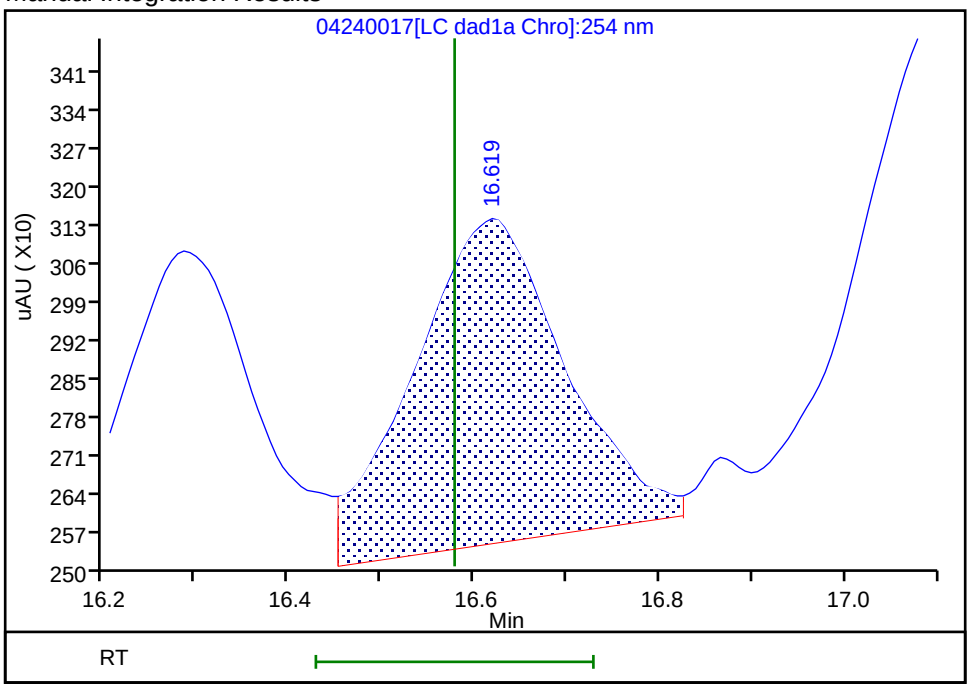
Processing Integration Results

RT: 16.62
Area: 8679
Amount: 0.023268
Amount Units: ug/ml



Manual Integration Results

RT: 16.62
Area: 6685
Amount: 0.020741
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:35:41 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

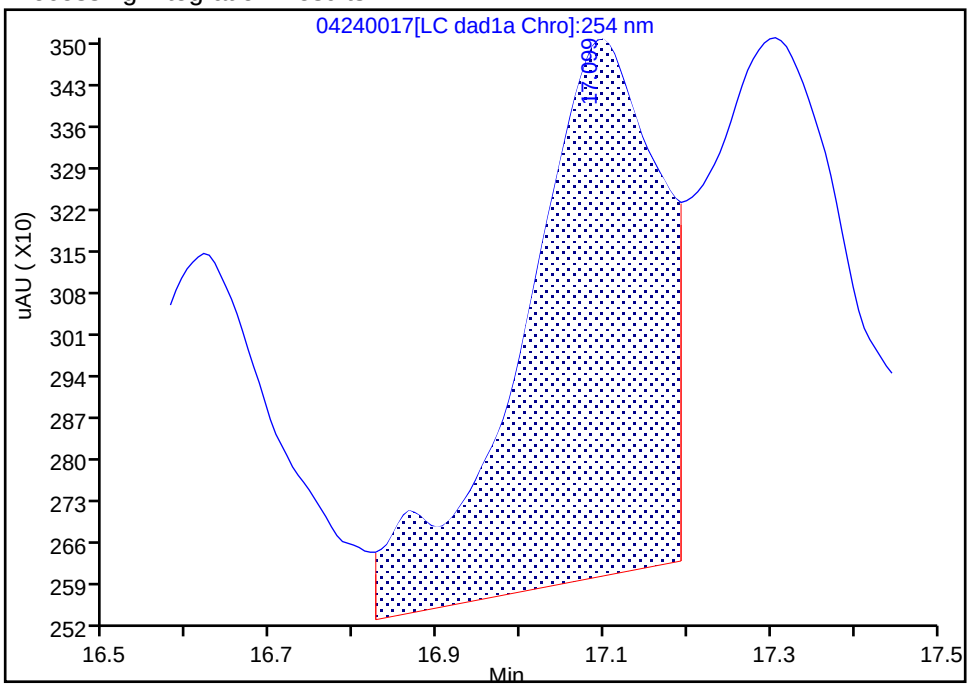
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Injection Date: 25-Apr-2024 01:39:50 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC INT 2
Client ID:
Operator ID: JZ/JG ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

18 2-Amino-4,6-dinitrotoluene, CAS: 35572-78-2

Signal: 1

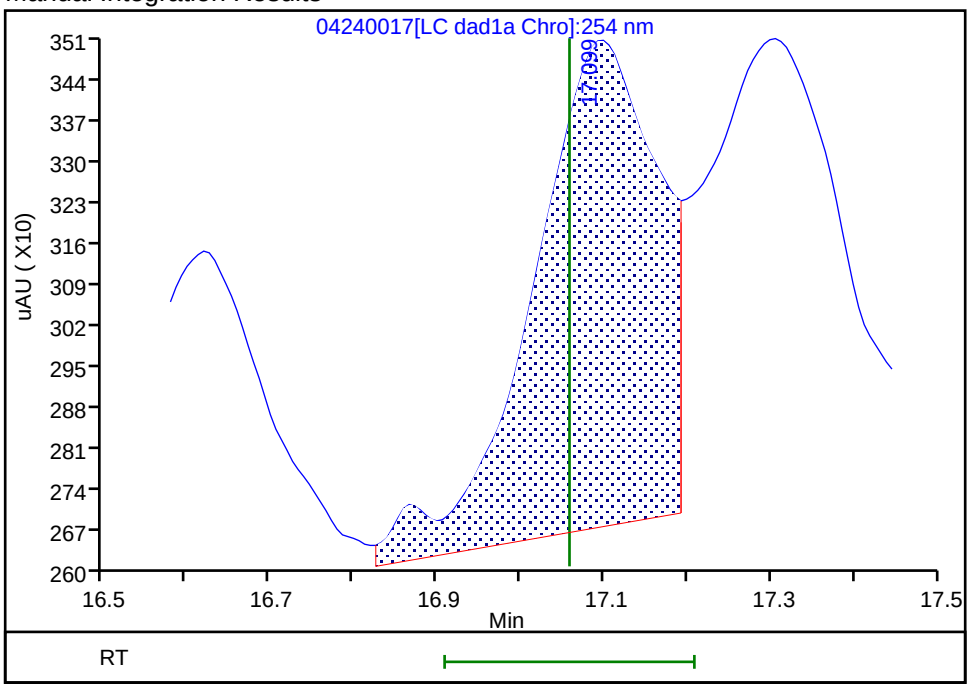
Processing Integration Results

RT: 17.10
Area: 10405
Amount: 0.019938
Amount Units: ug/ml



Manual Integration Results

RT: 17.10
Area: 8733
Amount: 0.021533
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:35:41 -06:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

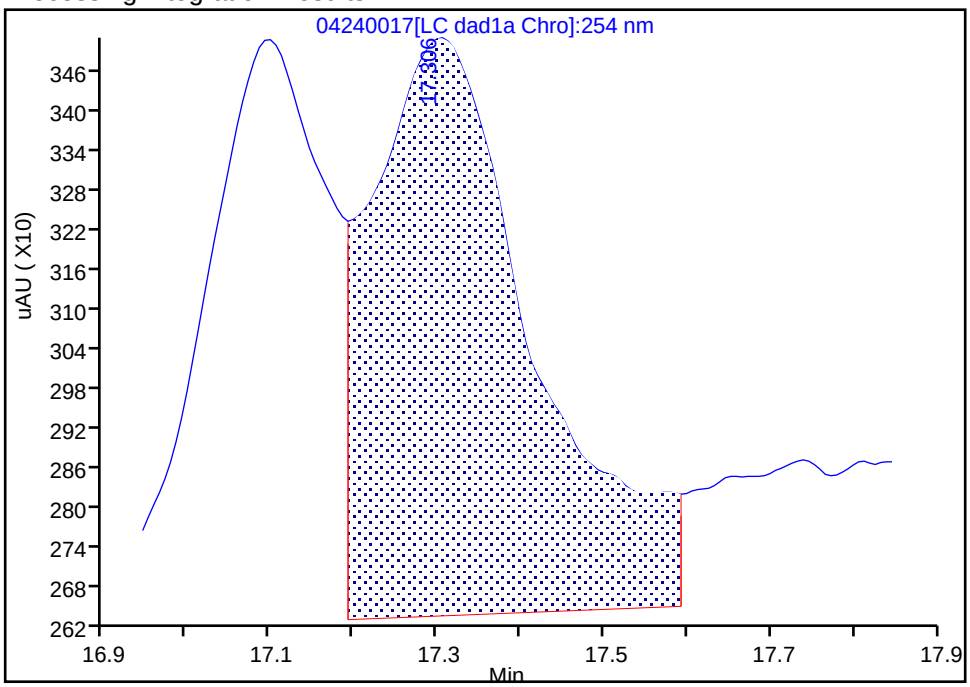
Data File: \\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240017.d
Injection Date: 25-Apr-2024 01:39:50 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC INT 2
Client ID:
Operator ID: JZ/JG ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

19 1,3,5-Trinitrobenzene, CAS: 99-35-4

Signal: 1

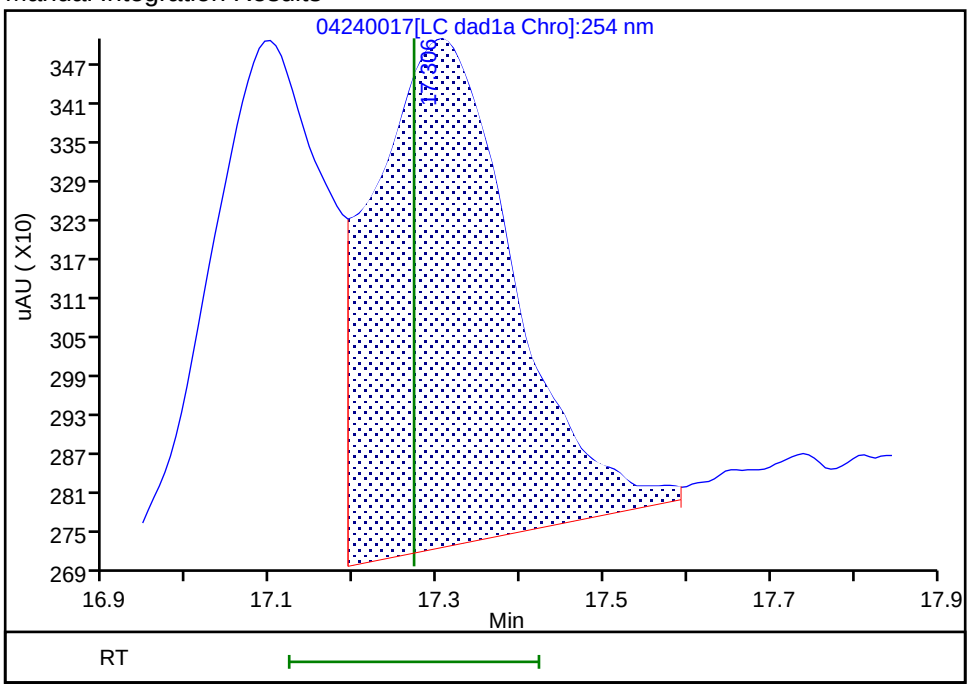
Processing Integration Results

RT: 17.31
Area: 11807
Amount: 0.023018
Amount Units: ug/ml



Manual Integration Results

RT: 17.31
Area: 9167
Amount: 0.021648
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:35:41 -06:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

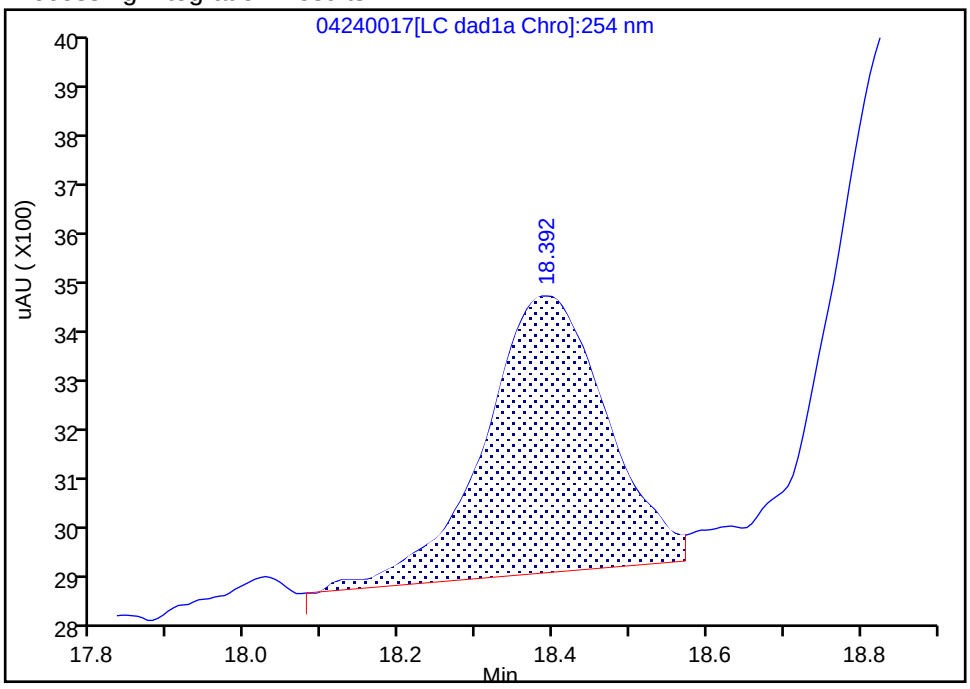
Data File:	\\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240017.d				
Injection Date:	25-Apr-2024 01:39:50	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 2				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

20 2,6-Dinitrotoluene, CAS: 606-20-2

Signal: 1

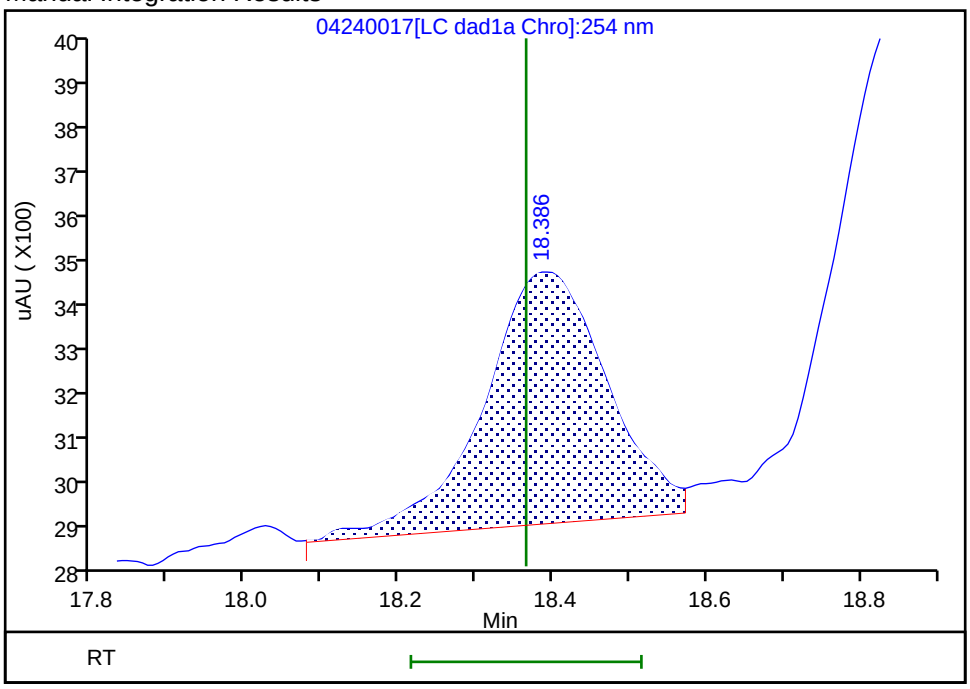
Processing Integration Results

RT: 18.39
Area: 5995
Amount: 0.016870
Amount Units: ug/ml



Manual Integration Results

RT: 18.39
Area: 6113
Amount: 0.021992
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:26:34 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

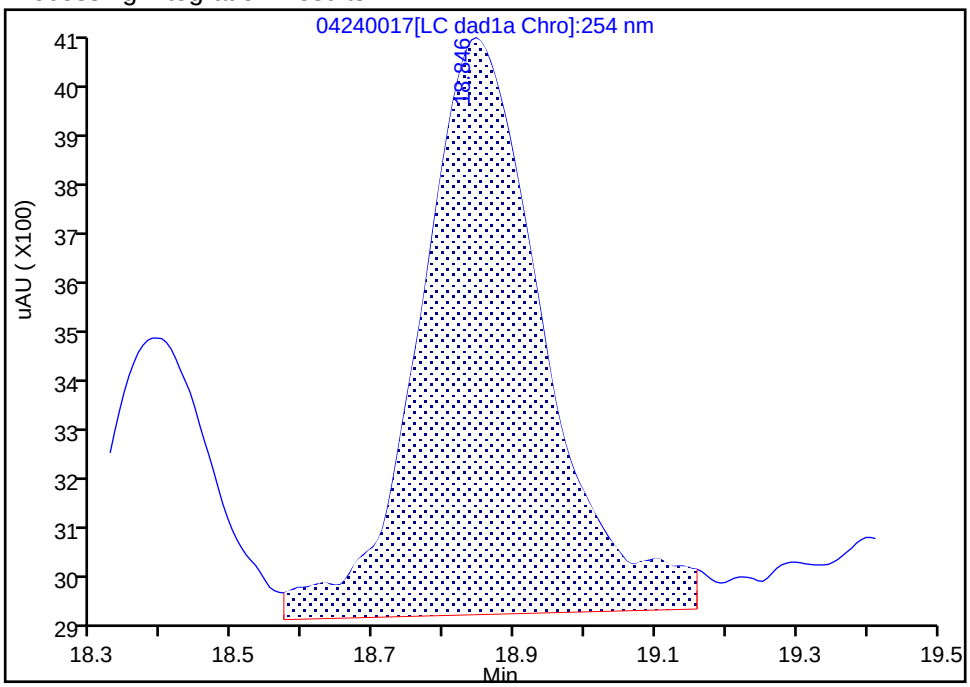
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Injection Date:	25-Apr-2024 01:39:50	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 2				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

21 2,4-Dinitrotoluene, CAS: 121-14-2

Signal: 1

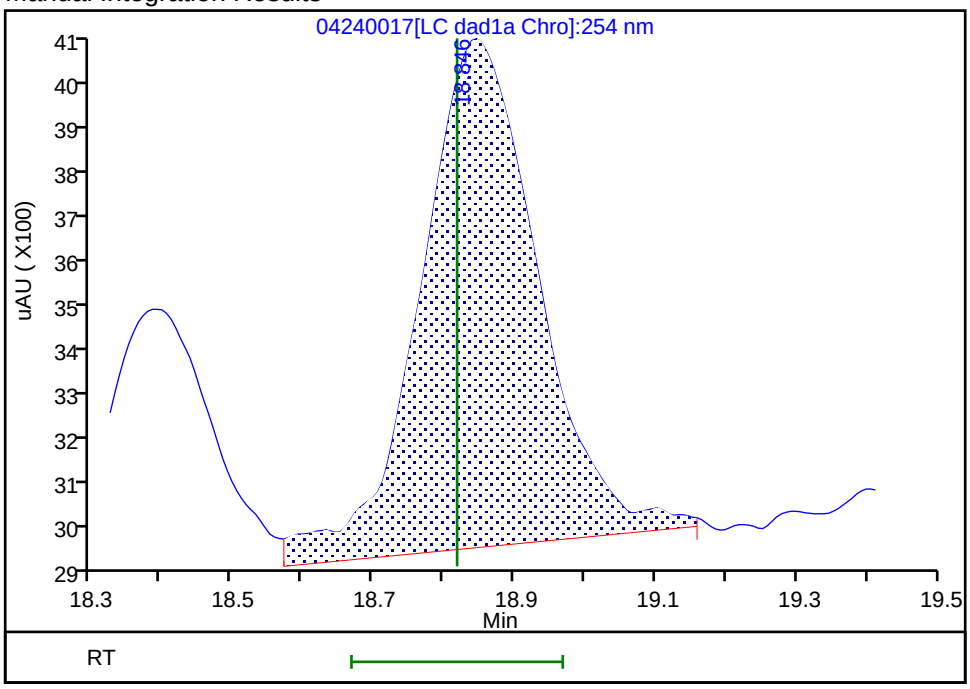
Processing Integration Results

RT: 18.85
Area: 12885
Amount: 0.021829
Amount Units: ug/ml



Manual Integration Results

RT: 18.85
Area: 12005
Amount: 0.021648
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:26:34 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

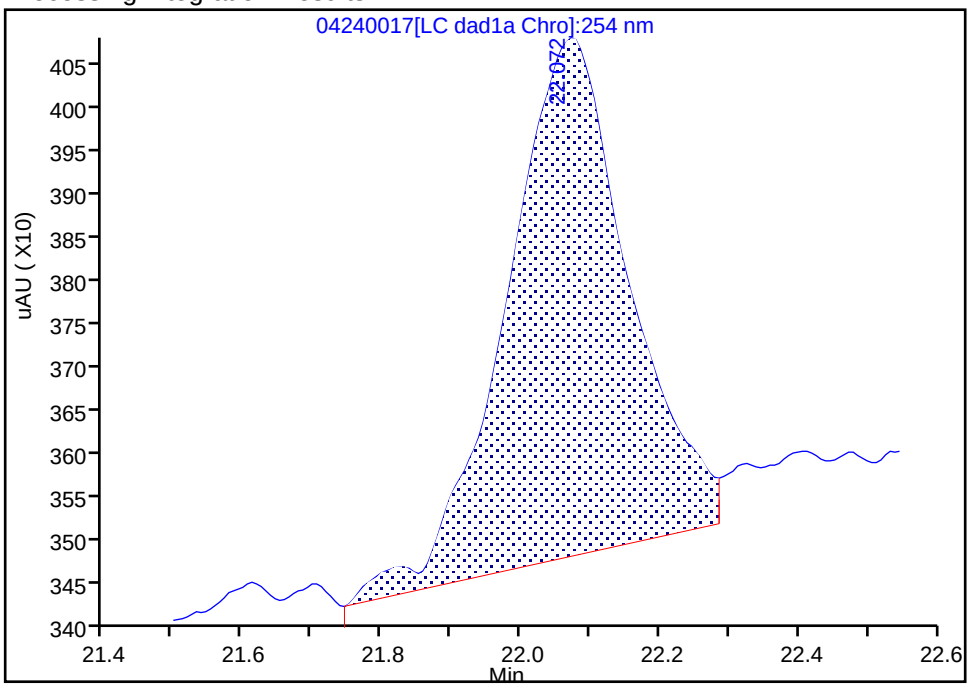
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Injection Date:	25-Apr-2024 01:39:50	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 2				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

22 Tetryl, CAS: 479-45-8

Signal: 1

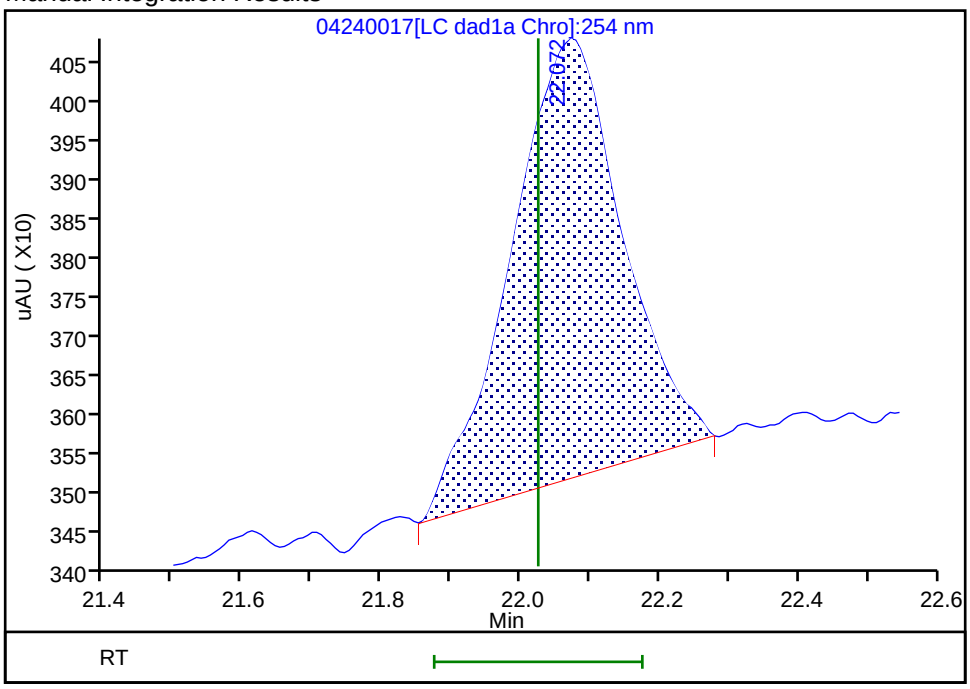
Processing Integration Results

RT: 22.07
Area: 7352
Amount: 0.022454
Amount Units: ug/ml



Manual Integration Results

RT: 22.07
Area: 6268
Amount: 0.018655
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:26:47 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

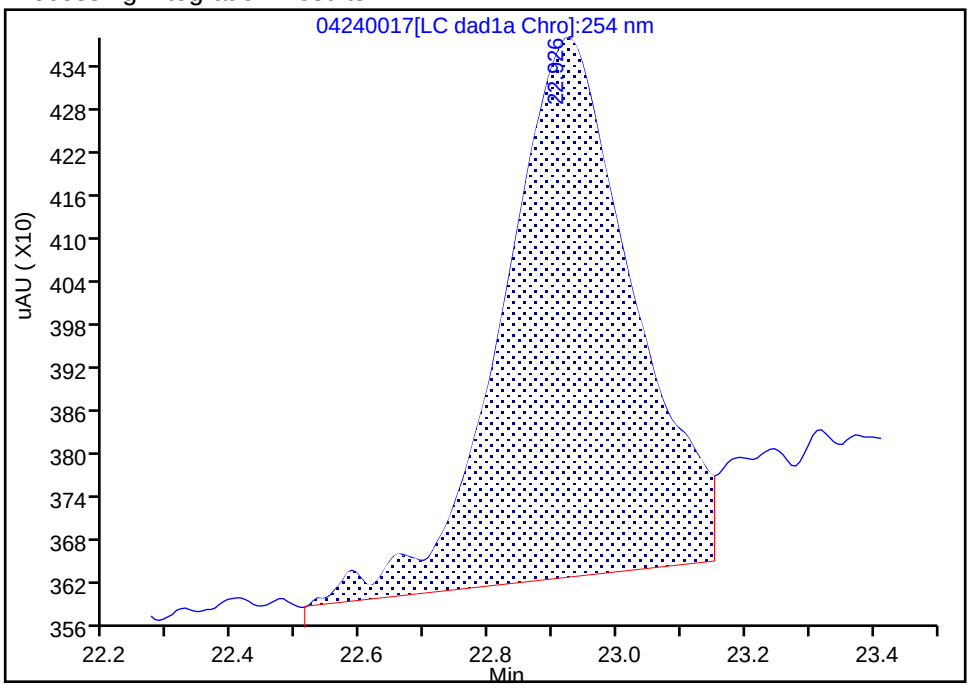
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Injection Date:	25-Apr-2024 01:39:50	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 2				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

23 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

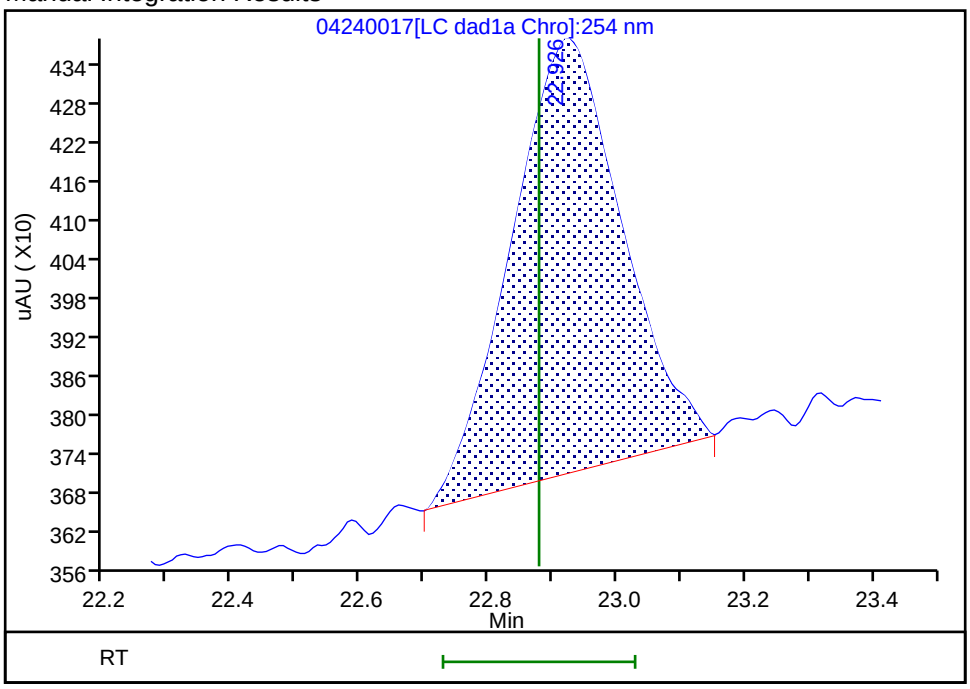
Processing Integration Results

RT: 22.93
Area: 10572
Amount: 0.023639
Amount Units: ug/ml



Manual Integration Results

RT: 22.93
Area: 7969
Amount: 0.019934
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:27:02 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\G2_LUNA\20240424-132624.b\04240018.D
Lims ID: IC INT 1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 25-Apr-2024 02:15:46 ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC INT 1
Operator ID: JZ/JG Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub16

Method: \\chromfs\Denver\ChromData\G2_LUNA\20240424-132624.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 25-Apr-2024 14:30:19 Calib Date: 25-Apr-2024 07:39:21
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\G2_LUNA\20240424-132624.b\04240027.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX1684

First Level Reviewer: LV5D Date: 25-Apr-2024 13:20:39

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
6 HMX	1	6.713	6.705	0.008	1677	0.0100	0.009634	M
5 2,4,6-Trinitrophenol	1	8.700	8.612	0.088	1549	0.0100	0.0102	
8 RDX	1	8.953	8.938	0.015	2562	0.0100	0.009837	
9 Nitrobenzene	1	11.426	11.425	0.001	3818	0.0100	0.0100	M
$ 10 1,2-Dinitrobenzene	1	12.360	12.345	0.015	2237	0.0100	0.008647	M
11 3,5-Dinitroaniline	1	14.200	14.185	0.015	5245	0.0100	0.0100	M
12 1,3-Dinitrobenzene	1	14.493	14.478	0.015	6332	0.0100	0.0107	M
13 Nitroglycerin	2	14.940	14.918	0.022	10431	0.1000	0.0873	M
14 o-Nitrotoluene	1	15.533	15.505	0.028	3289	0.0100	0.0134	M
15 p-Nitrotoluene	1	15.746	15.738	0.008	2223	0.0100	0.005995	M
16 4-Amino-2,6-dinitrotoluene	1	16.260	16.245	0.015	3366	0.0100	0.009734	M
17 m-Nitrotoluene	1	16.586	16.578	0.008	3672	0.0100	0.009808	M
18 2-Amino-4,6-dinitrotoluene	1	17.086	17.058	0.028	5022	0.0100	0.0124	M
19 1,3,5-Trinitrobenzene	1	17.286	17.272	0.014	5210	0.0100	0.0123	M
20 2,6-Dinitrotoluene	1	18.380	18.365	0.015	3016	0.0100	0.0109	M
21 2,4-Dinitrotoluene	1	18.833	18.818	0.015	5764	0.0100	0.0104	M
22 Tetryl	1	22.027	22.025	0.002	3675	0.0100	0.0103	
23 2,4,6-Trinitrotoluene	1	22.900	22.878	0.022	3703	0.0100	0.009263	M
24 PETN	2	24.033	24.032	0.001	10531	0.1000	0.1003	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00080 Amount Added: 1.00 Units: uL

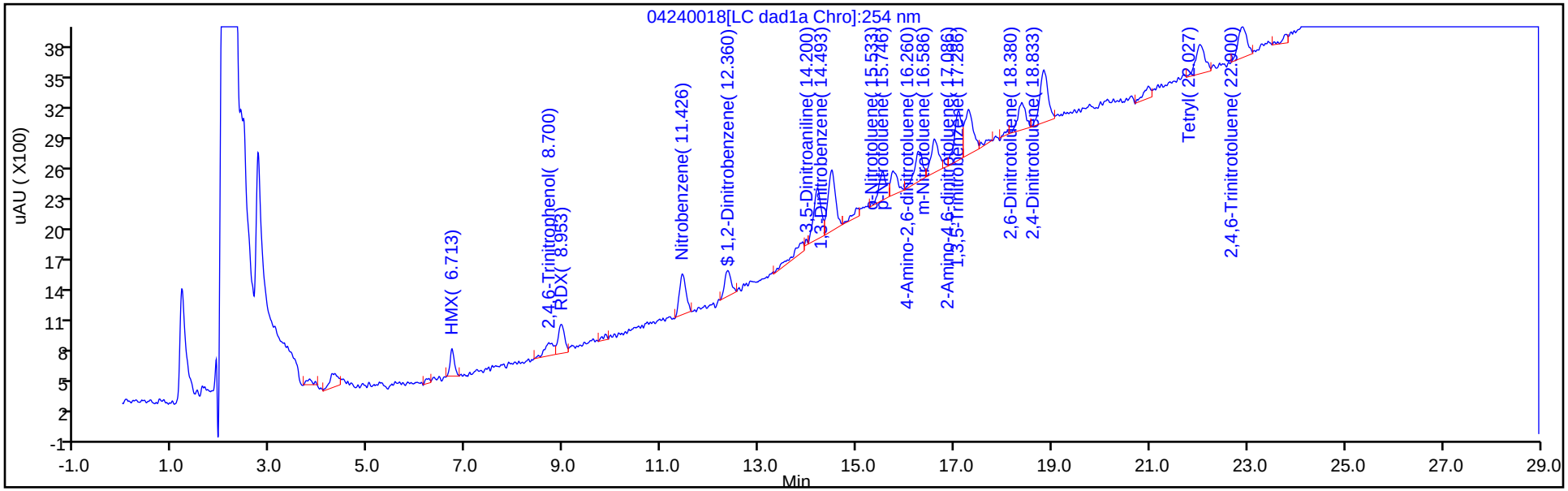
Report Date: 25-Apr-2024 14:30:19 Chrom Revision: 2.3 09-Apr-2024 17:43:44

Eurofins Denver

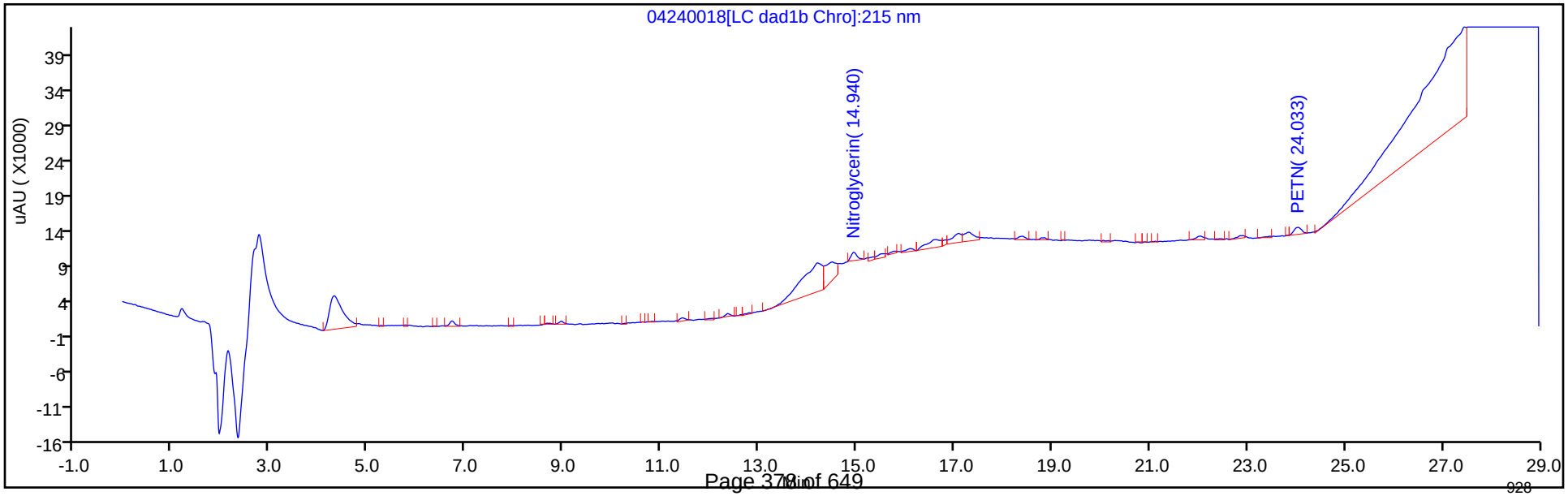
Data File: \\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240018.d

Injection Date:	25-Apr-2024 02:15:46	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	JZ/JG
Lims ID:	IC INT 1			Worklist Smp#:	18
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

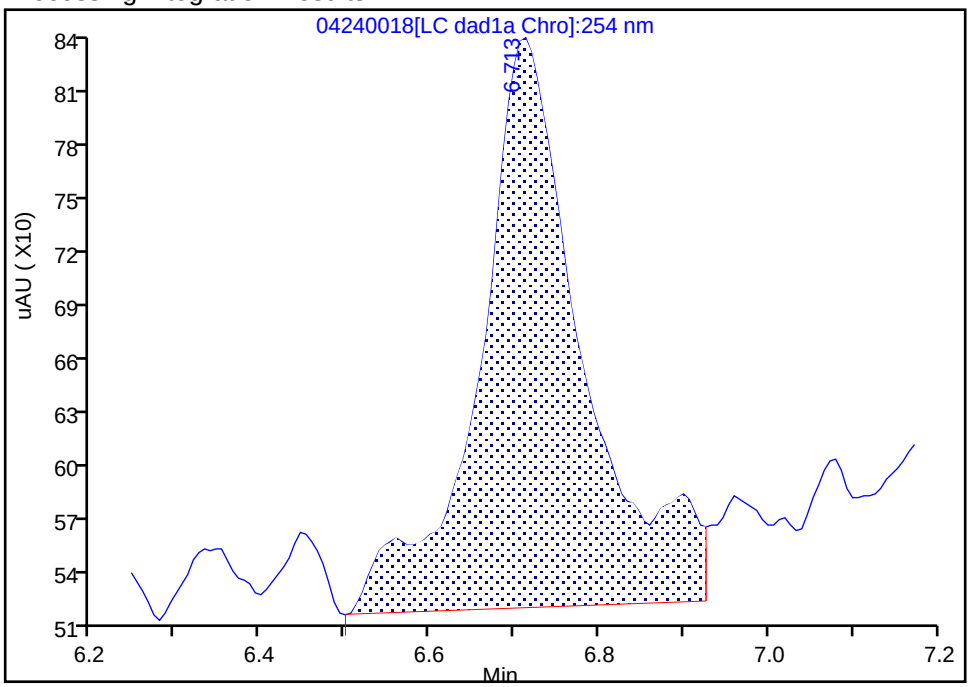
Data File:	\\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240018.d				
Injection Date:	25-Apr-2024 02:15:46	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 1				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

6 HMX, CAS: 2691-41-0

Signal: 1

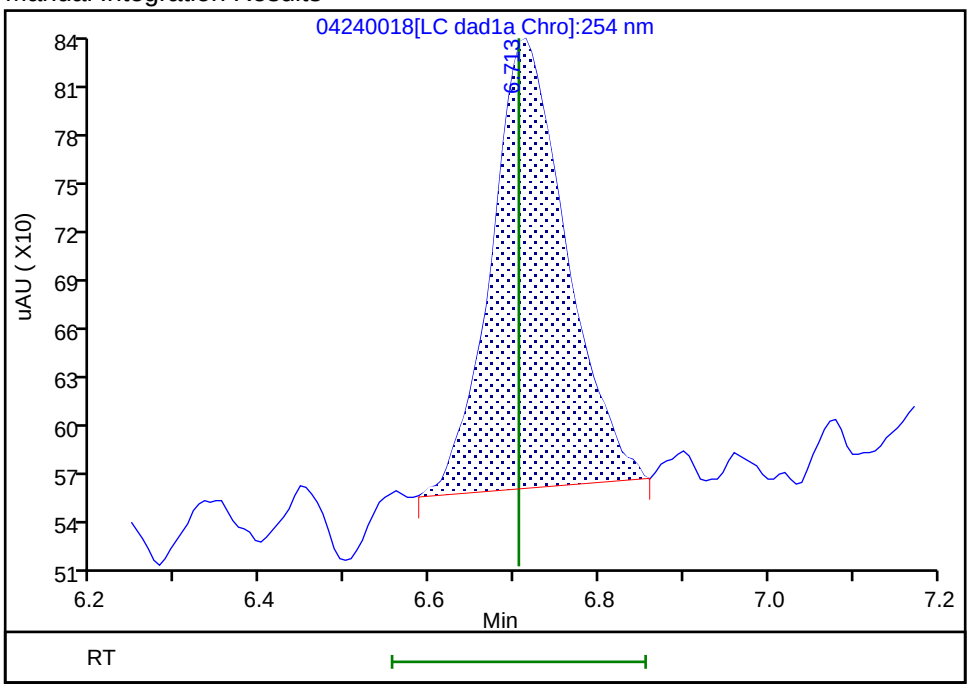
Processing Integration Results

RT: 6.71
Area: 2684
Amount: 0.010199
Amount Units: ug/ml



Manual Integration Results

RT: 6.71
Area: 1677
Amount: 0.009634
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:31:03 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

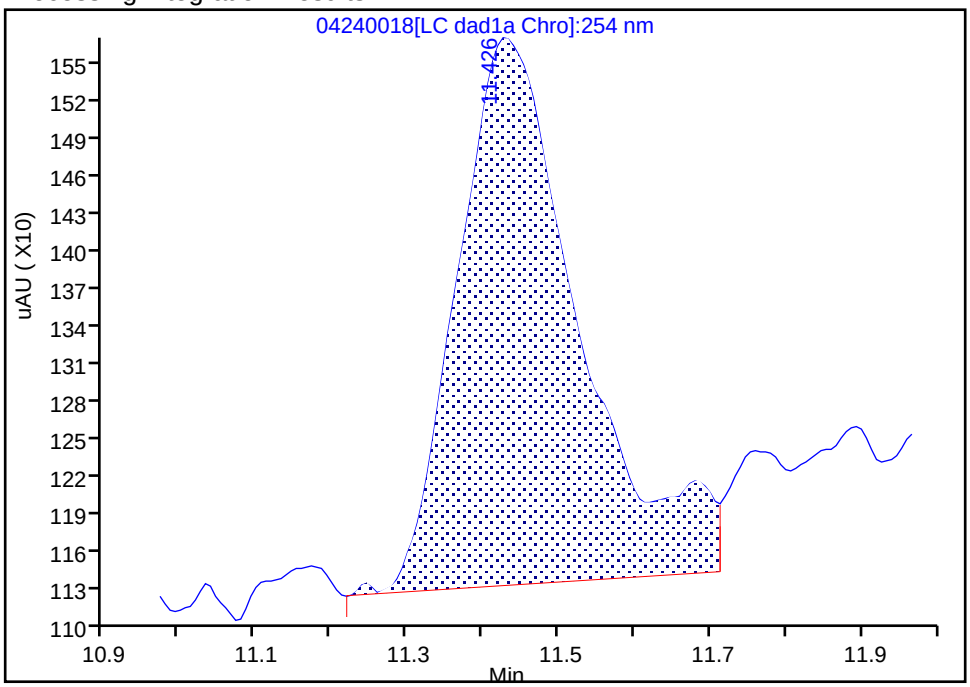
Data File:	\\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240018.d				
Injection Date:	25-Apr-2024 02:15:46	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 1				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

9 Nitrobenzene, CAS: 98-95-3

Signal: 1

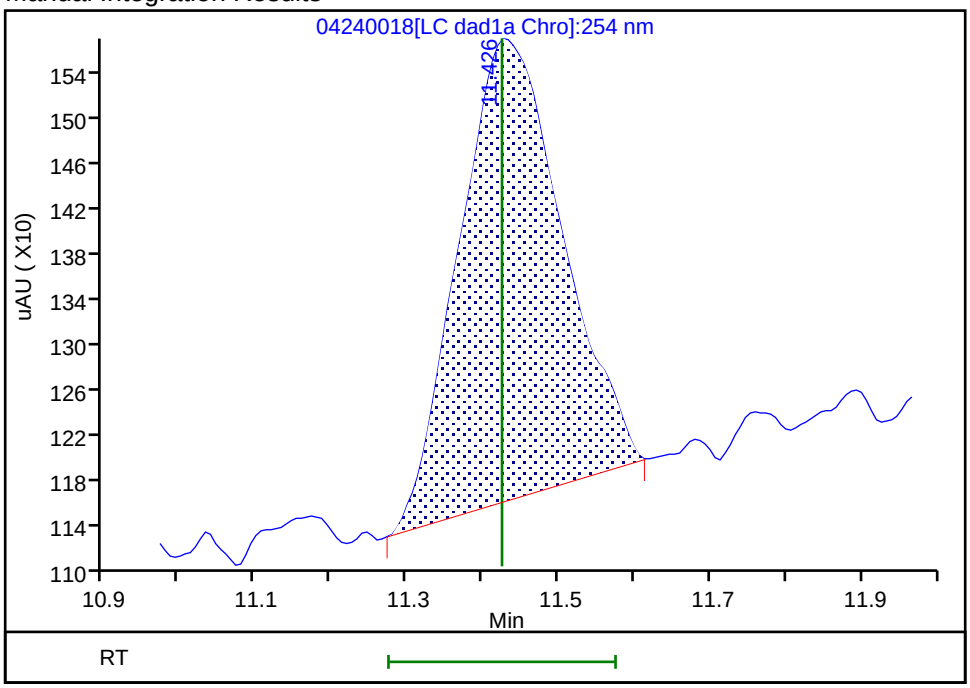
Processing Integration Results

RT: 11.43
Area: 4838
Amount: 0.012296
Amount Units: ug/ml



Manual Integration Results

RT: 11.43
Area: 3818
Amount: 0.009992
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:27:50 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

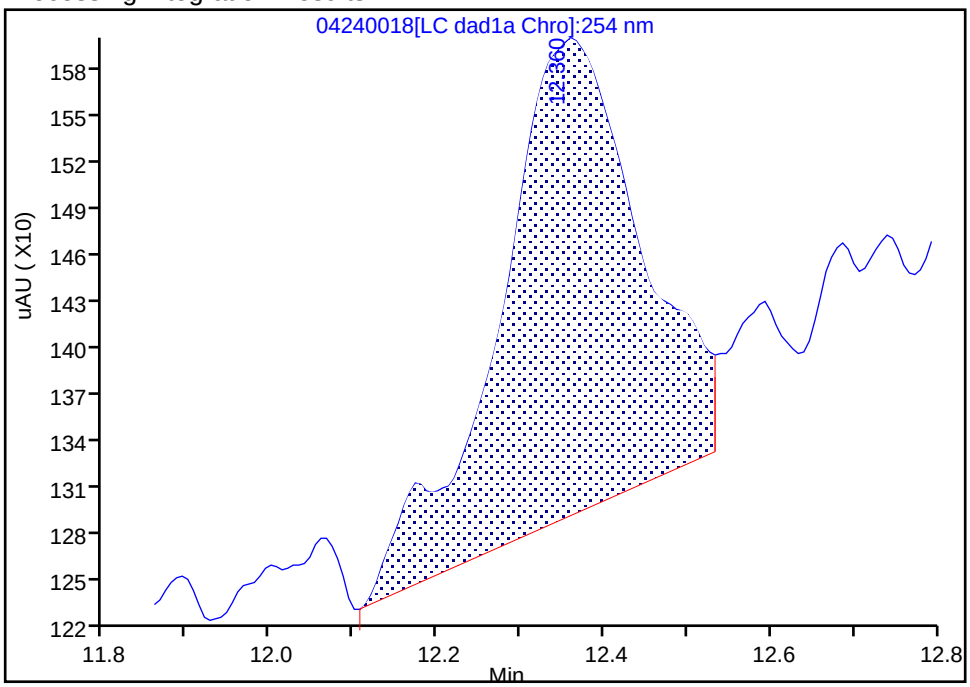
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Injection Date:	25-Apr-2024 02:15:46	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 1				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

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

Signal: 1

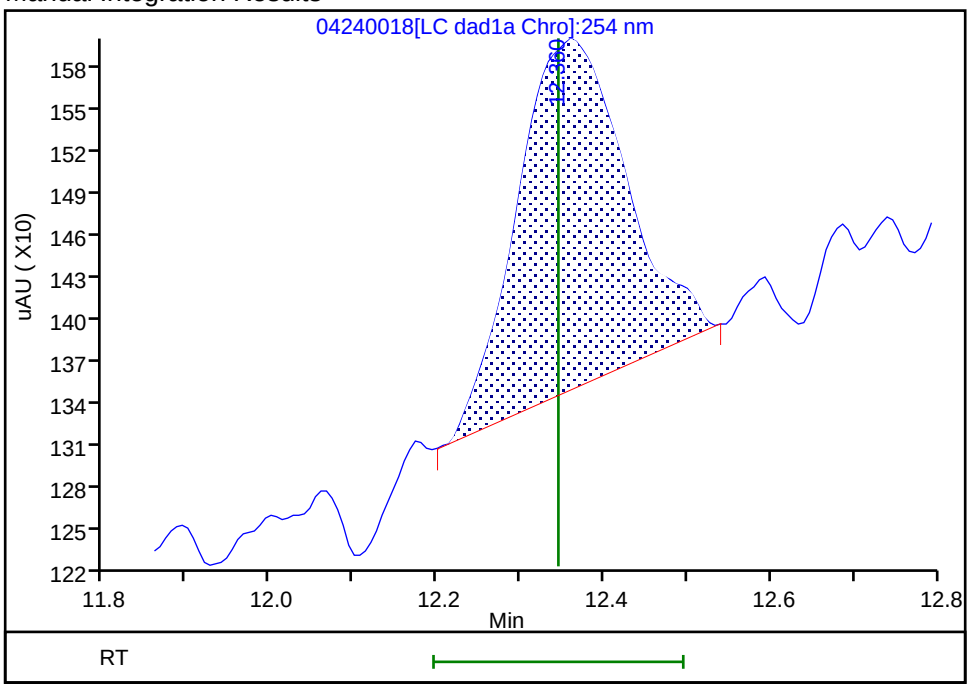
Processing Integration Results

RT: 12.36
Area: 3595
Amount: 0.013131
Amount Units: ug/ml



Manual Integration Results

RT: 12.36
Area: 2237
Amount: 0.008647
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:28:45 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

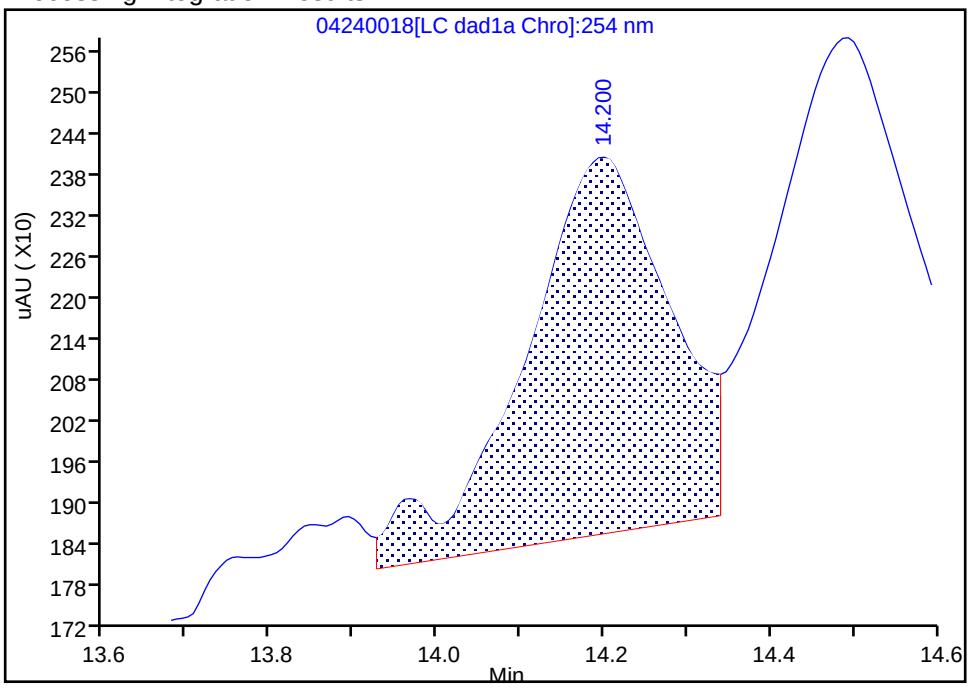
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Injection Date:	25-Apr-2024 02:15:46	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 1				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

11 3,5-Dinitroaniline, CAS: 618-87-1

Signal: 1

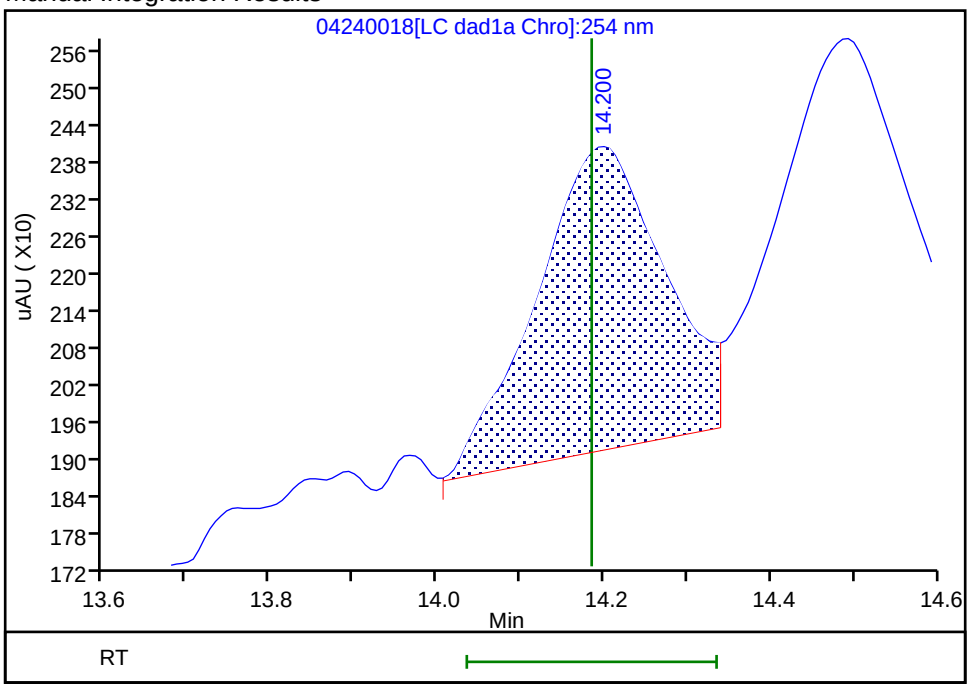
Processing Integration Results

RT: 14.20
Area: 6757
Amount: 0.010763
Amount Units: ug/ml



Manual Integration Results

RT: 14.20
Area: 5245
Amount: 0.010044
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:29:01 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

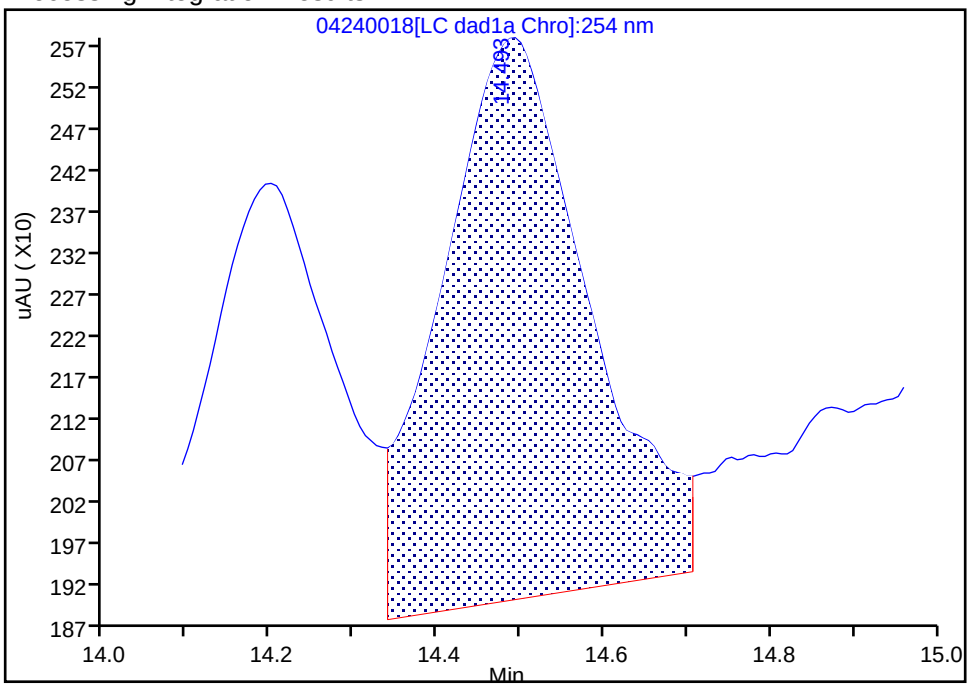
Data File:	\\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240018.d				
Injection Date:	25-Apr-2024 02:15:46	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 1				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

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

Signal: 1

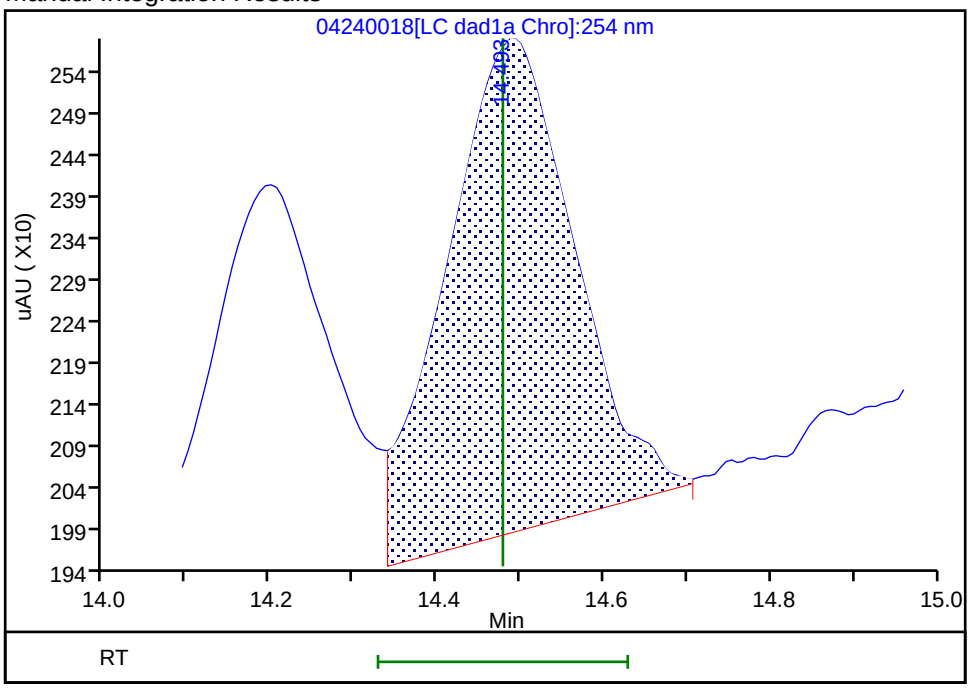
Processing Integration Results

RT: 14.49
Area: 8301
Amount: 0.013579
Amount Units: ug/ml



Manual Integration Results

RT: 14.49
Area: 6332
Amount: 0.010743
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:28:58 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

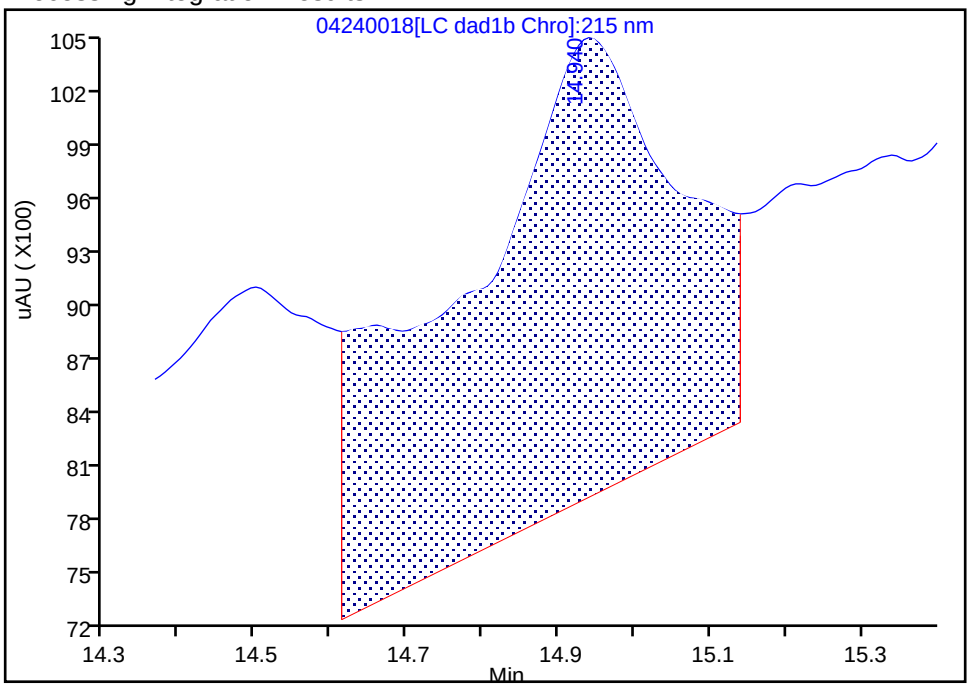
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Injection Date:	25-Apr-2024 02:15:46	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 1				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1B, 215 nm		

13 Nitroglycerin, CAS: 55-63-0

Signal: 1

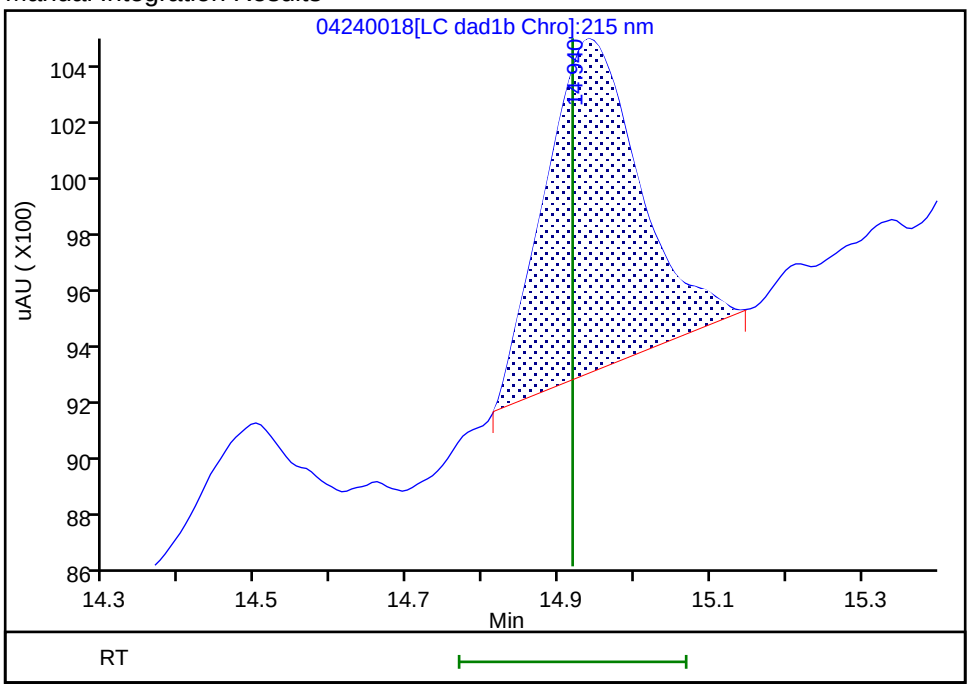
Processing Integration Results

RT: 14.94
Area: 53313
Amount: 0.315461
Amount Units: ug/ml



Manual Integration Results

RT: 14.94
Area: 10431
Amount: 0.087285
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:20:31 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

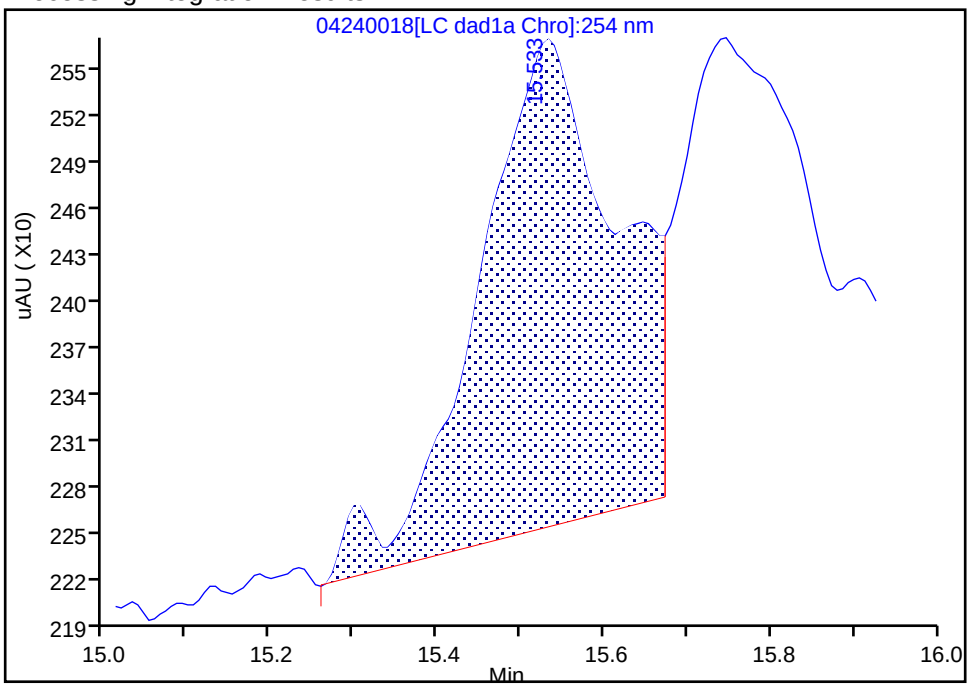
Data File:	\\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240018.d				
Injection Date:	25-Apr-2024 02:15:46	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 1				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

14 o-Nitrotoluene, CAS: 88-72-2

Signal: 1

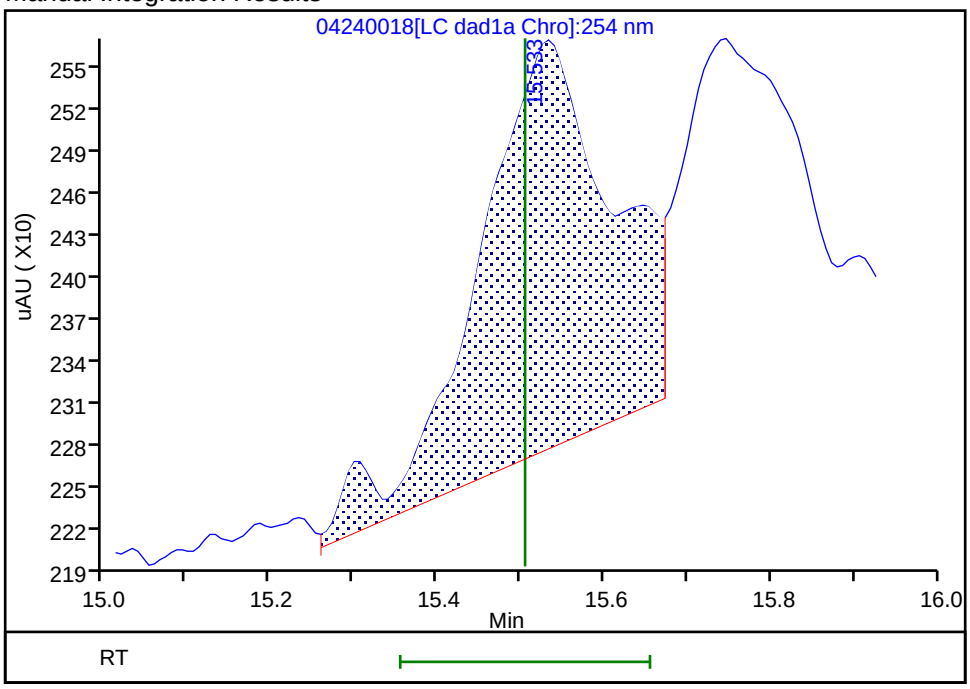
Processing Integration Results

RT: 15.53
Area: 3673
Amount: 0.013997
Amount Units: ug/ml



Manual Integration Results

RT: 15.53
Area: 3289
Amount: 0.013447
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:29:10 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

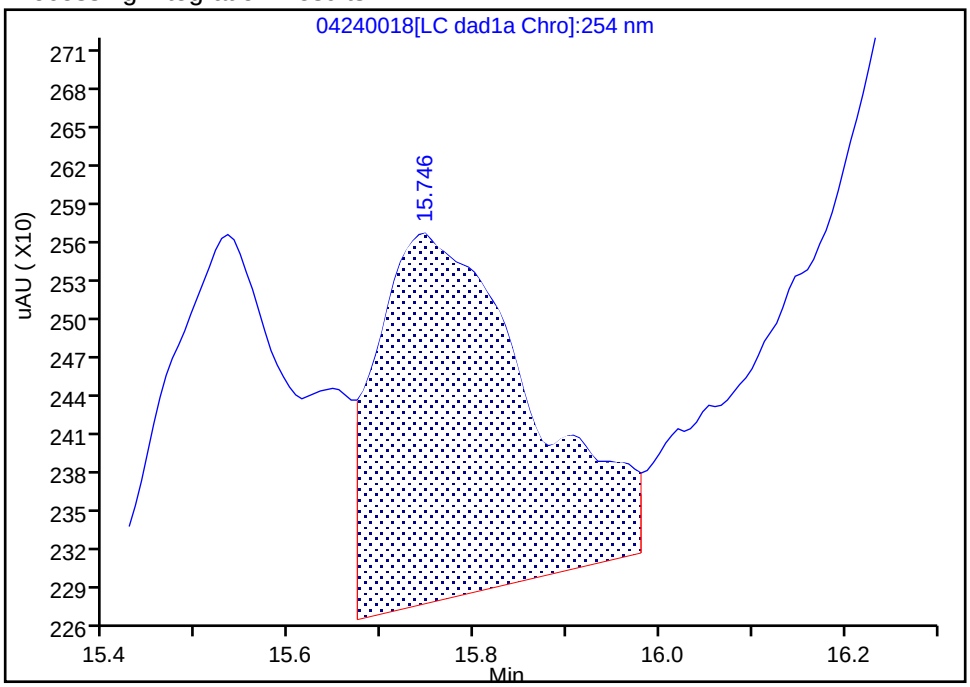
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Injection Date:	25-Apr-2024 02:15:46	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 1				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

15 p-Nitrotoluene, CAS: 99-99-0

Signal: 1

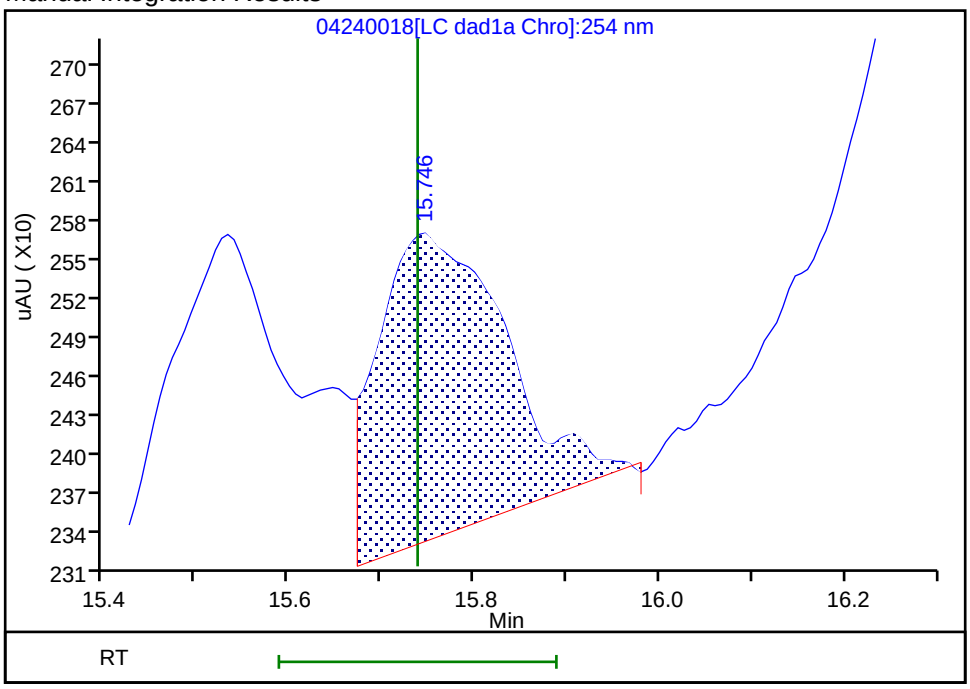
Processing Integration Results

RT: 15.75
Area: 3244
Amount: 0.013429
Amount Units: ug/ml



Manual Integration Results

RT: 15.75
Area: 2223
Amount: 0.005995
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:29:10 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

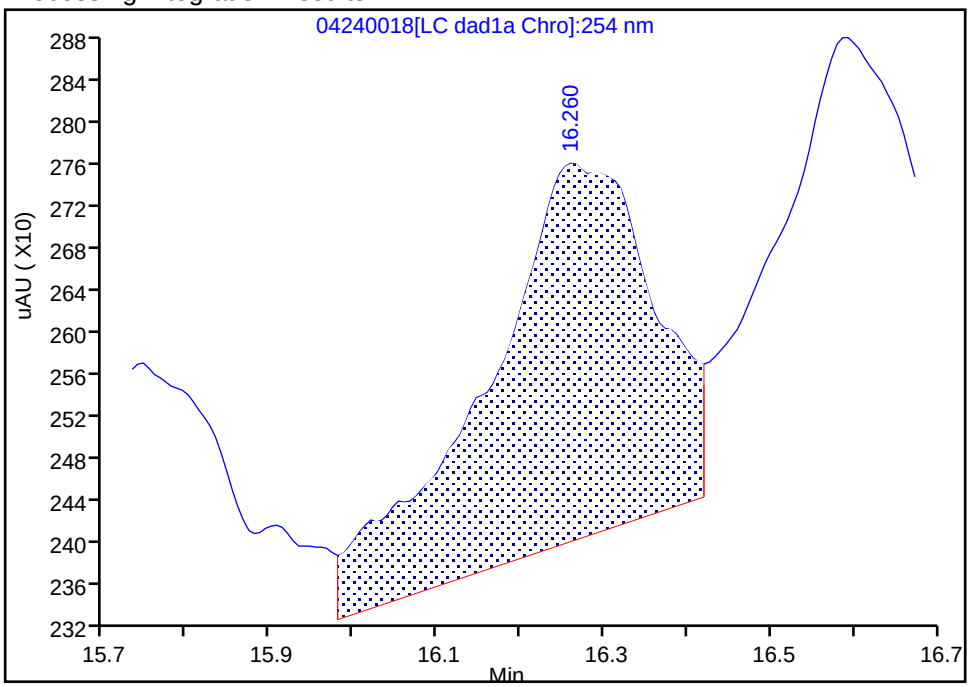
Data File:	\\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240018.d				
Injection Date:	25-Apr-2024 02:15:46	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 1				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

16 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

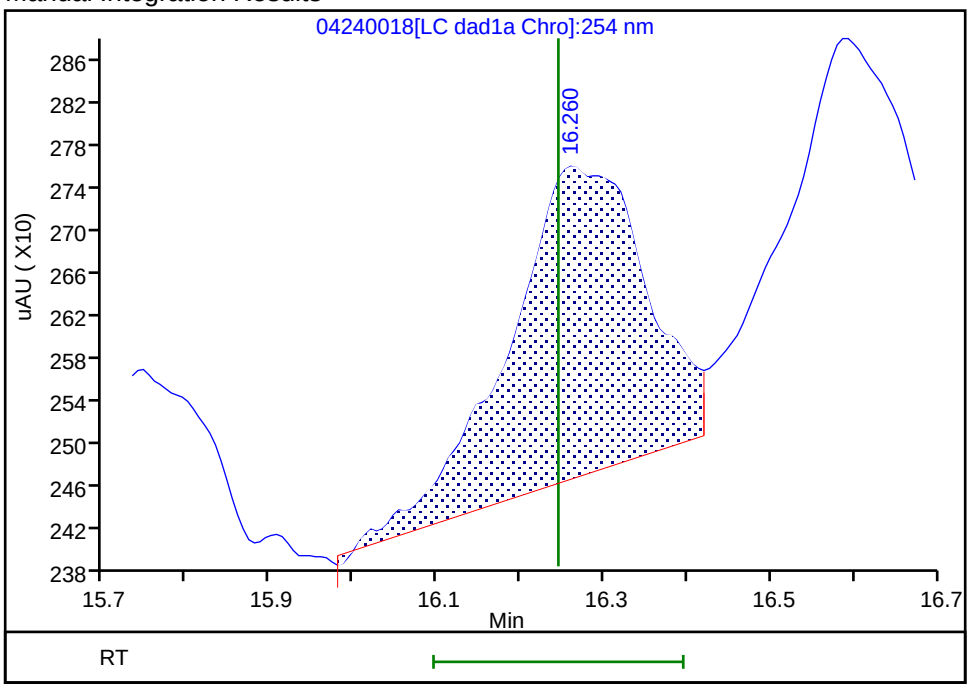
Processing Integration Results

RT: 16.26
Area: 5148
Amount: 0.010335
Amount Units: ug/ml



Manual Integration Results

RT: 16.26
Area: 3366
Amount: 0.009734
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:29:10 -06:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

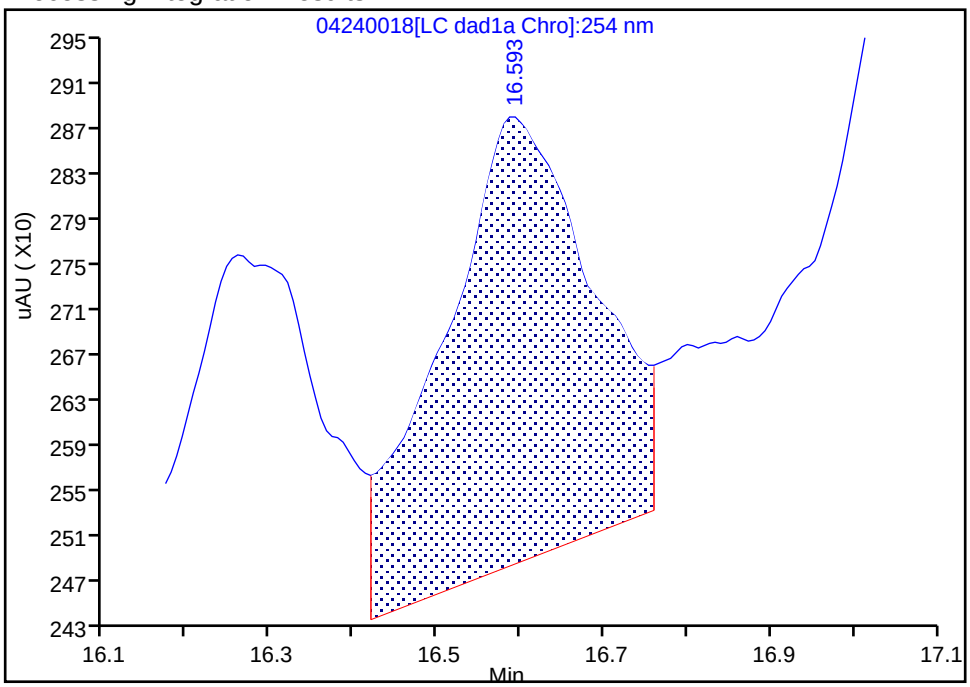
Data File: \\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240018.d
Injection Date: 25-Apr-2024 02:15:46 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC INT 1
Client ID:
Operator ID: JZ/JG ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

17 m-Nitrotoluene, CAS: 99-08-1

Signal: 1

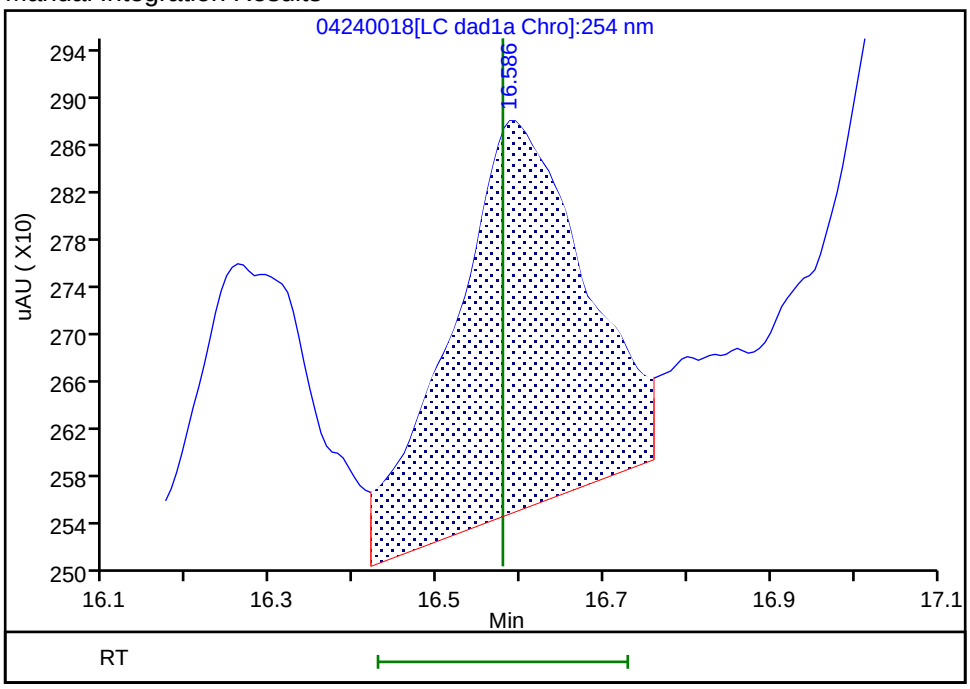
Processing Integration Results

RT: 16.59
Area: 4917
Amount: 0.010564
Amount Units: ug/ml



Manual Integration Results

RT: 16.59
Area: 3672
Amount: 0.009808
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:29:10 -06:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

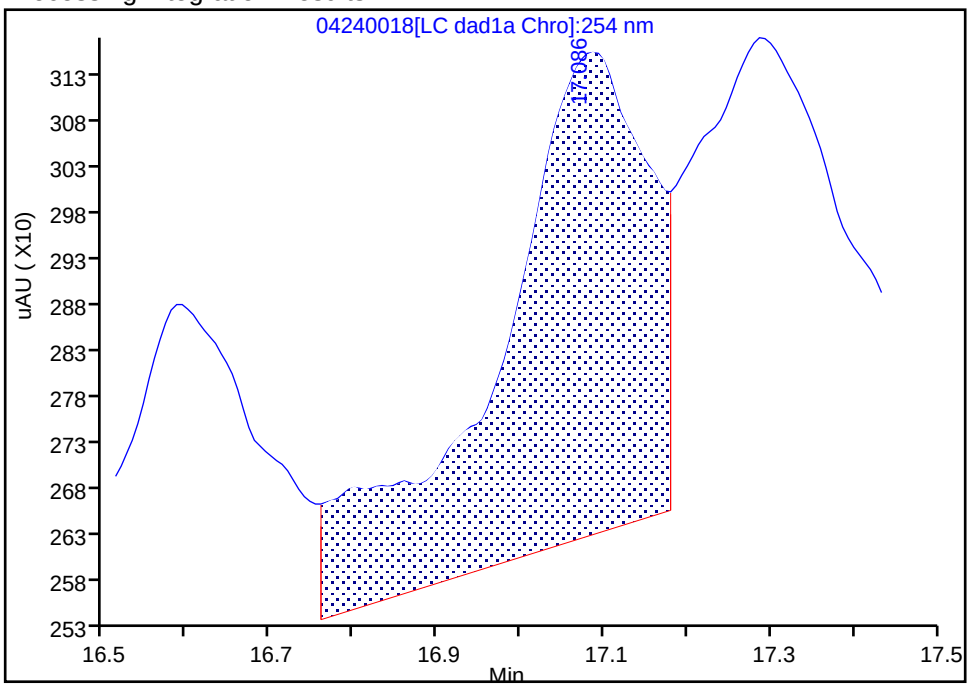
Data File:	\\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240018.d				
Injection Date:	25-Apr-2024 02:15:46	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 1				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

18 2-Amino-4,6-dinitrotoluene, CAS: 35572-78-2

Signal: 1

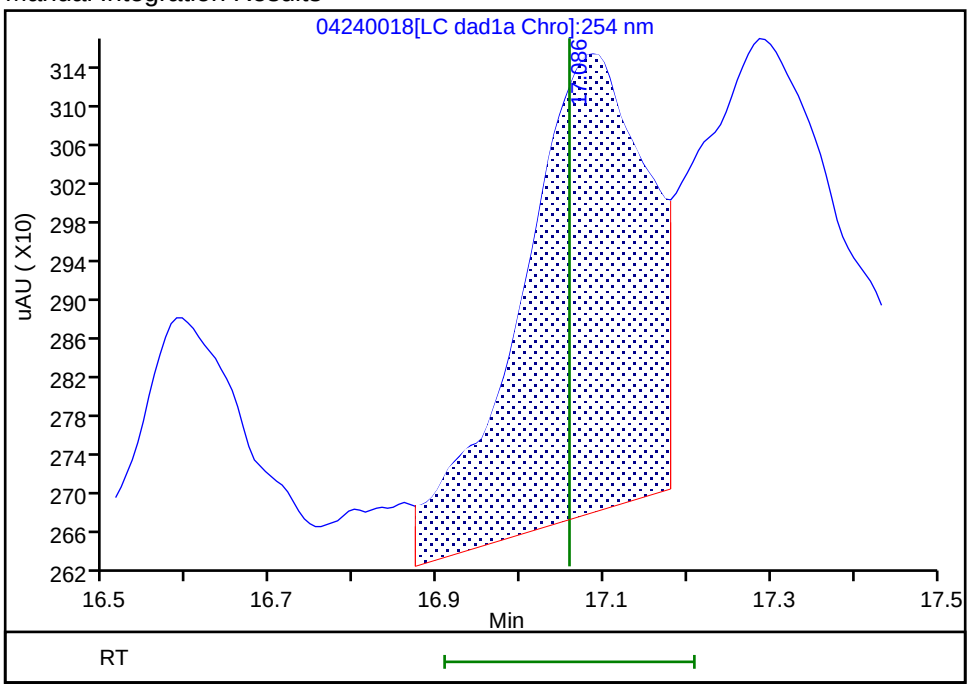
Processing Integration Results

RT: 17.09
Area: 6792
Amount: 0.011001
Amount Units: ug/ml



Manual Integration Results

RT: 17.09
Area: 5022
Amount: 0.012383
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:29:26 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

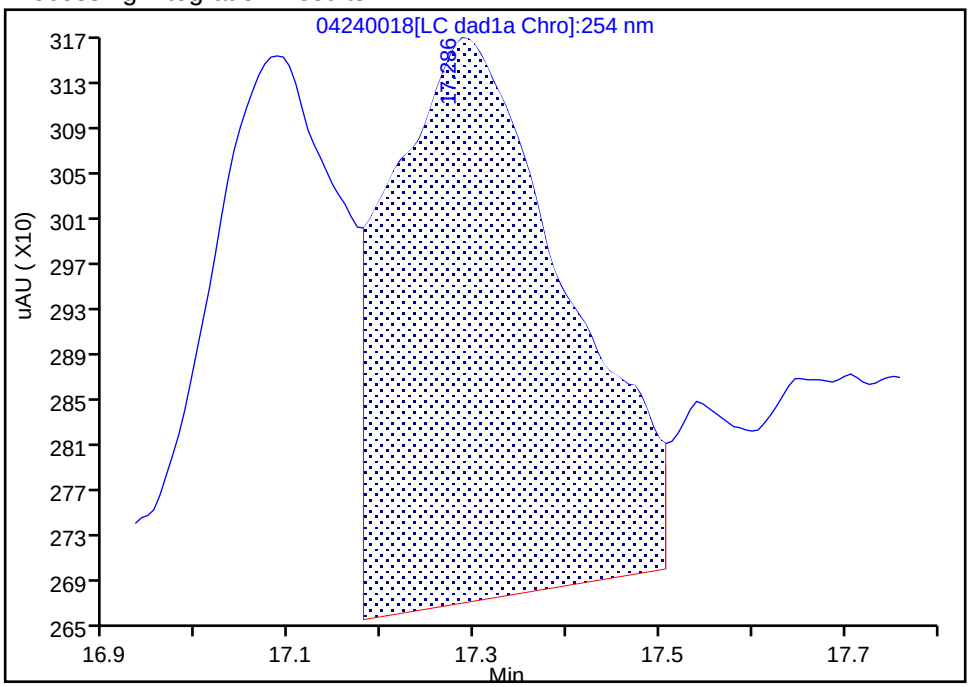
Data File:	\\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240018.d				
Injection Date:	25-Apr-2024 02:15:46	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 1				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

19 1,3,5-Trinitrobenzene, CAS: 99-35-4

Signal: 1

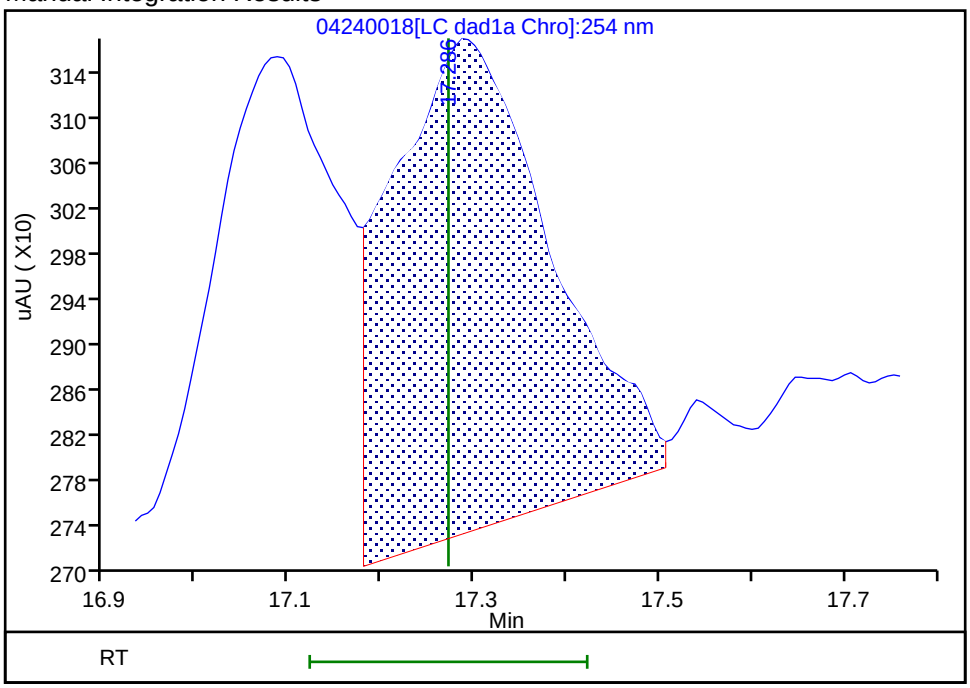
Processing Integration Results

RT: 17.29
Area: 6493
Amount: 0.014850
Amount Units: ug/ml



Manual Integration Results

RT: 17.29
Area: 5210
Amount: 0.012304
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:29:10 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

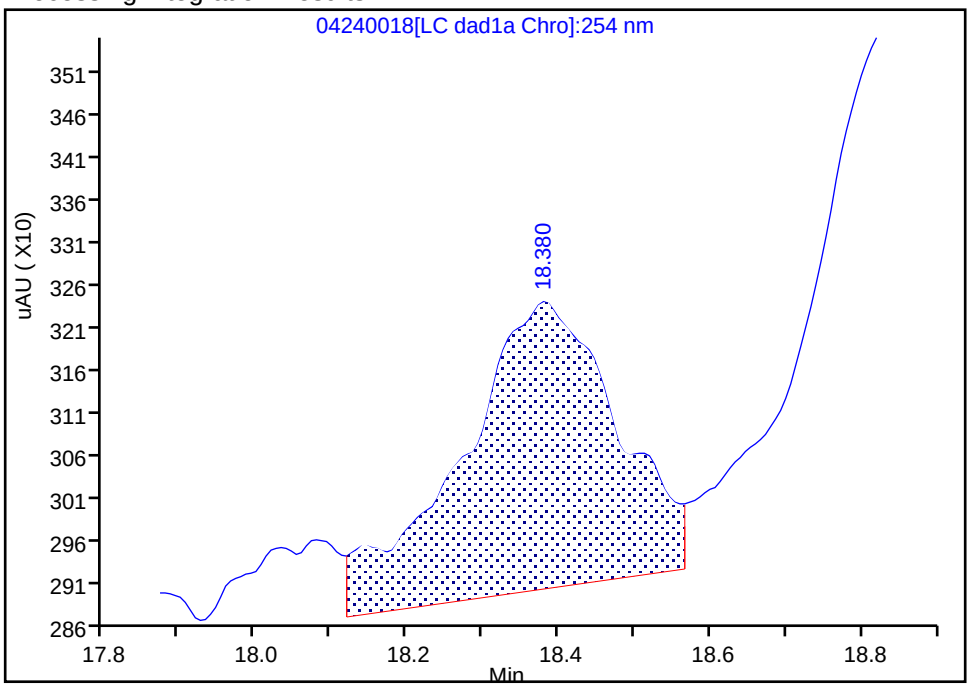
Data File:	\\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240018.d				
Injection Date:	25-Apr-2024 02:15:46	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 1				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

20 2,6-Dinitrotoluene, CAS: 606-20-2

Signal: 1

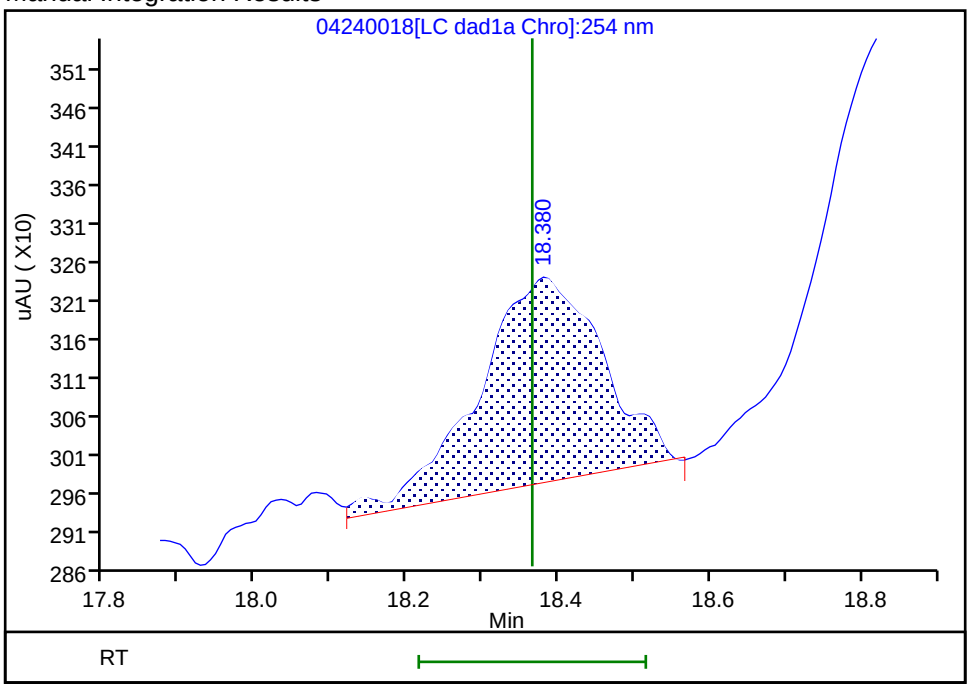
Processing Integration Results

RT: 18.38
Area: 4838
Amount: 0.011069
Amount Units: ug/ml



Manual Integration Results

RT: 18.38
Area: 3016
Amount: 0.010850
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:29:14 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

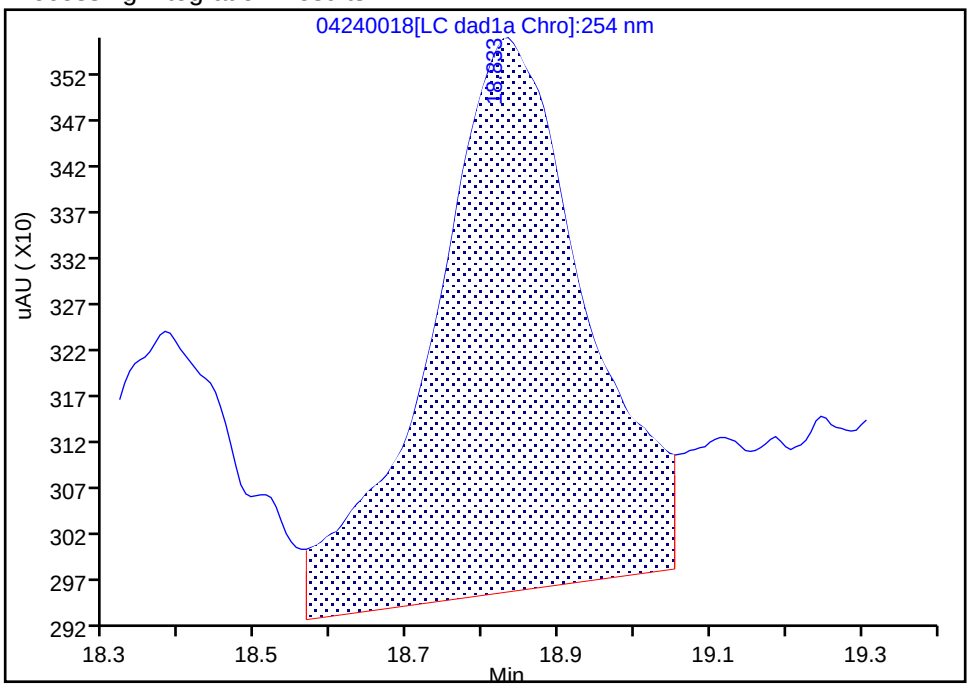
Data File: \\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240018.d
Injection Date: 25-Apr-2024 02:15:46 Instrument ID: CHHPLC_G2_LUNA
Lims ID: IC INT 1
Client ID:
Operator ID: JZ/JG ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: G2_8330_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC DAD1A, 254 nm

21 2,4-Dinitrotoluene, CAS: 121-14-2

Signal: 1

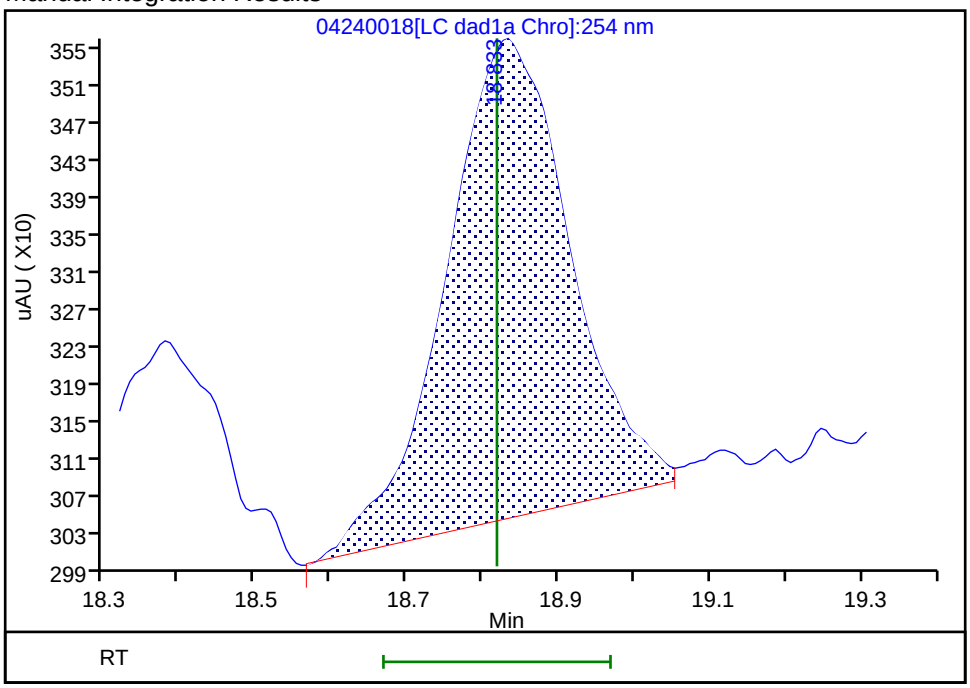
Processing Integration Results

RT: 18.83
Area: 8538
Amount: 0.014585
Amount Units: ug/ml



Manual Integration Results

RT: 18.83
Area: 5764
Amount: 0.010394
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:29:14 -06:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

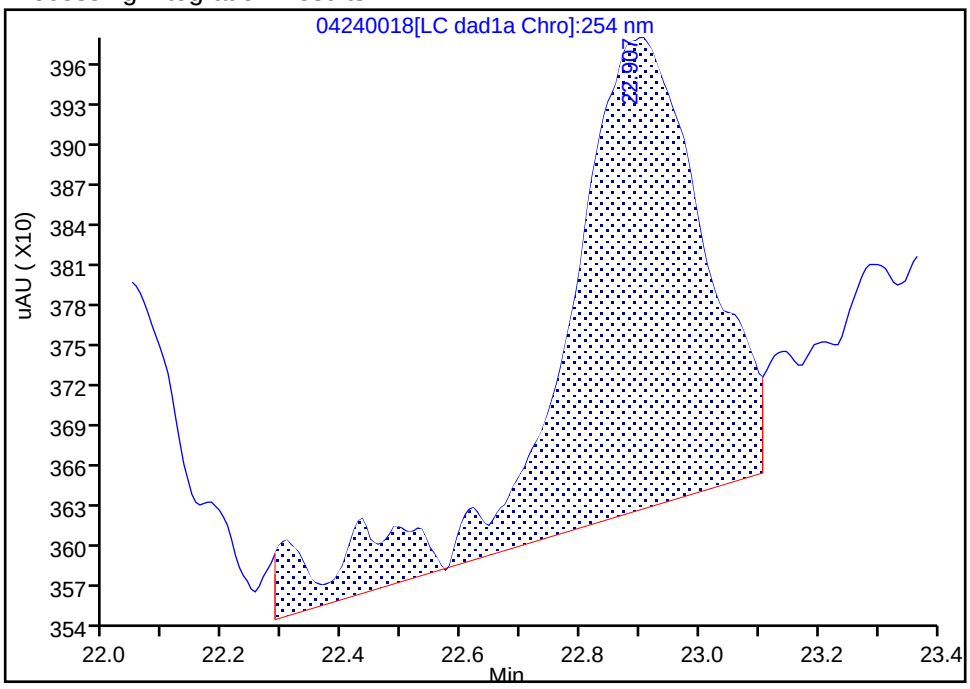
Data File:	\\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240018.d				
Injection Date:	25-Apr-2024 02:15:46	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	IC INT 1				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1A, 254 nm		

23 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

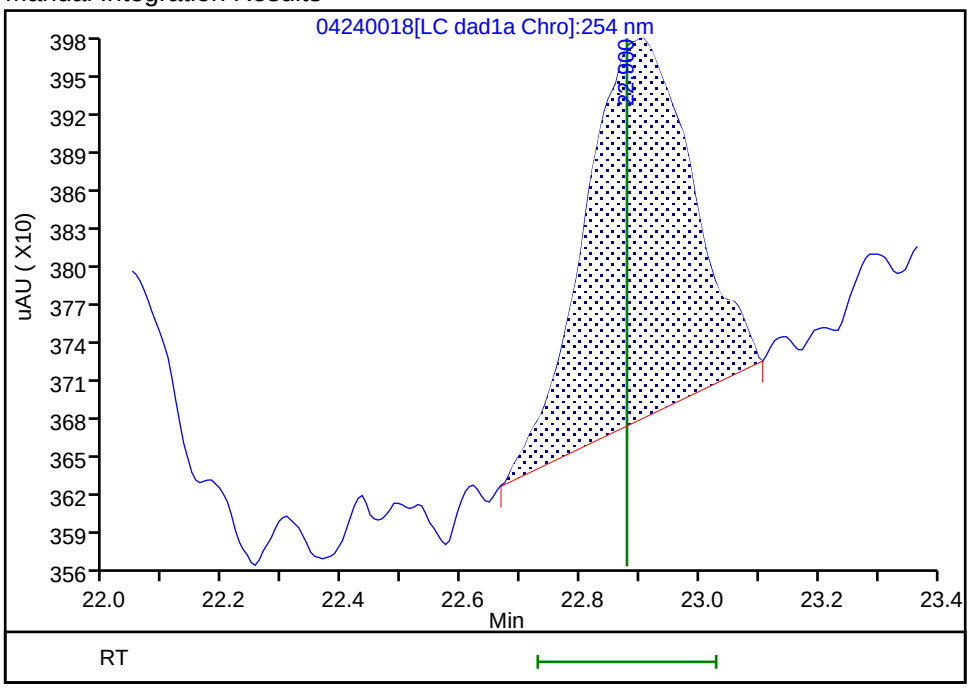
Processing Integration Results

RT: 22.91
Area: 5799
Amount: 0.013400
Amount Units: ug/ml



Manual Integration Results

RT: 22.90
Area: 3703
Amount: 0.009263
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:38:04 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Calibration / HMX

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

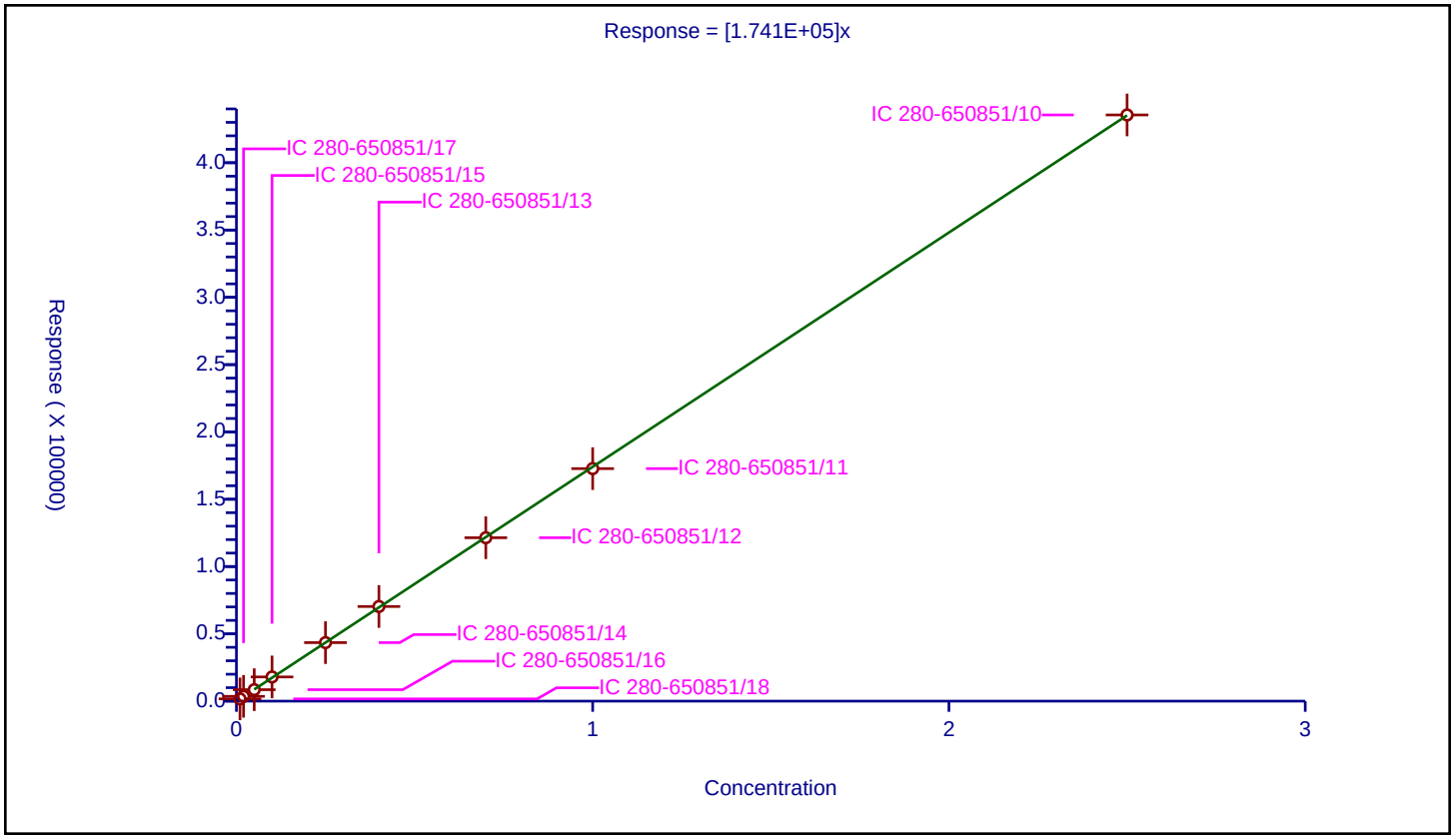
Curve Coefficients

Intercept:	0
Slope:	1.741E+05

Error Coefficients

Relative Standard Deviation:	2.2

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-650851/18	0.01	1677.0			167700.0	Y
2	IC 280-650851/17	0.02	3578.0			178900.0	Y
3	IC 280-650851/16	0.05	8509.0			170180.0	Y
4	IC 280-650851/15	0.1	17977.0			179770.0	Y
5	IC 280-650851/14	0.25	43487.0			173948.0	Y
6	IC 280-650851/13	0.4	70323.0			175807.5	Y
7	IC 280-650851/12	0.7	121397.0			173424.285714	Y
8	IC 280-650851/11	1.0	172751.0			172751.0	Y
9	IC 280-650851/10	2.5	435504.0			174201.6	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

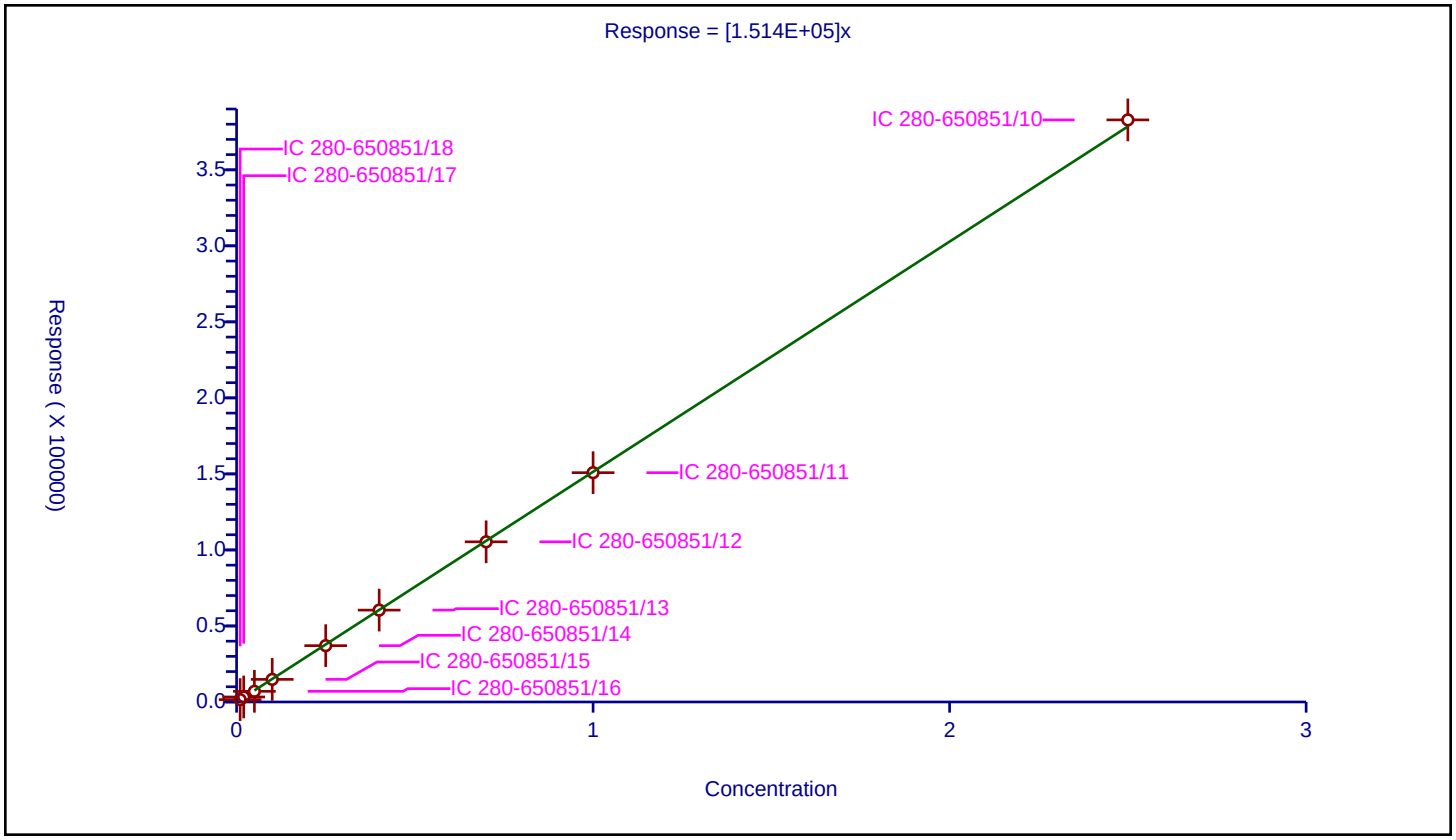
Curve Coefficients

Intercept:	0
Slope:	1.514E+05

Error Coefficients

Relative Standard Deviation:	4.3

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-650851/18	0.01	1549.0			154900.0	Y
2	IC 280-650851/17	0.02	3302.0			165100.0	Y
3	IC 280-650851/16	0.05	7014.0			140280.0	Y
4	IC 280-650851/15	0.1	14859.0			148590.0	Y
5	IC 280-650851/14	0.25	37043.0			148172.0	Y
6	IC 280-650851/13	0.4	60435.0			151087.5	Y
7	IC 280-650851/12	0.7	105341.0			150487.142857	Y
8	IC 280-650851/11	1.0	150820.0			150820.0	Y
9	IC 280-650851/10	2.5	382843.0			153137.2	Y



Calibration / RDX

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

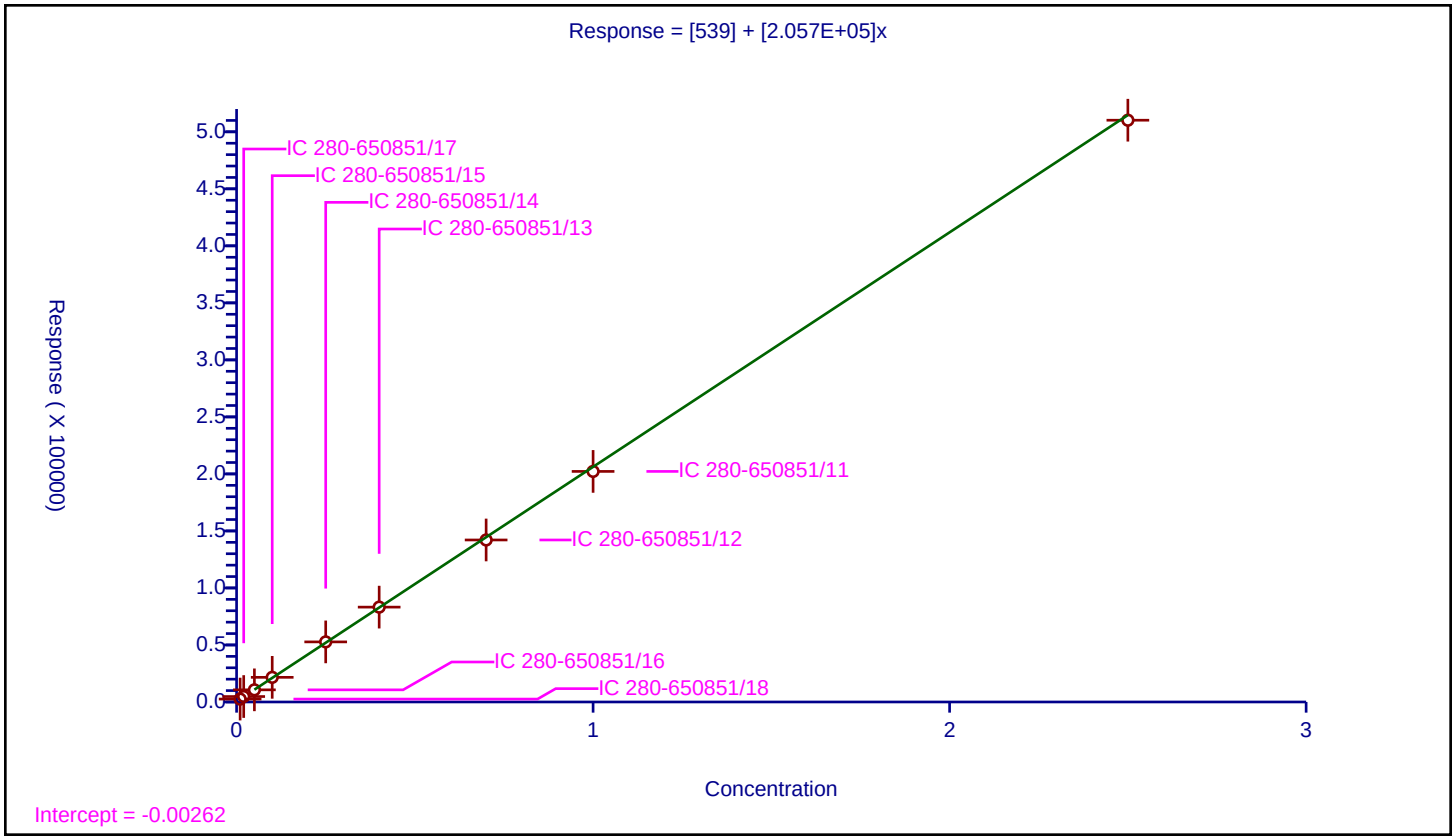
Curve Coefficients

Intercept:	539
Slope:	2.057E+05

Error Coefficients

Relative Standard Deviation:	2.2

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-650851/18	0.01	2562.0			256200.0	Y
2	IC 280-650851/17	0.02	4791.0			239550.0	Y
3	IC 280-650851/16	0.05	10654.0			213080.0	Y
4	IC 280-650851/15	0.1	21609.0			216090.0	Y
5	IC 280-650851/14	0.25	52707.0			210828.0	Y
6	IC 280-650851/13	0.4	83185.0			207962.5	Y
7	IC 280-650851/12	0.7	142066.0			202951.428571	Y
8	IC 280-650851/11	1.0	202193.0			202193.0	Y
9	IC 280-650851/10	2.5	510182.0			204072.8	Y



Calibration / Nitrobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

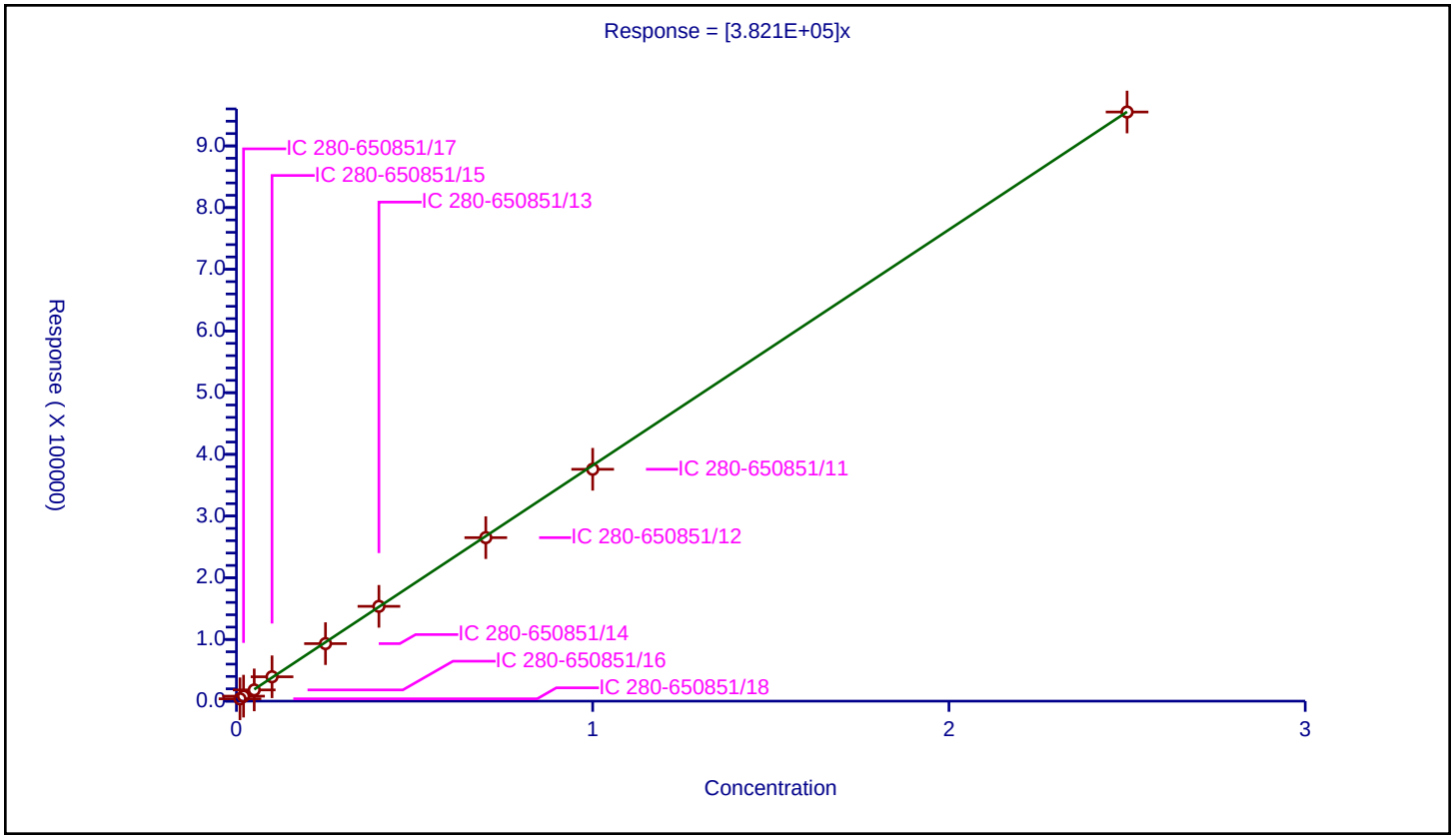
Curve Coefficients

Intercept:	0
Slope:	3.821E+05

Error Coefficients

Relative Standard Deviation:	3.2

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-650851/18	0.01	3818.0			381800.0	Y
2	IC 280-650851/17	0.02	8101.0			405050.0	Y
3	IC 280-650851/16	0.05	18193.0			363860.0	Y
4	IC 280-650851/15	0.1	39489.0			394890.0	Y
5	IC 280-650851/14	0.25	93225.0			372900.0	Y
6	IC 280-650851/13	0.4	153657.0			384142.5	Y
7	IC 280-650851/12	0.7	265026.0			378608.571429	Y
8	IC 280-650851/11	1.0	375845.0			375845.0	Y
9	IC 280-650851/10	2.5	954967.0			381986.8	Y



Calibration / 1,2-Dinitrobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

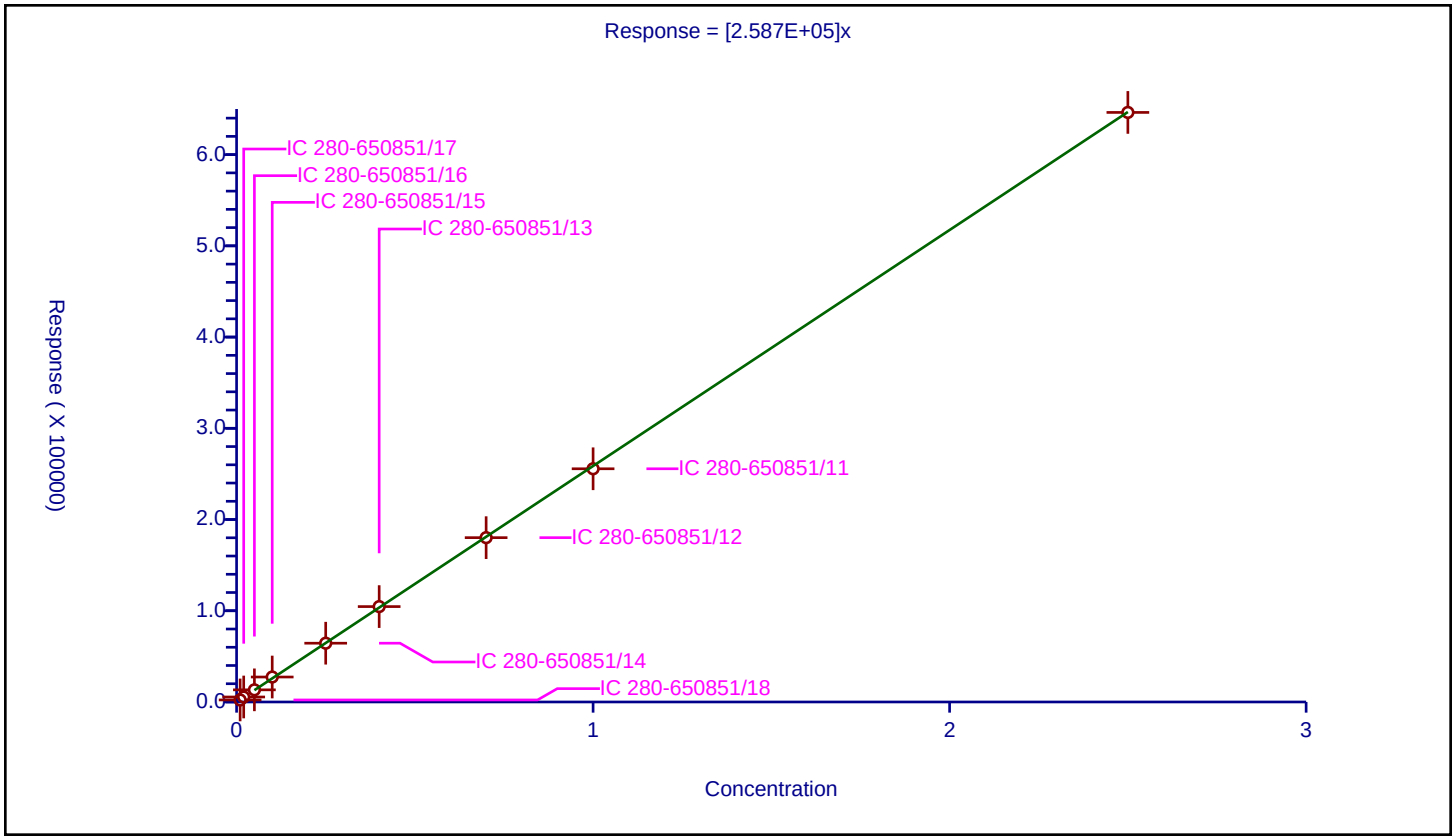
Curve Coefficients

Intercept:	0
Slope:	2.587E+05

Error Coefficients

Relative Standard Deviation:	5.7

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-650851/18	0.01	2237.0			223700.0	Y
2	IC 280-650851/17	0.02	5474.0			273700.0	Y
3	IC 280-650851/16	0.05	13324.0			266480.0	Y
4	IC 280-650851/15	0.1	27370.0			273700.0	Y
5	IC 280-650851/14	0.25	64431.0			257724.0	Y
6	IC 280-650851/13	0.4	104562.0			261405.0	Y
7	IC 280-650851/12	0.7	180143.0			257347.142857	Y
8	IC 280-650851/11	1.0	255644.0			255644.0	Y
9	IC 280-650851/10	2.5	646251.0			258500.4	Y



Calibration / 3,5-Dinitroaniline

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

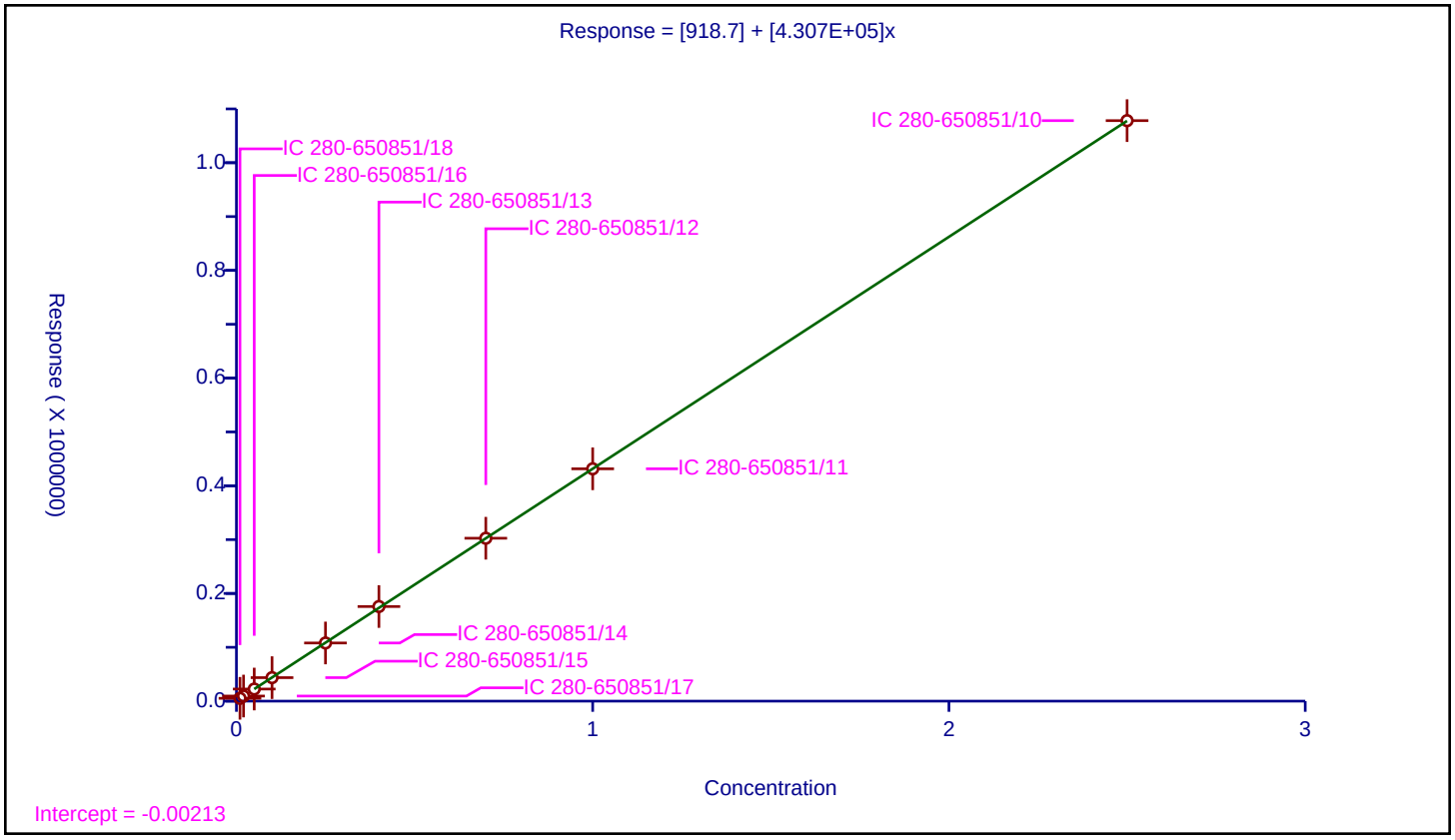
Curve Coefficients

Intercept:	918.7
Slope:	4.307E+05

Error Coefficients

Relative Standard Deviation:	0.7

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-650851/18	0.01	5245.0			524500.0	Y
2	IC 280-650851/17	0.02	9463.0			473150.0	Y
3	IC 280-650851/16	0.05	22481.0			449620.0	Y
4	IC 280-650851/15	0.1	43670.0			436700.0	Y
5	IC 280-650851/14	0.25	108023.0			432092.0	Y
6	IC 280-650851/13	0.4	175740.0			439350.0	Y
7	IC 280-650851/12	0.7	302587.0			432267.142857	Y
8	IC 280-650851/11	1.0	431522.0			431522.0	Y
9	IC 280-650851/10	2.5	1078184.0			431273.6	Y



Calibration / 1,3-Dinitrobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

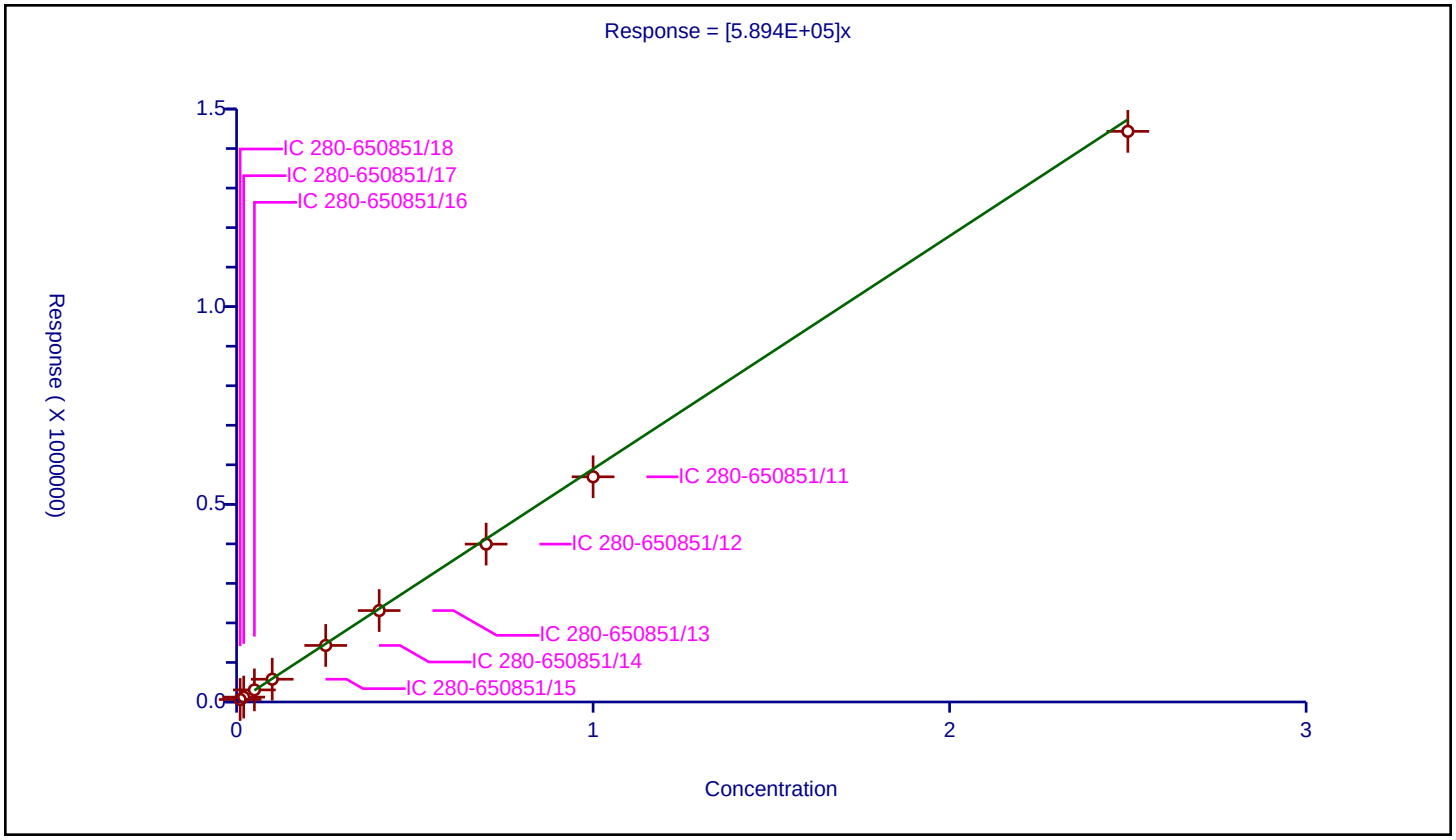
Curve Coefficients

Intercept:	0
Slope:	5.894E+05

Error Coefficients

Relative Standard Deviation:	4.1

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-650851/18	0.01	6332.0			633200.0	Y
2	IC 280-650851/17	0.02	12318.0			615900.0	Y
3	IC 280-650851/16	0.05	30596.0			611920.0	Y
4	IC 280-650851/15	0.1	57592.0			575920.0	Y
5	IC 280-650851/14	0.25	143019.0			572076.0	Y
6	IC 280-650851/13	0.4	231256.0			578140.0	Y
7	IC 280-650851/12	0.7	399408.0			570582.857143	Y
8	IC 280-650851/11	1.0	569625.0			569625.0	Y
9	IC 280-650851/10	2.5	1443498.0			577399.2	Y



Calibration / Nitroglycerin

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

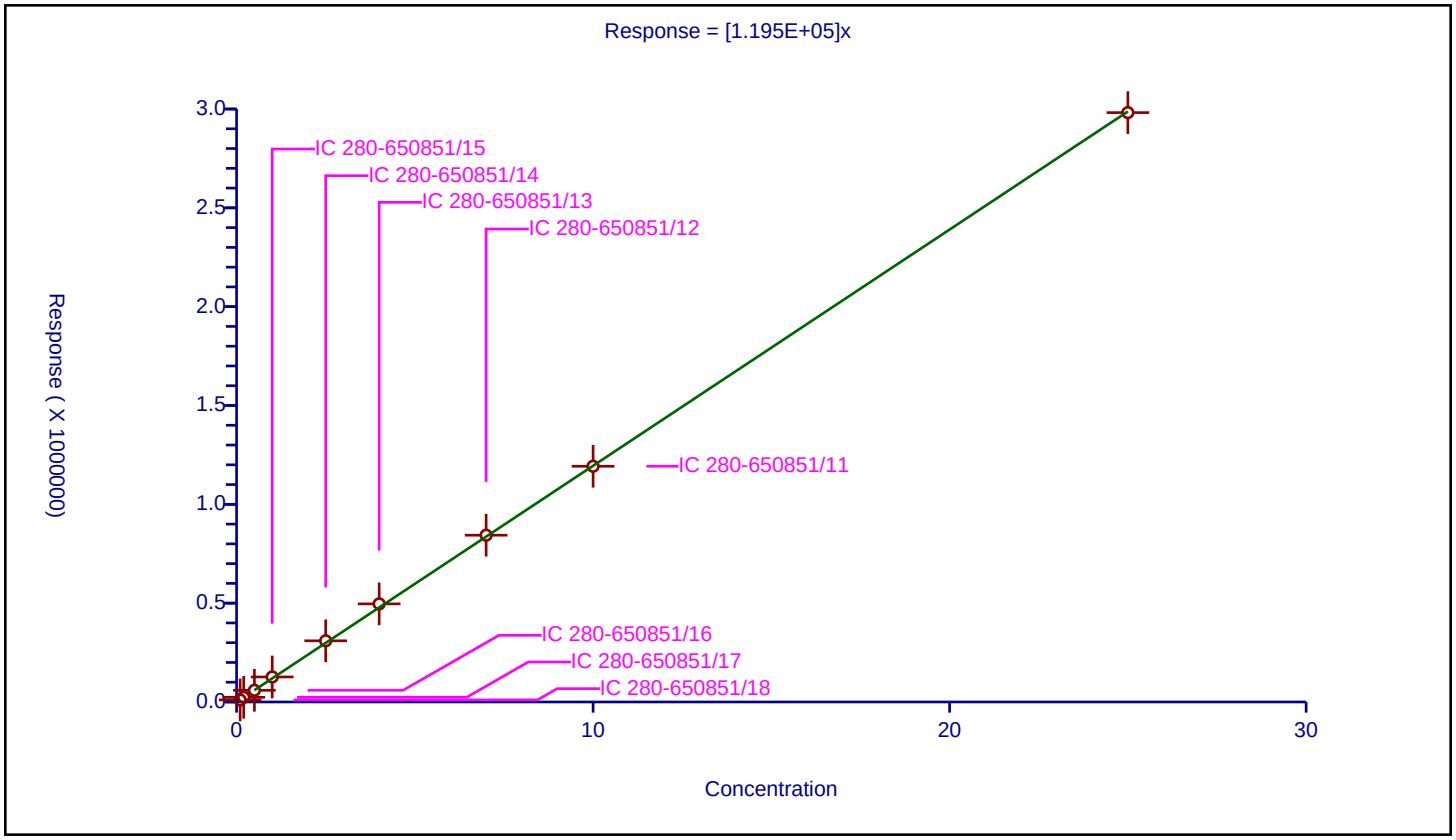
Curve Coefficients

Intercept:	0
Slope:	1.195E+05

Error Coefficients

Relative Standard Deviation:	5.3

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-650851/18	0.1	10431.0			104310.0	Y
2	IC 280-650851/17	0.2	23877.0			119385.0	Y
3	IC 280-650851/16	0.5	59130.0			118260.0	Y
4	IC 280-650851/15	1.0	126558.0			126558.0	Y
5	IC 280-650851/14	2.5	309600.0			123840.0	Y
6	IC 280-650851/13	4.0	496432.0			124108.0	Y
7	IC 280-650851/12	7.0	843844.0			120549.142857	Y
8	IC 280-650851/11	10.0	1192597.0			119259.7	Y
9	IC 280-650851/10	25.0	2981826.0			119273.04	Y



Calibration / o-Nitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

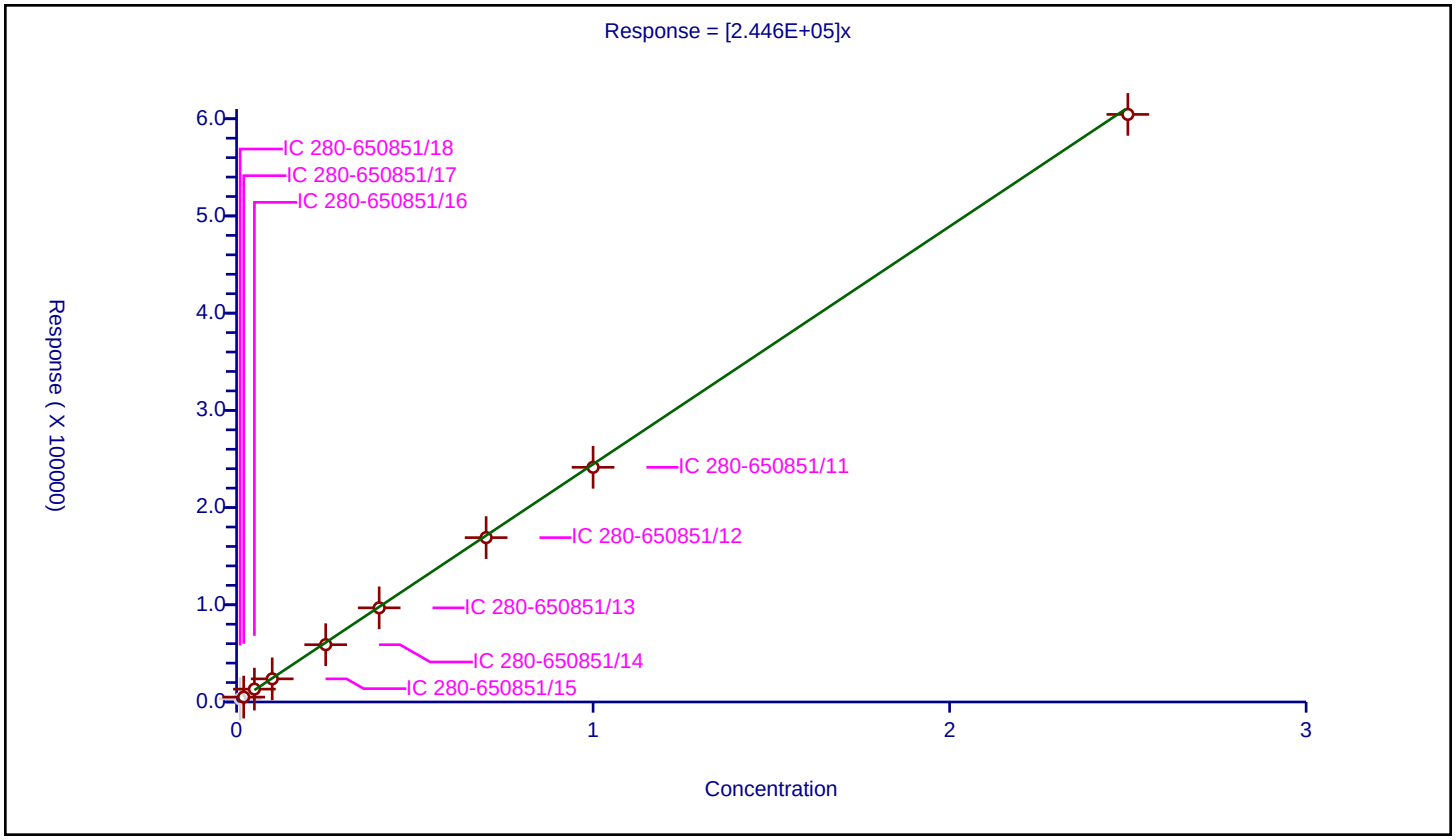
Curve Coefficients

Intercept:	0
Slope:	2.446E+05

Error Coefficients

Relative Standard Deviation:	3.8

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-650851/18	0.01	3289.0			328900.0	N
2	IC 280-650851/17	0.02	5024.0			251200.0	Y
3	IC 280-650851/16	0.05	13247.0			264940.0	Y
4	IC 280-650851/15	0.1	23799.0			237990.0	Y
5	IC 280-650851/14	0.25	58941.0			235764.0	Y
6	IC 280-650851/13	0.4	96839.0			242097.5	Y
7	IC 280-650851/12	0.7	169093.0			241561.428571	Y
8	IC 280-650851/11	1.0	241414.0			241414.0	Y
9	IC 280-650851/10	2.5	604470.0			241788.0	Y



Calibration / p-Nitrotoluene

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

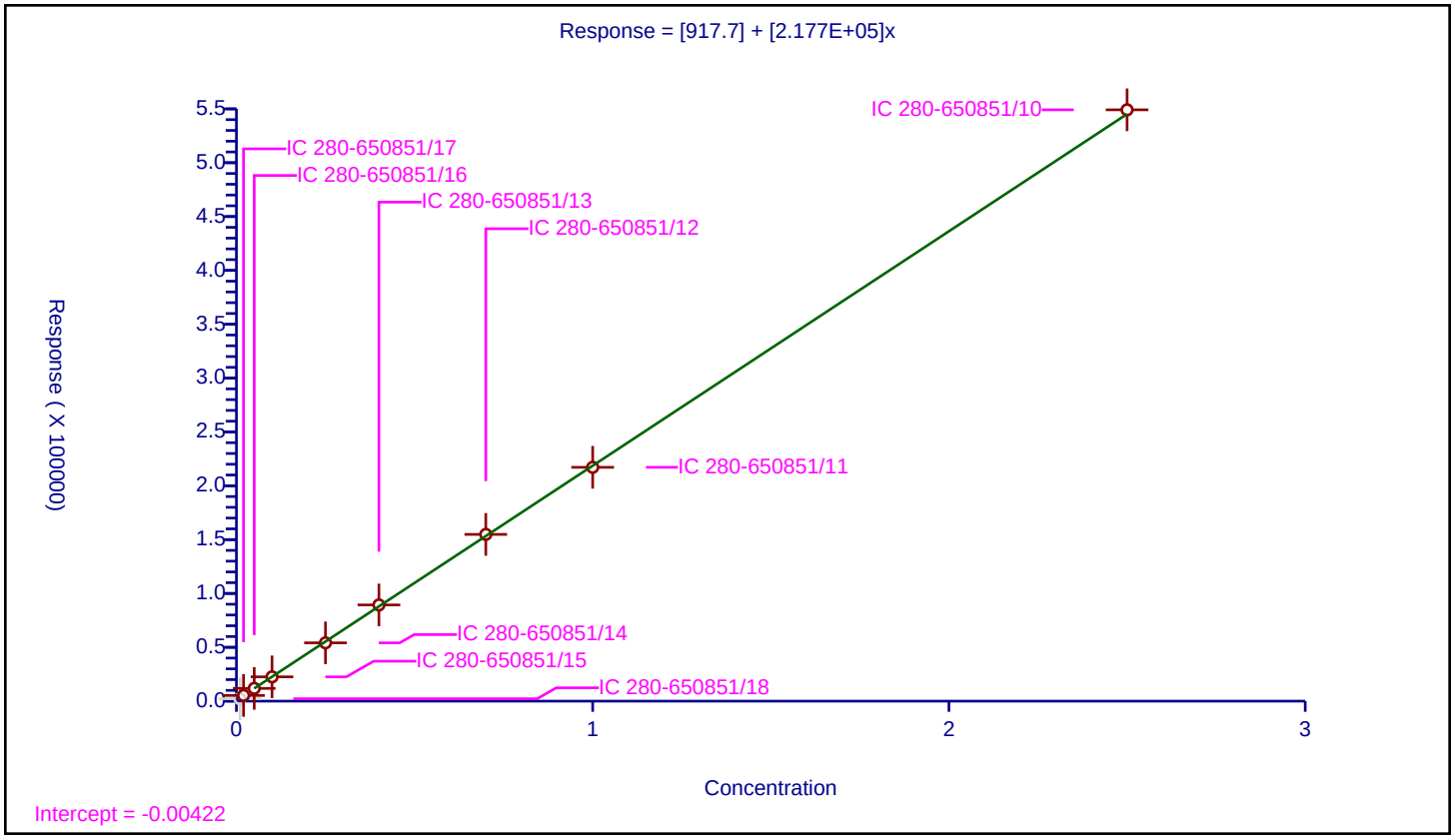
Curve Coefficients

Intercept:	917.7
Slope:	2.177E+05

Error Coefficients

Relative Standard Deviation:	1.3

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-650851/18	0.01	2223.0			222300.0	N
2	IC 280-650851/17	0.02	5278.0			263900.0	Y
3	IC 280-650851/16	0.05	11825.0			236500.0	Y
4	IC 280-650851/15	0.1	22549.0			225490.0	Y
5	IC 280-650851/14	0.25	54130.0			216520.0	Y
6	IC 280-650851/13	0.4	89334.0			223335.0	Y
7	IC 280-650851/12	0.7	154841.0			221201.428571	Y
8	IC 280-650851/11	1.0	217154.0			217154.0	Y
9	IC 280-650851/10	2.5	549133.0			219653.2	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

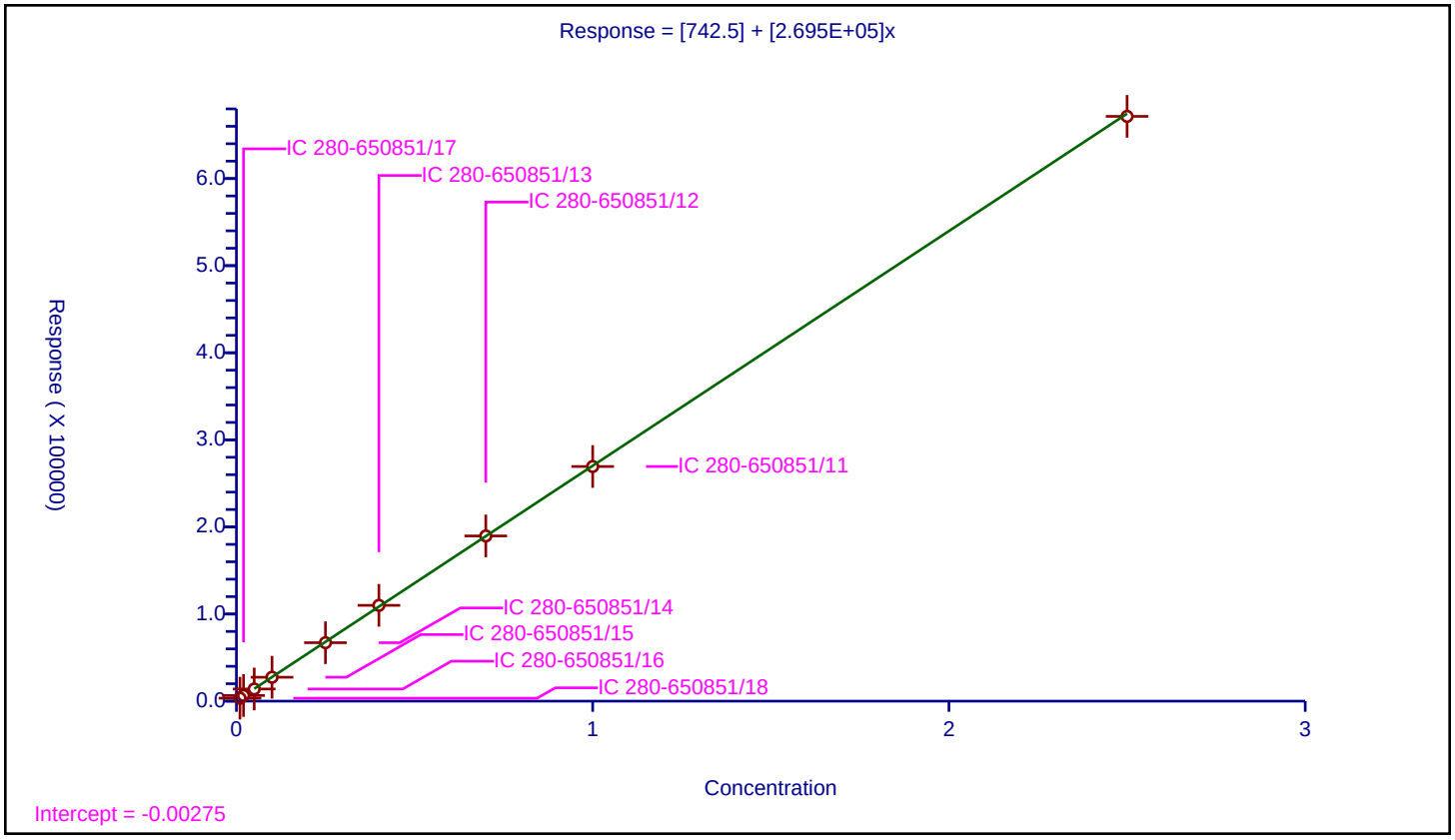
Curve Coefficients

Intercept:	742.5
Slope:	2.695E+05

Error Coefficients

Relative Standard Deviation:	2.8

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-650851/18	0.01	3366.0			336600.0	Y
2	IC 280-650851/17	0.02	6474.0			323700.0	Y
3	IC 280-650851/16	0.05	13955.0			279100.0	Y
4	IC 280-650851/15	0.1	27449.0			274490.0	Y
5	IC 280-650851/14	0.25	67115.0			268460.0	Y
6	IC 280-650851/13	0.4	109971.0			274927.5	Y
7	IC 280-650851/12	0.7	189660.0			270942.857143	Y
8	IC 280-650851/11	1.0	269382.0			269382.0	Y
9	IC 280-650851/10	2.5	671412.0			268564.8	Y



Calibration / m-Nitrotoluene

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

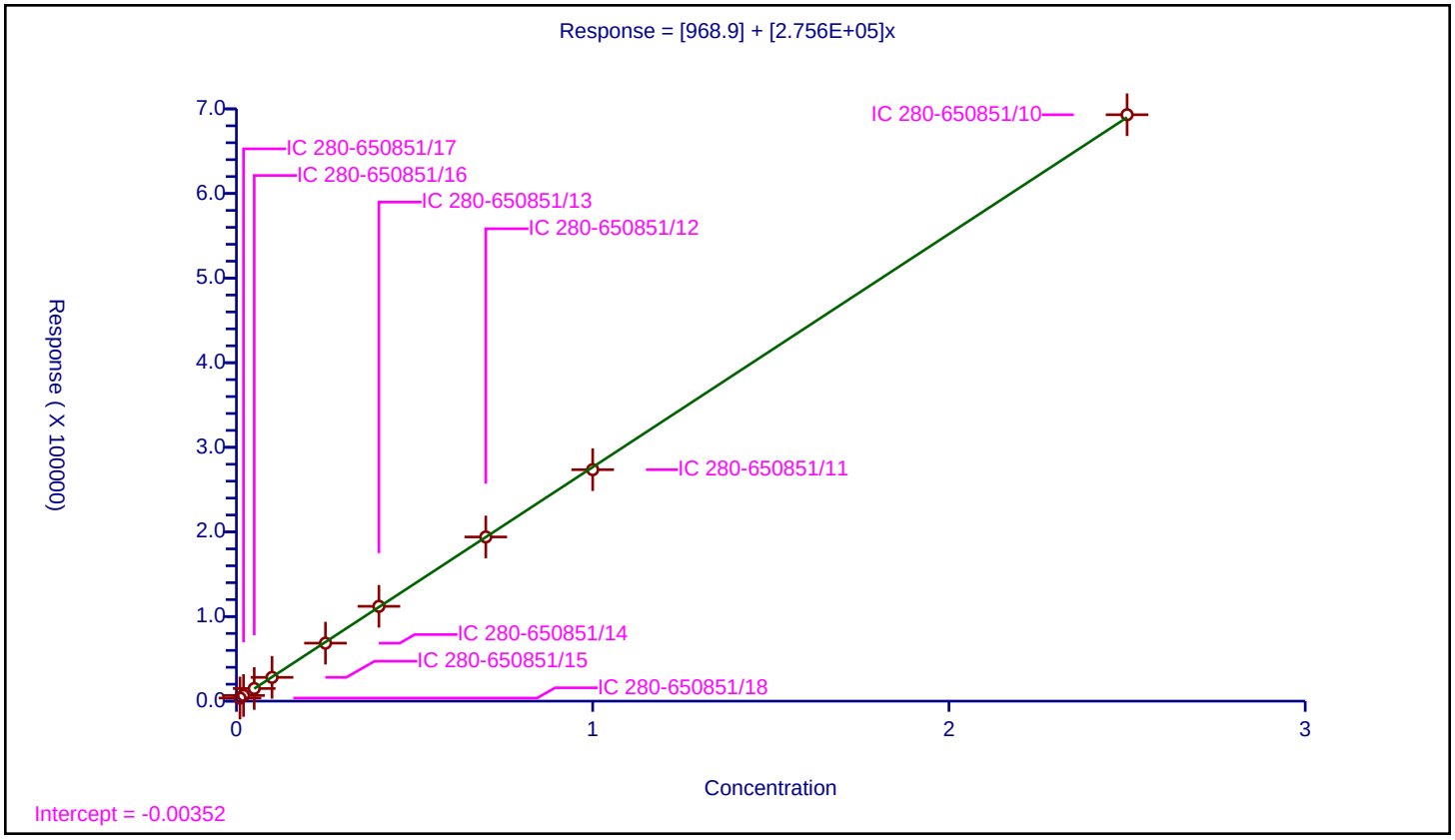
Curve Coefficients

Intercept:	968.9
Slope:	2.756E+05

Error Coefficients

Relative Standard Deviation:	2.0

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-650851/18	0.01	3672.0			367200.0	Y
2	IC 280-650851/17	0.02	6685.0			334250.0	Y
3	IC 280-650851/16	0.05	14941.0			298820.0	Y
4	IC 280-650851/15	0.1	28103.0			281030.0	Y
5	IC 280-650851/14	0.25	68559.0			274236.0	Y
6	IC 280-650851/13	0.4	112076.0			280190.0	Y
7	IC 280-650851/12	0.7	194048.0			277211.428571	Y
8	IC 280-650851/11	1.0	273569.0			273569.0	Y
9	IC 280-650851/10	2.5	693064.0			277225.6	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

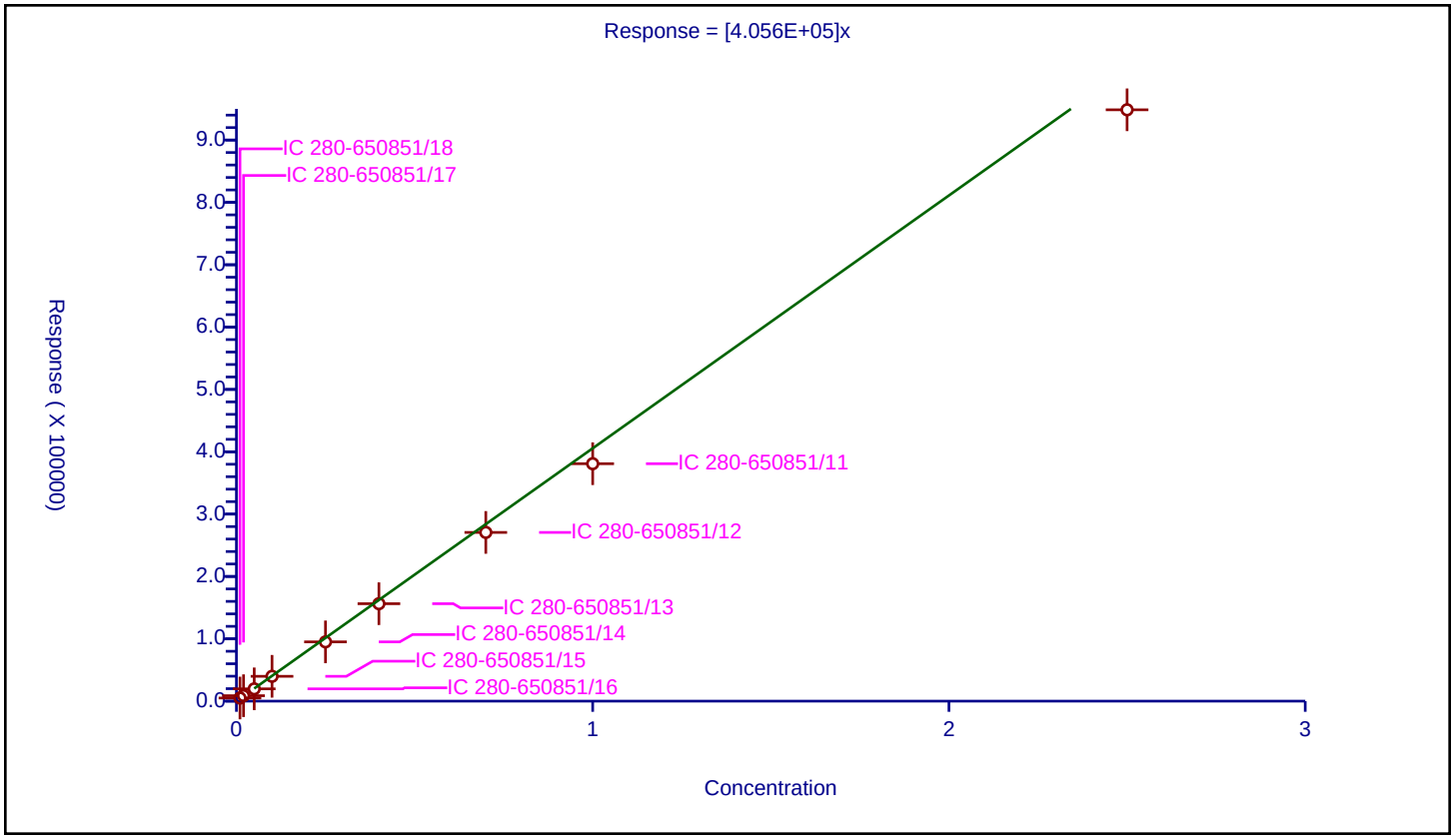
Curve Coefficients

Intercept:	0
Slope:	4.056E+05

Error Coefficients

Relative Standard Deviation:	9.9

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-650851/18	0.01	5022.0			502200.0	Y
2	IC 280-650851/17	0.02	8733.0			436650.0	Y
3	IC 280-650851/16	0.05	19735.0			394700.0	Y
4	IC 280-650851/15	0.1	39853.0			398530.0	Y
5	IC 280-650851/14	0.25	95082.0			380328.0	Y
6	IC 280-650851/13	0.4	156312.0			390780.0	Y
7	IC 280-650851/12	0.7	270634.0			386620.0	Y
8	IC 280-650851/11	1.0	380835.0			380835.0	Y
9	IC 280-650851/10	2.5	948541.0			379416.4	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

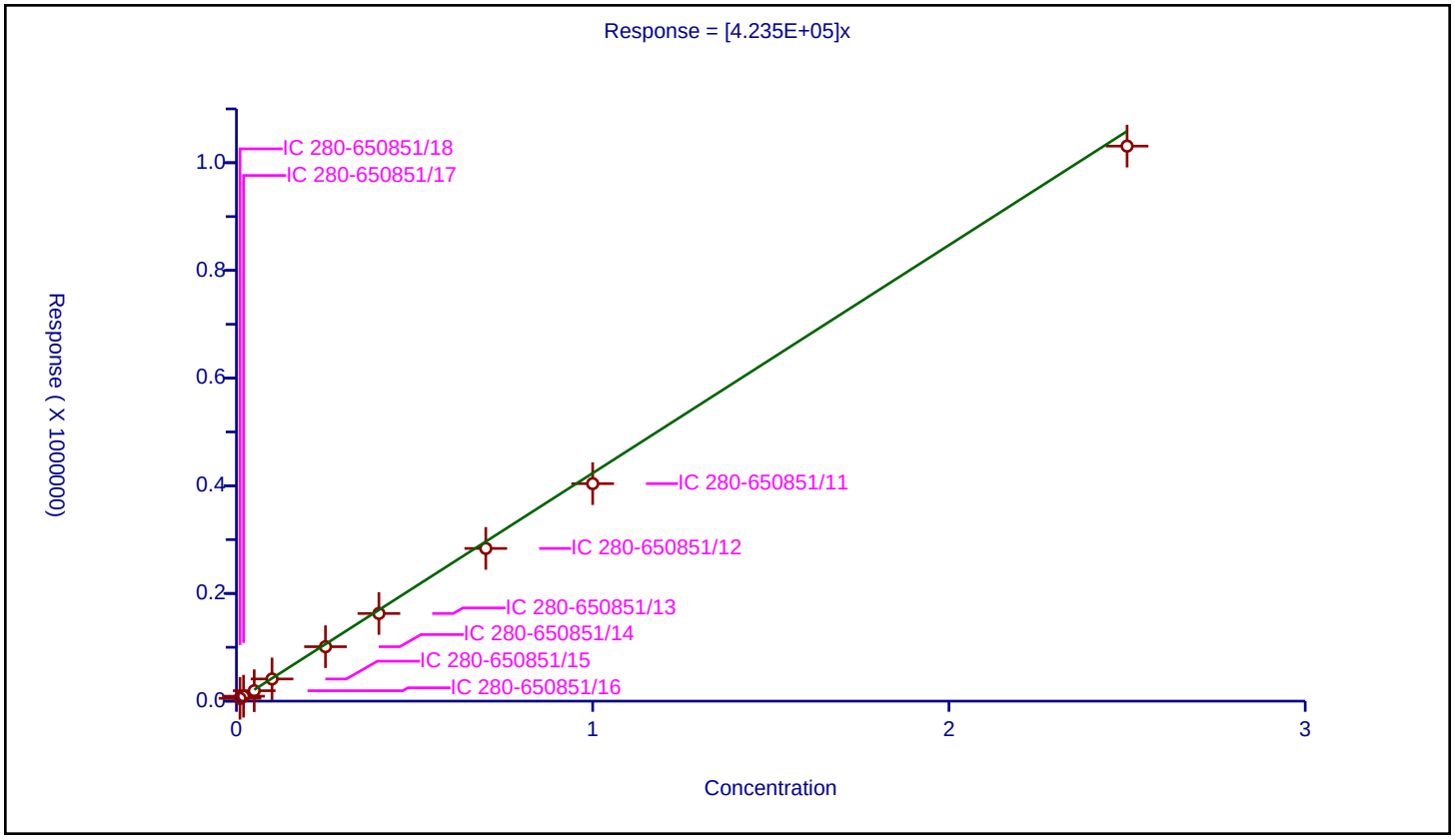
Curve Coefficients

Intercept:	0
Slope:	4.235E+05

Error Coefficients

Relative Standard Deviation:	9.8

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-650851/18	0.01	5210.0			521000.0	Y
2	IC 280-650851/17	0.02	9167.0			458350.0	Y
3	IC 280-650851/16	0.05	19358.0			387160.0	Y
4	IC 280-650851/15	0.1	41177.0			411770.0	Y
5	IC 280-650851/14	0.25	101067.0			404268.0	Y
6	IC 280-650851/13	0.4	162815.0			407037.5	Y
7	IC 280-650851/12	0.7	283624.0			405177.142857	Y
8	IC 280-650851/11	1.0	403965.0			403965.0	Y
9	IC 280-650851/10	2.5	1030907.0			412362.8	Y



Calibration / 2,6-Dinitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

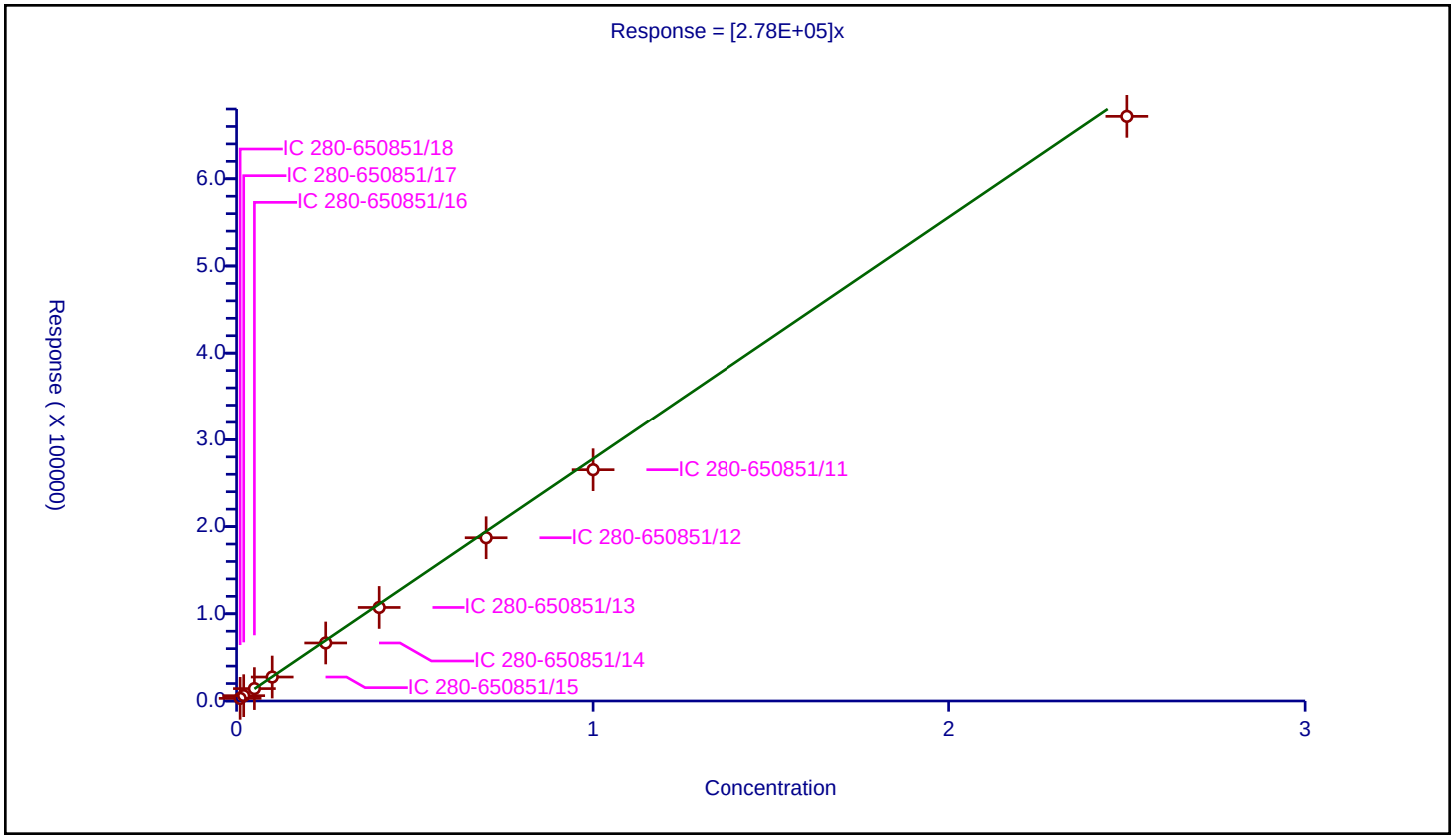
Curve Coefficients

Intercept:	0
Slope:	2.78E+05

Error Coefficients

Relative Standard Deviation:	5.6

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-650851/18	0.01	3016.0			301600.0	Y
2	IC 280-650851/17	0.02	6113.0			305650.0	Y
3	IC 280-650851/16	0.05	14197.0			283940.0	Y
4	IC 280-650851/15	0.1	27487.0			274870.0	Y
5	IC 280-650851/14	0.25	66539.0			266156.0	Y
6	IC 280-650851/13	0.4	107267.0			268167.5	Y
7	IC 280-650851/12	0.7	187213.0			267447.142857	Y
8	IC 280-650851/11	1.0	265267.0			265267.0	Y
9	IC 280-650851/10	2.5	671582.0			268632.8	Y



Calibration / 2,4-Dinitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

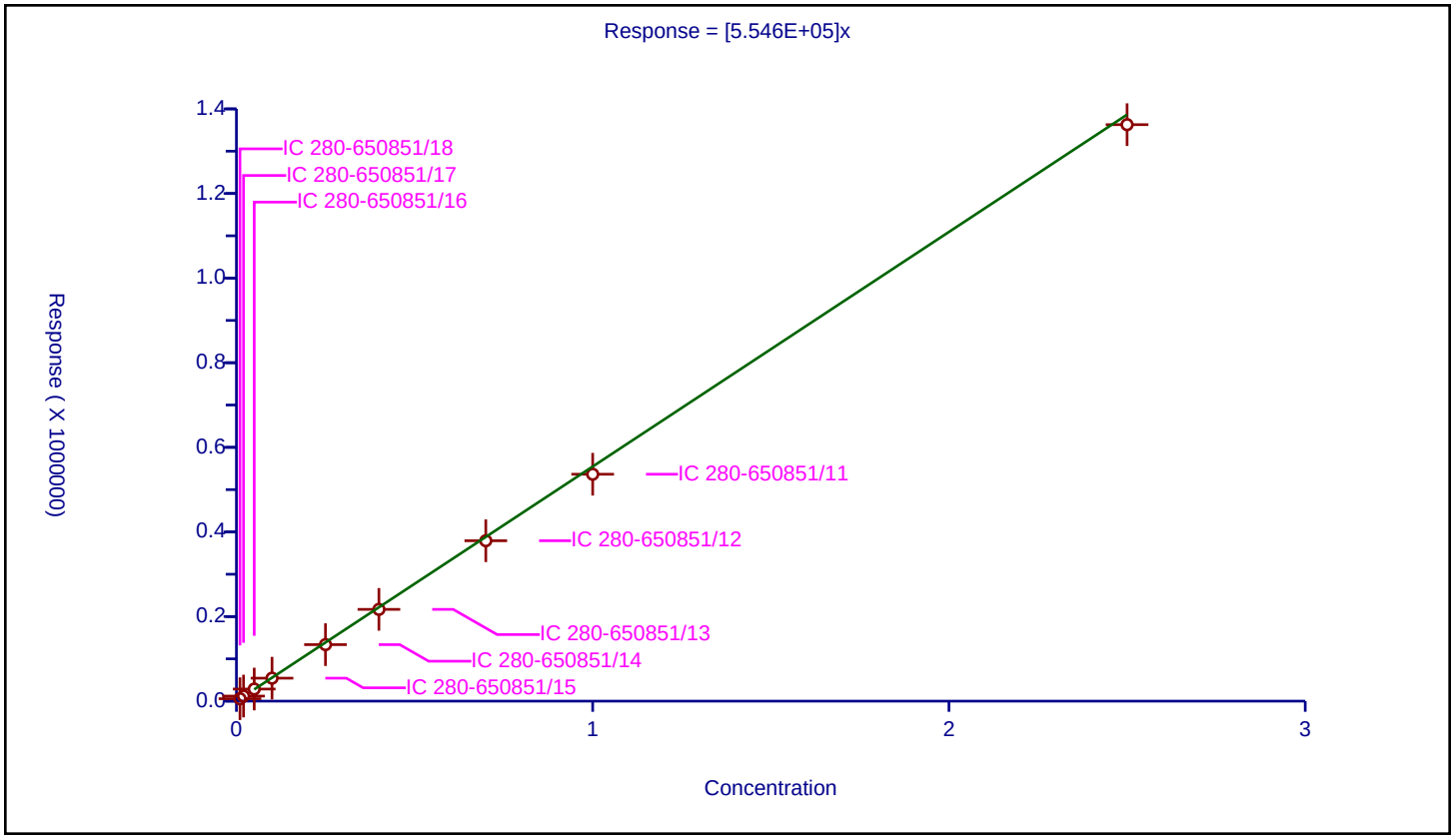
Curve Coefficients

Intercept:	0
Slope:	5.546E+05

Error Coefficients

Relative Standard Deviation:	4.1

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-650851/18	0.01	5764.0			576400.0	Y
2	IC 280-650851/17	0.02	12005.0			600250.0	Y
3	IC 280-650851/16	0.05	28589.0			571780.0	Y
4	IC 280-650851/15	0.1	54294.0			542940.0	Y
5	IC 280-650851/14	0.25	133579.0			534316.0	Y
6	IC 280-650851/13	0.4	216895.0			542237.5	Y
7	IC 280-650851/12	0.7	379151.0			541644.285714	Y
8	IC 280-650851/11	1.0	536407.0			536407.0	Y
9	IC 280-650851/10	2.5	1362753.0			545101.2	Y



Calibration / Tetryl

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

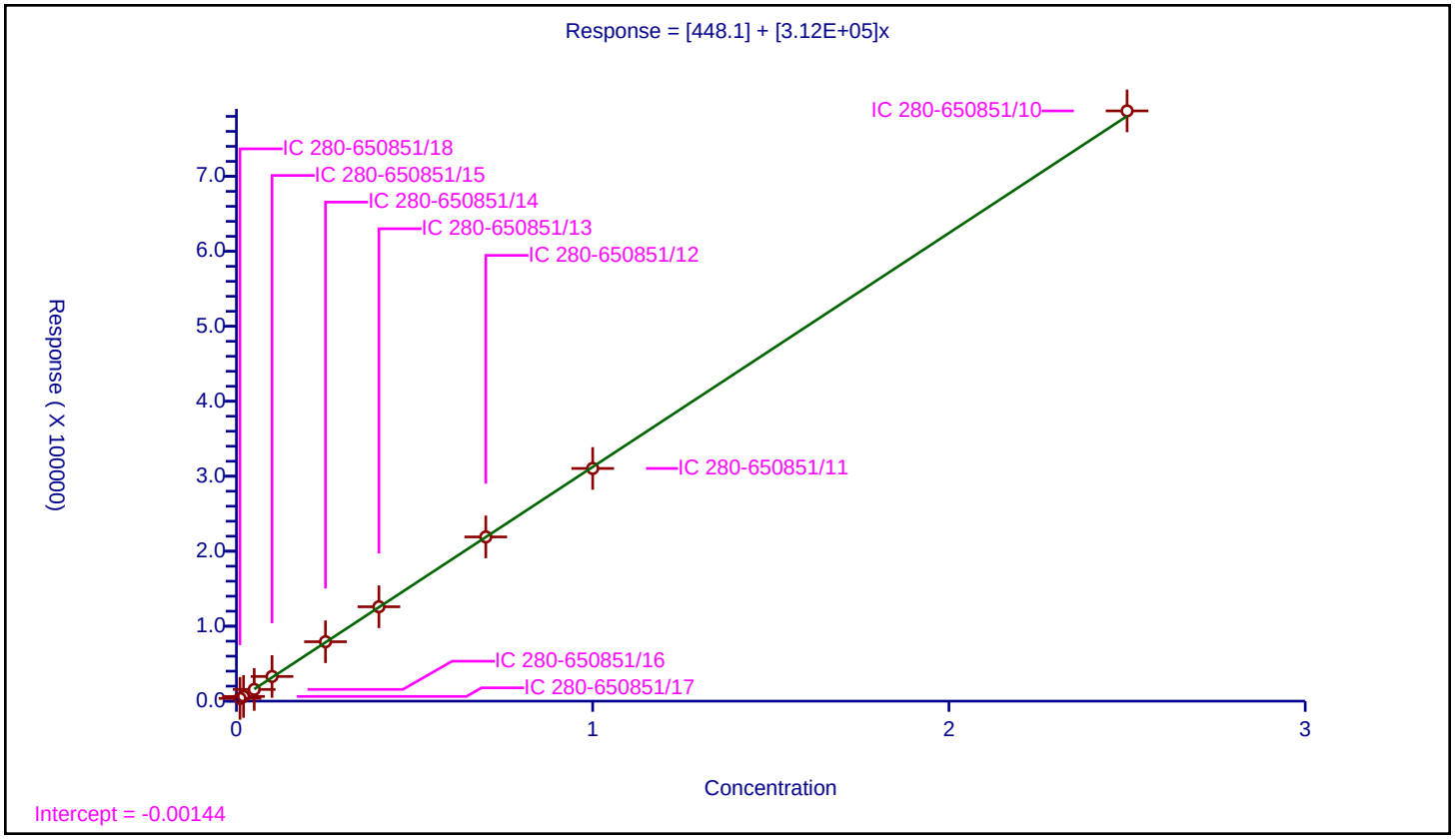
Curve Coefficients

Intercept:	448.1
Slope:	3.12E+05

Error Coefficients

Relative Standard Deviation:	3.5

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-650851/18	0.01	3675.0			367500.0	Y
2	IC 280-650851/17	0.02	6268.0			313400.0	Y
3	IC 280-650851/16	0.05	15630.0			312600.0	Y
4	IC 280-650851/15	0.1	32920.0			329200.0	Y
5	IC 280-650851/14	0.25	79229.0			316916.0	Y
6	IC 280-650851/13	0.4	125893.0			314732.5	Y
7	IC 280-650851/12	0.7	219045.0			312921.428571	Y
8	IC 280-650851/11	1.0	310388.0			310388.0	Y
9	IC 280-650851/10	2.5	787307.0			314922.8	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

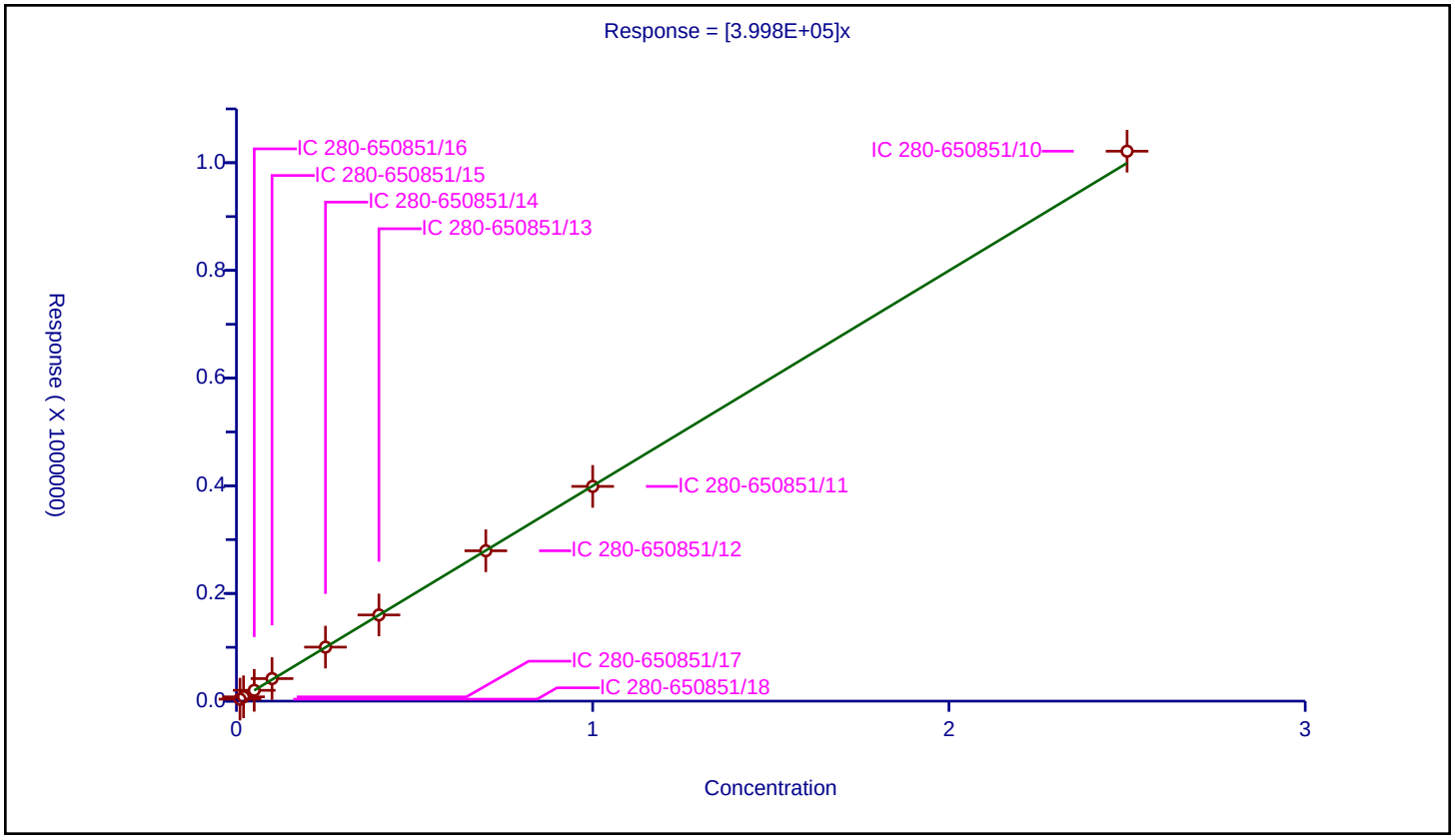
Curve Coefficients

Intercept:	0
Slope:	3.998E+05

Error Coefficients

Relative Standard Deviation:	3.2

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-650851/18	0.01	3703.0			370300.0	Y
2	IC 280-650851/17	0.02	7969.0			398450.0	Y
3	IC 280-650851/16	0.05	20131.0			402620.0	Y
4	IC 280-650851/15	0.1	41861.0			418610.0	Y
5	IC 280-650851/14	0.25	100337.0			401348.0	Y
6	IC 280-650851/13	0.4	160072.0			400180.0	Y
7	IC 280-650851/12	0.7	279268.0			398954.285714	Y
8	IC 280-650851/11	1.0	398830.0			398830.0	Y
9	IC 280-650851/10	2.5	1021428.0			408571.2	Y



Calibration / PETN

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

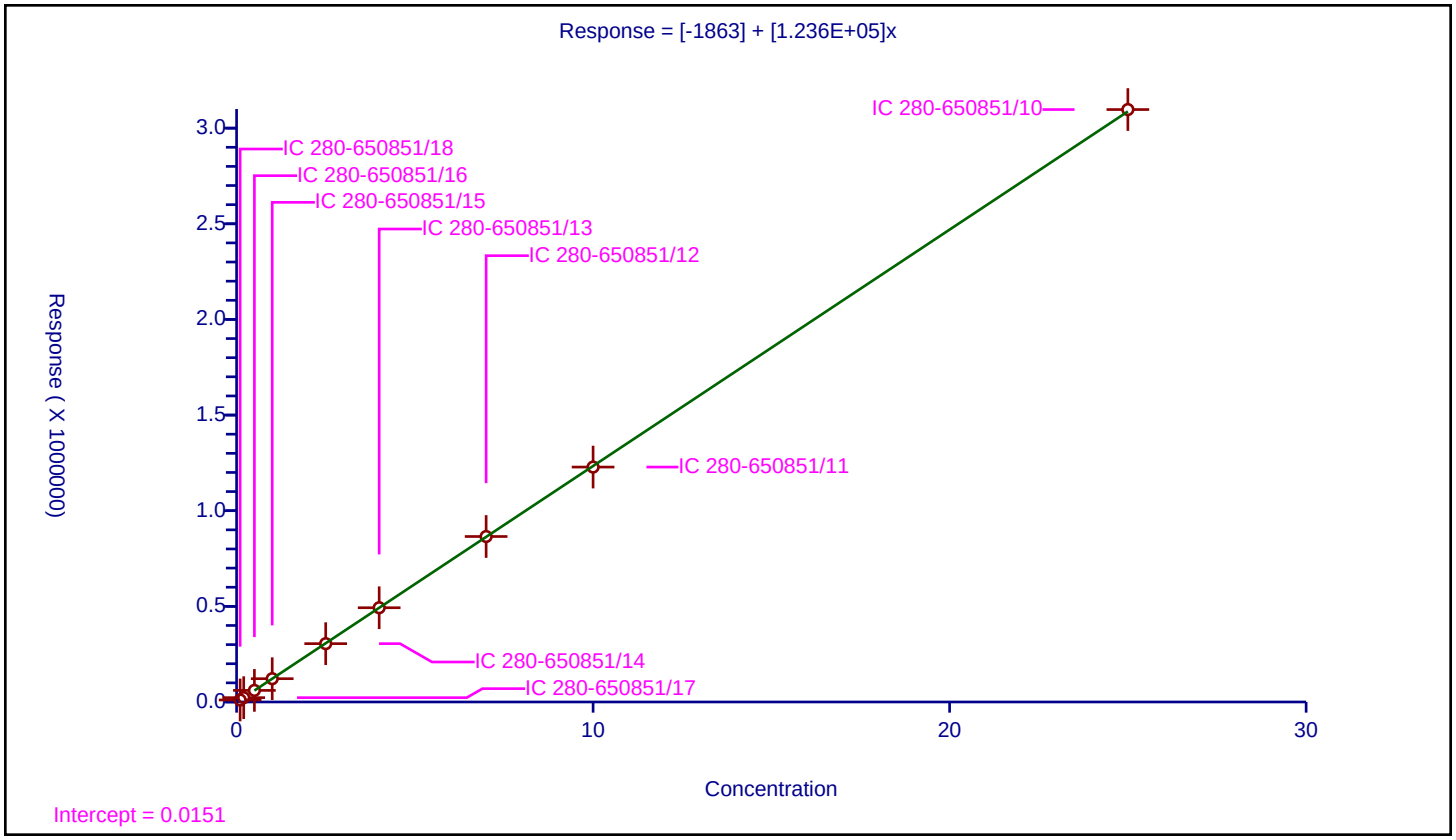
Curve Coefficients

Intercept:	-1863
Slope:	1.236E+05

Error Coefficients

Relative Standard Deviation:	0.7

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-650851/18	0.1	10531.0			105310.0	Y
2	IC 280-650851/17	0.2	22594.0			112970.0	Y
3	IC 280-650851/16	0.5	60616.0			121232.0	Y
4	IC 280-650851/15	1.0	121831.0			121831.0	Y
5	IC 280-650851/14	2.5	304928.0			121971.2	Y
6	IC 280-650851/13	4.0	492803.0			123200.75	Y
7	IC 280-650851/12	7.0	865110.0			123587.142857	Y
8	IC 280-650851/11	10.0	1228090.0			122809.0	Y
9	IC 280-650851/10	25.0	3097249.0			123889.96	Y



FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: Eurofins Denver | Job No.: 280-200203-1 | 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
2,4,6-Trinitrophenol	+++++	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
o-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
p-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
m-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 (Surr)	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.: 280-200203-1 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		203077.887				1.9		20.0			
HMX	93000 97508 95522	106250 97445	99580 96131	87750 96690	Ave		96652.9365				5.1		20.0			
DNX	140460 150134 150243	140060 149128	146114 149306	141349 147581	Ave		146041.715				2.9		20.0			
MNX	139160 134612 134910	126735 131392	131962 133087	131422 133128	Ave		132934.348				2.5		20.0			
RDX	126400 106776 105154	104900 106223	107720 104480	107730 106956	Lin2	173.498292	104832.257							0.9990		0.9900
2,4,6-Trinitrophenol	+++++ 75344 74908	77950 75140	76140 74266	73910 75756	Ave		75426.7643				1.7		20.0			
1,3,5-Trinitrobenzene	220300 214216 215272	214050 212963	233920 212653	214070 218705	Ave		217349.773				3.1		20.0			
1,3-Dinitrobenzene	301200 294592 296094	302700 296218	301160 293594	296590 301939	Ave		298231.910				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.: 280-200203-1 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		195177.925				2.1		20.0			
3,5-Dinitroaniline	223700 227780 235024	233250 231803	231220 229723	232920 238621	Lin2	-77.787847	233196.469							1.0000		0.9900
Tetryl	164200 169664 172761	155150 166958	171240 168961	171300 179110	Lin2	-117.30615	171283.726							0.9990		0.9900
Nitroglycerin	61210 65034 64690	60715 64271	64318 63656	63200 65375	Lin2	-403.23201	64455.8736							1.0000		0.9900
2,4,6-Trinitrotoluene	225700 213288 217208	219100 214585	218880 212211	216850 217864	Ave		217298.492				1.8		20.0			
4-Amino-2,6-dinitrotoluene	209900 146676 143972	167850 143735	155020 144779	151470 148480	Lin2	625.424427	143718.940							0.9990		0.9900
2-Amino-4,6-dinitrotoluene	202900 201384 207688	211200 199510	204980 198944	206120 208057	Ave		204531.476				2.0		20.0			
2,6-Dinitrotoluene	160000 139512 134291	146450 143753	146900 142416	143340 141490	Lin2	188.154614	140280.930							0.9990		0.9900
2,4-Dinitrotoluene	296800 287776 296269	296350 284400	286560 284846	297230 296080	Ave		291812.279				2.0		20.0			
o-Nitrotoluene	127300 124236 126481	120550 124605	129460 124796	124870 126917	Ave		125468.324				2.0		20.0			
p-Nitrotoluene	122900 107584 109290	117150 107470	113220 107763	106240 109373	Lin2	157.366410	107910.700							1.0000		0.9900
m-Nitrotoluene	159800 134928 138727	149600 135250	138940 134671	133450 138022	Lin2	249.900612	135119.434							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.: 280-200203-1 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								
PETN	70530 72744 73523	68860 72834	72696 72584	71766 74375	Ave		72212.329 2				2.3		20.0			
1,2-Dinitrobenzene (Surr)	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.: 280-200203-1 | 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 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
TNX	Ave	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
2,4,6-Trinitrophenol	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.: 280-200203-1 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 57501	2929 99691	7345 141490	14334 335728	34878	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
2,4-Dinitrotoluene	Ave	2968 113760	5927 199392	14328 296080	29723 740672	71944	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
o-Nitrotoluene	Ave	1273 49842	2411 87357	6473 126917	12487 316203	31059	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
p-Nitrotoluene	Lin2	1229 42988	2343 75434	5661 109373	10624 273226	26896	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
m-Nitrotoluene	Lin2	1598 54100	2992 94270	6947 138022	13345 346817	33732	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
PETN	Ave	7053 291336	13772 508089	36348 743747	71766 1838063	181859	0.100 4.00	0.200 7.00	0.500 10.0	1.00 25.0	2.50
1,2-Dinitrobenzene (Surr)	Ave	1315 51425	2530 89703	6795 130220	13238 328696	32250	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250

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.)	Dlt 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

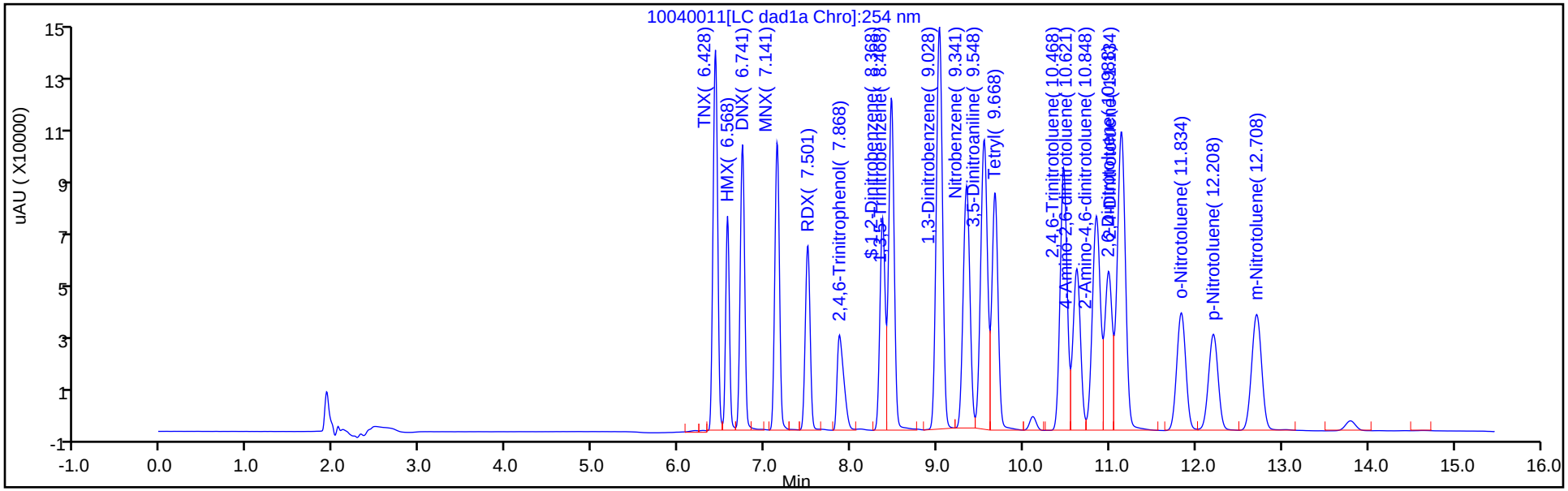
Report Date: 08-Oct-2024 13:19:10 Chrom Revision: 2.3 24-Sep-2024 15:19:46

Eurofins Denver

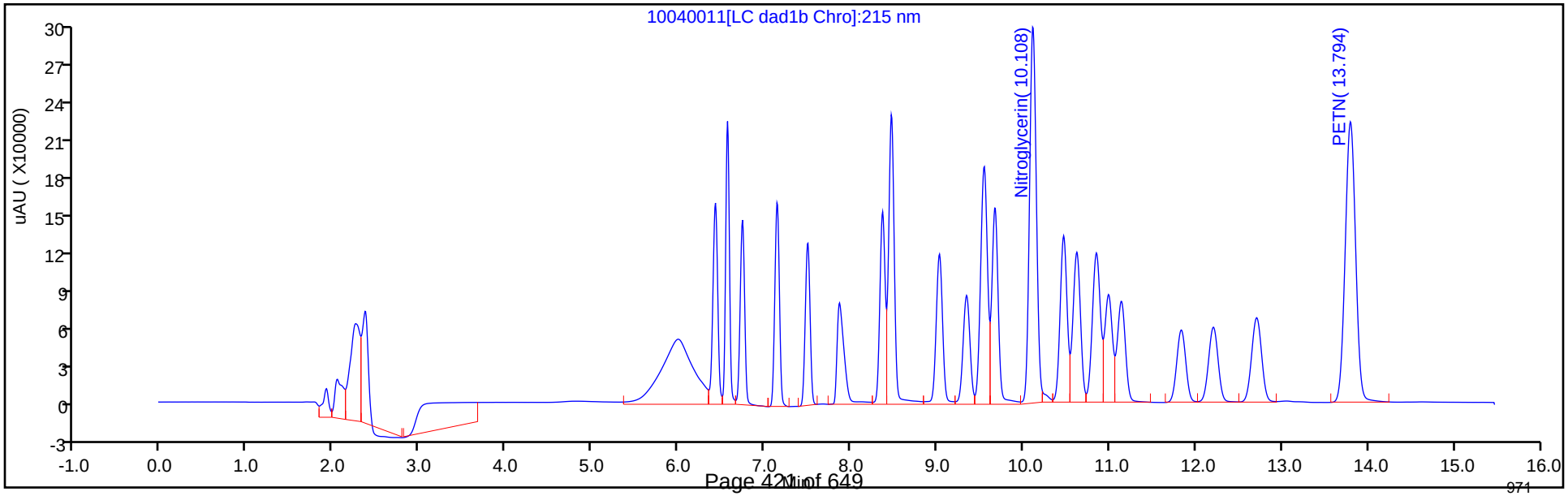
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040011.d

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



Manual Integration/User Assign Peak Report

Eurofins Denver

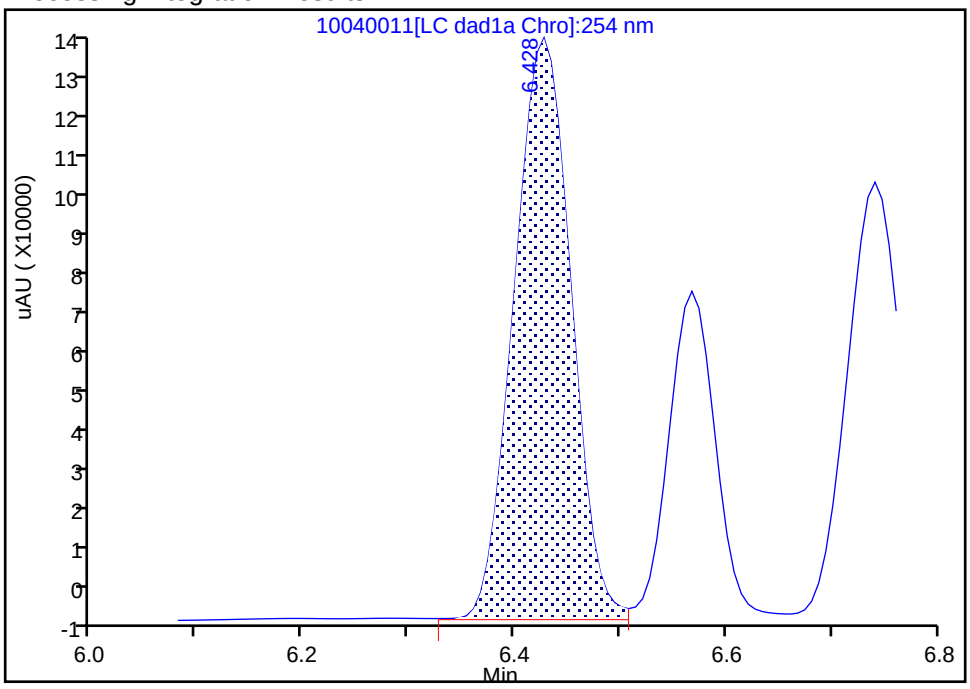
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040011.d				
Injection Date:	04-Oct-2024 16:59:29	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 9				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

3 TNX, CAS: 13980-04-6

Signal: 1

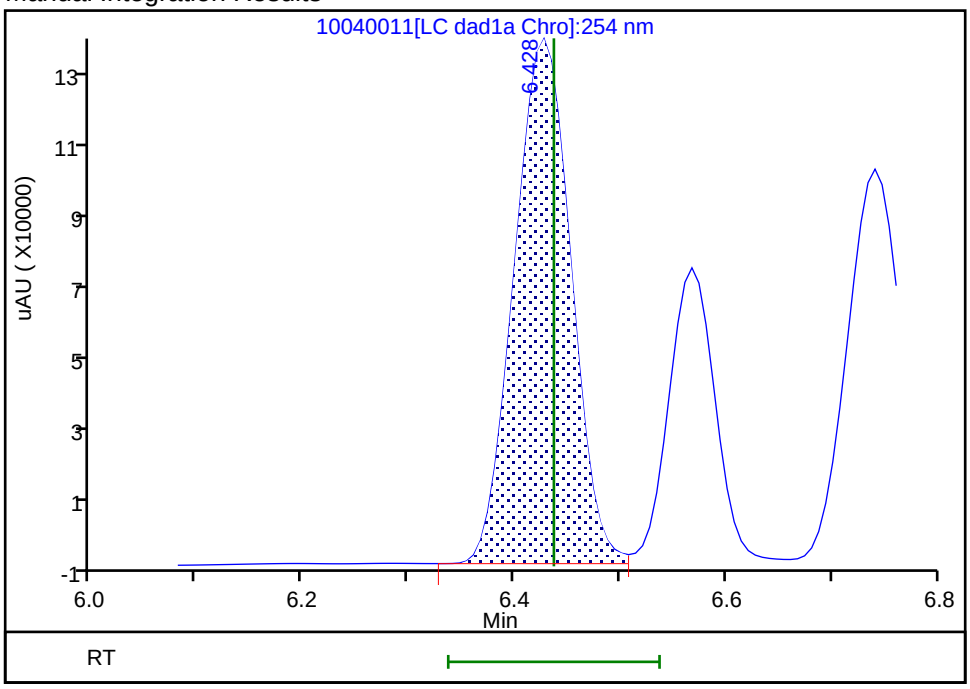
Processing Integration Results

RT: 6.43
Area: 518719
Amount: 2.507500
Amount Units: ug/mL



Manual Integration Results

RT: 6.43
Area: 516807
Amount: 2.544871
Amount Units: ug/mL



Reviewer: LV5D, 04-Oct-2024 17:24:16 -06:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

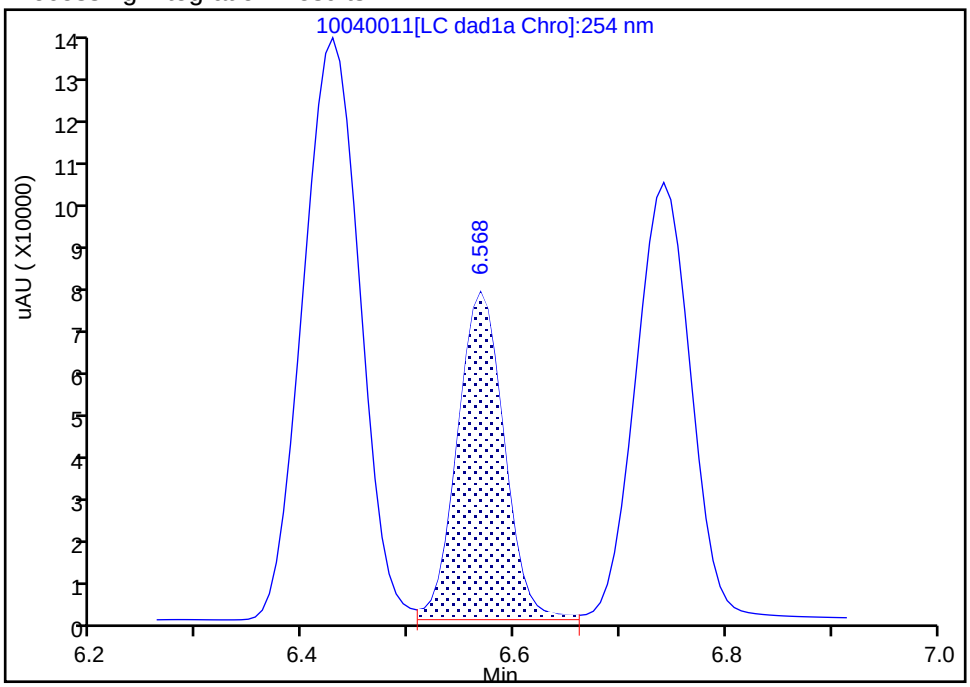
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040011.d				
Injection Date:	04-Oct-2024 16:59:29	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 9				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

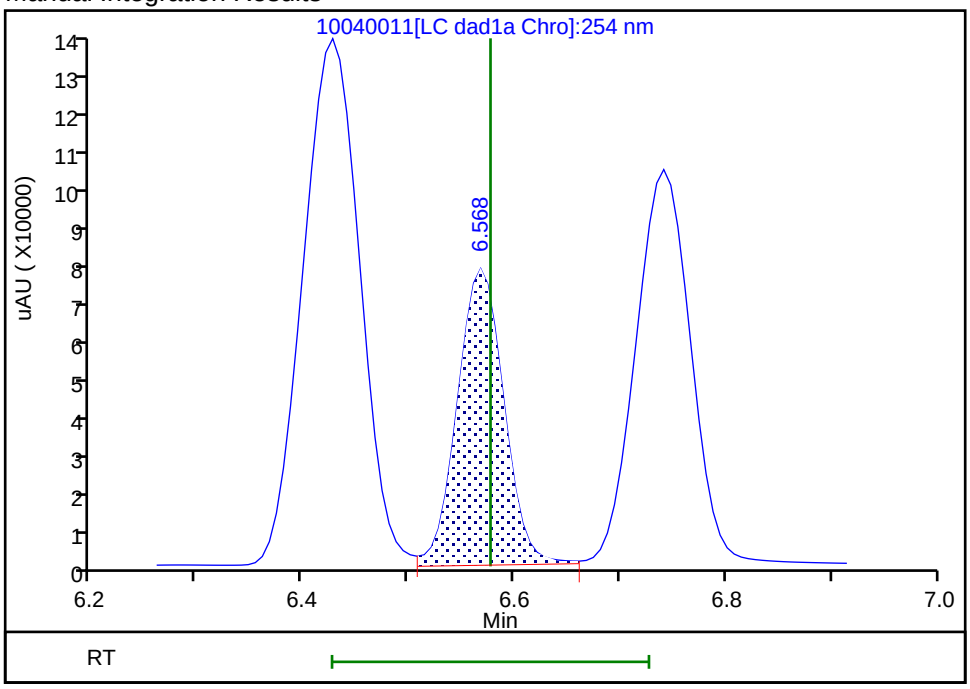
Processing Integration Results

RT: 6.57
Area: 239730
Amount: 2.500000
Amount Units: ug/mL



Manual Integration Results

RT: 6.57
Area: 238805
Amount: 2.470747
Amount Units: ug/mL



Reviewer: LV5D, 04-Oct-2024 17:24:16 -06:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

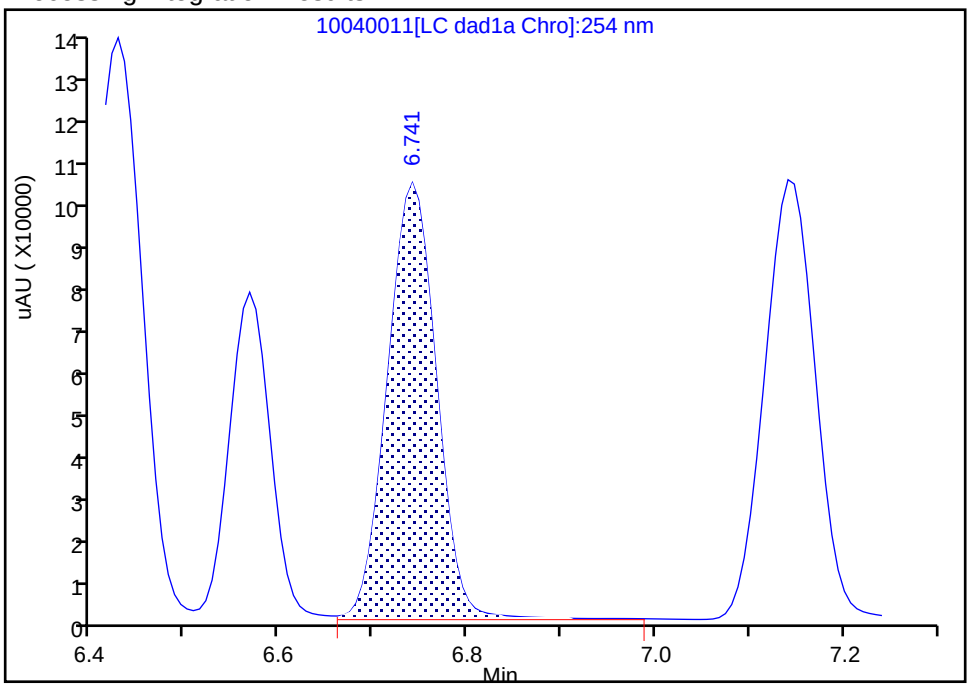
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040011.d				
Injection Date:	04-Oct-2024 16:59:29	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 9				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

6 DNX, CAS: 80251-29-2

Signal: 1

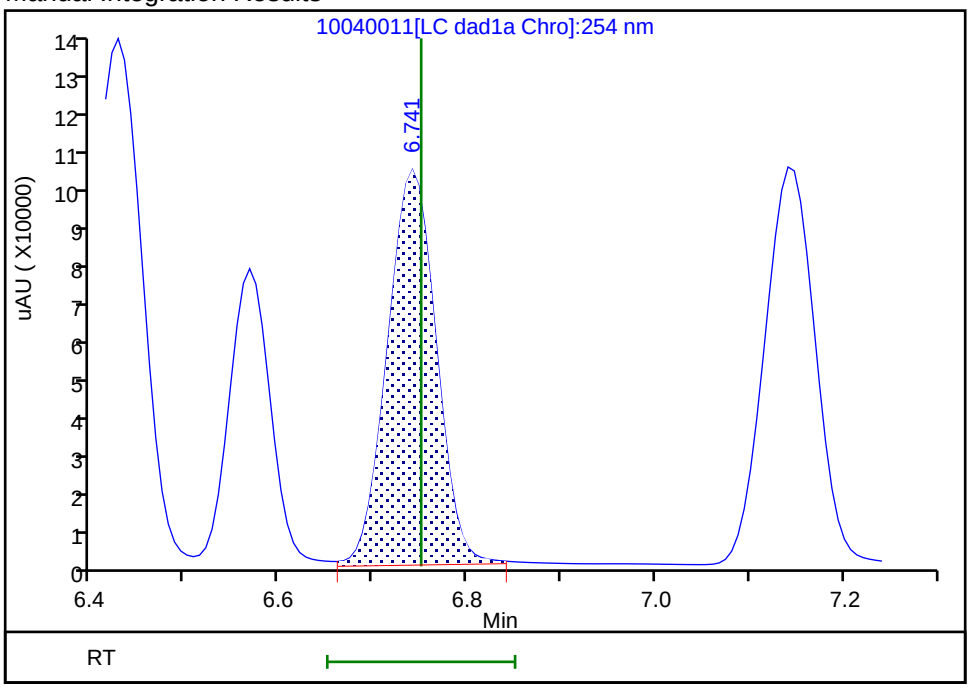
Processing Integration Results

RT: 6.74
Area: 379790
Amount: 2.502500
Amount Units: ug/mL



Manual Integration Results

RT: 6.74
Area: 375984
Amount: 2.574497
Amount Units: ug/mL



Reviewer: LV5D, 04-Oct-2024 17:24:19 -06:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

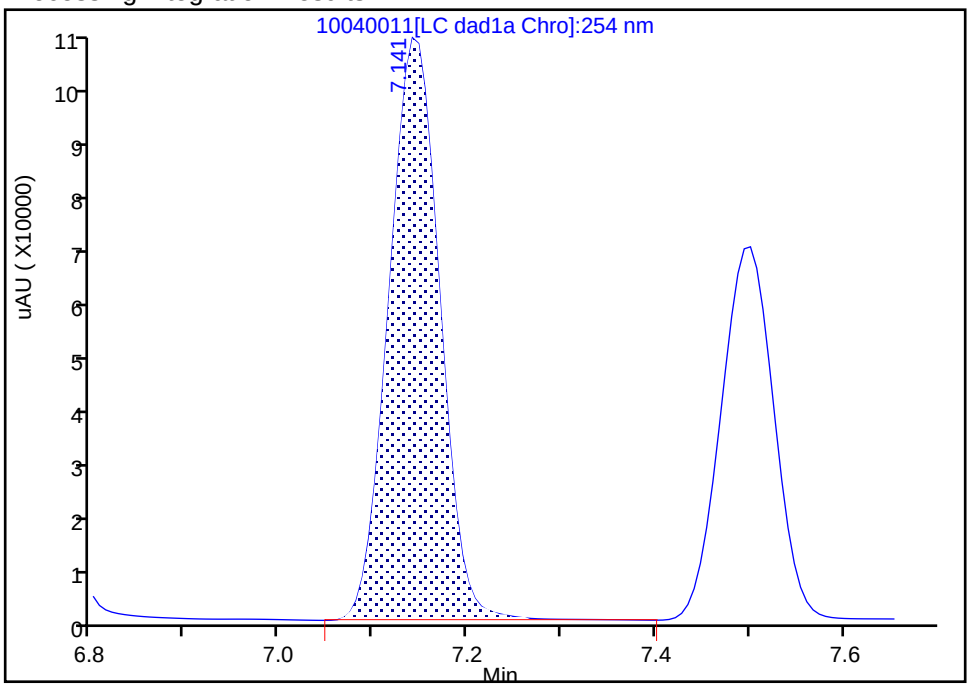
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040011.d
Injection Date: 04-Oct-2024 16:59:29 Instrument ID: CHHPLC_X3
Lims ID: IC INT/DMT 9
Client ID:
Operator ID: JZ ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

7 MNX, CAS: 5755-27-1

Signal: 1

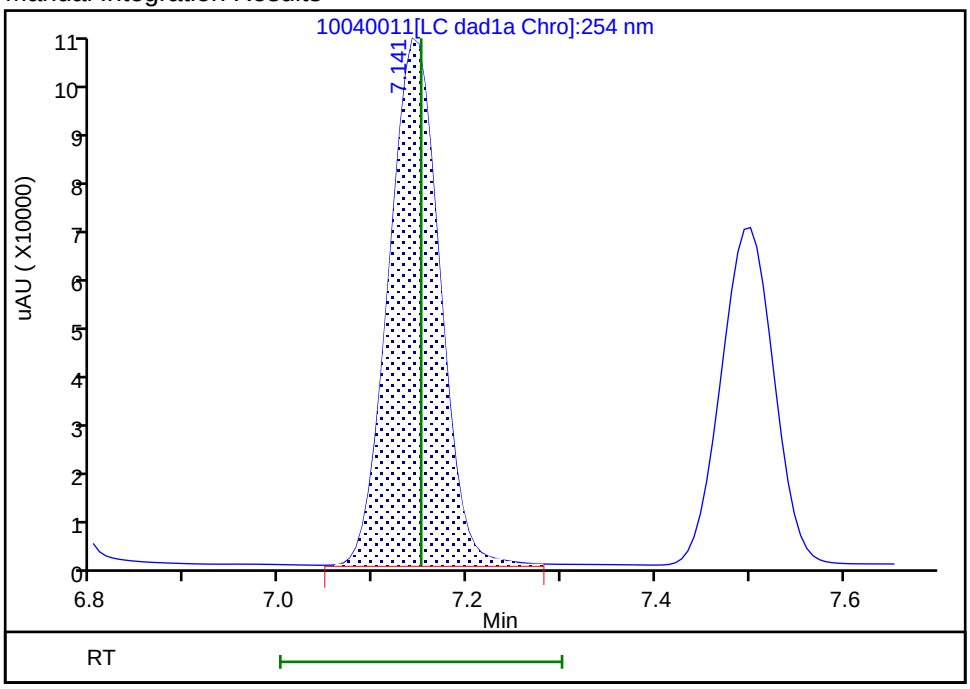
Processing Integration Results

RT: 7.14
Area: 394458
Amount: 2.917500
Amount Units: ug/mL



Manual Integration Results

RT: 7.14
Area: 393599
Amount: 2.960853
Amount Units: ug/mL



Reviewer: LV5D, 04-Oct-2024 17:24:24 -06:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

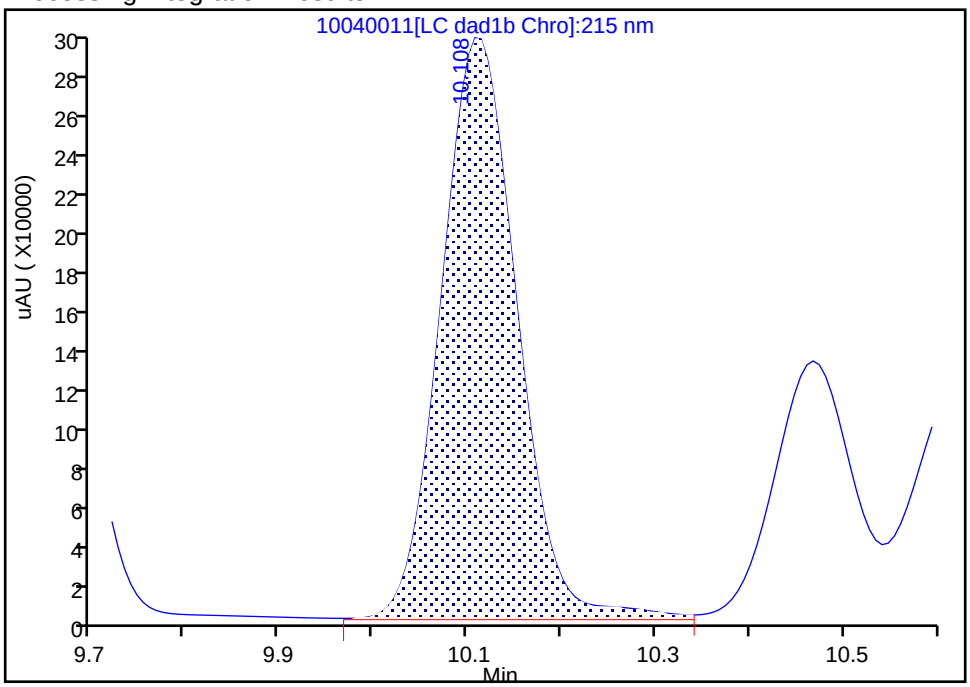
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040011.d				
Injection Date:	04-Oct-2024 16:59:29	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 9				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1C, 215 nm		

16 Nitroglycerin, CAS: 55-63-0

Signal: 1

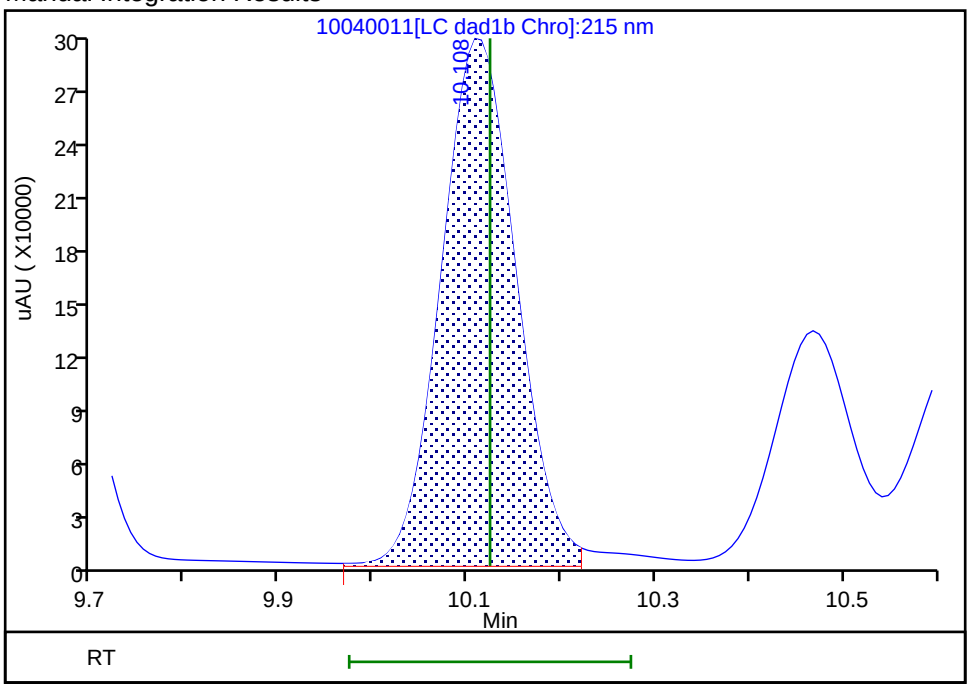
Processing Integration Results

RT: 10.11
Area: 1655248
Amount: 23.821068
Amount Units: ug/mL



Manual Integration Results

RT: 10.11
Area: 1617250
Amount: 25.097065
Amount Units: ug/mL



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

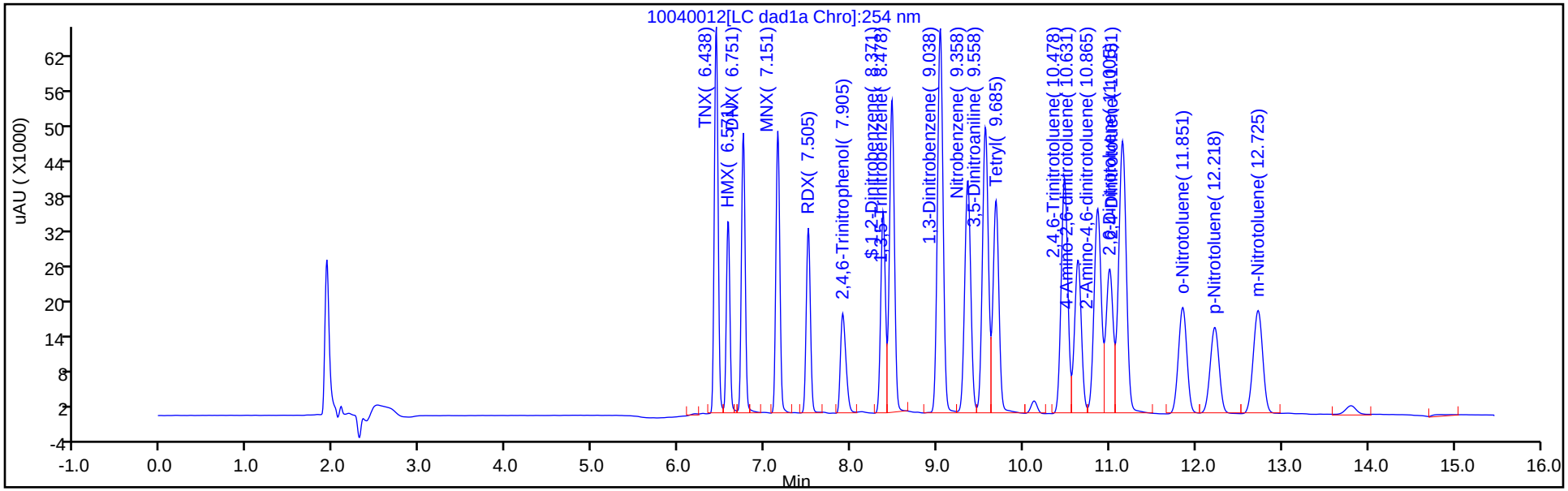
Report Date: 08-Oct-2024 13:19:12 Chrom Revision: 2.3 24-Sep-2024 15:19:46

Eurofins Denver

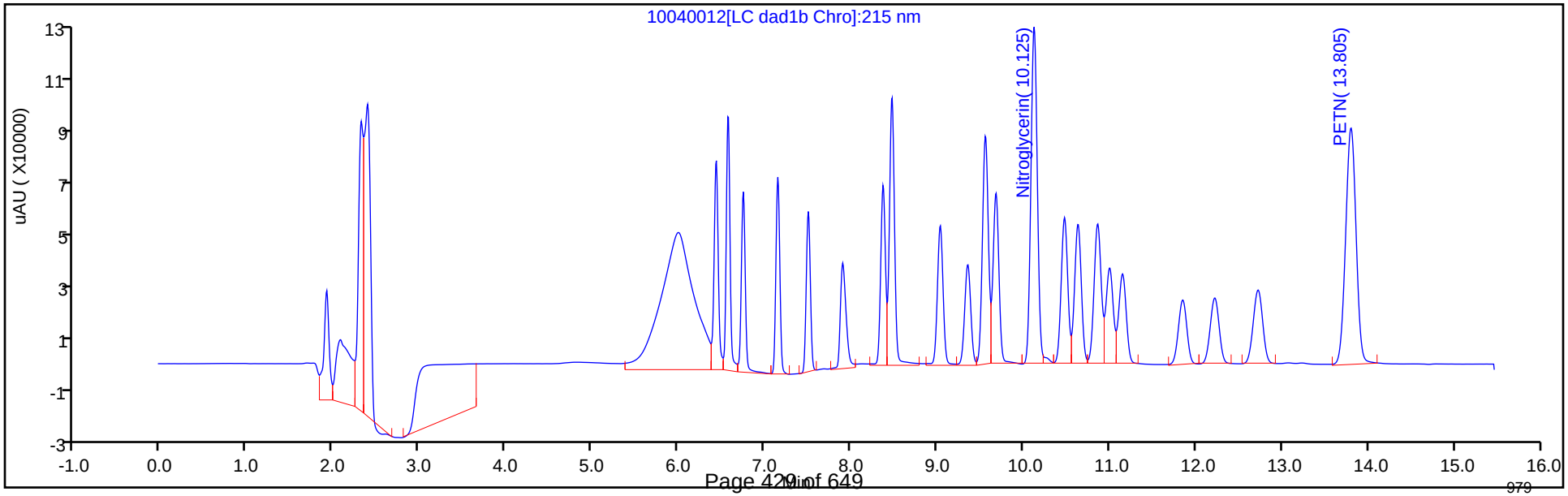
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040012.d

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



979

Manual Integration/User Assign Peak Report

Eurofins Denver

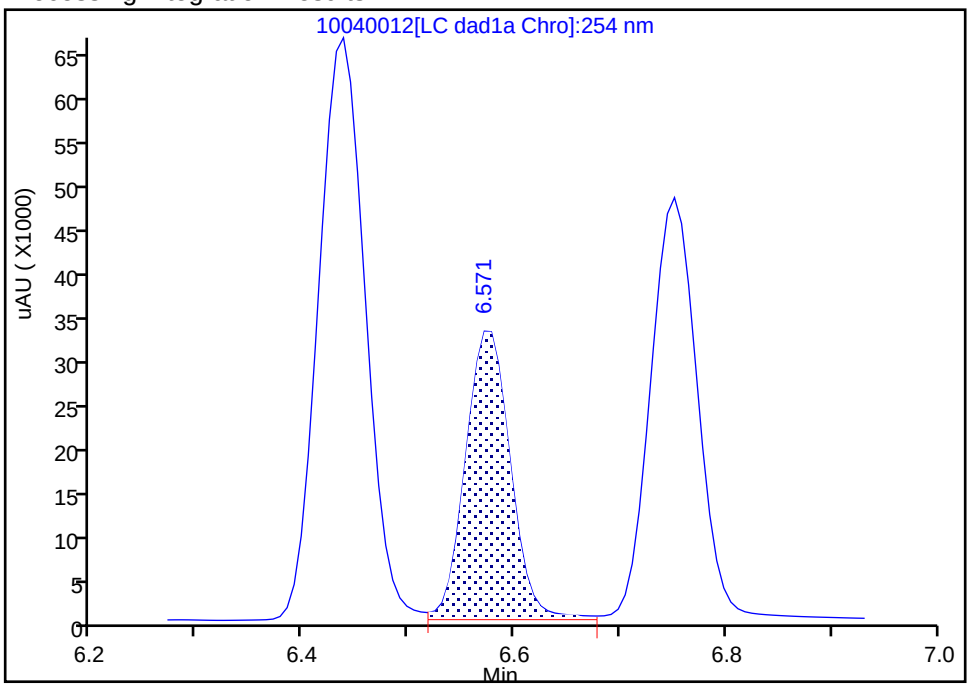
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040012.d				
Injection Date:	04-Oct-2024 17:21:25	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 8				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

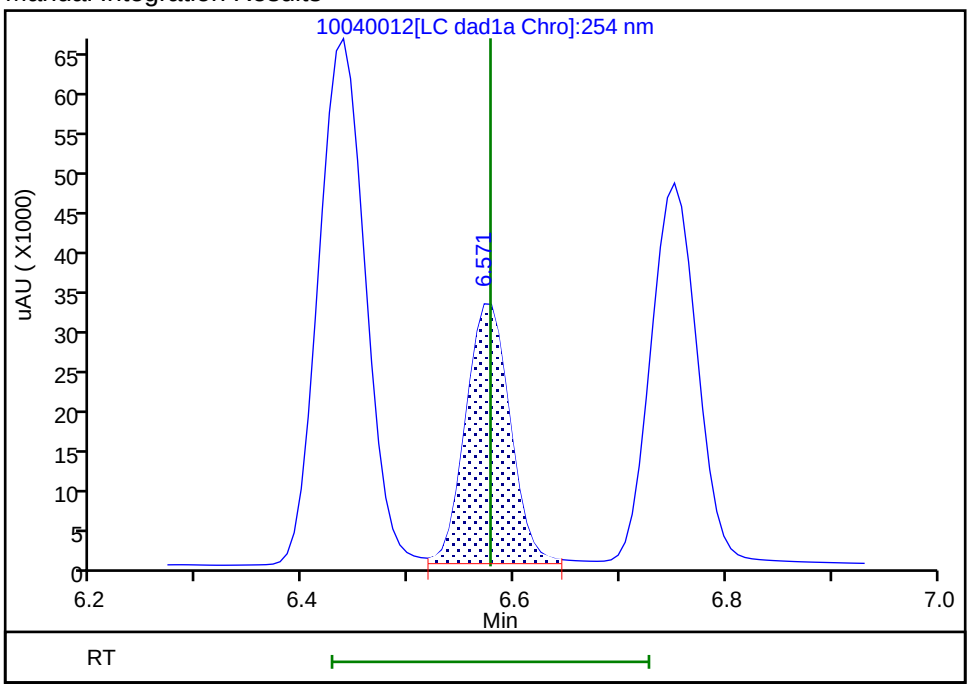
Processing Integration Results

RT: 6.57
Area: 97637
Amount: 1.048050
Amount Units: ug/mL



Manual Integration Results

RT: 6.57
Area: 96690
Amount: 1.000383
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 12:59:37 -06:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

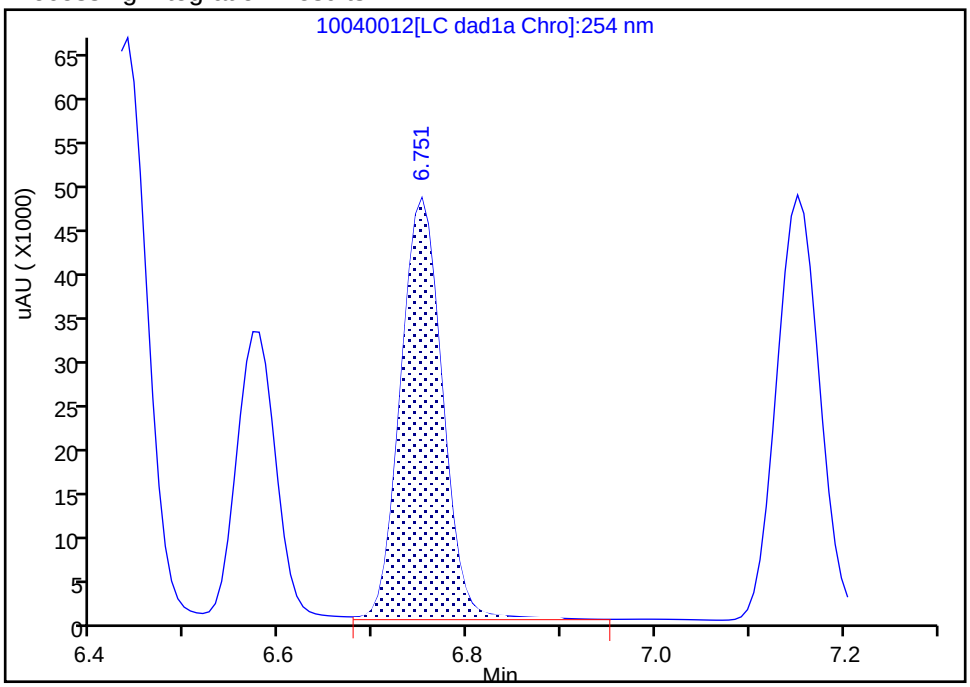
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040012.d
Injection Date: 04-Oct-2024 17:21:25 Instrument ID: CHHPLC_X3
Lims ID: IC INT/DMT 8
Client ID:
Operator ID: JZ ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

6 DNX, CAS: 80251-29-2

Signal: 1

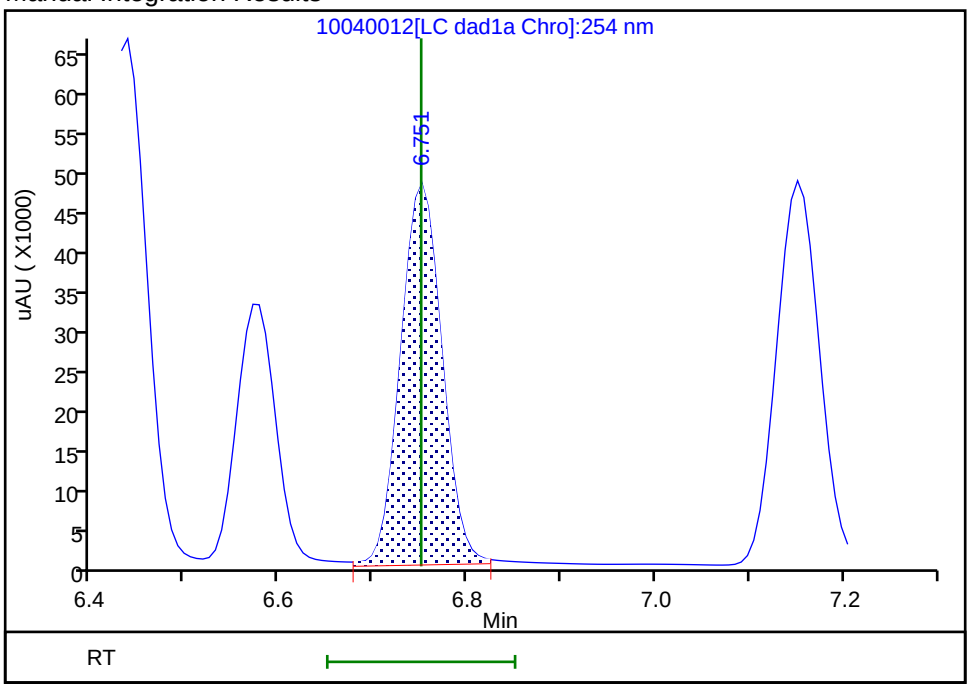
Processing Integration Results

RT: 6.75
Area: 149634
Amount: 0.974610
Amount Units: ug/mL



Manual Integration Results

RT: 6.75
Area: 147729
Amount: 1.011553
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 12:59:36 -06:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

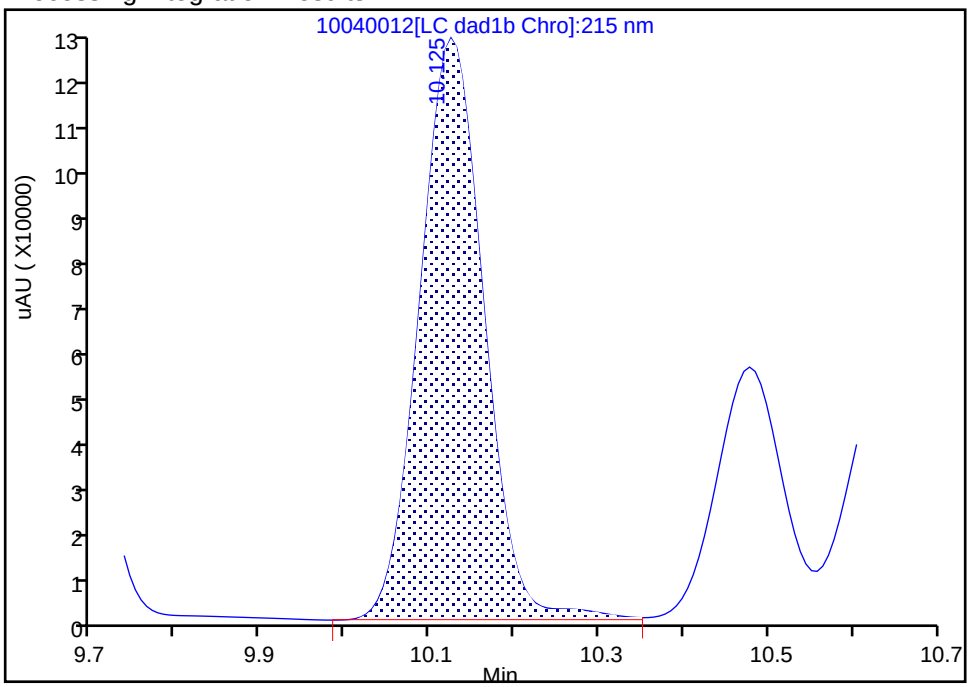
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040012.d				
Injection Date:	04-Oct-2024 17:21:25	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 8				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1C, 215 nm		

16 Nitroglycerin, CAS: 55-63-0

Signal: 1

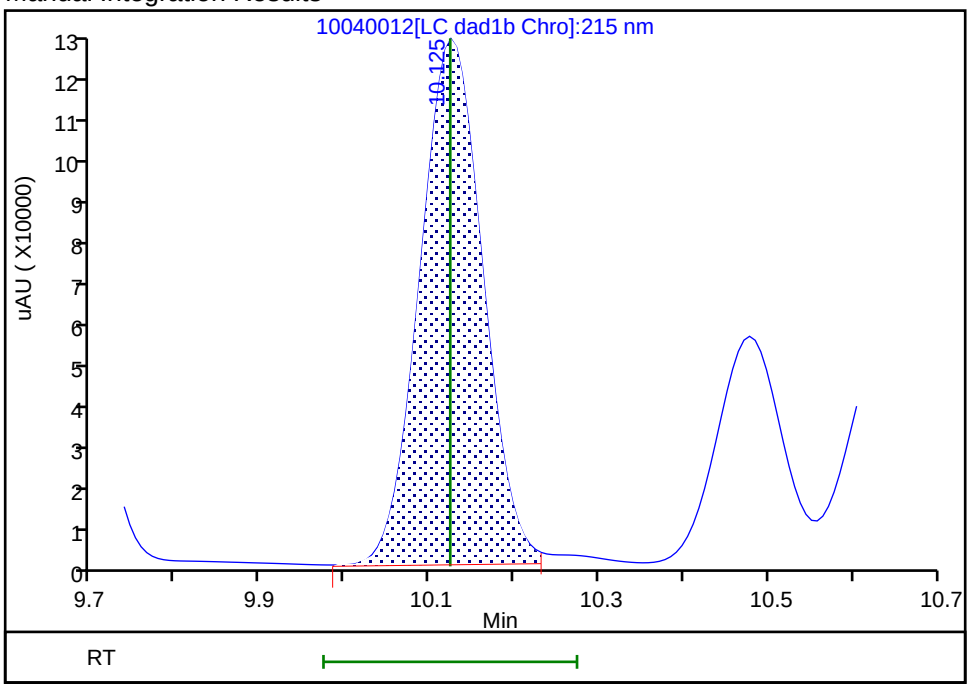
Processing Integration Results

RT: 10.12
Area: 665997
Amount: 9.607872
Amount Units: ug/mL



Manual Integration Results

RT: 10.12
Area: 653746
Amount: 10.148792
Amount Units: ug/mL



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

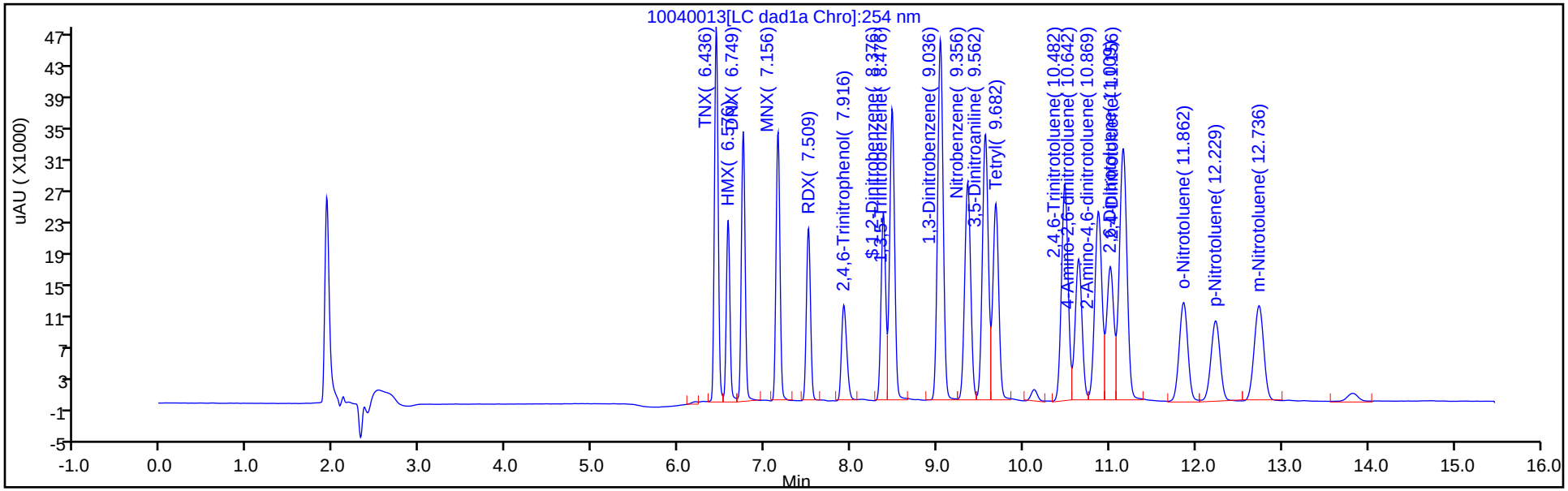
Report Date: 08-Oct-2024 13:19:14 Chrom Revision: 2.3 24-Sep-2024 15:19:46

Eurofins Denver

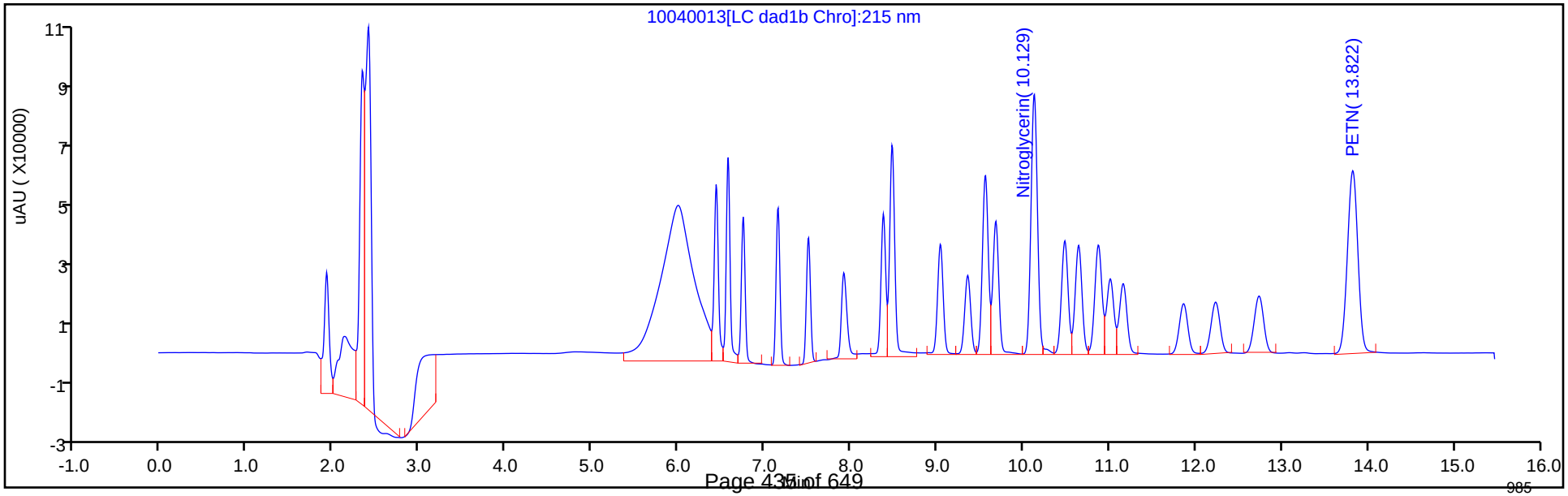
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040013.d

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



Manual Integration/User Assign Peak Report

Eurofins Denver

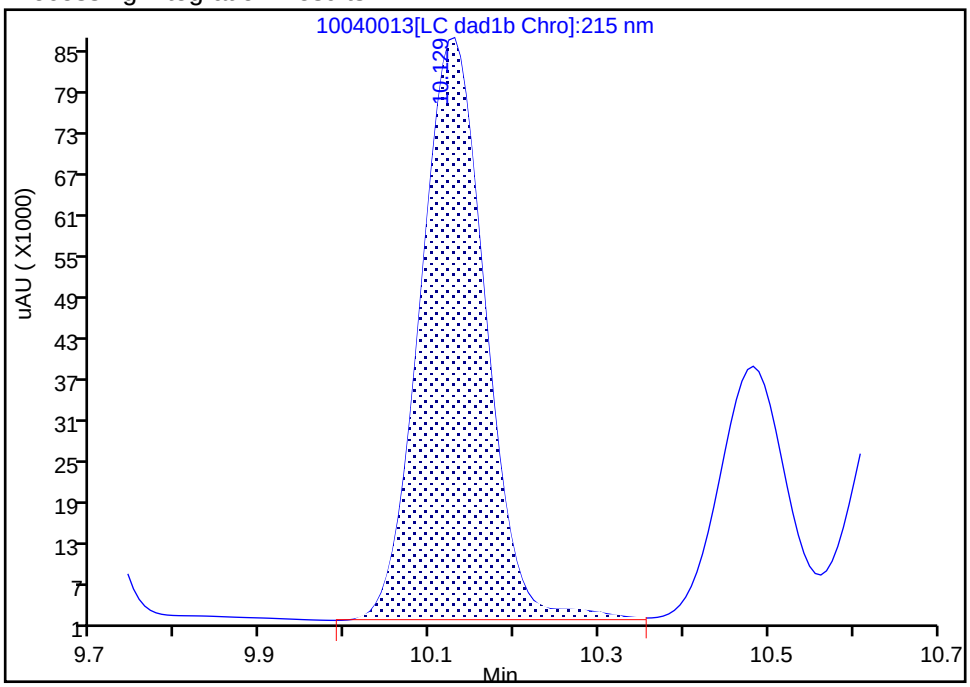
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Injection Date: 04-Oct-2024 17:43:18 Instrument ID: CHHPLC_X3
Lims ID: IC INT/DMT 7
Client ID:
Operator ID: JZ ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1C, 215 nm

16 Nitroglycerin, CAS: 55-63-0

Signal: 1

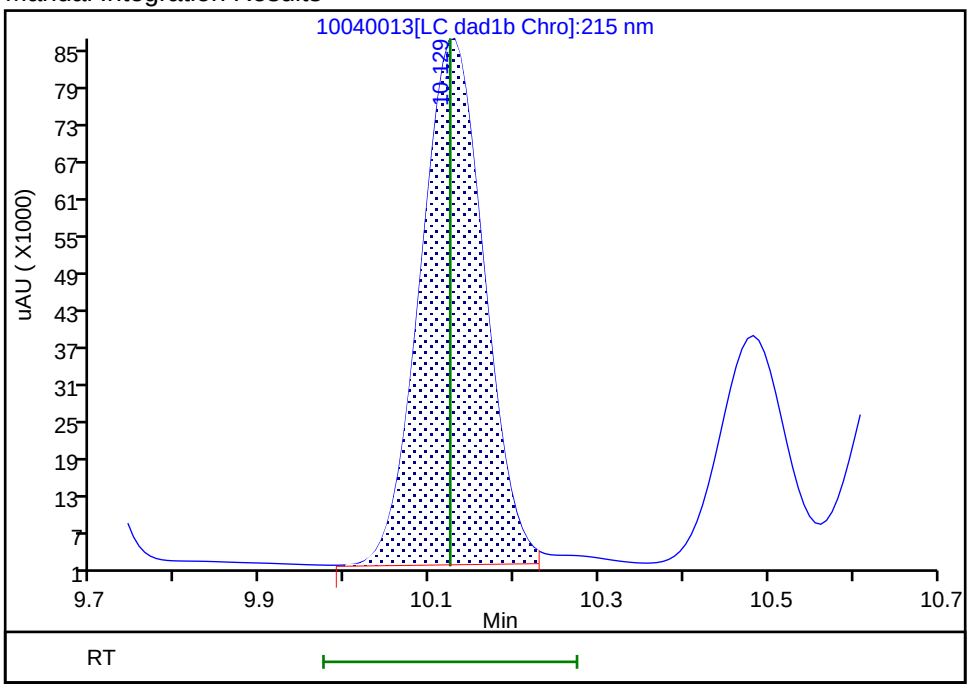
Processing Integration Results

RT: 10.13
Area: 453503
Amount: 6.555243
Amount Units: ug/mL



Manual Integration Results

RT: 10.13
Area: 445595
Amount: 6.919435
Amount Units: ug/mL



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

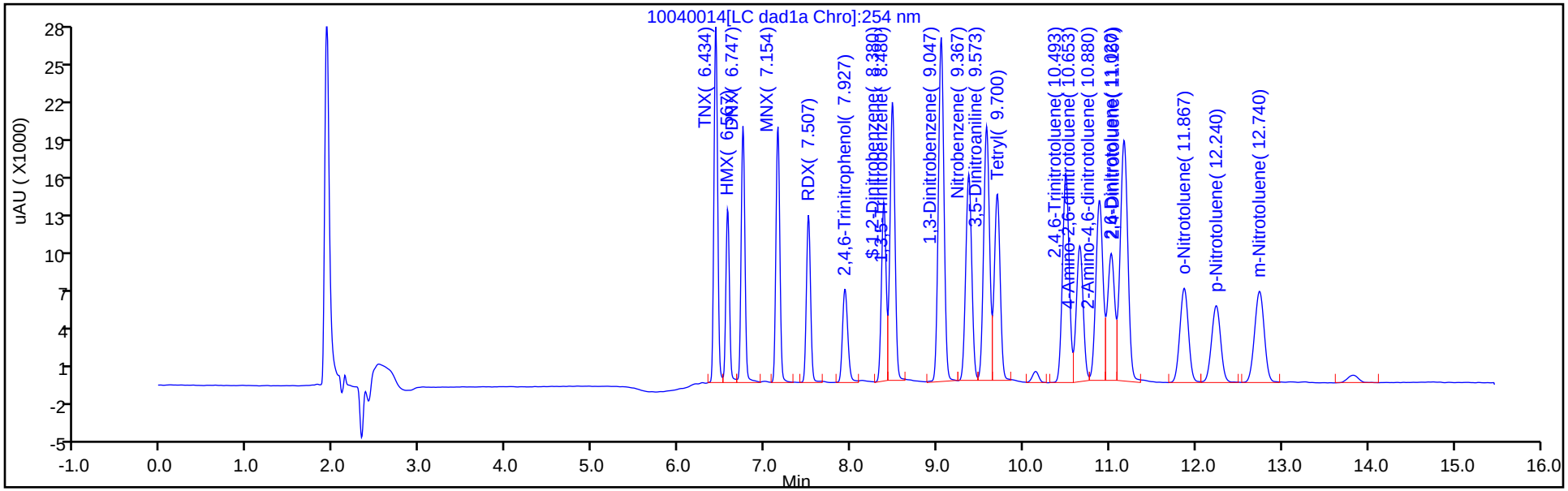
Report Date: 08-Oct-2024 13:19:16 Chrom Revision: 2.3 24-Sep-2024 15:19:46

Eurofins Denver

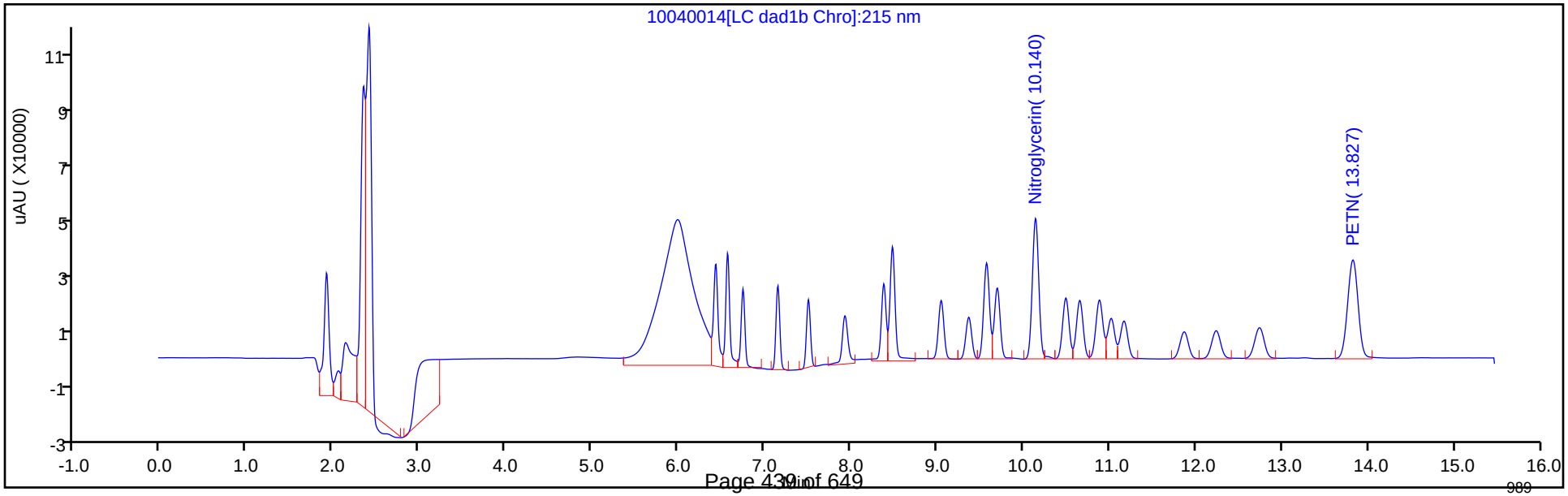
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040014.d

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



Manual Integration/User Assign Peak Report

Eurofins Denver

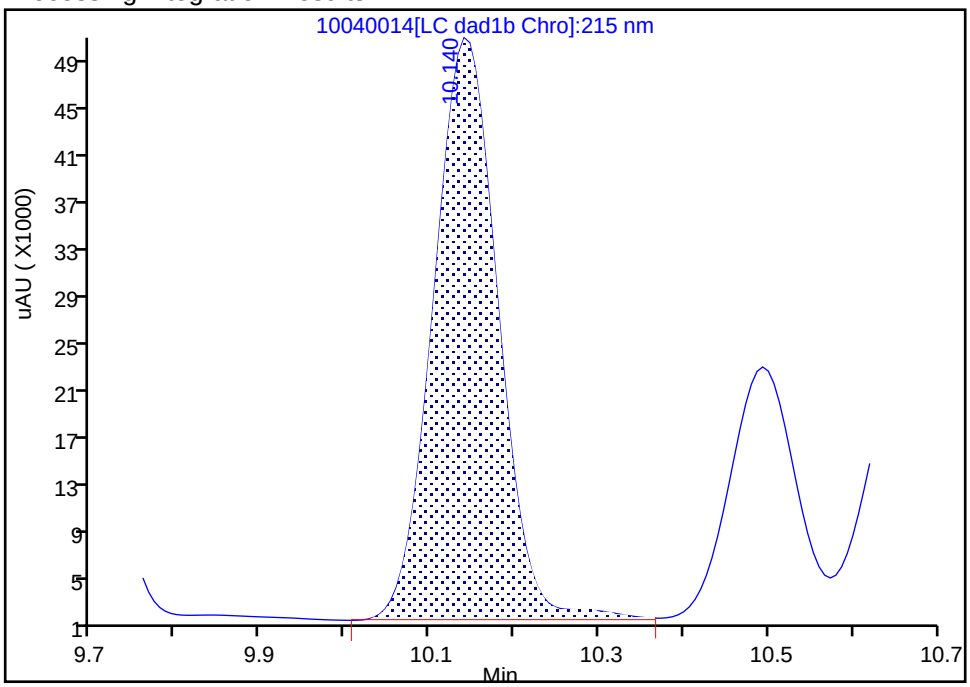
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040014.d				
Injection Date:	04-Oct-2024 18:05:18	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 6				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1C, 215 nm		

16 Nitroglycerin, CAS: 55-63-0

Signal: 1

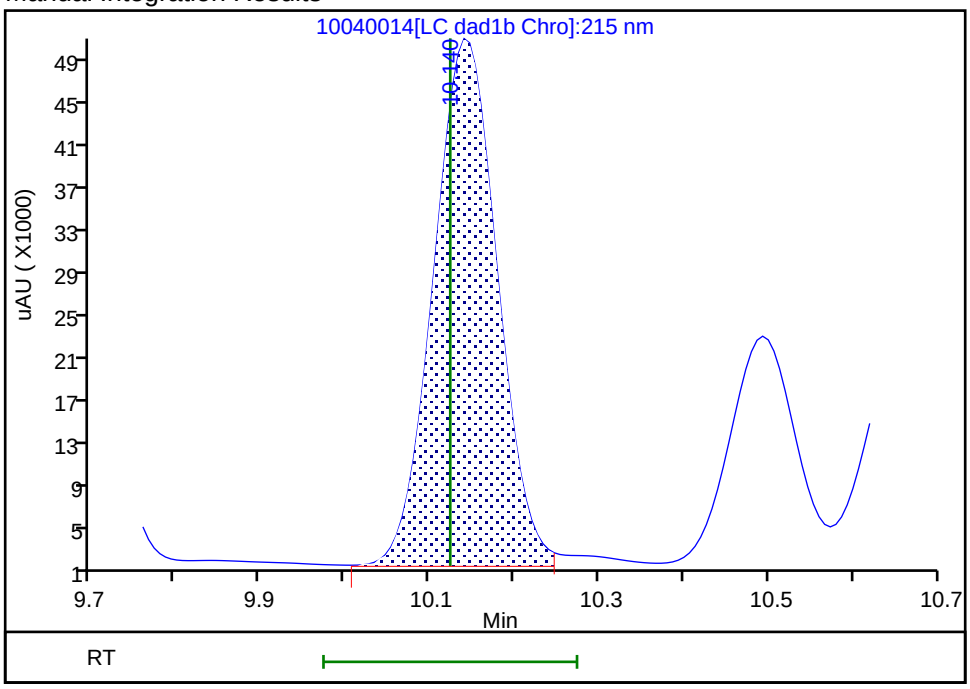
Processing Integration Results

RT: 10.14
Area: 261803
Amount: 3.791159
Amount Units: ug/mL



Manual Integration Results

RT: 10.14
Area: 257082
Amount: 3.994752
Amount Units: ug/mL



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

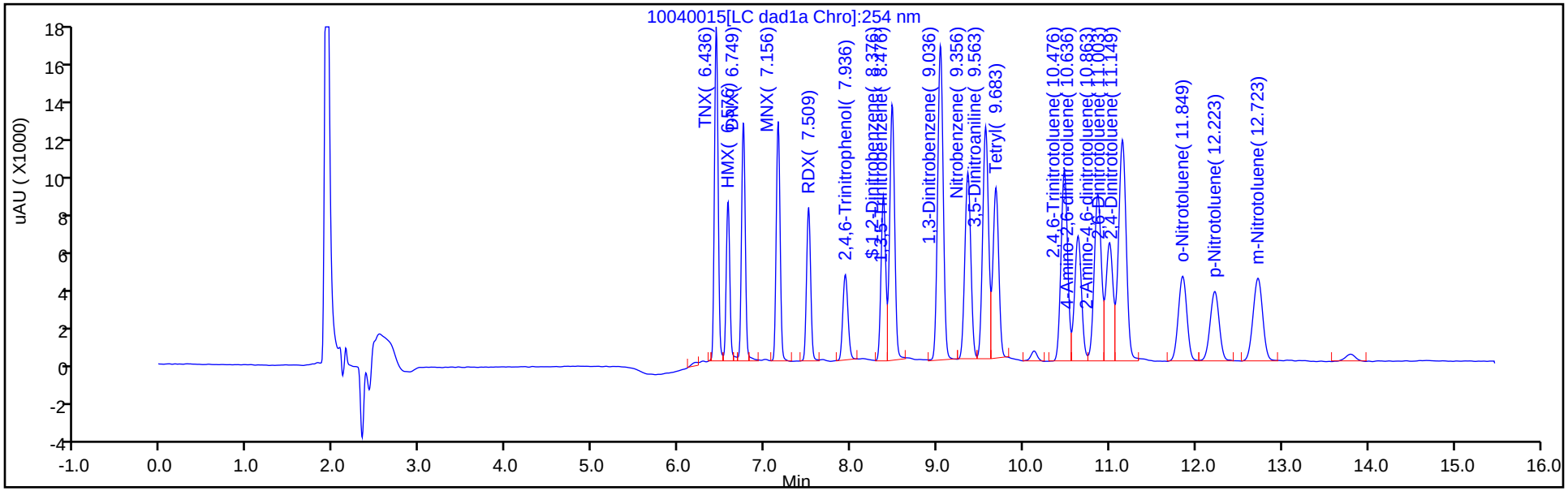
Report Date: 08-Oct-2024 13:19:18 Chrom Revision: 2.3 24-Sep-2024 15:19:46

Eurofins Denver

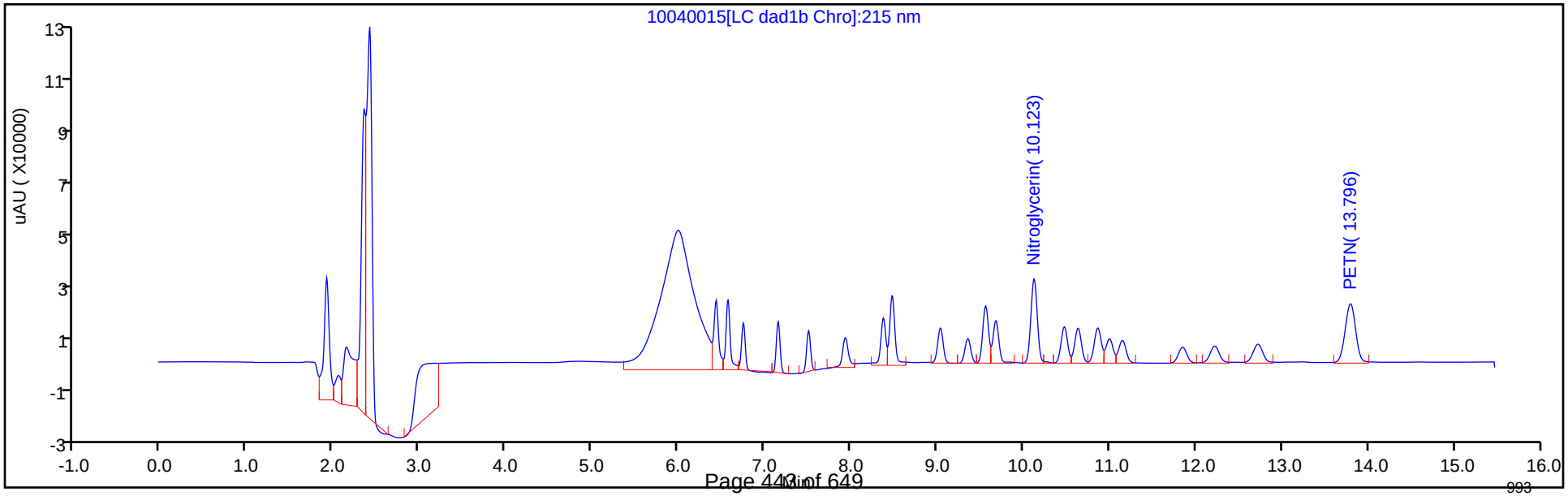
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040015.d

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



Manual Integration/User Assign Peak Report

Eurofins Denver

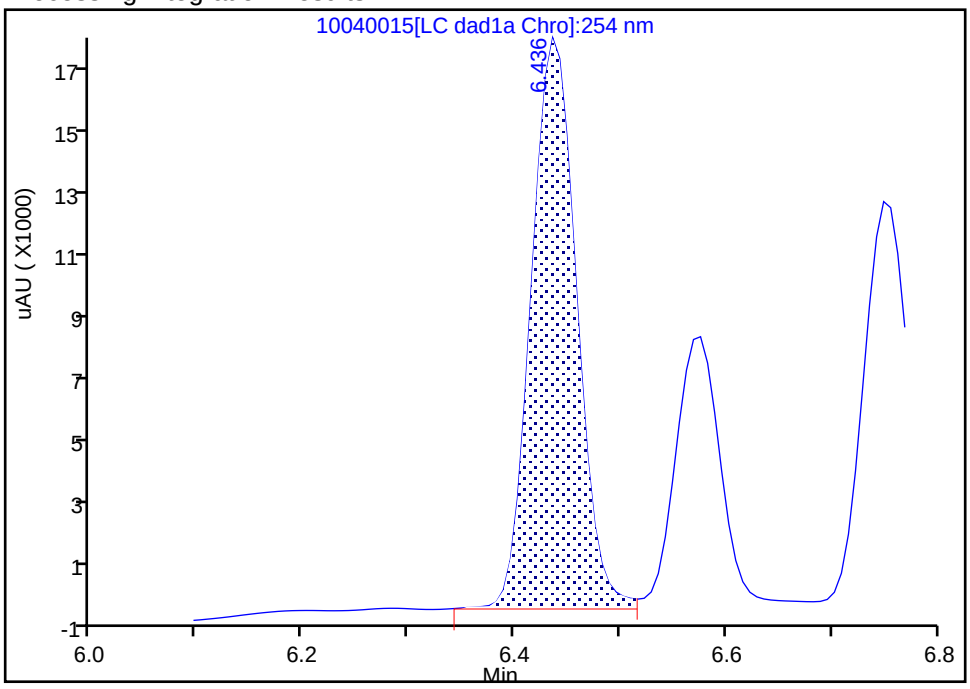
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Injection Date:	04-Oct-2024 18:27:10	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 5				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

3 TNX, CAS: 13980-04-6

Signal: 1

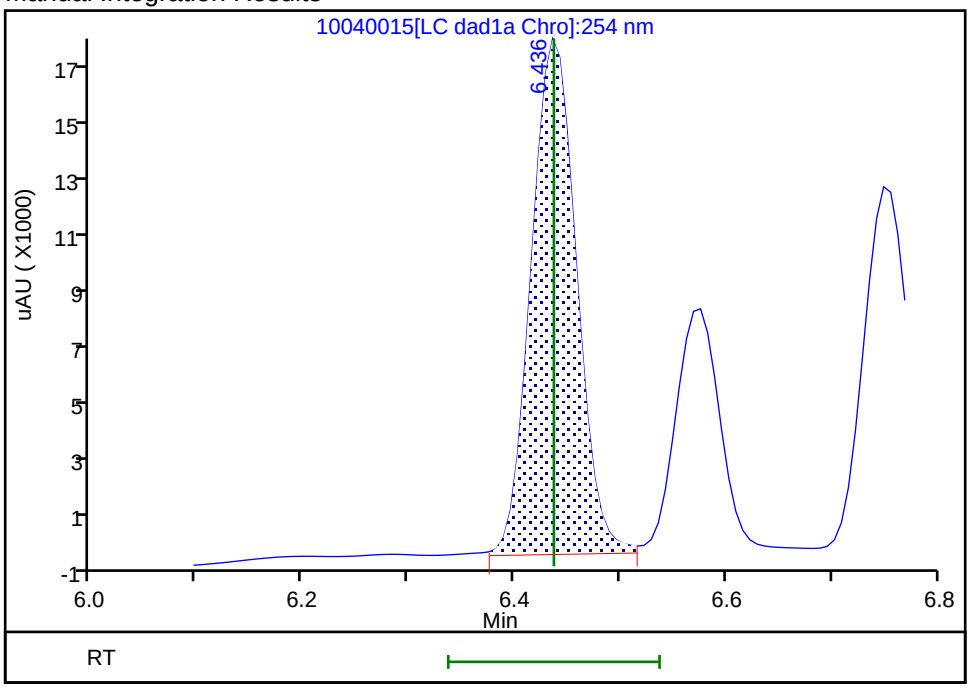
Processing Integration Results

RT: 6.44
Area: 52071
Amount: 0.246404
Amount Units: ug/mL



Manual Integration Results

RT: 6.44
Area: 51995
Amount: 0.256035
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:01:42 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

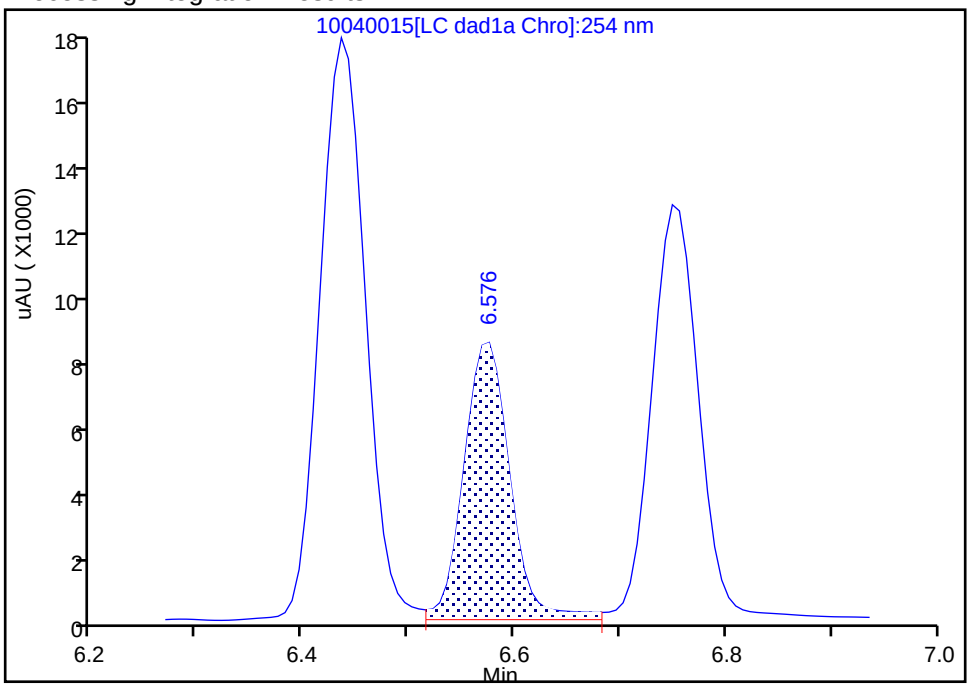
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040015.d				
Injection Date:	04-Oct-2024 18:27:10	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 5				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

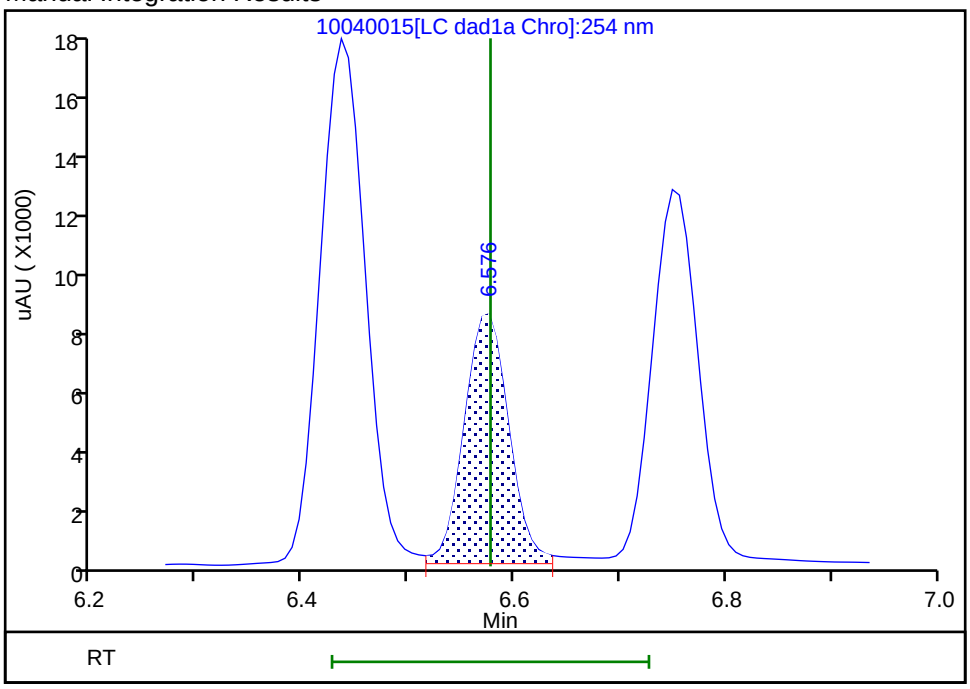
Processing Integration Results

RT: 6.58
Area: 24952
Amount: 0.261690
Amount Units: ug/mL



Manual Integration Results

RT: 6.58
Area: 24377
Amount: 0.252212
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:01:43 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

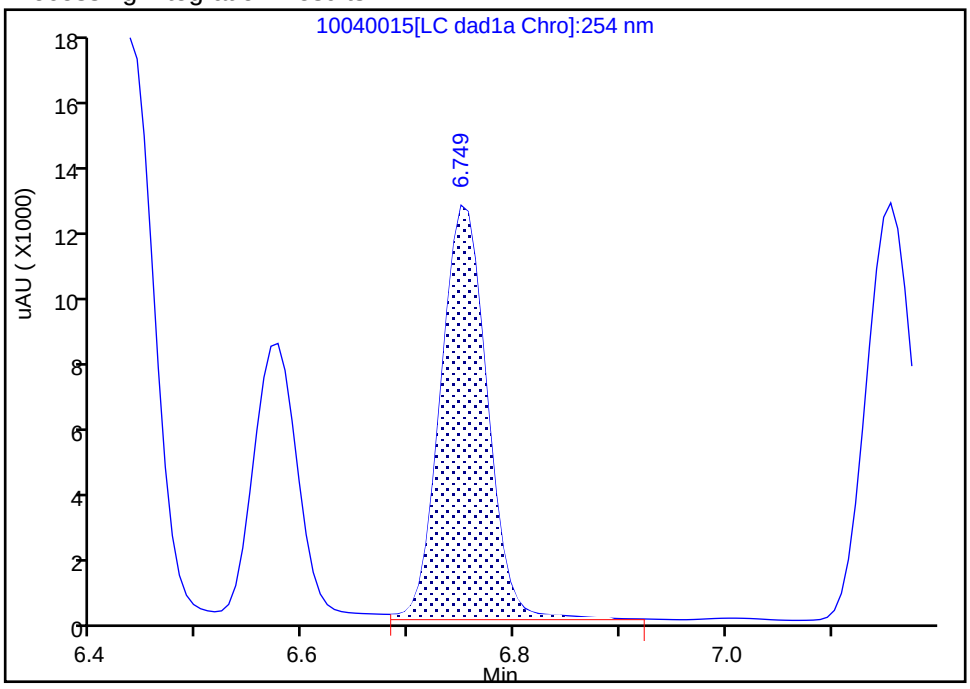
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Injection Date:	04-Oct-2024 18:27:10	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 5				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

6 DNX, CAS: 80251-29-2

Signal: 1

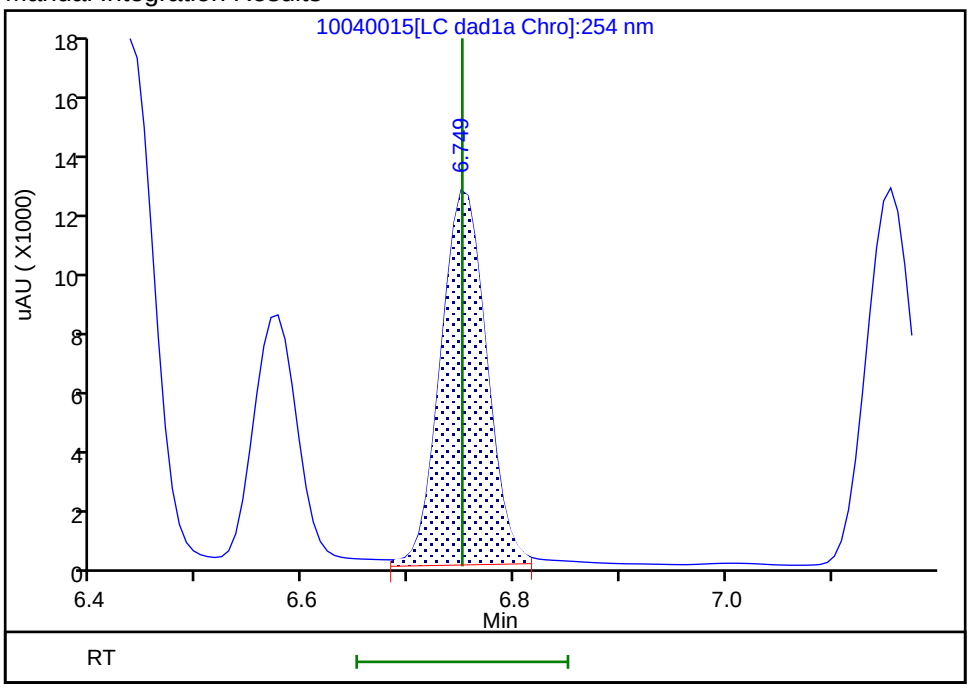
Processing Integration Results

RT: 6.75
Area: 38135
Amount: 0.248727
Amount Units: ug/mL



Manual Integration Results

RT: 6.75
Area: 37571
Amount: 0.257262
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:01:45 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

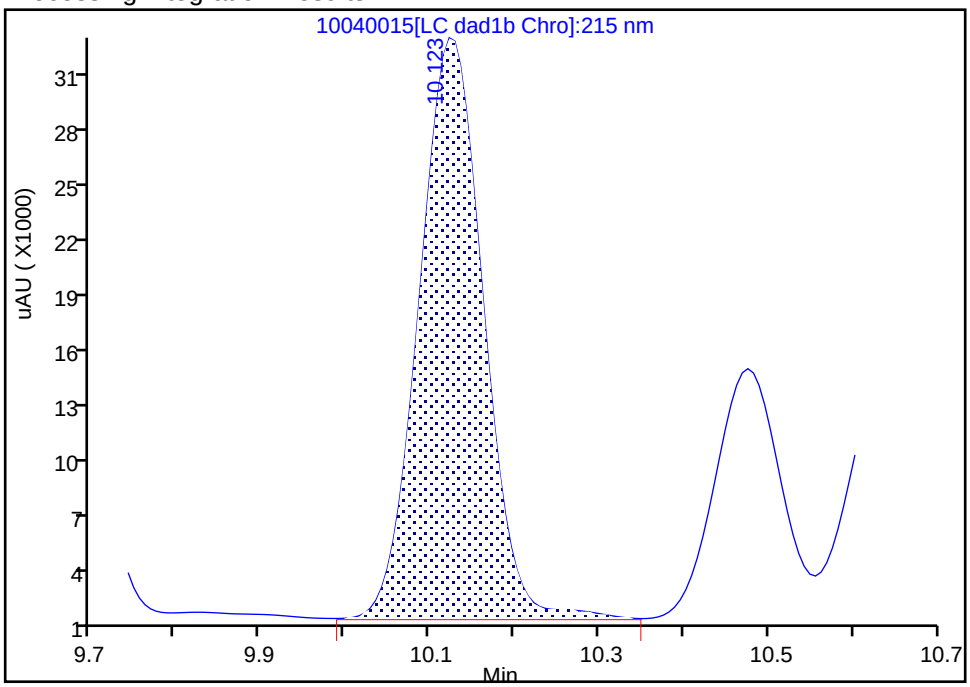
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040015.d				
Injection Date:	04-Oct-2024 18:27:10	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 5				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1C, 215 nm		

16 Nitroglycerin, CAS: 55-63-0

Signal: 1

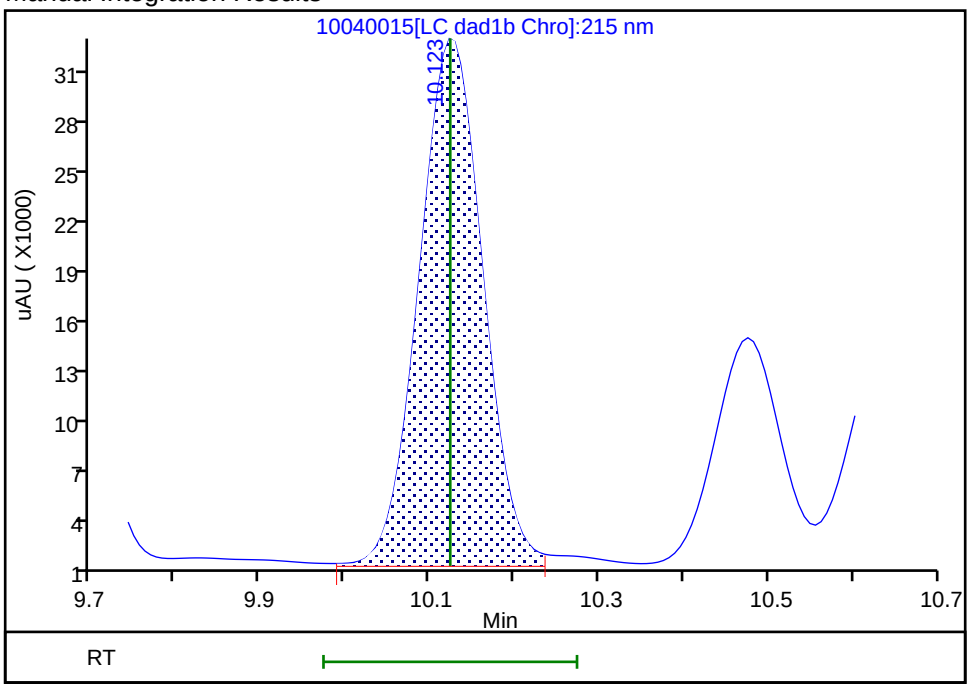
Processing Integration Results

RT: 10.12
Area: 165170
Amount: 2.396371
Amount Units: ug/mL



Manual Integration Results

RT: 10.12
Area: 162585
Amount: 2.528679
Amount Units: ug/mL



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

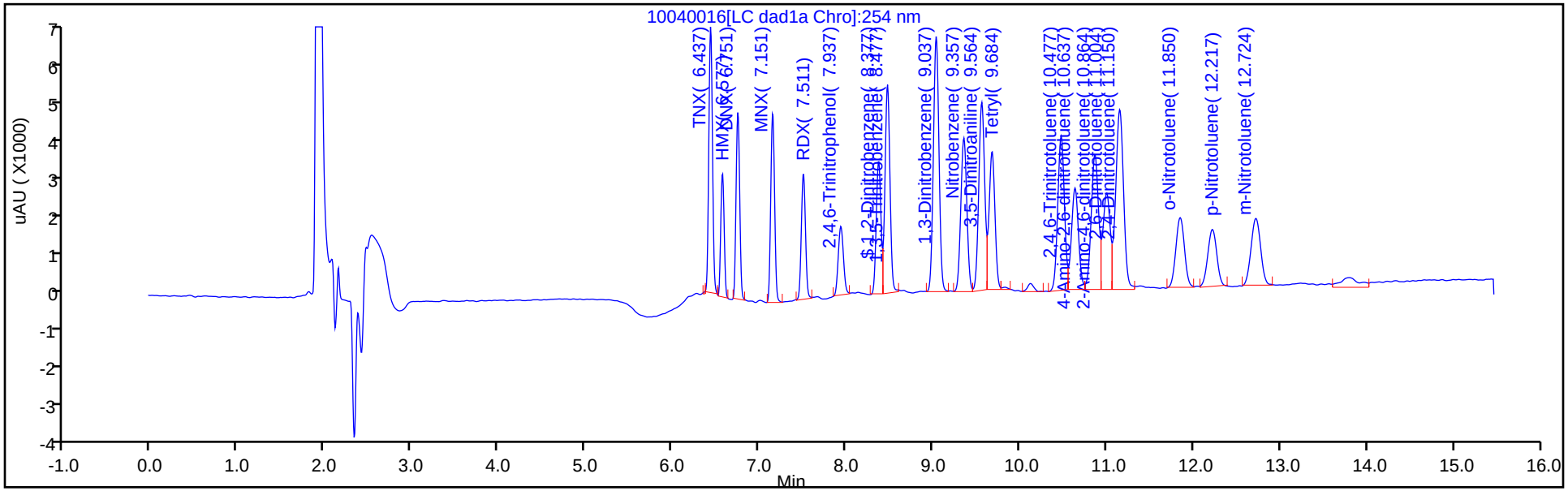
Report Date: 08-Oct-2024 13:19:20 Chrom Revision: 2.3 24-Sep-2024 15:19:46

Eurofins Denver

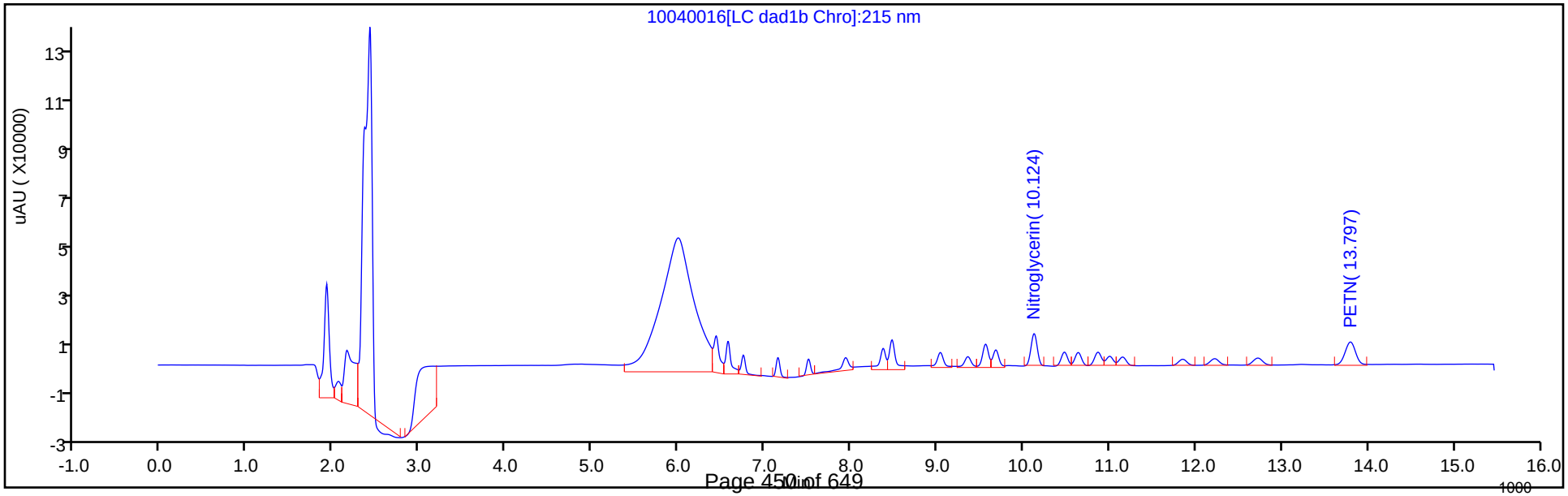
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040016.d

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



Manual Integration/User Assign Peak Report

Eurofins Denver

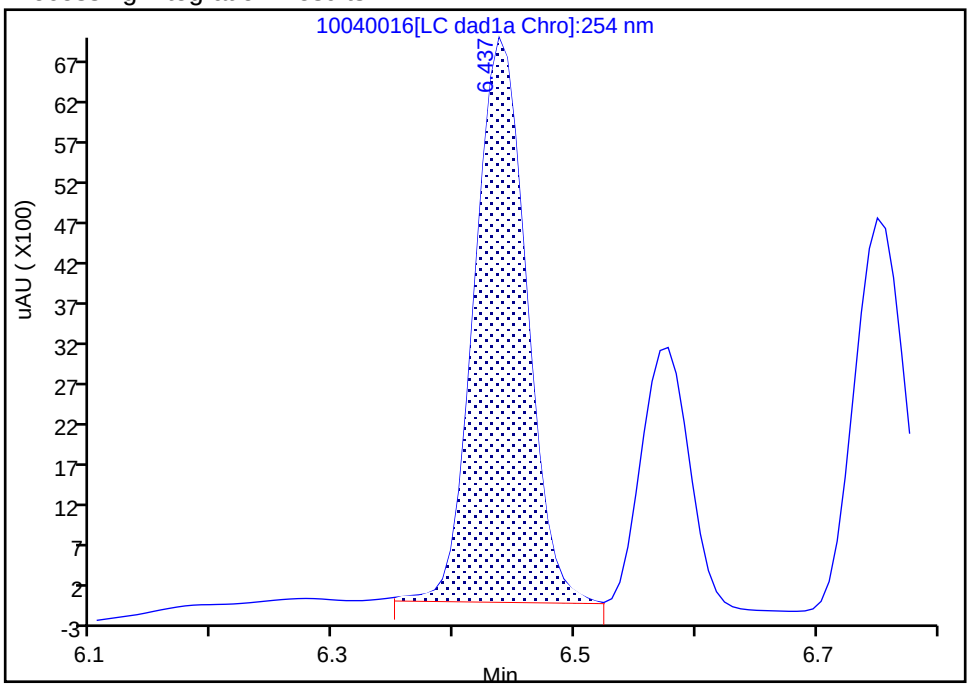
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Injection Date:	04-Oct-2024 18:49:07	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 4				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

3 TNX, CAS: 13980-04-6

Signal: 1

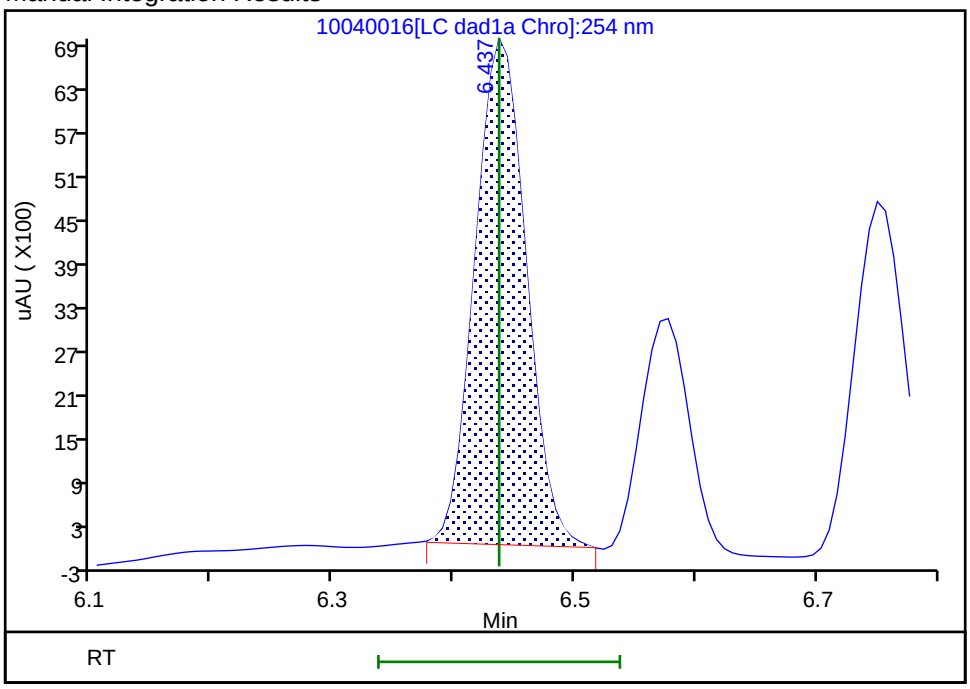
Processing Integration Results

RT: 6.44
Area: 20842
Amount: 0.098642
Amount Units: ug/mL



Manual Integration Results

RT: 6.44
Area: 20335
Amount: 0.100134
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:02:31 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

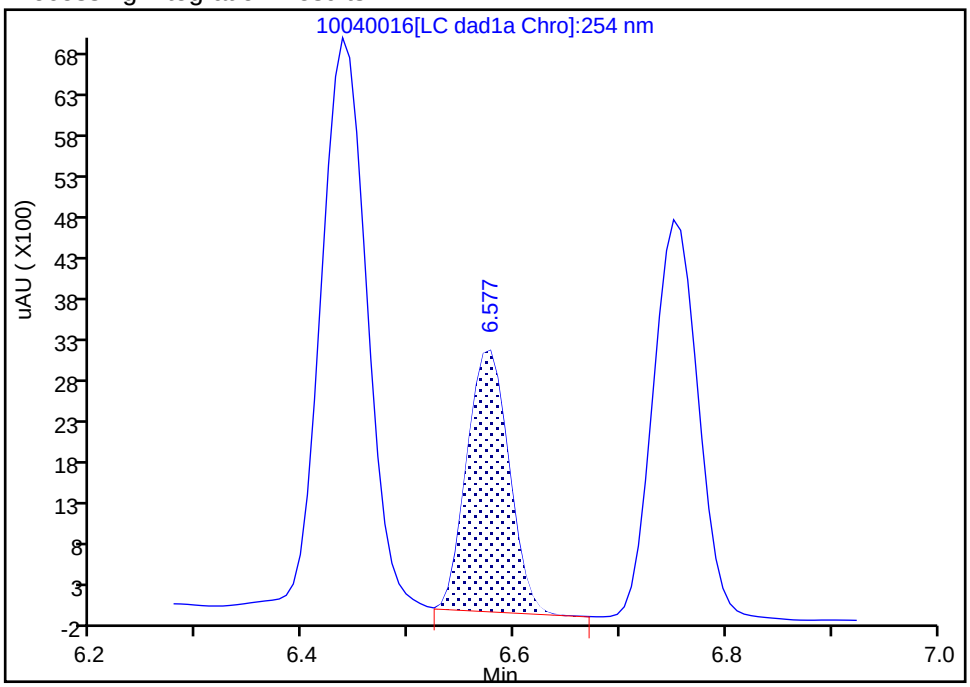
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Lims ID:	IC INT/DMT 4				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

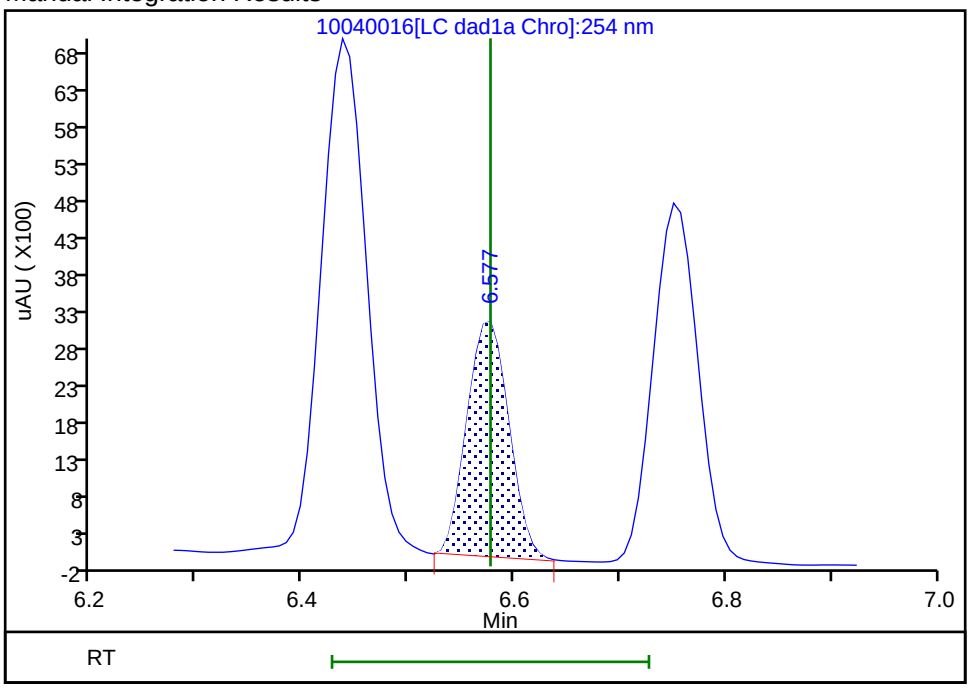
Processing Integration Results

RT: 6.58
Area: 8824
Amount: 0.087114
Amount Units: ug/mL



Manual Integration Results

RT: 6.58
Area: 8775
Amount: 0.090789
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:02:33 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

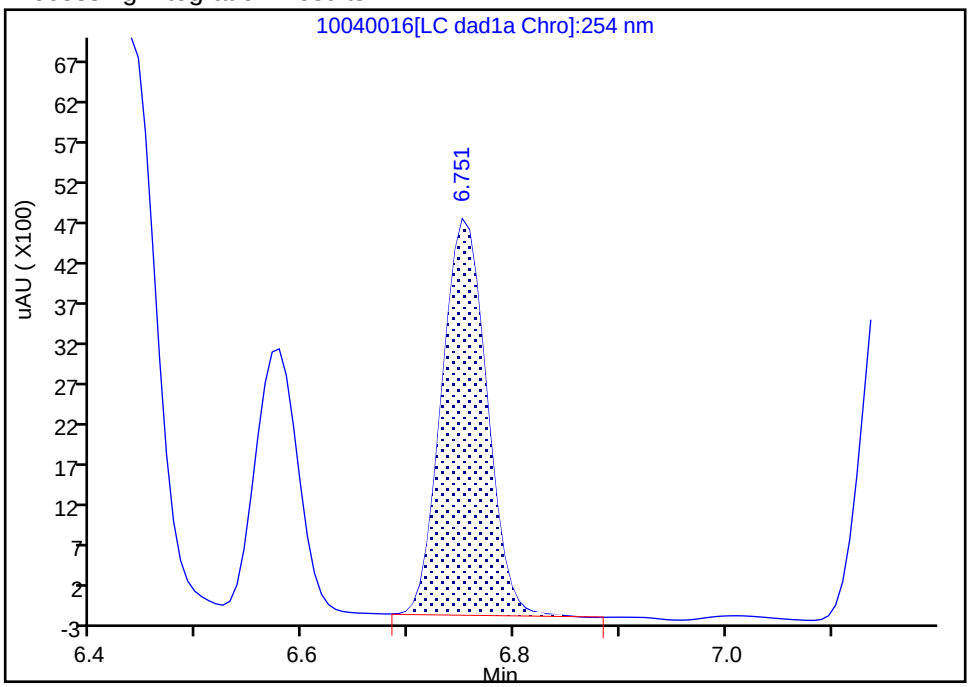
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Injection Date: 04-Oct-2024 18:49:07 Instrument ID: CHHPLC_X3
Lims ID: IC INT/DMT 4
Client ID:
Operator ID: JZ ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

6 DNX, CAS: 80251-29-2

Signal: 1

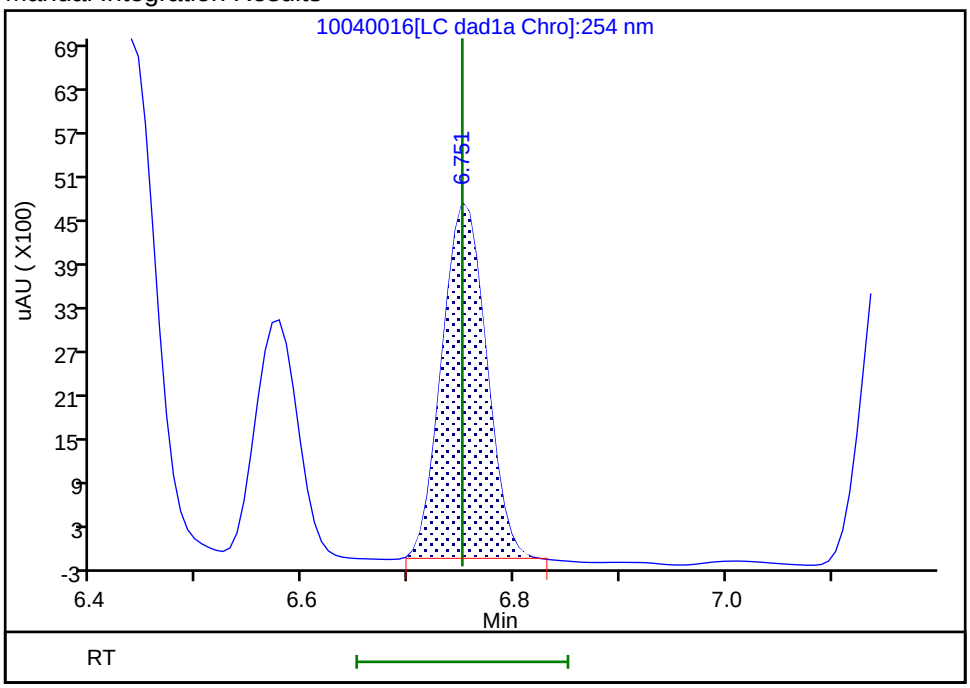
Processing Integration Results

RT: 6.75
Area: 14575
Amount: 0.095218
Amount Units: ug/mL



Manual Integration Results

RT: 6.75
Area: 14149
Amount: 0.096883
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:02:38 -06:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

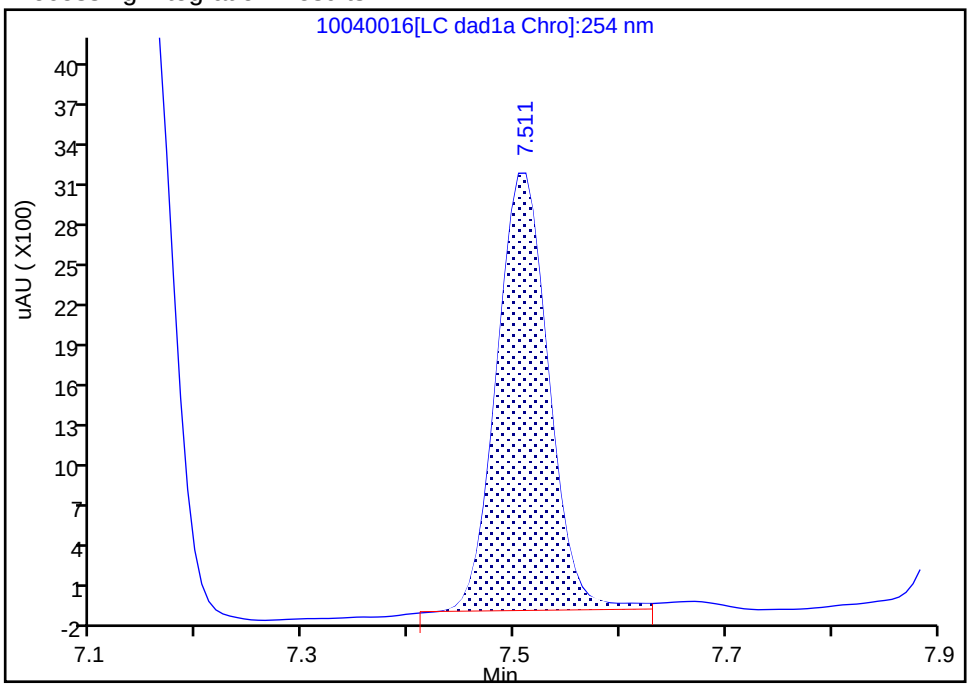
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Injection Date: 04-Oct-2024 18:49:07 Instrument ID: CHHPLC_X3
Lims ID: IC INT/DMT 4
Client ID:
Operator ID: JZ ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

8 RDX, CAS: 121-82-4

Signal: 1

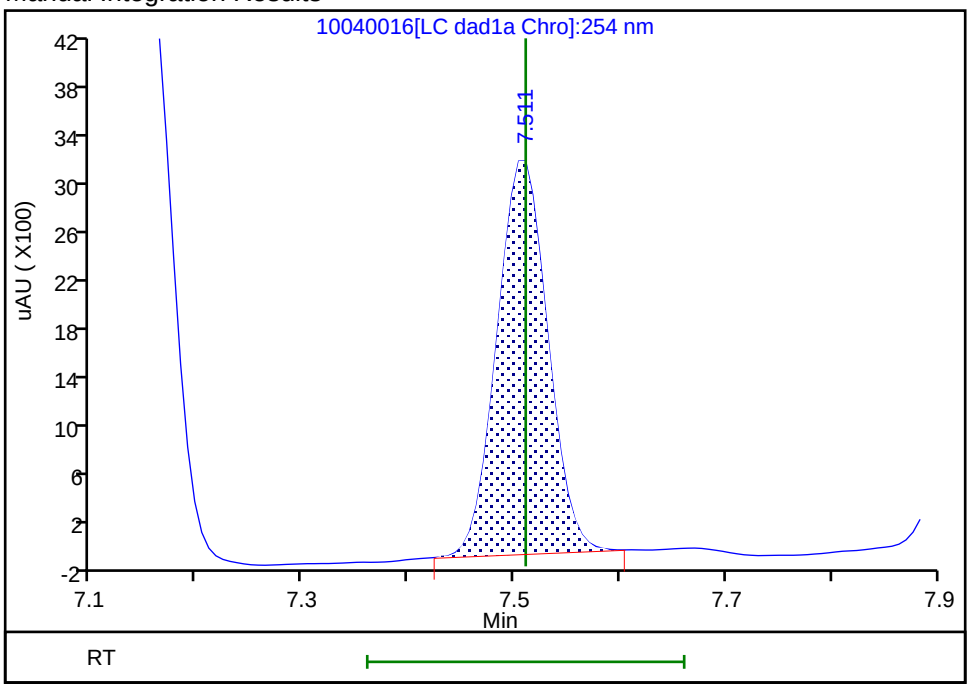
Processing Integration Results

RT: 7.51
Area: 11085
Amount: 0.100964
Amount Units: ug/mL



Manual Integration Results

RT: 7.51
Area: 10773
Amount: 0.101109
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:02:47 -06:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

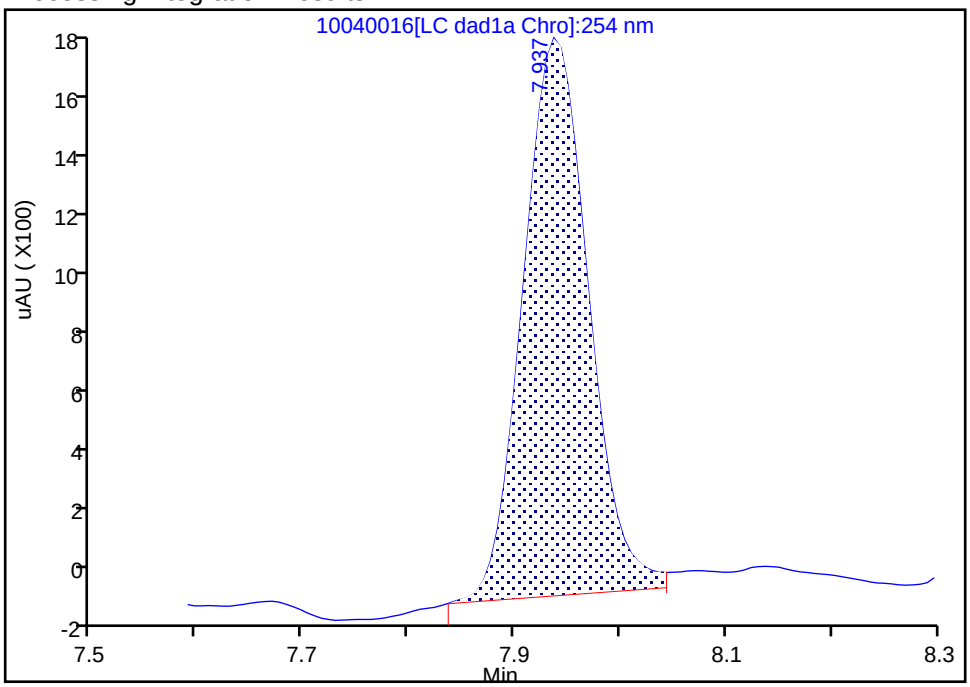
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040016.d
Injection Date: 04-Oct-2024 18:49:07 Instrument ID: CHHPLC_X3
Lims ID: IC INT/DMT 4
Client ID:
Operator ID: JZ ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

9 2,4,6-Trinitrophenol, CAS: 88-89-1

Signal: 1

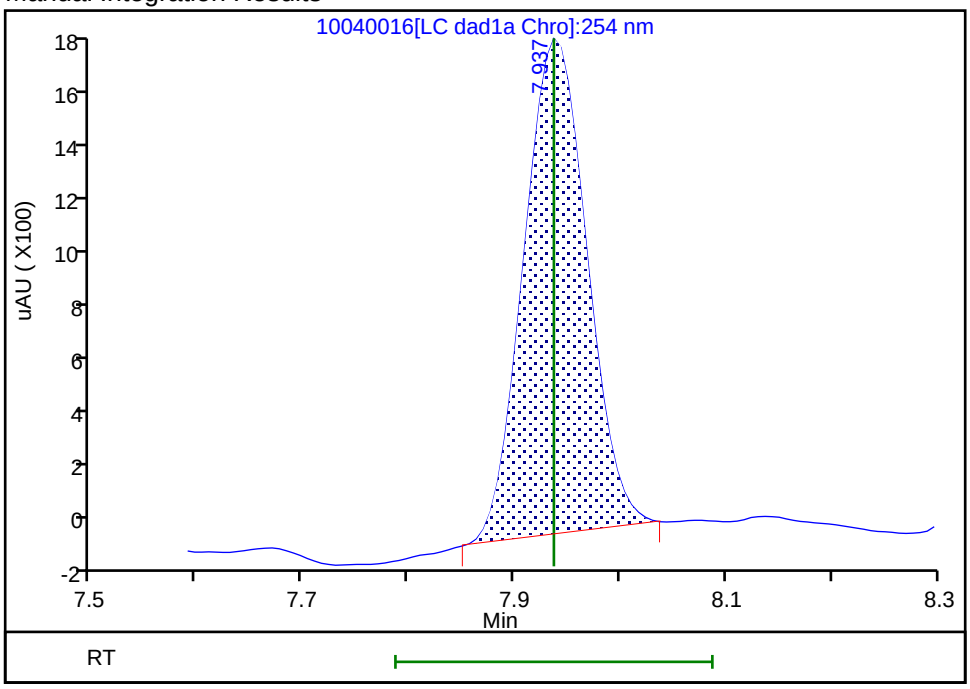
Processing Integration Results

RT: 7.94
Area: 7772
Amount: 0.095498
Amount Units: ug/mL



Manual Integration Results

RT: 7.94
Area: 7391
Amount: 0.097989
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:02:51 -06:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

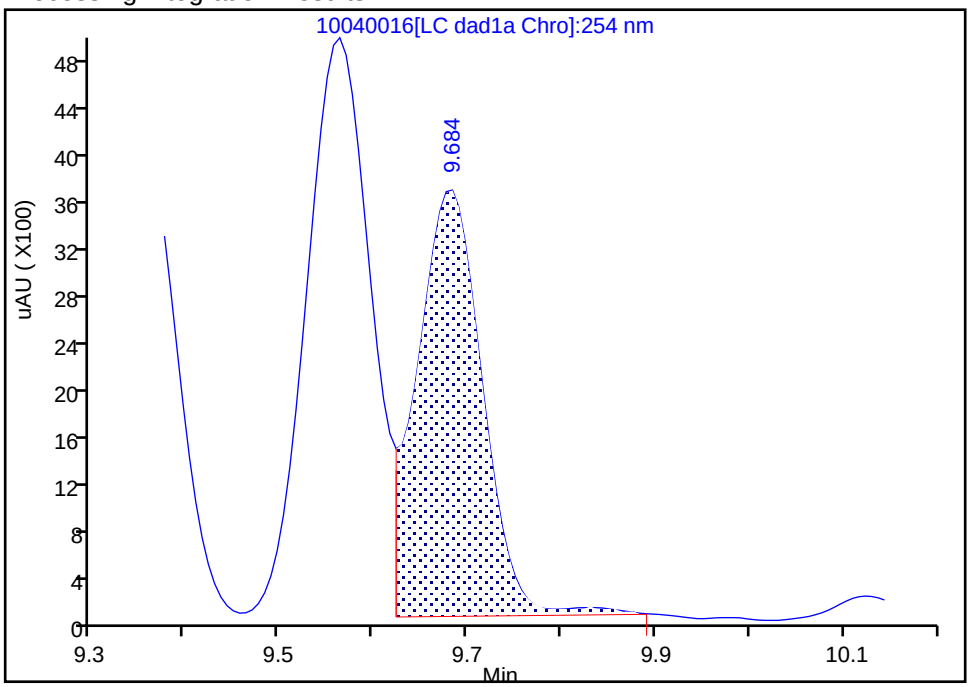
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Injection Date: 04-Oct-2024 18:49:07 Instrument ID: CHHPLC_X3
Lims ID: IC INT/DMT 4
Client ID:
Operator ID: JZ ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

15 Tetryl, CAS: 479-45-8

Signal: 1

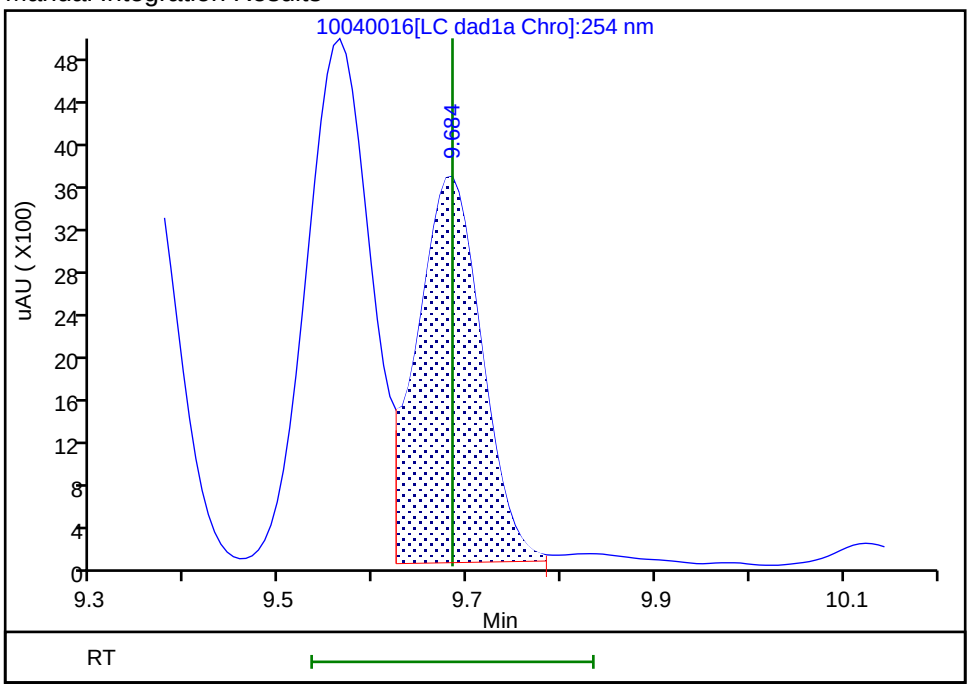
Processing Integration Results

RT: 9.68
Area: 17446
Amount: 0.103129
Amount Units: ug/mL



Manual Integration Results

RT: 9.68
Area: 17130
Amount: 0.100694
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:03:04 -06:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

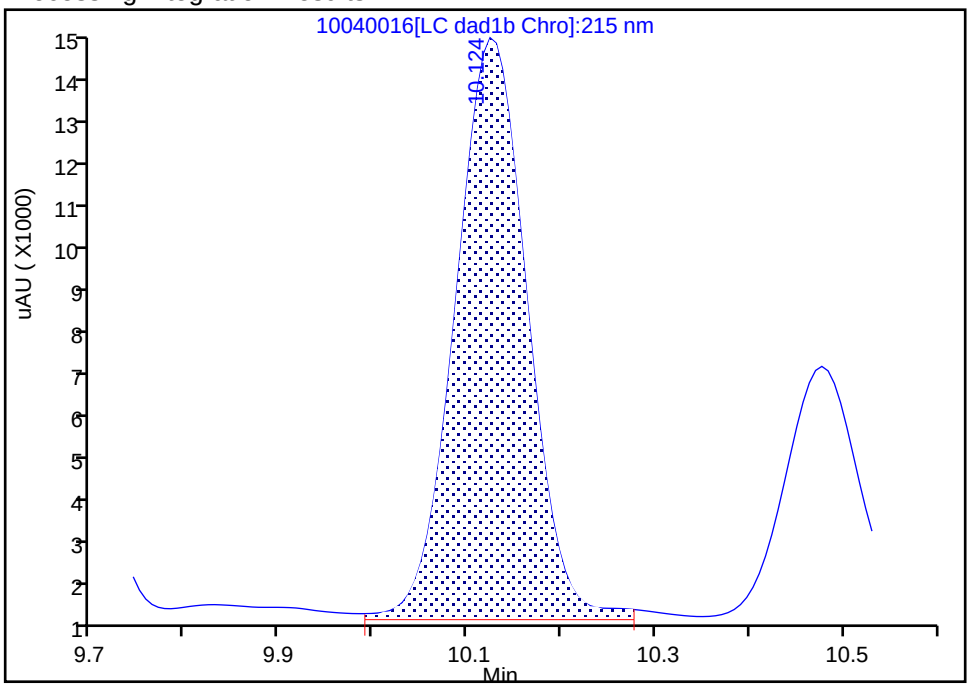
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040016.d				
Injection Date:	04-Oct-2024 18:49:07	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 4				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1C, 215 nm		

16 Nitroglycerin, CAS: 55-63-0

Signal: 1

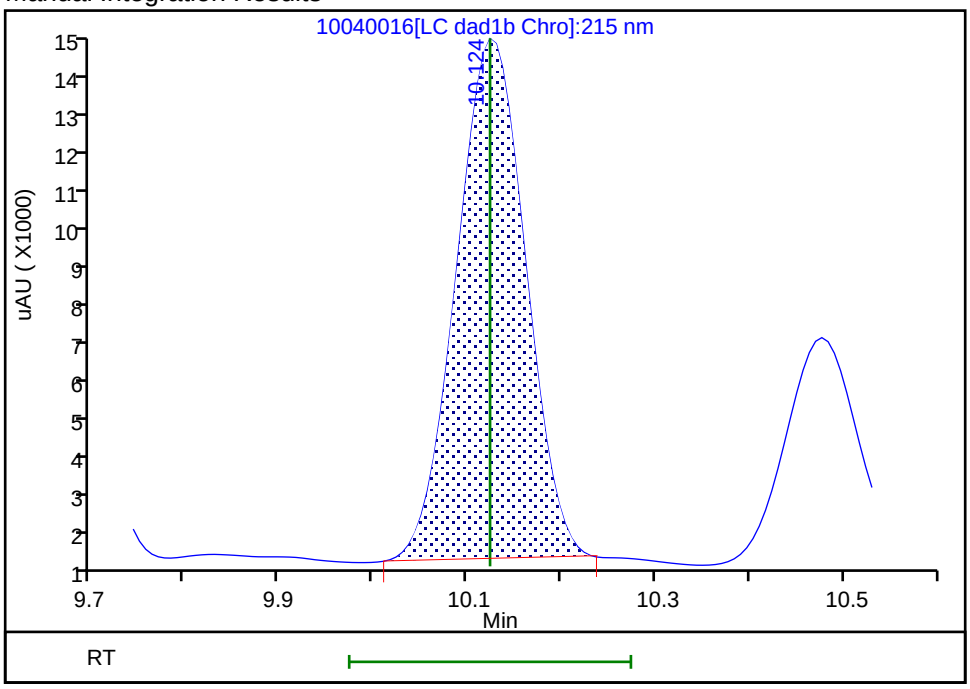
Processing Integration Results

RT: 10.12
Area: 67088
Amount: 0.959514
Amount Units: ug/mL



Manual Integration Results

RT: 10.12
Area: 63200
Amount: 0.986772
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:03:11 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

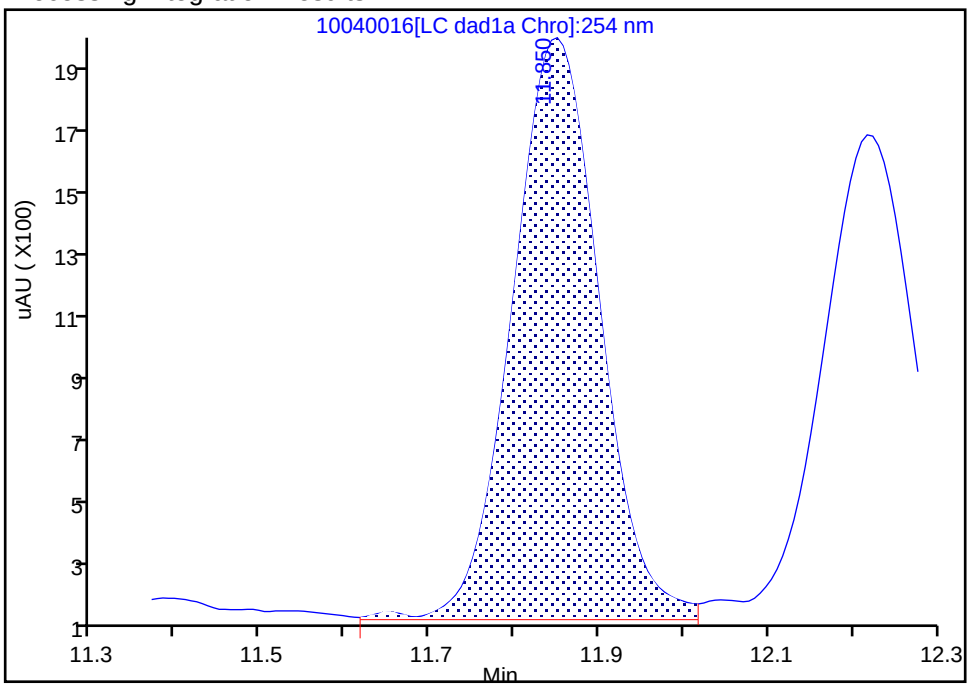
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040016.d
Injection Date: 04-Oct-2024 18:49:07 Instrument ID: CHHPLC_X3
Lims ID: IC INT/DMT 4
Client ID:
Operator ID: JZ ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

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

Signal: 1

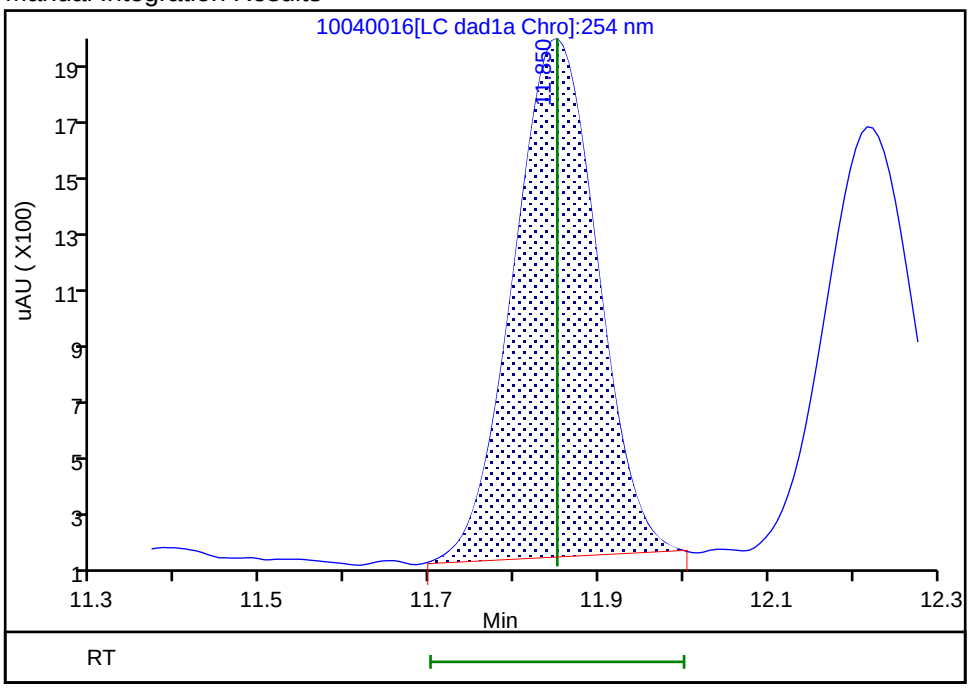
Processing Integration Results

RT: 11.85
Area: 13314
Amount: 0.103639
Amount Units: ug/mL



Manual Integration Results

RT: 11.85
Area: 12487
Amount: 0.099523
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:03:36 -06:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

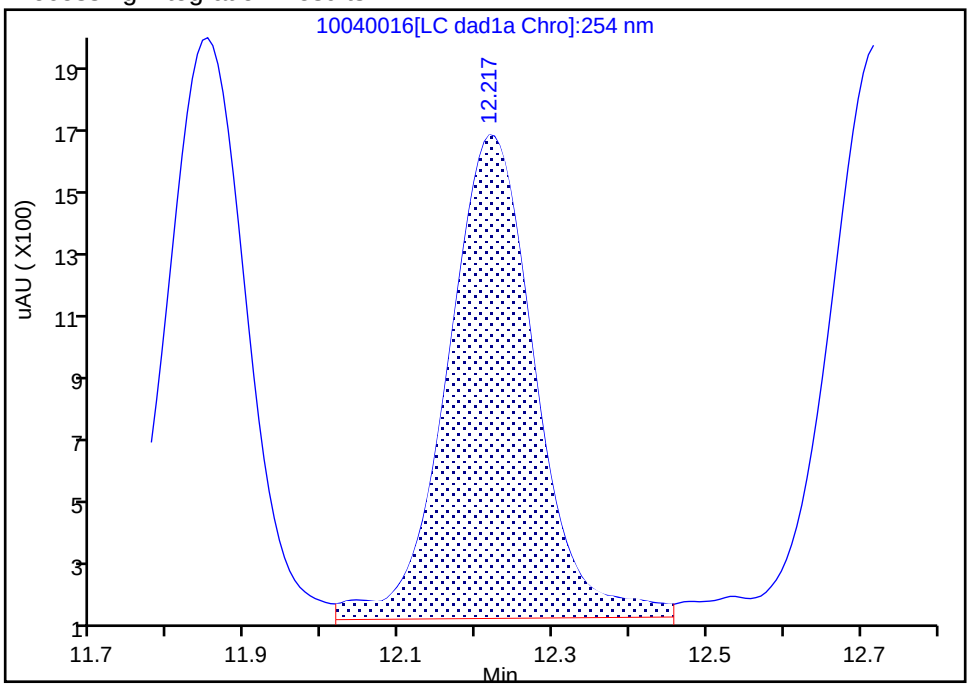
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040016.d
Injection Date: 04-Oct-2024 18:49:07 Instrument ID: CHHPLC_X3
Lims ID: IC INT/DMT 4
Client ID:
Operator ID: JZ ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

23 p-Nitrotoluene, CAS: 99-99-0

Signal: 1

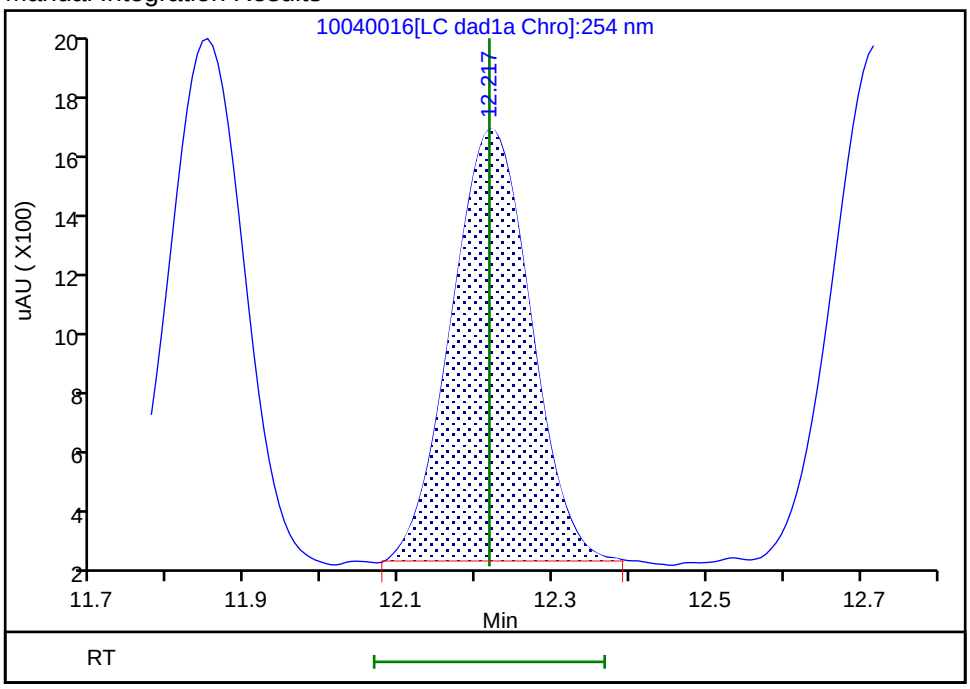
Processing Integration Results

RT: 12.22
Area: 12196
Amount: 0.107960
Amount Units: ug/mL



Manual Integration Results

RT: 12.22
Area: 10624
Amount: 0.096993
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:03:40 -06:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

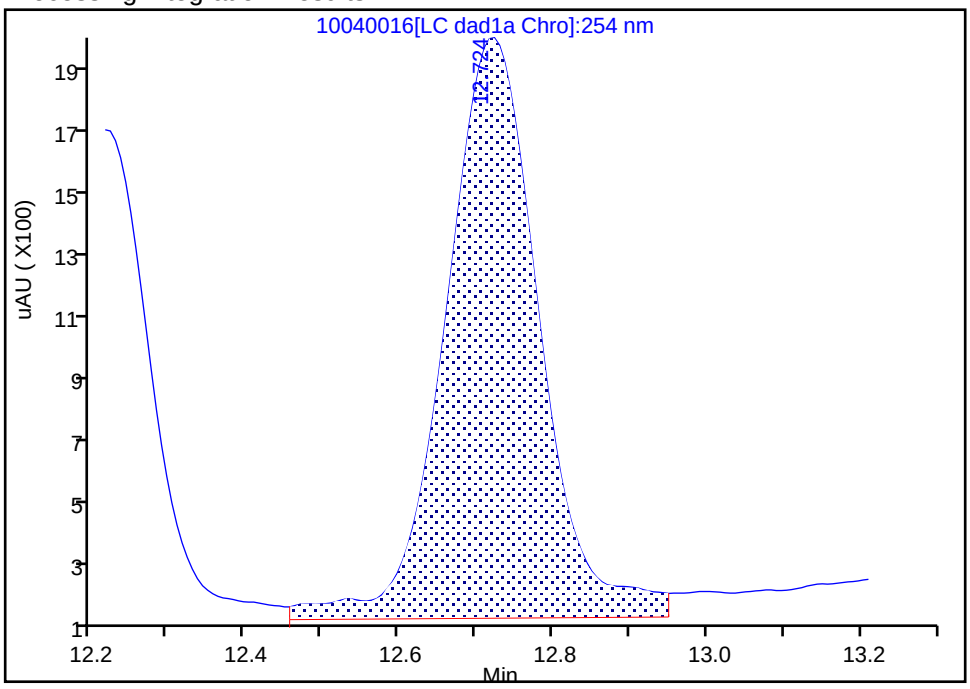
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040016.d				
Injection Date:	04-Oct-2024 18:49:07	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 4				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

24 m-Nitrotoluene, CAS: 99-08-1

Signal: 1

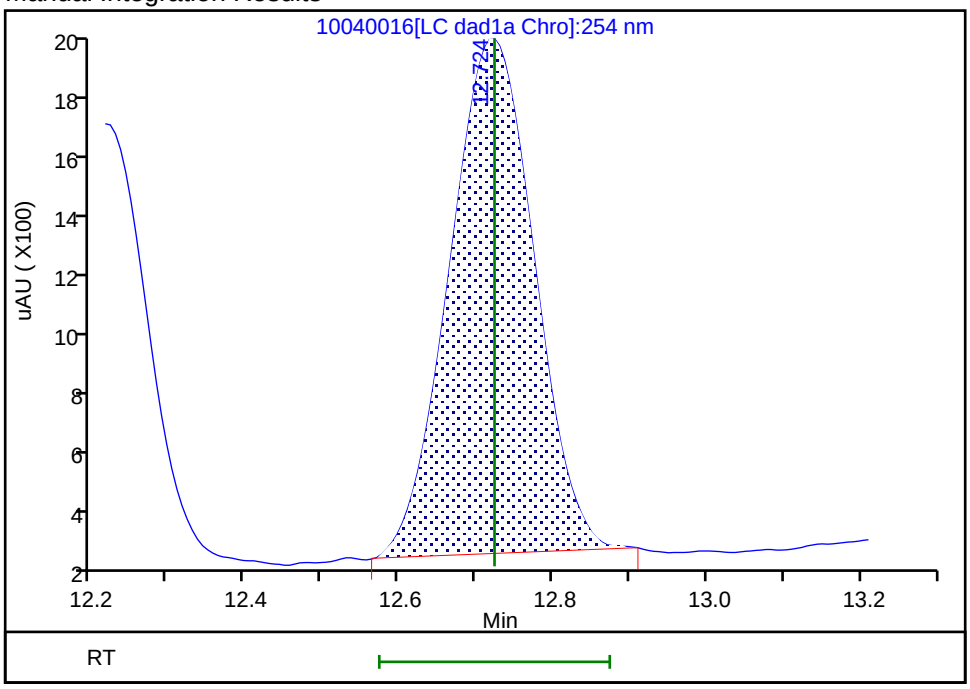
Processing Integration Results

RT: 12.72
Area: 15464
Amount: 0.107416
Amount Units: ug/mL



Manual Integration Results

RT: 12.72
Area: 13345
Amount: 0.096915
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:03:43 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

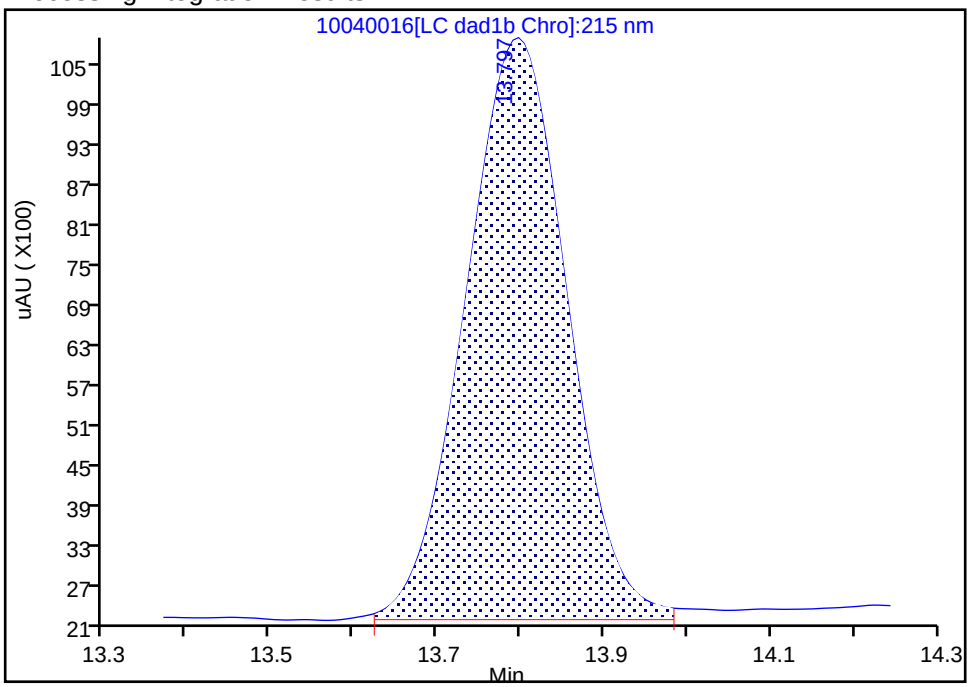
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040016.d
Injection Date: 04-Oct-2024 18:49:07 Instrument ID: CHHPLC_X3
Lims ID: IC INT/DMT 4
Client ID:
Operator ID: JZ ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1C, 215 nm

25 PETN, CAS: 78-11-5

Signal: 1

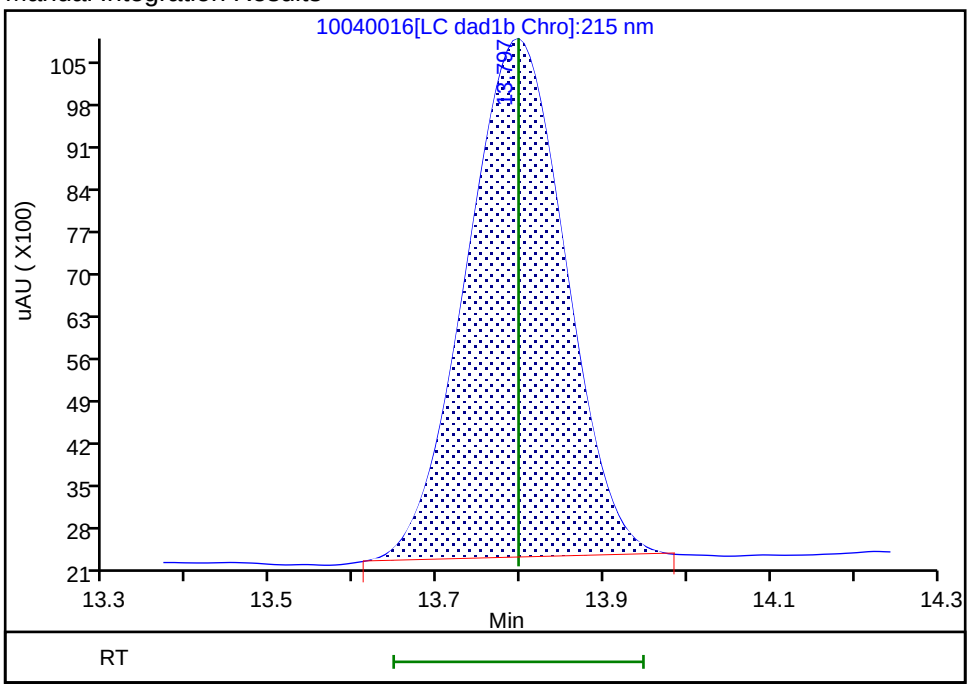
Processing Integration Results

RT: 13.80
Area: 74197
Amount: 1.031477
Amount Units: ug/mL



Manual Integration Results

RT: 13.80
Area: 71766
Amount: 0.993819
Amount Units: ug/mL



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

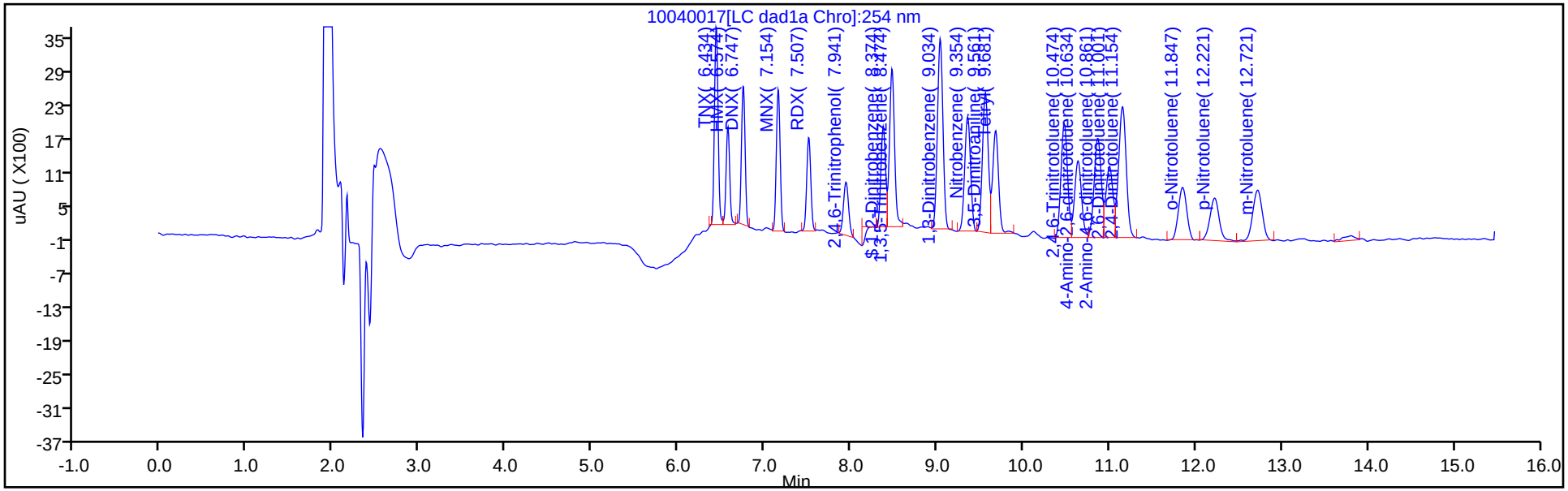
Report Date: 08-Oct-2024 13:19:22 Chrom Revision: 2.3 24-Sep-2024 15:19:46

Eurofins Denver

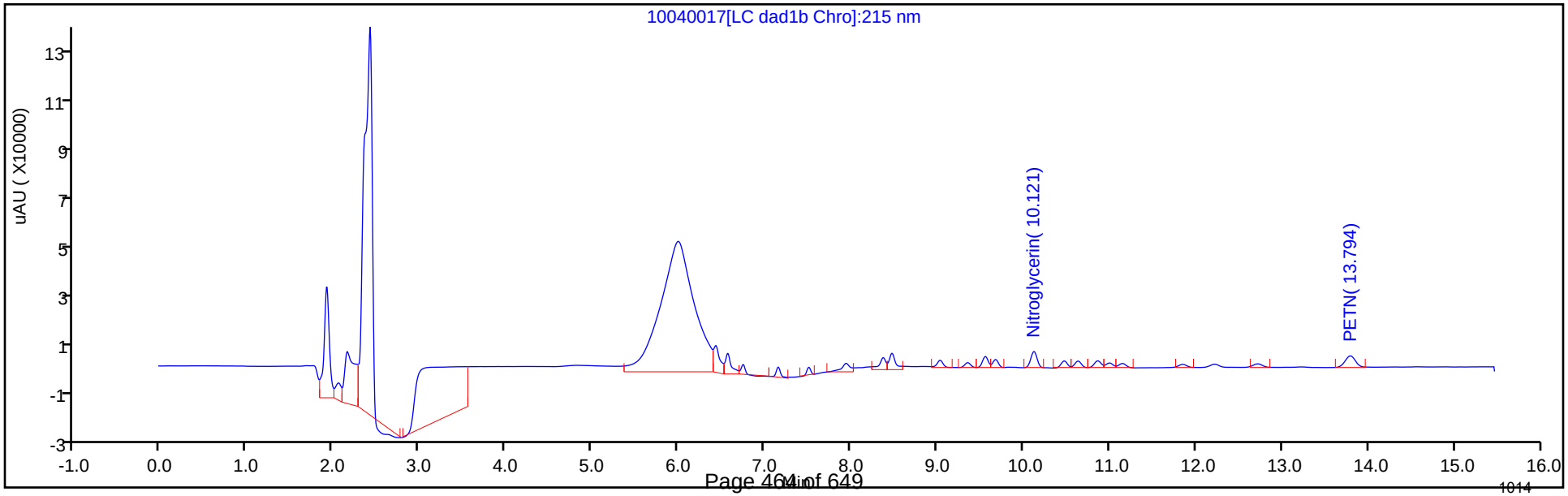
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040017.d

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



1014

Manual Integration/User Assign Peak Report

Eurofins Denver

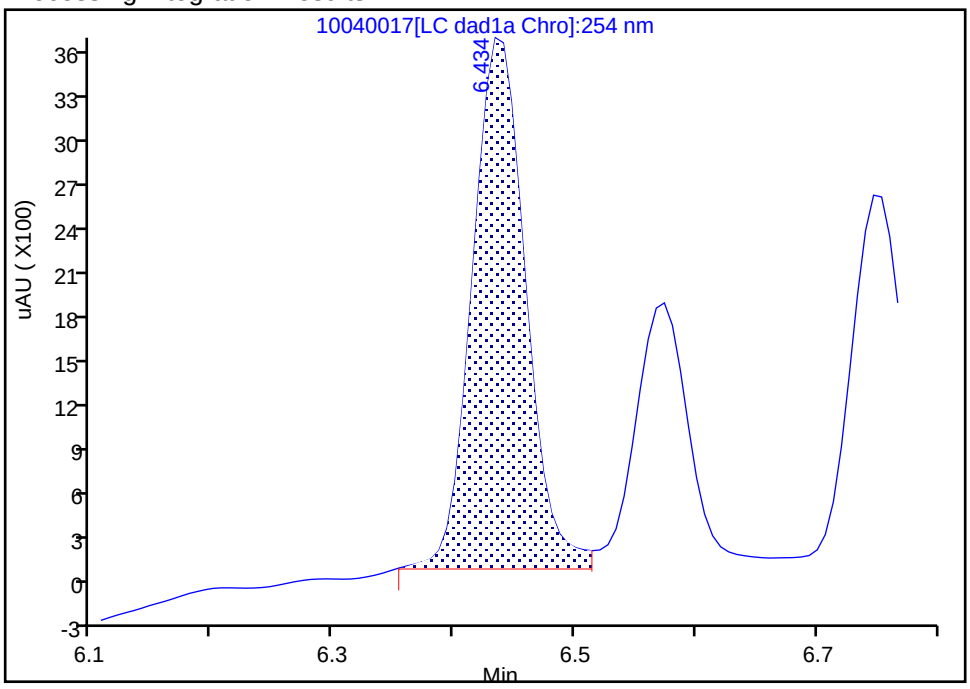
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Injection Date:	04-Oct-2024 19:11:05	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 3				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

3 TNX, CAS: 13980-04-6

Signal: 1

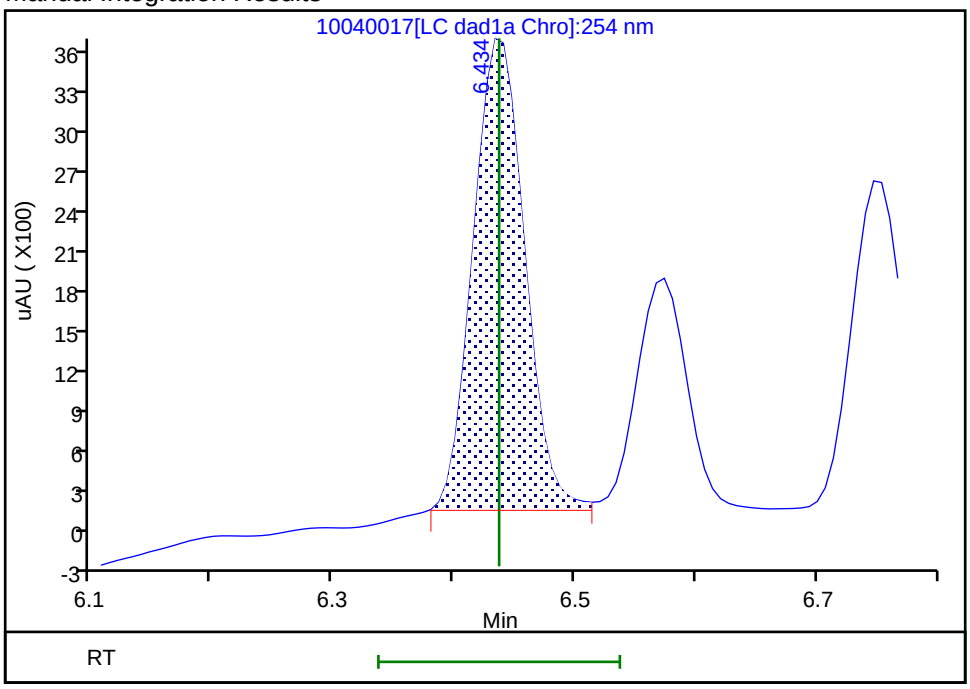
Processing Integration Results

RT: 6.43
Area: 10875
Amount: 0.051607
Amount Units: ug/mL



Manual Integration Results

RT: 6.43
Area: 10367
Amount: 0.051049
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:05:07 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

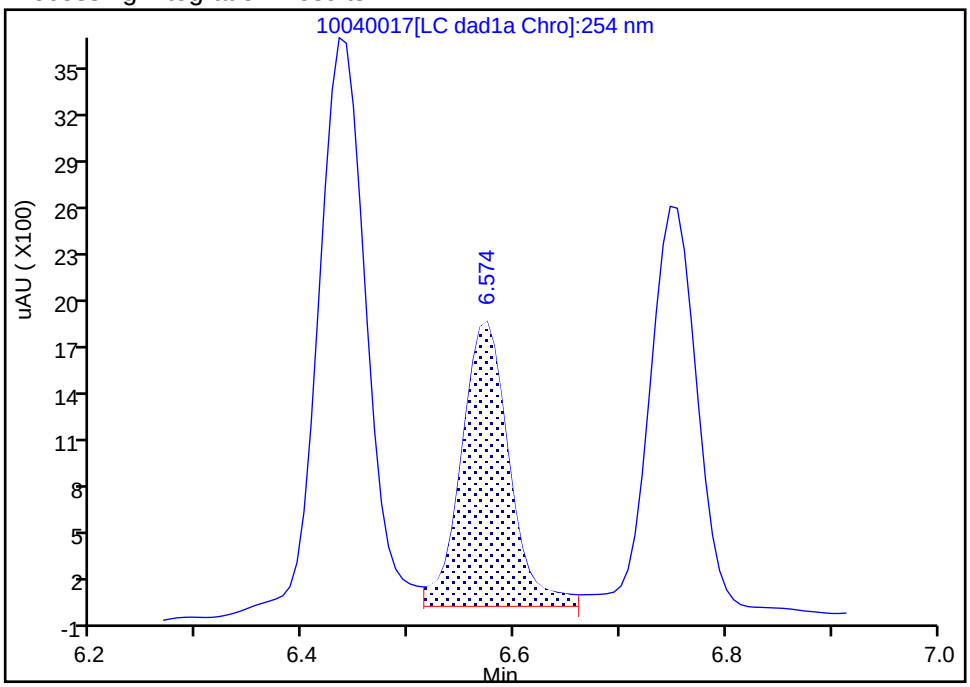
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040017.d				
Injection Date:	04-Oct-2024 19:11:05	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 3				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

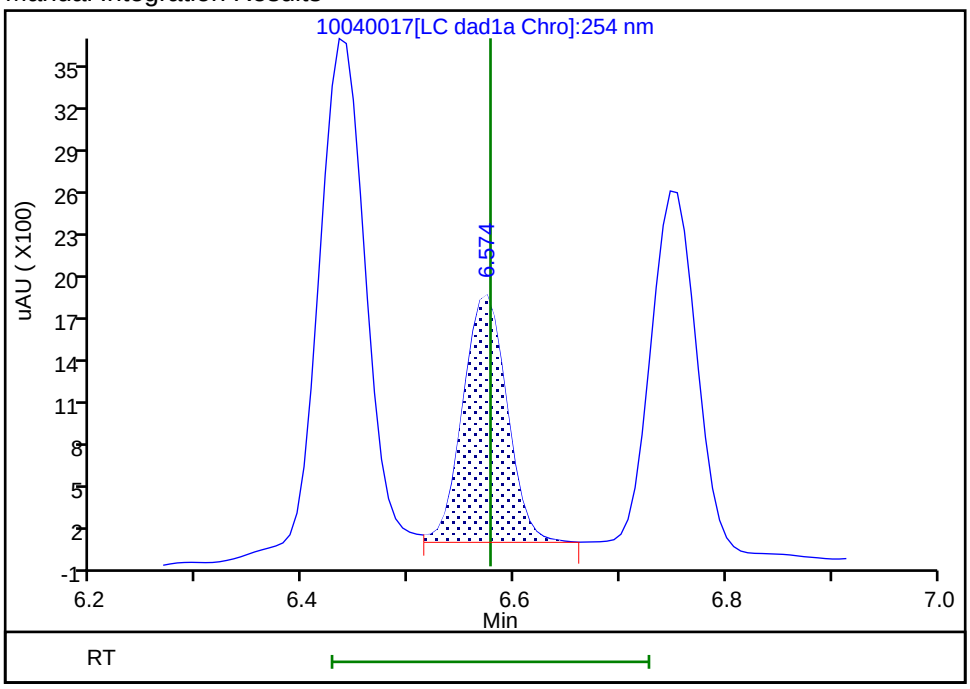
Processing Integration Results

RT: 6.57
Area: 5573
Amount: 0.051766
Amount Units: ug/mL



Manual Integration Results

RT: 6.57
Area: 4979
Amount: 0.051514
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:05:03 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Eurofins Denver

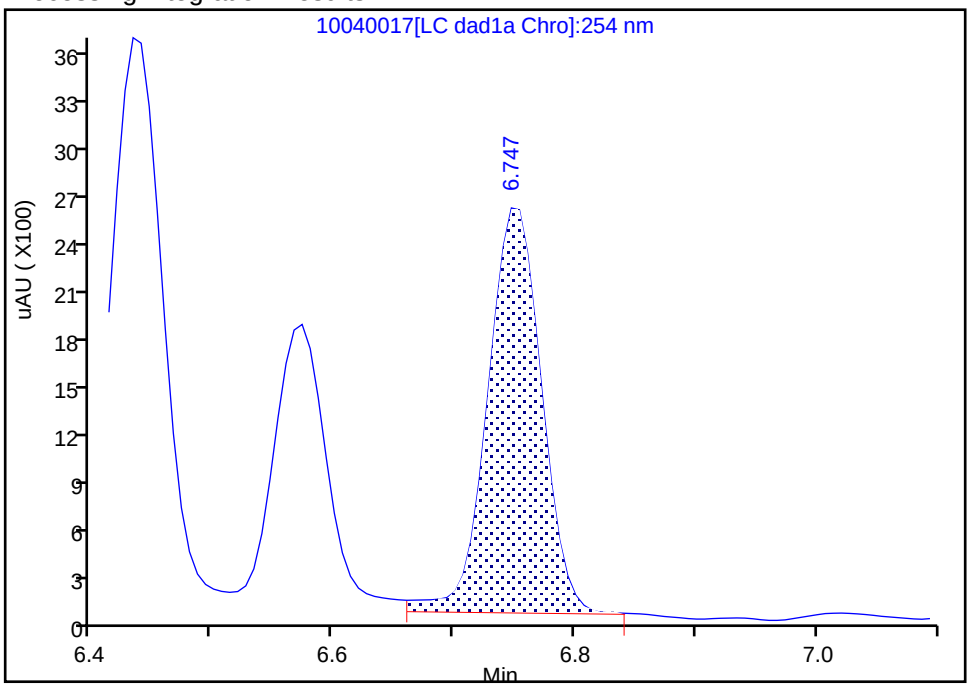
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040017.d				
Injection Date:	04-Oct-2024 19:11:05	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 3				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

6 DNX, CAS: 80251-29-2

Signal: 1

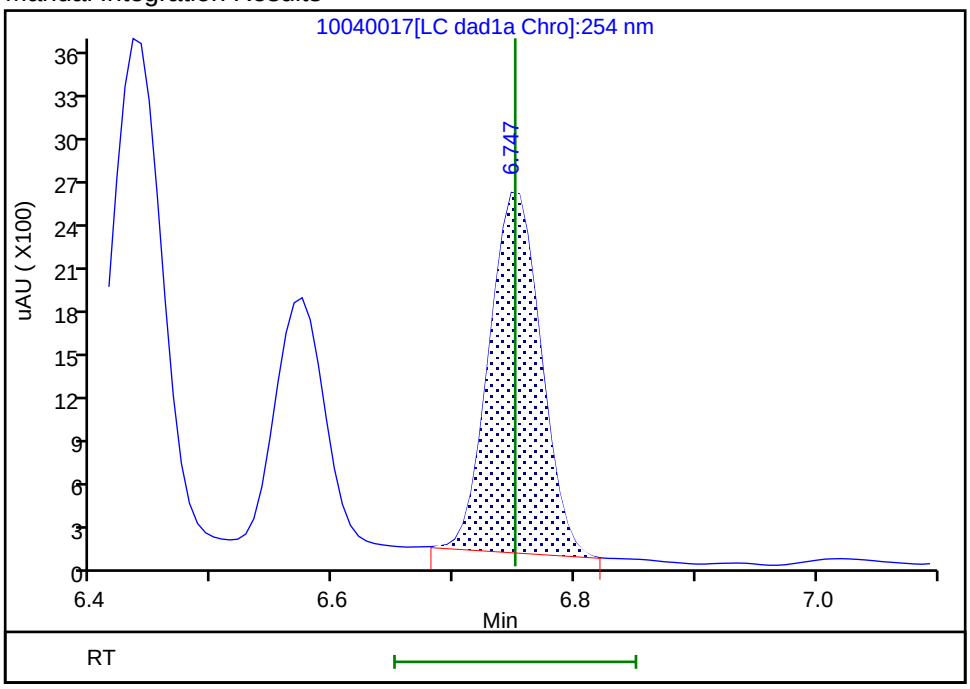
Processing Integration Results

RT: 6.75
Area: 7771
Amount: 0.050925
Amount Units: ug/mL



Manual Integration Results

RT: 6.75
Area: 7313
Amount: 0.050075
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:04:59 -06:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

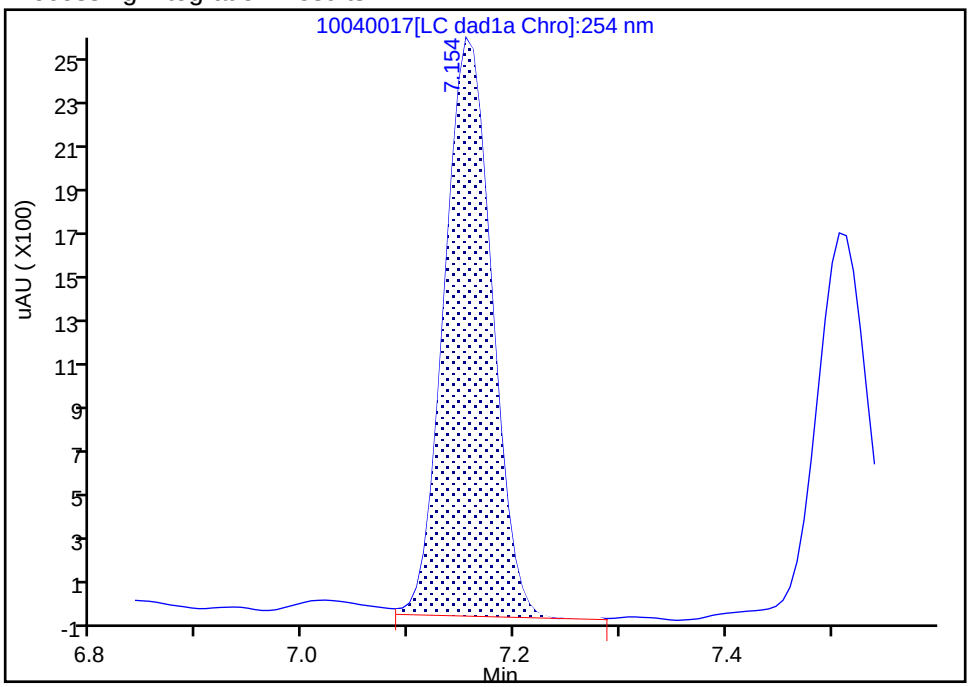
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040017.d
Injection Date: 04-Oct-2024 19:11:05 Instrument ID: CHHPLC_X3
Lims ID: IC INT/DMT 3
Client ID:
Operator ID: JZ ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

7 MNX, CAS: 5755-27-1

Signal: 1

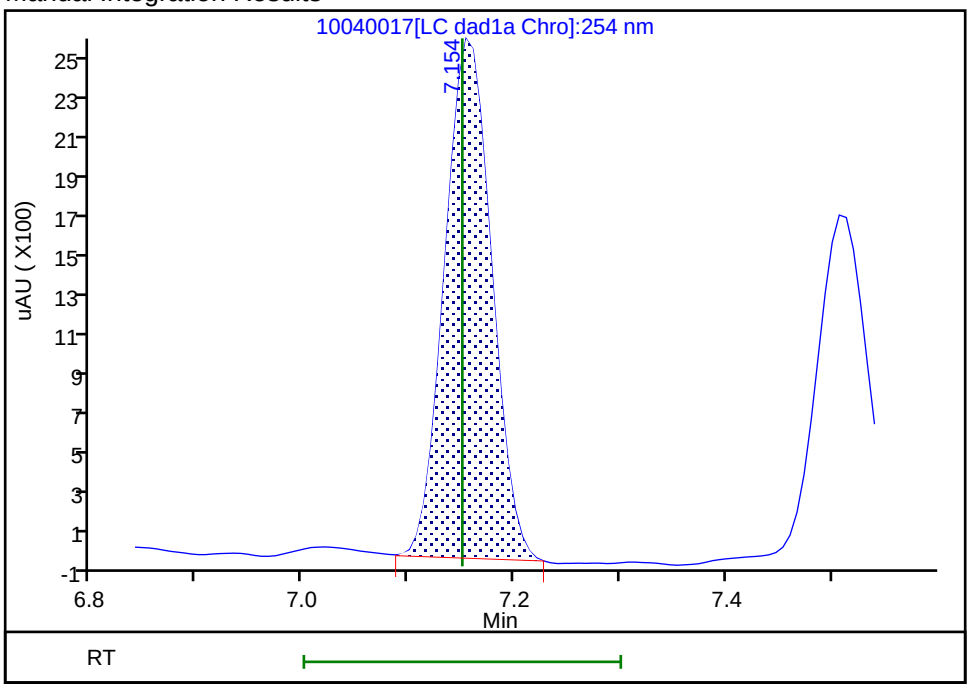
Processing Integration Results

RT: 7.15
Area: 7839
Amount: 0.058573
Amount Units: ug/mL



Manual Integration Results

RT: 7.15
Area: 7700
Amount: 0.057923
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:04:53 -06:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

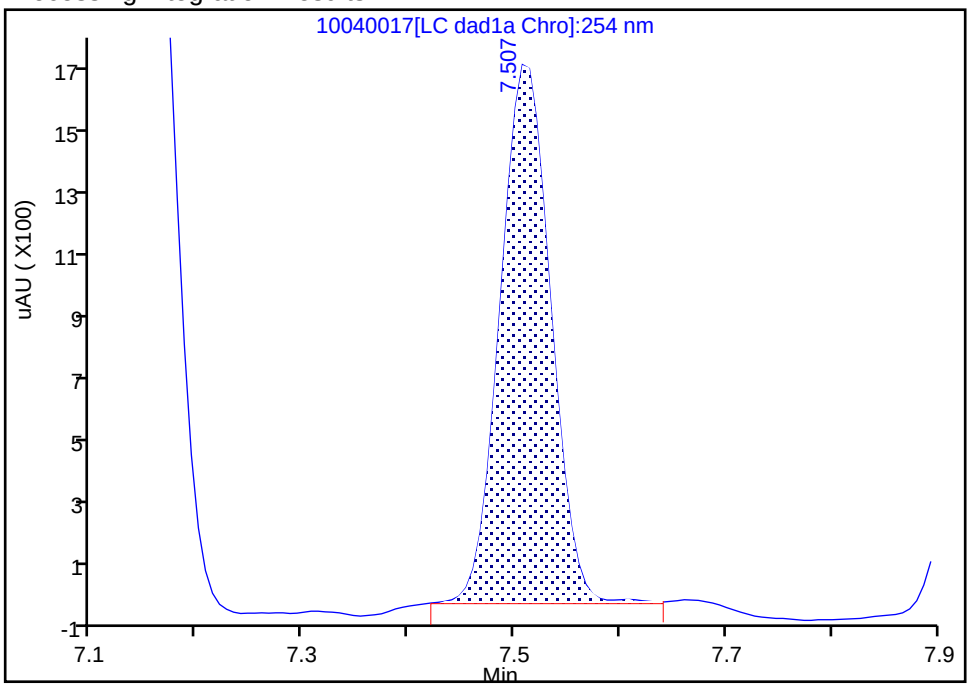
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040017.d
Injection Date: 04-Oct-2024 19:11:05 Instrument ID: CHHPLC_X3
Lims ID: IC INT/DMT 3
Client ID:
Operator ID: JZ ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

8 RDX, CAS: 121-82-4

Signal: 1

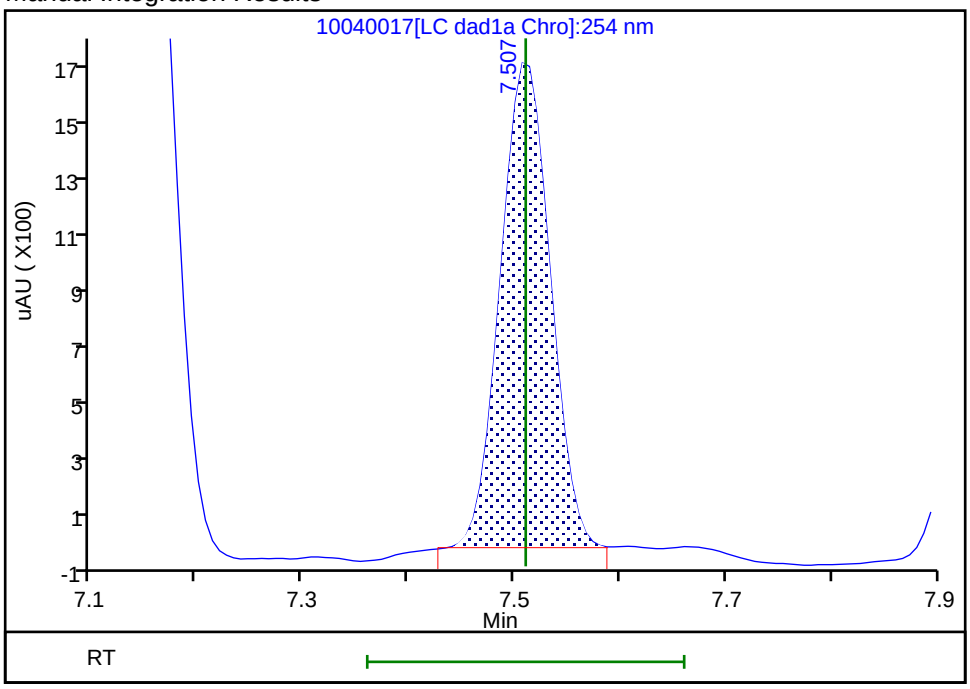
Processing Integration Results

RT: 7.51
Area: 5457
Amount: 0.049860
Amount Units: ug/mL



Manual Integration Results

RT: 7.51
Area: 5386
Amount: 0.049722
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:04:45 -06:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

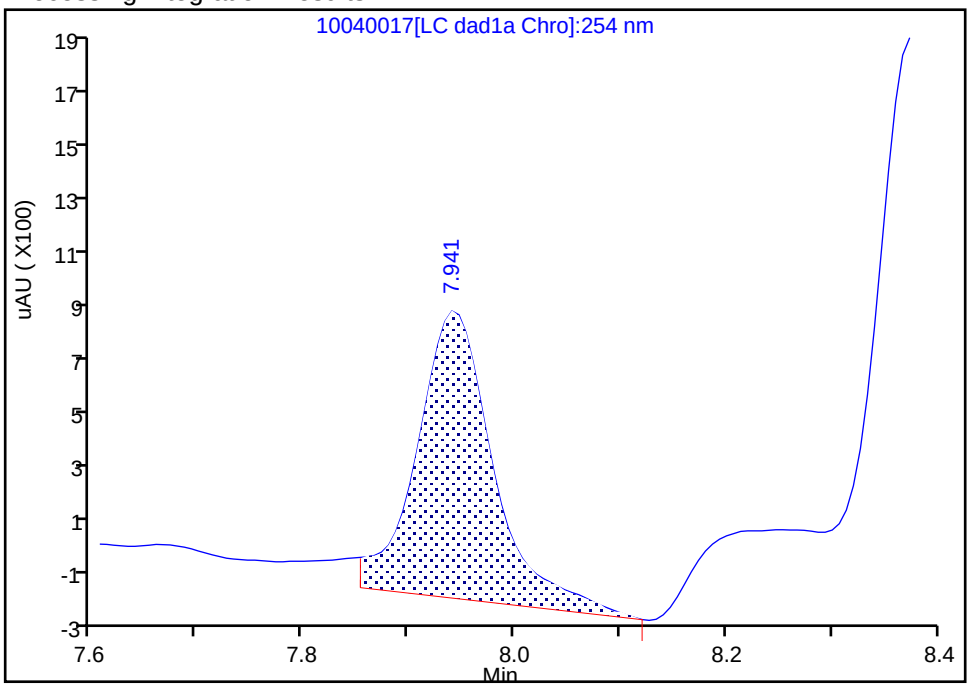
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040017.d
Injection Date: 04-Oct-2024 19:11:05 Instrument ID: CHHPLC_X3
Lims ID: IC INT/DMT 3
Client ID:
Operator ID: JZ ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

9 2,4,6-Trinitrophenol, CAS: 88-89-1

Signal: 1

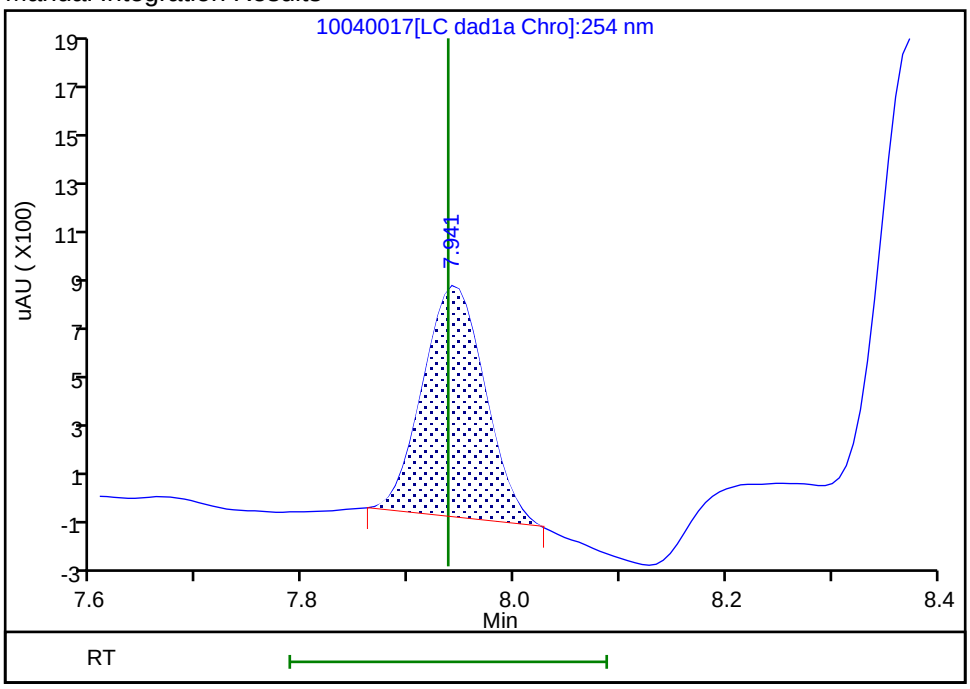
Processing Integration Results

RT: 7.94
Area: 5246
Amount: 0.064797
Amount Units: ug/mL



Manual Integration Results

RT: 7.94
Area: 3807
Amount: 0.050473
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:04:36 -06:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

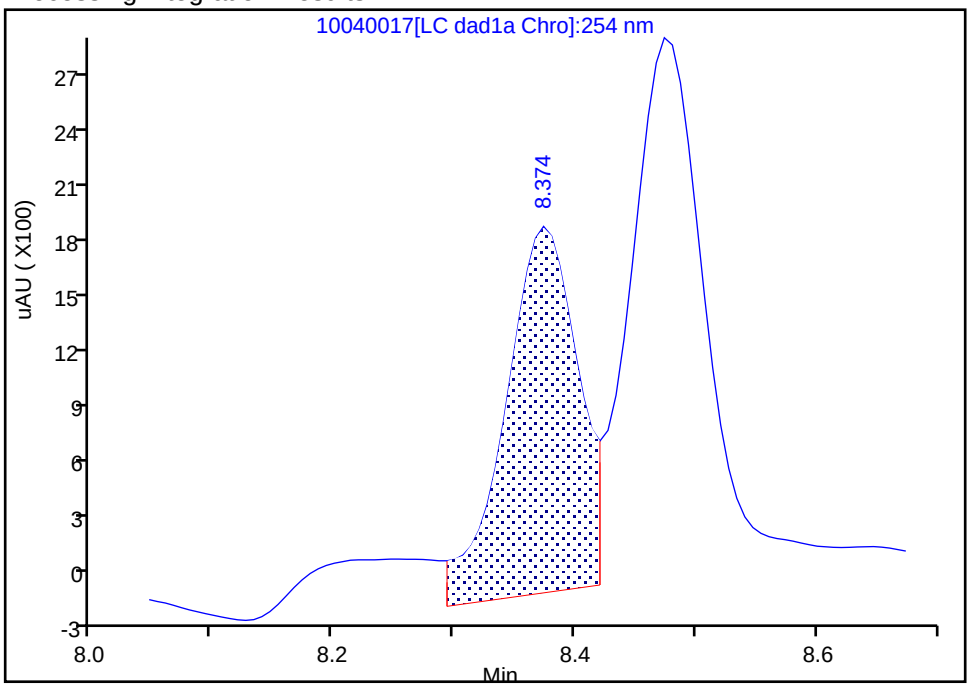
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040017.d				
Injection Date:	04-Oct-2024 19:11:05	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 3				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

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

Signal: 1

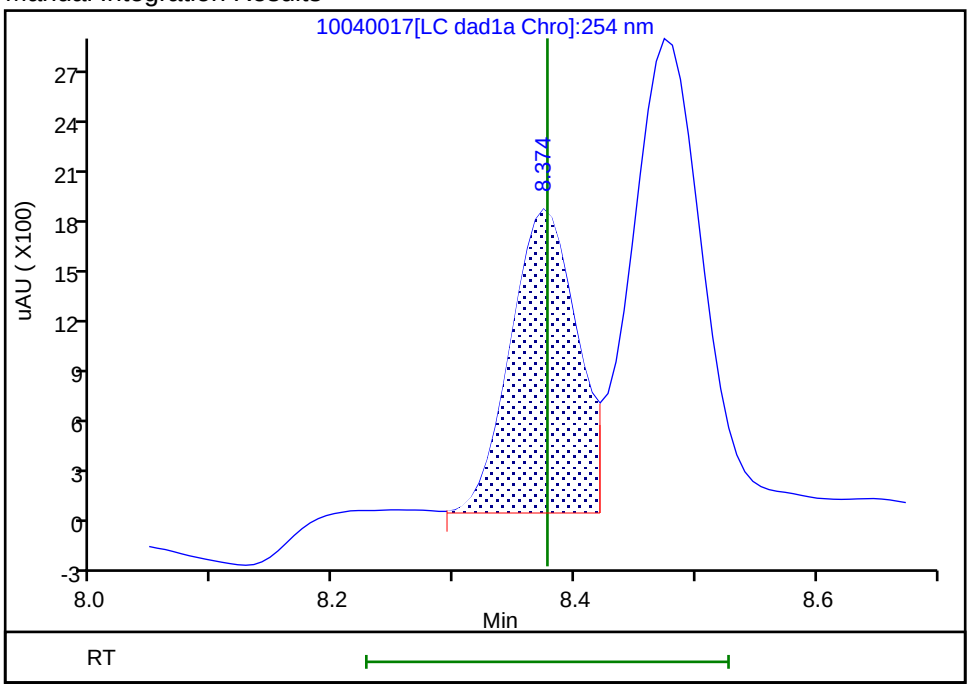
Processing Integration Results

RT: 8.37
Area: 8186
Amount: 0.061318
Amount Units: ug/mL



Manual Integration Results

RT: 8.37
Area: 6795
Amount: 0.052105
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:04:29 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

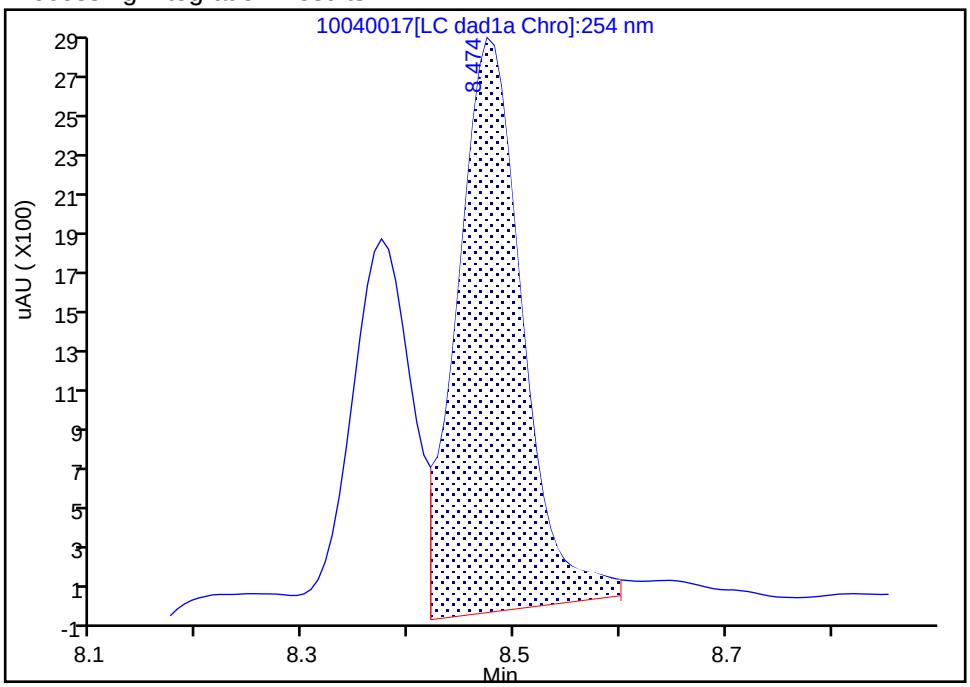
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040017.d				
Injection Date:	04-Oct-2024 19:11:05	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 3				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit 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

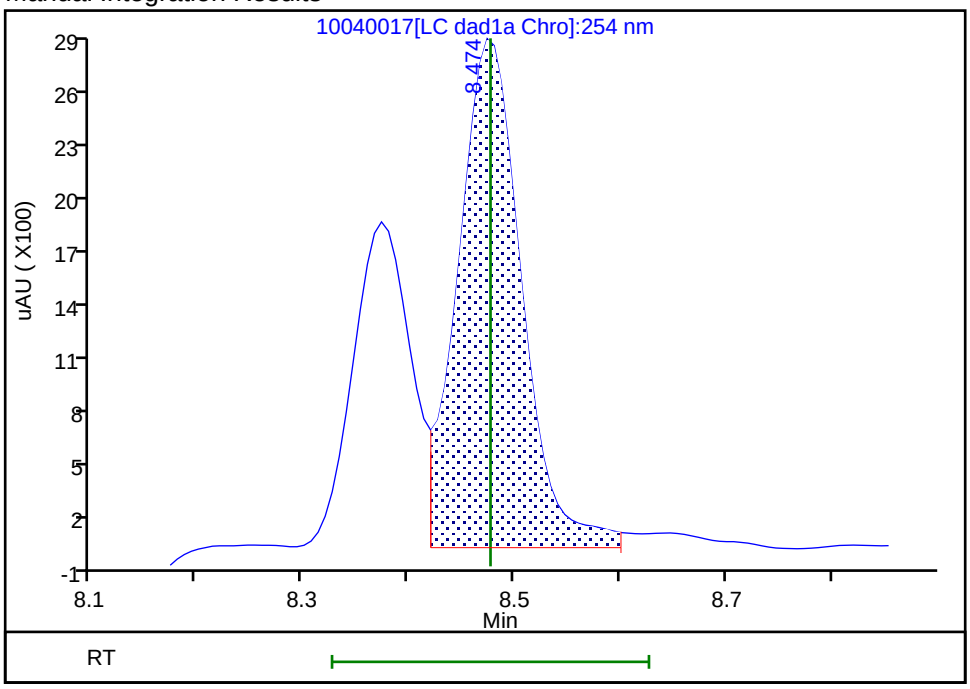
Processing Integration Results

RT: 8.47
Area: 12317
Amount: 0.056311
Amount Units: ug/mL



Manual Integration Results

RT: 8.47
Area: 11696
Amount: 0.053812
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:04:29 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

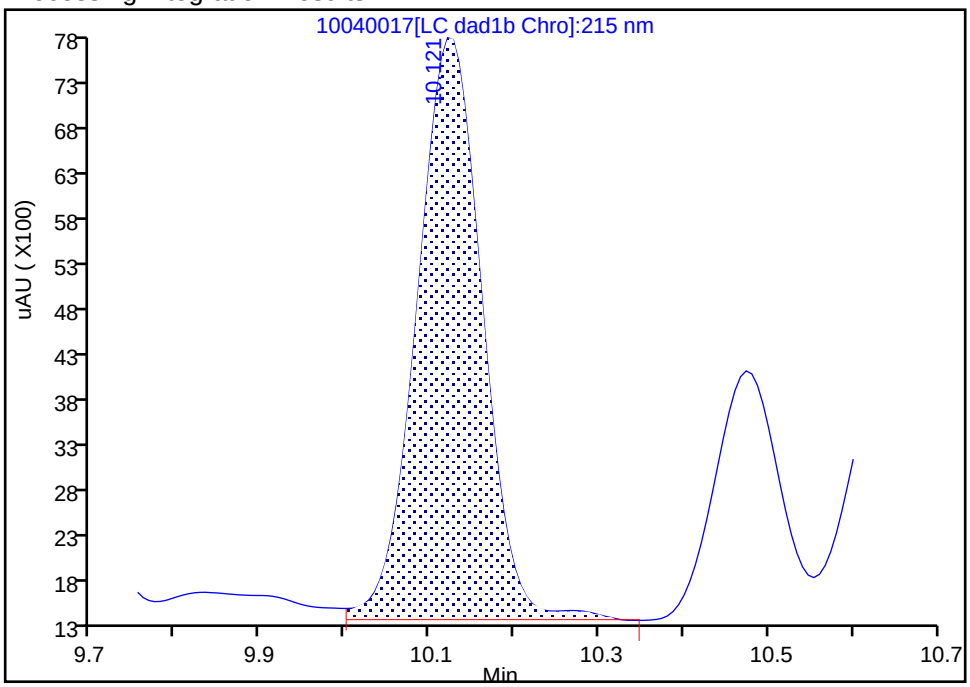
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040017.d
Injection Date: 04-Oct-2024 19:11:05 Instrument ID: CHHPLC_X3
Lims ID: IC INT/DMT 3
Client ID:
Operator ID: JZ ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1C, 215 nm

16 Nitroglycerin, CAS: 55-63-0

Signal: 1

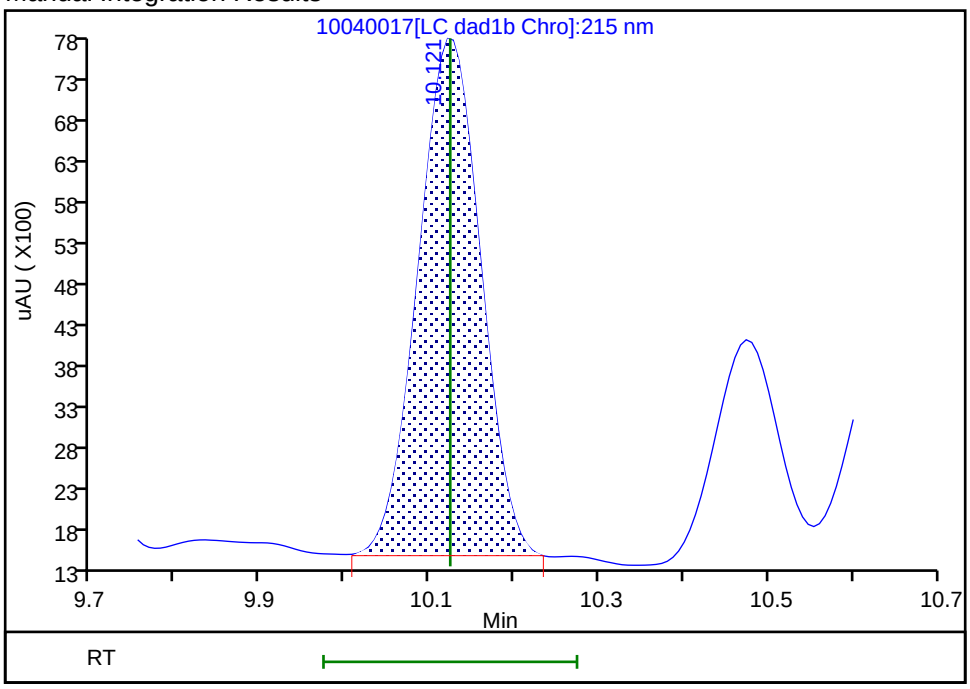
Processing Integration Results

RT: 10.12
Area: 34193
Amount: 0.496918
Amount Units: ug/mL



Manual Integration Results

RT: 10.12
Area: 32159
Amount: 0.505186
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:09:34 -06:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

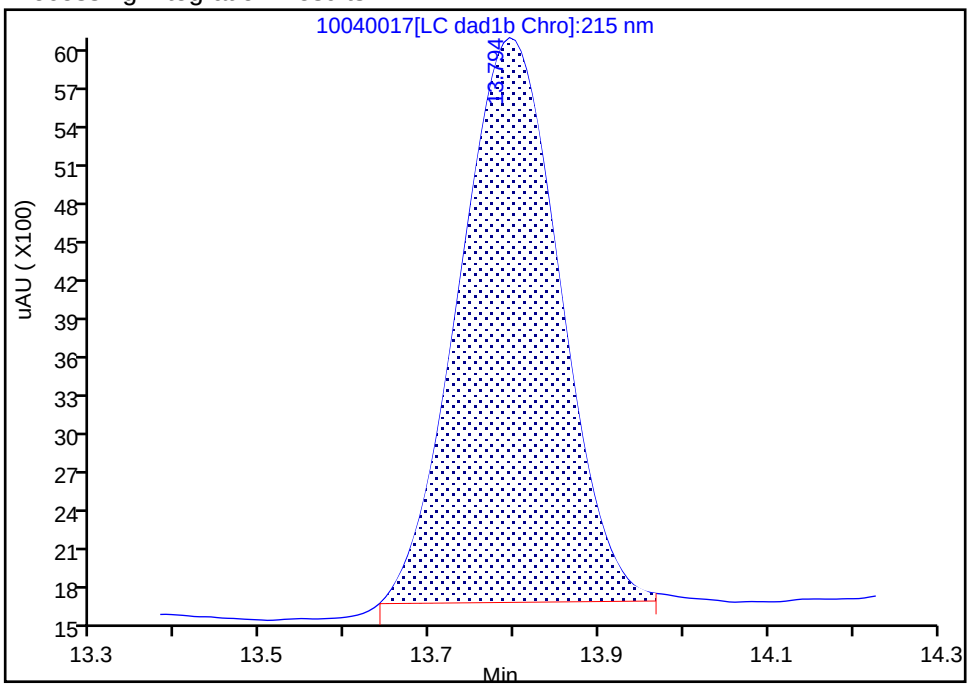
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040017.d
Injection Date: 04-Oct-2024 19:11:05 Instrument ID: CHHPLC_X3
Lims ID: IC INT/DMT 3
Client ID:
Operator ID: JZ ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1C, 215 nm

25 PETN, CAS: 78-11-5

Signal: 1

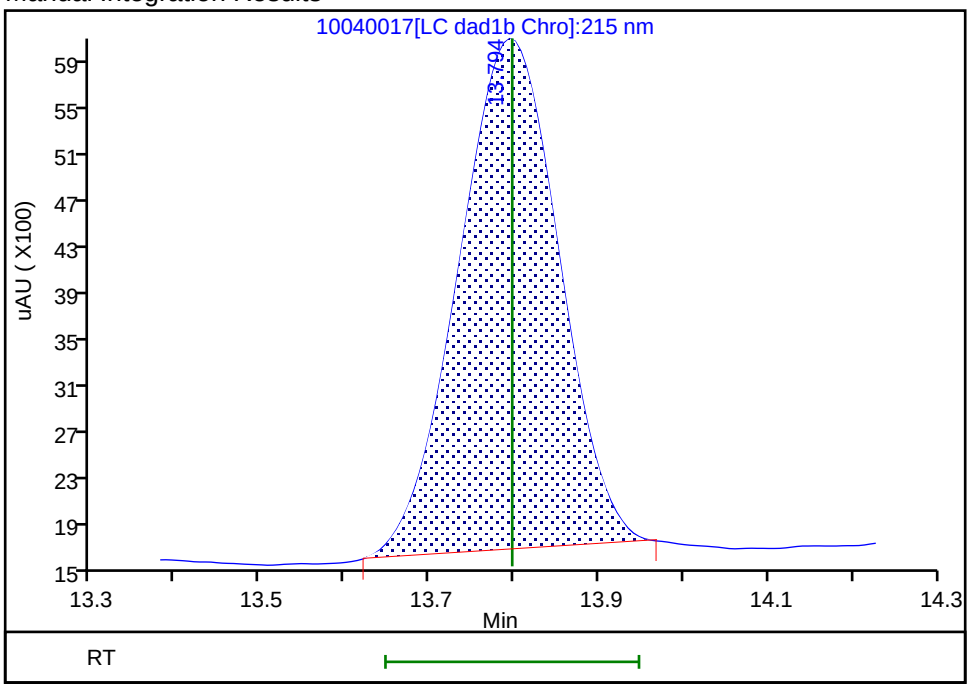
Processing Integration Results

RT: 13.79
Area: 36213
Amount: 0.505564
Amount Units: ug/mL



Manual Integration Results

RT: 13.79
Area: 36348
Amount: 0.503349
Amount Units: ug/mL



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

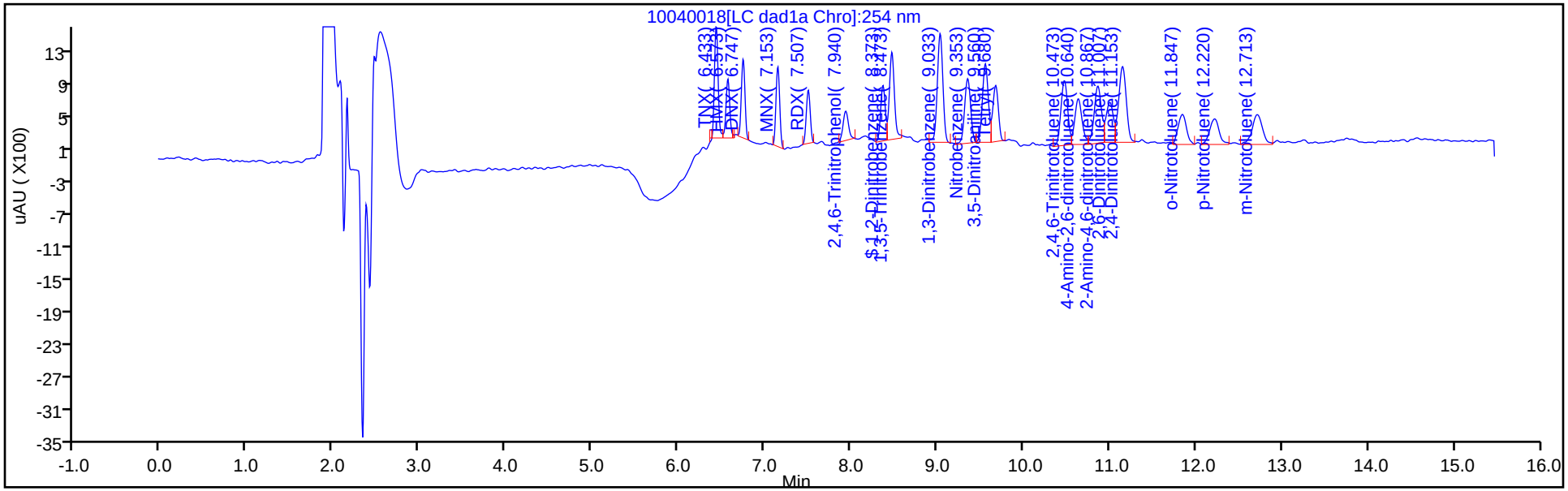
Report Date: 08-Oct-2024 13:19:23 Chrom Revision: 2.3 24-Sep-2024 15:19:46

Eurofins Denver

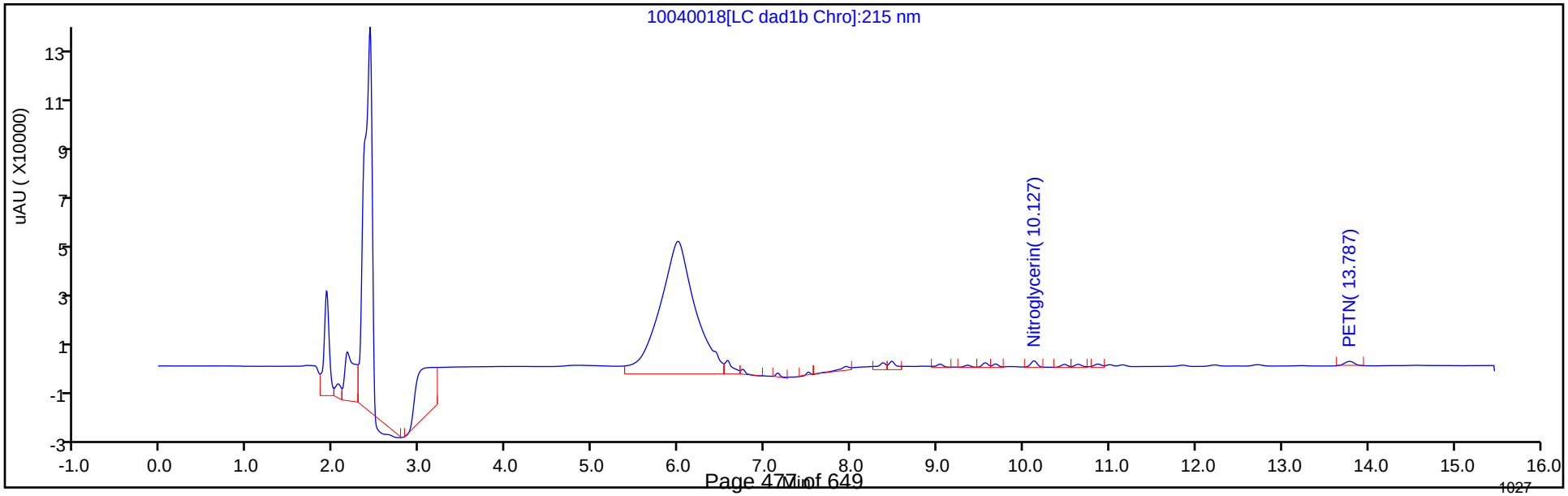
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040018.d

Injection Date:	04-Oct-2024 19:33:04	Instrument ID:	CHHPLC_X3	Operator ID:	JZ
Lims ID:	IC INT/DMT 2			Worklist Smp#:	18
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



1027

Manual Integration/User Assign Peak Report

Eurofins Denver

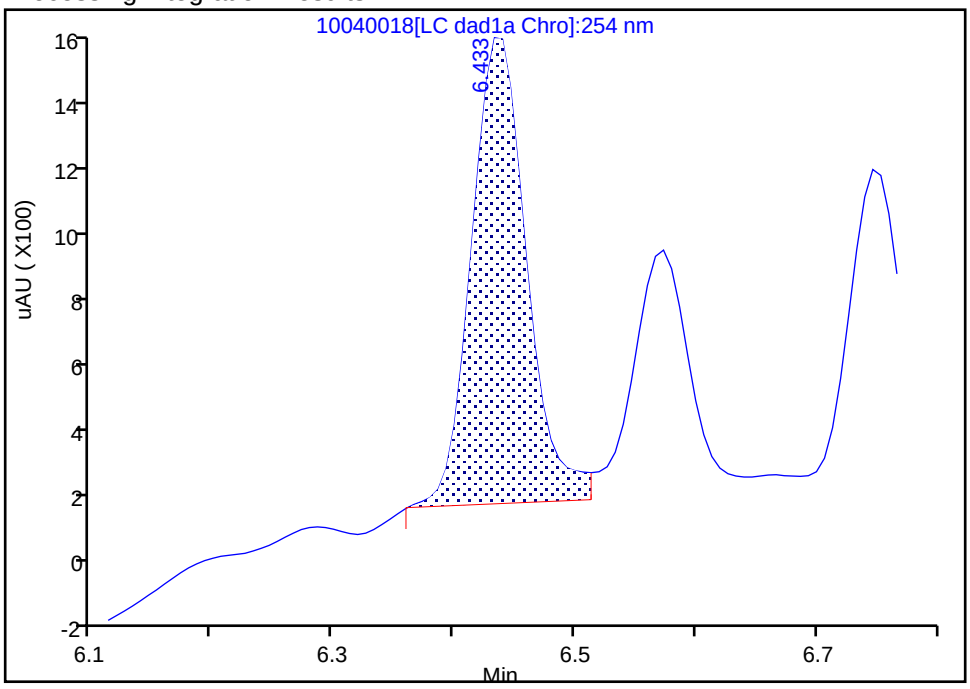
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040018.d
Injection Date: 04-Oct-2024 19:33:04 Instrument ID: CHHPLC_X3
Lims ID: IC INT/DMT 2
Client ID:
Operator ID: JZ ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

3 TNX, CAS: 13980-04-6

Signal: 1

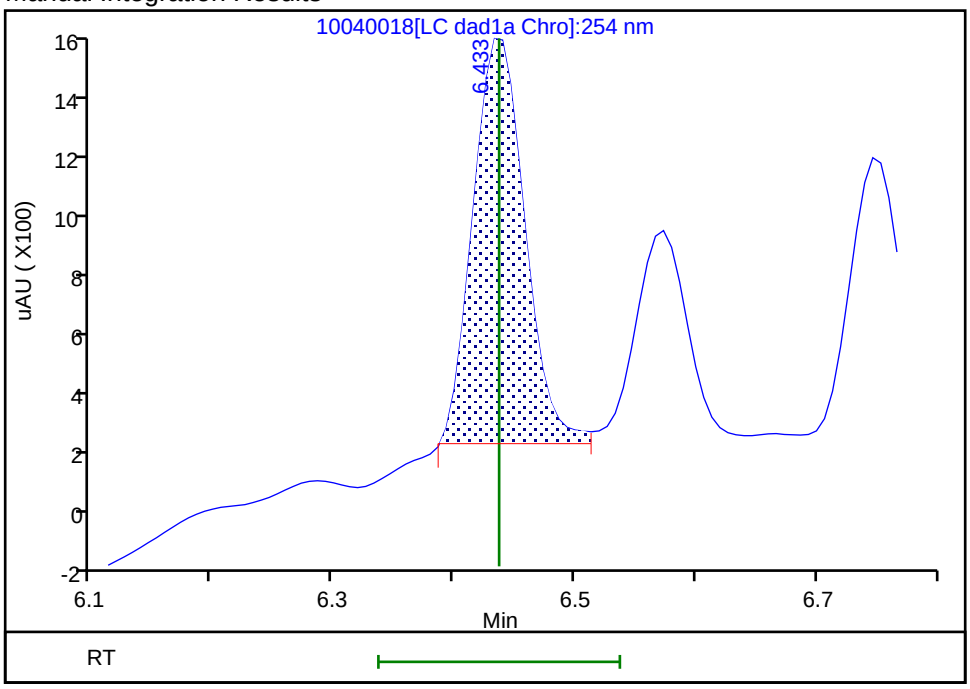
Processing Integration Results

RT: 6.43
Area: 4490
Amount: 0.021421
Amount Units: ug/mL



Manual Integration Results

RT: 6.43
Area: 4020
Amount: 0.019795
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:05:26 -06:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

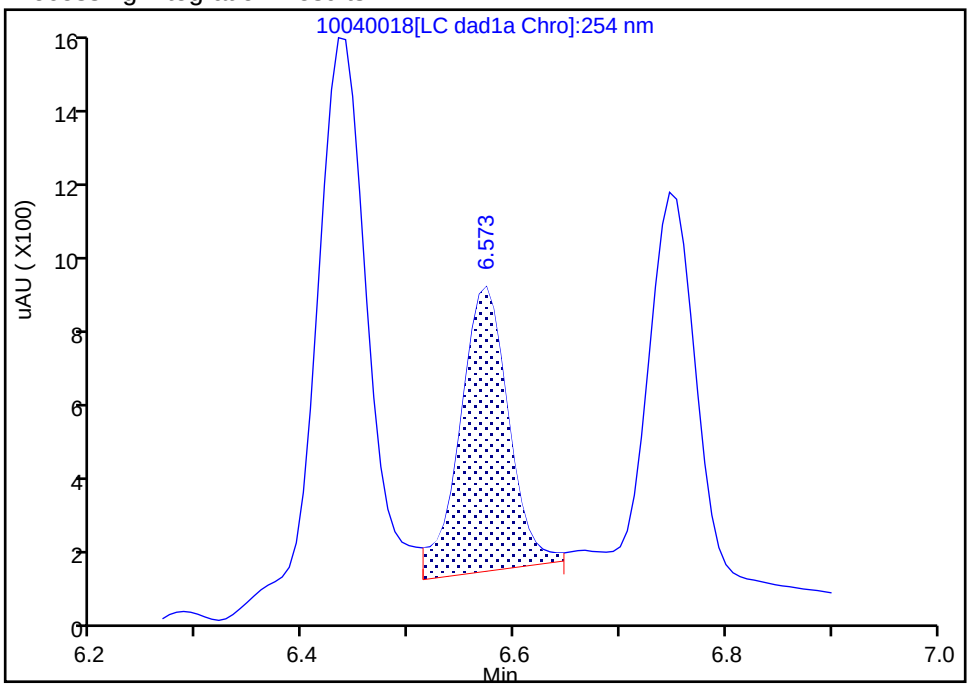
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Injection Date:	04-Oct-2024 19:33:04	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 2				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

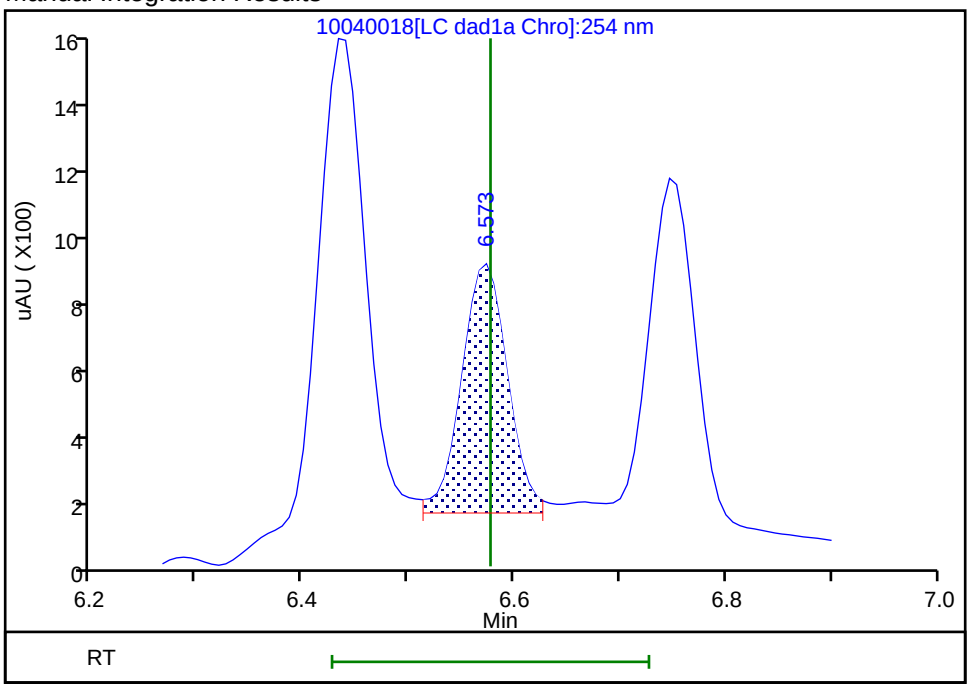
Processing Integration Results

RT: 6.57
Area: 2344
Amount: 0.018346
Amount Units: ug/mL



Manual Integration Results

RT: 6.57
Area: 2125
Amount: 0.021986
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:05:28 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

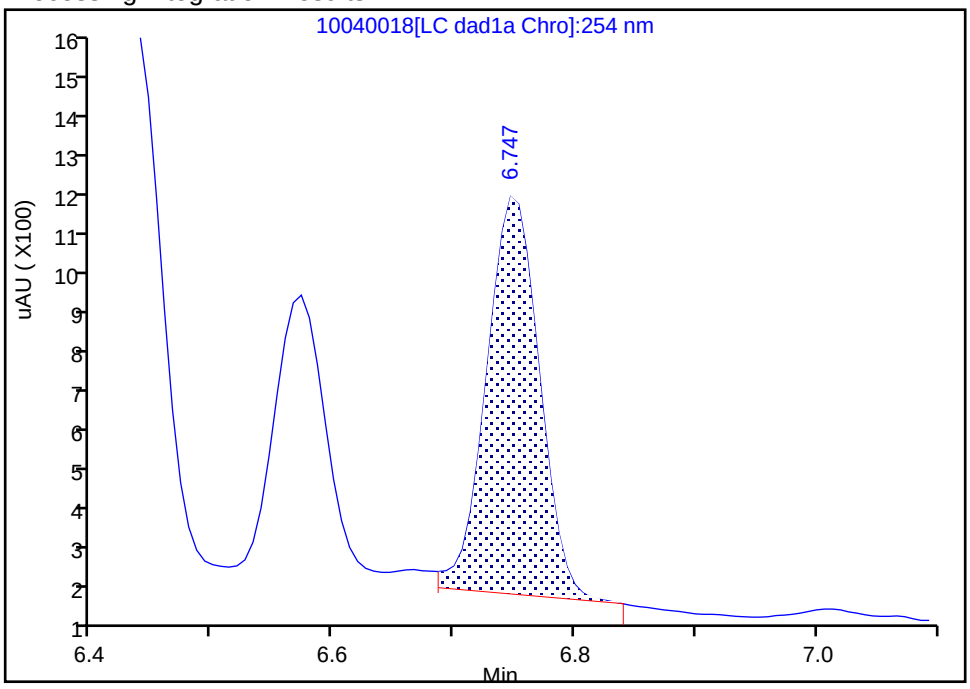
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Injection Date:	04-Oct-2024 19:33:04	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 2				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

6 DNX, CAS: 80251-29-2

Signal: 1

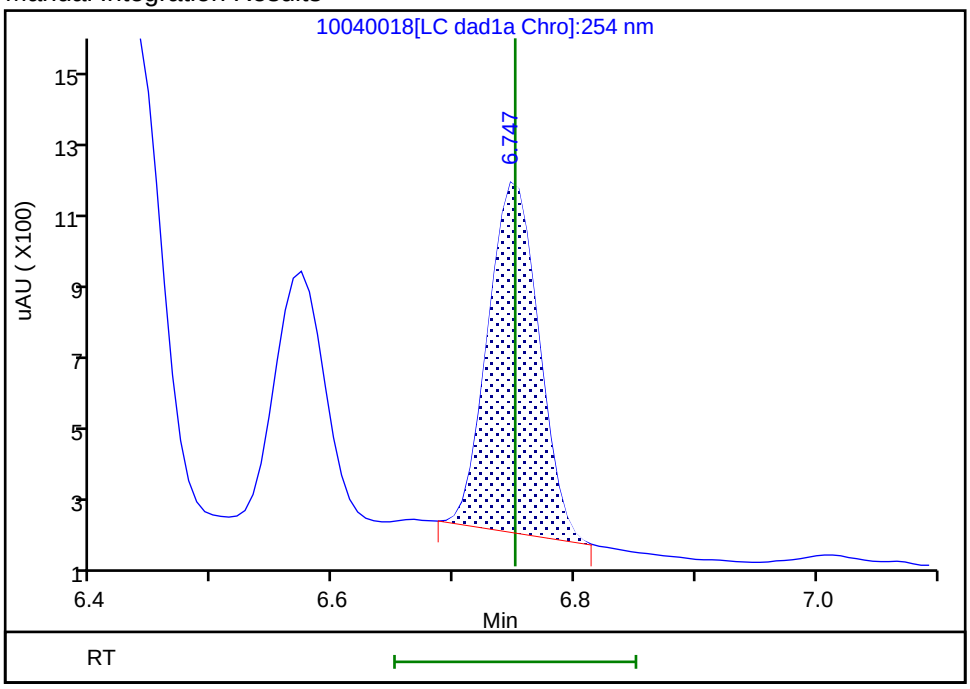
Processing Integration Results

RT: 6.75
Area: 3002
Amount: 0.019805
Amount Units: ug/mL



Manual Integration Results

RT: 6.75
Area: 2804
Amount: 0.019200
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:05:36 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins Denver

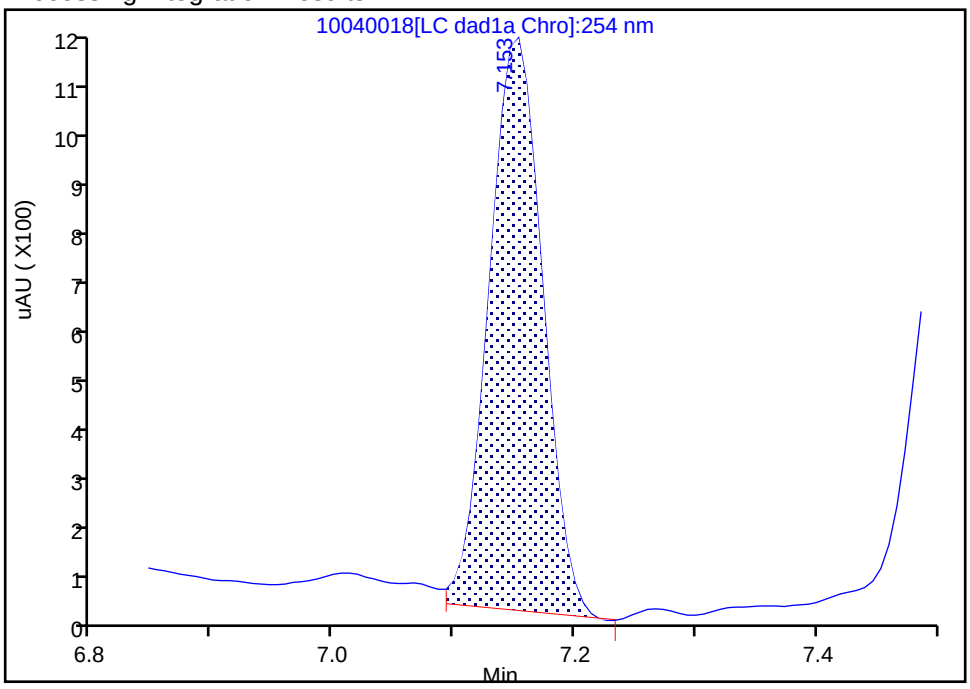
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040018.d				
Injection Date:	04-Oct-2024 19:33:04	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 2				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

7 MNX, CAS: 5755-27-1

Signal: 1

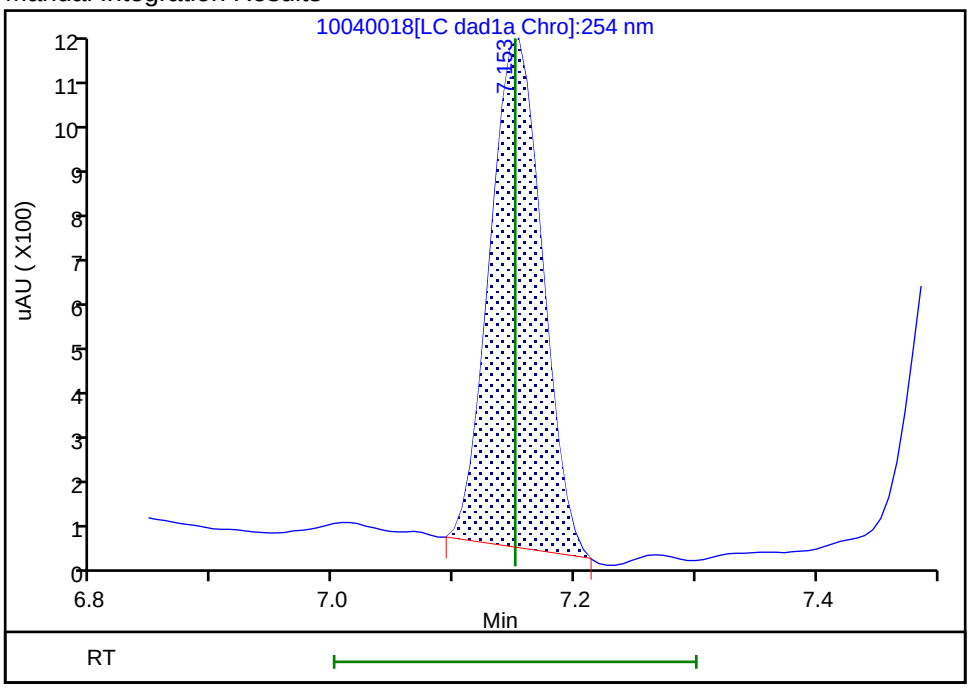
Processing Integration Results

RT: 7.15
Area: 3091
Amount: 0.023142
Amount Units: ug/mL



Manual Integration Results

RT: 7.15
Area: 2958
Amount: 0.022252
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:05:43 -06:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

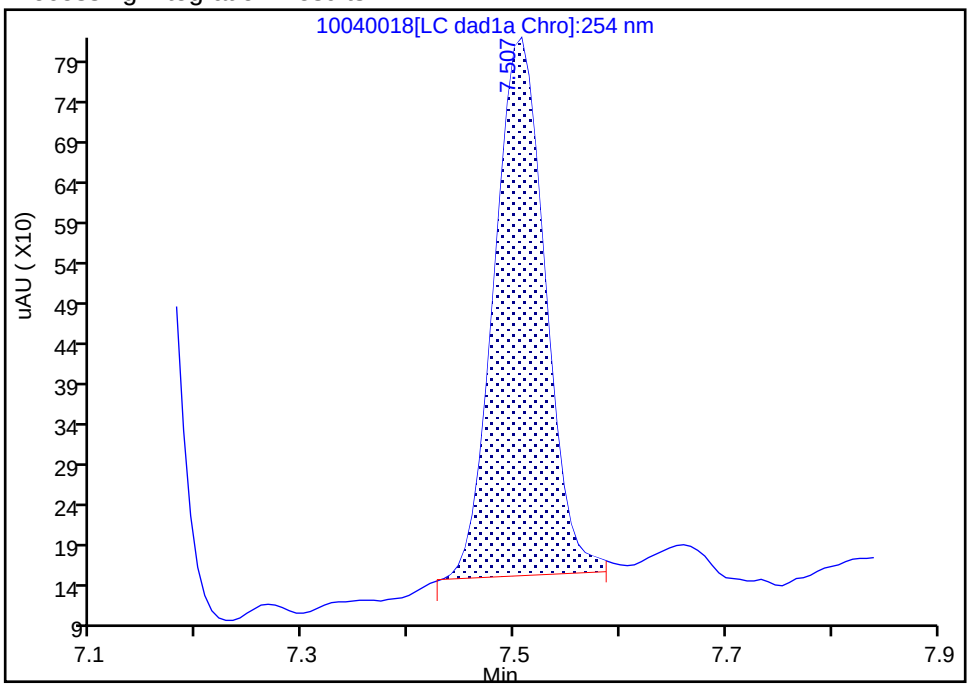
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040018.d				
Injection Date:	04-Oct-2024 19:33:04	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 2				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

8 RDX, CAS: 121-82-4

Signal: 1

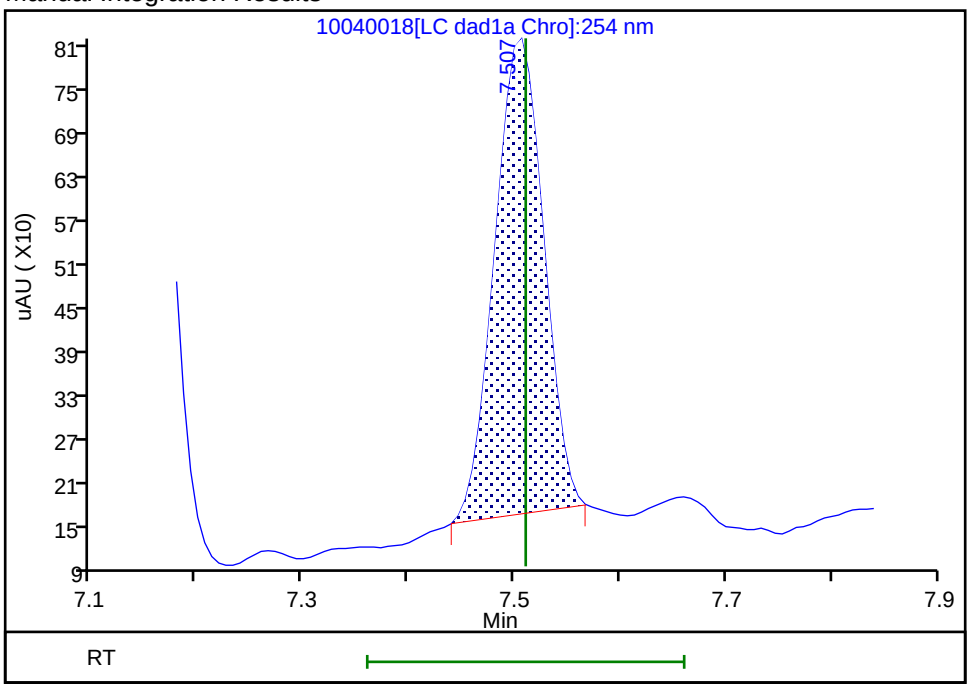
Processing Integration Results

RT: 7.51
Area: 2243
Amount: 0.020524
Amount Units: ug/mL



Manual Integration Results

RT: 7.51
Area: 2098
Amount: 0.018358
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:05:48 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

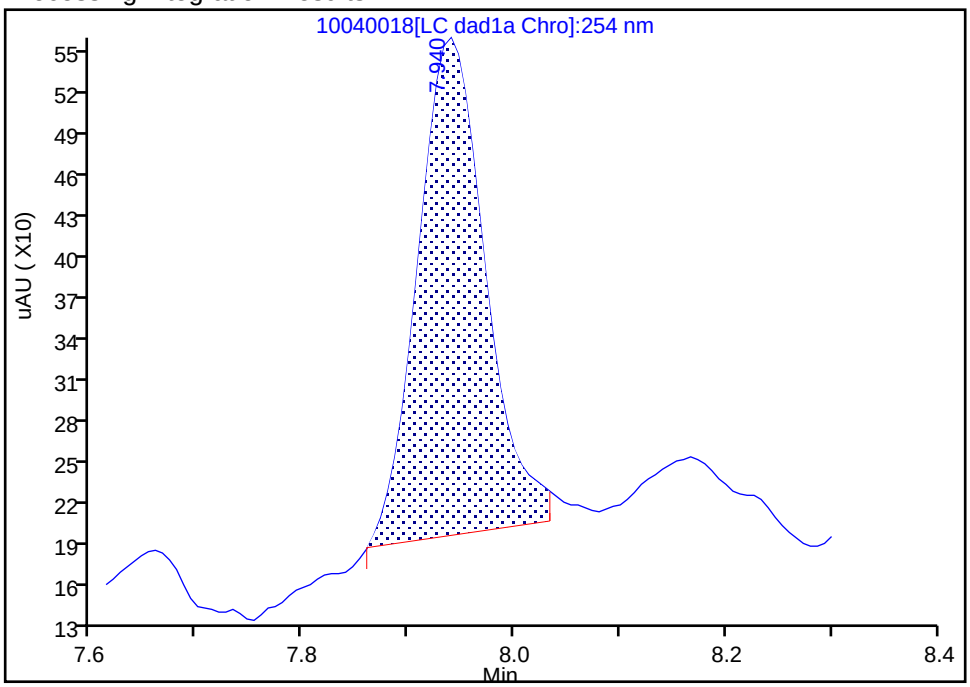
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040018.d
Injection Date: 04-Oct-2024 19:33:04 Instrument ID: CHHPLC_X3
Lims ID: IC INT/DMT 2
Client ID:
Operator ID: JZ ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

9 2,4,6-Trinitrophenol, CAS: 88-89-1

Signal: 1

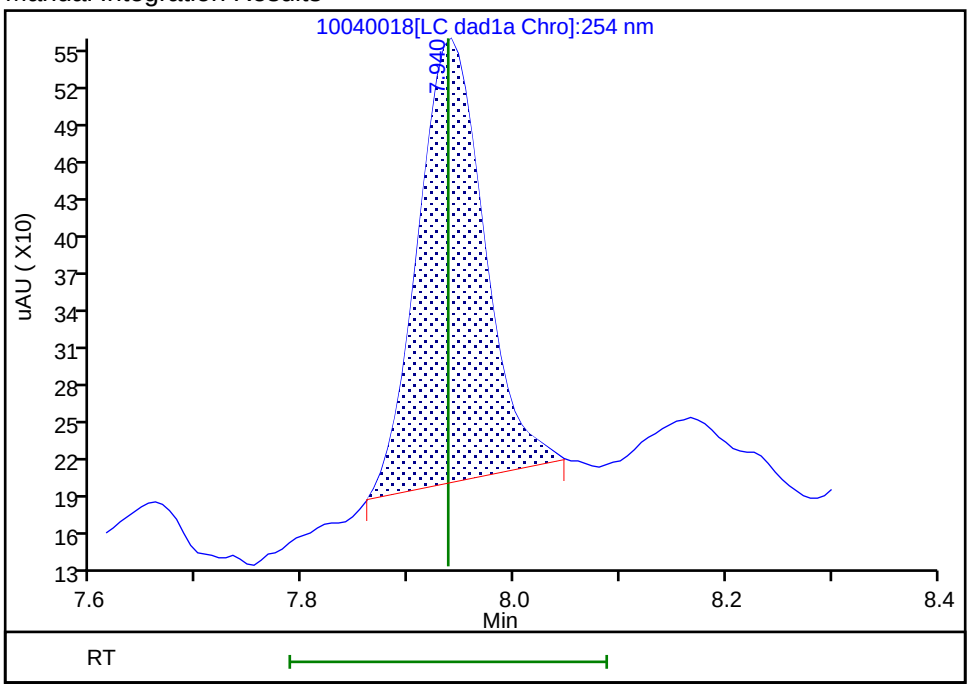
Processing Integration Results

RT: 7.94
Area: 1610
Amount: 0.020704
Amount Units: ug/mL



Manual Integration Results

RT: 7.94
Area: 1559
Amount: 0.020669
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:05:52 -06:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

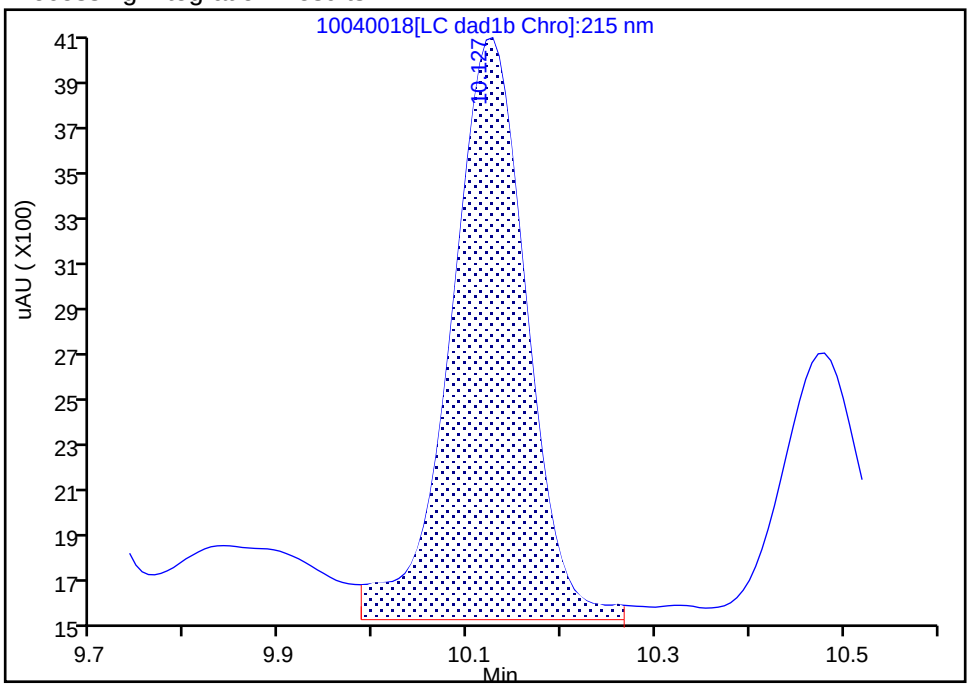
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040018.d				
Injection Date:	04-Oct-2024 19:33:04	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 2				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1C, 215 nm		

16 Nitroglycerin, CAS: 55-63-0

Signal: 1

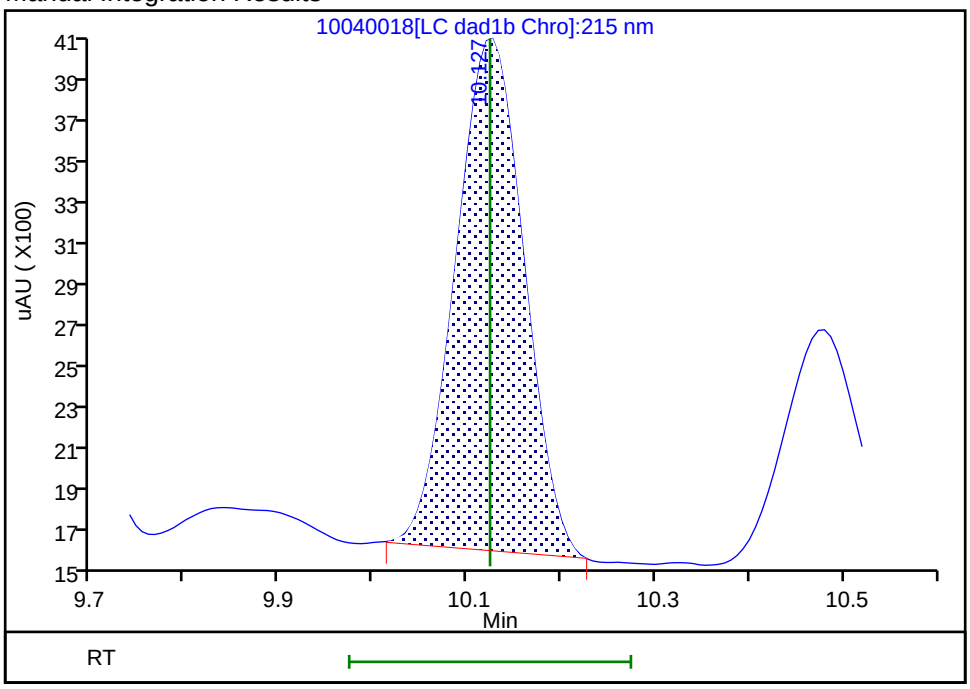
Processing Integration Results

RT: 10.13
Area: 14150
Amount: 0.206998
Amount Units: ug/mL



Manual Integration Results

RT: 10.13
Area: 12143
Amount: 0.194648
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:09:41 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

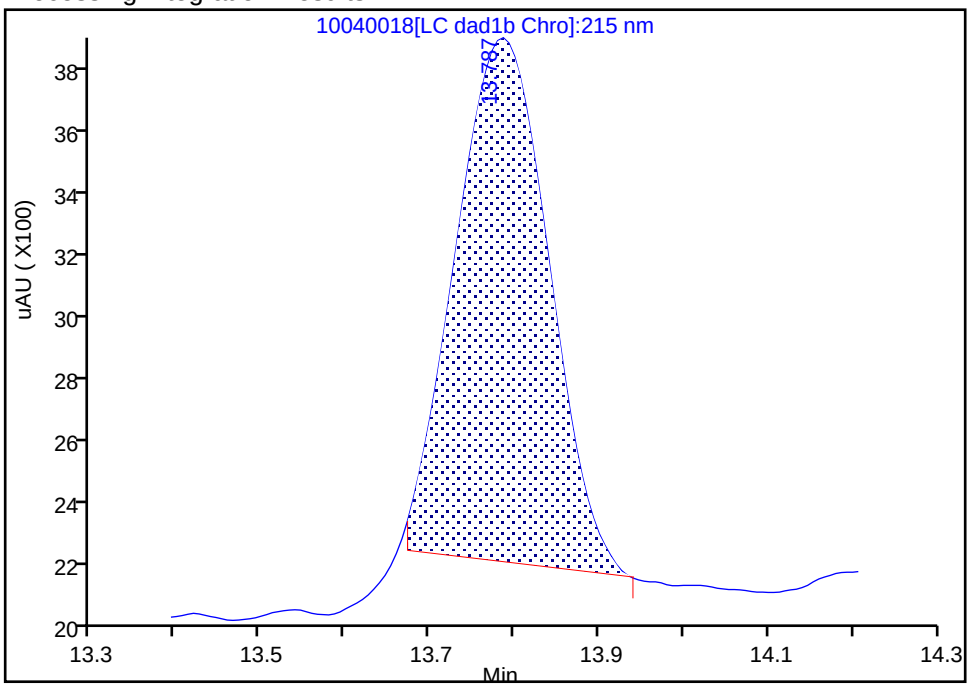
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Injection Date: 04-Oct-2024 19:33:04 Instrument ID: CHHPLC_X3
Lims ID: IC INT/DMT 2
Client ID:
Operator ID: JZ ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1C, 215 nm

25 PETN, CAS: 78-11-5

Signal: 1

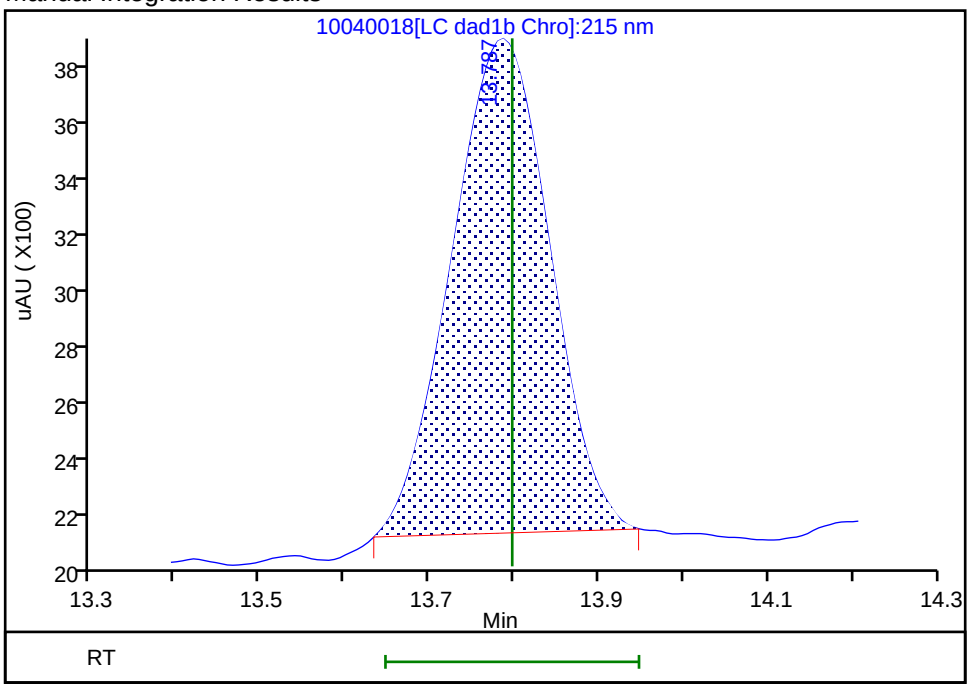
Processing Integration Results

RT: 13.79
Area: 12556
Amount: 0.175210
Amount Units: ug/mL



Manual Integration Results

RT: 13.79
Area: 13772
Amount: 0.190715
Amount Units: ug/mL



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:

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8330 DMT_00018	Amount Added:	0.50	Units: uL

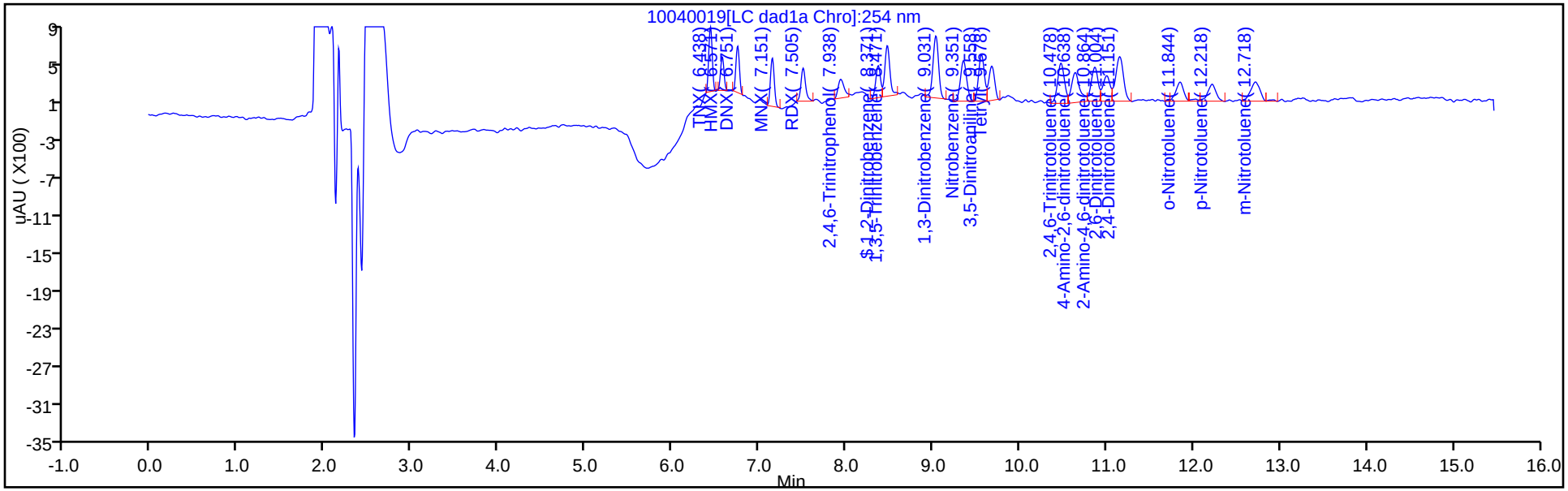
Report Date: 08-Oct-2024 13:19:26 Chrom Revision: 2.3 24-Sep-2024 15:19:46

Eurofins Denver

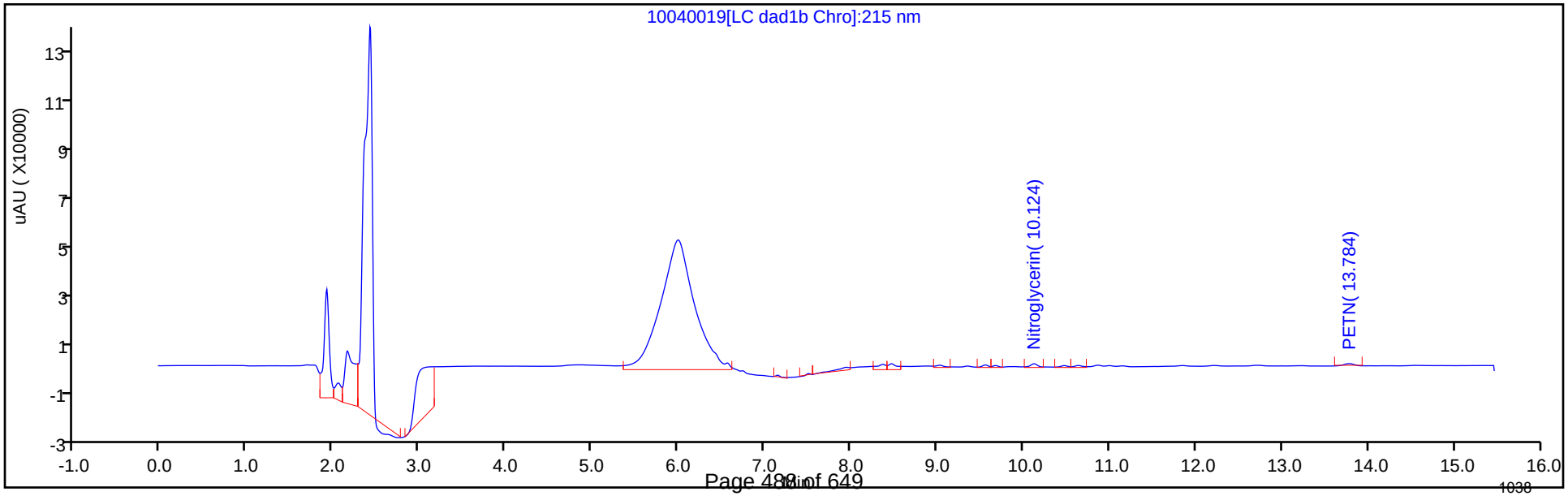
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Injection Date:	04-Oct-2024 19:55:02	Instrument ID:	CHHPLC_X3	Operator ID:	JZ
Lims ID:	IC INT/DMT 1			Worklist Smp#:	19
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	8330_X3	Limit Group:	GCSV - 8330		

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



1038

Manual Integration/User Assign Peak Report

Eurofins Denver

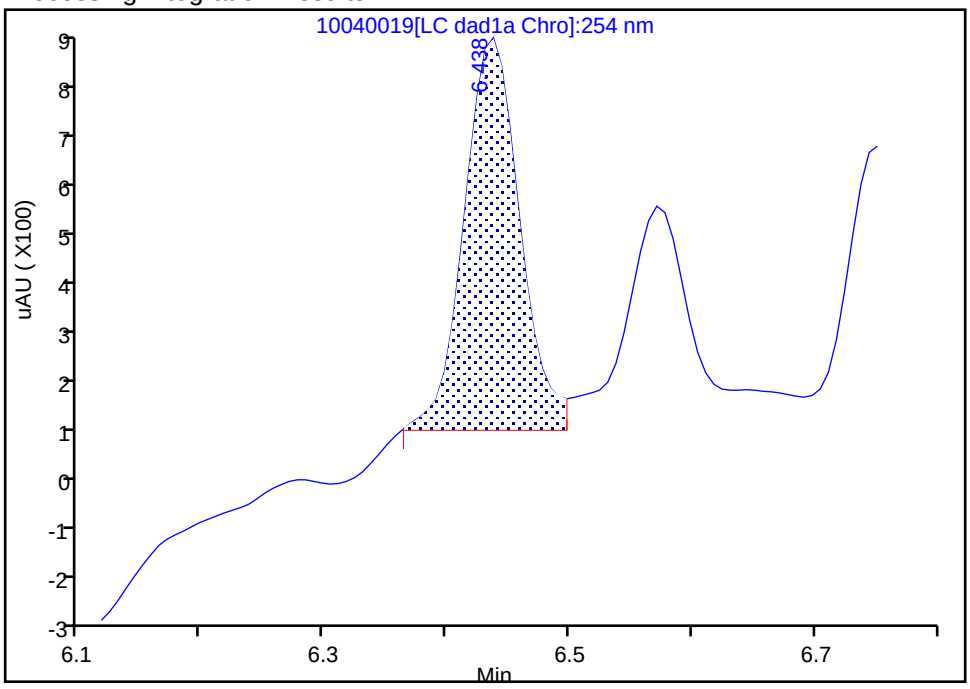
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040019.d
Injection Date: 04-Oct-2024 19:55:02 Instrument ID: CHHPLC_X3
Lims ID: IC INT/DMT 1
Client ID:
Operator ID: JZ ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

3 TNX, CAS: 13980-04-6

Signal: 1

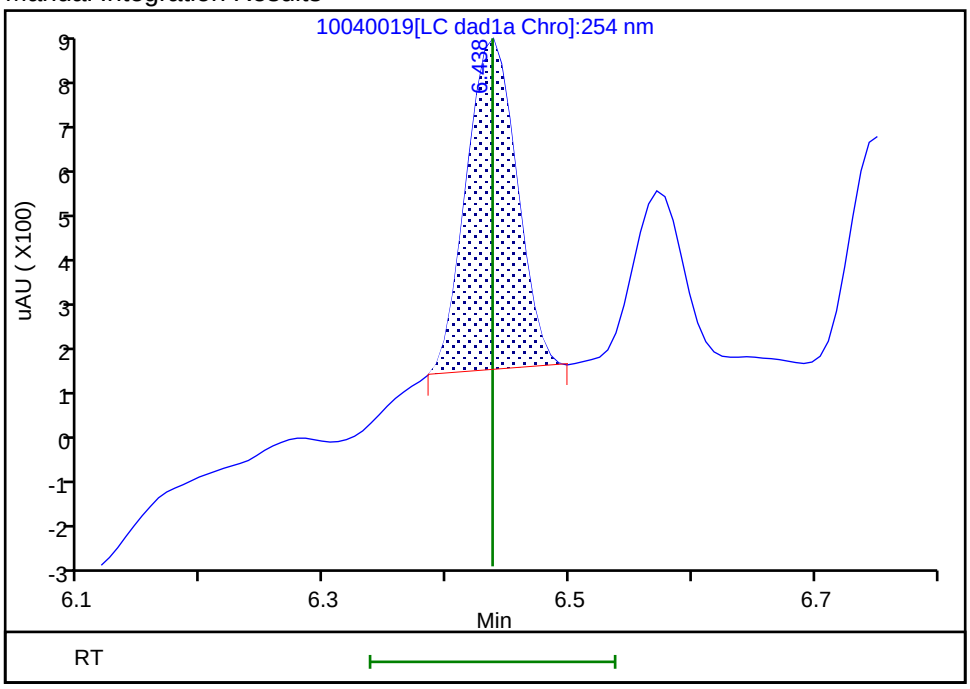
Processing Integration Results

RT: 6.44
Area: 2305
Amount: 0.011135
Amount Units: ug/mL



Manual Integration Results

RT: 6.44
Area: 1951
Amount: 0.009607
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:07:17 -06:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

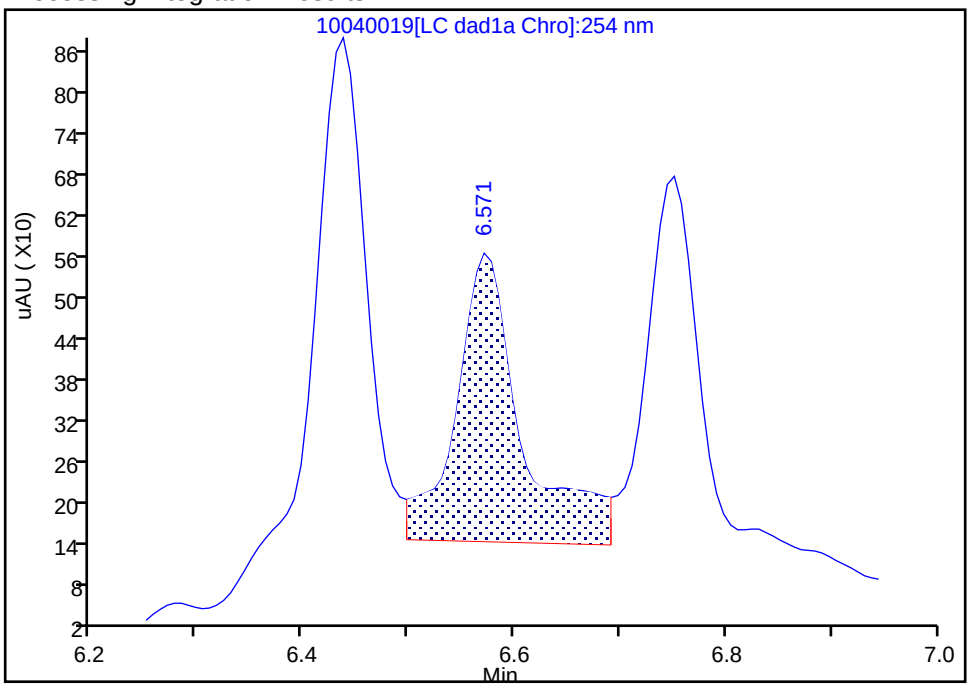
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040019.d
Injection Date: 04-Oct-2024 19:55:02 Instrument ID: CHHPLC_X3
Lims ID: IC INT/DMT 1
Client ID:
Operator ID: JZ ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

4 HMX, CAS: 2691-41-0

Signal: 1

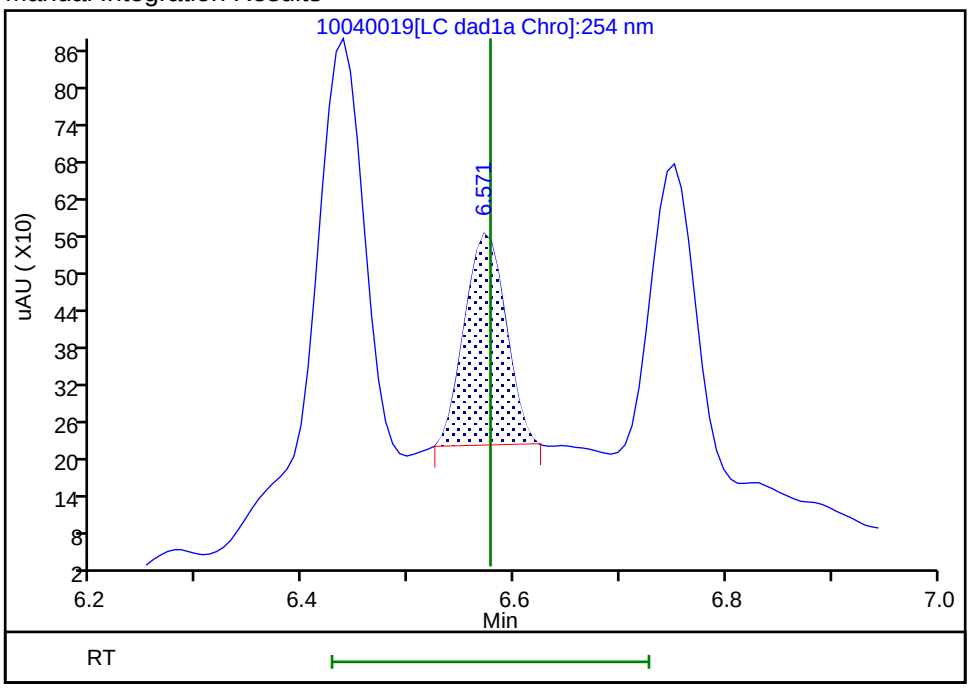
Processing Integration Results

RT: 6.57
Area: 1819
Amount: 0.013460
Amount Units: ug/mL



Manual Integration Results

RT: 6.57
Area: 930
Amount: 0.009622
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:07:10 -06:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

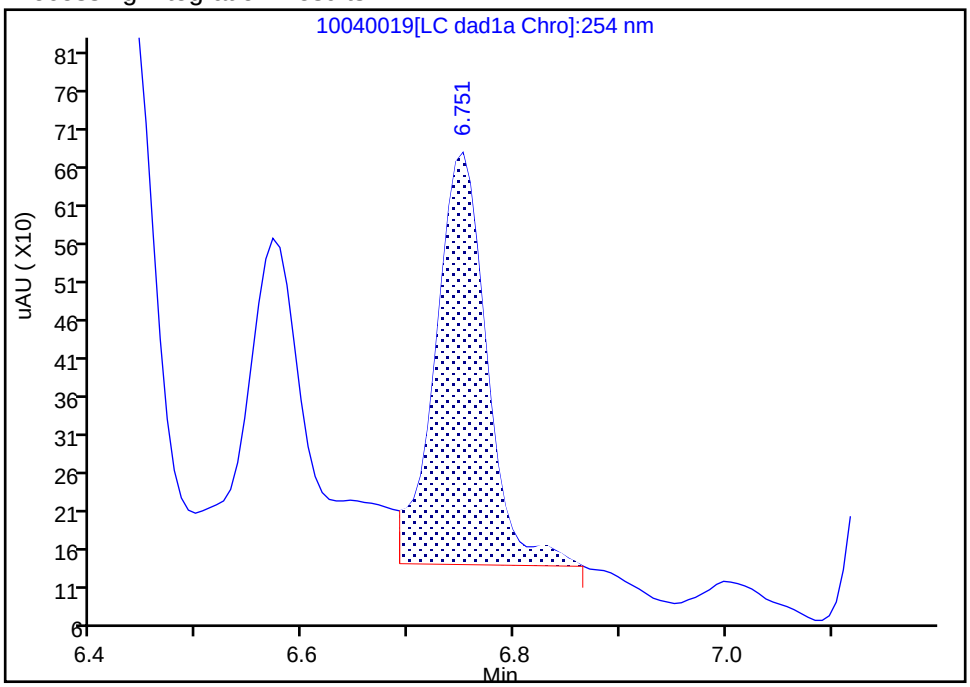
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040019.d				
Injection Date:	04-Oct-2024 19:55:02	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 1				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	19	Worklist Smp#:	19
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

6 DNX, CAS: 80251-29-2

Signal: 1

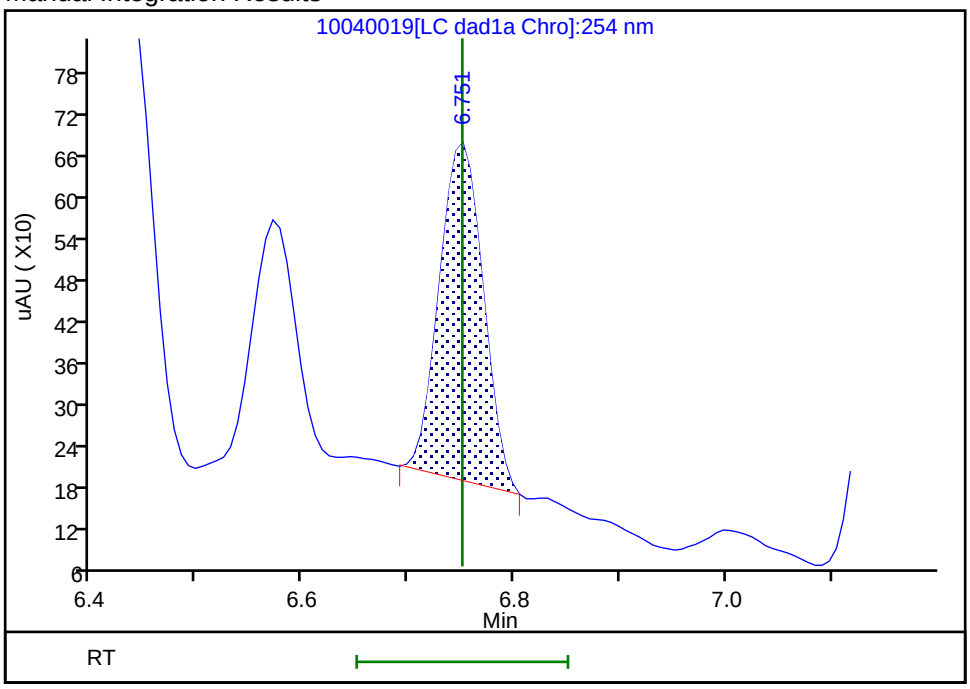
Processing Integration Results

RT: 6.75
Area: 1806
Amount: 0.012001
Amount Units: ug/mL



Manual Integration Results

RT: 6.75
Area: 1406
Amount: 0.009627
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:07:06 -06:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

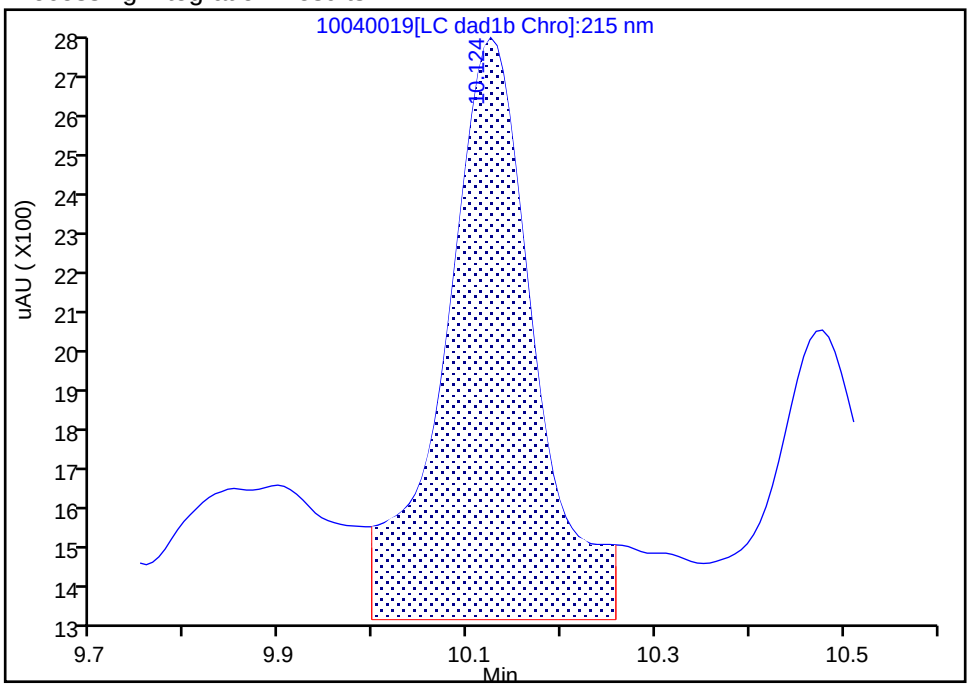
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040019.d
Injection Date: 04-Oct-2024 19:55:02 Instrument ID: CHHPLC_X3
Lims ID: IC INT/DMT 1
Client ID:
Operator ID: JZ ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1C, 215 nm

16 Nitroglycerin, CAS: 55-63-0

Signal: 1

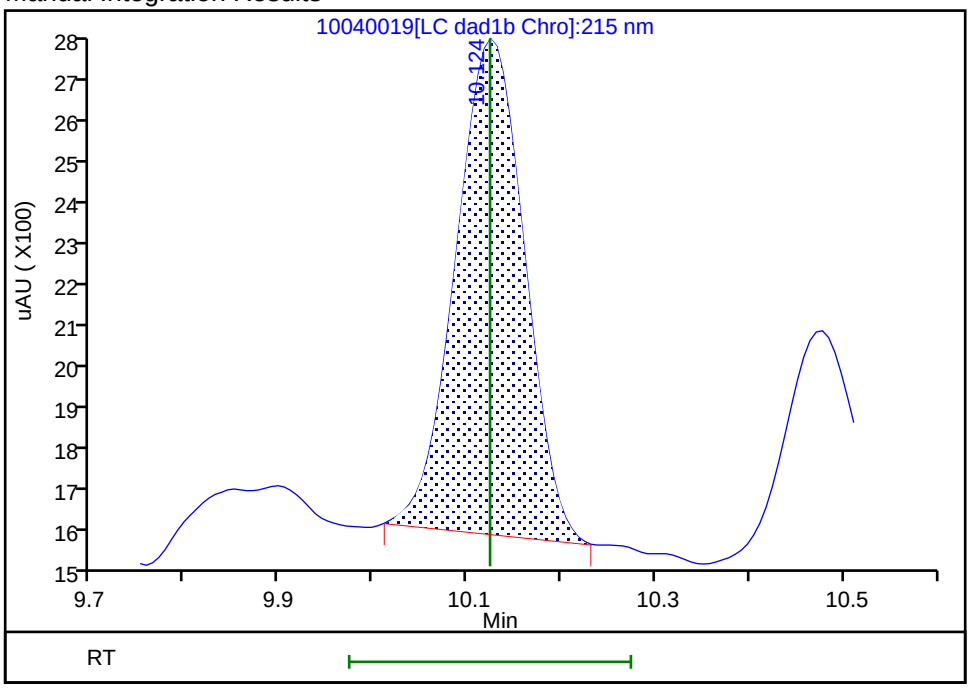
Processing Integration Results

RT: 10.12
Area: 9393
Amount: 0.139687
Amount Units: ug/mL



Manual Integration Results

RT: 10.12
Area: 6121
Amount: 0.101220
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:09:48 -06:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

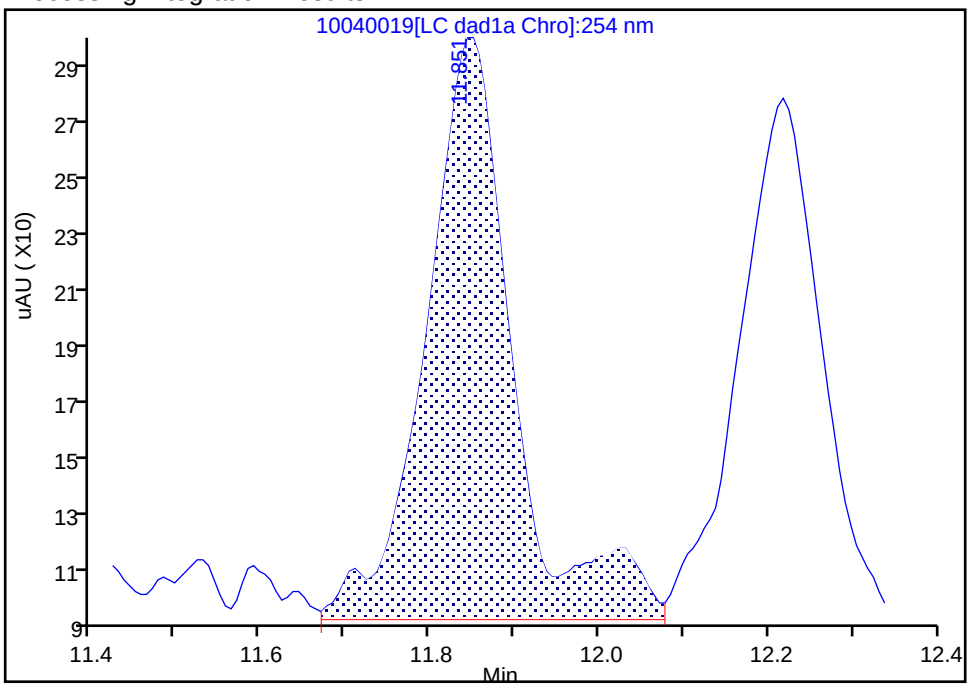
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040019.d				
Injection Date:	04-Oct-2024 19:55:02	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 1				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	19	Worklist Smp#:	19
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

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

Signal: 1

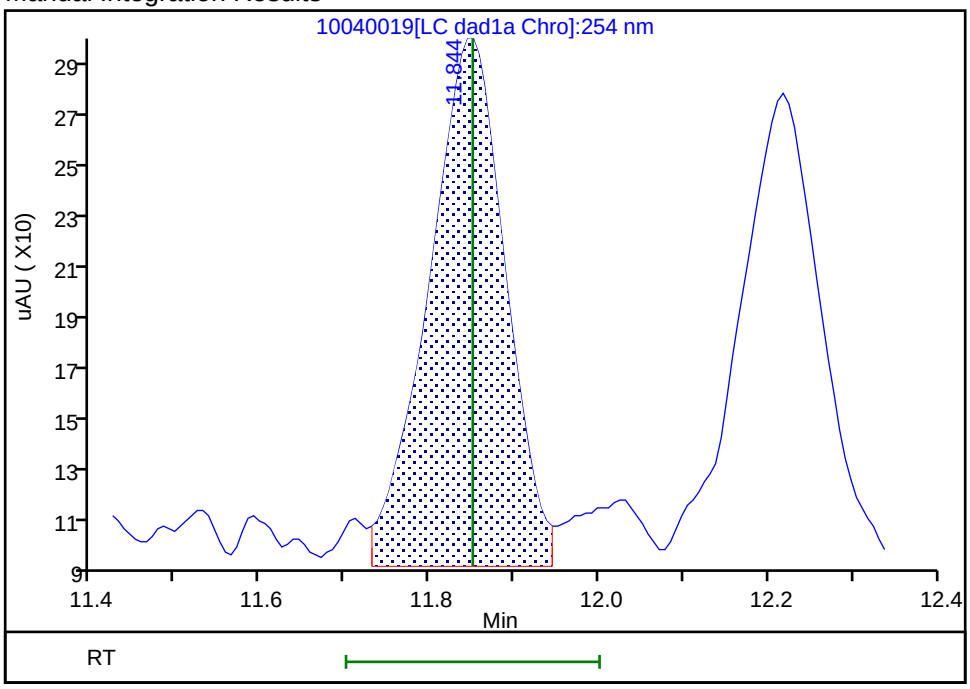
Processing Integration Results

RT: 11.85
Area: 1460
Amount: 0.011447
Amount Units: ug/mL



Manual Integration Results

RT: 11.84
Area: 1273
Amount: 0.010146
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:06:44 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

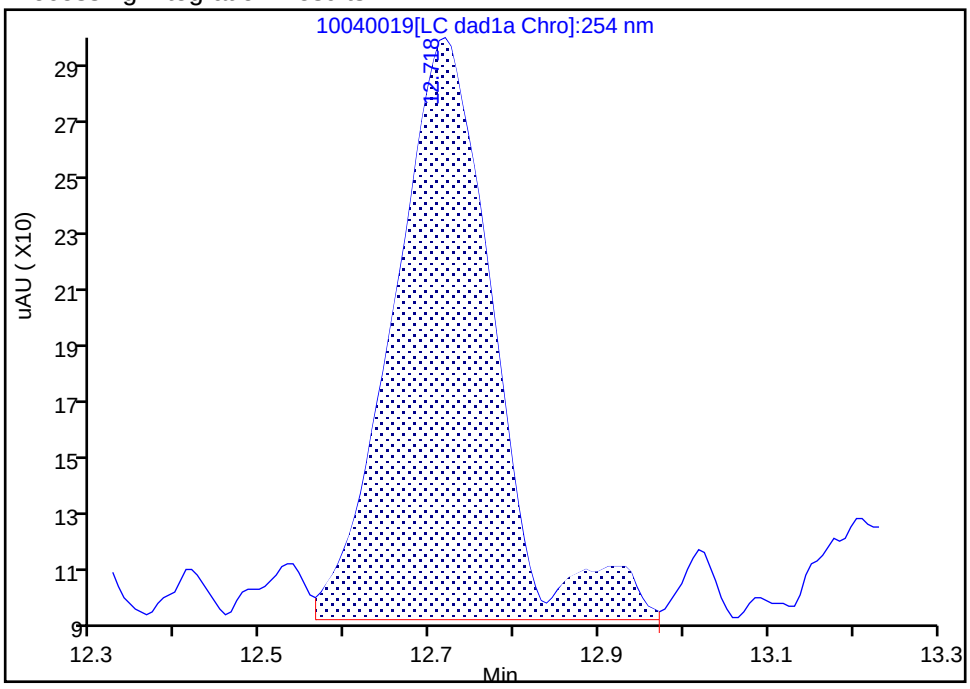
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040019.d				
Injection Date:	04-Oct-2024 19:55:02	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 1				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	19	Worklist Smp#:	19
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

24 m-Nitrotoluene, CAS: 99-08-1

Signal: 1

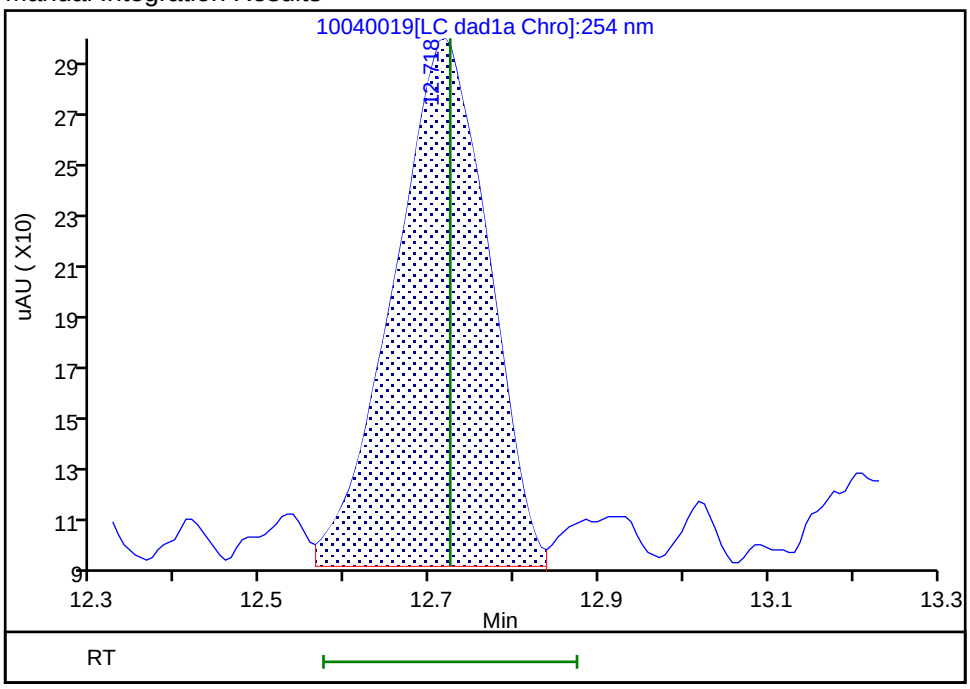
Processing Integration Results

RT: 12.72
Area: 1709
Amount: 0.012068
Amount Units: ug/mL



Manual Integration Results

RT: 12.72
Area: 1598
Amount: 0.009977
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:06:32 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

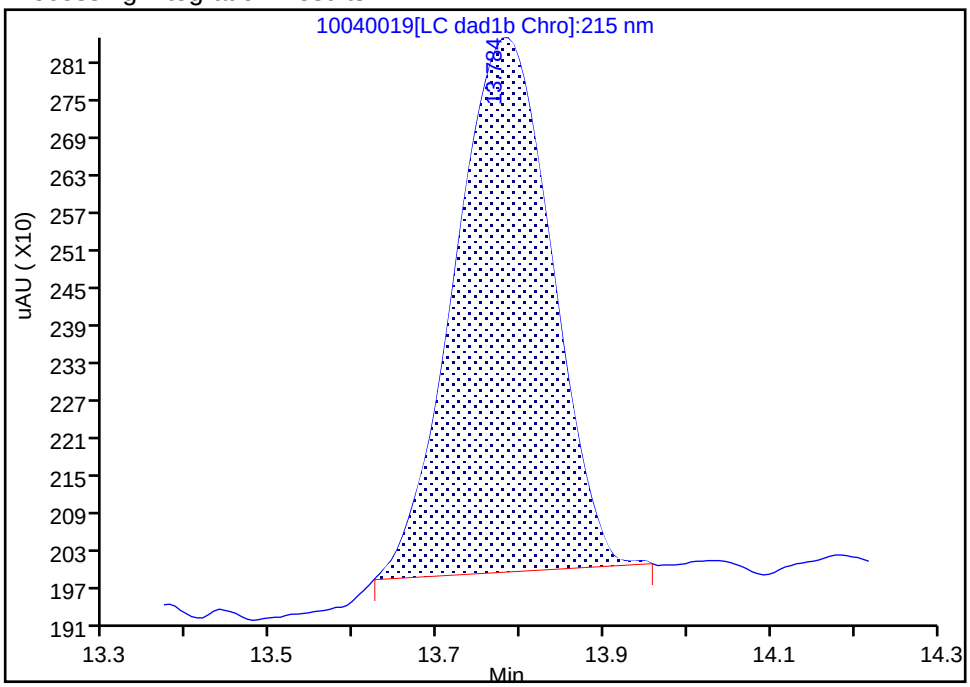
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040019.d
Injection Date: 04-Oct-2024 19:55:02 Instrument ID: CHHPLC_X3
Lims ID: IC INT/DMT 1
Client ID:
Operator ID: JZ ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1C, 215 nm

25 PETN, CAS: 78-11-5

Signal: 1

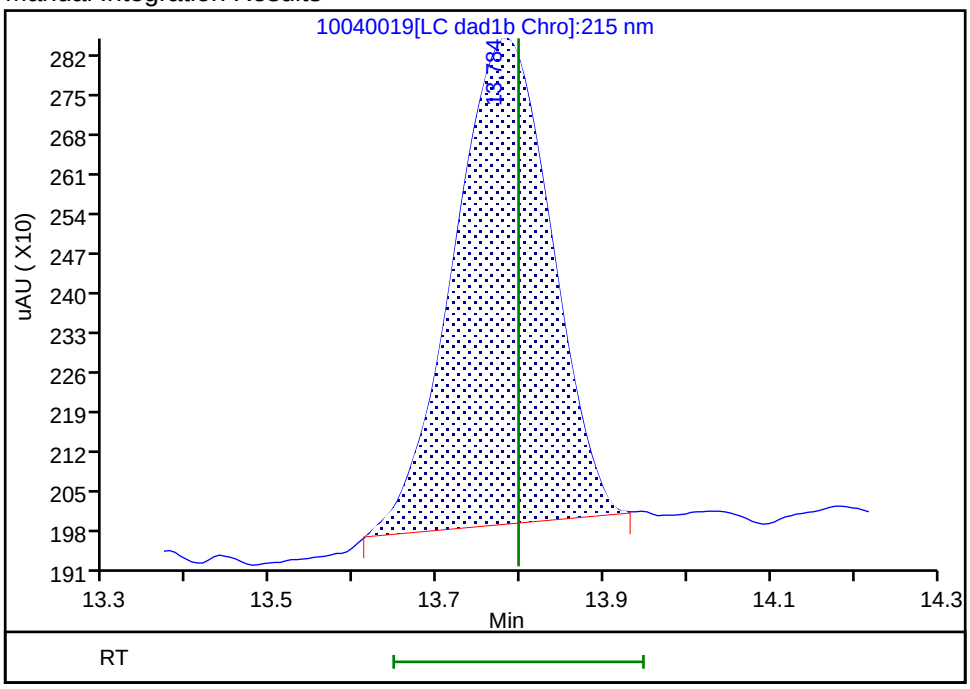
Processing Integration Results

RT: 13.78
Area: 6952
Amount: 0.096421
Amount Units: ug/mL



Manual Integration Results

RT: 13.78
Area: 7053
Amount: 0.097670
Amount Units: ug/mL



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

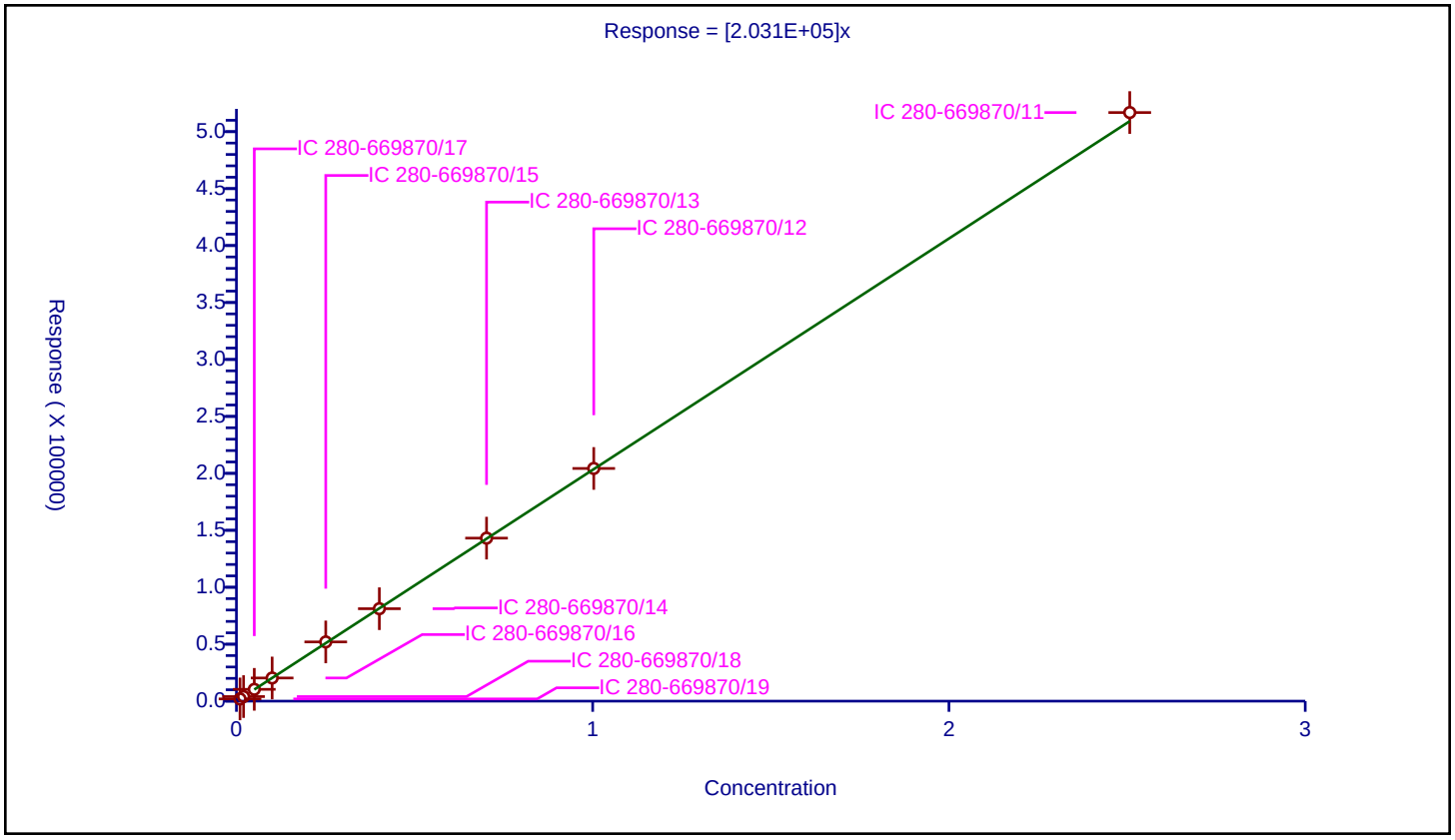
Curve Coefficients

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

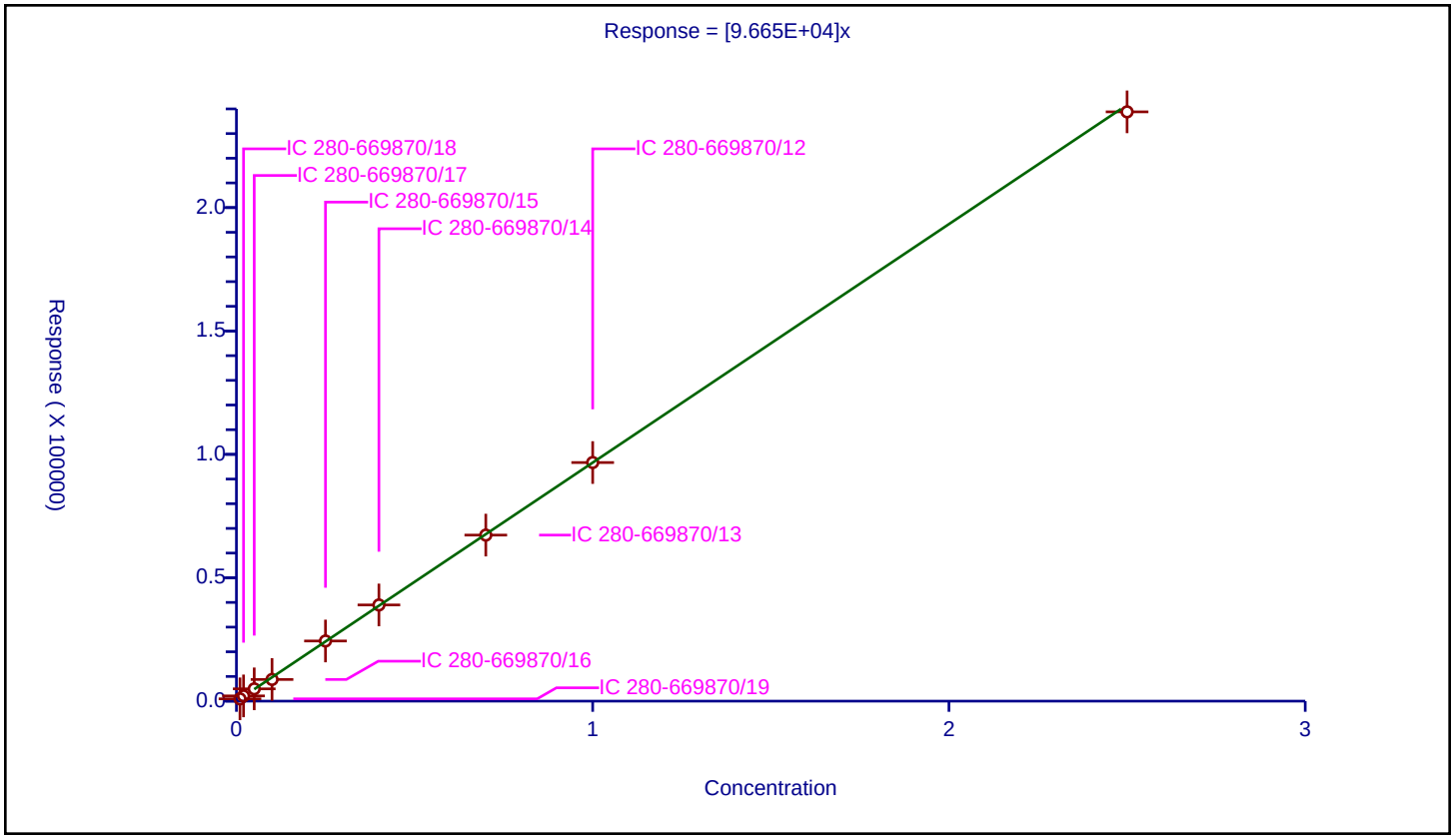
Curve Coefficients

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

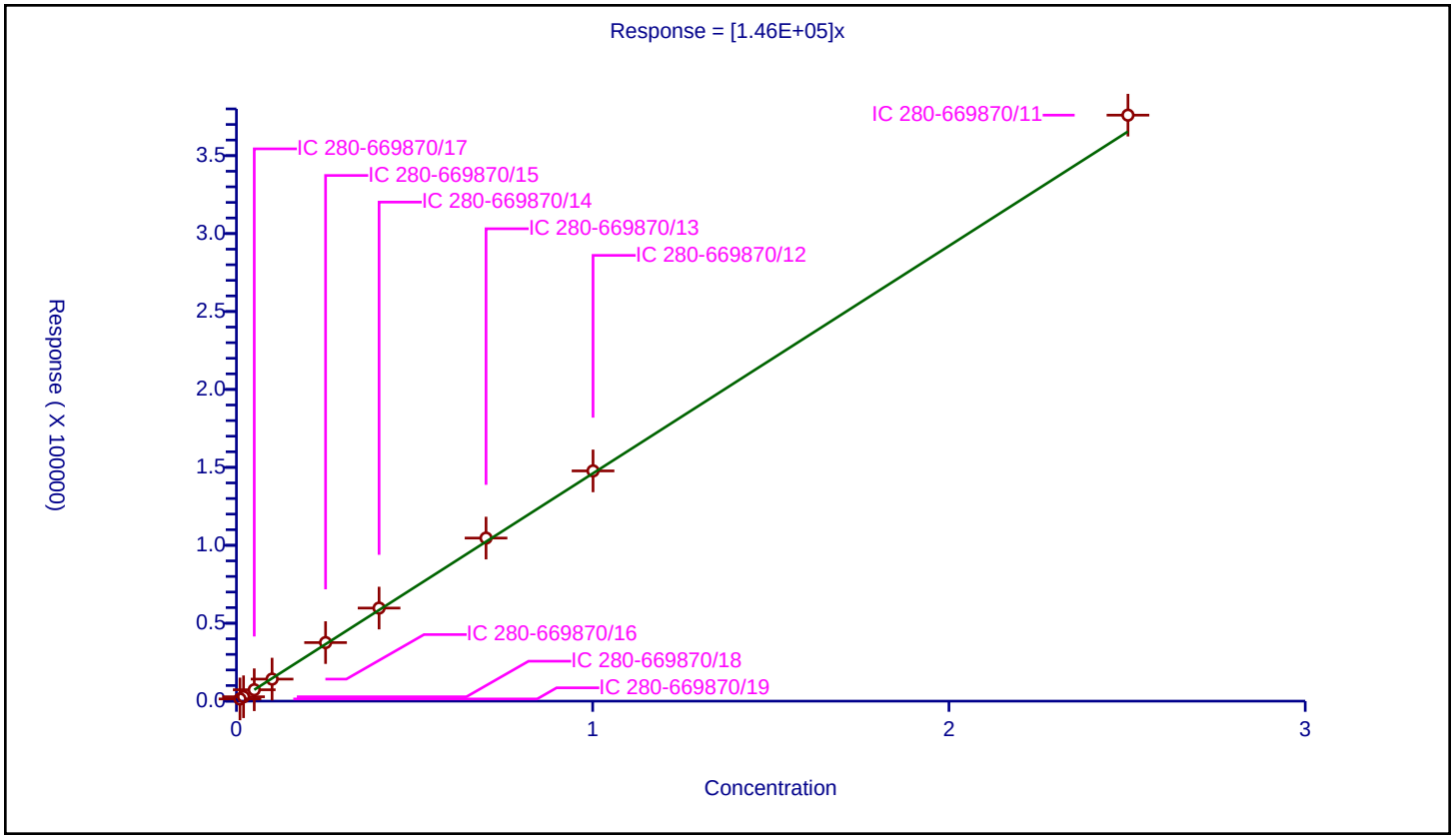
Curve Coefficients

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

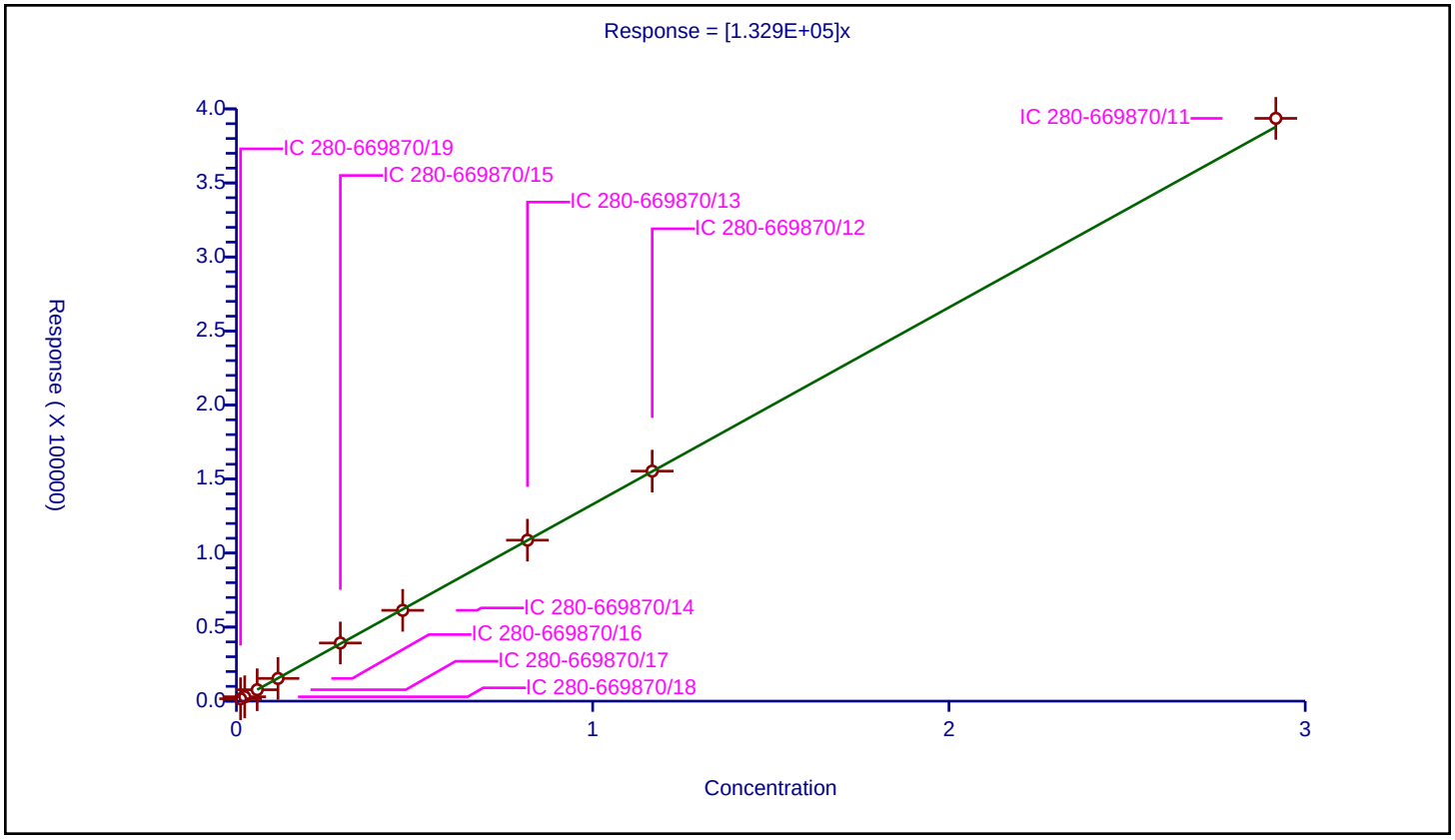
Curve Coefficients

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

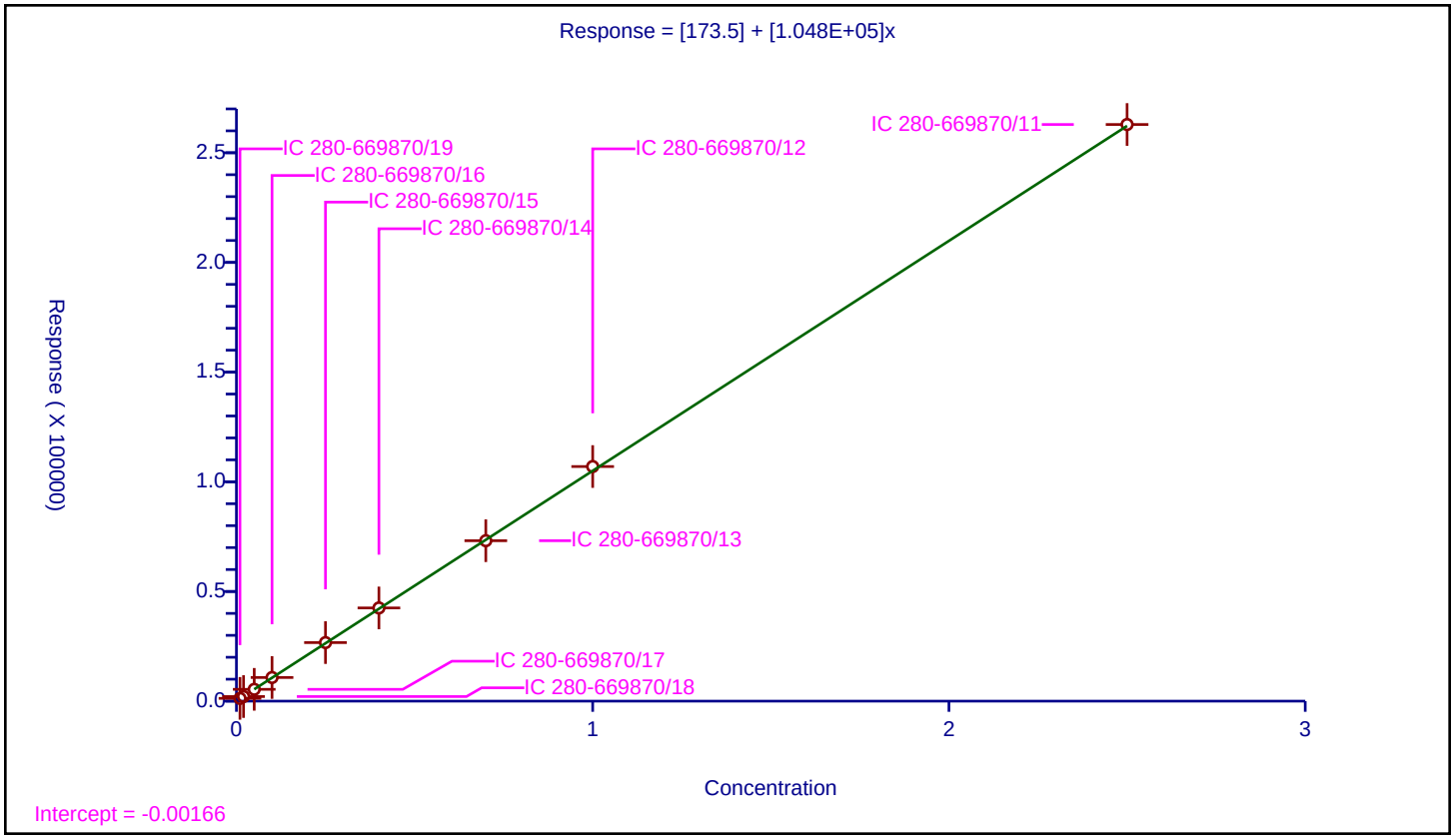
Curve Coefficients

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
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

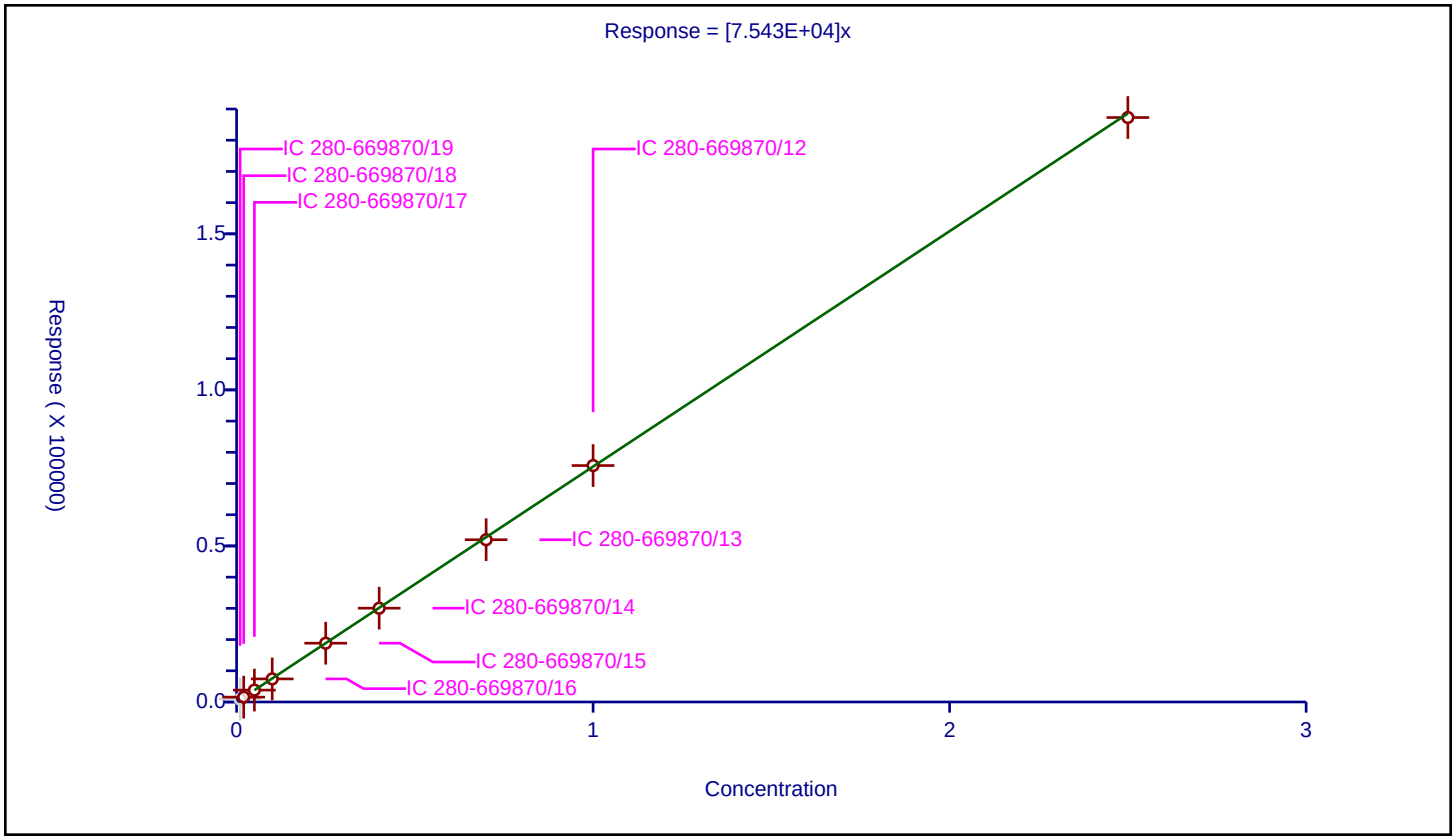
Curve Coefficients

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

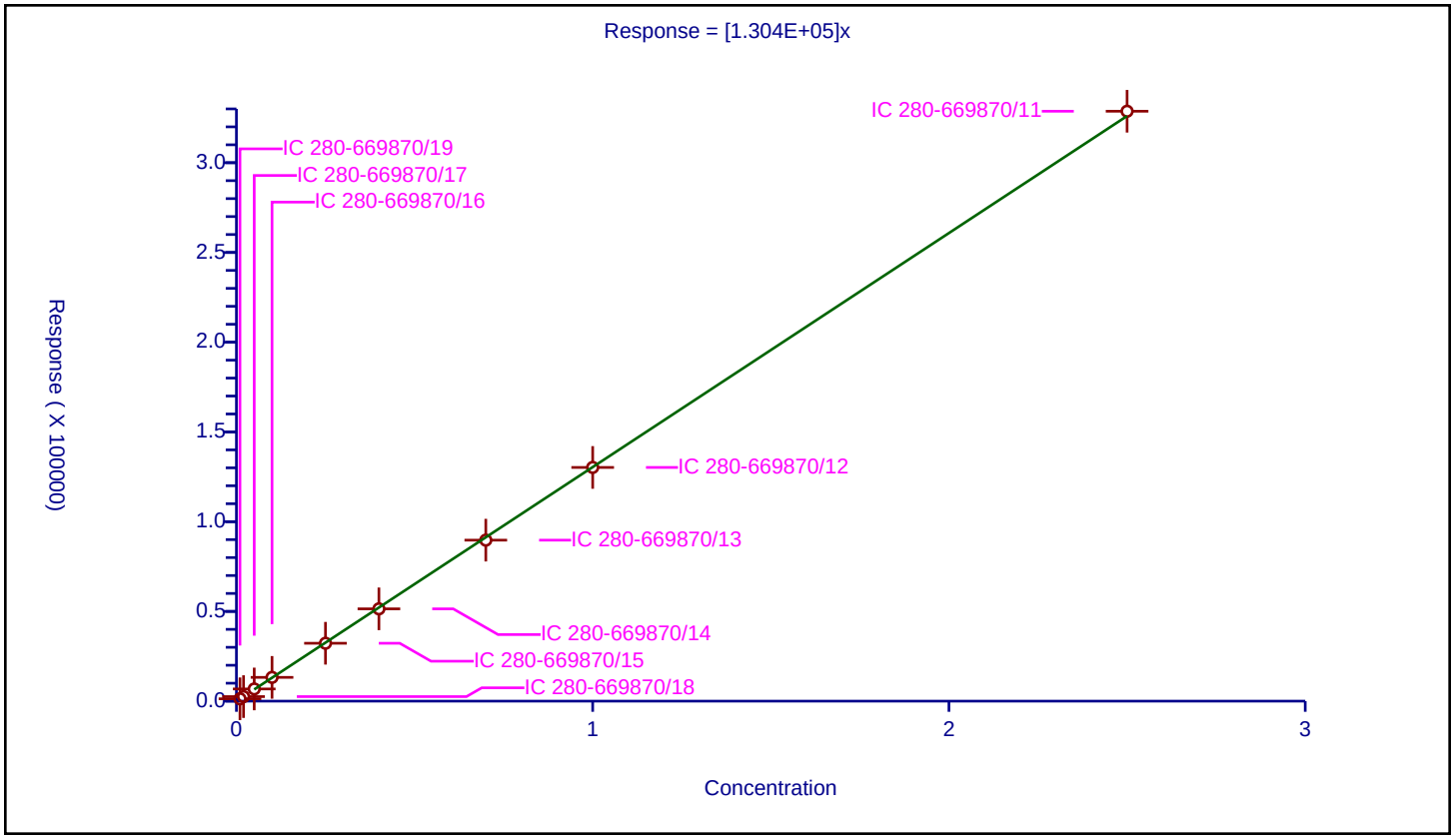
Curve Coefficients

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

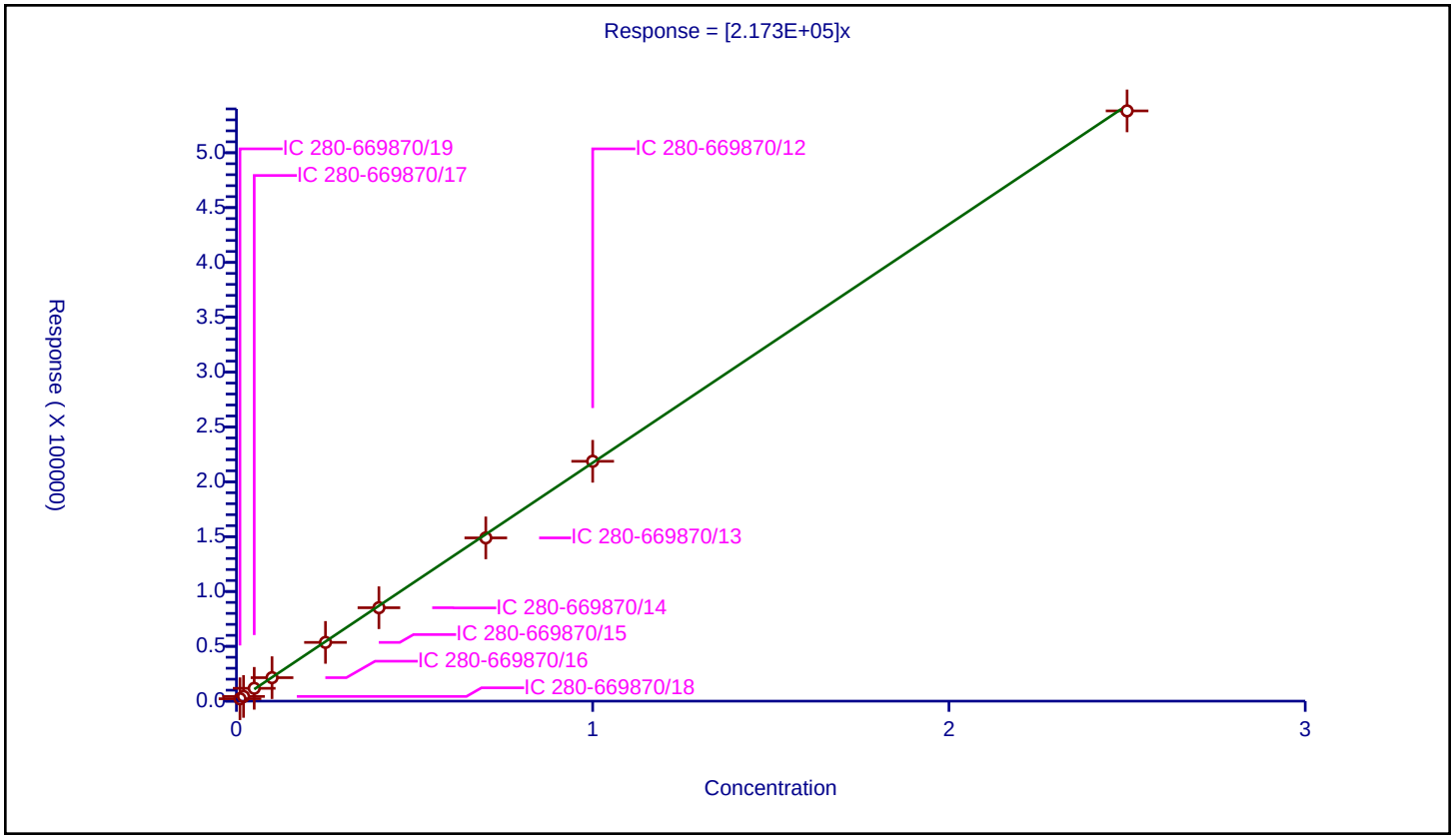
Curve Coefficients

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

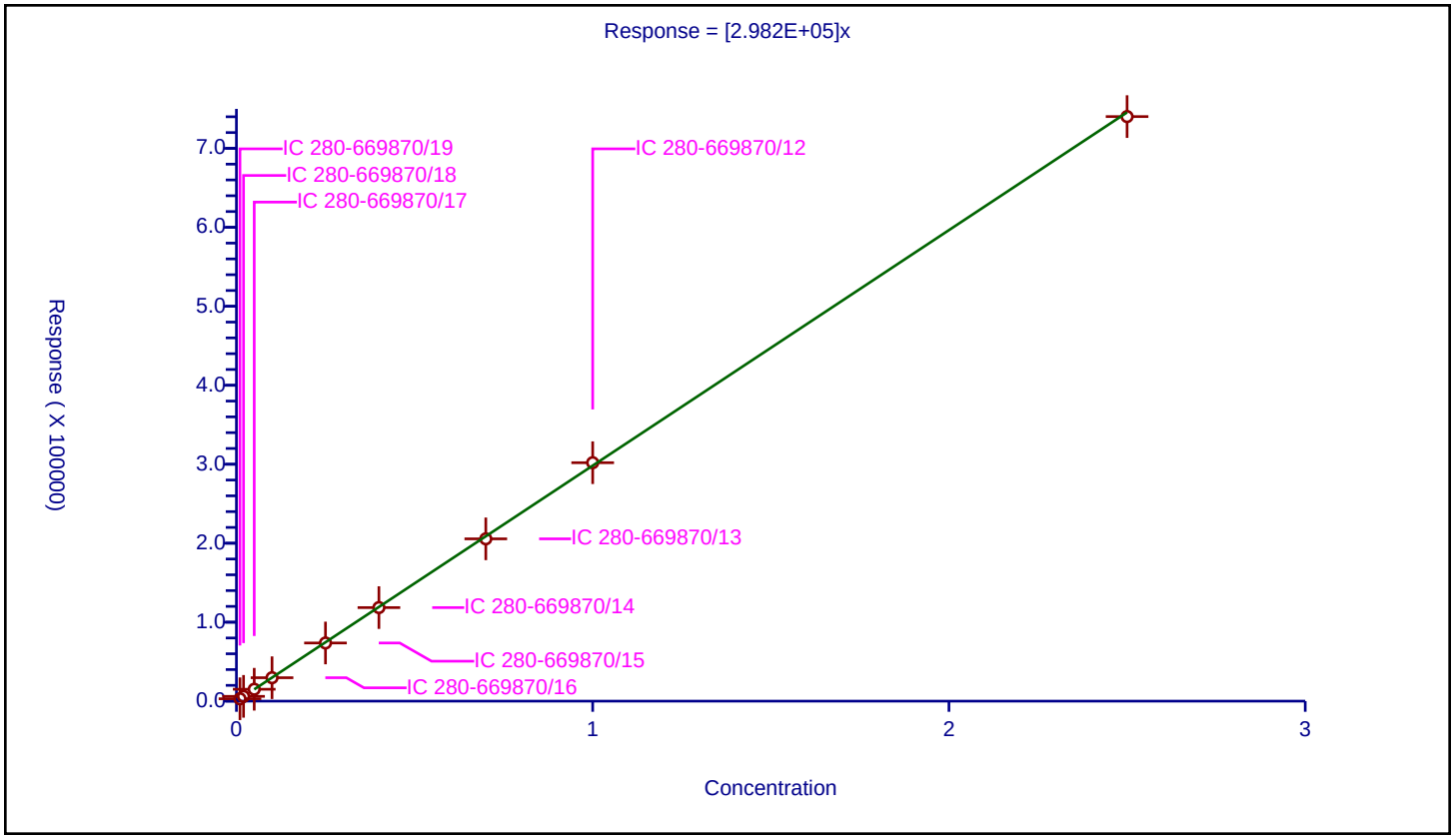
Curve Coefficients

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

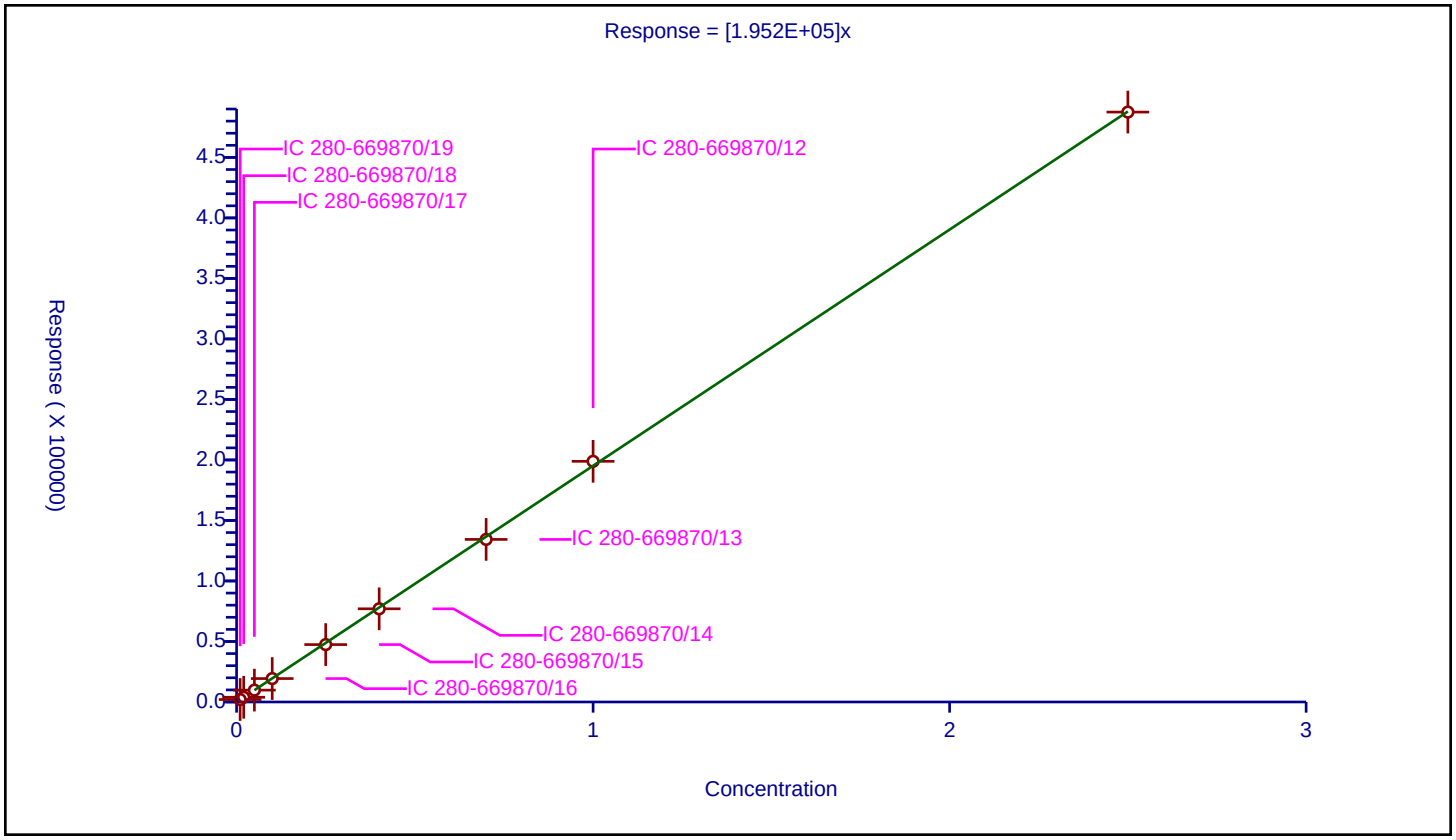
Curve Coefficients

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

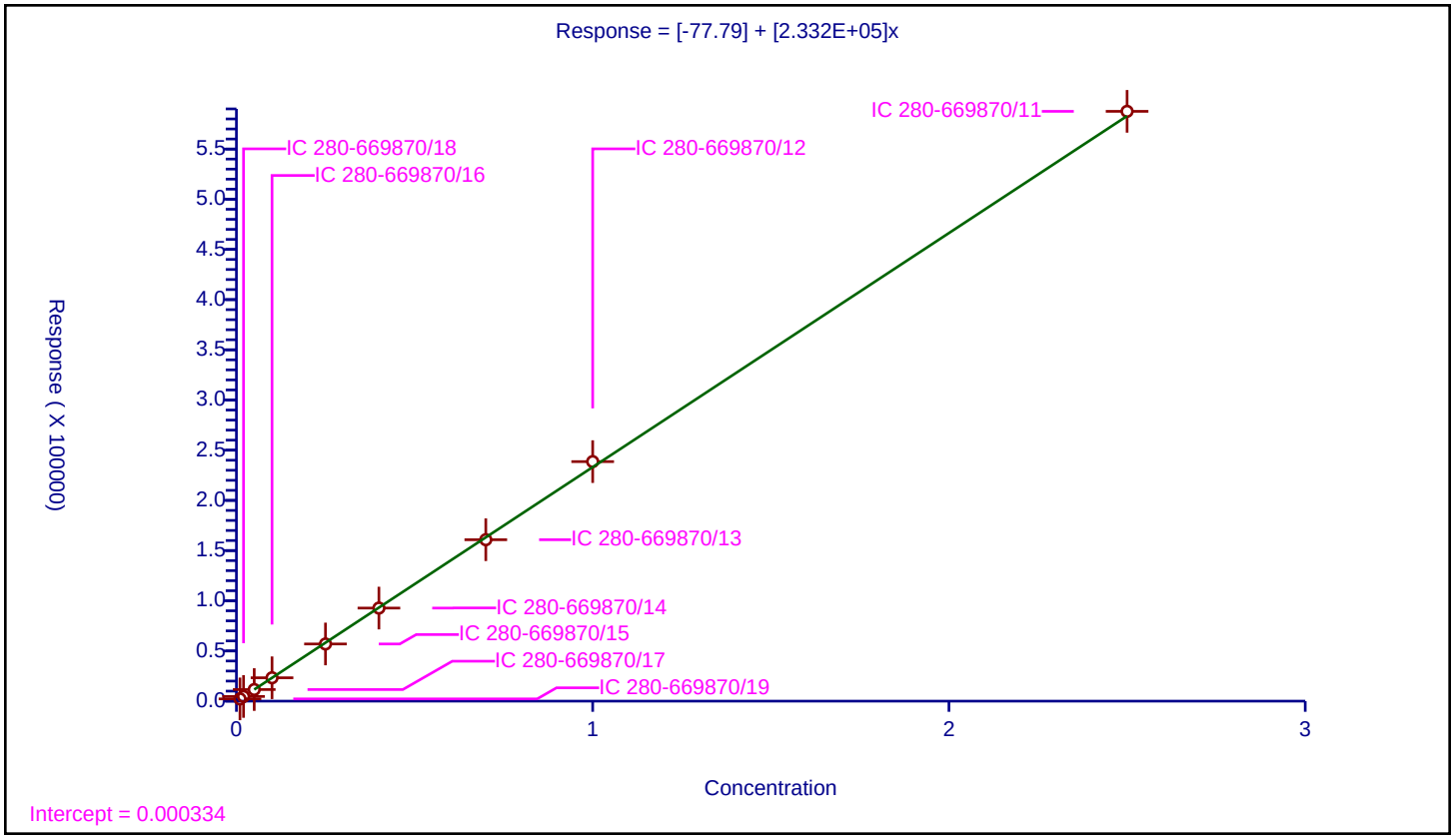
Curve Coefficients

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

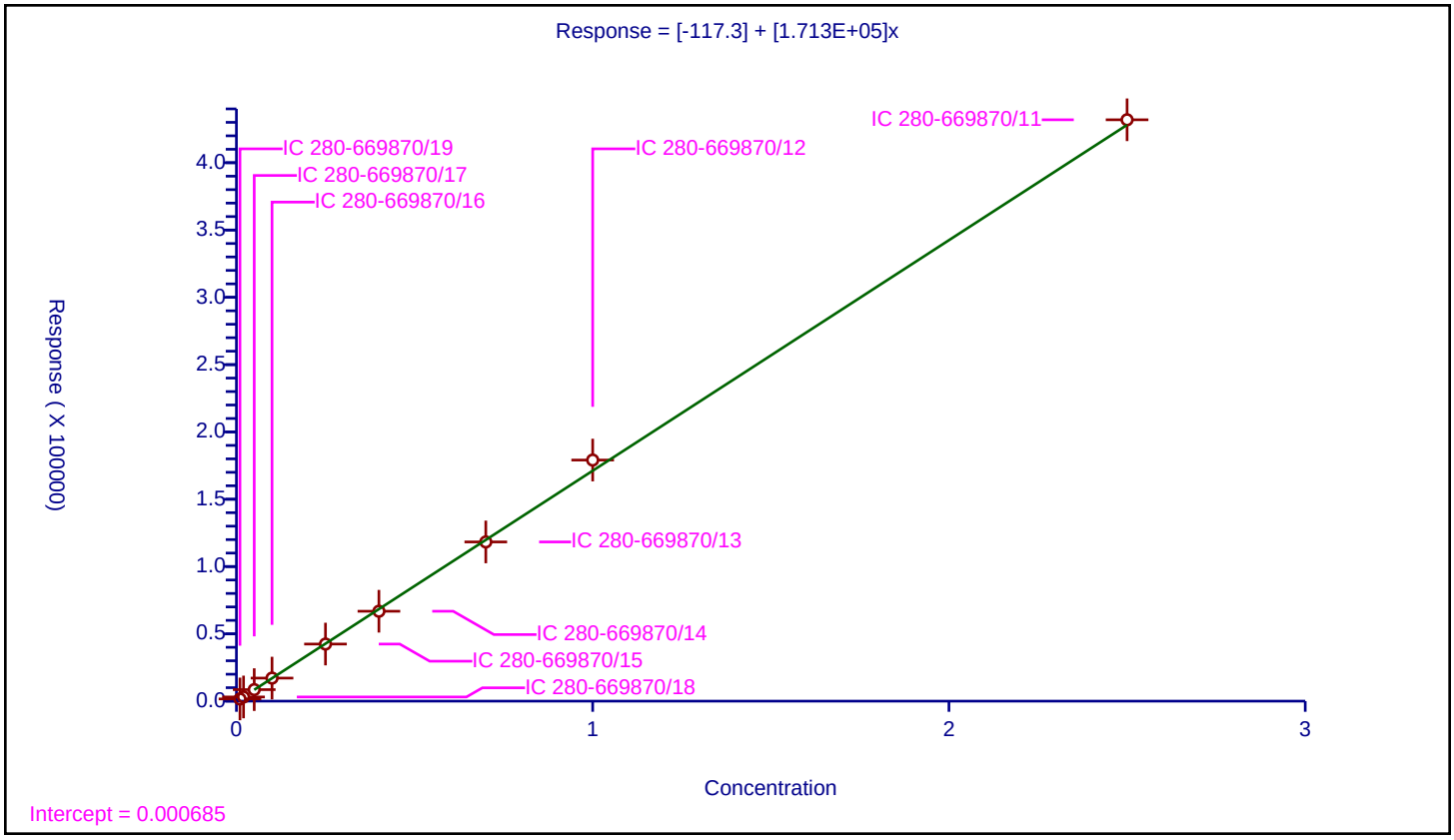
Curve Coefficients

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

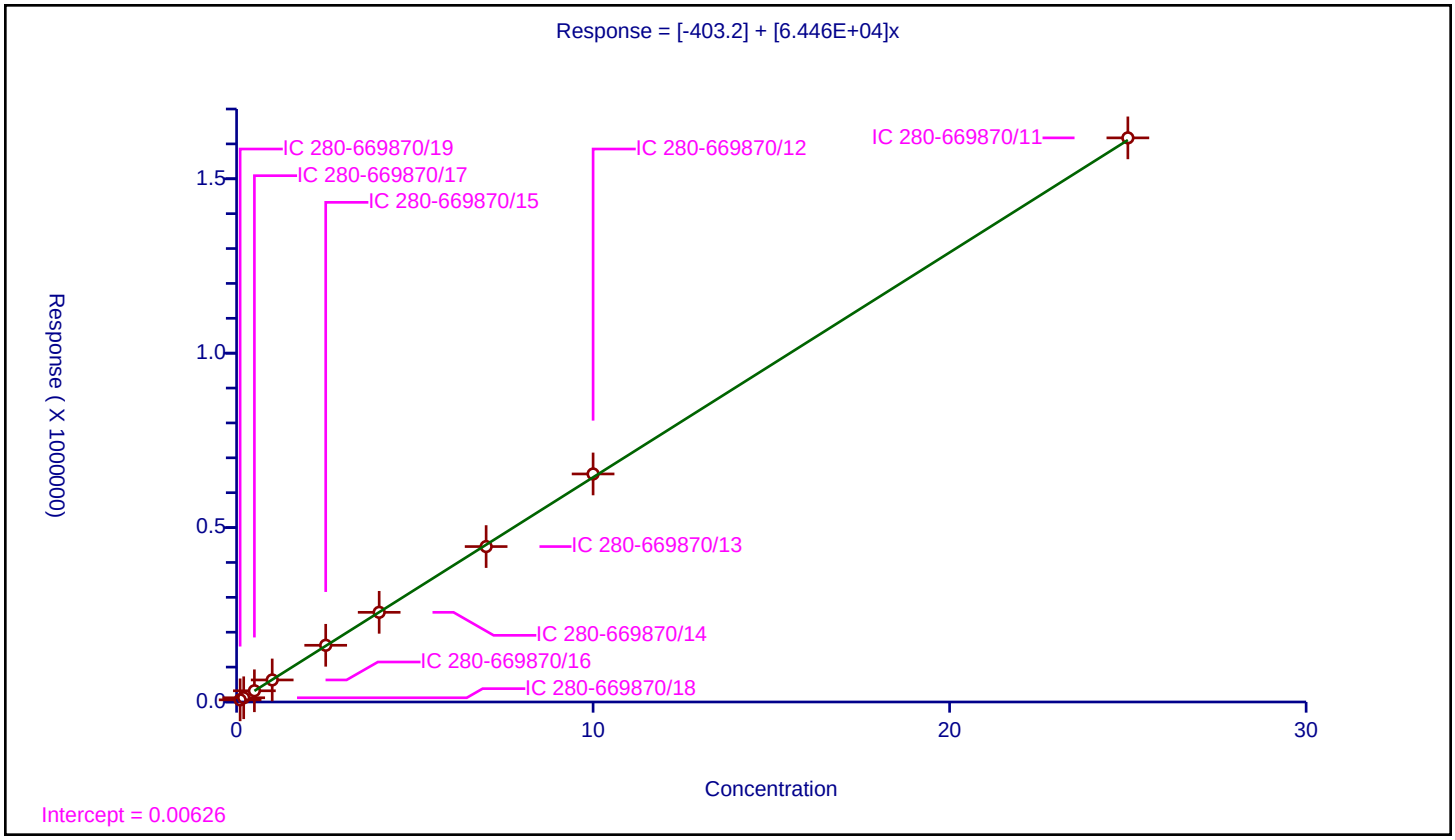
Curve Coefficients

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

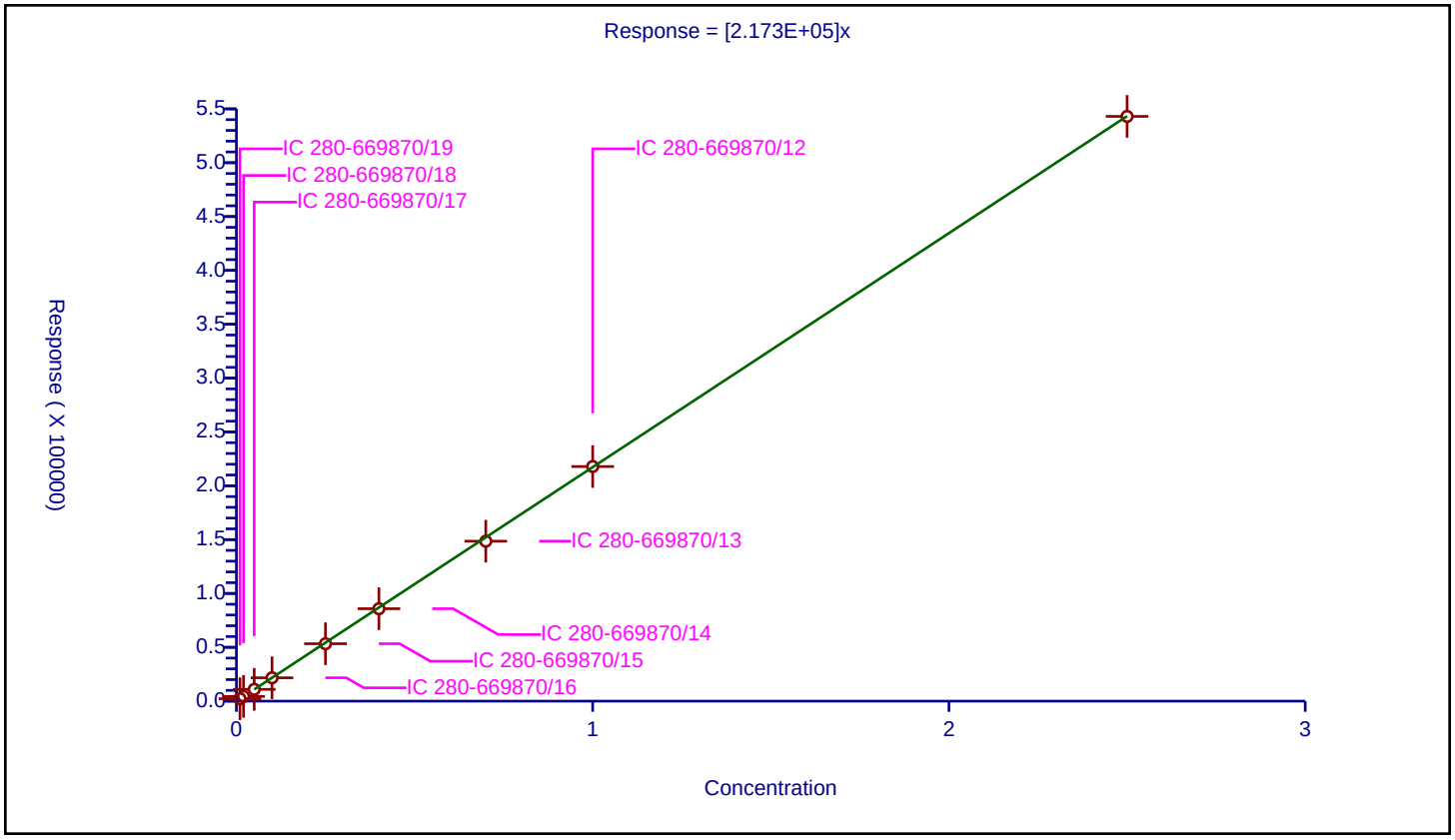
Curve Coefficients

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

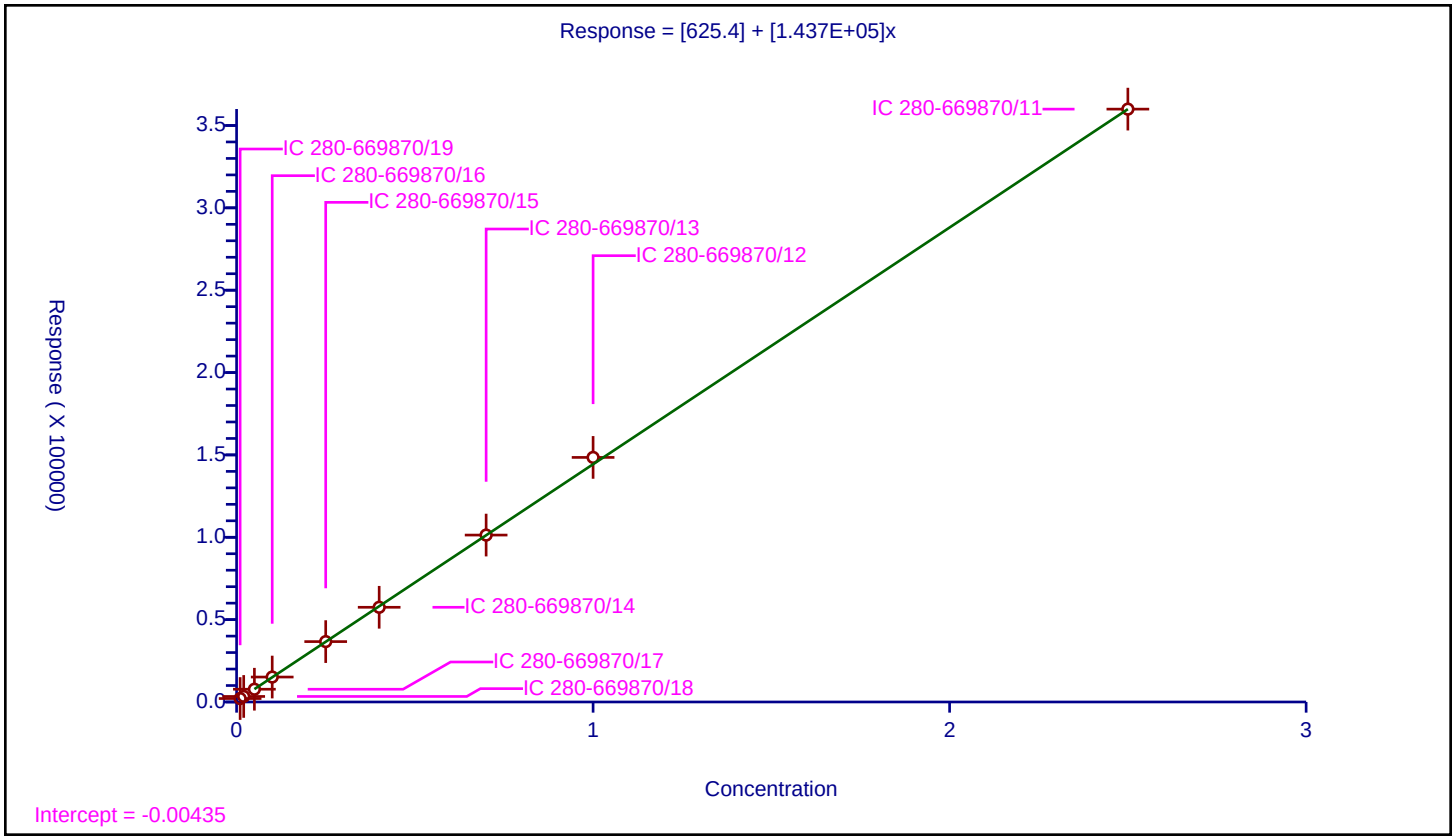
Curve Coefficients

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

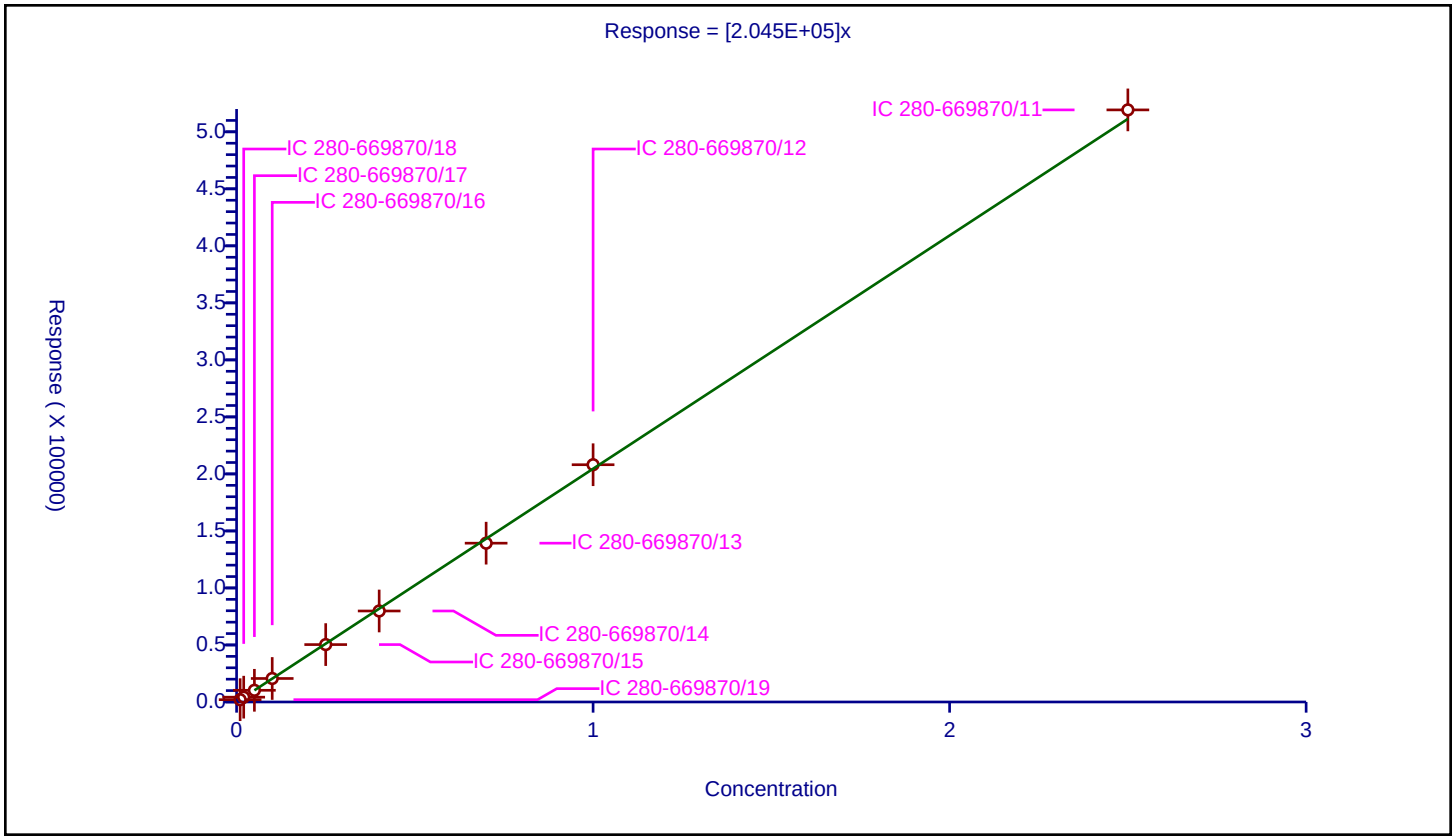
Curve Coefficients

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

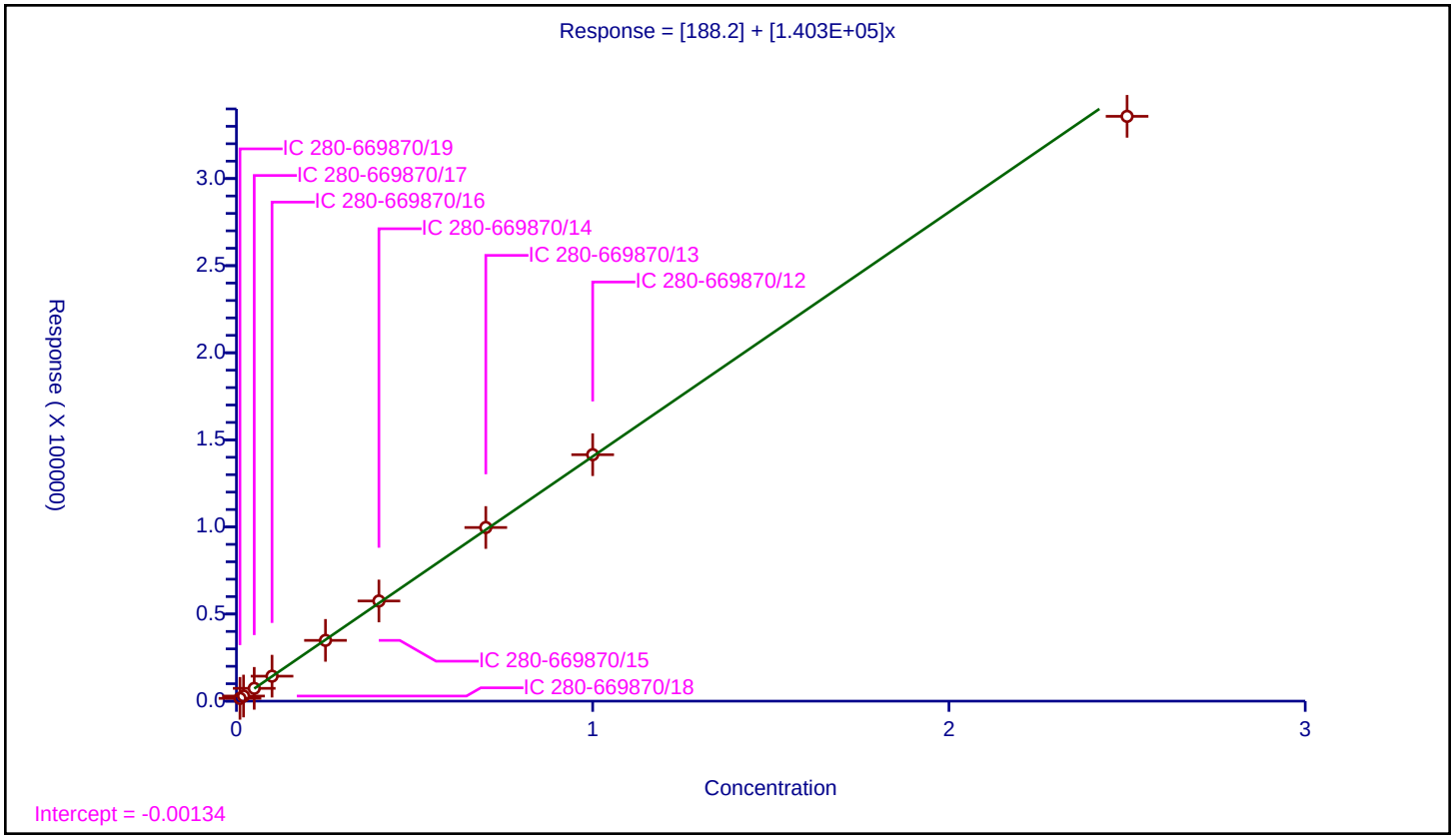
Curve Coefficients

Intercept:	188.2
Slope:	1.403E+05

Error Coefficients

Relative Standard Deviation:	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

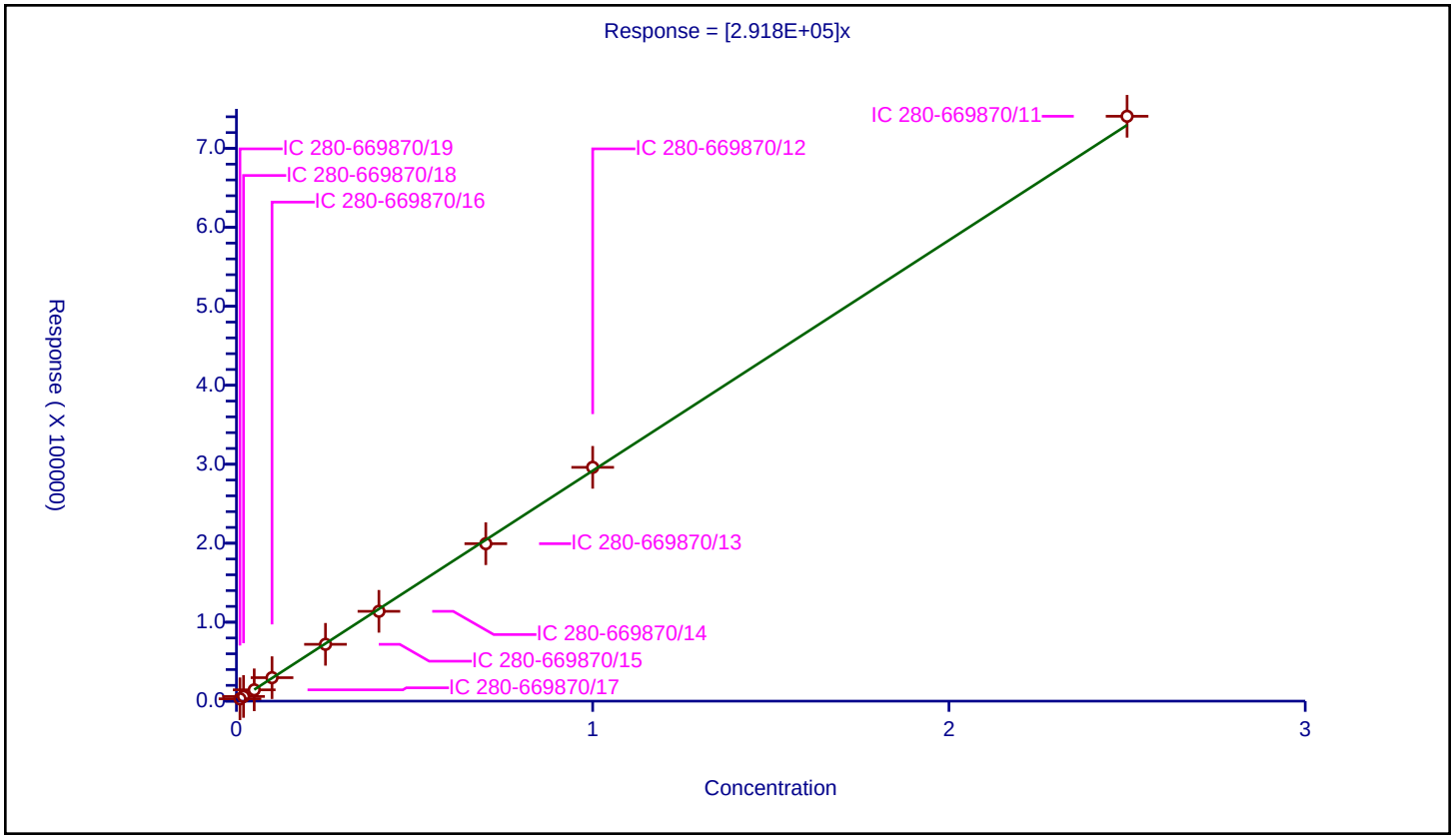
Curve Coefficients

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

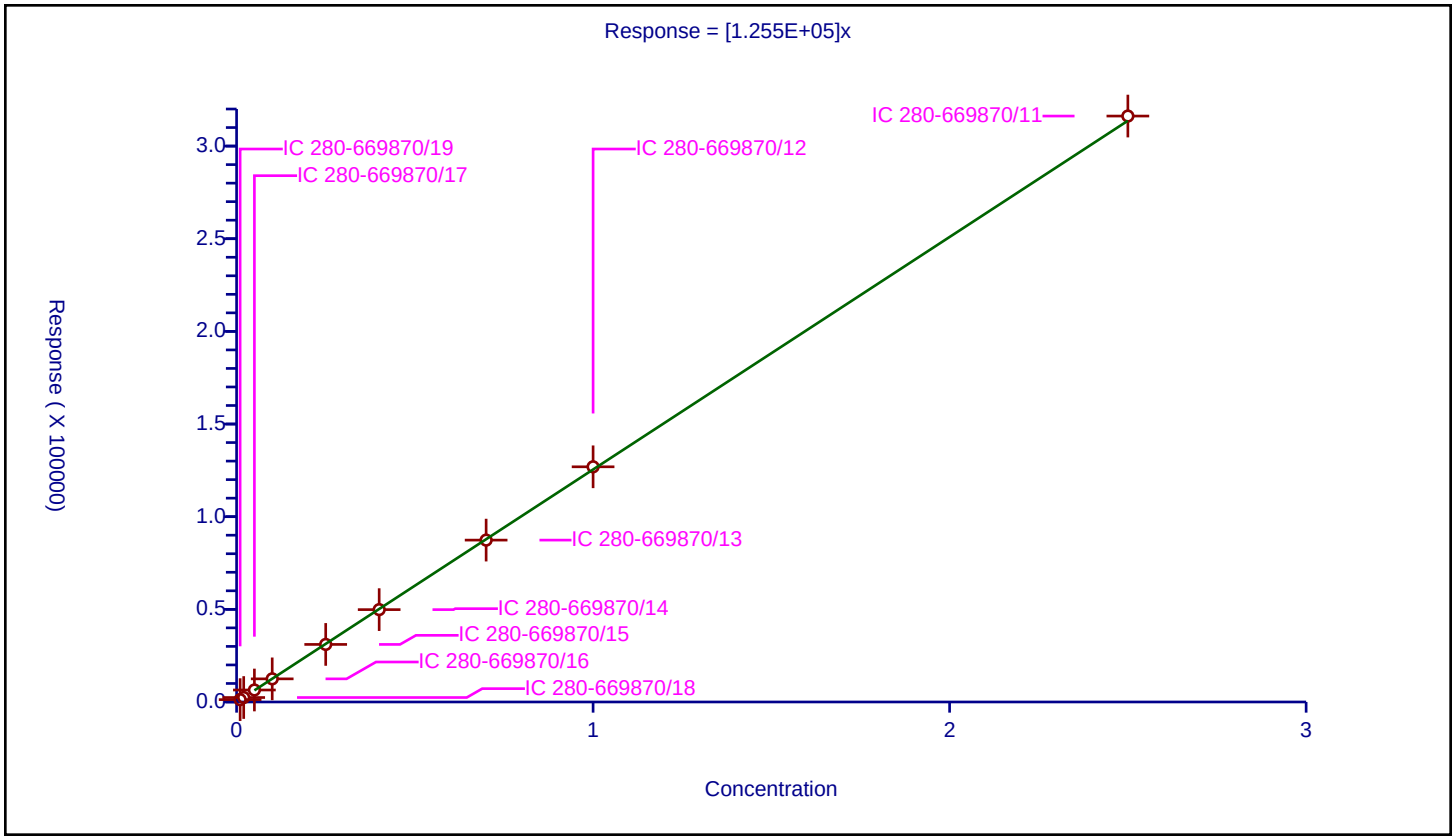
Curve Coefficients

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

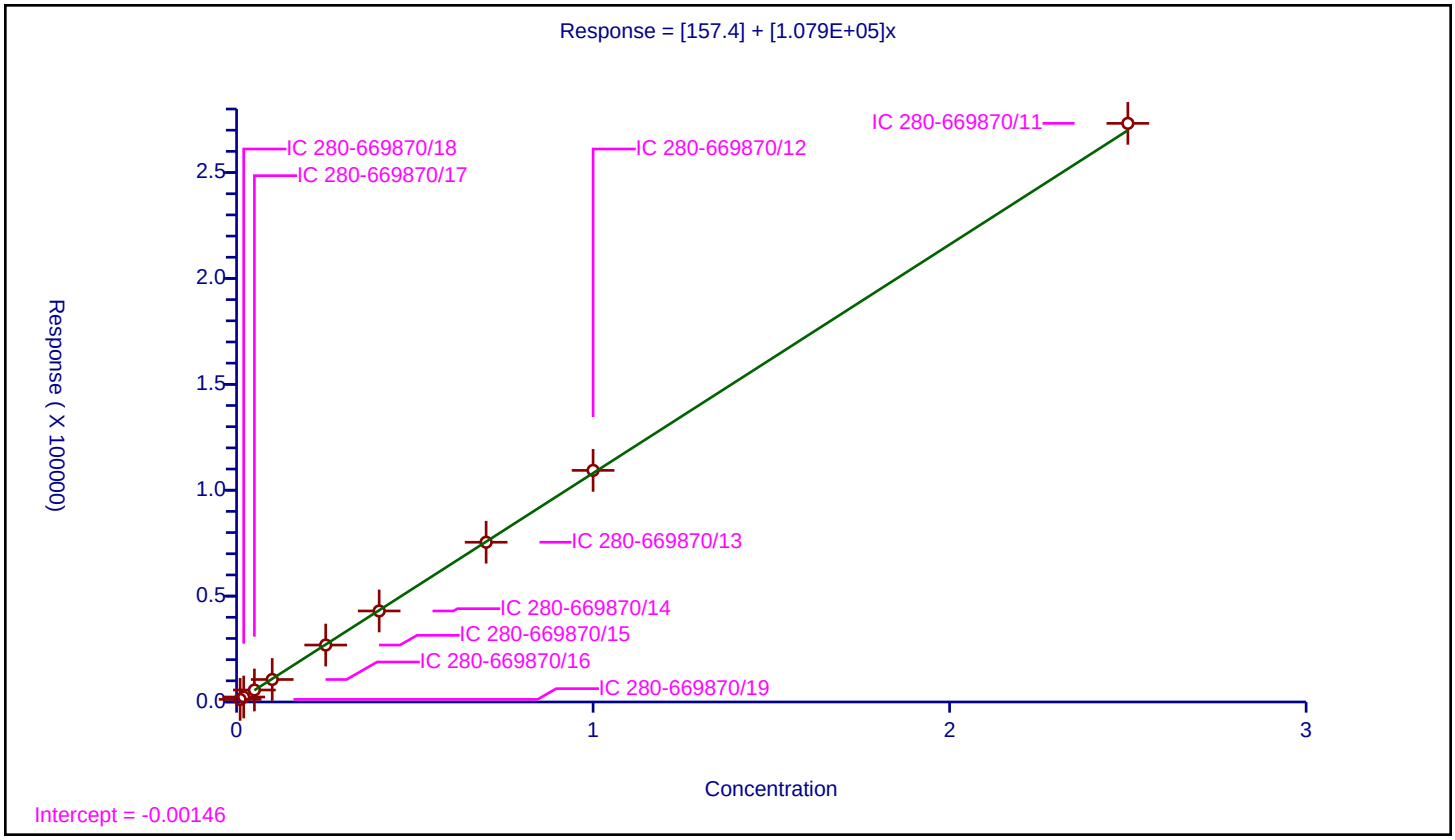
Curve Coefficients

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

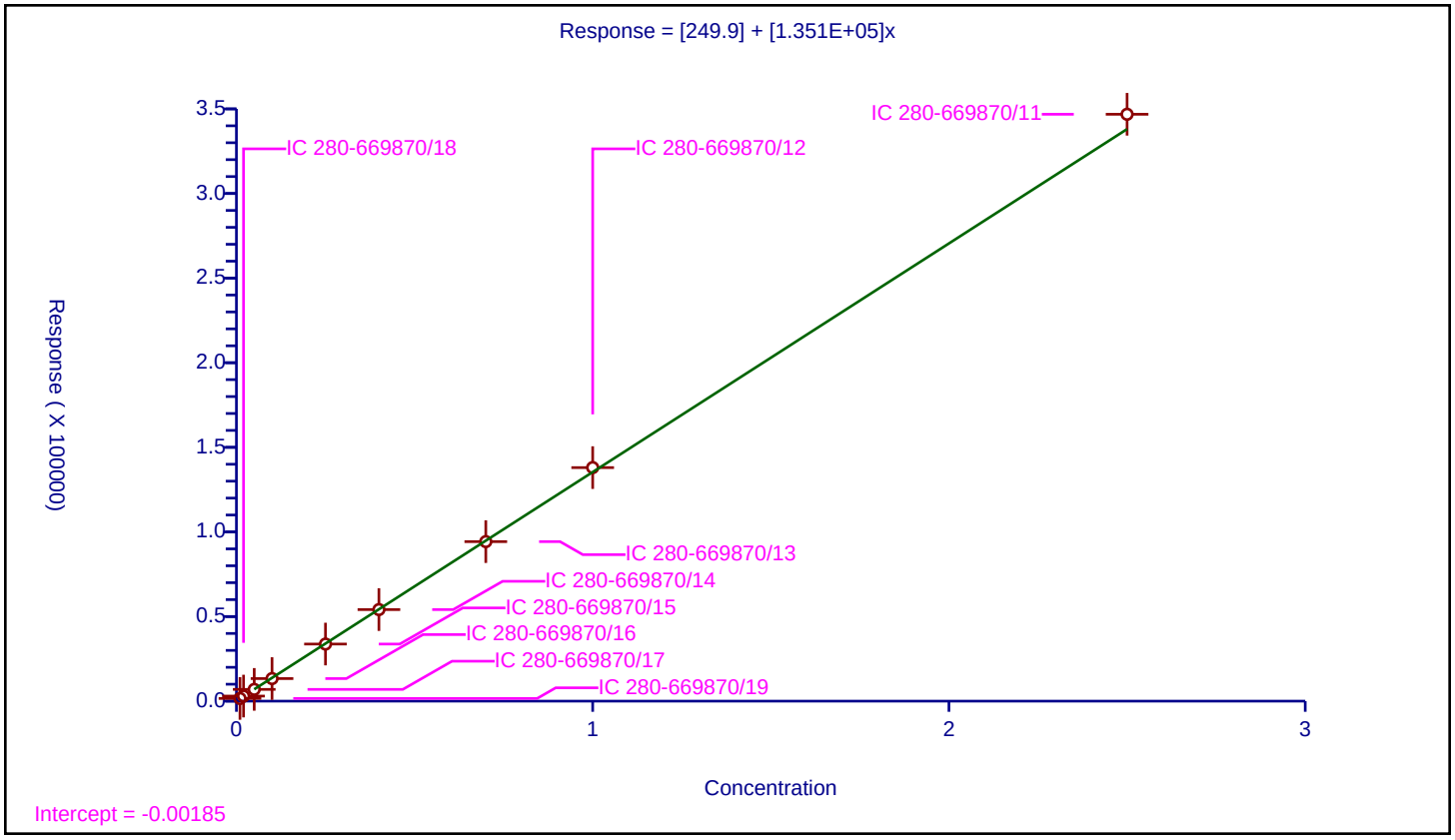
Curve Coefficients

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

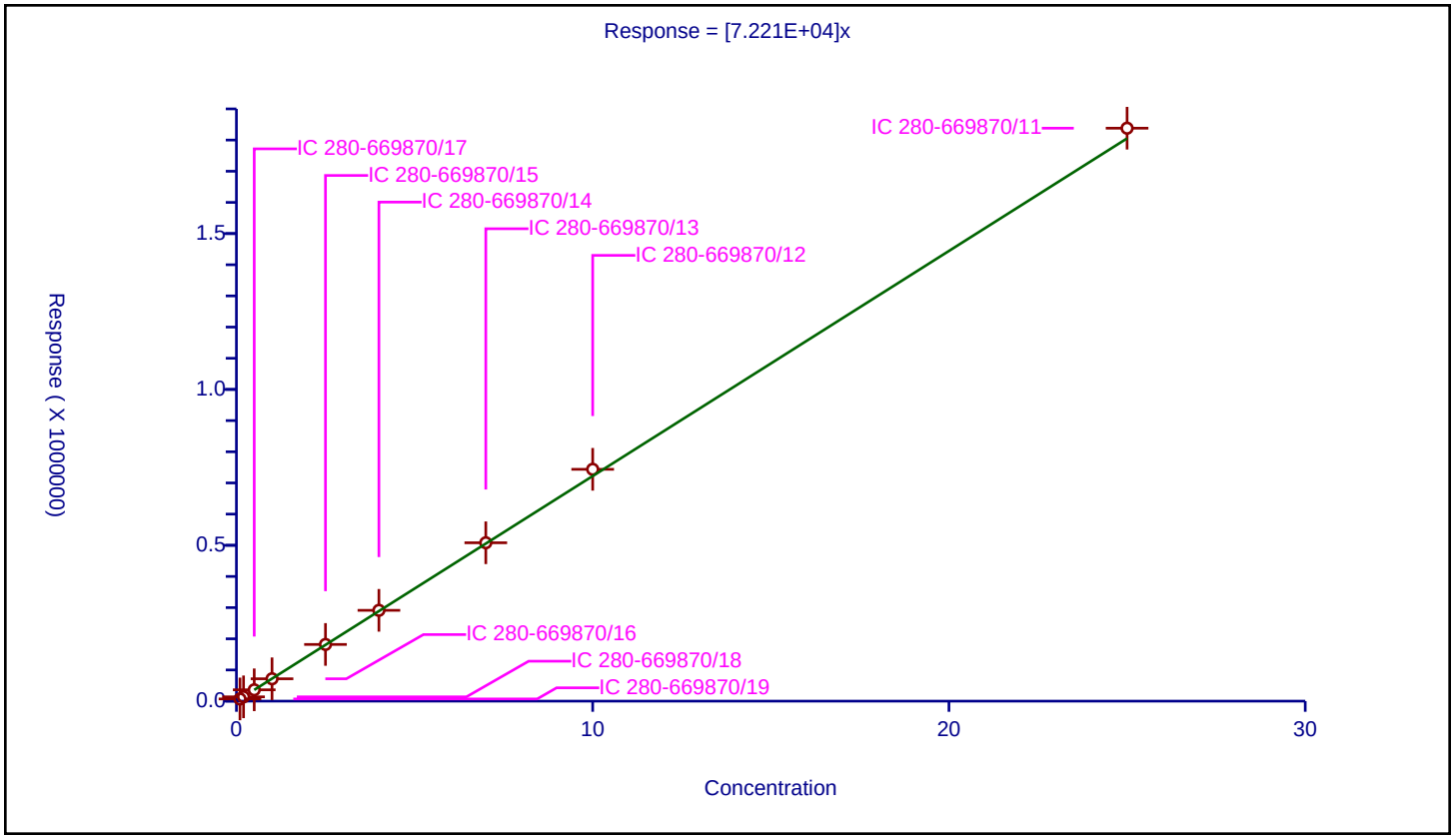
Curve Coefficients

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 VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-200203-1

SDG No.:

Lab Sample ID: ICV 280-650851/19 | Calibration Date: 04/25/2024 02:51

Instrument ID: CHHPLC_G2_LUNA | Calib Start Date: 04/24/2024 21:28

GC Column: Luna-phenylhex ID: 4.60(mm) | Calib End Date: 04/25/2024 02:15

Lab File ID: 04240019.D | Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	174076	166804		479	500	-4.2	20.0
2,4,6-Trinitrophenol	Ave	151397	162096		535	500	7.1	20.0
RDX	Lin2		212688		514	500	2.9	20.0
Nitrobenzene	Ave	382120	410196		537	500	7.3	20.0
3,5-Dinitroaniline	Lin2		467084		540	500	8.0	20.0
1,3-Dinitrobenzene	Ave	589418	622818		528	500	5.7	20.0
Nitroglycerin	Ave	119505	129045		5400	5000	8.0	20.0
o-Nitrotoluene	Ave	244594	255606		523	500	4.5	20.0
p-Nitrotoluene	Lin2		237762		542	500	8.4	20.0
4-Amino-2,6-dinitrotoluene	Lin2		298664		551	500	10.3	20.0
m-Nitrotoluene	Lin2		294022		530	500	6.0	20.0
2-Amino-4,6-dinitrotoluene	Ave	405562	411548		507	500	1.5	20.0
1,3,5-Trinitrobenzene	Ave	423454	463460		547	500	9.4	20.0
2,6-Dinitrotoluene	Ave	277970	282262		508	500	1.5	20.0
2,4-Dinitrotoluene	Ave	554564	571064		515	500	3.0	20.0
Tetryl	Lin2		340546		544	500	8.9	20.0
2,4,6-Trinitrotoluene	Ave	399763	421604		527	500	5.5	20.0
PETN	Lin2		139356		5650	5000	13.1	20.0
1,2-Dinitrobenzene (Surr)	Ave	258689	258086		499	500	-0.2	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Lab Sample ID: ICV 280-650851/19 Calibration Date: 04/25/2024 02:51

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 04/24/2024 21:28

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 04/25/2024 02:15

Lab File ID: 04240019.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.69	6.56	6.86
2,4,6-Trinitrophenol	8.58	8.46	8.76
RDX	8.92	8.79	9.09
Nitrobenzene	11.42	11.28	11.58
3,5-Dinitroaniline	14.19	14.04	14.34
1,3-Dinitrobenzene	14.48	14.33	14.63
Nitroglycerin	14.93	14.77	15.07
o-Nitrotoluene	15.51	15.36	15.66
p-Nitrotoluene	15.74	15.59	15.89
4-Amino-2,6-dinitrotoluene	16.24	16.10	16.40
m-Nitrotoluene	16.57	16.43	16.73
2-Amino-4,6-dinitrotoluene	17.05	16.91	17.21
1,3,5-Trinitrobenzene	17.26	17.12	17.42
2,6-Dinitrotoluene	18.36	18.22	18.52
2,4-Dinitrotoluene	18.81	18.67	18.97
Tetryl	22.03	21.88	22.18
2,4,6-Trinitrotoluene	22.88	22.73	23.03
PETN	24.03	23.88	24.18
1,2-Dinitrobenzene (Surr)	12.35	12.20	12.50

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\G2_LUNA\20240424-132624.b\04240019.D
Lims ID: ICV INT
Client ID:
Sample Type: ICV
Inject. Date: 25-Apr-2024 02:51:47 ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: ICV INT
Operator ID: JZ/JG Instrument ID: CHHPLC_G2_LUNA
Sublist:

Method: \\chromfs\Denver\ChromData\G2_LUNA\20240424-132624.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 25-Apr-2024 14:35:18 Calib Date: 25-Apr-2024 02:15:46
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\G2_LUNA\20240424-132624.b\04240018.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX1684

First Level Reviewer: LV5D Date: 25-Apr-2024 13:30:09

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
6 HMX	1	6.690	6.705	-0.015	83402	0.5000	0.4791	
5 2,4,6-Trinitrophenol	1	8.583	8.612	-0.029	81048	0.5000	0.5353	
8 RDX	1	8.923	8.938	-0.015	106344	0.5000	0.5145	
9 Nitrobenzene	1	11.423	11.425	-0.002	205098	0.5000	0.5367	
$ 10 1,2-Dinitrobenzene	1	12.350	12.345	0.005	129043	0.5000	0.4988	
11 3,5-Dinitroaniline	1	14.190	14.185	0.005	233542	0.5000	0.5401	
12 1,3-Dinitrobenzene	1	14.477	14.478	-0.001	311409	0.5000	0.5283	
13 Nitroglycerin	2	14.930	14.918	0.012	645227	5.00	5.40	M
14 o-Nitrotoluene	1	15.510	15.505	0.005	127803	0.5000	0.5225	
15 p-Nitrotoluene	1	15.737	15.738	-0.001	118881	0.5000	0.5418	
16 4-Amino-2,6-dinitrotoluene	1	16.243	16.245	-0.002	149332	0.5000	0.5513	
17 m-Nitrotoluene	1	16.570	16.578	-0.008	147011	0.5000	0.5299	
18 2-Amino-4,6-dinitrotoluene	1	17.050	17.058	-0.008	205774	0.5000	0.5074	
19 1,3,5-Trinitrobenzene	1	17.263	17.272	-0.009	231730	0.5000	0.5472	
20 2,6-Dinitrotoluene	1	18.357	18.365	-0.008	141131	0.5000	0.5077	
21 2,4-Dinitrotoluene	1	18.810	18.818	-0.008	285532	0.5000	0.5149	
22 Tetryl	1	22.030	22.025	0.005	170273	0.5000	0.5444	
23 2,4,6-Trinitrotoluene	1	22.883	22.878	0.005	210802	0.5000	0.5273	
24 PETN	2	24.030	24.032	-0.002	696781	5.00	5.65	
25 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_00154	Amount Added:	50.00	Units: uL
8330 LCS_00134	Amount Added:	50.00	Units: uL

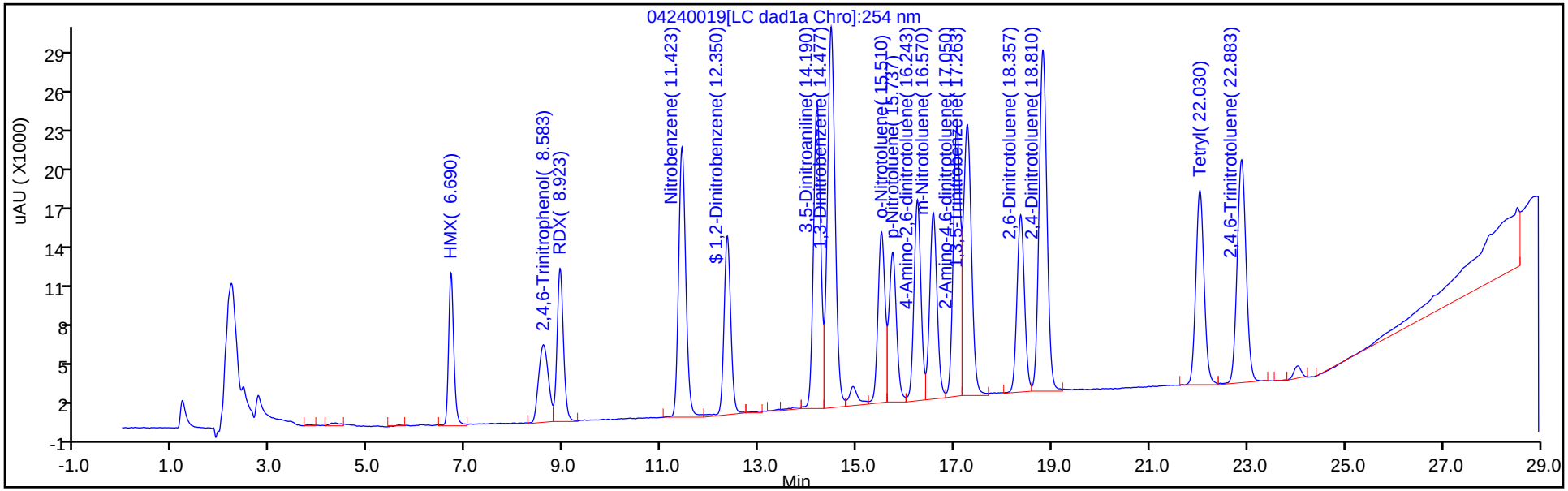
Report Date: 25-Apr-2024 14:35:28 Chrom Revision: 2.3 09-Apr-2024 17:43:44

Eurofins Denver

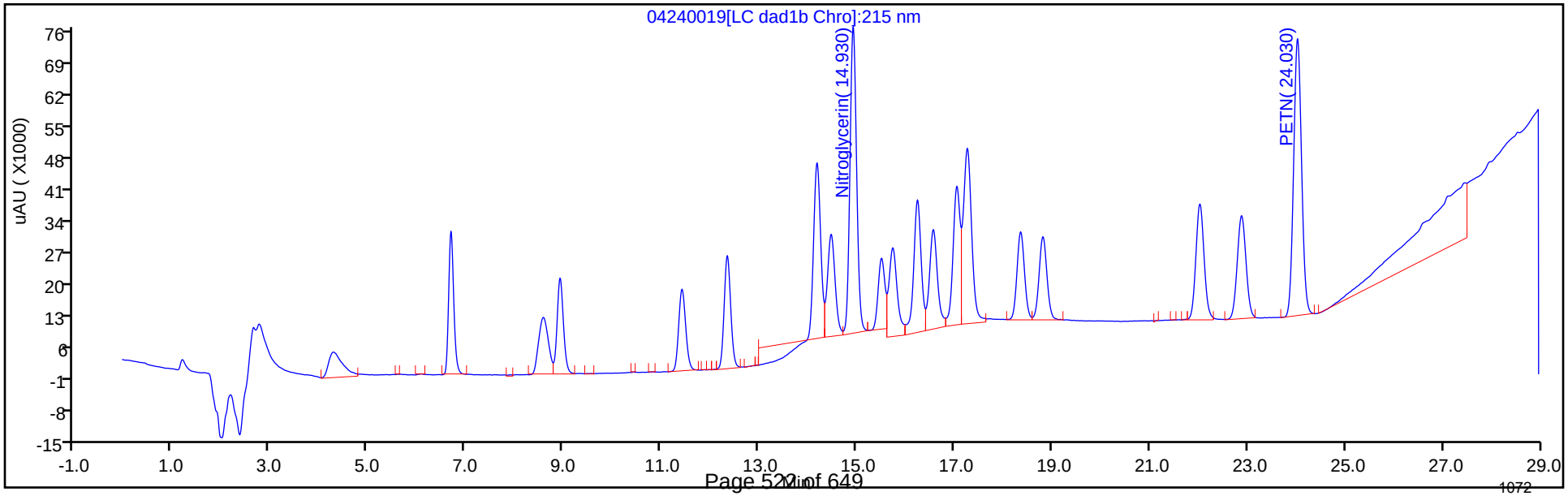
Data File: \\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240019.d

Injection Date:	25-Apr-2024 02:51:47	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	JZ/JG
Lims ID:	ICV INT			Worklist Smp#:	19
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



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Manual Integration/User Assign Peak Report

Eurofins Denver

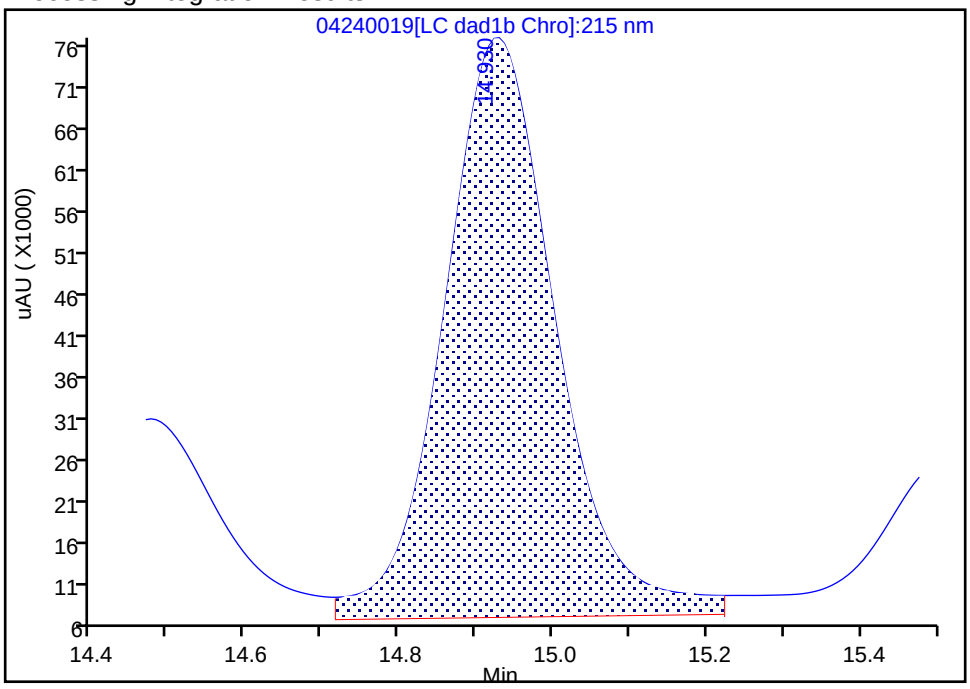
Data File:	\\chromfs\denver\chromdata\g2_luna\20240424-132624.b\04240019.d				
Injection Date:	25-Apr-2024 02:51:47	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	ICV INT				
Client ID:					
Operator ID:	JZ/JG	ALS Bottle#:	19	Worklist Smp#:	19
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1B, 215 nm		

13 Nitroglycerin, CAS: 55-63-0

Signal: 1

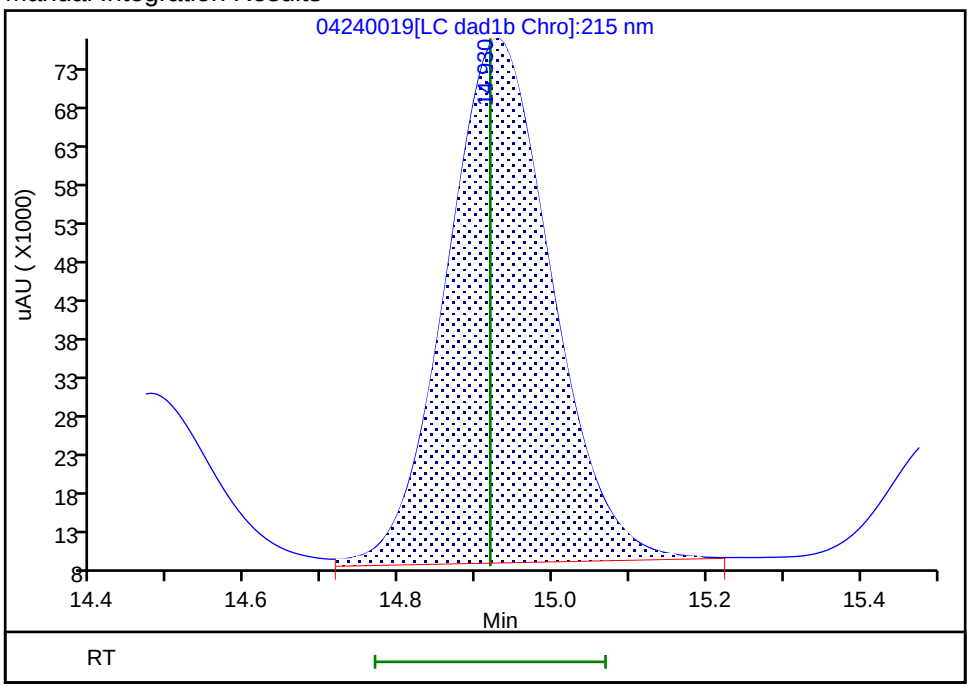
Processing Integration Results

RT: 14.93
Area: 708140
Amount: 5.925621
Amount Units: ug/ml



Manual Integration Results

RT: 14.93
Area: 645227
Amount: 5.399174
Amount Units: ug/ml



Reviewer: LV5D, 25-Apr-2024 13:30:07 -06:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Lab Sample ID: CCV 280-677524/7 Calibration Date: 12/05/2024 18:06

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 04/24/2024 21:28

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 04/25/2024 02:15

Lab File ID: 12050007.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	174076	178544		256	250	2.6	20.0
2,4,6-Trinitrophenol	Ave	151397	147580		244	250	-2.5	20.0
RDX	Lin2		200132		241	250	-3.7	20.0
Nitrobenzene	Ave	382120	359188		235	250	-6.0	20.0
3,5-Dinitroaniline	Lin2		437352		252	250	0.7	20.0
1,3-Dinitrobenzene	Ave	589418	552972		235	250	-6.2	20.0
Nitroglycerin	Ave	119505	121239		2540	2500	1.5	20.0
o-Nitrotoluene	Ave	244594	231388		237	250	-5.4	20.0
p-Nitrotoluene	Lin2		203304		229	250	-8.3	20.0
4-Amino-2,6-dinitrotoluene	Lin2		269388		247	250	-1.1	20.0
m-Nitrotoluene	Lin2		255992		229	250	-8.5	20.0
2-Amino-4,6-dinitrotoluene	Ave	405562	381032		235	250	-6.0	20.0
1,3,5-Trinitrobenzene	Ave	423454	392940		232	250	-7.2	20.0
2,6-Dinitrotoluene	Ave	277970	263208		237	250	-5.3	20.0
2,4-Dinitrotoluene	Ave	554564	531112		239	250	-4.2	20.0
Tetryl	Lin2		300488		239	250	-4.3	20.0
2,4,6-Trinitrotoluene	Ave	399763	397736		249	250	-0.5	20.0
PETN	Lin2		130529		2660	2500	6.2	20.0
1,2-Dinitrobenzene (Surr)	Ave	258689	251264		243	250	-2.9	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Lab Sample ID: CCV 280-677524/7 Calibration Date: 12/05/2024 18:06

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 04/24/2024 21:28

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 04/25/2024 02:15

Lab File ID: 12050007.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.56	6.41	6.71
2,4,6-Trinitrophenol	7.90	7.75	8.05
RDX	8.73	8.58	8.88
Nitrobenzene	11.29	11.14	11.44
3,5-Dinitroaniline	13.92	13.77	14.07
1,3-Dinitrobenzene	14.27	14.12	14.42
Nitroglycerin	14.66	14.51	14.81
o-Nitrotoluene	15.32	15.17	15.47
p-Nitrotoluene	15.55	15.40	15.70
4-Amino-2,6-dinitrotoluene	15.98	15.83	16.13
m-Nitrotoluene	16.38	16.23	16.53
2-Amino-4,6-dinitrotoluene	16.75	16.60	16.90
1,3,5-Trinitrobenzene	17.04	16.89	17.19
2,6-Dinitrotoluene	18.10	17.95	18.25
2,4-Dinitrotoluene	18.54	18.39	18.69
Tetryl	21.59	21.44	21.74
2,4,6-Trinitrotoluene	22.51	22.36	22.66
PETN	23.55	23.40	23.70
1,2-Dinitrobenzene (Surr)	12.15	12.00	12.30

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\G2_LUNA\20241205-140496.b\12050007.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 05-Dec-2024 18:06:08 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: JZ Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub16

Method: \\chromfs\Denver\ChromData\G2_LUNA\20241205-140496.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 06-Dec-2024 12:41:24 Calib Date: 25-Apr-2024 07:39:21
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\G2_LUNA\20240424-132624.b\04240027.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX1606

First Level Reviewer: LV5D Date: 05-Dec-2024 19:22:30

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
6 HMX	1	6.558	6.558	0.000	44636	0.2500	0.2564	
5 2,4,6-Trinitrophenol	1	7.898	7.898	0.000	36895	0.2500	0.2437	
8 RDX	1	8.725	8.725	0.000	50033	0.2500	0.2407	
9 Nitrobenzene	1	11.291	11.291	0.000	89797	0.2500	0.2350	
$ 10 1,2-Dinitrobenzene	1	12.151	12.151	0.000	62816	0.2500	0.2428	
11 3,5-Dinitroaniline	1	13.924	13.924	0.000	109338	0.2500	0.2517	
12 1,3-Dinitrobenzene	1	14.271	14.271	0.000	138243	0.2500	0.2345	
13 Nitroglycerin	2	14.664	14.664	0.000	303098	2.50	2.54	
14 o-Nitrotoluene	1	15.324	15.324	0.000	57847	0.2500	0.2365	
15 p-Nitrotoluene	1	15.551	15.551	0.000	50826	0.2500	0.2292	
16 4-Amino-2,6-dinitrotoluene	1	15.978	15.978	0.000	67347	0.2500	0.2471	
17 m-Nitrotoluene	1	16.378	16.378	0.000	63998	0.2500	0.2287	
18 2-Amino-4,6-dinitrotoluene	1	16.751	16.751	0.000	95258	0.2500	0.2349	
19 1,3,5-Trinitrobenzene	1	17.038	17.038	0.000	98235	0.2500	0.2320	
20 2,6-Dinitrotoluene	1	18.104	18.104	0.000	65802	0.2500	0.2367	
21 2,4-Dinitrotoluene	1	18.538	18.538	0.000	132778	0.2500	0.2394	
22 Tetryl	1	21.585	21.585	0.000	75122	0.2500	0.2394	
23 2,4,6-Trinitrotoluene	1	22.505	22.505	0.000	99434	0.2500	0.2487	
24 PETN	2	23.551	23.551	0.000	326323	2.50	2.66	

QC Flag Legend
Processing Flags

Reagents:
8330IntermStk_00083 Amount Added: 25.00 Units: uL

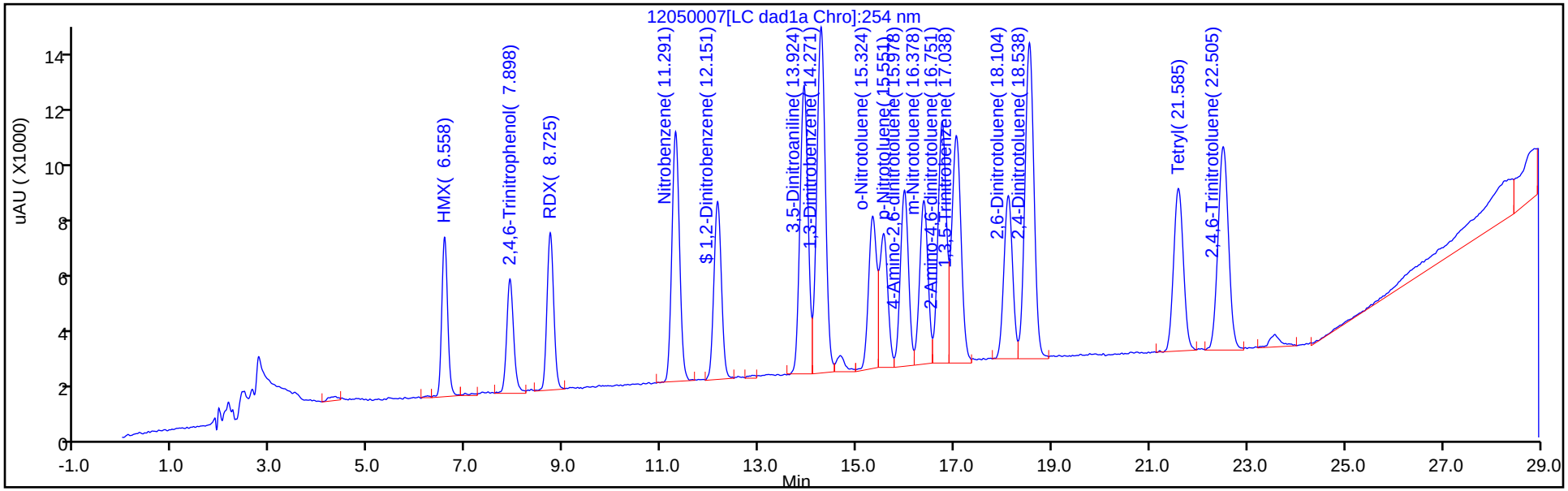
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Eurofins Denver

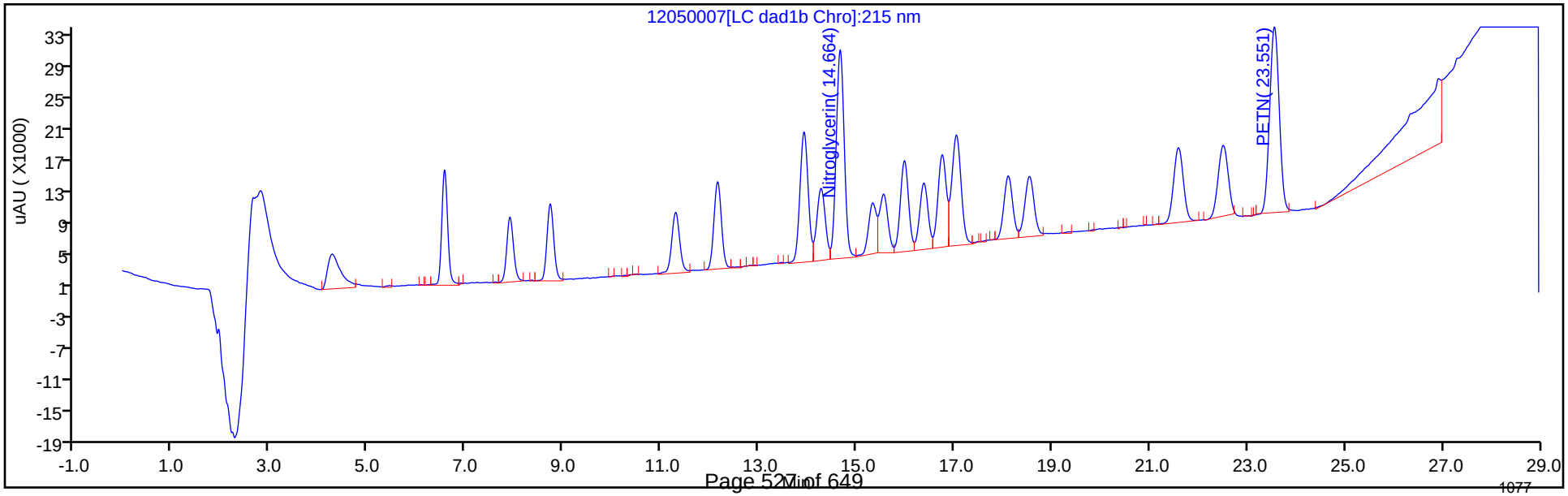
Data File: \\chromfs\denver\chromdata\g2_luna\20241205-140496.b\12050007.d

Injection Date:	05-Dec-2024 18:06:08	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	JZ
Lims ID:	CCV			Worklist Smp#:	7
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



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FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-200203-1

SDG No.:

Lab Sample ID: CCV 280-677524/19 | Calibration Date: 12/06/2024 00:05

Instrument ID: CHHPLC_G2_LUNA | Calib Start Date: 04/24/2024 21:28

GC Column: Luna-phenylhex ID: 4.60(mm) | Calib End Date: 04/25/2024 02:15

Lab File ID: 12050019.D | Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	174076	172448		248	250	-0.9	20.0
2,4,6-Trinitrophenol	Ave	151397	150944		249	250	-0.3	20.0
RDX	Lin2		203000		244	250	-2.3	20.0
Nitrobenzene	Ave	382120	355468		233	250	-7.0	20.0
3,5-Dinitroaniline	Lin2		433124		249	250	-0.3	20.0
1,3-Dinitrobenzene	Ave	589418	552640		234	250	-6.2	20.0
Nitroglycerin	Ave	119505	121054		2530	2500	1.3	20.0
o-Nitrotoluene	Ave	244594	233208		238	250	-4.7	20.0
p-Nitrotoluene	Lin2		198592		224	250	-10.5	20.0
4-Amino-2,6-dinitrotoluene	Lin2		270380		248	250	-0.8	20.0
m-Nitrotoluene	Lin2		254796		228	250	-9.0	20.0
2-Amino-4,6-dinitrotoluene	Ave	405562	389356		240	250	-4.0	20.0
1,3,5-Trinitrobenzene	Ave	423454	396608		234	250	-6.3	20.0
2,6-Dinitrotoluene	Ave	277970	264744		238	250	-4.8	20.0
2,4-Dinitrotoluene	Ave	554564	530412		239	250	-4.4	20.0
Tetryl	Lin2		312128		249	250	-0.5	20.0
2,4,6-Trinitrotoluene	Ave	399763	403792		253	250	1.0	20.0
PETN	Lin2		129823		2640	2500	5.7	20.0
1,2-Dinitrobenzene (Surr)	Ave	258689	258344		250	250	-0.1	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Lab Sample ID: CCV 280-677524/19 Calibration Date: 12/06/2024 00:05

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 04/24/2024 21:28

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 04/25/2024 02:15

Lab File ID: 12050019.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.58	6.41	6.71
2,4,6-Trinitrophenol	7.91	7.75	8.05
RDX	8.75	8.58	8.88
Nitrobenzene	11.32	11.14	11.44
3,5-Dinitroaniline	13.97	13.77	14.07
1,3-Dinitrobenzene	14.31	14.12	14.42
Nitroglycerin	14.70	14.51	14.81
o-Nitrotoluene	15.37	15.17	15.47
p-Nitrotoluene	15.59	15.40	15.70
4-Amino-2,6-dinitrotoluene	16.03	15.83	16.13
m-Nitrotoluene	16.42	16.23	16.53
2-Amino-4,6-dinitrotoluene	16.81	16.60	16.90
1,3,5-Trinitrobenzene	17.08	16.89	17.19
2,6-Dinitrotoluene	18.16	17.95	18.25
2,4-Dinitrotoluene	18.60	18.39	18.69
Tetryl	21.71	21.44	21.74
2,4,6-Trinitrotoluene	22.62	22.36	22.66
PETN	23.71	23.40	23.70
1,2-Dinitrobenzene (Surr)	12.19	12.00	12.30

Report Date: 06-Dec-2024 12:41:11 Chrom Revision: 2.3 12-Nov-2024 16:55:22

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\G2_LUNA\20241205-140496.b\12050019.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 06-Dec-2024 00:05:29 ALS Bottle#: 7 Worklist Smp#: 19
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: JZ Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub16

Method: \\chromfs\Denver\ChromData\G2_LUNA\20241205-140496.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 06-Dec-2024 12:41:11 Calib Date: 25-Apr-2024 07:39:21
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\G2_LUNA\20240424-132624.b\04240027.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX1606

First Level Reviewer: LV5D Date: 06-Dec-2024 10:41:19

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
6 HMX	1	6.579	6.558	0.021	43112	0.2500	0.2477	
5 2,4,6-Trinitrophenol	1	7.905	7.898	0.007	37736	0.2500	0.2493	
8 RDX	1	8.752	8.725	0.027	50750	0.2500	0.2442	
9 Nitrobenzene	1	11.319	11.291	0.028	88867	0.2500	0.2326	
$ 10 1,2-Dinitrobenzene	1	12.192	12.151	0.041	64586	0.2500	0.2497	
11 3,5-Dinitroaniline	1	13.965	13.924	0.041	108281	0.2500	0.2493	
12 1,3-Dinitrobenzene	1	14.305	14.271	0.034	138160	0.2500	0.2344	
13 Nitroglycerin	2	14.699	14.664	0.035	302636	2.50	2.53	
14 o-Nitrotoluene	1	15.365	15.324	0.041	58302	0.2500	0.2384	
15 p-Nitrotoluene	1	15.585	15.551	0.034	49648	0.2500	0.2238	
16 4-Amino-2,6-dinitrotoluene	1	16.025	15.978	0.047	67595	0.2500	0.2481	
17 m-Nitrotoluene	1	16.419	16.378	0.041	63699	0.2500	0.2276	
18 2-Amino-4,6-dinitrotoluene	1	16.805	16.751	0.054	97339	0.2500	0.2400	
19 1,3,5-Trinitrobenzene	1	17.079	17.038	0.041	99152	0.2500	0.2342	
20 2,6-Dinitrotoluene	1	18.159	18.104	0.055	66186	0.2500	0.2381	
21 2,4-Dinitrotoluene	1	18.599	18.538	0.061	132603	0.2500	0.2391	
22 Tetryl	1	21.712	21.585	0.127	78032	0.2500	0.2487	
23 2,4,6-Trinitrotoluene	1	22.619	22.505	0.114	100948	0.2500	0.2525	
24 PETN	2	23.712	23.551	0.161	324557	2.50	2.64	a

QC Flag Legend

Processing Flags
Review Flags
a - User Assigned ID

Reagents:

8330IntermStk_00083 Amount Added: 25.00 Units: uL

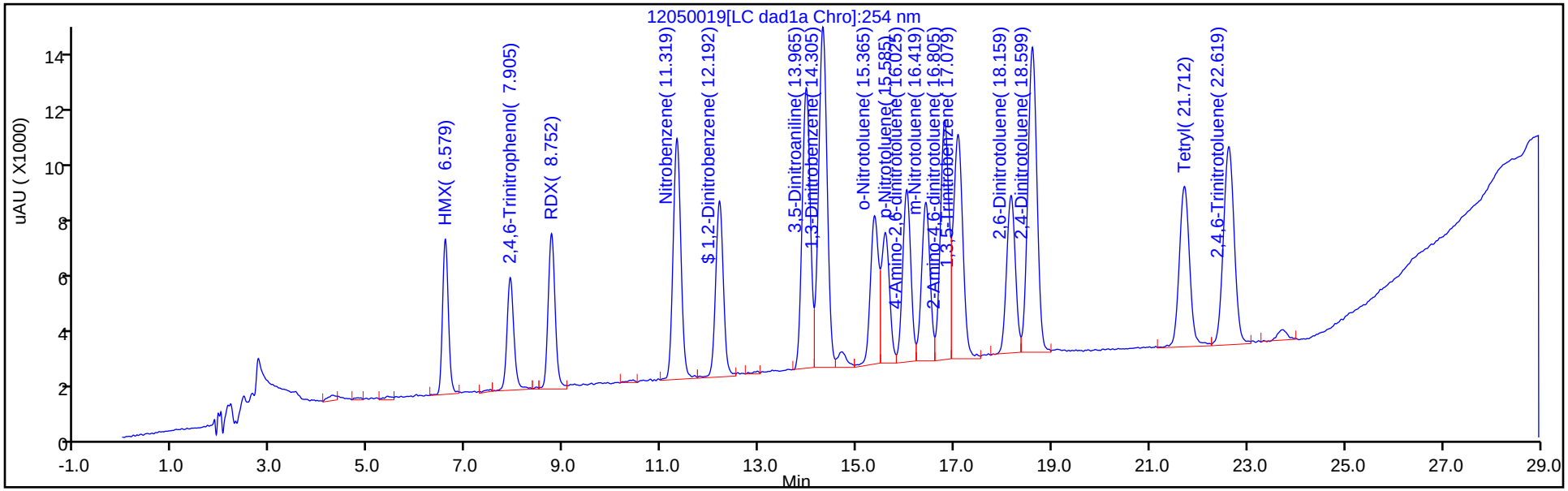
Report Date: 06-Dec-2024 12:41:11 Chrom Revision: 2.3 12-Nov-2024 16:55:22

Eurofins Denver

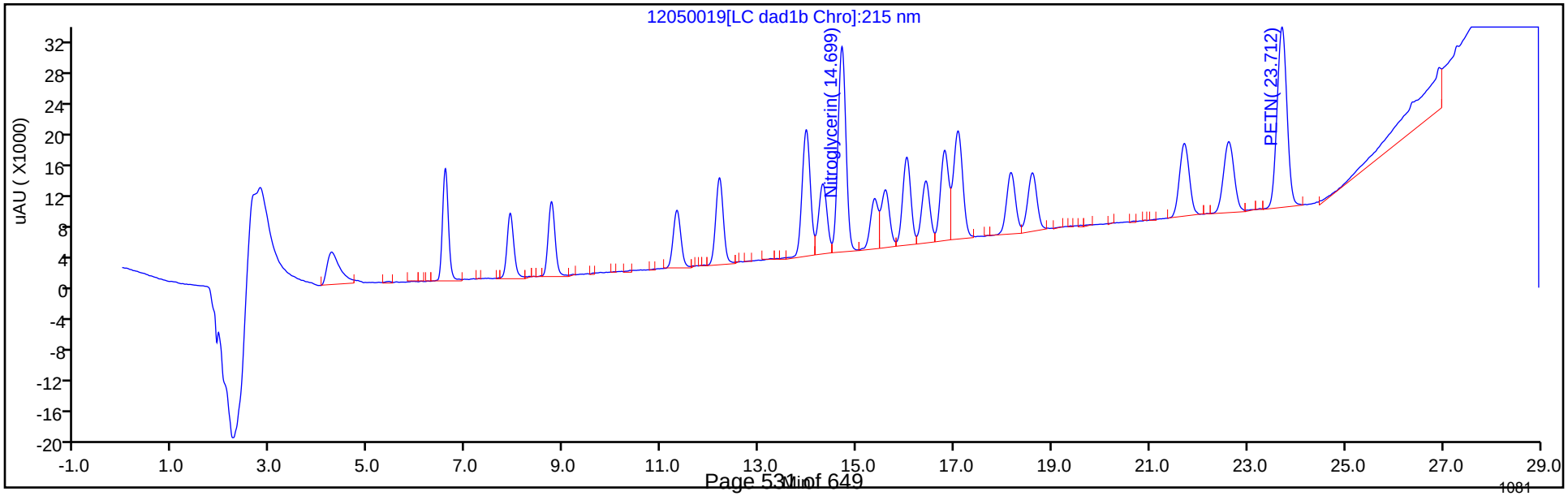
Data File: \\chromfs\denver\chromdata\g2_luna\20241205-140496.b\12050019.d

Injection Date:	06-Dec-2024 00:05:29	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	JZ
Lims ID:	CCV			Worklist Smp#:	19
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



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Manual Integration/User Assign Peak Report

Eurofins Denver

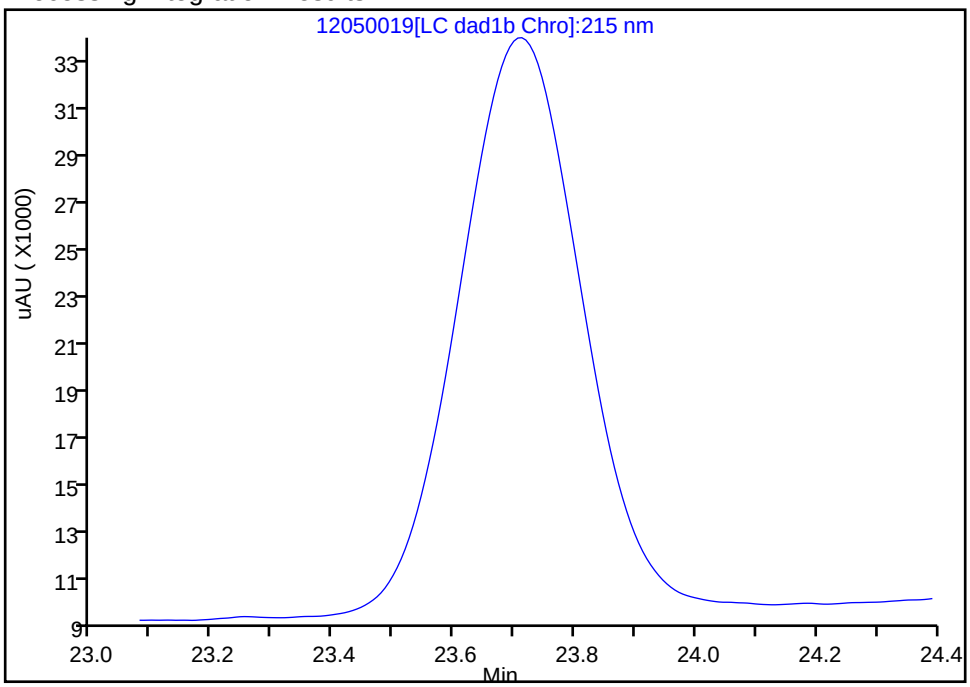
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Injection Date:	06-Dec-2024 00:05:29	Instrument ID:	CHHPLC_G2_LUNA		
Lims ID:	CCV				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	7	Worklist Smp#:	19
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC DAD1B, 215 nm		

24 PETN, CAS: 78-11-5

Signal: 1

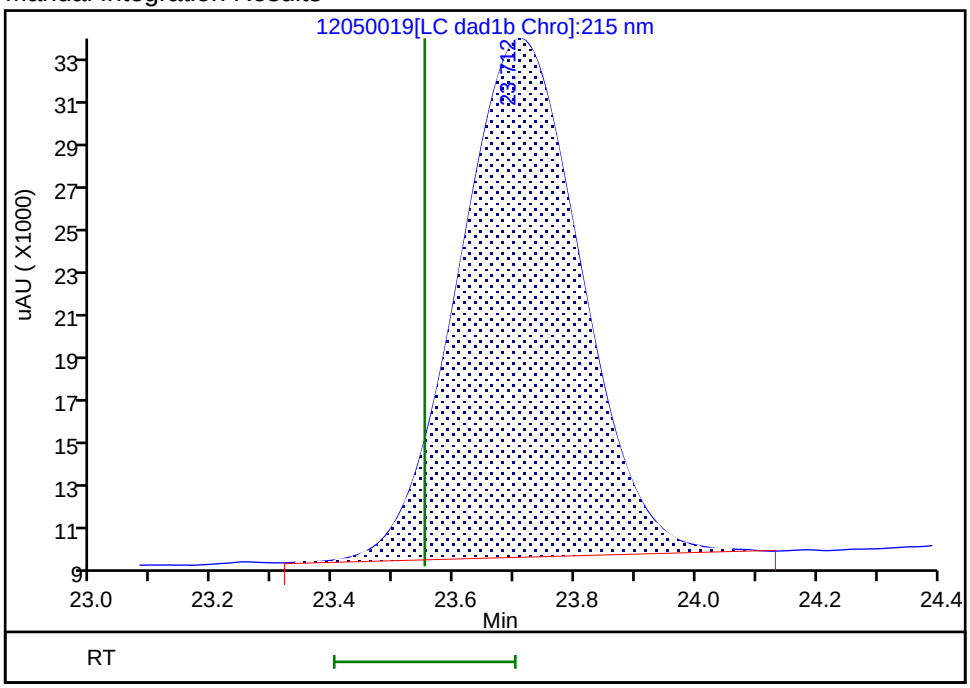
Not Detected
Expected RT: 23.55

Processing Integration Results



Manual Integration Results

RT: 23.71
Area: 324557
Amount: 2.641706
Amount Units: ug/ml



Reviewer: LV5D, 06-Dec-2024 10:41:17 -07:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-200203-1

SDG No.:

Lab Sample ID: CCV 280-677657/7 | Calibration Date: 12/06/2024 15:52

Instrument ID: CHHPLC_G2_LUNA | Calib Start Date: 04/24/2024 21:28

GC Column: Luna-phenylhex ID: 4.60(mm) | Calib End Date: 04/25/2024 02:15

Lab File ID: 12060007.D | Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	174076	177364		255	250	1.9	20.0
2,4,6-Trinitrophenol	Ave	151397	148492		245	250	-1.9	20.0
RDX	Lin2		204032		245	250	-1.8	20.0
Nitrobenzene	Ave	382120	373616		244	250	-2.2	20.0
3,5-Dinitroaniline	Lin2		441256		254	250	1.6	20.0
1,3-Dinitrobenzene	Ave	589418	560540		238	250	-4.9	20.0
Nitroglycerin	Ave	119505	122957		2570	2500	2.9	20.0
o-Nitrotoluene	Ave	244594	239812		245	250	-2.0	20.0
p-Nitrotoluene	Lin2		207820		234	250	-6.2	20.0
4-Amino-2,6-dinitrotoluene	Lin2		275584		253	250	1.2	20.0
m-Nitrotoluene	Lin2		264856		237	250	-5.3	20.0
2-Amino-4,6-dinitrotoluene	Ave	405562	388880		240	250	-4.1	20.0
1,3,5-Trinitrobenzene	Ave	423454	404380		239	250	-4.5	20.0
2,6-Dinitrotoluene	Ave	277970	266628		240	250	-4.1	20.0
2,4-Dinitrotoluene	Ave	554564	541568		244	250	-2.3	20.0
Tetryl	Lin2		312712		249	250	-0.3	20.0
2,4,6-Trinitrotoluene	Ave	399763	408860		256	250	2.3	20.0
PETN	Lin2		132424		2690	2500	7.8	20.0
1,2-Dinitrobenzene (Surr)	Ave	258689	258816		250	250	0.0	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Lab Sample ID: CCV 280-677657/7 Calibration Date: 12/06/2024 15:52

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 04/24/2024 21:28

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 04/25/2024 02:15

Lab File ID: 12060007.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.57	6.42	6.72
2,4,6-Trinitrophenol	7.84	7.69	7.99
RDX	8.73	8.58	8.88
Nitrobenzene	11.29	11.14	11.44
3,5-Dinitroaniline	13.89	13.74	14.04
1,3-Dinitrobenzene	14.25	14.10	14.40
Nitroglycerin	14.63	14.48	14.78
o-Nitrotoluene	15.30	15.15	15.45
p-Nitrotoluene	15.52	15.37	15.67
4-Amino-2,6-dinitrotoluene	15.94	15.79	16.09
m-Nitrotoluene	16.35	16.20	16.50
2-Amino-4,6-dinitrotoluene	16.71	16.56	16.86
1,3,5-Trinitrobenzene	17.01	16.86	17.16
2,6-Dinitrotoluene	18.07	17.92	18.22
2,4-Dinitrotoluene	18.51	18.36	18.66
Tetryl	21.55	21.40	21.70
2,4,6-Trinitrotoluene	22.48	22.33	22.63
PETN	23.53	23.38	23.68
1,2-Dinitrobenzene (Surr)	12.14	11.99	12.29

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\G2_LUNA\20241206-140534.b\12060007.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 06-Dec-2024 15:52:53 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: JZ Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub16

Method: \\chromfs\Denver\ChromData\G2_LUNA\20241206-140534.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 06-Dec-2024 20:12:13 Calib Date: 25-Apr-2024 07:39:21
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\G2_LUNA\20240424-132624.b\04240027.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX1606

First Level Reviewer: LV5D Date: 06-Dec-2024 16:44:18

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
6 HMX	1	6.567	6.567	0.000	44341	0.2500	0.2547	
5 2,4,6-Trinitrophenol	1	7.840	7.840	0.000	37123	0.2500	0.2452	
8 RDX	1	8.734	8.734	0.000	51008	0.2500	0.2454	
9 Nitrobenzene	1	11.293	11.293	0.000	93404	0.2500	0.2444	
$ 10 1,2-Dinitrobenzene	1	12.140	12.140	0.000	64704	0.2500	0.2501	
11 3,5-Dinitroaniline	1	13.893	13.893	0.000	110314	0.2500	0.2540	
12 1,3-Dinitrobenzene	1	14.247	14.247	0.000	140135	0.2500	0.2378	
13 Nitroglycerin	2	14.633	14.633	0.000	307393	2.50	2.57	
14 o-Nitrotoluene	1	15.300	15.300	0.000	59953	0.2500	0.2451	
15 p-Nitrotoluene	1	15.520	15.520	0.000	51955	0.2500	0.2344	
16 4-Amino-2,6-dinitrotoluene	1	15.940	15.940	0.000	68896	0.2500	0.2529	
17 m-Nitrotoluene	1	16.347	16.347	0.000	66214	0.2500	0.2367	
18 2-Amino-4,6-dinitrotoluene	1	16.713	16.713	0.000	97220	0.2500	0.2397	
19 1,3,5-Trinitrobenzene	1	17.013	17.013	0.000	101095	0.2500	0.2387	
20 2,6-Dinitrotoluene	1	18.067	18.067	0.000	66657	0.2500	0.2398	
21 2,4-Dinitrotoluene	1	18.507	18.507	0.000	135392	0.2500	0.2441	
22 Tetryl	1	21.554	21.554	0.000	78178	0.2500	0.2492	
23 2,4,6-Trinitrotoluene	1	22.480	22.480	0.000	102215	0.2500	0.2557	
24 PETN	2	23.527	23.527	0.000	331061	2.50	2.69	

QC Flag Legend
Processing Flags

Reagents:
8330IntermStk_00083 Amount Added: 25.00 Units: uL

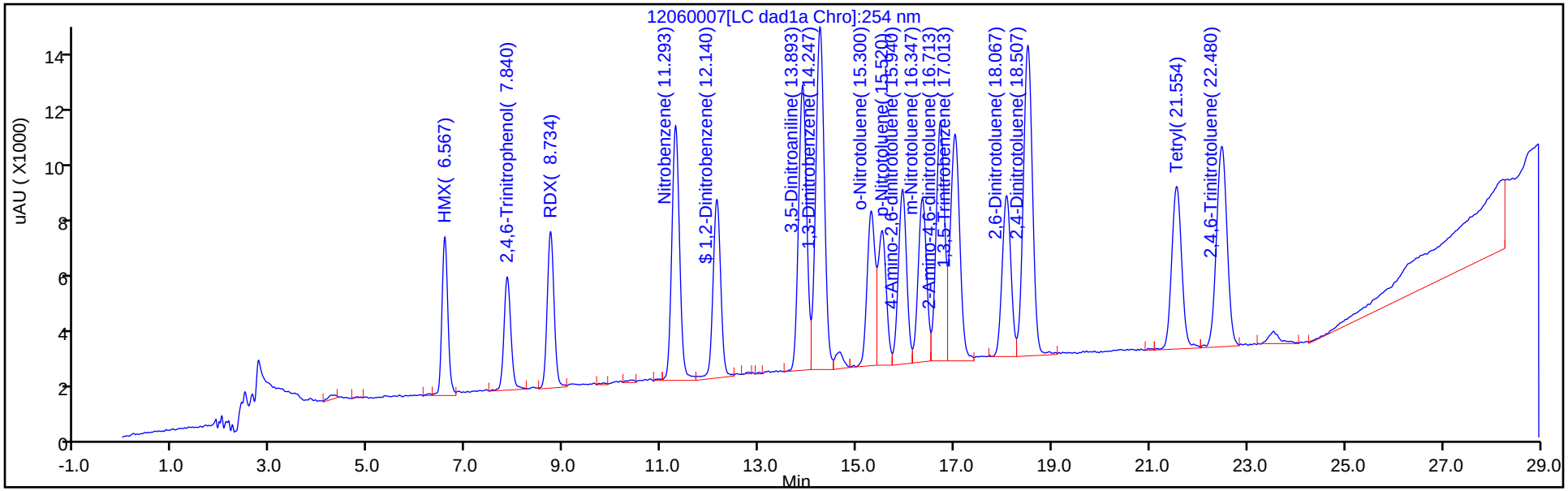
Report Date: 06-Dec-2024 20:12:13 Chrom Revision: 2.3 12-Nov-2024 16:55:22

Eurofins Denver

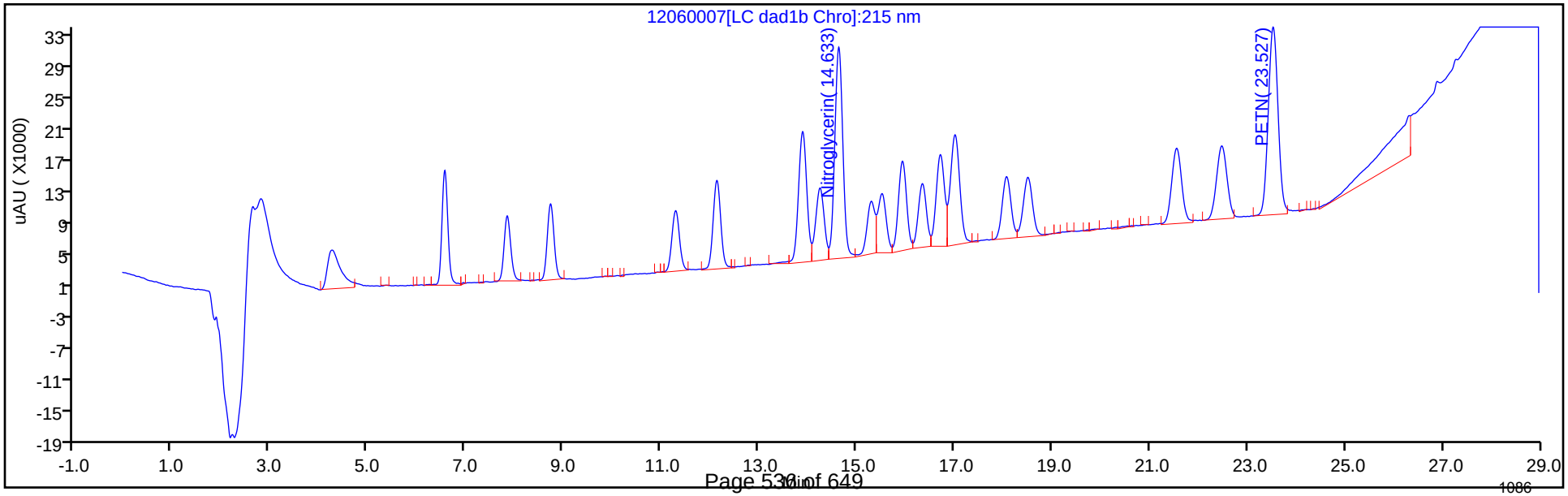
Data File: \\chromfs\denver\chromdata\g2_luna\20241206-140534.b\12060007.d

Injection Date:	06-Dec-2024 15:52:53	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	JZ
Lims ID:	CCV			Worklist Smp#:	7
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



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FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-200203-1

SDG No.:

Lab Sample ID: CCV 280-677657/15 | Calibration Date: 12/06/2024 19:28

Instrument ID: CHHPLC_G2_LUNA | Calib Start Date: 04/24/2024 21:28

GC Column: Luna-phenylhex ID: 4.60(mm) | Calib End Date: 04/25/2024 02:15

Lab File ID: 12060015.D | Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	174076	175936		253	250	1.1	20.0
2,4,6-Trinitrophenol	Ave	151397	149804		247	250	-1.1	20.0
RDX	Lin2		203464		245	250	-2.1	20.0
Nitrobenzene	Ave	382120	362944		237	250	-5.0	20.0
3,5-Dinitroaniline	Lin2		436556		251	250	0.5	20.0
1,3-Dinitrobenzene	Ave	589418	561188		238	250	-4.8	20.0
Nitroglycerin	Ave	119505	123030		2570	2500	3.0	20.0
o-Nitrotoluene	Ave	244594	230692		236	250	-5.7	20.0
p-Nitrotoluene	Lin2		204528		231	250	-7.7	20.0
4-Amino-2,6-dinitrotoluene	Lin2		270124		248	250	-0.9	20.0
m-Nitrotoluene	Lin2		260164		232	250	-7.0	20.0
2-Amino-4,6-dinitrotoluene	Ave	405562	385868		238	250	-4.9	20.0
1,3,5-Trinitrobenzene	Ave	423454	400308		236	250	-5.5	20.0
2,6-Dinitrotoluene	Ave	277970	266392		240	250	-4.2	20.0
2,4-Dinitrotoluene	Ave	554564	537704		242	250	-3.0	20.0
Tetryl	Lin2		315060		251	250	0.4	20.0
2,4,6-Trinitrotoluene	Ave	399763	412444		258	250	3.2	20.0
PETN	Lin2		130252		2650	2500	6.0	20.0
1,2-Dinitrobenzene (Surr)	Ave	258689	257032		248	250	-0.6	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Lab Sample ID: CCV 280-677657/15 Calibration Date: 12/06/2024 19:28

Instrument ID: CHHPLC_G2_LUNA Calib Start Date: 04/24/2024 21:28

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 04/25/2024 02:15

Lab File ID: 12060015.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.57	6.42	6.72
2,4,6-Trinitrophenol	7.85	7.69	7.99
RDX	8.74	8.58	8.88
Nitrobenzene	11.30	11.14	11.44
3,5-Dinitroaniline	13.92	13.74	14.04
1,3-Dinitrobenzene	14.27	14.10	14.40
Nitroglycerin	14.65	14.48	14.78
o-Nitrotoluene	15.32	15.15	15.45
p-Nitrotoluene	15.54	15.37	15.67
4-Amino-2,6-dinitrotoluene	15.97	15.79	16.09
m-Nitrotoluene	16.37	16.20	16.50
2-Amino-4,6-dinitrotoluene	16.74	16.56	16.86
1,3,5-Trinitrobenzene	17.03	16.86	17.16
2,6-Dinitrotoluene	18.09	17.92	18.22
2,4-Dinitrotoluene	18.53	18.36	18.66
Tetryl	21.59	21.40	21.70
2,4,6-Trinitrotoluene	22.51	22.33	22.63
PETN	23.55	23.38	23.68
1,2-Dinitrobenzene (Surr)	12.16	11.99	12.29

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\G2_LUNA\20241206-140534.b\12060015.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 06-Dec-2024 19:28:33 ALS Bottle#: 7 Worklist Smp#: 15
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: JZ Instrument ID: CHHPLC_G2_LUNA
Sublist: chrom-G2_8330_Luna*sub16

Method: \\chromfs\Denver\ChromData\G2_LUNA\20241206-140534.b\G2_8330_Luna.m
Limit Group: GCSV - 8330
Last Update: 06-Dec-2024 20:12:16 Calib Date: 25-Apr-2024 07:39:21
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\G2_LUNA\20240424-132624.b\04240027.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC DAD1A, 254 nm
Process Host: CTX1606

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
6 HMX	1	6.565	6.567	-0.002	43984	0.2500	0.2527	
5 2,4,6-Trinitrophenol	1	7.852	7.840	0.012	37451	0.2500	0.2474	
8 RDX	1	8.739	8.734	0.005	50866	0.2500	0.2447	
9 Nitrobenzene	1	11.298	11.293	0.005	90736	0.2500	0.2375	
$ 10 1,2-Dinitrobenzene	1	12.158	12.140	0.018	64258	0.2500	0.2484	
11 3,5-Dinitroaniline	1	13.918	13.893	0.025	109139	0.2500	0.2513	
12 1,3-Dinitrobenzene	1	14.272	14.247	0.025	140297	0.2500	0.2380	
13 Nitroglycerin	2	14.652	14.633	0.019	307576	2.50	2.57	
14 o-Nitrotoluene	1	15.318	15.300	0.018	57673	0.2500	0.2358	
15 p-Nitrotoluene	1	15.538	15.520	0.018	51132	0.2500	0.2306	
16 4-Amino-2,6-dinitrotoluene	1	15.965	15.940	0.025	67531	0.2500	0.2478	
17 m-Nitrotoluene	1	16.365	16.347	0.018	65041	0.2500	0.2325	
18 2-Amino-4,6-dinitrotoluene	1	16.738	16.713	0.025	96467	0.2500	0.2379	
19 1,3,5-Trinitrobenzene	1	17.025	17.013	0.012	100077	0.2500	0.2363	
20 2,6-Dinitrotoluene	1	18.092	18.067	0.025	66598	0.2500	0.2396	
21 2,4-Dinitrotoluene	1	18.525	18.507	0.018	134426	0.2500	0.2424	
22 Tetryl	1	21.585	21.554	0.031	78765	0.2500	0.2510	
23 2,4,6-Trinitrotoluene	1	22.505	22.480	0.025	103111	0.2500	0.2579	
24 PETN	2	23.552	23.527	0.025	325629	2.50	2.65	

Reagents:

8330IntermStk_00083 Amount Added: 25.00 Units: uL

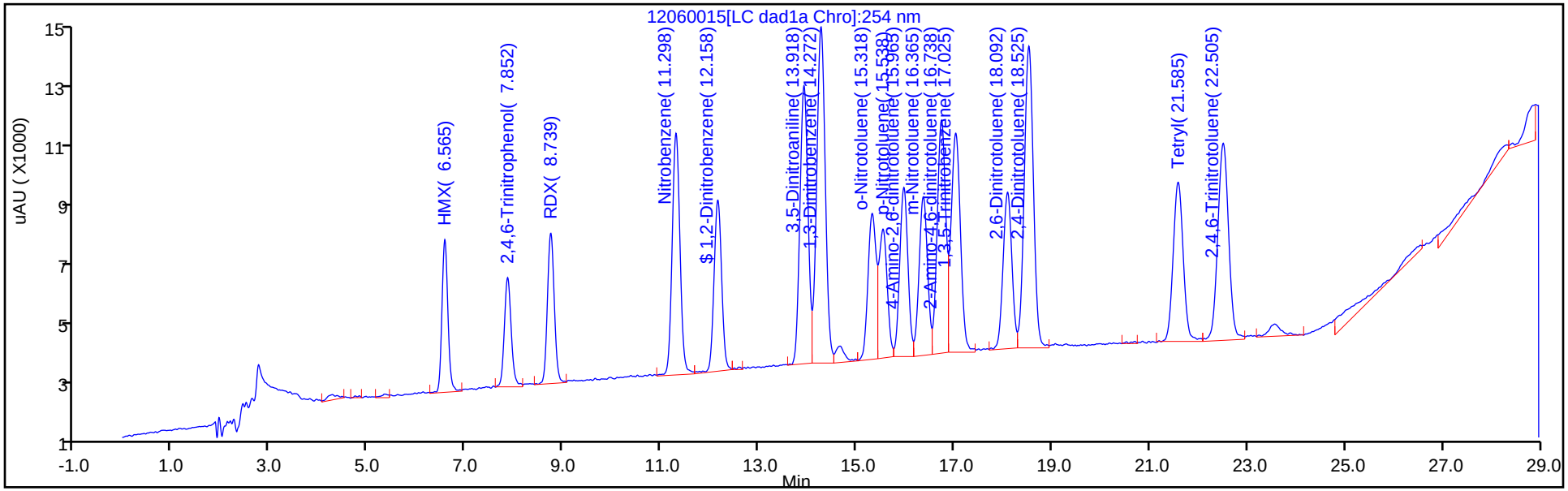
Report Date: 06-Dec-2024 20:12:16 Chrom Revision: 2.3 12-Nov-2024 16:55:22

Eurofins Denver

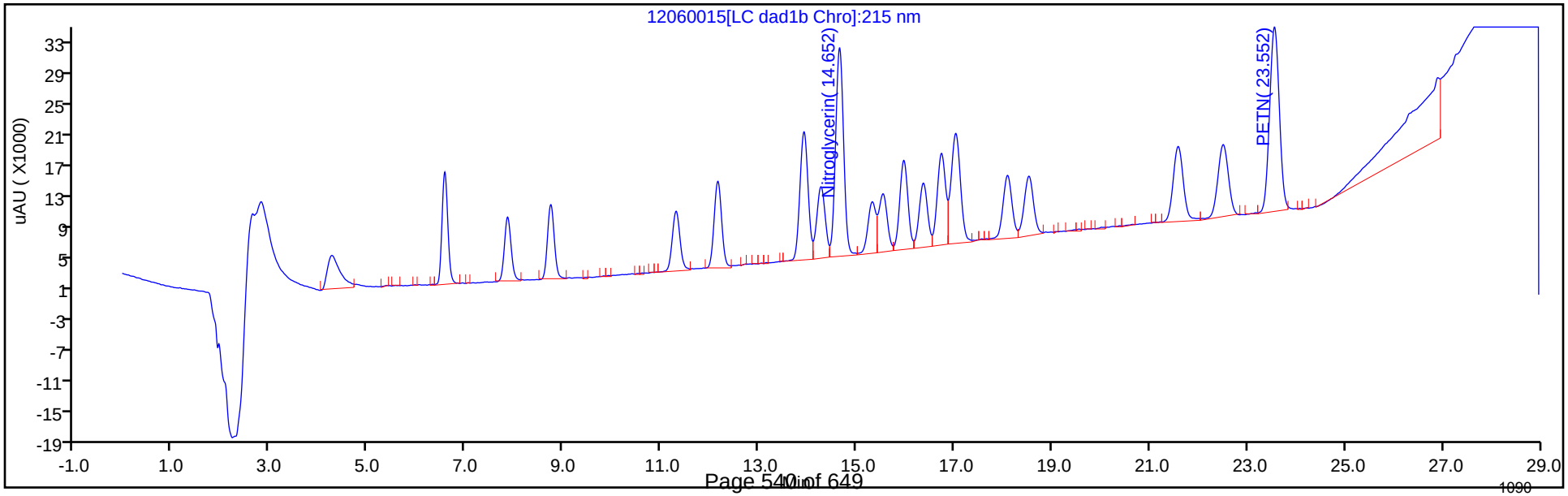
Data File: \\chromfs\denver\chromdata\g2_luna\20241206-140534.b\12060015.d

Injection Date:	06-Dec-2024 19:28:33	Instrument ID:	CHHPLC_G2_LUNA	Operator ID:	JZ
Lims ID:	CCV			Worklist Smp#:	15
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	G2_8330_Luna	Limit Group:	GCSV - 8330		

Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Luna-Phenyl hexyl (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



1090

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-200203-1

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
2,4,6-Trinitrophenol	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		5420	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
o-Nitrotoluene	Ave	125468	130908		522	500	4.3	20.0
p-Nitrotoluene	Lin2		114438		529	500	5.8	20.0
m-Nitrotoluene	Lin2		143934		531	500	6.2	20.0
PETN	Ave	72212	79177		5480	5000	9.6	20.0
1,2-Dinitrobenzene (Surr)	Ave	130410	128386		492	500	-1.6	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200203-1

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
2,4,6-Trinitrophenol	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
o-Nitrotoluene	11.83	11.70	12.00
p-Nitrotoluene	12.19	12.07	12.37
m-Nitrotoluene	12.70	12.57	12.87
PETN	13.77	13.65	13.95
1,2-Dinitrobenzene (Surr)	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:

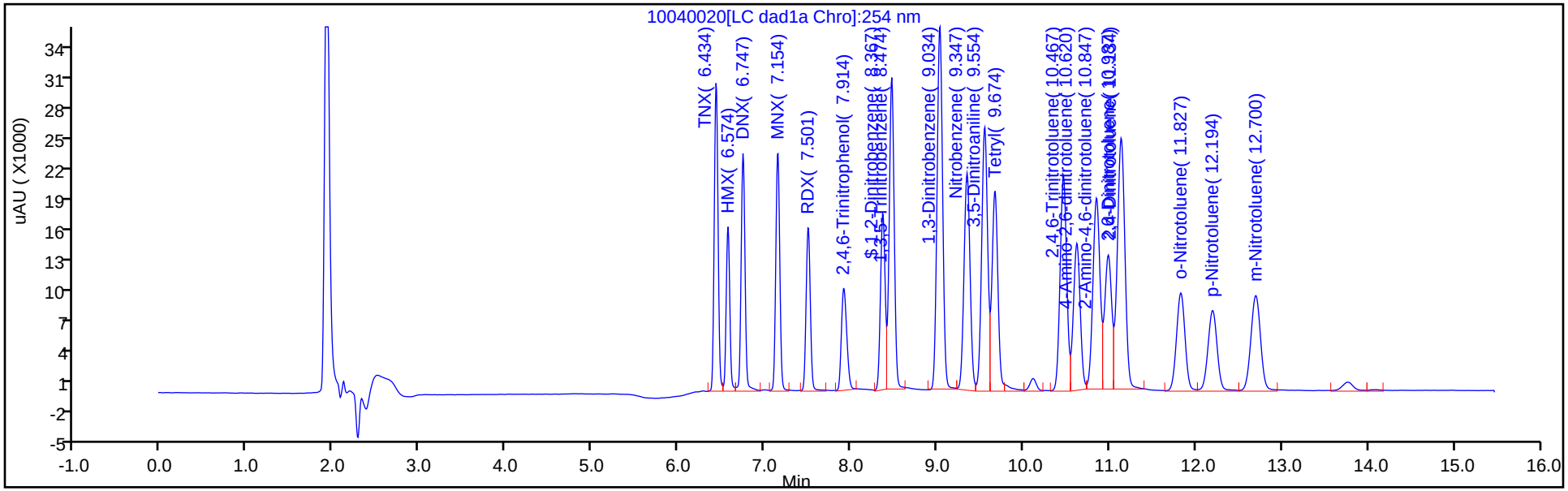
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8330 LCS_00137	Amount Added:	50.00	Units: uL
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Report Date: 08-Oct-2024 13:50:49 Chrom Revision: 2.3 24-Sep-2024 15:19:46

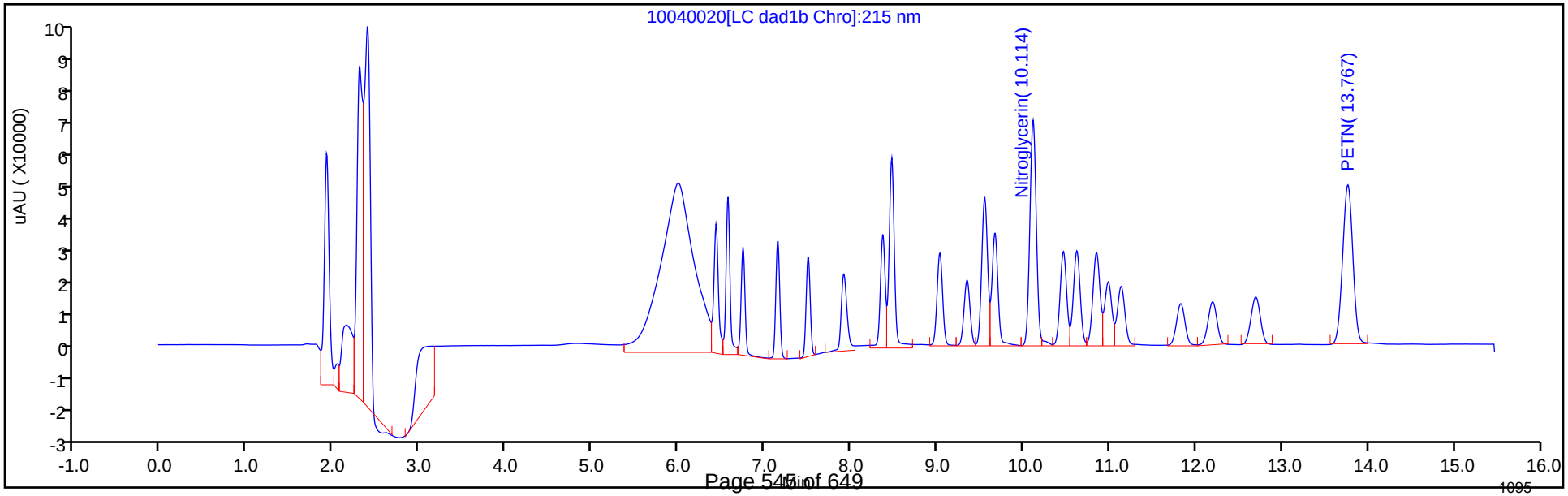
Eurofins Denver

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



Manual Integration/User Assign Peak Report

Eurofins Denver

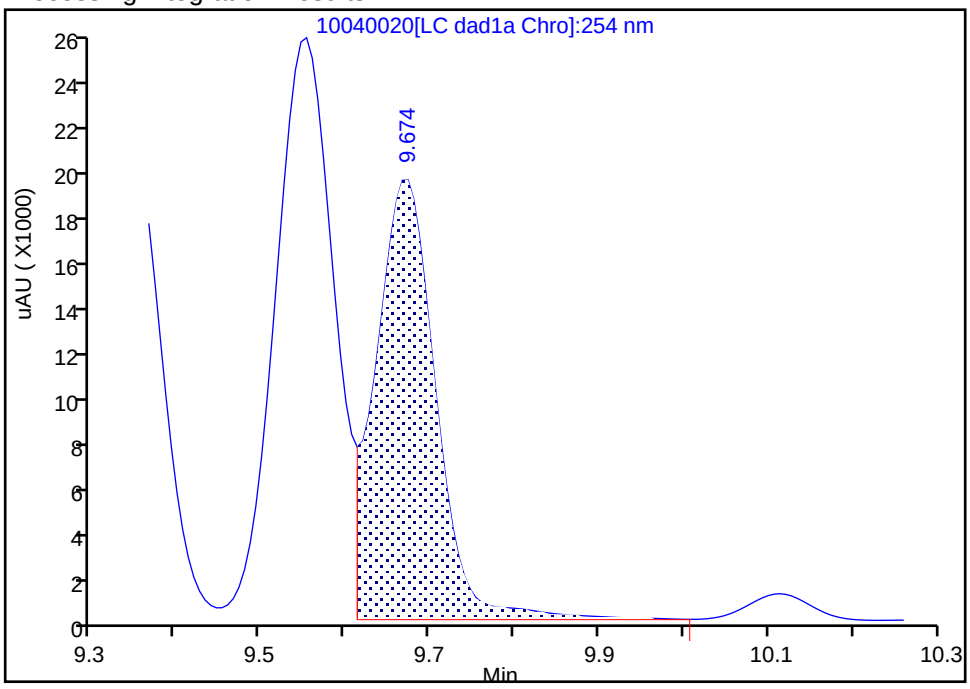
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Injection Date:	04-Oct-2024 20:16:59	Instrument ID:	CHHPLC_X3		
Lims ID:	ICV INT/DMT				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	20	Worklist Smp#:	20
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

15 Tetryl, CAS: 479-45-8

Signal: 1

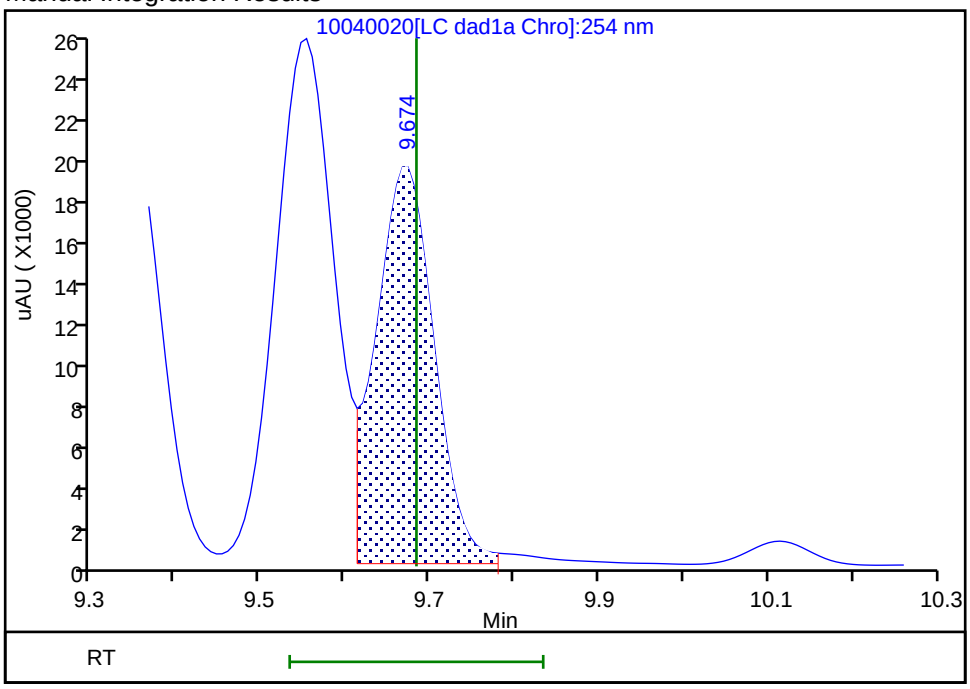
Processing Integration Results

RT: 9.67
Area: 95739
Amount: 0.567120
Amount Units: ug/mL



Manual Integration Results

RT: 9.67
Area: 92852
Amount: 0.542780
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:11:49 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

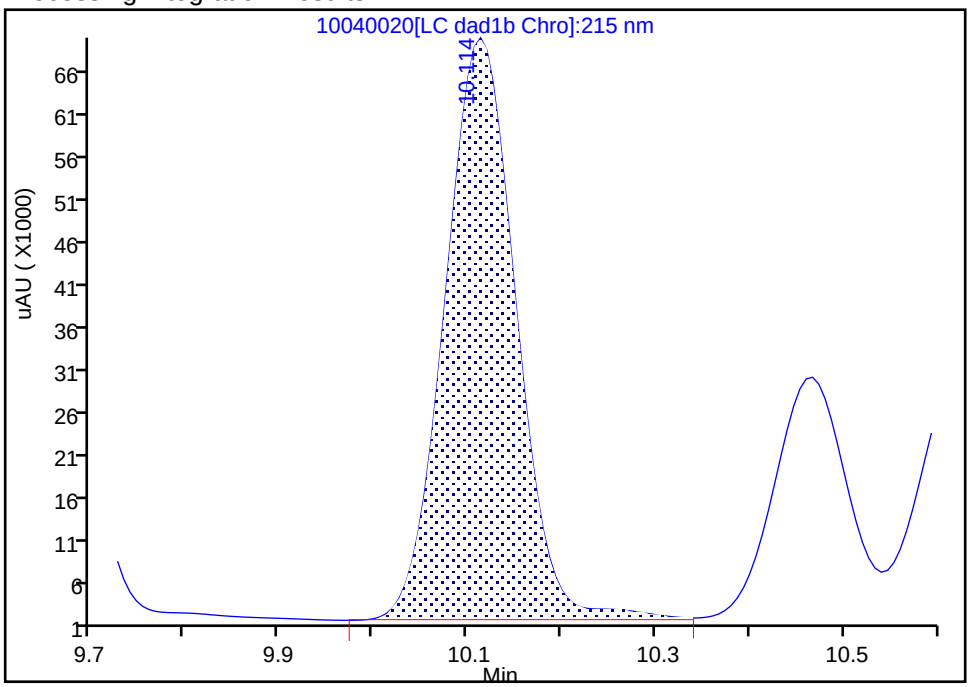
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Injection Date:	04-Oct-2024 20:16:59	Instrument ID:	CHHPLC_X3		
Lims ID:	ICV INT/DMT				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	20	Worklist Smp#:	20
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1C, 215 nm		

16 Nitroglycerin, CAS: 55-63-0

Signal: 1

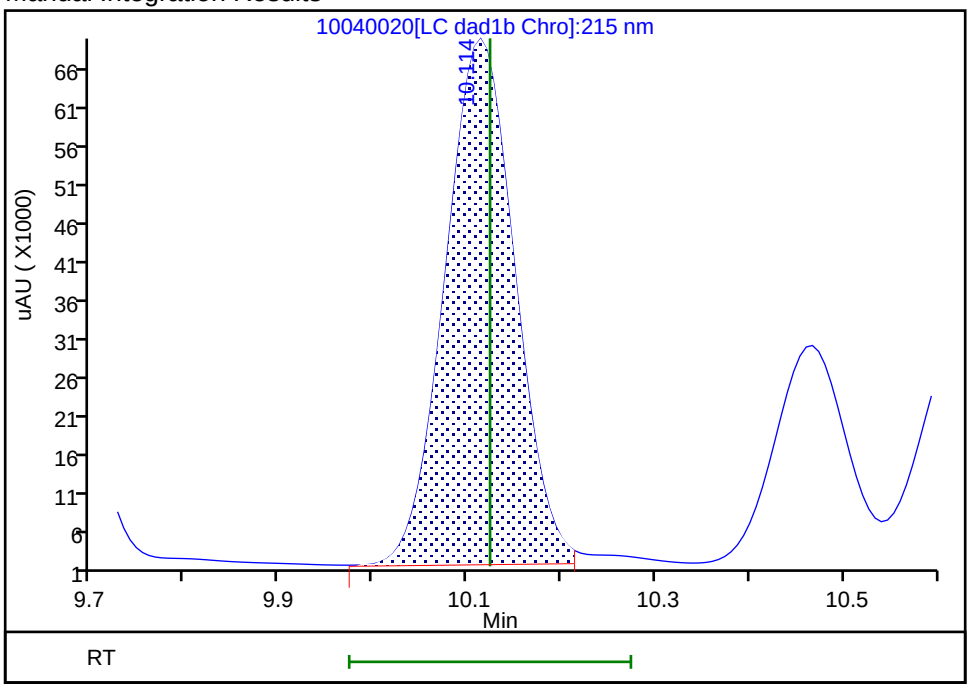
Processing Integration Results

RT: 10.11
Area: 355382
Amount: 5.587098
Amount Units: ug/mL



Manual Integration Results

RT: 10.11
Area: 348863
Amount: 5.418687
Amount Units: ug/mL



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.: 280-200203-1

SDG No.:

Lab Sample ID: CCV 280-677391/20 Calibration Date: 12/04/2024 20:17

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: 12040020.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	96653	97244		252	250	0.6	20.0
RDX	Lin2		110132		261	250	4.4	20.0
2,4,6-Trinitrophenol	Ave	75427	81376		270	250	7.9	20.0
1,3,5-Trinitrobenzene	Ave	217350	224620		258	250	3.3	20.0
1,3-Dinitrobenzene	Ave	298232	305620		256	250	2.5	20.0
Nitrobenzene	Ave	195178	195784		251	250	0.3	20.0
3,5-Dinitroaniline	Lin2		245072		263	250	5.2	20.0
Tetryl	Lin2		167260		245	250	-2.1	20.0
Nitroglycerin	Lin2		69616		2710	2500	8.3	20.0
2,4,6-Trinitrotoluene	Ave	217298	219860		253	250	1.2	20.0
4-Amino-2,6-dinitrotoluene	Lin2		152860		262	250	4.6	20.0
2-Amino-4,6-dinitrotoluene	Ave	204531	210012		257	250	2.7	20.0
2,6-Dinitrotoluene	Lin2		147164		261	250	4.4	20.0
2,4-Dinitrotoluene	Ave	291812	299736		257	250	2.7	20.0
o-Nitrotoluene	Ave	125468	124716		249	250	-0.6	20.0
p-Nitrotoluene	Lin2		107600		248	250	-0.9	20.0
m-Nitrotoluene	Lin2		135436		249	250	-0.5	20.0
PETN	Ave	72212	75581		2620	2500	4.7	20.0
1,2-Dinitrobenzene (Surr)	Ave	130410	135608		260	250	4.0	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Lab Sample ID: CCV 280-677391/20 Calibration Date: 12/04/2024 20:17

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: 12040020.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.64	6.50	6.80
RDX	7.58	7.43	7.73
2,4,6-Trinitrophenol	7.95	7.80	8.10
1,3,5-Trinitrobenzene	8.54	8.39	8.69
1,3-Dinitrobenzene	9.08	8.94	9.24
Nitrobenzene	9.40	9.25	9.55
3,5-Dinitroaniline	9.59	9.44	9.74
Tetryl	9.70	9.55	9.85
Nitroglycerin	10.14	9.99	10.29
2,4,6-Trinitrotoluene	10.49	10.39	10.59
4-Amino-2,6-dinitrotoluene	10.62	10.52	10.72
2-Amino-4,6-dinitrotoluene	10.85	10.75	10.95
2,6-Dinitrotoluene	10.99	10.89	11.09
2,4-Dinitrotoluene	11.14	11.04	11.24
o-Nitrotoluene	11.82	11.67	11.97
p-Nitrotoluene	12.17	12.02	12.32
m-Nitrotoluene	12.66	12.51	12.81
PETN	13.66	13.52	13.82
1,2-Dinitrobenzene (Surr)	8.43	8.29	8.59

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20241204-140455.b\12040020.D
Lims ID: CCV INT
Client ID:
Sample Type: CCV
Inject. Date: 04-Dec-2024 20:17:23 ALS Bottle#: 7 Worklist Smp#: 20
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\20241204-140455.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 05-Dec-2024 11:14:25 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: CTX1637

First Level Reviewer: LV5D Date: 05-Dec-2024 11:07:47

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
4 HMX	1	6.642	6.649	-0.007	24311	0.2500	0.2515	
8 RDX	1	7.575	7.576	-0.001	27533	0.2500	0.2610	
9 2,4,6-Trinitrophenol	1	7.948	7.949	-0.001	20344	0.2500	0.2697	
$ 10 1,2-Dinitrobenzene	1	8.428	8.436	-0.008	33902	0.2500	0.2600	
11 1,3,5-Trinitrobenzene	1	8.535	8.543	-0.008	56155	0.2500	0.2584	
12 1,3-Dinitrobenzene	1	9.082	9.089	-0.007	76405	0.2500	0.2562	
13 Nitrobenzene	1	9.395	9.402	-0.007	48946	0.2500	0.2508	
14 3,5-Dinitroaniline	1	9.588	9.589	-0.001	61268	0.2500	0.2631	
15 Tetryl	1	9.695	9.702	-0.007	41815	0.2500	0.2448	
16 Nitroglycerin	2	10.135	10.142	-0.007	174041	2.50	2.71	
17 2,4,6-Trinitrotoluene	1	10.488	10.489	-0.001	54965	0.2500	0.2529	
18 4-Amino-2,6-dinitrotoluene	1	10.622	10.622	0.000	38215	0.2500	0.2615	
19 2-Amino-4,6-dinitrotoluene	1	10.848	10.849	-0.001	52503	0.2500	0.2567	
20 2,6-Dinitrotoluene	1	10.988	10.989	-0.001	36791	0.2500	0.2609	
21 2,4-Dinitrotoluene	1	11.142	11.142	0.000	74934	0.2500	0.2568	
22 o-Nitrotoluene	1	11.815	11.816	-0.001	31179	0.2500	0.2485	M
23 p-Nitrotoluene	1	12.168	12.169	-0.001	26900	0.2500	0.2478	M
24 m-Nitrotoluene	1	12.655	12.662	-0.007	33859	0.2500	0.2487	M
25 PETN	2	13.655	13.669	-0.014	188953	2.50	2.62	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00083 Amount Added: 25.00 Units: uL

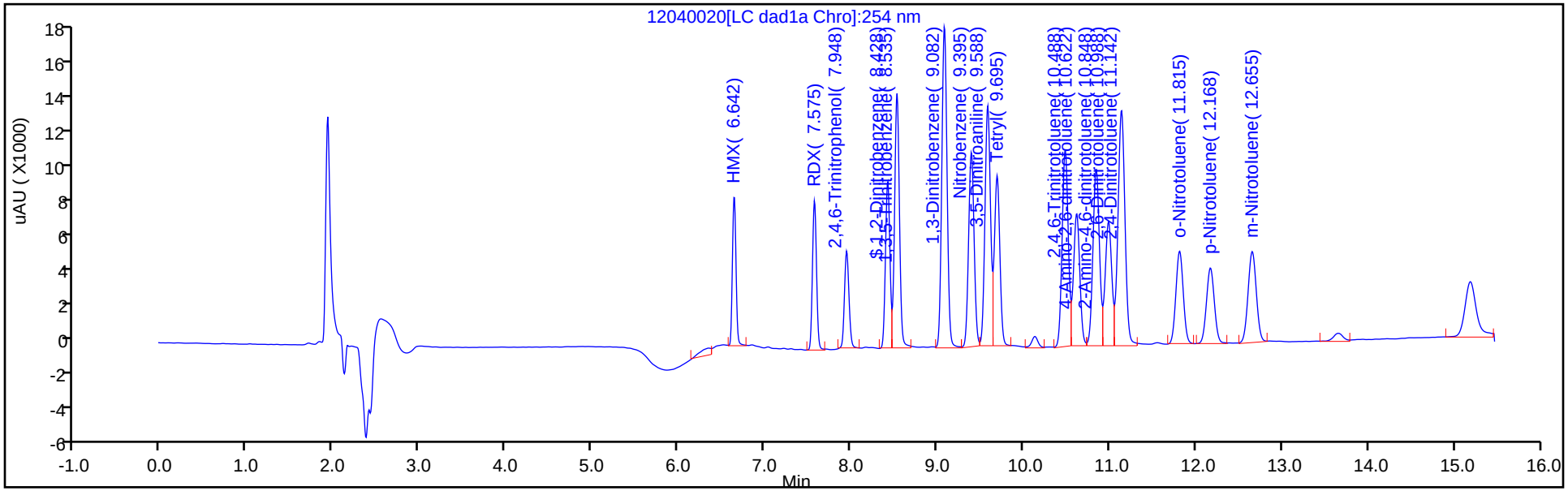
Report Date: 05-Dec-2024 11:14:26 Chrom Revision: 2.3 12-Nov-2024 16:55:22

Eurofins Denver

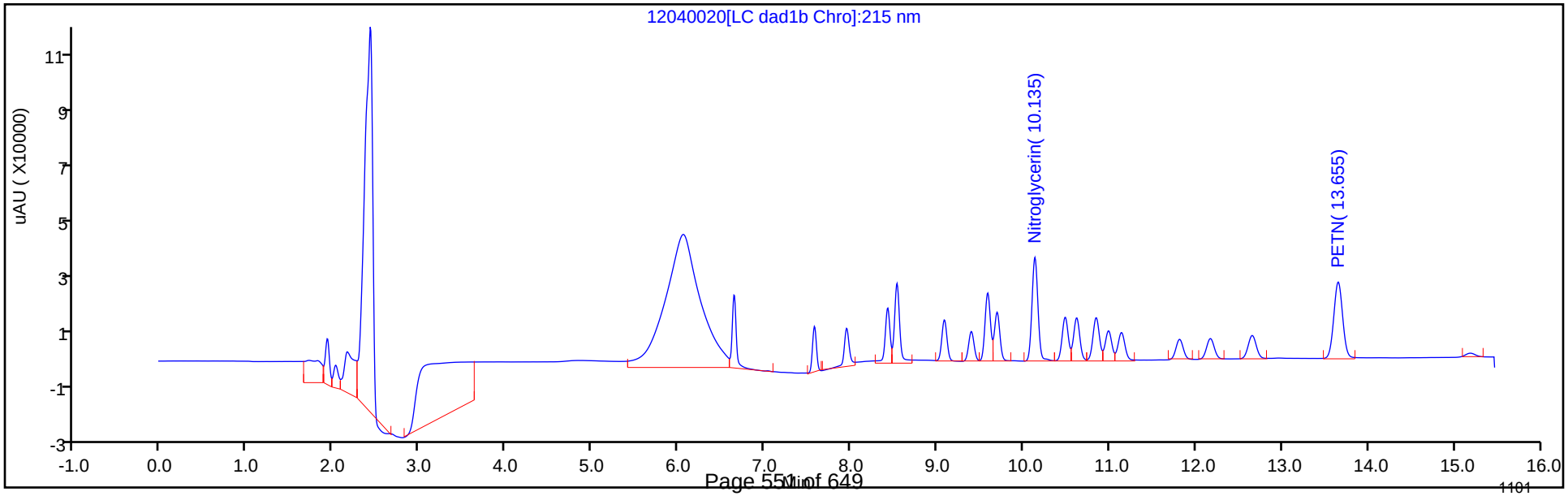
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Injection Date:	04-Dec-2024 20:17:23	Instrument ID:	CHHPLC_X3	Operator ID:	JZ
Lims ID:	CCV INT			Worklist Smp#:	20
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins Denver

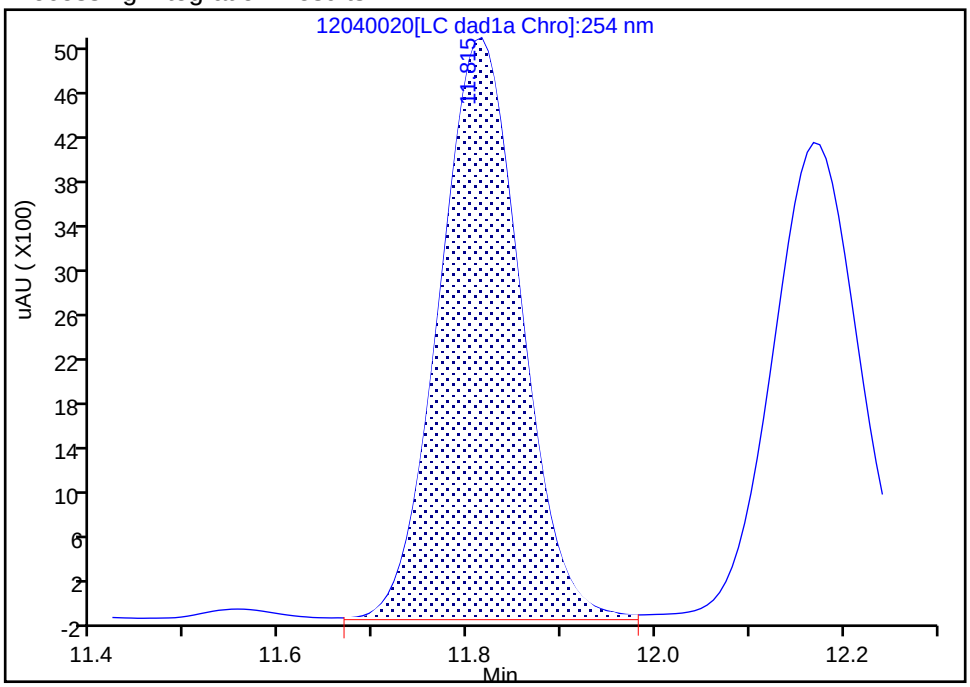
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Injection Date:	04-Dec-2024 20:17:23	Instrument ID:	CHHPLC_X3		
Lims ID:	CCV INT				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	7	Worklist Smp#:	20
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

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

Signal: 1

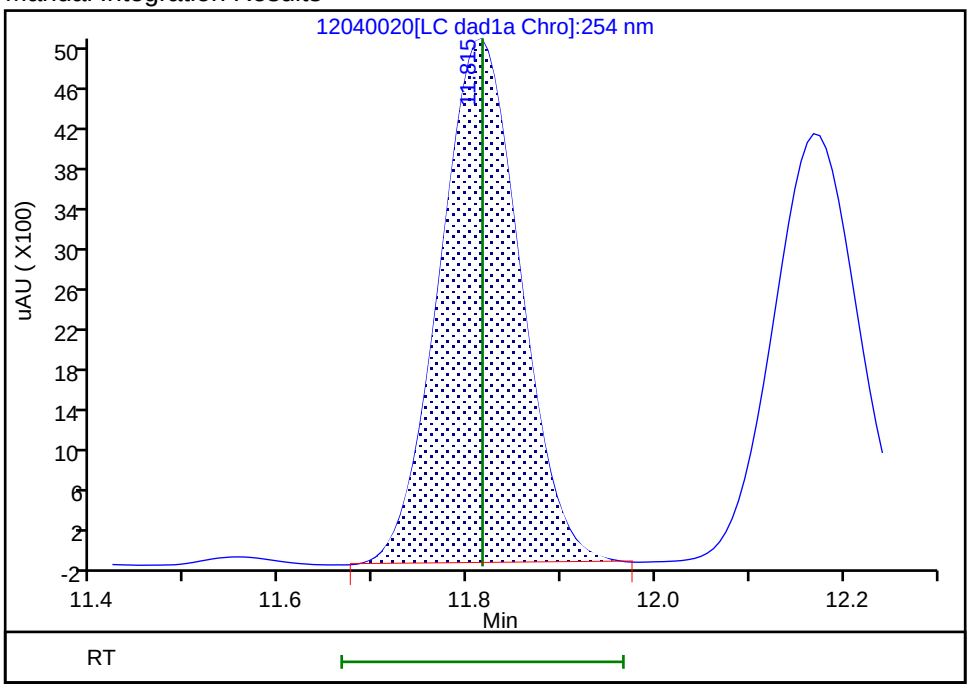
Processing Integration Results

RT: 11.81
Area: 31874
Amount: 0.254040
Amount Units: ug/mL



Manual Integration Results

RT: 11.81
Area: 31179
Amount: 0.248501
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 11:07:39 -07:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

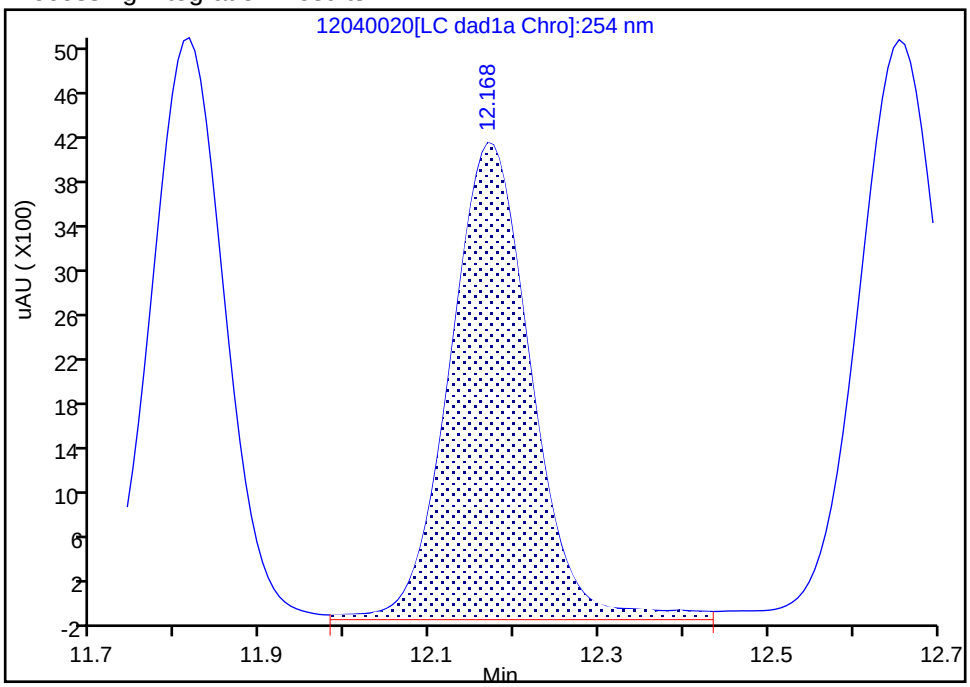
Data File: \\chromfs\denver\chromdata\chhplc_x\20241204-140455.b\12040020.d
Injection Date: 04-Dec-2024 20:17:23 Instrument ID: CHHPLC_X3
Lims ID: CCV INT
Client ID:
Operator ID: JZ ALS Bottle#: 7 Worklist Smp#: 20
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

23 p-Nitrotoluene, CAS: 99-99-0

Signal: 1

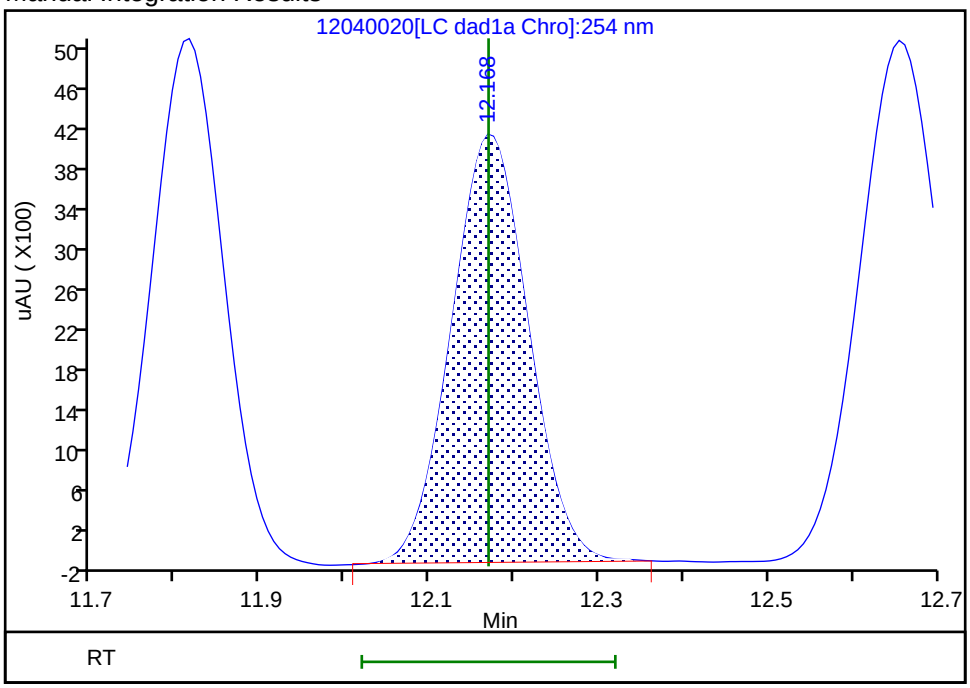
Processing Integration Results

RT: 12.17
Area: 28717
Amount: 0.264660
Amount Units: ug/mL



Manual Integration Results

RT: 12.17
Area: 26900
Amount: 0.247822
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 11:07:42 -07:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

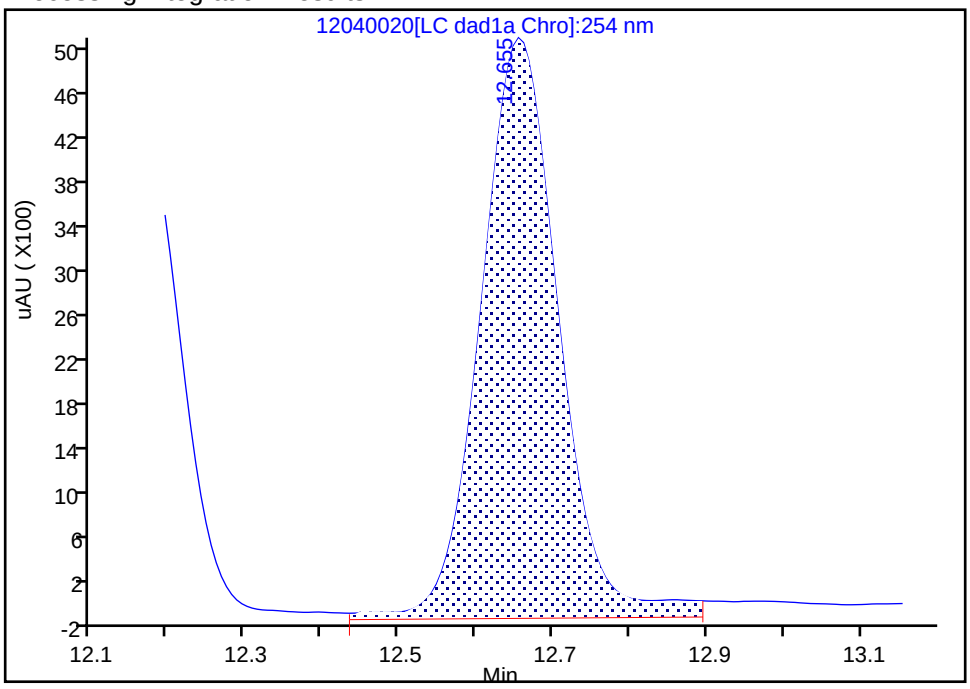
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Injection Date:	04-Dec-2024 20:17:23	Instrument ID:	CHHPLC_X3		
Lims ID:	CCV INT				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	7	Worklist Smp#:	20
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

24 m-Nitrotoluene, CAS: 99-08-1

Signal: 1

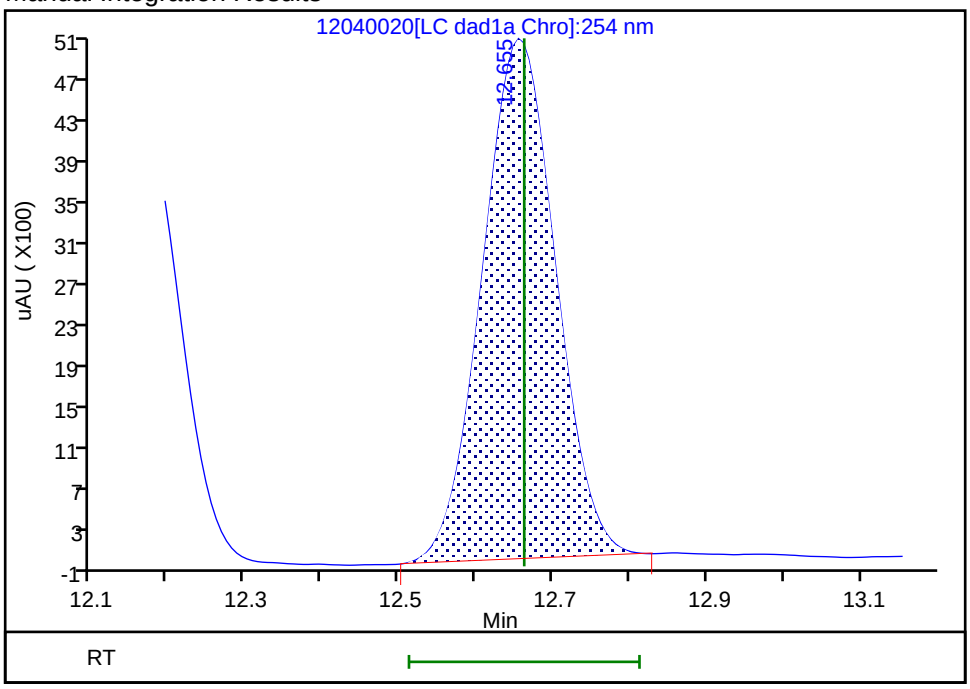
Processing Integration Results

RT: 12.65
Area: 36896
Amount: 0.271213
Amount Units: ug/mL



Manual Integration Results

RT: 12.65
Area: 33859
Amount: 0.248736
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 11:07:44 -07:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-200203-1

SDG No.:

Lab Sample ID: CCV 280-677391/30 | Calibration Date: 12/04/2024 23:56

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: 12040030.D | Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	96653	98536		255	250	1.9	20.0
RDX	Lin2		110196		261	250	4.5	20.0
2,4,6-Trinitrophenol	Ave	75427	82664		274	250	9.6	20.0
1,3,5-Trinitrobenzene	Ave	217350	224788		259	250	3.4	20.0
1,3-Dinitrobenzene	Ave	298232	305160		256	250	2.3	20.0
Nitrobenzene	Ave	195178	193676		248	250	-0.8	20.0
3,5-Dinitroaniline	Lin2		241956		260	250	3.9	20.0
Tetryl	Lin2		171592		251	250	0.5	20.0
Nitroglycerin	Lin2		70009		2720	2500	8.9	20.0
2,4,6-Trinitrotoluene	Ave	217298	228124		262	250	5.0	20.0
4-Amino-2,6-dinitrotoluene	Lin2		152672		261	250	4.5	20.0
2-Amino-4,6-dinitrotoluene	Ave	204531	208776		255	250	2.1	20.0
2,6-Dinitrotoluene	Lin2		148648		264	250	5.4	20.0
2,4-Dinitrotoluene	Ave	291812	299880		257	250	2.8	20.0
o-Nitrotoluene	Ave	125468	124964		249	250	-0.4	20.0
p-Nitrotoluene	Lin2		110356		254	250	1.7	20.0
m-Nitrotoluene	Lin2		133684		245	250	-1.8	20.0
PETN	Ave	72212	75534		2610	2500	4.6	20.0
1,2-Dinitrobenzene (Surr)	Ave	130410	135880		260	250	4.2	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Lab Sample ID: CCV 280-677391/30 Calibration Date: 12/04/2024 23:56

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: 12040030.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.64	6.50	6.80
RDX	7.57	7.43	7.73
2,4,6-Trinitrophenol	7.95	7.80	8.10
1,3,5-Trinitrobenzene	8.53	8.39	8.69
1,3-Dinitrobenzene	9.08	8.94	9.24
Nitrobenzene	9.39	9.25	9.55
3,5-Dinitroaniline	9.59	9.44	9.74
Tetryl	9.70	9.55	9.85
Nitroglycerin	10.14	9.99	10.29
2,4,6-Trinitrotoluene	10.49	10.39	10.59
4-Amino-2,6-dinitrotoluene	10.63	10.52	10.72
2-Amino-4,6-dinitrotoluene	10.85	10.75	10.95
2,6-Dinitrotoluene	10.99	10.89	11.09
2,4-Dinitrotoluene	11.15	11.04	11.24
o-Nitrotoluene	11.82	11.67	11.97
p-Nitrotoluene	12.17	12.02	12.32
m-Nitrotoluene	12.66	12.51	12.81
PETN	13.66	13.52	13.82
1,2-Dinitrobenzene (Surr)	8.43	8.29	8.59

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20241204-140455.b\12040030.D
Lims ID: CCV INT
Client ID:
Sample Type: CCV
Inject. Date: 04-Dec-2024 23:56:47 ALS Bottle#: 7 Worklist Smp#: 30
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\20241204-140455.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 05-Dec-2024 11:14:32 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: CTX1637

First Level Reviewer: LV5D Date: 05-Dec-2024 11:11:03

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
4 HMX	1	6.639	6.649	-0.010	24634	0.2500	0.2549	
8 RDX	1	7.573	7.576	-0.003	27549	0.2500	0.2611	
9 2,4,6-Trinitrophenol	1	7.946	7.949	-0.003	20666	0.2500	0.2740	
$ 10 1,2-Dinitrobenzene	1	8.426	8.436	-0.010	33970	0.2500	0.2605	
11 1,3,5-Trinitrobenzene	1	8.533	8.543	-0.010	56197	0.2500	0.2586	
12 1,3-Dinitrobenzene	1	9.079	9.089	-0.010	76290	0.2500	0.2558	
13 Nitrobenzene	1	9.393	9.402	-0.009	48419	0.2500	0.2481	
14 3,5-Dinitroaniline	1	9.586	9.589	-0.003	60489	0.2500	0.2597	
15 Tetryl	1	9.699	9.702	-0.003	42898	0.2500	0.2511	
16 Nitroglycerin	2	10.139	10.142	-0.003	175022	2.50	2.72	
17 2,4,6-Trinitrotoluene	1	10.486	10.489	-0.003	57031	0.2500	0.2625	
18 4-Amino-2,6-dinitrotoluene	1	10.626	10.622	0.004	38168	0.2500	0.2612	
19 2-Amino-4,6-dinitrotoluene	1	10.853	10.849	0.004	52194	0.2500	0.2552	
20 2,6-Dinitrotoluene	1	10.993	10.989	0.004	37162	0.2500	0.2636	
21 2,4-Dinitrotoluene	1	11.146	11.142	0.004	74970	0.2500	0.2569	
22 o-Nitrotoluene	1	11.819	11.816	0.003	31241	0.2500	0.2490	M
23 p-Nitrotoluene	1	12.173	12.169	0.004	27589	0.2500	0.2542	M
24 m-Nitrotoluene	1	12.659	12.662	-0.003	33421	0.2500	0.2455	M
25 PETN	2	13.659	13.669	-0.010	188834	2.50	2.61	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00083 Amount Added: 25.00 Units: uL

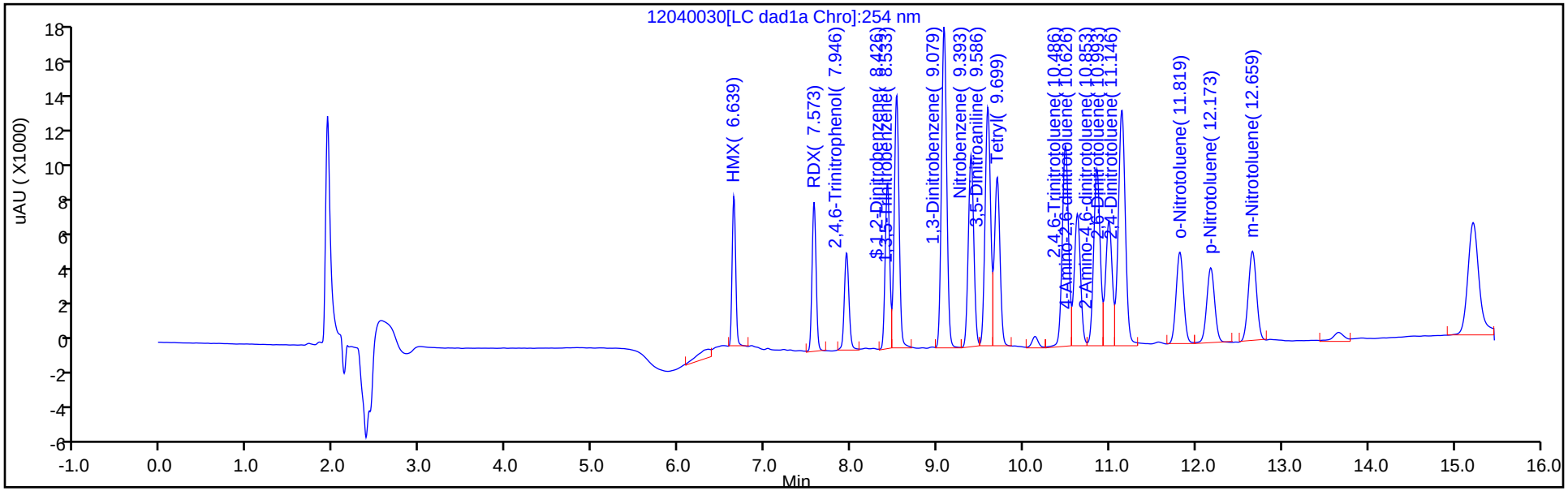
Report Date: 05-Dec-2024 11:14:33 Chrom Revision: 2.3 12-Nov-2024 16:55:22

Eurofins Denver

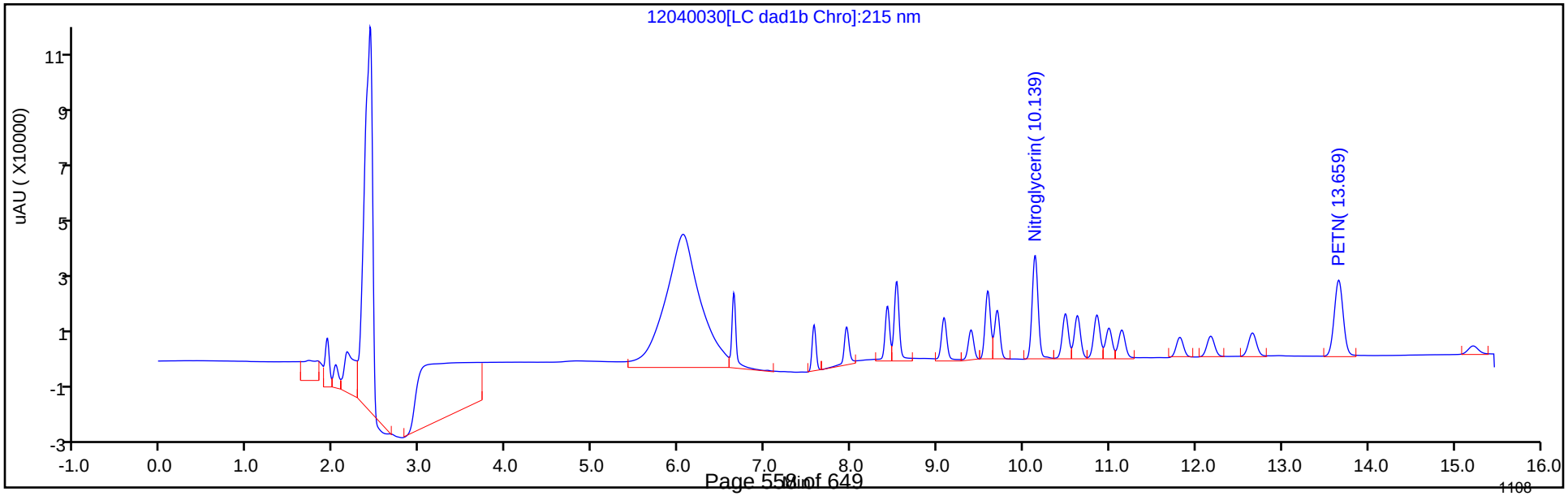
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Injection Date:	04-Dec-2024 23:56:47	Instrument ID:	CHHPLC_X3	Operator ID:	JZ
Lims ID:	CCV INT			Worklist Smp#:	30
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8330_X3	Limit Group:	GCSV - 8330		

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



1108

Manual Integration/User Assign Peak Report

Eurofins Denver

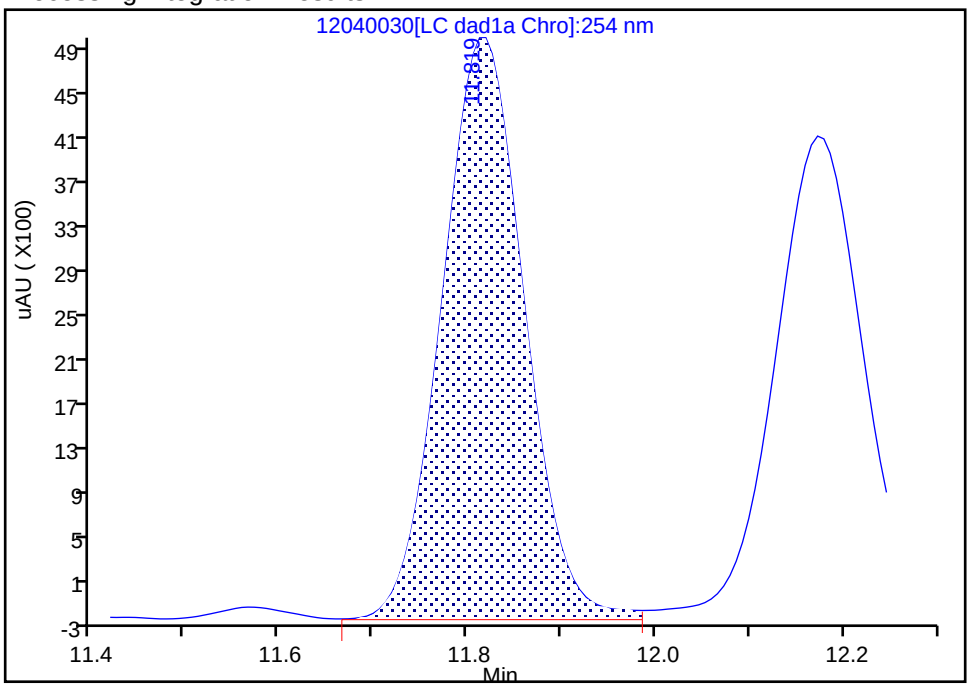
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Injection Date:	04-Dec-2024 23:56:47	Instrument ID:	CHHPLC_X3		
Lims ID:	CCV INT				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	7	Worklist Smp#:	30
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

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

Signal: 1

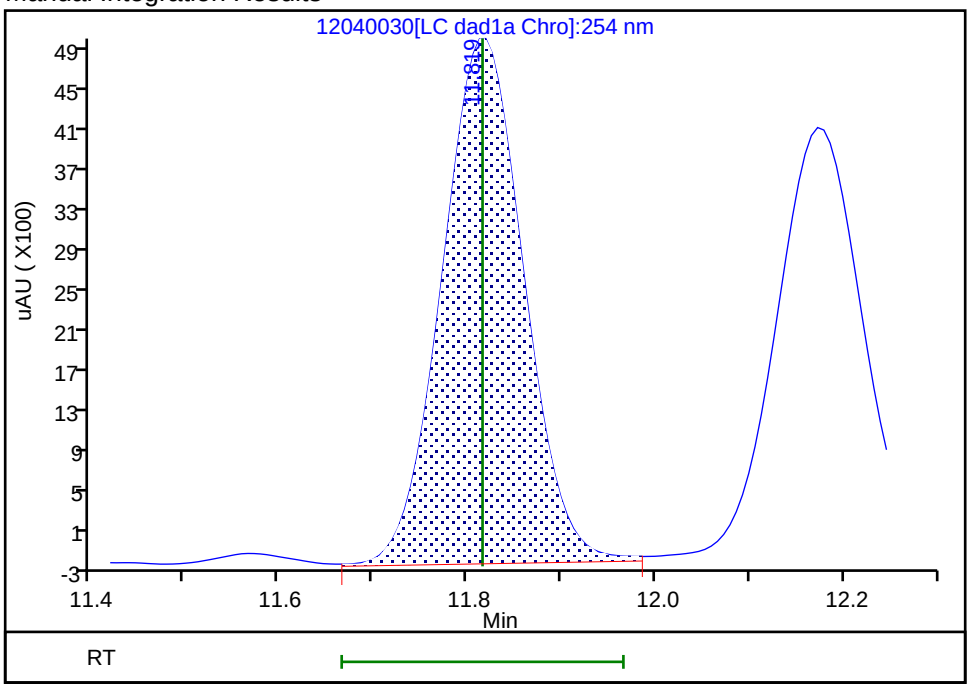
Processing Integration Results

RT: 11.82
Area: 31663
Amount: 0.252359
Amount Units: ug/mL



Manual Integration Results

RT: 11.82
Area: 31241
Amount: 0.248995
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 11:10:57 -07:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

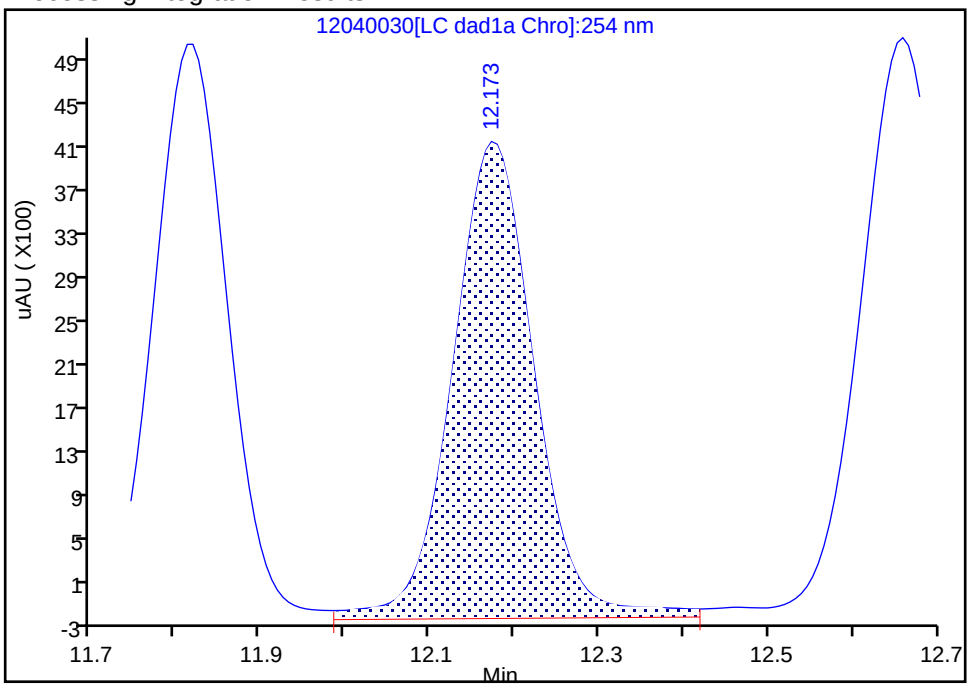
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Injection Date: 04-Dec-2024 23:56:47 Instrument ID: CHHPLC_X3
Lims ID: CCV INT
Client ID:
Operator ID: JZ ALS Bottle#: 7 Worklist Smp#: 30
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

23 p-Nitrotoluene, CAS: 99-99-0

Signal: 1

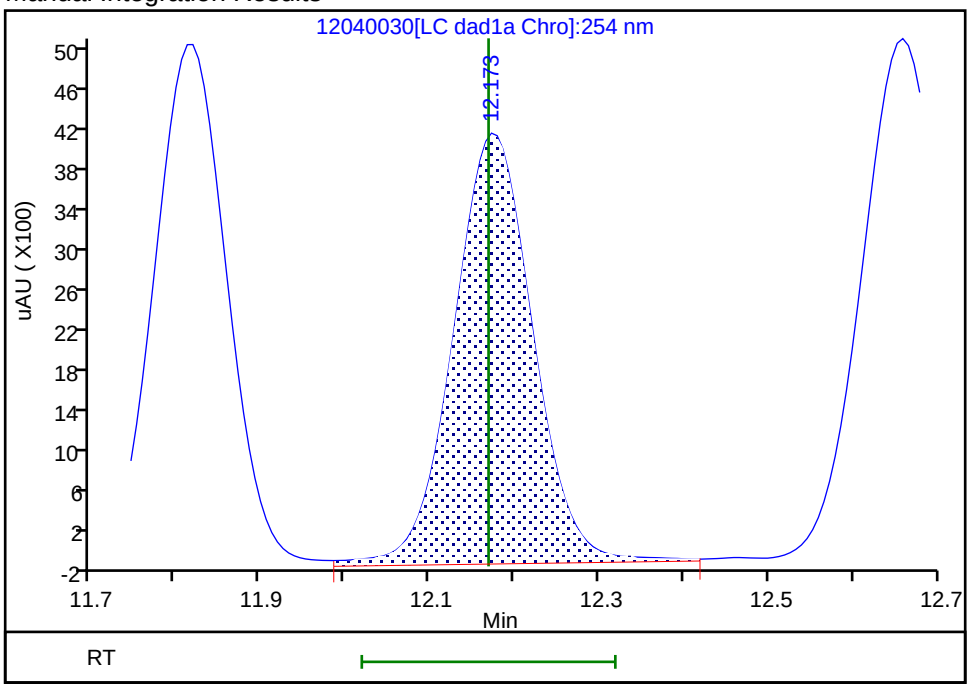
Processing Integration Results

RT: 12.17
Area: 29110
Amount: 0.268302
Amount Units: ug/mL



Manual Integration Results

RT: 12.17
Area: 27589
Amount: 0.254207
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 11:10:57 -07:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Eurofins Denver

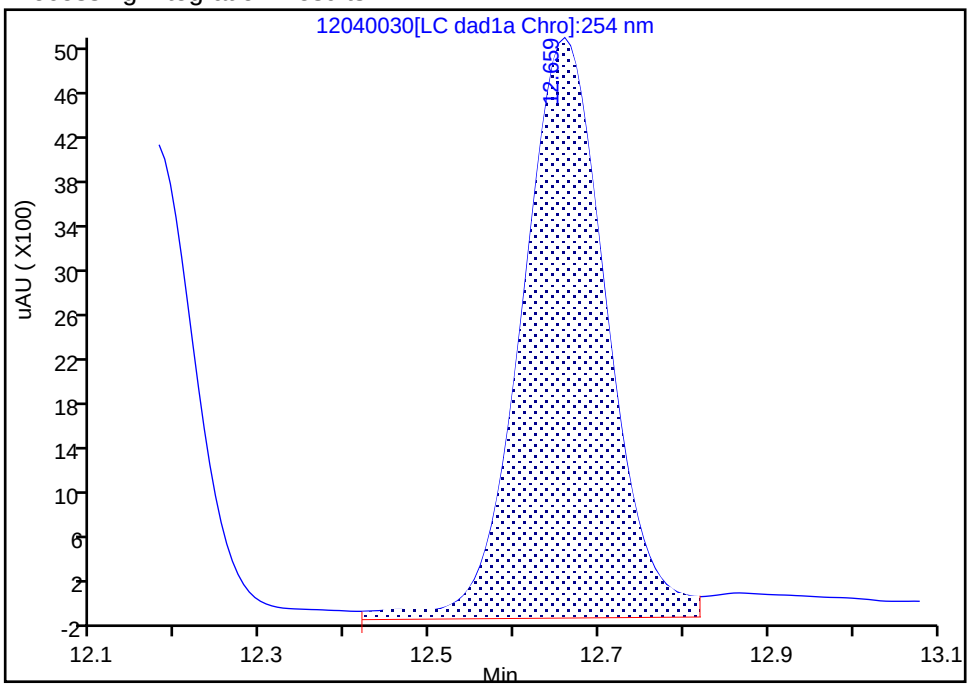
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241204-140455.b\12040030.d				
Injection Date:	04-Dec-2024 23:56:47	Instrument ID:	CHHPLC_X3		
Lims ID:	CCV INT				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	7	Worklist Smp#:	30
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

24 m-Nitrotoluene, CAS: 99-08-1

Signal: 1

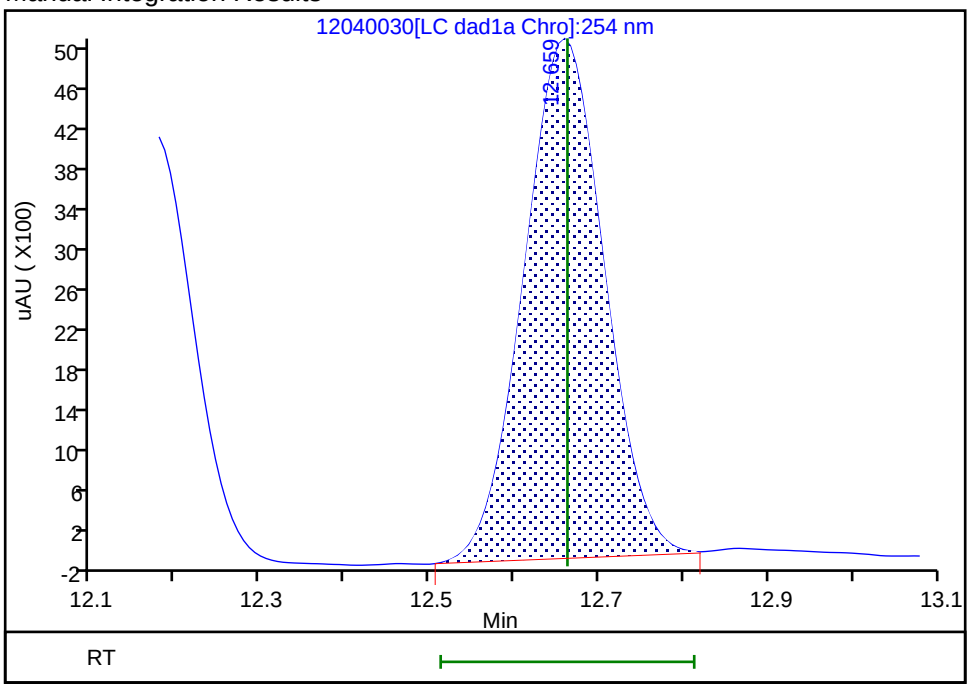
Processing Integration Results

RT: 12.66
Area: 36319
Amount: 0.266942
Amount Units: ug/mL



Manual Integration Results

RT: 12.66
Area: 33421
Amount: 0.245495
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 11:11:01 -07:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-200203-1

SDG No.:

Lab Sample ID: CCV 280-677520/7 | Calibration Date: 12/05/2024 16:40

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: 12050007.D | Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	96653	93680		242	250	-3.1	20.0
RDX	Lin2		109596		260	250	3.9	20.0
2,4,6-Trinitrophenol	Ave	75427	79332		263	250	5.2	20.0
1,3,5-Trinitrobenzene	Ave	217350	222024		255	250	2.2	20.0
1,3-Dinitrobenzene	Ave	298232	305524		256	250	2.4	20.0
Nitrobenzene	Ave	195178	197936		254	250	1.4	20.0
3,5-Dinitroaniline	Lin2		238724		256	250	2.5	20.0
Tetryl	Lin2		173692		254	250	1.7	20.0
Nitroglycerin	Lin2		68744		2670	2500	6.9	20.0
2,4,6-Trinitrotoluene	Ave	217298	221020		254	250	1.7	20.0
4-Amino-2,6-dinitrotoluene	Lin2		149328		255	250	2.2	20.0
2-Amino-4,6-dinitrotoluene	Ave	204531	208596		255	250	2.0	20.0
2,6-Dinitrotoluene	Lin2		144104		255	250	2.2	20.0
2,4-Dinitrotoluene	Ave	291812	293712		252	250	0.7	20.0
o-Nitrotoluene	Ave	125468	125940		251	250	0.4	20.0
p-Nitrotoluene	Lin2		107656		248	250	-0.8	20.0
m-Nitrotoluene	Lin2		136100		250	250	-0.0	20.0
PETN	Ave	72212	73649		2550	2500	2.0	20.0
1,2-Dinitrobenzene (Surr)	Ave	130410	134776		258	250	3.3	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Lab Sample ID: CCV 280-677520/7 Calibration Date: 12/05/2024 16:40

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: 12050007.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.64	6.49	6.79
RDX	7.57	7.42	7.72
2,4,6-Trinitrophenol	7.93	7.78	8.08
1,3,5-Trinitrobenzene	8.53	8.38	8.68
1,3-Dinitrobenzene	9.08	8.93	9.23
Nitrobenzene	9.38	9.23	9.53
3,5-Dinitroaniline	9.57	9.42	9.72
Tetryl	9.68	9.53	9.83
Nitroglycerin	10.11	9.96	10.26
2,4,6-Trinitrotoluene	10.46	10.36	10.56
4-Amino-2,6-dinitrotoluene	10.58	10.48	10.68
2-Amino-4,6-dinitrotoluene	10.81	10.71	10.91
2,6-Dinitrotoluene	10.96	10.86	11.06
2,4-Dinitrotoluene	11.11	11.01	11.21
o-Nitrotoluene	11.78	11.63	11.93
p-Nitrotoluene	12.13	11.98	12.28
m-Nitrotoluene	12.61	12.46	12.76
PETN	13.60	13.45	13.75
1,2-Dinitrobenzene (Surr)	8.42	8.27	8.57

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20241205-140494.b\12050007.D
Lims ID: CCV INT
Client ID:
Sample Type: CCV
Inject. Date: 05-Dec-2024 16:40:57 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\20241205-140494.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 06-Dec-2024 11:32:02 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: CTX1606

First Level Reviewer: LV5D Date: 05-Dec-2024 17:55:40

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
4 HMX	1	6.642	6.642	0.000	23420	0.2500	0.2423	M
8 RDX	1	7.568	7.568	0.000	27399	0.2500	0.2597	
9 2,4,6-Trinitrophenol	1	7.928	7.928	0.000	19833	0.2500	0.2629	
$ 10 1,2-Dinitrobenzene	1	8.422	8.422	0.000	33694	0.2500	0.2584	
11 1,3,5-Trinitrobenzene	1	8.528	8.528	0.000	55506	0.2500	0.2554	
12 1,3-Dinitrobenzene	1	9.075	9.075	0.000	76381	0.2500	0.2561	
13 Nitrobenzene	1	9.382	9.382	0.000	49484	0.2500	0.2535	
14 3,5-Dinitroaniline	1	9.568	9.568	0.000	59681	0.2500	0.2563	
15 Tetryl	1	9.675	9.675	0.000	43423	0.2500	0.2542	
16 Nitroglycerin	2	10.108	10.108	0.000	171859	2.50	2.67	
17 2,4,6-Trinitrotoluene	1	10.462	10.462	0.000	55255	0.2500	0.2543	M
18 4-Amino-2,6-dinitrotoluene	1	10.582	10.582	0.000	37332	0.2500	0.2554	M
19 2-Amino-4,6-dinitrotoluene	1	10.808	10.808	0.000	52149	0.2500	0.2550	M
20 2,6-Dinitrotoluene	1	10.955	10.955	0.000	36026	0.2500	0.2555	M
21 2,4-Dinitrotoluene	1	11.108	11.108	0.000	73428	0.2500	0.2516	M
22 o-Nitrotoluene	1	11.775	11.775	0.000	31485	0.2500	0.2509	M
23 p-Nitrotoluene	1	12.128	12.128	0.000	26914	0.2500	0.2480	M
24 m-Nitrotoluene	1	12.608	12.608	0.000	34025	0.2500	0.2500	M
25 PETN	2	13.595	13.595	0.000	184122	2.50	2.55	M

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00083 Amount Added: 25.00 Units: uL

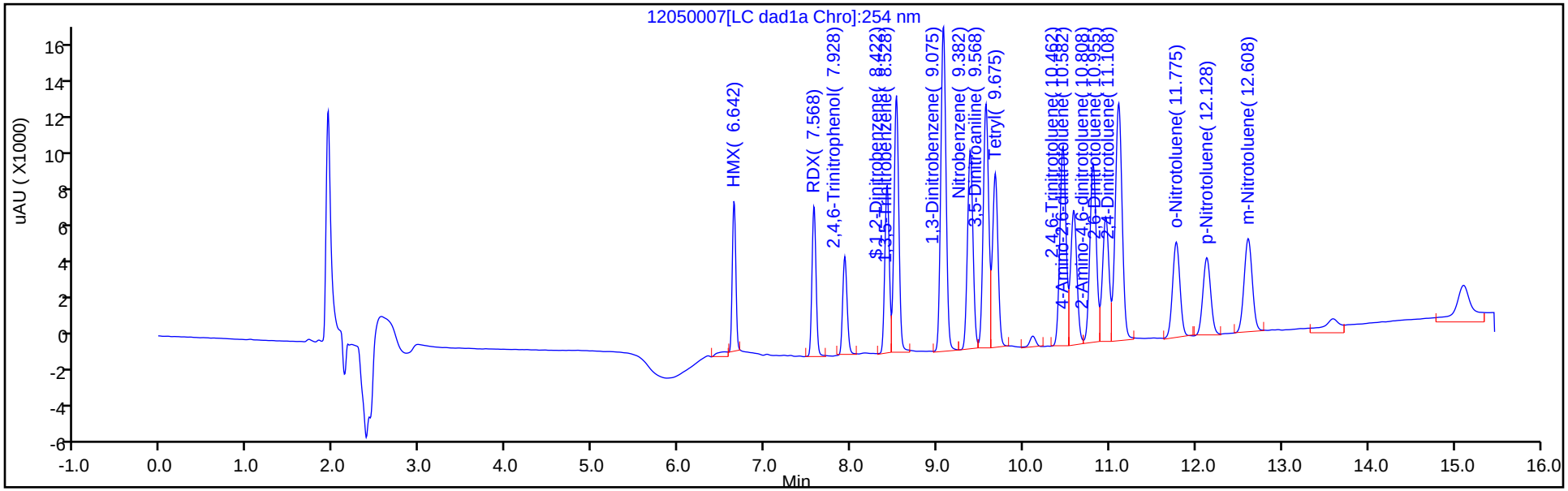
Report Date: 06-Dec-2024 11:32:02 Chrom Revision: 2.3 12-Nov-2024 16:55:22

Eurofins Denver

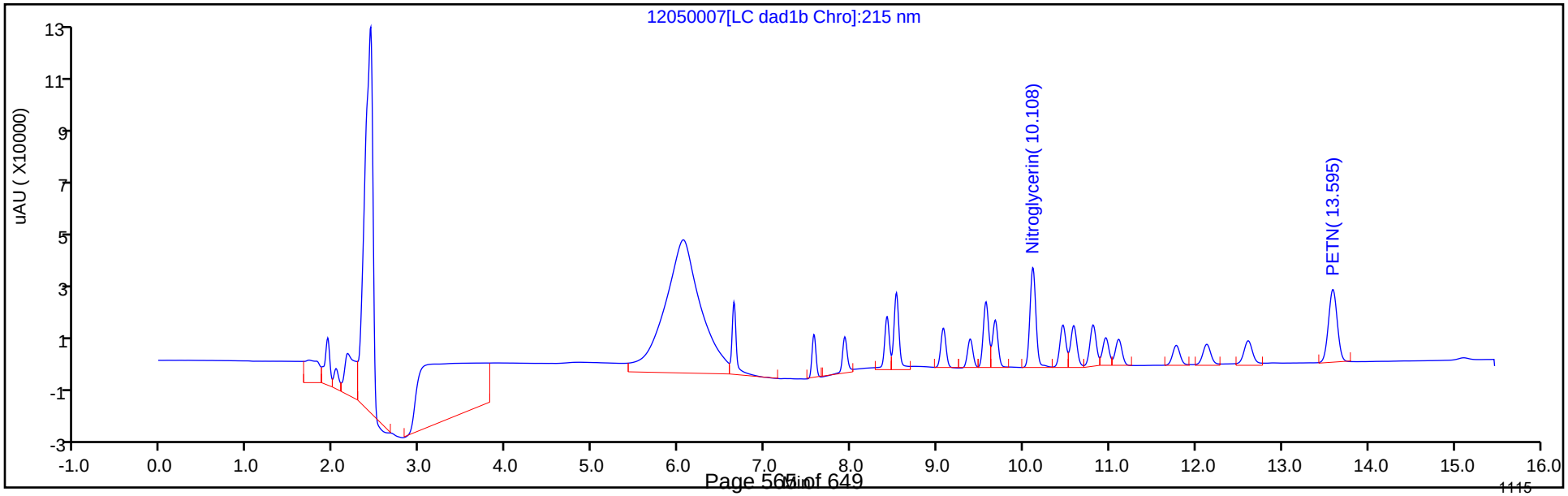
Data File: \\chromfs\denver\chromdata\chhplc_x\20241205-140494.b\12050007.d

Injection Date:	05-Dec-2024 16:40:57	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



1115

Manual Integration/User Assign Peak Report

Eurofins Denver

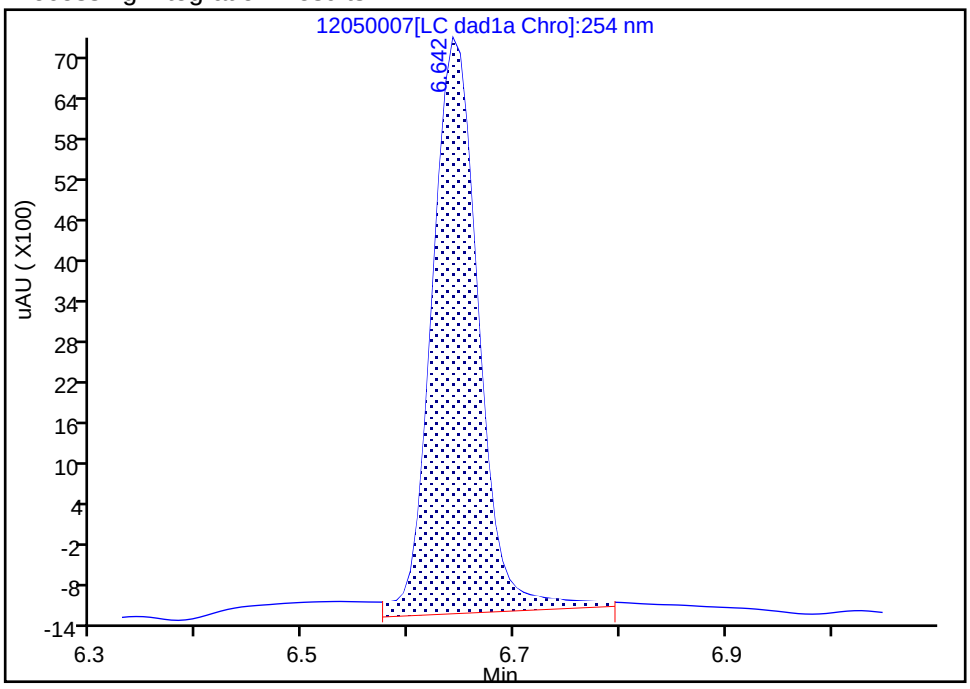
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Injection Date:	05-Dec-2024 16:40:57	Instrument ID:	CHHPLC_X3		
Lims ID:	CCV INT				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	7	Worklist Smp#:	7
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

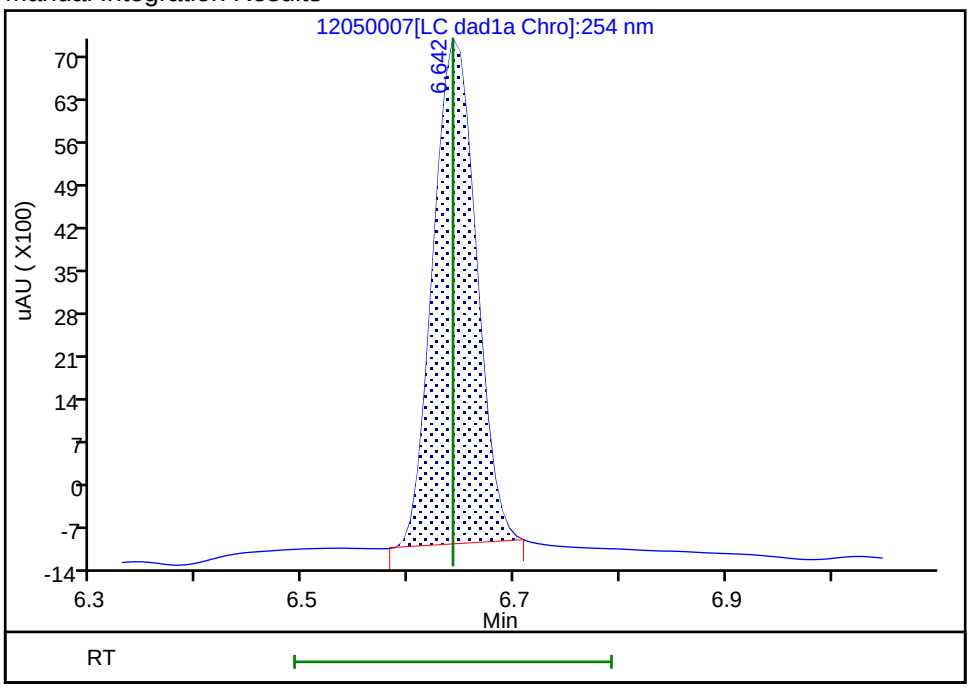
Processing Integration Results

RT: 6.64
Area: 26047
Amount: 0.269490
Amount Units: ug/mL



Manual Integration Results

RT: 6.64
Area: 23420
Amount: 0.242310
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 17:55:17 -07:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins Denver

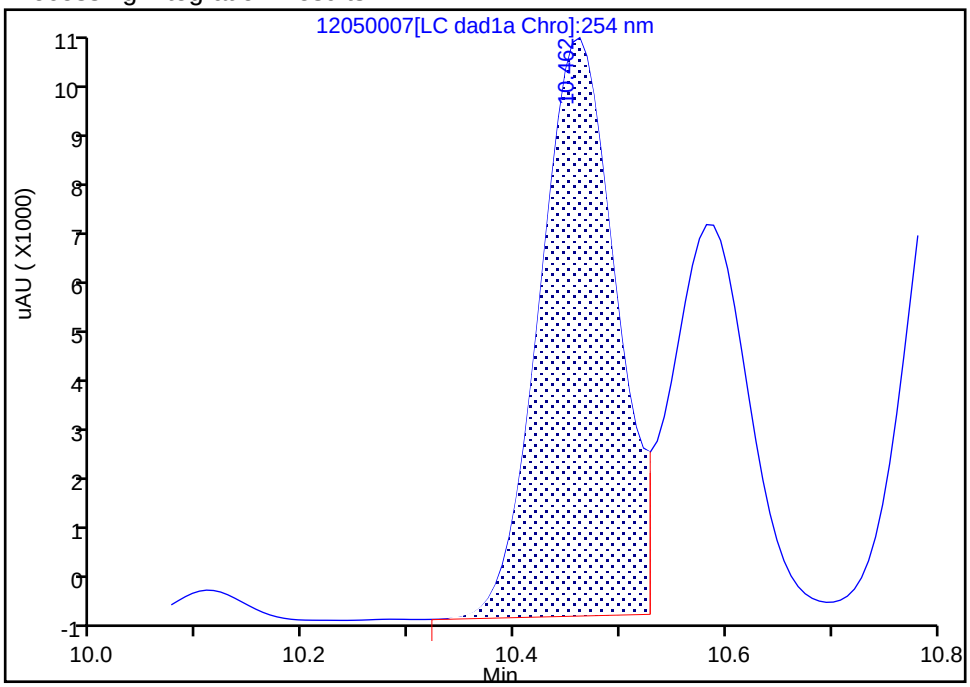
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Injection Date:	05-Dec-2024 16:40:57	Instrument ID:	CHHPLC_X3		
Lims ID:	CCV INT				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	7	Worklist Smp#:	7
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

17 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

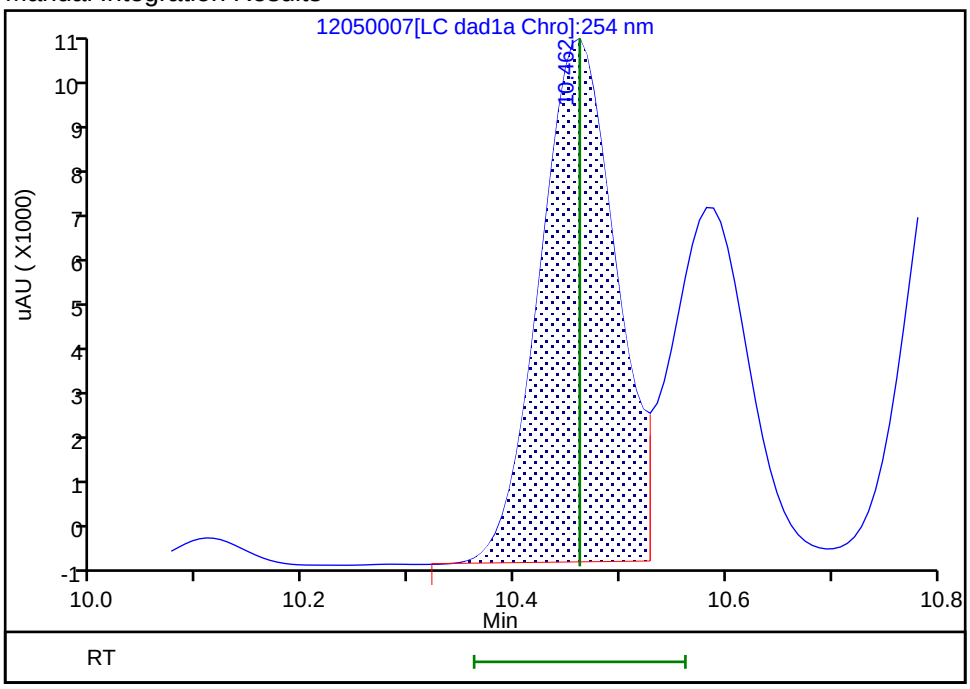
Processing Integration Results

RT: 10.46
Area: 55106
Amount: 0.253596
Amount Units: ug/mL



Manual Integration Results

RT: 10.46
Area: 55255
Amount: 0.254282
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 17:55:23 -07:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Eurofins Denver

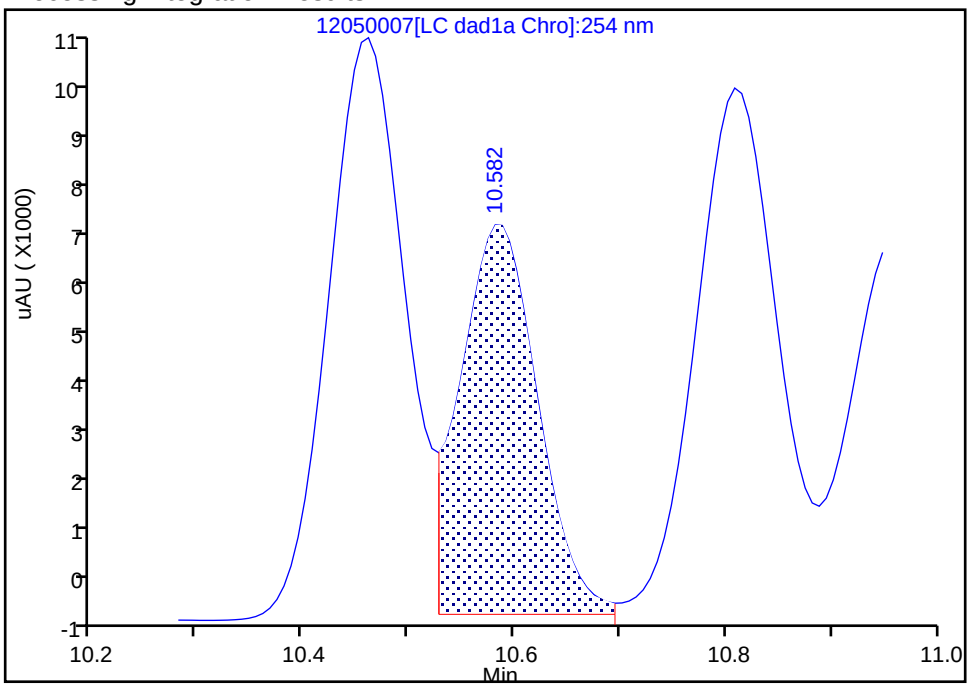
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Injection Date: 05-Dec-2024 16:40:57 Instrument ID: CHHPLC_X3
Lims ID: CCV INT
Client ID:
Operator ID: JZ ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

18 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

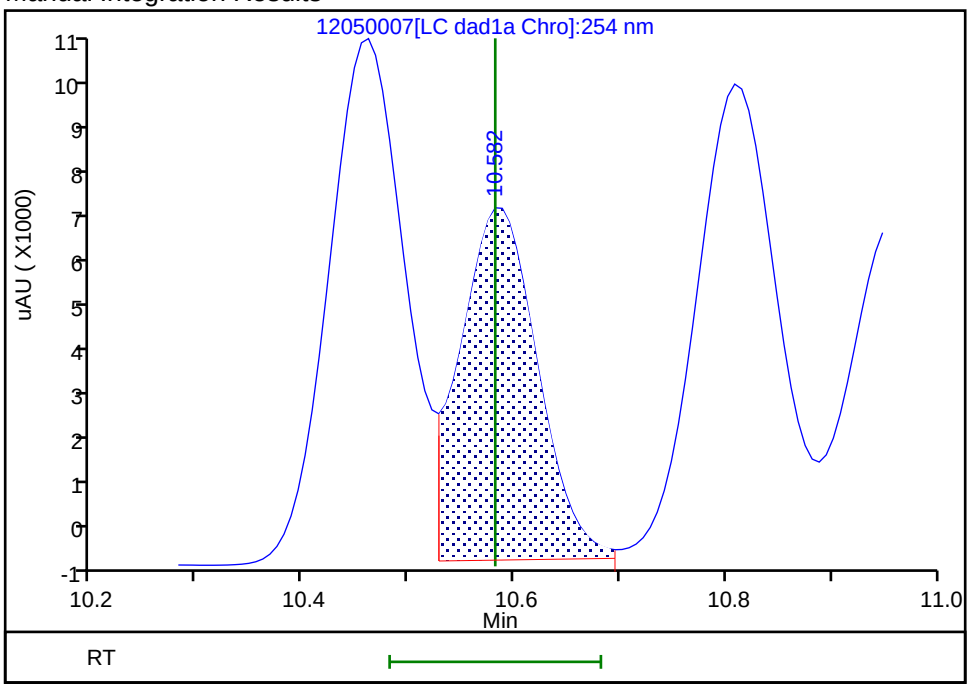
Processing Integration Results

RT: 10.58
Area: 37452
Amount: 0.256240
Amount Units: ug/mL



Manual Integration Results

RT: 10.58
Area: 37332
Amount: 0.255405
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 17:55:23 -07:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

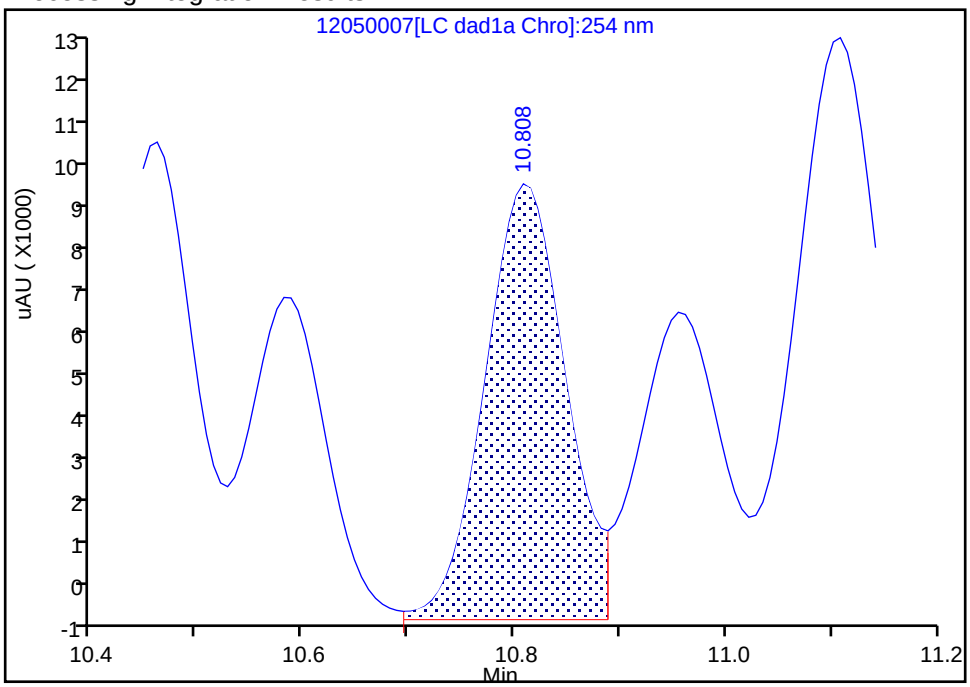
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Injection Date:	05-Dec-2024 16:40:57	Instrument ID:	CHHPLC_X3		
Lims ID:	CCV INT				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	7	Worklist Smp#:	7
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

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

Signal: 1

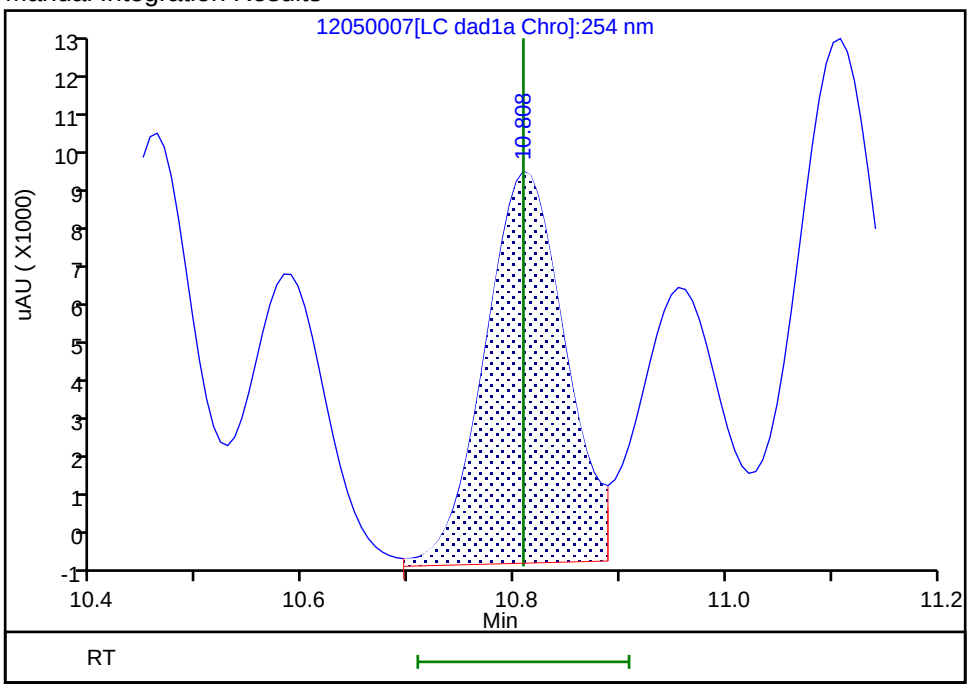
Processing Integration Results

RT: 10.81
Area: 52857
Amount: 0.258430
Amount Units: ug/mL



Manual Integration Results

RT: 10.81
Area: 52149
Amount: 0.254968
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 17:55:23 -07:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

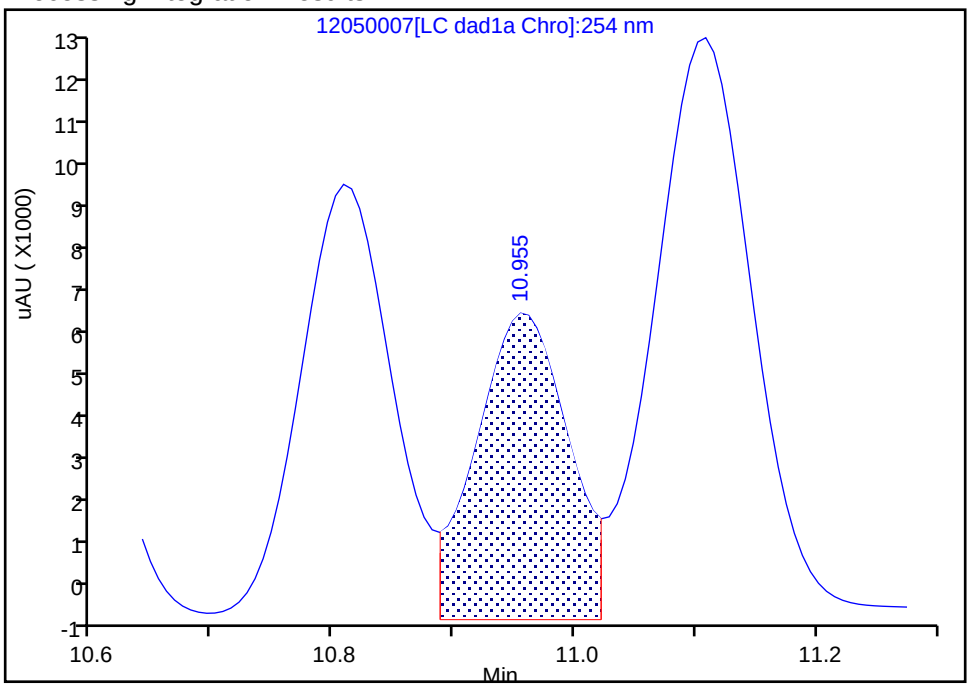
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Injection Date:	05-Dec-2024 16:40:57	Instrument ID:	CHHPLC_X3		
Lims ID:	CCV INT				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	7	Worklist Smp#:	7
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

20 2,6-Dinitrotoluene, CAS: 606-20-2

Signal: 1

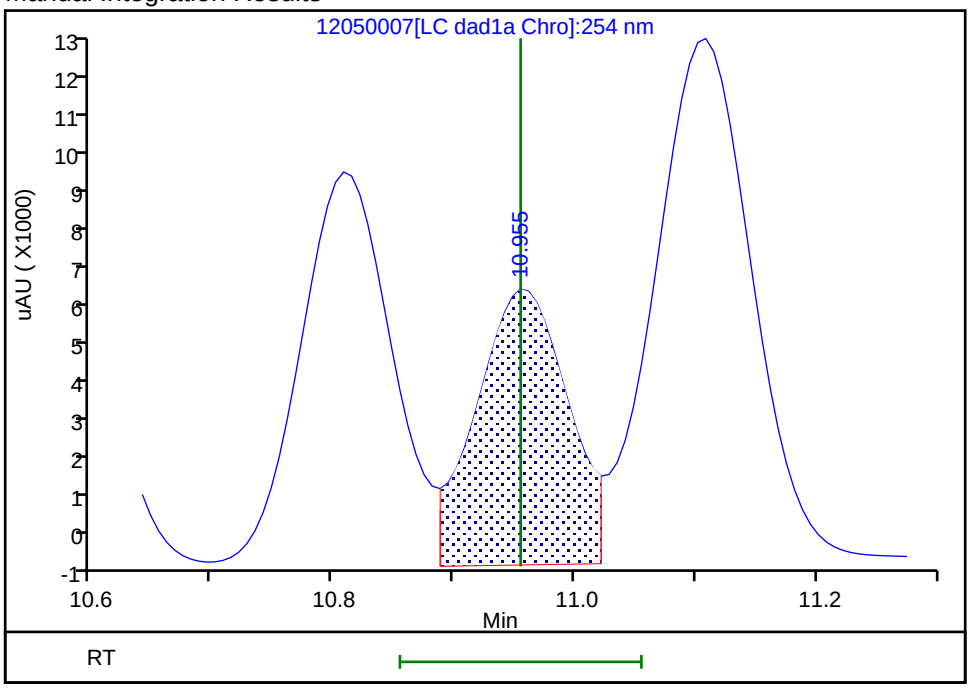
Processing Integration Results

RT: 10.95
Area: 36850
Amount: 0.261346
Amount Units: ug/mL



Manual Integration Results

RT: 10.95
Area: 36026
Amount: 0.255472
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 17:55:23 -07:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Eurofins Denver

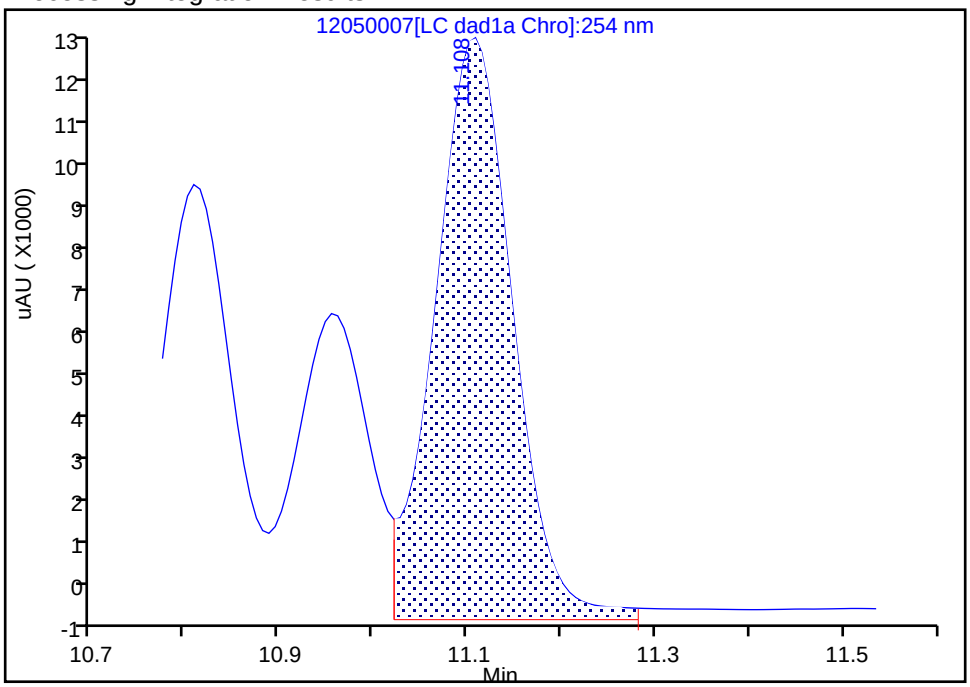
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Injection Date:	05-Dec-2024 16:40:57	Instrument ID:	CHHPLC_X3		
Lims ID:	CCV INT				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	7	Worklist Smp#:	7
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

21 2,4-Dinitrotoluene, CAS: 121-14-2

Signal: 1

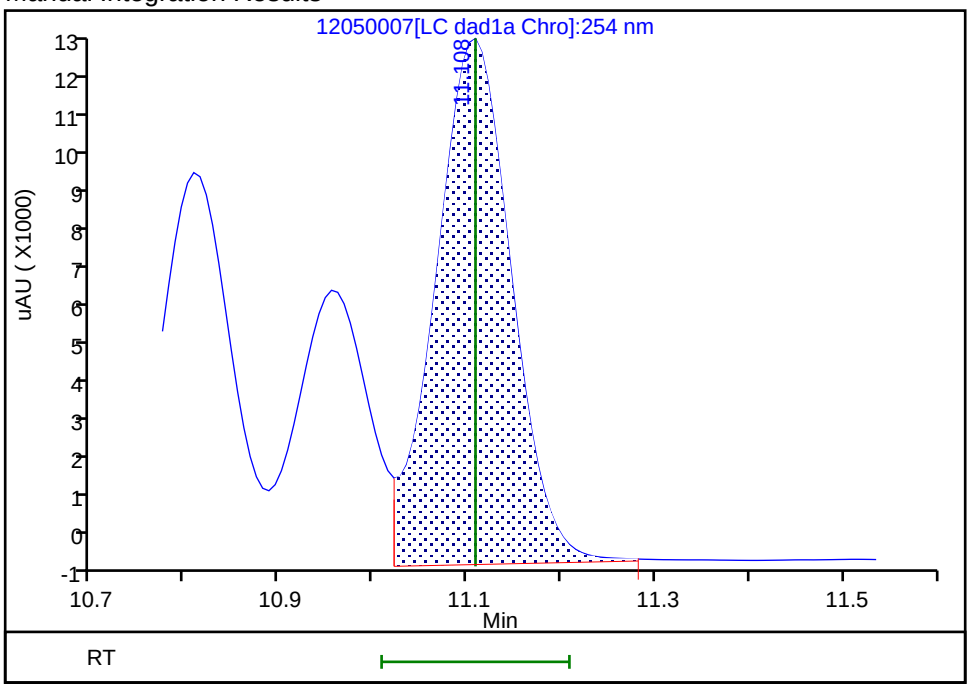
Processing Integration Results

RT: 11.11
Area: 76143
Amount: 0.260931
Amount Units: ug/mL



Manual Integration Results

RT: 11.11
Area: 73428
Amount: 0.251628
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 17:55:23 -07:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Eurofins Denver

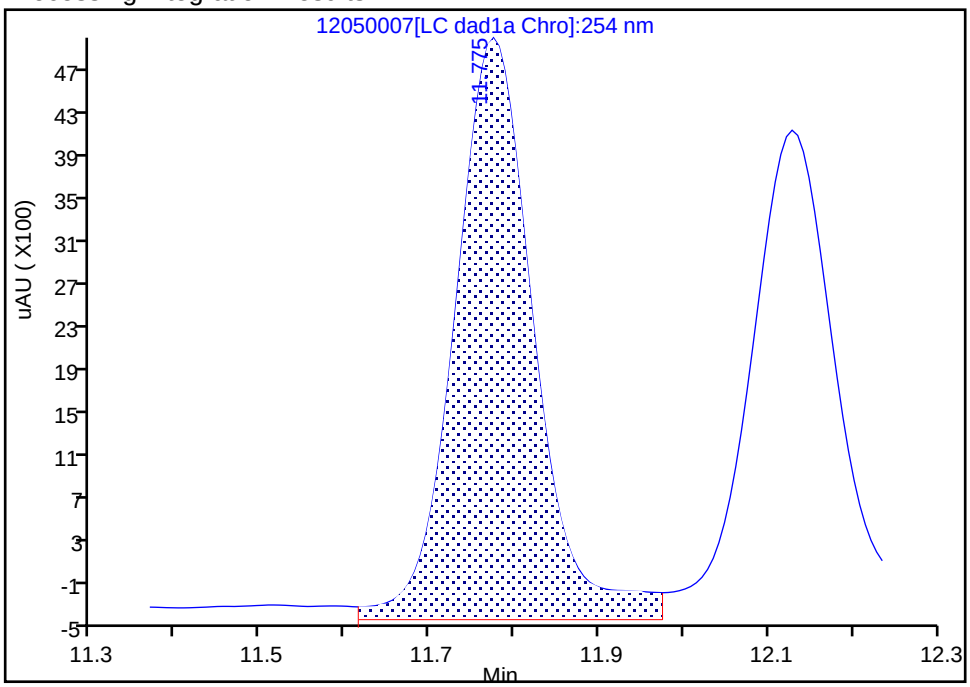
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Injection Date:	05-Dec-2024 16:40:57	Instrument ID:	CHHPLC_X3		
Lims ID:	CCV INT				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	7	Worklist Smp#:	7
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

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

Signal: 1

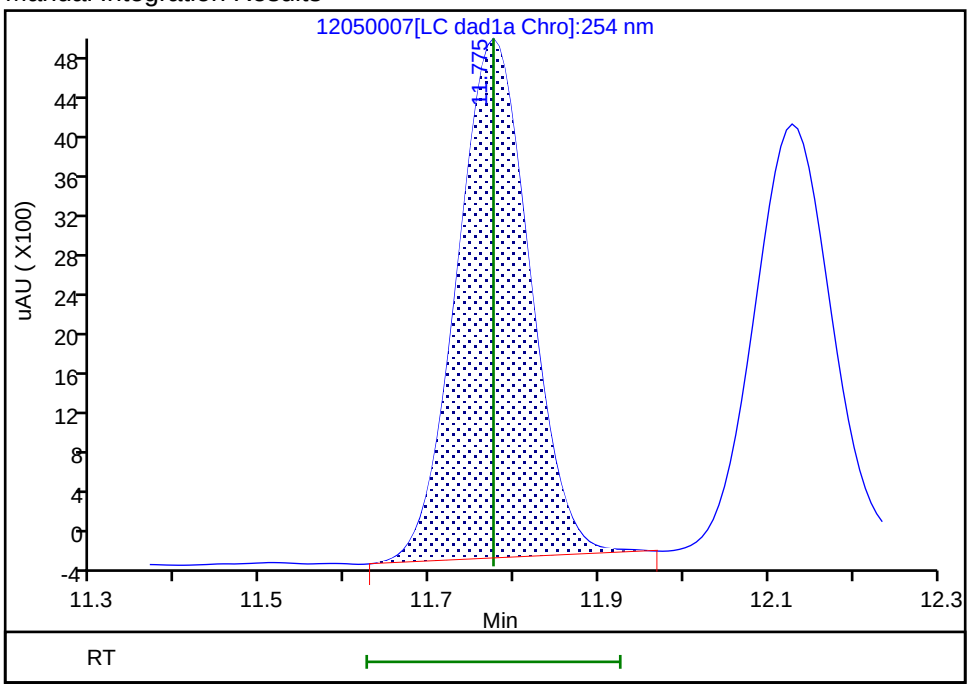
Processing Integration Results

RT: 11.77
Area: 35689
Amount: 0.284446
Amount Units: ug/mL



Manual Integration Results

RT: 11.77
Area: 31485
Amount: 0.250940
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 17:55:36 -07:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins Denver

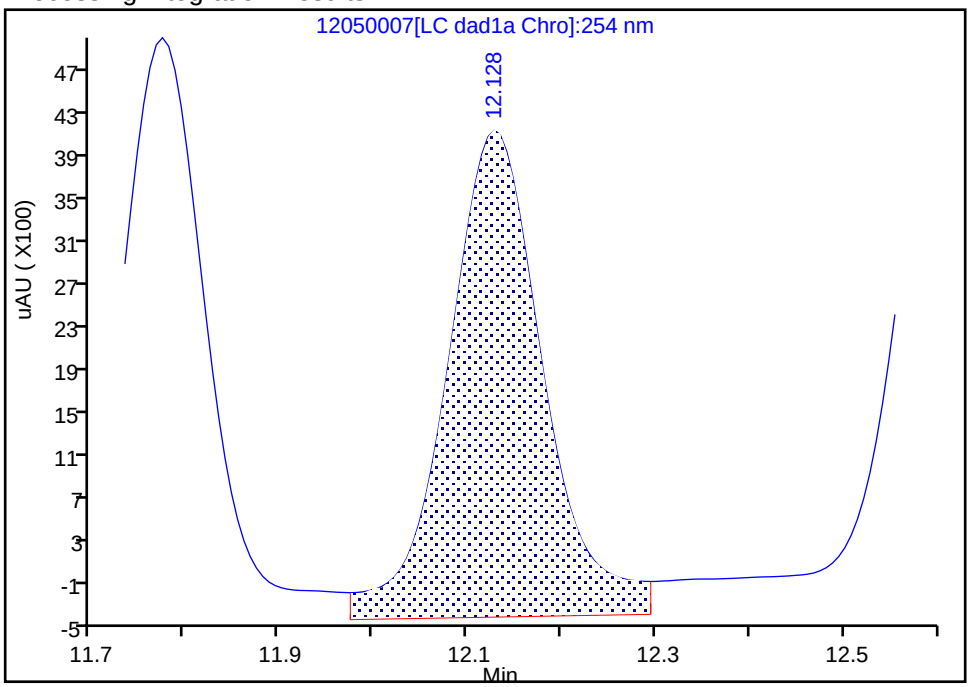
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Lims ID:	CCV INT				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	7	Worklist Smp#:	7
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

23 p-Nitrotoluene, CAS: 99-99-0

Signal: 1

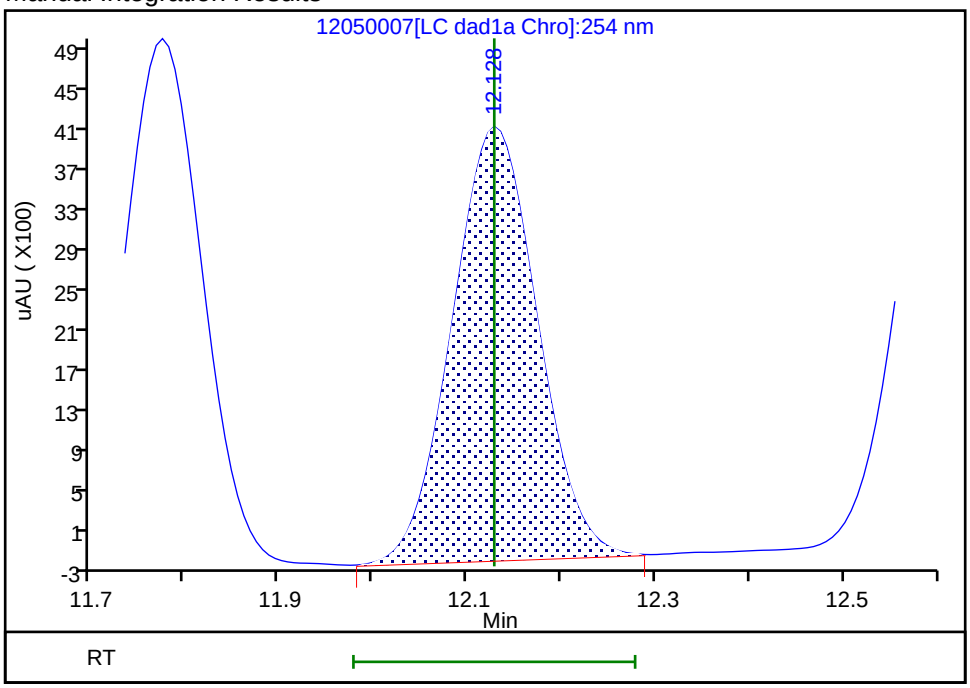
Processing Integration Results

RT: 12.13
Area: 32414
Amount: 0.298920
Amount Units: ug/mL



Manual Integration Results

RT: 12.13
Area: 26914
Amount: 0.247952
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 17:55:34 -07:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

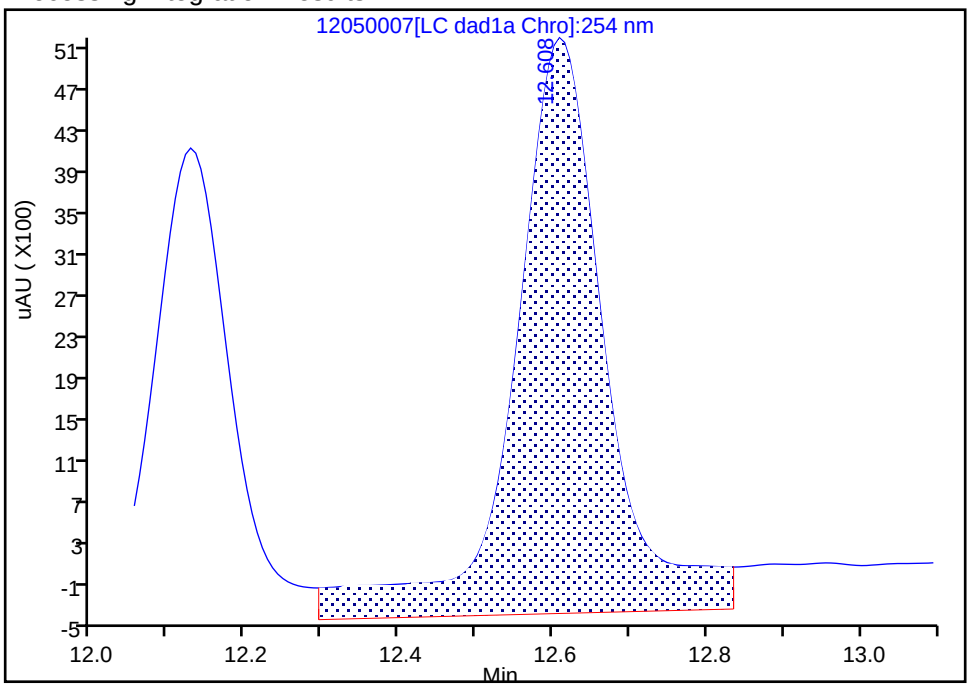
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Injection Date:	05-Dec-2024 16:40:57	Instrument ID:	CHHPLC_X3		
Lims ID:	CCV INT				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	7	Worklist Smp#:	7
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

24 m-Nitrotoluene, CAS: 99-08-1

Signal: 1

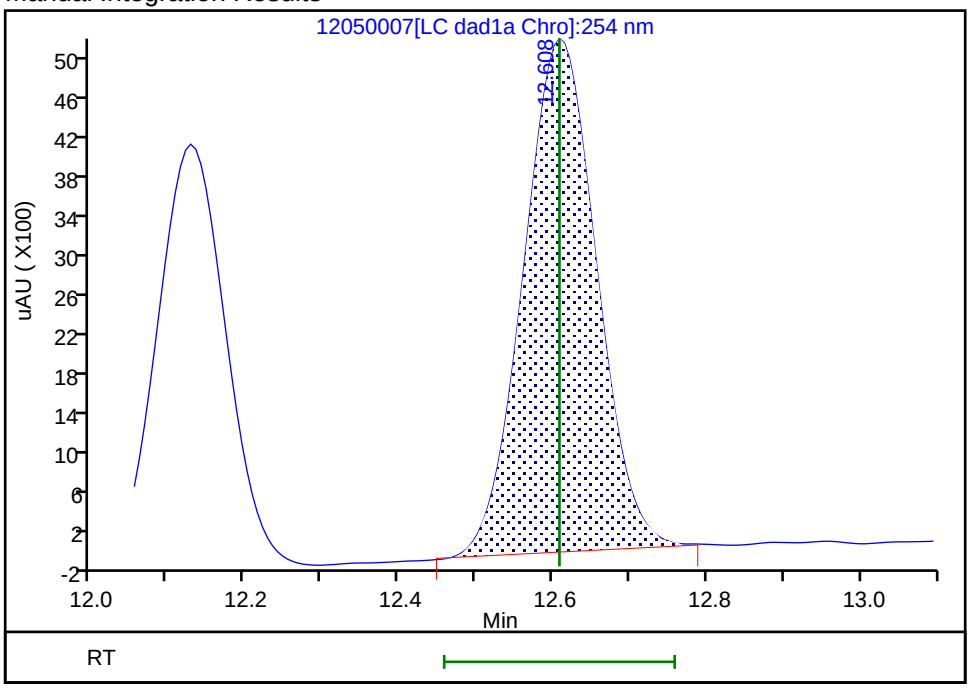
Processing Integration Results

RT: 12.61
Area: 46070
Amount: 0.339108
Amount Units: ug/mL



Manual Integration Results

RT: 12.61
Area: 34025
Amount: 0.249965
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 17:55:31 -07:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

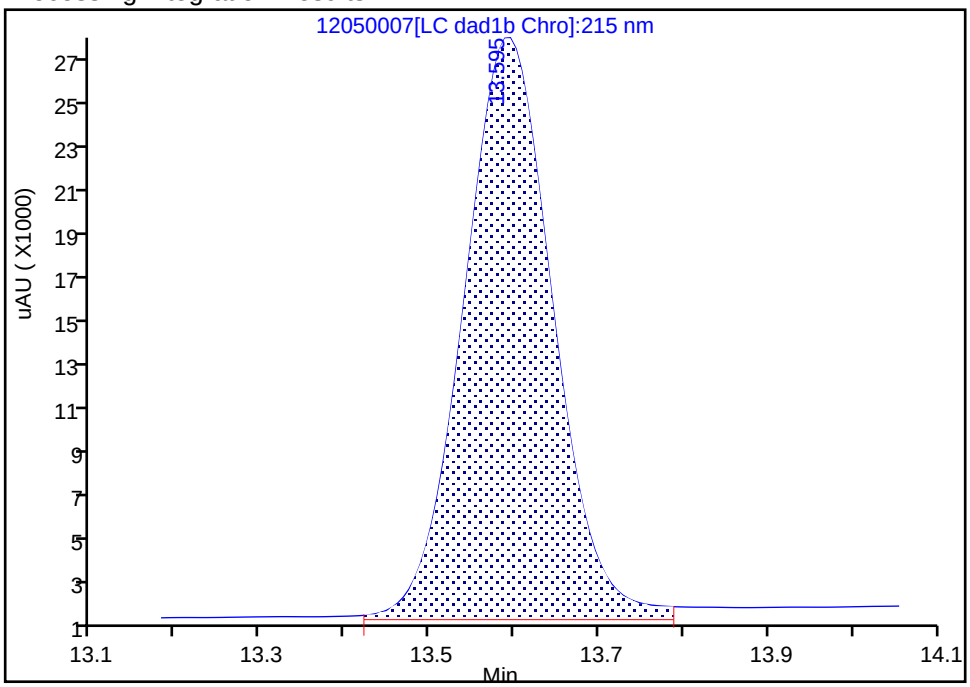
Data File: \\chromfs\denver\chromdata\chhplc_x\20241205-140494.b\12050007.d
Injection Date: 05-Dec-2024 16:40:57 Instrument ID: CHHPLC_X3
Lims ID: CCV INT
Client ID:
Operator ID: JZ ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1C, 215 nm

25 PETN, CAS: 78-11-5

Signal: 1

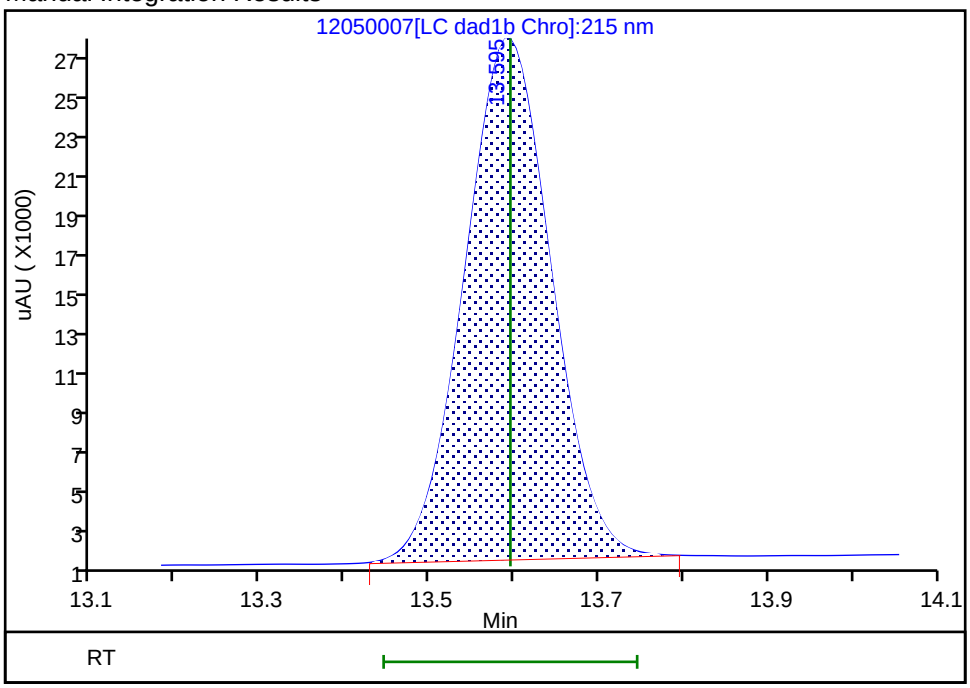
Processing Integration Results

RT: 13.59
Area: 193434
Amount: 2.678684
Amount Units: ug/mL



Manual Integration Results

RT: 13.59
Area: 184122
Amount: 2.549731
Amount Units: ug/mL



Reviewer: LV5D, 06-Dec-2024 11:28:43 -07:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-200203-1

SDG No.:

Lab Sample ID: CCV 280-677520/12 | Calibration Date: 12/05/2024 17:24

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: 12050012.D | Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	96653	94388		244	250	-2.3	20.0
RDX	Lin2		109180		259	250	3.5	20.0
2,4,6-Trinitrophenol	Ave	75427	79240		263	250	5.1	20.0
1,3,5-Trinitrobenzene	Ave	217350	221248		254	250	1.8	20.0
1,3-Dinitrobenzene	Ave	298232	305960		256	250	2.6	20.0
Nitrobenzene	Ave	195178	197780		253	250	1.3	20.0
3,5-Dinitroaniline	Lin2		238424		256	250	2.4	20.0
Tetryl	Lin2		172148		252	250	0.8	20.0
Nitroglycerin	Lin2		68521		2660	2500	6.6	20.0
2,4,6-Trinitrotoluene	Ave	217298	222224		256	250	2.3	20.0
4-Amino-2,6-dinitrotoluene	Lin2		149104		255	250	2.0	20.0
2-Amino-4,6-dinitrotoluene	Ave	204531	209376		256	250	2.4	20.0
2,6-Dinitrotoluene	Lin2		144424		256	250	2.4	20.0
2,4-Dinitrotoluene	Ave	291812	294108		252	250	0.8	20.0
o-Nitrotoluene	Ave	125468	124560		248	250	-0.7	20.0
p-Nitrotoluene	Lin2		107060		247	250	-1.4	20.0
m-Nitrotoluene	Lin2		135596		249	250	-0.4	20.0
PETN	Ave	72212	73626		2550	2500	2.0	20.0
1,2-Dinitrobenzene (Surr)	Ave	130410	136036		261	250	4.3	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Lab Sample ID: CCV 280-677520/12 Calibration Date: 12/05/2024 17:24

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: 12050012.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.64	6.49	6.79
RDX	7.57	7.42	7.72
2,4,6-Trinitrophenol	7.94	7.78	8.08
1,3,5-Trinitrobenzene	8.54	8.38	8.68
1,3-Dinitrobenzene	9.08	8.93	9.23
Nitrobenzene	9.39	9.23	9.53
3,5-Dinitroaniline	9.58	9.42	9.72
Tetryl	9.68	9.53	9.83
Nitroglycerin	10.12	9.96	10.26
2,4,6-Trinitrotoluene	10.46	10.36	10.56
4-Amino-2,6-dinitrotoluene	10.59	10.48	10.68
2-Amino-4,6-dinitrotoluene	10.82	10.71	10.91
2,6-Dinitrotoluene	10.96	10.86	11.06
2,4-Dinitrotoluene	11.12	11.01	11.21
o-Nitrotoluene	11.79	11.63	11.93
p-Nitrotoluene	12.14	11.98	12.28
m-Nitrotoluene	12.63	12.46	12.76
PETN	13.62	13.45	13.75
1,2-Dinitrobenzene (Surr)	8.42	8.27	8.57

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20241205-140494.b\12050012.D
Lims ID: CCV INT
Client ID:
Sample Type: CCV
Inject. Date: 05-Dec-2024 17:24:54 ALS Bottle#: 7 Worklist Smp#: 12
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\20241205-140494.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 06-Dec-2024 11:32:04 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: CTX1606

First Level Reviewer: LV5D Date: 05-Dec-2024 17:56:15

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
4 HMX	1	6.642	6.642	0.000	23597	0.2500	0.2441	M
8 RDX	1	7.569	7.568	0.001	27295	0.2500	0.2587	
9 2,4,6-Trinitrophenol	1	7.936	7.928	0.008	19810	0.2500	0.2626	
$ 10 1,2-Dinitrobenzene	1	8.422	8.422	0.000	34009	0.2500	0.2608	
11 1,3,5-Trinitrobenzene	1	8.536	8.528	0.008	55312	0.2500	0.2545	
12 1,3-Dinitrobenzene	1	9.076	9.075	0.001	76490	0.2500	0.2565	
13 Nitrobenzene	1	9.389	9.382	0.007	49445	0.2500	0.2533	
14 3,5-Dinitroaniline	1	9.576	9.568	0.008	59606	0.2500	0.2559	
15 Tetryl	1	9.682	9.675	0.007	43037	0.2500	0.2519	
16 Nitroglycerin	2	10.116	10.108	0.008	171302	2.50	2.66	
17 2,4,6-Trinitrotoluene	1	10.462	10.462	0.000	55556	0.2500	0.2557	M
18 4-Amino-2,6-dinitrotoluene	1	10.589	10.582	0.007	37276	0.2500	0.2550	M
19 2-Amino-4,6-dinitrotoluene	1	10.816	10.808	0.008	52344	0.2500	0.2559	M
20 2,6-Dinitrotoluene	1	10.962	10.955	0.007	36106	0.2500	0.2560	M
21 2,4-Dinitrotoluene	1	11.116	11.108	0.008	73527	0.2500	0.2520	M
22 o-Nitrotoluene	1	11.789	11.775	0.014	31140	0.2500	0.2482	M
23 p-Nitrotoluene	1	12.142	12.128	0.014	26765	0.2500	0.2466	M
24 m-Nitrotoluene	1	12.629	12.608	0.021	33899	0.2500	0.2490	M
25 PETN	2	13.622	13.595	0.027	184065	2.50	2.55	M

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00083 Amount Added: 25.00 Units: uL

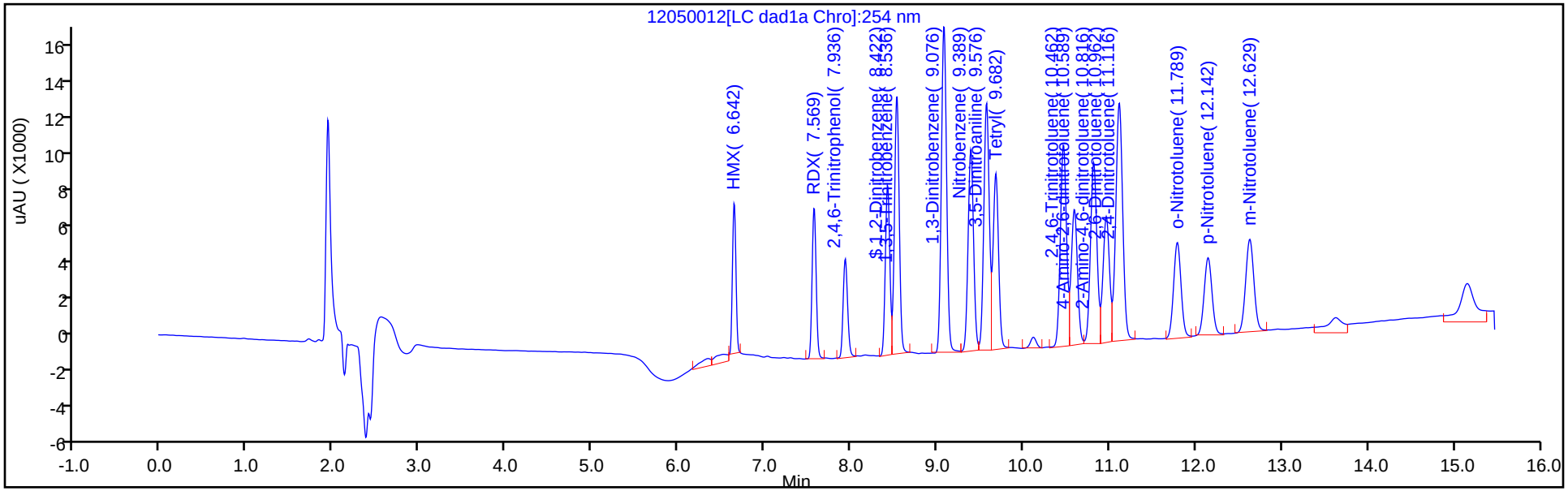
Report Date: 06-Dec-2024 11:32:04 Chrom Revision: 2.3 12-Nov-2024 16:55:22

Eurofins Denver

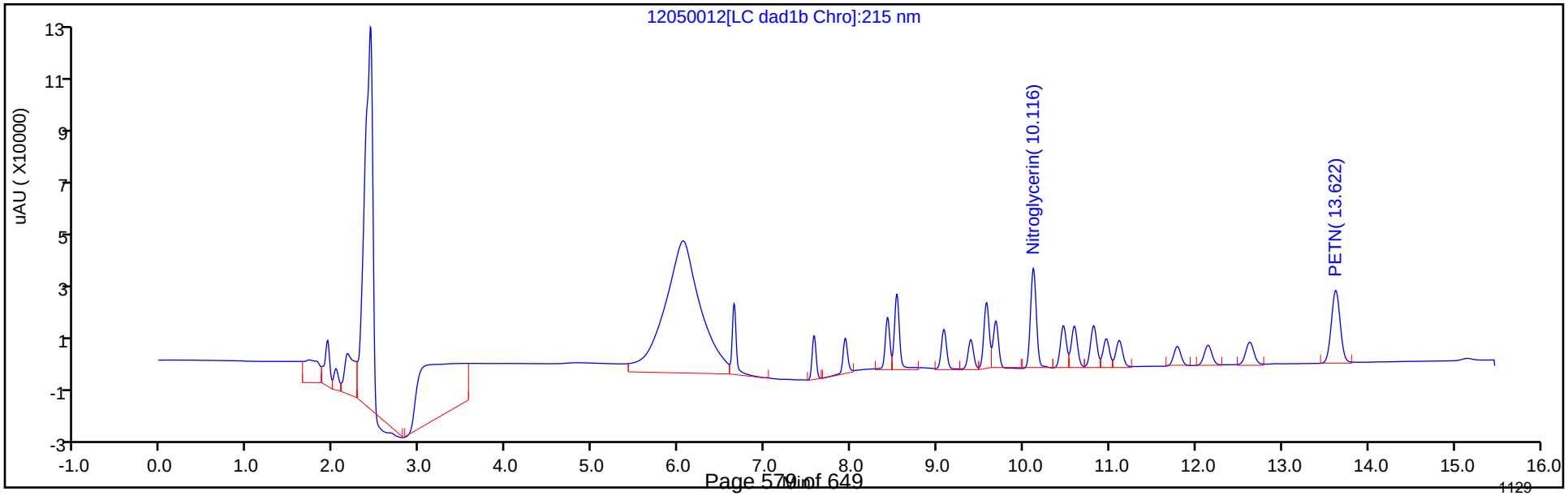
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Injection Date:	05-Dec-2024 17:24:54	Instrument ID:	CHHPLC_X3	Operator ID:	JZ
Lims ID:	CCV INT			Worklist Smp#:	12
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8330_X3	Limit Group:	GCSV - 8330		

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



1129

Manual Integration/User Assign Peak Report

Eurofins Denver

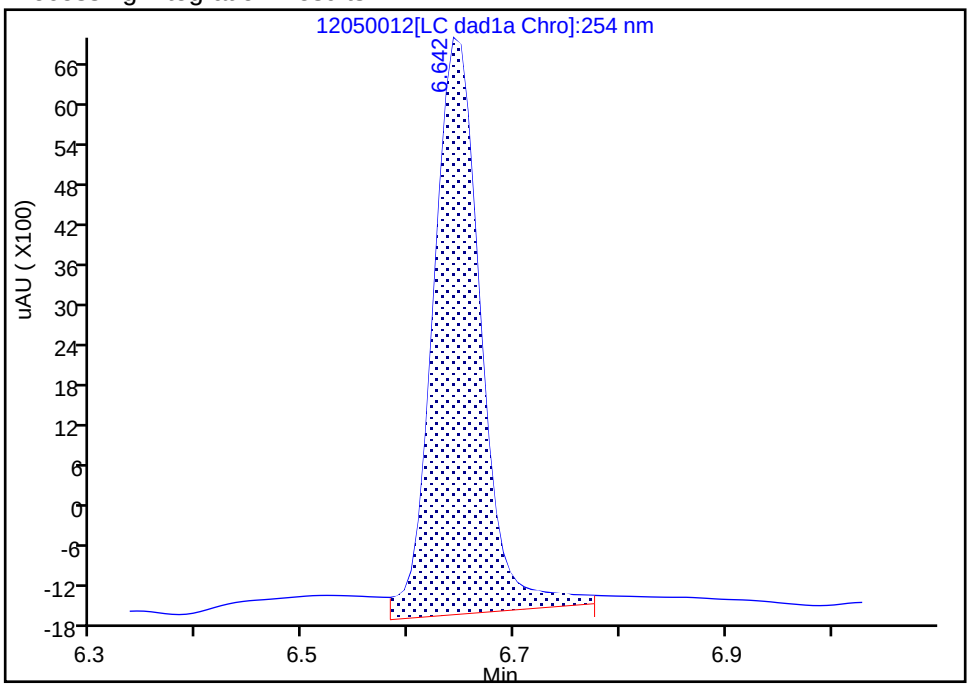
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Lims ID:	CCV INT				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	7	Worklist Smp#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

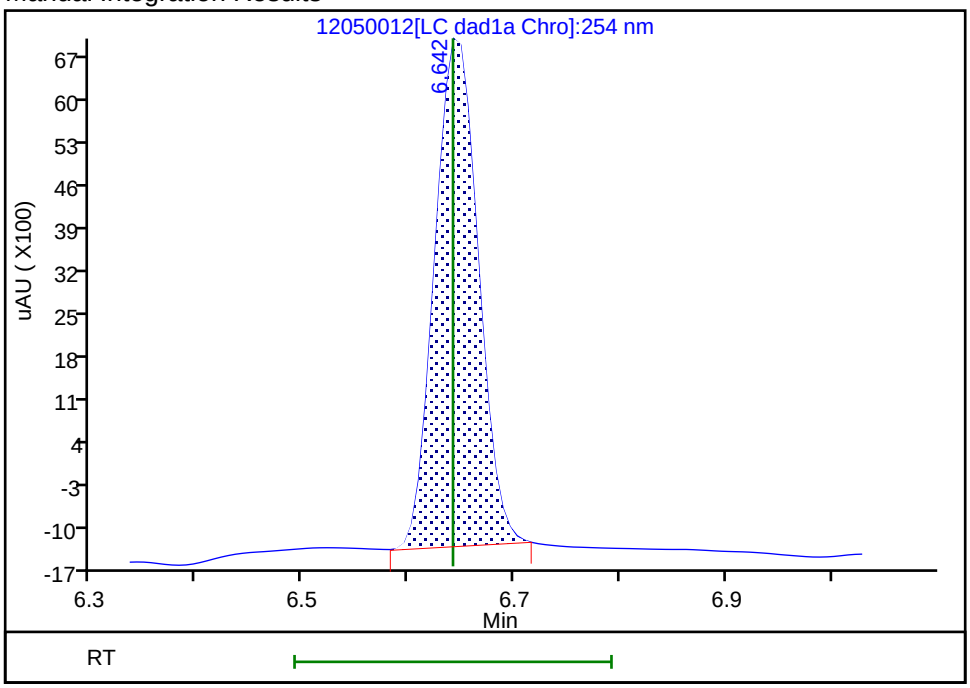
Processing Integration Results

RT: 6.64
Area: 26799
Amount: 0.277270
Amount Units: ug/mL



Manual Integration Results

RT: 6.64
Area: 23597
Amount: 0.244142
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 17:55:51 -07:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

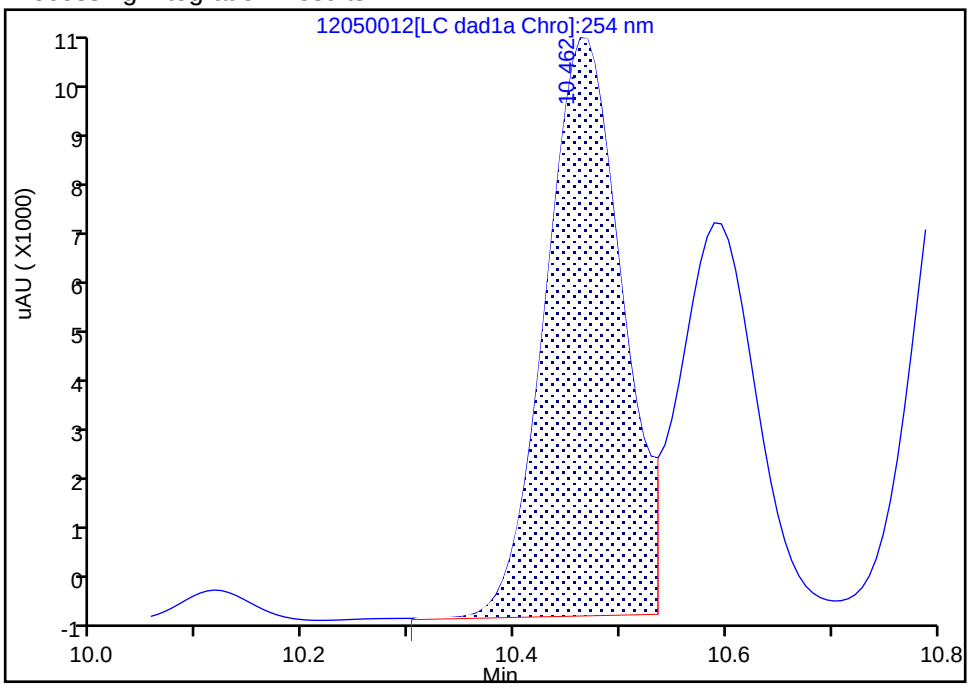
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Lims ID:	CCV INT				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	7	Worklist Smp#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

17 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

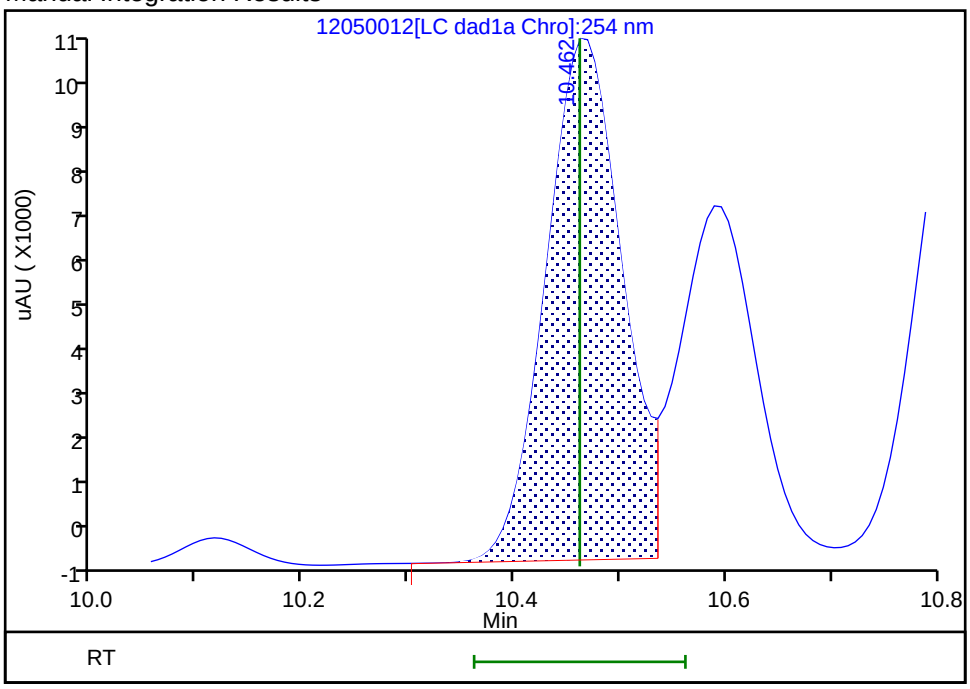
Processing Integration Results

RT: 10.46
Area: 55423
Amount: 0.255055
Amount Units: ug/mL



Manual Integration Results

RT: 10.46
Area: 55556
Amount: 0.255667
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 17:55:56 -07:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Eurofins Denver

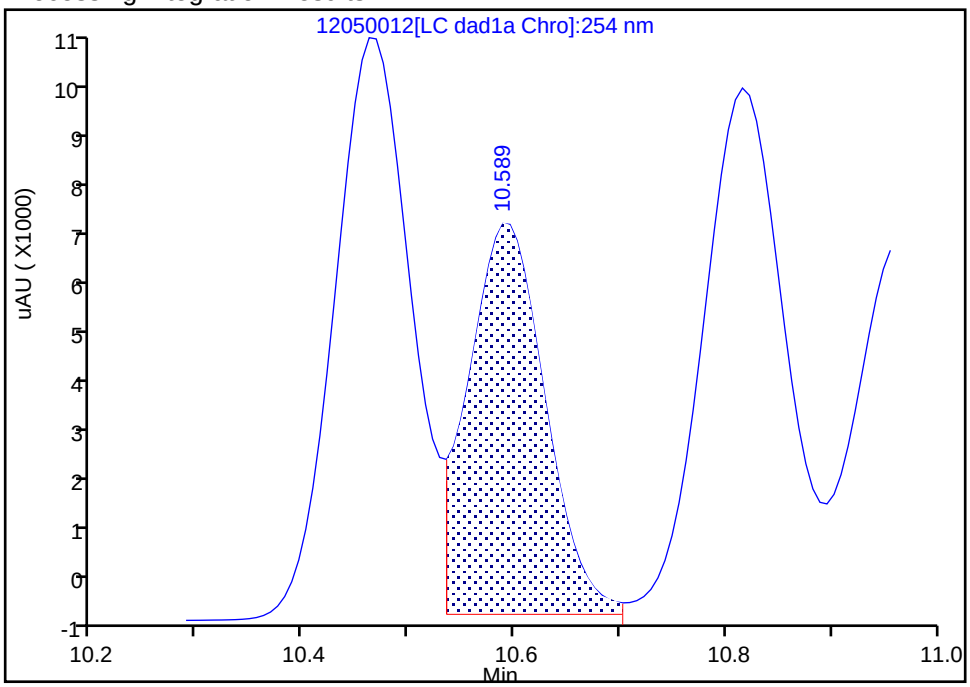
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Lims ID:	CCV INT				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	7	Worklist Smp#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

18 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

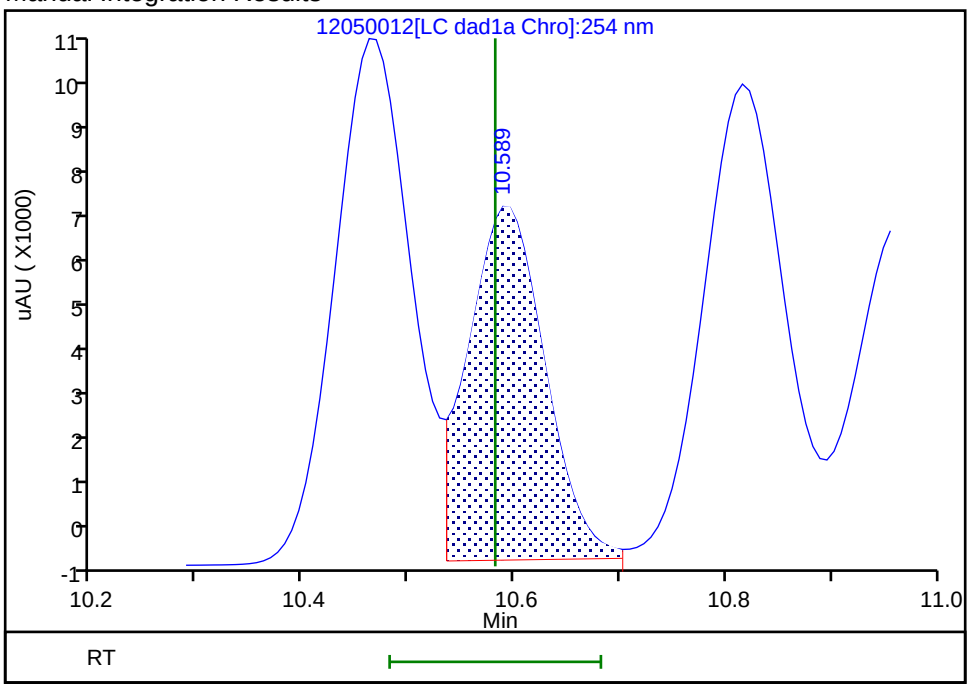
Processing Integration Results

RT: 10.59
Area: 37471
Amount: 0.256372
Amount Units: ug/mL



Manual Integration Results

RT: 10.59
Area: 37276
Amount: 0.255016
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 17:55:56 -07:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

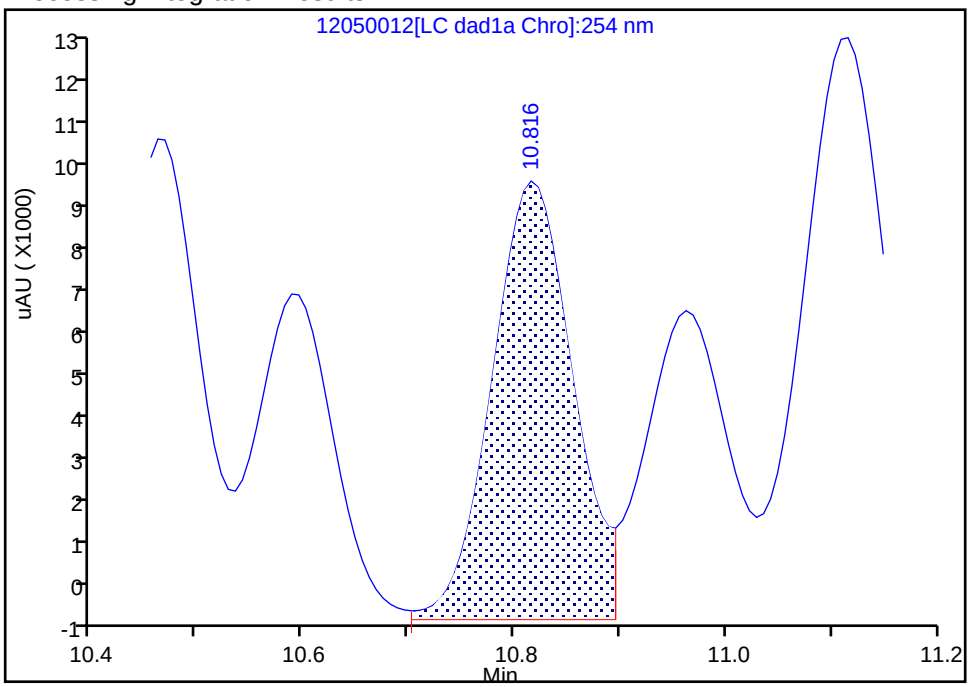
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Lims ID:	CCV INT				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	7	Worklist Smp#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

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

Signal: 1

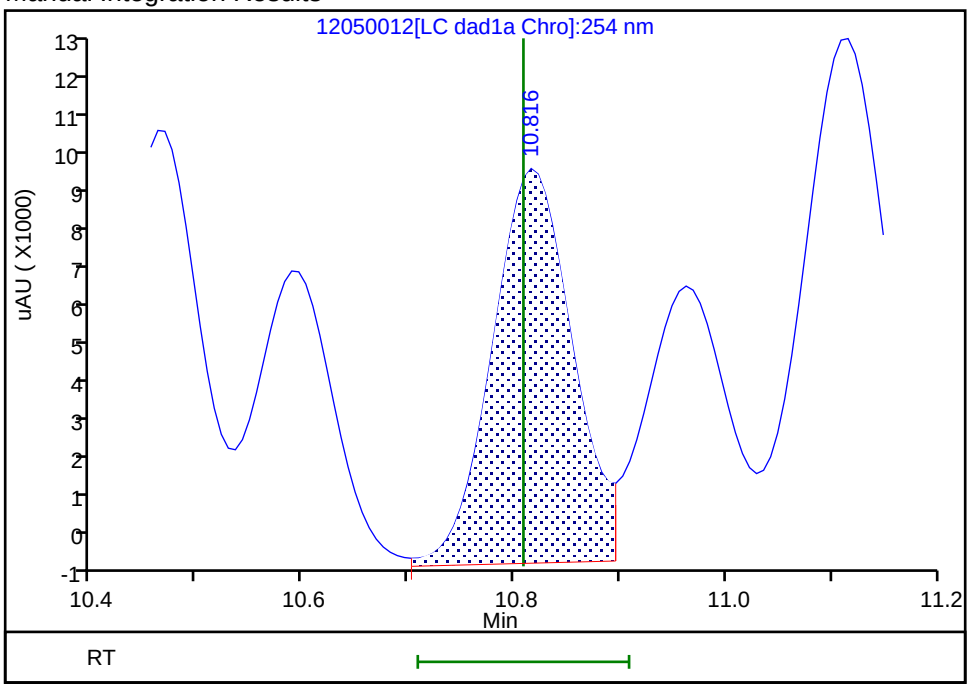
Processing Integration Results

RT: 10.82
Area: 53080
Amount: 0.259520
Amount Units: ug/mL



Manual Integration Results

RT: 10.82
Area: 52344
Amount: 0.255921
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 17:55:56 -07:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

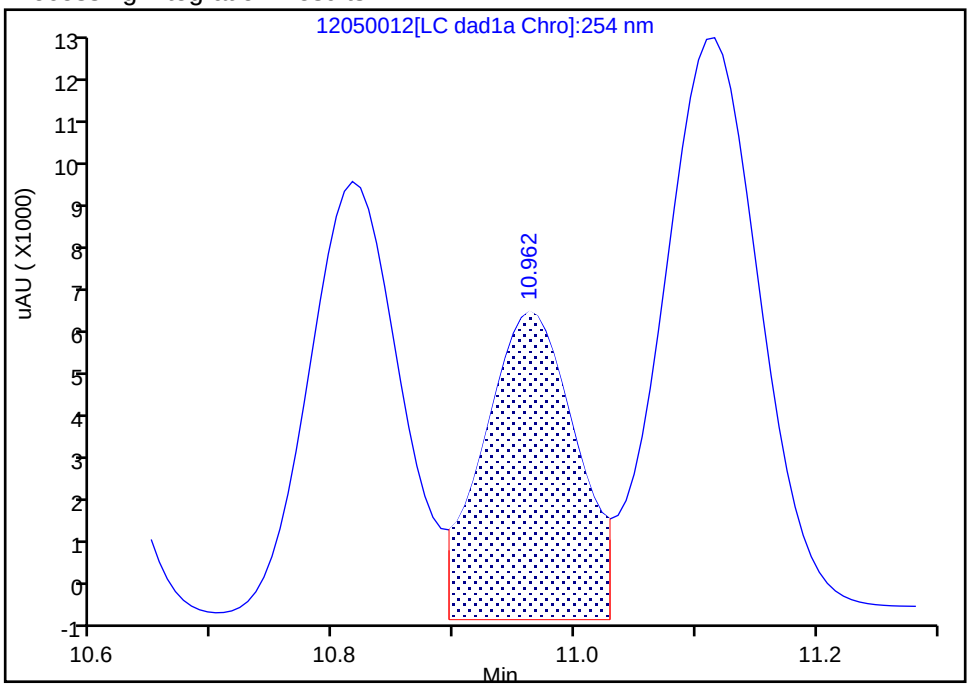
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Injection Date:	05-Dec-2024 17:24:54	Instrument ID:	CHHPLC_X3		
Lims ID:	CCV INT				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	7	Worklist Smp#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

20 2,6-Dinitrotoluene, CAS: 606-20-2

Signal: 1

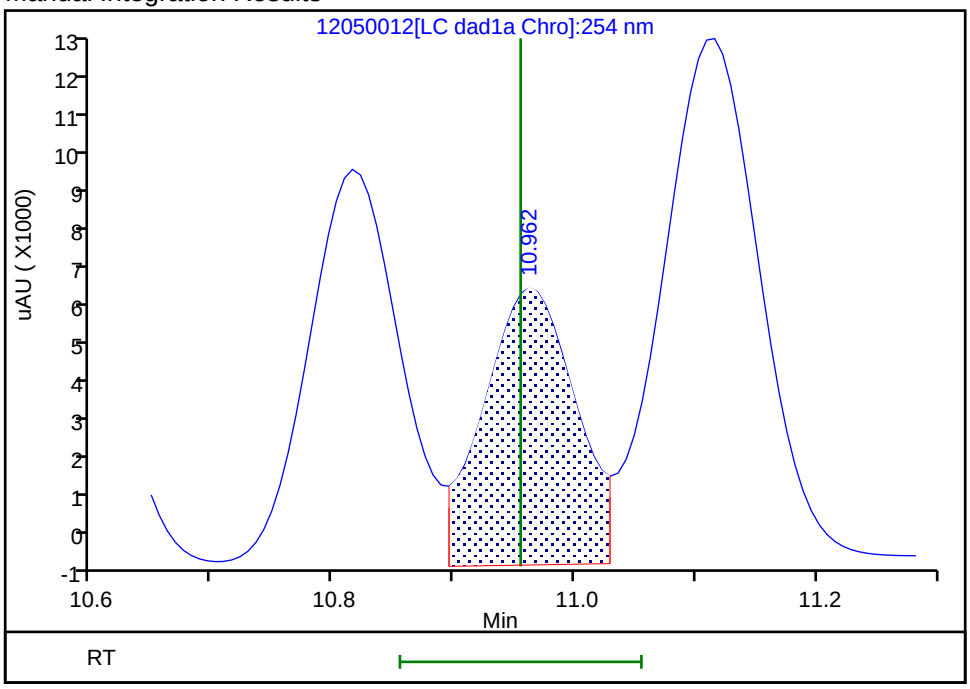
Processing Integration Results

RT: 10.96
Area: 36914
Amount: 0.261802
Amount Units: ug/mL



Manual Integration Results

RT: 10.96
Area: 36106
Amount: 0.256042
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 17:55:56 -07:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Eurofins Denver

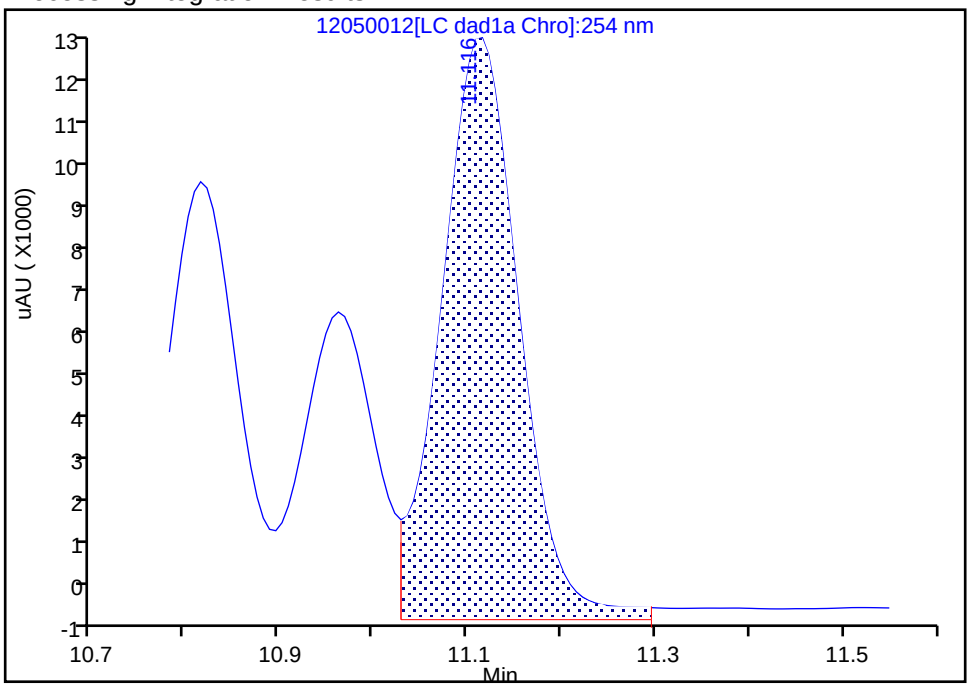
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Lims ID:	CCV INT				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	7	Worklist Smp#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

21 2,4-Dinitrotoluene, CAS: 121-14-2

Signal: 1

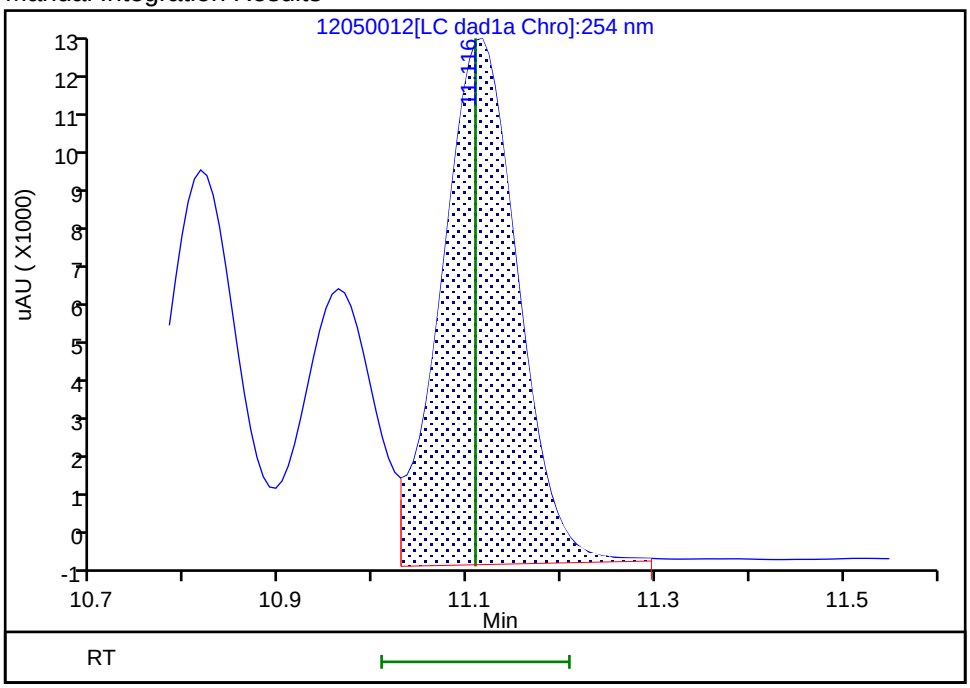
Processing Integration Results

RT: 11.12
Area: 76215
Amount: 0.261178
Amount Units: ug/mL



Manual Integration Results

RT: 11.12
Area: 73527
Amount: 0.251967
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 17:55:56 -07:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

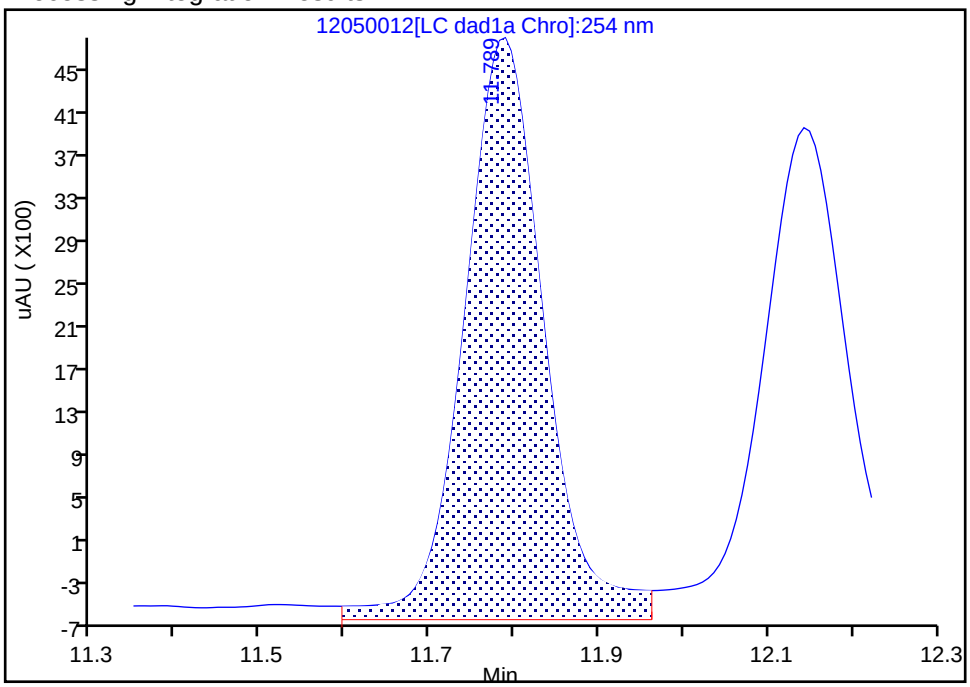
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Injection Date:	05-Dec-2024 17:24:54	Instrument ID:	CHHPLC_X3		
Lims ID:	CCV INT				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	7	Worklist Smp#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

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

Signal: 1

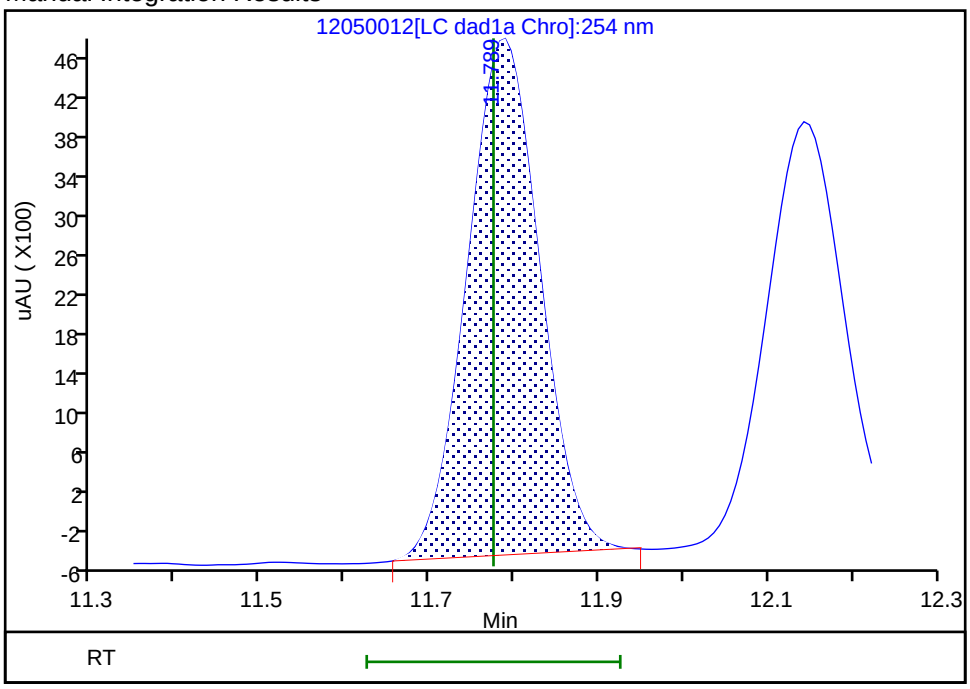
Processing Integration Results

RT: 11.79
Area: 35746
Amount: 0.284901
Amount Units: ug/mL



Manual Integration Results

RT: 11.79
Area: 31140
Amount: 0.248190
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 17:56:11 -07:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

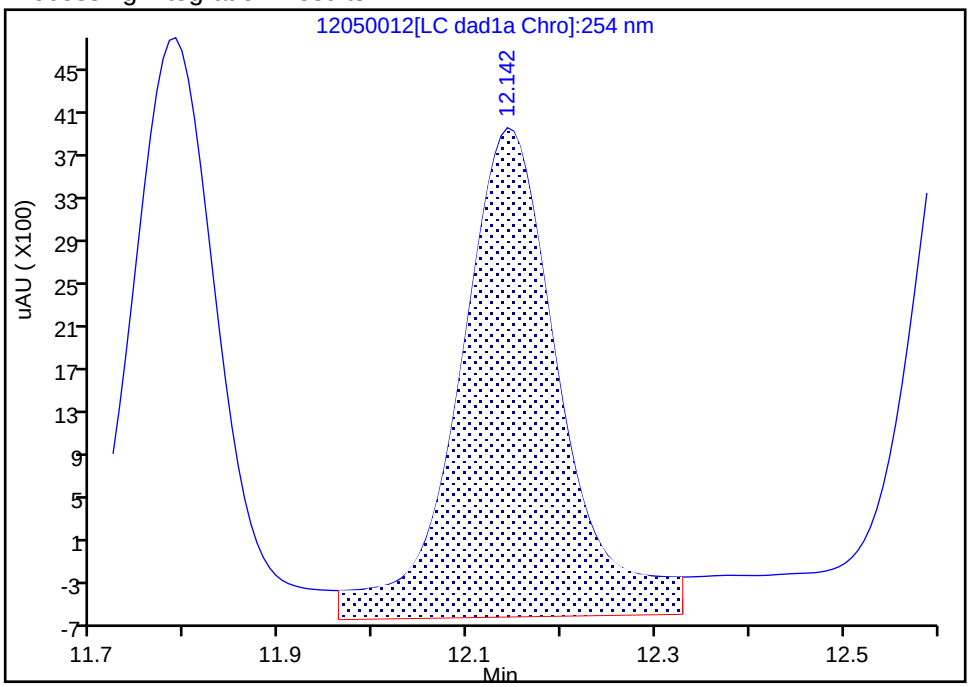
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Lims ID:	CCV INT				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	7	Worklist Smp#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

23 p-Nitrotoluene, CAS: 99-99-0

Signal: 1

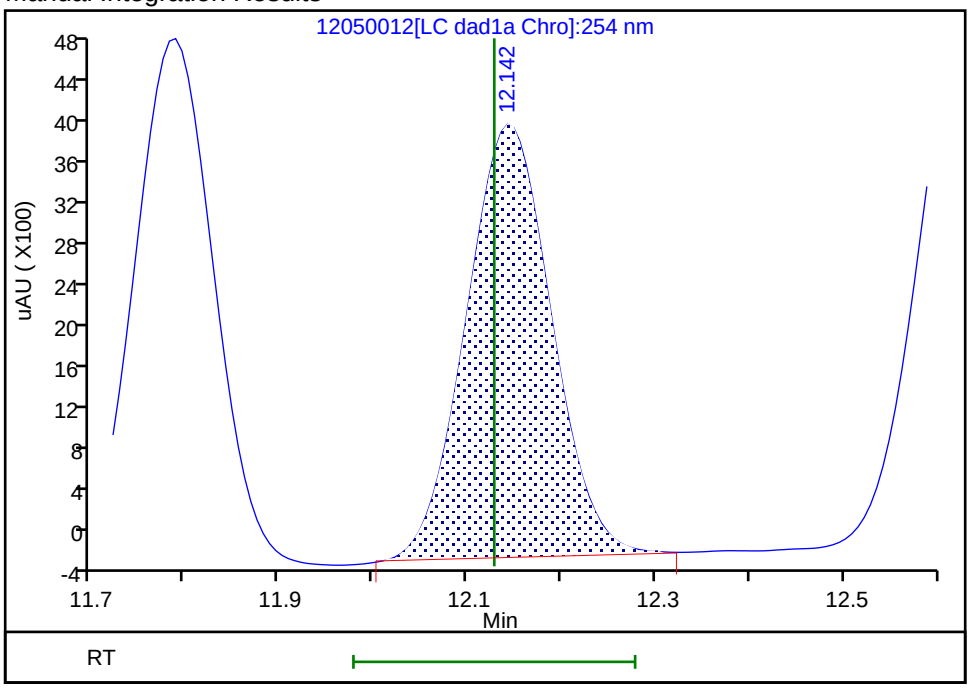
Processing Integration Results

RT: 12.14
Area: 33793
Amount: 0.311699
Amount Units: ug/mL



Manual Integration Results

RT: 12.14
Area: 26765
Amount: 0.246571
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 17:56:08 -07:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

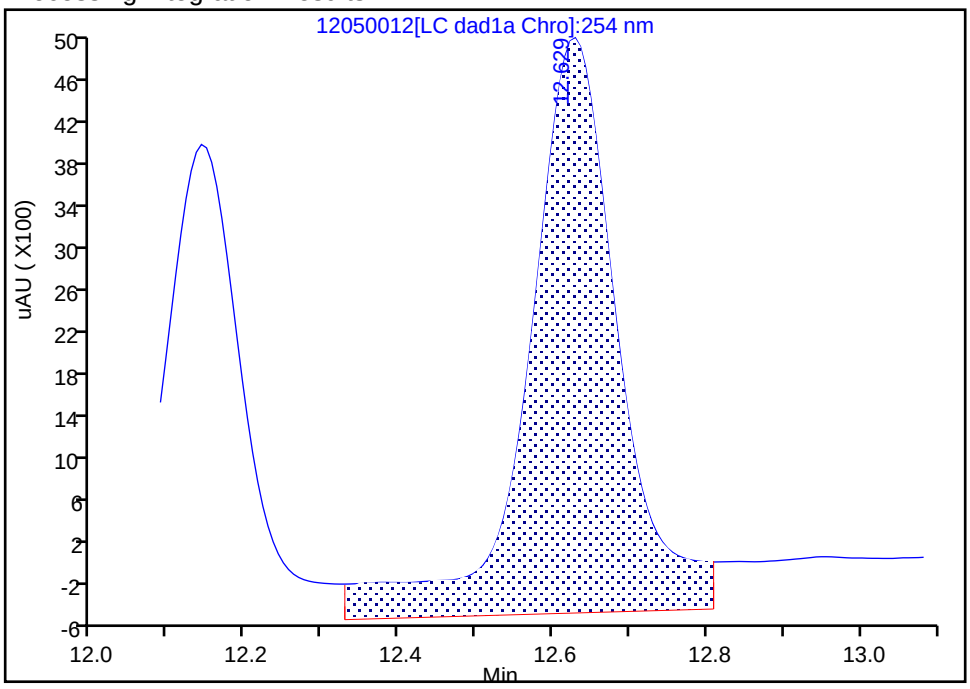
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241205-140494.b\12050012.d				
Injection Date:	05-Dec-2024 17:24:54	Instrument ID:	CHHPLC_X3		
Lims ID:	CCV INT				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	7	Worklist Smp#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

24 m-Nitrotoluene, CAS: 99-08-1

Signal: 1

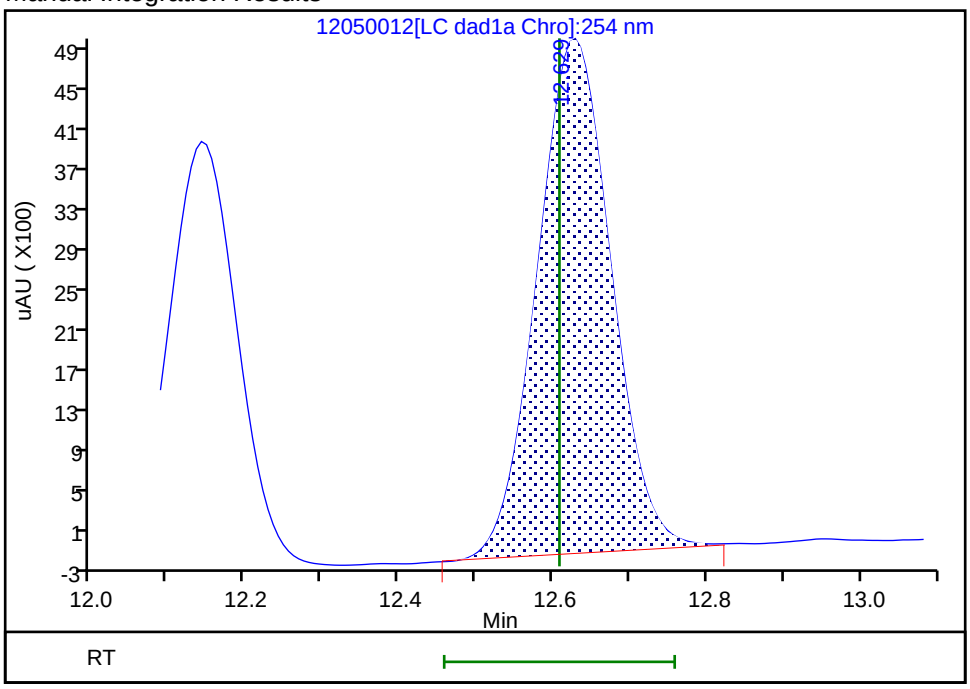
Processing Integration Results

RT: 12.63
Area: 44903
Amount: 0.330471
Amount Units: ug/mL



Manual Integration Results

RT: 12.63
Area: 33899
Amount: 0.249032
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 17:56:06 -07:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

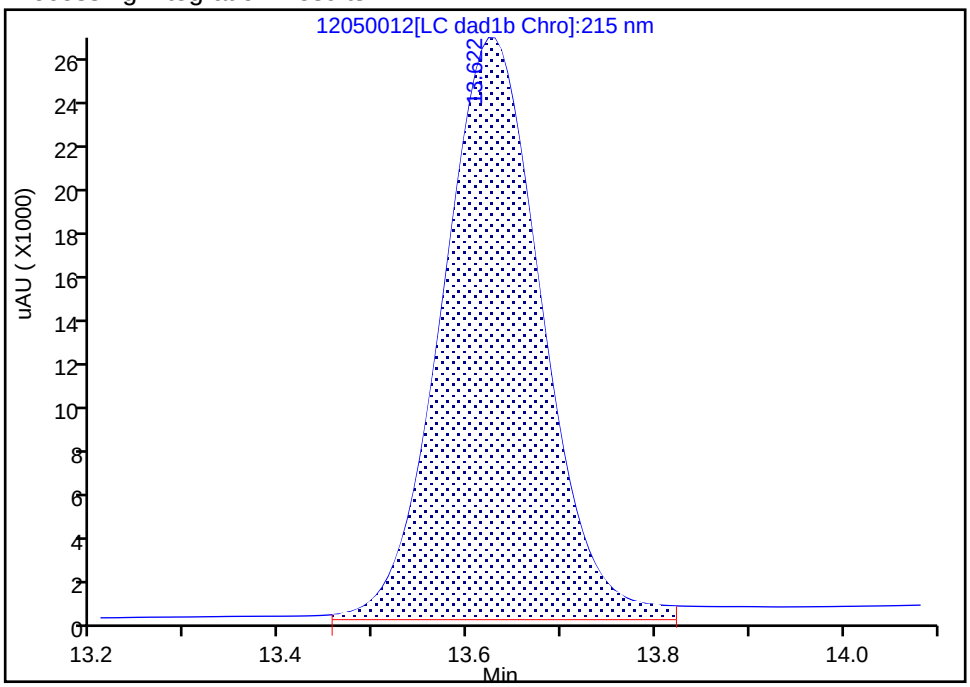
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241205-140494.b\12050012.d				
Injection Date:	05-Dec-2024 17:24:54	Instrument ID:	CHHPLC_X3		
Lims ID:	CCV INT				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	7	Worklist Smp#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1C, 215 nm		

25 PETN, CAS: 78-11-5

Signal: 1

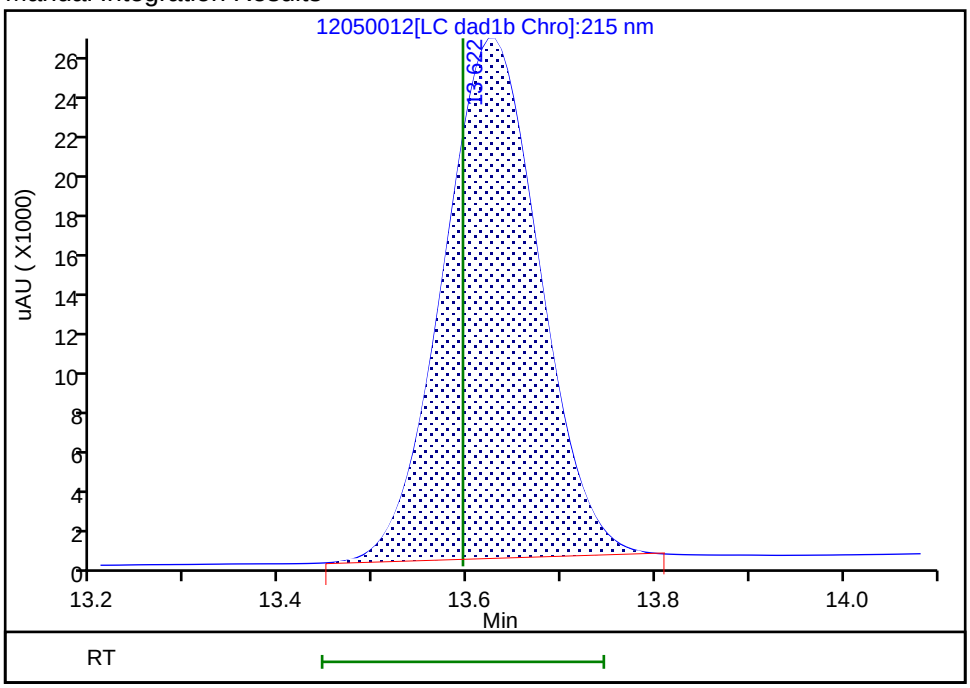
Processing Integration Results

RT: 13.62
Area: 194314
Amount: 2.690870
Amount Units: ug/mL



Manual Integration Results

RT: 13.62
Area: 184065
Amount: 2.548941
Amount Units: ug/mL



Reviewer: LV5D, 06-Dec-2024 11:28:35 -07:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-200203-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-677232/1-A

Matrix: Solid | Lab File ID: 12040021.D

Analysis Method: 8330B MOD | Date Collected:

Extraction Method: 8330B | Date Extracted: 12/03/2024 17:54

Sample wt/vol: 10(g) | Date Analyzed: 12/04/2024 20:39

Con. Extract Vol.: 40(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.: 677391 | Units: mg/Kg

Preparation Batch No.: 677232 | Instrument ID: CHHPLC_X3

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	0.040	U	0.10	0.040	0.014
99-65-0	1,3-Dinitrobenzene	0.040	U	0.10	0.040	0.017
118-96-7	2,4,6-Trinitrotoluene	0.070	U	0.10	0.070	0.031
121-14-2	2,4-Dinitrotoluene	0.040	U	0.10	0.040	0.015
606-20-2	2,6-Dinitrotoluene	0.040	U	0.10	0.040	0.019
35572-78-2	2-Amino-4,6-dinitrotoluene	0.070	U	0.10	0.070	0.033
88-72-2	o-Nitrotoluene	0.10	U	0.20	0.10	0.047
99-08-1	m-Nitrotoluene	0.15	U	0.20	0.15	0.064
19406-51-0	4-Amino-2,6-dinitrotoluene	0.070	U	0.10	0.070	0.030
99-99-0	p-Nitrotoluene	0.10	U	0.20	0.10	0.037
98-95-3	Nitrobenzene	0.20	U	0.30	0.20	0.085
55-63-0	Nitroglycerin	0.70	U	2.0	0.70	0.22
2691-41-0	HMX	0.070	U M	0.10	0.070	0.023
78-11-5	PETN	1.0	U	2.0	1.0	0.49
121-82-4	RDX	0.10	U	0.20	0.10	0.043
479-45-8	Tetryl	0.10	U	0.20	0.10	0.044

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene (Surr)	105		78-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20241204-140455.b\12040021.D
Lims ID: MB 280-677232/1-A
Client ID:
Sample Type: MB
Inject. Date: 04-Dec-2024 20:39:22 ALS Bottle#: 21 Worklist Smp#: 21
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: MB 280-677232/1-A
Operator ID: JZ Instrument ID: CHHPLC_X3

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20241204-140455.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 05-Dec-2024 11:14:25 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: CTX1637

First Level Reviewer: LV5D Date: 05-Dec-2024 11:07:57

	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		6.501				ND	
	3 TNX	1		6.511				ND	
	4 HMX	1	6.627	6.649	-0.022	98		0.001014	7M
	5 2,4-diamino-6-nitrotoluene	1		6.681				ND	
	6 DNX	1		6.824				ND	
	7 MNX	1		7.224				ND	
	8 RDX	1		7.576				ND	
	9 2,4,6-Trinitrophenol	1		7.949				ND	
$	10 1,2-Dinitrobenzene	1	8.413	8.436	-0.023	34164	0.2500	0.2620	
	11 1,3,5-Trinitrobenzene	1		8.543				ND	
	12 1,3-Dinitrobenzene	1		9.089				ND	
	13 Nitrobenzene	1		9.402				ND	
	14 3,5-Dinitroaniline	1		9.589				ND	
	15 Tetryl	1		9.702				ND	
	16 Nitroglycerin	2		10.142				ND	
	17 2,4,6-Trinitrotoluene	1		10.489				ND	
	18 4-Amino-2,6-dinitrotoluene	1		10.622				ND	
	19 2-Amino-4,6-dinitrotoluene	1		10.849				ND	
	20 2,6-Dinitrotoluene	1		10.989				ND	
	21 2,4-Dinitrotoluene	1		11.142				ND	
	22 o-Nitrotoluene	1		11.816				ND	
	23 p-Nitrotoluene	1		12.169				ND	
	24 m-Nitrotoluene	1		12.662				ND	
	25 PETN	2		13.669				ND	
	26 Ammonium Picrate	1		0.000				ND	

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection

Review Flags
M - Manually Integrated

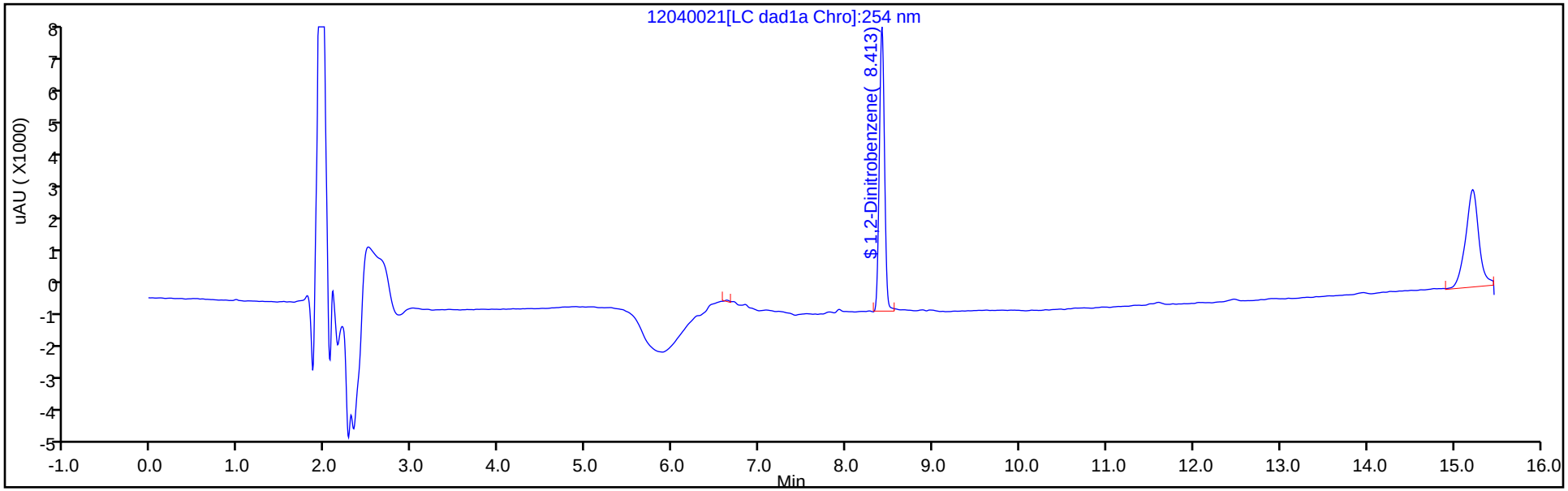
Report Date: 05-Dec-2024 11:14:26 Chrom Revision: 2.3 12-Nov-2024 16:55:22

Eurofins Denver

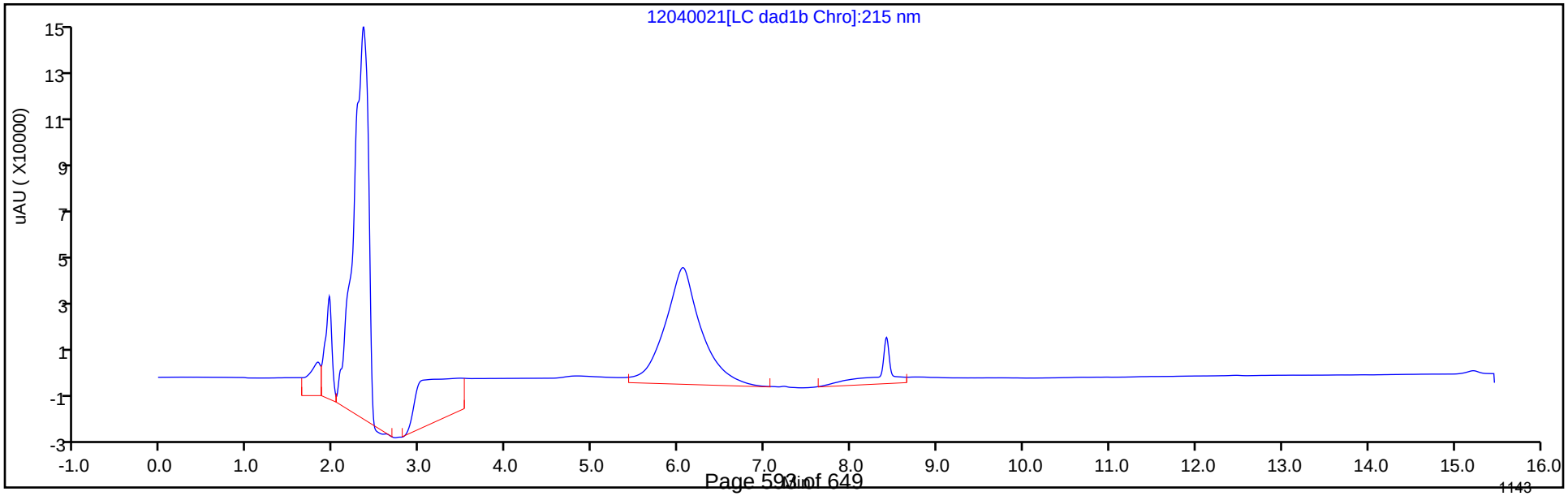
Data File: \\chromfs\denver\chromdata\chhplc_x\20241204-140455.b\12040021.d

Injection Date:	04-Dec-2024 20:39:22	Instrument ID:	CHHPLC_X3	Operator ID:	JZ
Lims ID:	MB 280-677232/1-A			Worklist Smp#:	21
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	21
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



1143

Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\CHHPLC_X\20241204-140455.b\12040021.D				
Lims ID:	MB 280-677232/1-A				
Client ID:					
Sample Type:	MB				
Inject. Date:	04-Dec-2024 20:39:22	ALS Bottle#:	21	Worklist Smp#:	21
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	MB 280-677232/1-A				
Operator ID:	JZ	Instrument ID:	CHHPLC_X3		
Method:	\\chromfs\Denver\ChromData\CHHPLC_X\20241204-140455.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	05-Dec-2024 11:14:25	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:	CTX1637				

First Level Reviewer: LV5D Date: 05-Dec-2024 11:07:57

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2500	0.2620	104.79

Manual Integration/User Assign Peak Report

Eurofins Denver

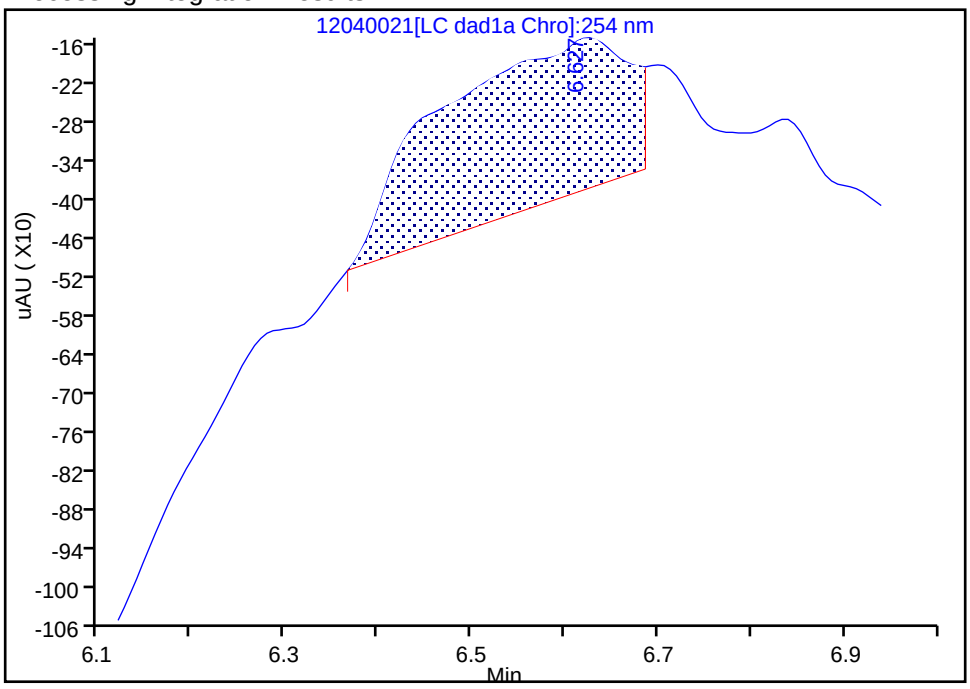
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241204-140455.b\12040021.d				
Injection Date:	04-Dec-2024 20:39:22	Instrument ID:	CHHPLC_X3		
Lims ID:	MB 280-677232/1-A				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	21	Worklist Smp#:	21
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

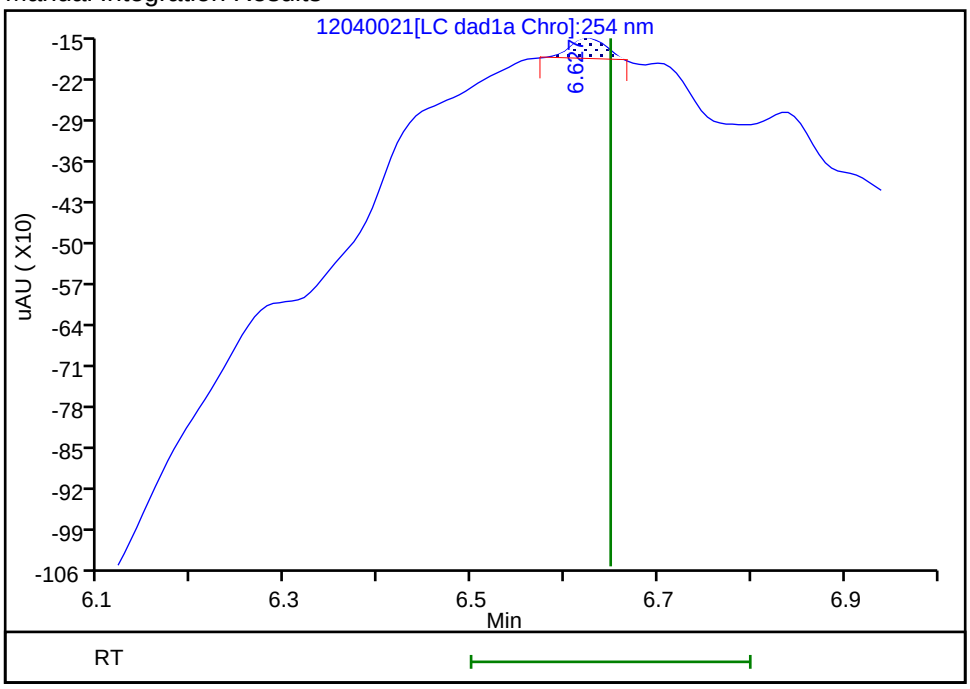
Processing Integration Results

RT: 6.63
Area: 3534
Amount: 0.036564
Amount Units: ug/mL



Manual Integration Results

RT: 6.63
Area: 98
Amount: 0.001014
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 11:07:55 -07:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-200203-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-677232/2-A

Matrix: Solid | Lab File ID: 12040022.D

Analysis Method: 8330B MOD | Date Collected:

Extraction Method: 8330B | Date Extracted: 12/03/2024 17:54

Sample wt/vol: 10(g) | Date Analyzed: 12/04/2024 21:01

Con. Extract Vol.: 40(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.: 677391 | Units: mg/Kg

Preparation Batch No.: 677232 | Instrument ID: CHHPLC_X3

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	1.05		0.10	0.040	0.014
99-65-0	1,3-Dinitrobenzene	1.06		0.10	0.040	0.017
118-96-7	2,4,6-Trinitrotoluene	1.02		0.10	0.070	0.031
121-14-2	2,4-Dinitrotoluene	1.03		0.10	0.040	0.015
606-20-2	2,6-Dinitrotoluene	1.06		0.10	0.040	0.019
35572-78-2	2-Amino-4,6-dinitrotoluene	1.05		0.10	0.070	0.033
88-72-2	o-Nitrotoluene	1.02	M	0.20	0.10	0.047
99-08-1	m-Nitrotoluene	1.01	M	0.20	0.15	0.064
19406-51-0	4-Amino-2,6-dinitrotoluene	1.07		0.10	0.070	0.030
99-99-0	p-Nitrotoluene	1.02	M	0.20	0.10	0.037
98-95-3	Nitrobenzene	1.07		0.30	0.20	0.085
55-63-0	Nitroglycerin	10.9		2.0	0.70	0.22
2691-41-0	HMX	0.941		0.10	0.070	0.023
78-11-5	PETN	10.9		2.0	1.0	0.49
121-82-4	RDX	1.01		0.20	0.10	0.043
479-45-8	Tetryl	1.03		0.20	0.10	0.044

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene (Surr)	102		78-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20241204-140455.b\12040022.D
Lims ID: LCS 280-677232/2-A
Client ID:
Sample Type: LCS
Inject. Date: 04-Dec-2024 21:01:14 ALS Bottle#: 22 Worklist Smp#: 22
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: LCS 280-677232/2-A
Operator ID: JZ Instrument ID: CHHPLC_X3

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20241204-140455.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 05-Dec-2024 11:14:25 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: CTX1637

First Level Reviewer: LV5D Date: 05-Dec-2024 11:08:14

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
4 HMX	1	6.638	6.649	-0.011	22732	0.2500	0.2352	
8 RDX	1	7.564	7.576	-0.012	26576	0.2500	0.2519	
9 2,4,6-Trinitrophenol	1	7.944	7.949	-0.005	22267	0.2500	0.2952	
$ 10 1,2-Dinitrobenzene	1	8.418	8.436	-0.018	33392	0.2500	0.2561	
11 1,3,5-Trinitrobenzene	1	8.524	8.543	-0.019	56935	0.2500	0.2620	
12 1,3-Dinitrobenzene	1	9.071	9.089	-0.018	79018	0.2500	0.2650	
13 Nitrobenzene	1	9.377	9.402	-0.025	52155	0.2500	0.2672	
14 3,5-Dinitroaniline	1	9.571	9.589	-0.018	60197	0.2500	0.2585	
15 Tetryl	1	9.684	9.702	-0.018	43816	0.2500	0.2565	
16 Nitroglycerin	2	10.124	10.142	-0.018	175849	2.50	2.73	
17 2,4,6-Trinitrotoluene	1	10.477	10.489	-0.012	55219	0.2500	0.2541	
18 4-Amino-2,6-dinitrotoluene	1	10.611	10.622	-0.011	39111	0.2500	0.2678	
19 2-Amino-4,6-dinitrotoluene	1	10.831	10.849	-0.018	53552	0.2500	0.2618	
20 2,6-Dinitrotoluene	1	10.977	10.989	-0.012	37328	0.2500	0.2648	
21 2,4-Dinitrotoluene	1	11.131	11.142	-0.011	75072	0.2500	0.2573	
22 o-Nitrotoluene	1	11.804	11.816	-0.012	32132	0.2500	0.2561	M
23 p-Nitrotoluene	1	12.164	12.169	-0.005	27715	0.2500	0.2554	M
24 m-Nitrotoluene	1	12.644	12.662	-0.018	34401	0.2500	0.2527	M
25 PETN	2	13.664	13.669	-0.005	197214	2.50	2.73	
26 Ammonium Picrate	1		0.000			ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND
Review Flags
M - Manually Integrated

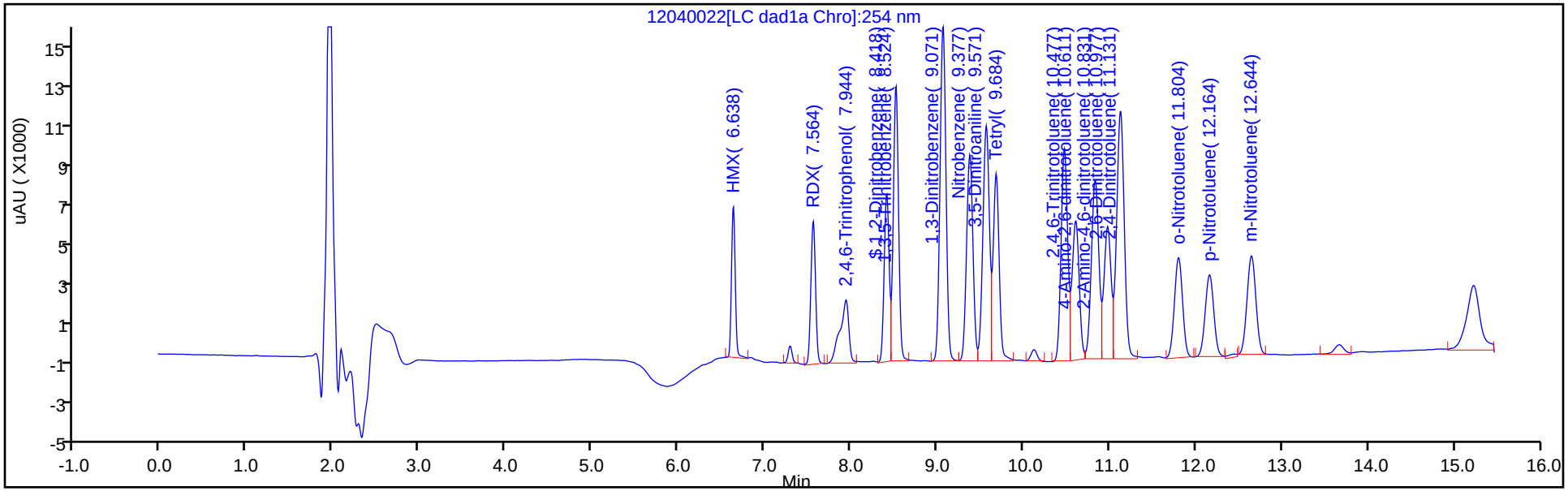
Report Date: 05-Dec-2024 11:14:27 Chrom Revision: 2.3 12-Nov-2024 16:55:22

Eurofins Denver

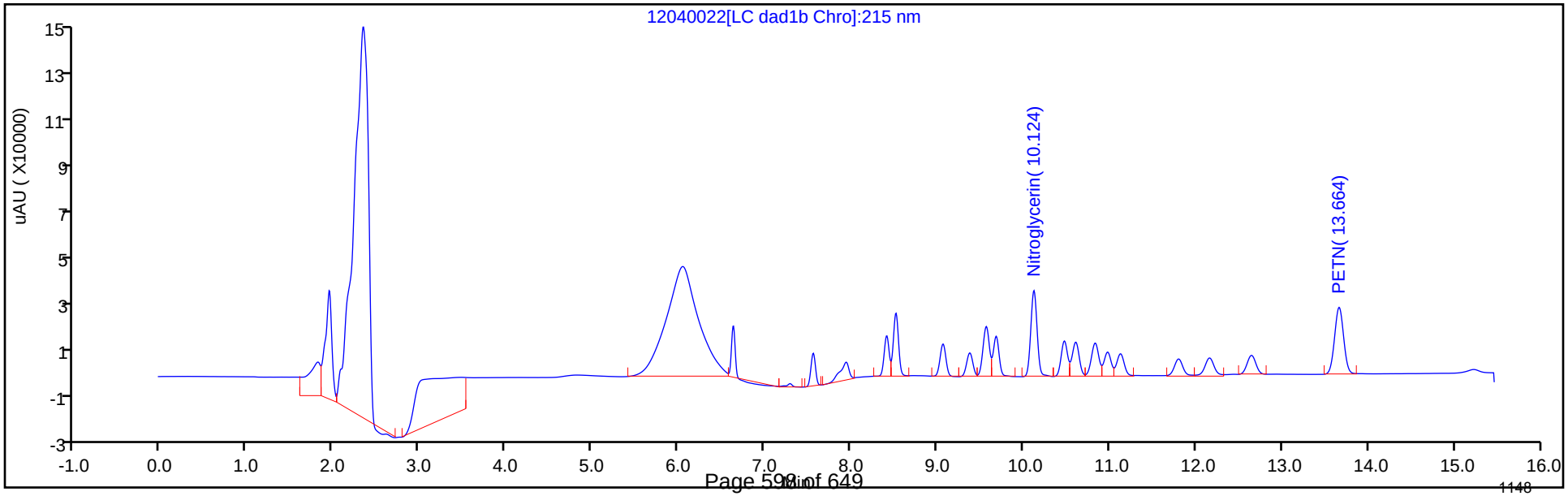
Data File: \\chromfs\denver\chromdata\chhplc_x\20241204-140455.b\12040022.d

Injection Date:	04-Dec-2024 21:01:14	Instrument ID:	CHHPLC_X3	Operator ID:	JZ
Lims ID:	LCS 280-677232/2-A			Worklist Smp#:	22
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	22
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



1148

Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20241204-140455.b\12040022.D
Lims ID: LCS 280-677232/2-A
Client ID:
Sample Type: LCS
Inject. Date: 04-Dec-2024 21:01:14 ALS Bottle#: 22 Worklist Smp#: 22
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: LCS 280-677232/2-A
Operator ID: JZ Instrument ID: CHHPLC_X3

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20241204-140455.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 05-Dec-2024 11:14:25 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: CTX1637

First Level Reviewer: LV5D Date: 05-Dec-2024 11:08:14

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2500	0.2561	102.42

Manual Integration/User Assign Peak Report

Eurofins Denver

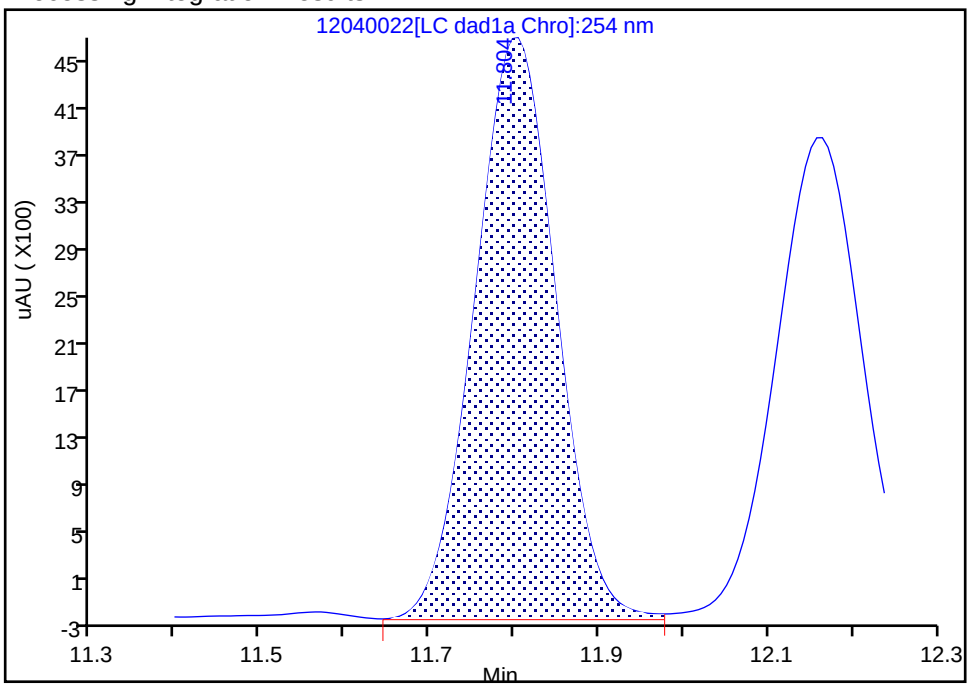
Data File: \\chromfs\denver\chromdata\chhplc_x\20241204-140455.b\12040022.d
Injection Date: 04-Dec-2024 21:01:14 Instrument ID: CHHPLC_X3
Lims ID: LCS 280-677232/2-A
Client ID:
Operator ID: JZ ALS Bottle#: 22 Worklist Smp#: 22
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

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

Signal: 1

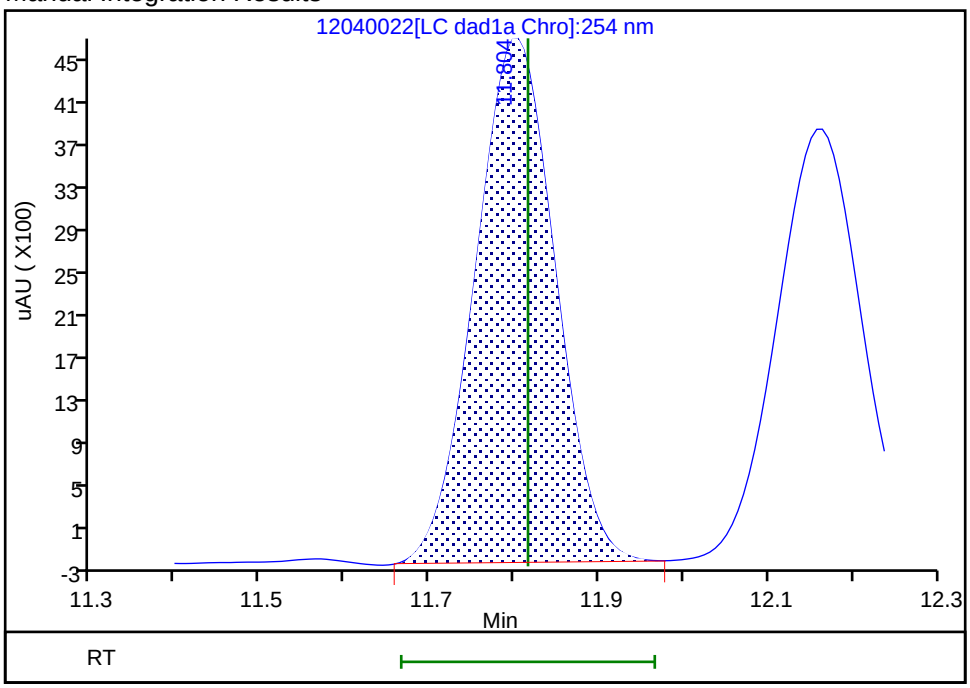
Processing Integration Results

RT: 11.80
Area: 32874
Amount: 0.262010
Amount Units: ug/mL



Manual Integration Results

RT: 11.80
Area: 32132
Amount: 0.256097
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 11:08:08 -07:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

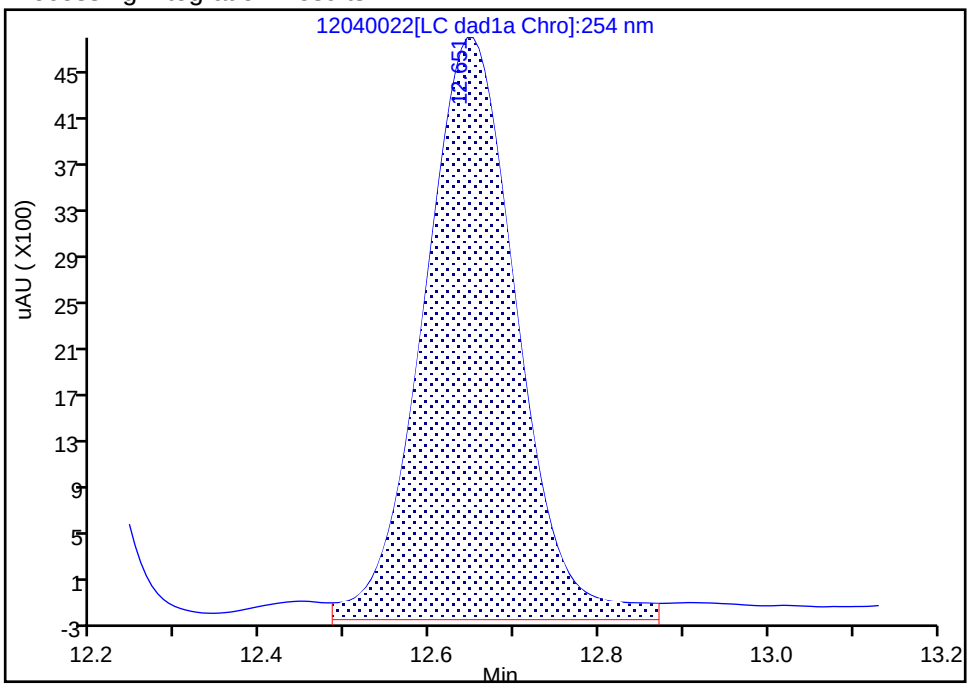
Data File: \\chromfs\denver\chromdata\chhplc_x\20241204-140455.b\12040022.d
Injection Date: 04-Dec-2024 21:01:14 Instrument ID: CHHPLC_X3
Lims ID: LCS 280-677232/2-A
Client ID:
Operator ID: JZ ALS Bottle#: 22 Worklist Smp#: 22
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

24 m-Nitrotoluene, CAS: 99-08-1

Signal: 1

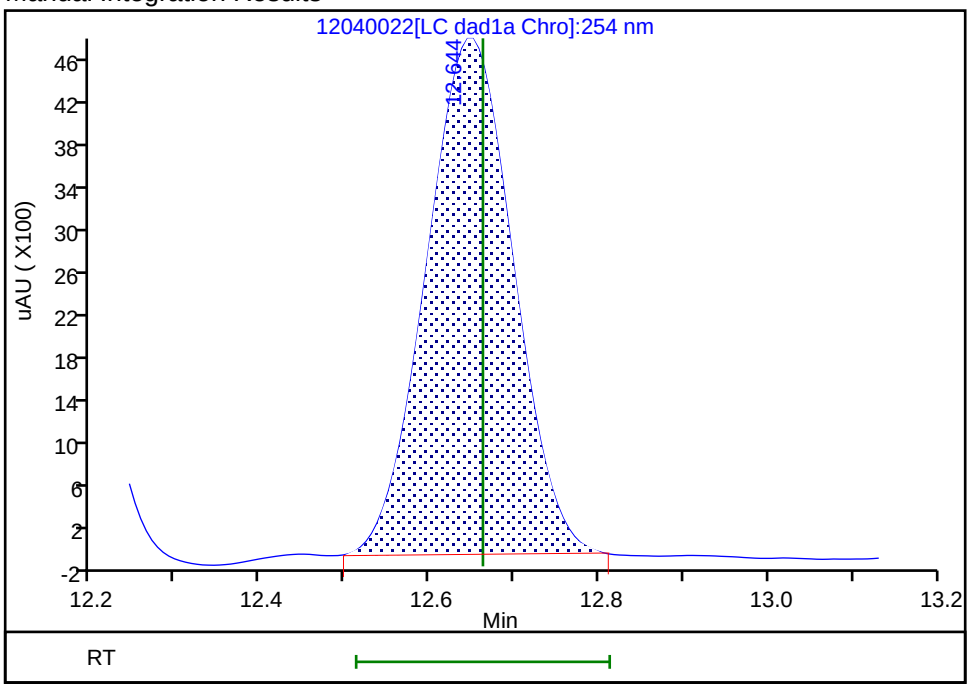
Processing Integration Results

RT: 12.65
Area: 38023
Amount: 0.279553
Amount Units: ug/mL



Manual Integration Results

RT: 12.64
Area: 34401
Amount: 0.252748
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 11:08:04 -07:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

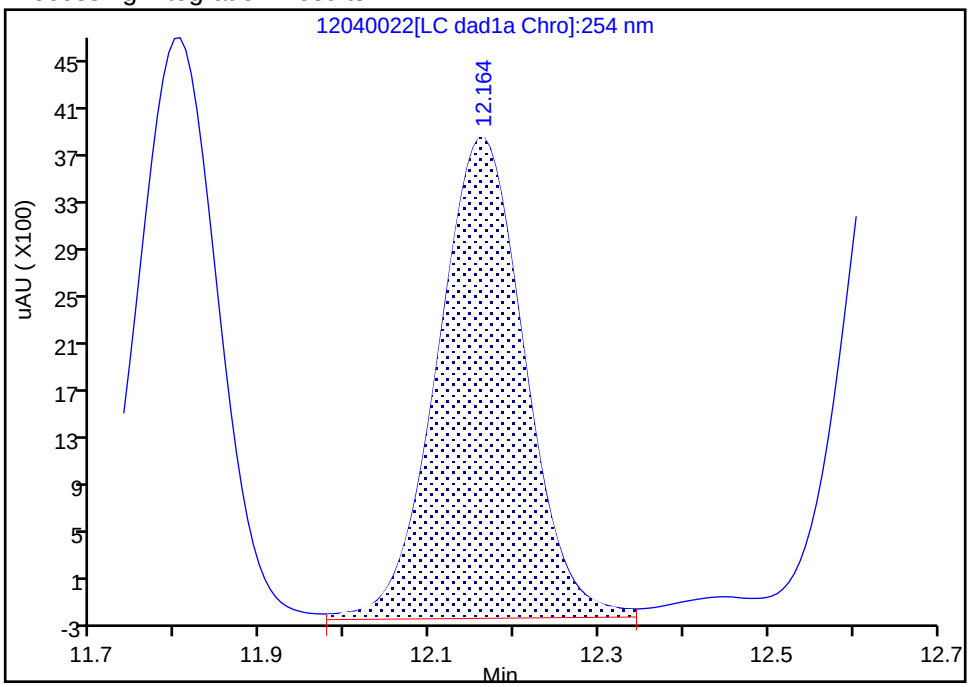
Data File: \\chromfs\denver\chromdata\chhplc_x\20241204-140455.b\12040022.d
Injection Date: 04-Dec-2024 21:01:14 Instrument ID: CHHPLC_X3
Lims ID: LCS 280-677232/2-A
Client ID:
Operator ID: JZ ALS Bottle#: 22 Worklist Smp#: 22
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

23 p-Nitrotoluene, CAS: 99-99-0

Signal: 1

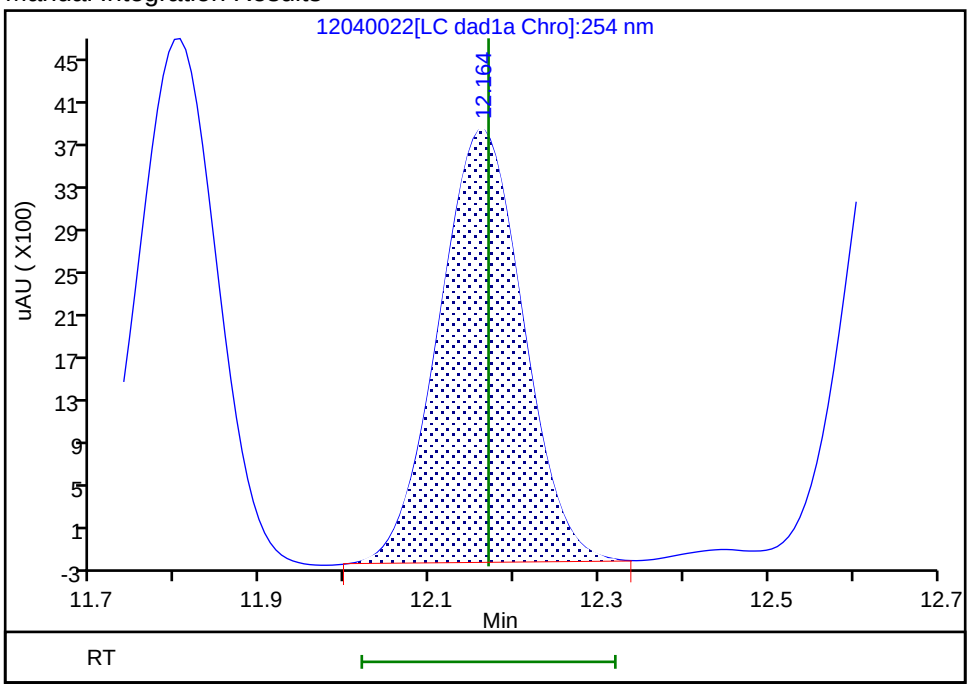
Processing Integration Results

RT: 12.16
Area: 29224
Amount: 0.269358
Amount Units: ug/mL



Manual Integration Results

RT: 12.16
Area: 27715
Amount: 0.255374
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 11:08:06 -07:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-200203-1

SDG No.:

Client Sample ID: P3HWMU-CONTAM-003-002 MS | Lab Sample ID: 280-200203-2 MS

Matrix: Solid | Lab File ID: 12040025.D

Analysis Method: 8330B MOD | Date Collected: 12/02/2024 12:44

Extraction Method: 8330B | Date Extracted: 12/03/2024 17:54

Sample wt/vol: +10.08(g) | Date Analyzed: 12/04/2024 22:06

Con. Extract Vol.: 40(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: 8.1 % Solids: 91.9 | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 677391 | Units: mg/Kg

Preparation Batch No.: 677232 | Instrument ID: CHHPLC_X3

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	1.10		0.11	0.043	0.015
99-65-0	1,3-Dinitrobenzene	1.11		0.11	0.043	0.018
118-96-7	2,4,6-Trinitrotoluene	1.65		0.11	0.076	0.033
121-14-2	2,4-Dinitrotoluene	1.10		0.11	0.043	0.016
606-20-2	2,6-Dinitrotoluene	1.09		0.11	0.043	0.021
35572-78-2	2-Amino-4,6-dinitrotoluene	1.19		0.11	0.076	0.035
88-72-2	o-Nitrotoluene	1.10		0.22	0.11	0.051
99-08-1	m-Nitrotoluene	1.25		0.22	0.16	0.069
19406-51-0	4-Amino-2,6-dinitrotoluene	1.22		0.11	0.076	0.032
99-99-0	p-Nitrotoluene	1.15		0.22	0.11	0.039
98-95-3	Nitrobenzene	1.12		0.32	0.22	0.092
55-63-0	Nitroglycerin	11.6		2.2	0.76	0.23
2691-41-0	HMX	1.14	M	0.11	0.076	0.024
78-11-5	PETN	11.4		2.2	1.1	0.53
121-82-4	RDX	1.40		0.22	0.11	0.046
479-45-8	Tetryl	1.08		0.22	0.11	0.047

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene (Surr)	99		78-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20241204-140455.b\12040025.D
Lims ID: 280-200203-A-2-B MS
Client ID:
Sample Type: MS
Inject. Date: 04-Dec-2024 22:06:59 ALS Bottle#: 25 Worklist Smp#: 25
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-200203-A-2-B MS
Operator ID: JZ Instrument ID: CHHPLC_X3

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20241204-140455.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 05-Dec-2024 11:14:25 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: CTX1637

First Level Reviewer: LV5D Date: 05-Dec-2024 11:09:13

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
4	HMX	1	6.641	6.649	-0.008	25535	0.2500	0.2642	M
8	RDX	1	7.568	7.576	-0.008	34135	0.2500	0.3240	
9	2,4,6-Trinitrophenol	1	7.941	7.949	-0.008	21438	0.2500	0.2842	
$ 10	1,2-Dinitrobenzene	1	8.421	8.436	-0.015	32205	0.2500	0.2470	
11	1,3,5-Trinitrobenzene	1	8.528	8.543	-0.015	55537	0.2500	0.2555	
12	1,3-Dinitrobenzene	1	9.074	9.089	-0.015	77030	0.2500	0.2583	
13	Nitrobenzene	1	9.381	9.402	-0.021	50576	0.2500	0.2591	
14	3,5-Dinitroaniline	1	9.574	9.589	-0.015	58814	0.2500	0.2525	
15	Tetryl	1	9.687	9.702	-0.015	42602	0.2500	0.2494	
16	Nitroglycerin	2	10.127	10.142	-0.015	172652	2.50	2.68	
17	2,4,6-Trinitrotoluene	1	10.481	10.489	-0.008	82909	0.2500	0.3815	
18	4-Amino-2,6-dinitrotoluene	1	10.607	10.622	-0.015	41127	0.2500	0.2818	
19	2-Amino-4,6-dinitrotoluene	1	10.834	10.849	-0.015	56388	0.2500	0.2757	
20	2,6-Dinitrotoluene	1	10.981	10.989	-0.008	35679	0.2500	0.2530	
21	2,4-Dinitrotoluene	1	11.127	11.142	-0.015	74147	0.2500	0.2541	
22	o-Nitrotoluene	1	11.794	11.816	-0.022	32054	0.2500	0.2555	
23	p-Nitrotoluene	1	12.154	12.169	-0.015	28819	0.2500	0.2656	
24	m-Nitrotoluene	1	12.634	12.662	-0.028	39403	0.2500	0.2898	
25	PETN	2	13.647	13.669	-0.022	191096	2.50	2.65	
26	Ammonium Picrate	1		0.000			ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND
Review Flags
M - Manually Integrated

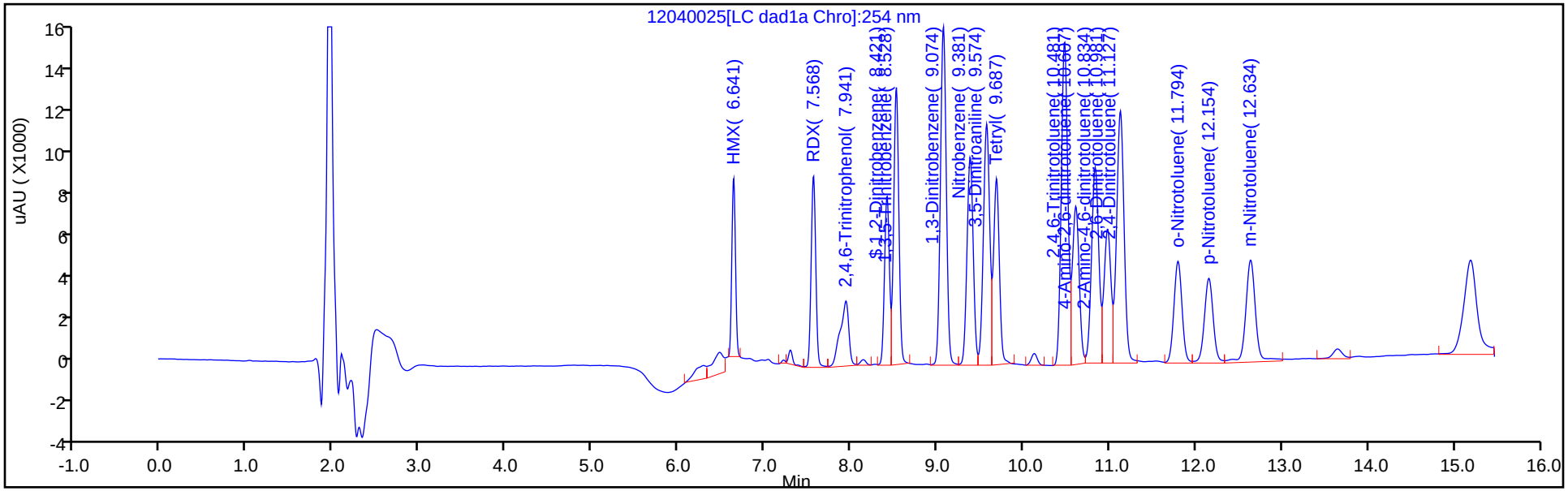
Report Date: 05-Dec-2024 11:14:29 Chrom Revision: 2.3 12-Nov-2024 16:55:22

Eurofins Denver

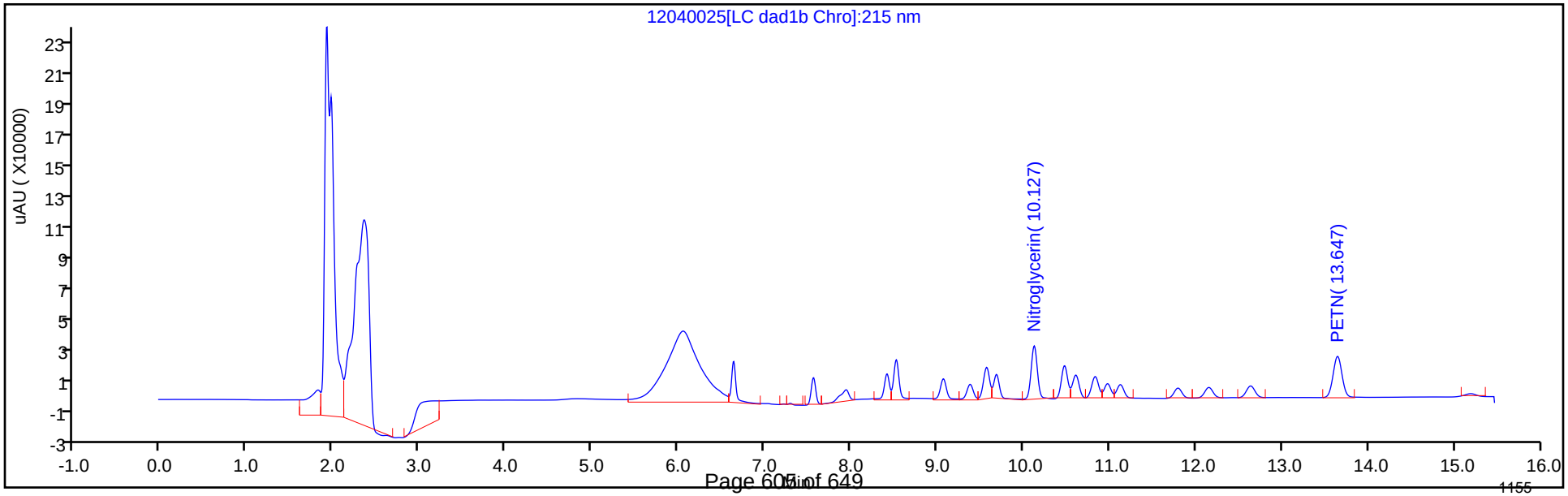
Data File: \\chromfs\denver\chromdata\chhplc_x\20241204-140455.b\12040025.d

Injection Date:	04-Dec-2024 22:06:59	Instrument ID:	CHHPLC_X3	Operator ID:	JZ
Lims ID:	280-200203-A-2-B MS			Worklist Smp#:	25
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



1155

Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\CHHPLC_X\20241204-140455.b\12040025.D				
Lims ID:	280-200203-A-2-B MS				
Client ID:					
Sample Type:	MS				
Inject. Date:	04-Dec-2024 22:06:59	ALS Bottle#:	25	Worklist Smp#:	25
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-200203-A-2-B MS				
Operator ID:	JZ	Instrument ID:	CHHPLC_X3		
Method:	\\chromfs\Denver\ChromData\CHHPLC_X\20241204-140455.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	05-Dec-2024 11:14:25	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:	CTX1637				

First Level Reviewer: LV5D Date: 05-Dec-2024 11:09:13

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2500	0.2470	98.78

Manual Integration/User Assign Peak Report

Eurofins Denver

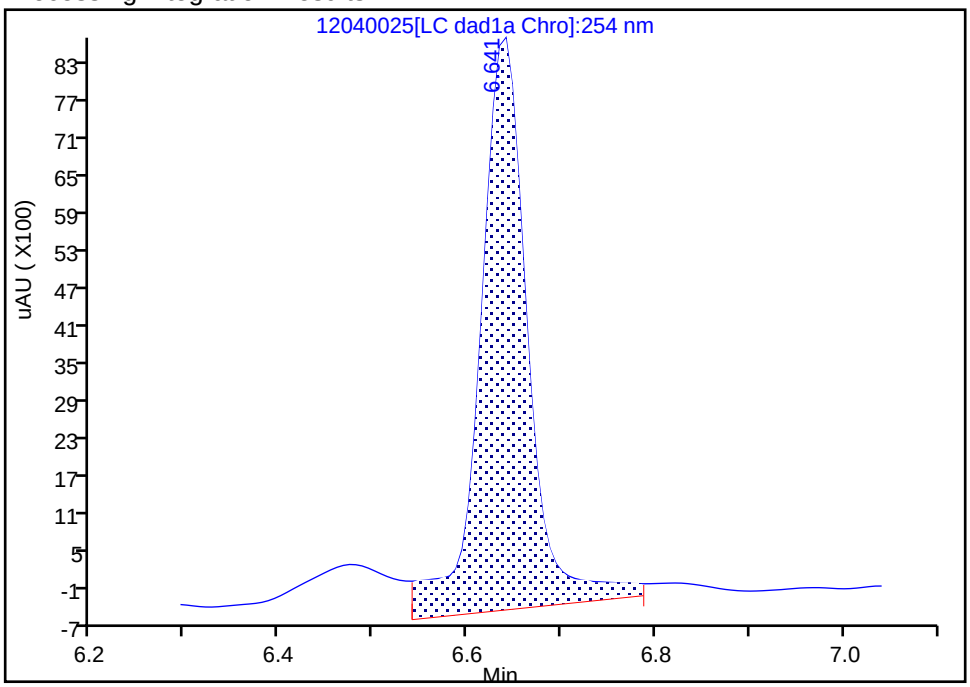
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241204-140455.b\12040025.d				
Injection Date:	04-Dec-2024 22:06:59	Instrument ID:	CHHPLC_X3		
Lims ID:	280-200203-A-2-B MS				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	25	Worklist Smp#:	25
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

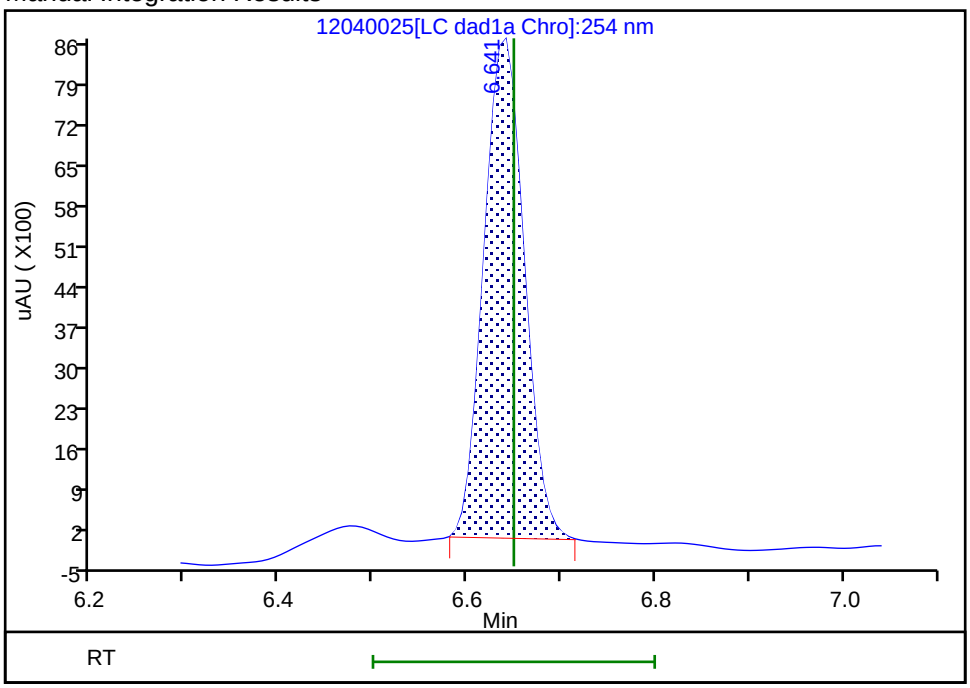
Processing Integration Results

RT: 6.64
Area: 32475
Amount: 0.335996
Amount Units: ug/mL



Manual Integration Results

RT: 6.64
Area: 25535
Amount: 0.264193
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 11:09:12 -07:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-200203-1

SDG No.:

Client Sample ID: P3HWMU-CONTAM-003-002 MSD | Lab Sample ID: 280-200203-2 MSD

Matrix: Solid | Lab File ID: 12040026.D

Analysis Method: 8330B MOD | Date Collected: 12/02/2024 12:44

Extraction Method: 8330B | Date Extracted: 12/03/2024 17:54

Sample wt/vol: +10.87(g) | Date Analyzed: 12/04/2024 22:28

Con. Extract Vol.: 40(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: 8.1 % Solids: 91.9 | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 677391 | Units: mg/Kg

Preparation Batch No.: 677232 | Instrument ID: CHHPLC_X3

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	1.02		0.10	0.040	0.014
99-65-0	1,3-Dinitrobenzene	1.03		0.10	0.040	0.017
118-96-7	2,4,6-Trinitrotoluene	1.47		0.10	0.070	0.031
121-14-2	2,4-Dinitrotoluene	1.01		0.10	0.040	0.015
606-20-2	2,6-Dinitrotoluene	1.00		0.10	0.040	0.019
35572-78-2	2-Amino-4,6-dinitrotoluene	1.11		0.10	0.070	0.033
88-72-2	o-Nitrotoluene	1.02		0.20	0.10	0.047
99-08-1	m-Nitrotoluene	1.17		0.20	0.15	0.064
19406-51-0	4-Amino-2,6-dinitrotoluene	1.16		0.10	0.070	0.030
99-99-0	p-Nitrotoluene	1.07		0.20	0.10	0.037
98-95-3	Nitrobenzene	1.03		0.30	0.20	0.085
55-63-0	Nitroglycerin	10.7		2.0	0.70	0.22
2691-41-0	HMX	1.04	M	0.10	0.070	0.023
78-11-5	PETN	10.6		2.0	1.0	0.49
121-82-4	RDX	1.31		0.20	0.10	0.043
479-45-8	Tetryl	0.963		0.20	0.10	0.044

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene (Surr)	97		78-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20241204-140455.b\12040026.D
Lims ID: 280-200203-A-2-C MSD
Client ID:
Sample Type: MSD
Inject. Date: 04-Dec-2024 22:28:52 ALS Bottle#: 26 Worklist Smp#: 26
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-200203-A-2-C MSD
Operator ID: JZ Instrument ID: CHHPLC_X3

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20241204-140455.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 05-Dec-2024 11:14:25 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: CTX1637

First Level Reviewer: LV5D Date: 05-Dec-2024 11:09:17

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
4 HMX	1	6.635	6.649	-0.014	25096	0.2500	0.2597	M
8 RDX	1	7.562	7.576	-0.014	34403	0.2500	0.3265	
9 2,4,6-Trinitrophenol	1	7.942	7.949	-0.007	21252	0.2500	0.2818	
$ 10 1,2-Dinitrobenzene	1	8.415	8.436	-0.021	31787	0.2500	0.2437	
11 1,3,5-Trinitrobenzene	1	8.522	8.543	-0.021	55468	0.2500	0.2552	
12 1,3-Dinitrobenzene	1	9.069	9.089	-0.020	76412	0.2500	0.2562	
13 Nitrobenzene	1	9.382	9.402	-0.020	50270	0.2500	0.2576	
14 3,5-Dinitroaniline	1	9.575	9.589	-0.014	59987	0.2500	0.2576	
15 Tetryl	1	9.689	9.702	-0.013	41081	0.2500	0.2405	
16 Nitroglycerin	2	10.129	10.142	-0.013	172595	2.50	2.68	
17 2,4,6-Trinitrotoluene	1	10.482	10.489	-0.007	79553	0.2500	0.3661	
18 4-Amino-2,6-dinitrotoluene	1	10.615	10.622	-0.007	42131	0.2500	0.2888	
19 2-Amino-4,6-dinitrotoluene	1	10.842	10.849	-0.007	56542	0.2500	0.2764	
20 2,6-Dinitrotoluene	1	10.989	10.989	0.000	35303	0.2500	0.2503	
21 2,4-Dinitrotoluene	1	11.135	11.142	-0.007	73761	0.2500	0.2528	
22 o-Nitrotoluene	1	11.809	11.816	-0.007	32126	0.2500	0.2560	
23 p-Nitrotoluene	1	12.169	12.169	0.000	28888	0.2500	0.2662	
24 m-Nitrotoluene	1	12.662	12.662	0.000	39716	0.2500	0.2921	
25 PETN	2	13.675	13.669	0.006	190880	2.50	2.64	
26 Ammonium Picrate	1		0.000			ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND
Review Flags
M - Manually Integrated

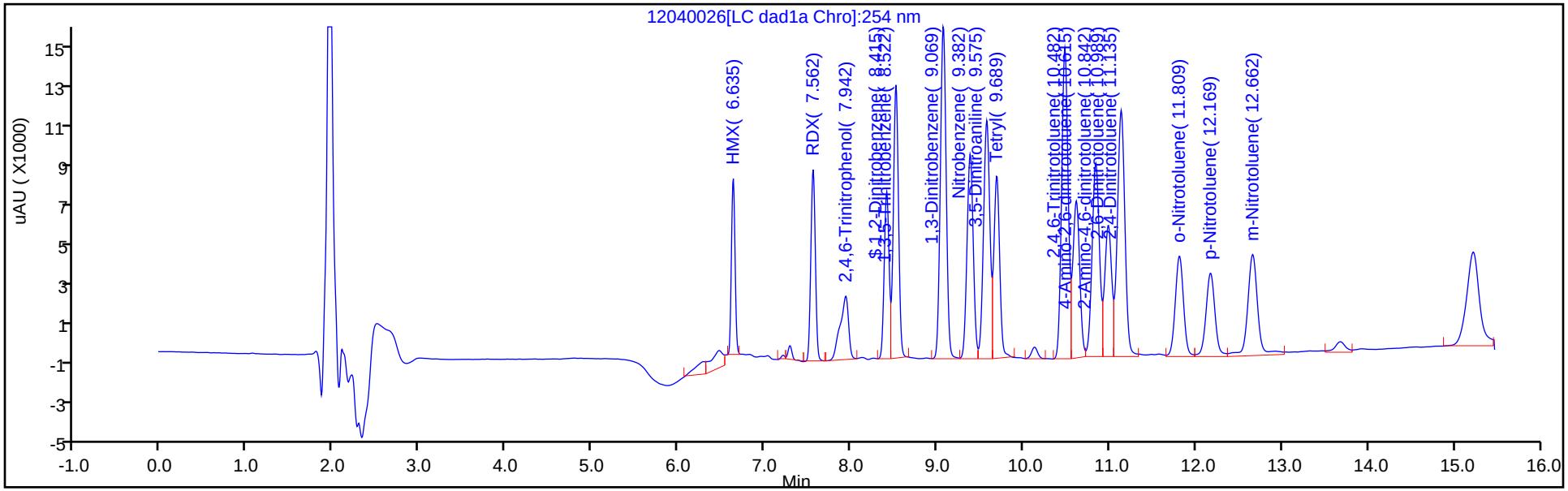
Report Date: 05-Dec-2024 11:14:30 Chrom Revision: 2.3 12-Nov-2024 16:55:22

Eurofins Denver

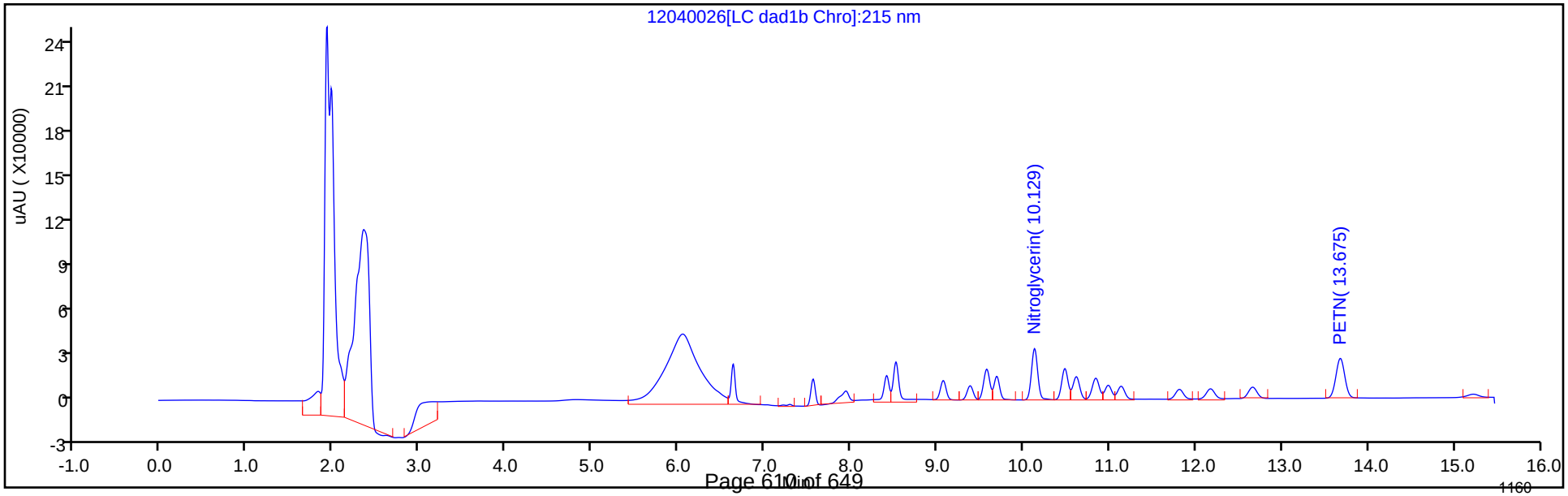
Data File: \\chromfs\denver\chromdata\chhplc_x\20241204-140455.b\12040026.d

Injection Date:	04-Dec-2024 22:28:52	Instrument ID:	CHHPLC_X3	Operator ID:	JZ
Lims ID:	280-200203-A-2-C MSD			Worklist Smp#:	26
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



1160

Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20241204-140455.b\12040026.D
Lims ID: 280-200203-A-2-C MSD
Client ID:
Sample Type: MSD
Inject. Date: 04-Dec-2024 22:28:52 ALS Bottle#: 26 Worklist Smp#: 26
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-200203-A-2-C MSD
Operator ID: JZ Instrument ID: CHHPLC_X3

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20241204-140455.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 05-Dec-2024 11:14:25 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: CTX1637

First Level Reviewer: LV5D Date: 05-Dec-2024 11:09:17

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2500	0.2437	97.50

Manual Integration/User Assign Peak Report

Eurofins Denver

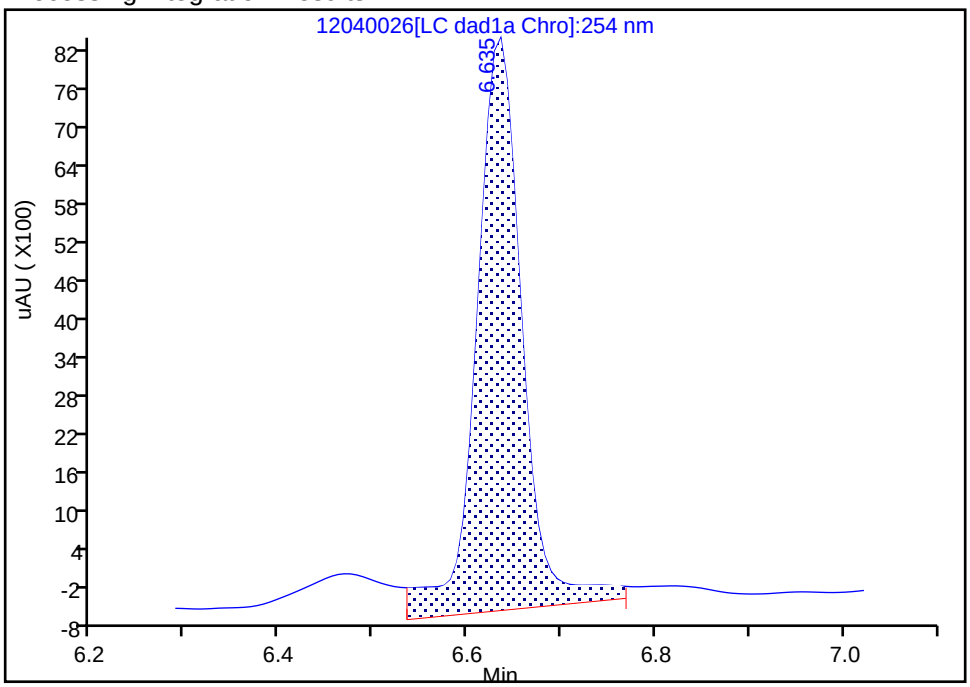
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Injection Date: 04-Dec-2024 22:28:52 Instrument ID: CHHPLC_X3
Lims ID: 280-200203-A-2-C MSD
Client ID:
Operator ID: JZ ALS Bottle#: 26 Worklist Smp#: 26
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

4 HMX, CAS: 2691-41-0

Signal: 1

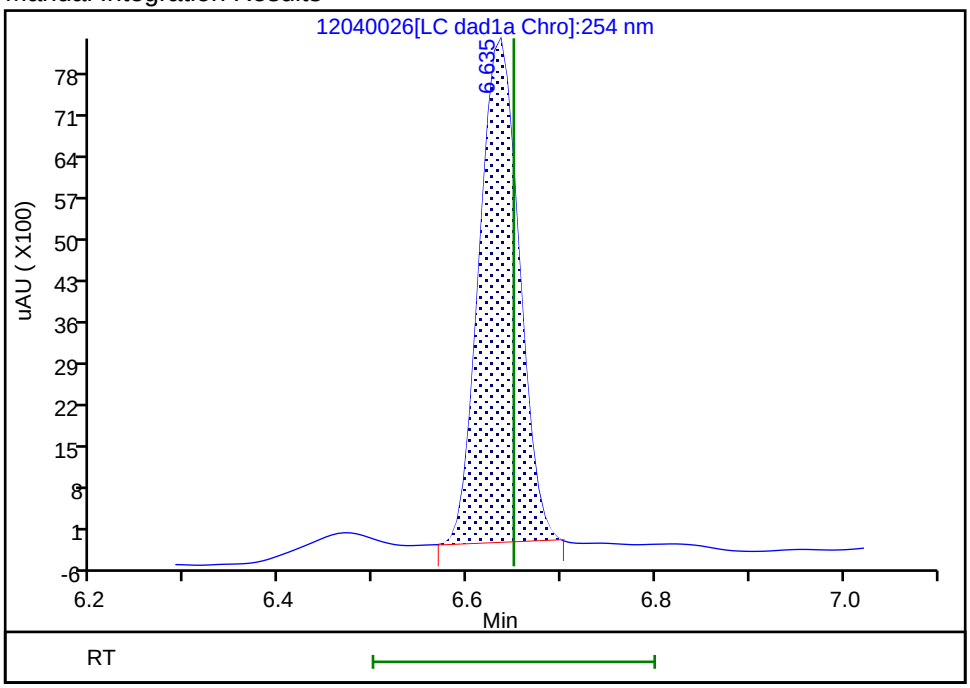
Processing Integration Results

RT: 6.64
Area: 30345
Amount: 0.313958
Amount Units: ug/mL



Manual Integration Results

RT: 6.64
Area: 25096
Amount: 0.259651
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 11:09:16 -07:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-200203-1

SDG No.:

Client Sample ID: P3HWMU-CONTAM-003-002 DU | Lab Sample ID: 280-200203-2 DU

Matrix: Solid | Lab File ID: 12040027.D

Analysis Method: 8330B MOD | Date Collected: 12/02/2024 12:44

Extraction Method: 8330B | Date Extracted: 12/03/2024 17:54

Sample wt/vol: +10.11(g) | Date Analyzed: 12/04/2024 22:50

Con. Extract Vol.: 40(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: 8.1 % Solids: 91.9 | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 677391 | Units: mg/Kg

Preparation Batch No.: 677232 | Instrument ID: CHHPLC_X3

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	0.043	U	0.11	0.043	0.015
99-65-0	1,3-Dinitrobenzene	0.043	U	0.11	0.043	0.018
118-96-7	2,4,6-Trinitrotoluene	0.616	M	0.11	0.075	0.033
121-14-2	2,4-Dinitrotoluene	0.043	U	0.11	0.043	0.016
606-20-2	2,6-Dinitrotoluene	0.043	U	0.11	0.043	0.021
35572-78-2	2-Amino-4,6-dinitrotoluene	0.111		0.11	0.075	0.035
88-72-2	o-Nitrotoluene	0.11	U	0.22	0.11	0.051
99-08-1	m-Nitrotoluene	0.16	U	0.22	0.16	0.069
19406-51-0	4-Amino-2,6-dinitrotoluene	0.133	M	0.11	0.075	0.032
99-99-0	p-Nitrotoluene	0.11	U	0.22	0.11	0.039
98-95-3	Nitrobenzene	0.22	U	0.32	0.22	0.091
55-63-0	Nitroglycerin	0.75	U	2.2	0.75	0.23
2691-41-0	HMX	0.203	M	0.11	0.075	0.024
78-11-5	PETN	1.1	U	2.2	1.1	0.53
121-82-4	RDX	0.445		0.22	0.11	0.046
479-45-8	Tetryl	0.11	U	0.22	0.11	0.047

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene (Surr)	100		78-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20241204-140455.b\12040027.D
Lims ID: 280-200203-A-2-D DU
Client ID:
Sample Type: DU
Inject. Date: 04-Dec-2024 22:50:53 ALS Bottle#: 27 Worklist Smp#: 27
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-200203-A-2-D DU
Operator ID: JZ Instrument ID: CHHPLC_X3

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20241204-140455.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 05-Dec-2024 11:14:25 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: CTX1637

First Level Reviewer: LV5D Date: 05-Dec-2024 11:09:42

	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		6.501				ND	7
	3 TNX	1		6.511				ND	
	4 HMX	1	6.638	6.649	-0.011	4564		0.0472	M
	5 2,4-diamino-6-nitrotoluene	1		6.681				ND	
	6 DNX	1		6.824				ND	
	7 MNX	1	7.211	7.224	-0.013	770		0.005792	
	8 RDX	1	7.564	7.576	-0.012	11013		0.1034	
	9 2,4,6-Trinitrophenol	1		7.949				ND	
$	10 1,2-Dinitrobenzene	1	8.411	8.436	-0.025	32660	0.2500	0.2504	
	11 1,3,5-Trinitrobenzene	1		8.543				ND	
	12 1,3-Dinitrobenzene	1		9.089				ND	
	13 Nitrobenzene	1		9.402				ND	
	14 3,5-Dinitroaniline	1	9.564	9.589	-0.025	857		0.004009	M
	15 Tetryl	1		9.702				ND	
	16 Nitroglycerin	2		10.142				ND	
	17 2,4,6-Trinitrotoluene	1	10.478	10.489	-0.011	31099		0.1431	M
	18 4-Amino-2,6-dinitrotoluene	1	10.604	10.622	-0.018	5081		0.0310	Ma
	19 2-Amino-4,6-dinitrotoluene	1	10.831	10.849	-0.018	5285		0.0258	
	20 2,6-Dinitrotoluene	1		10.989				ND	
	21 2,4-Dinitrotoluene	1		11.142				ND	
	22 o-Nitrotoluene	1		11.816				ND	
	23 p-Nitrotoluene	1		12.169				ND	
	24 m-Nitrotoluene	1		12.662				ND	
	25 PETN	2		13.669				ND	
	26 Ammonium Picrate	1		0.000				ND	

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection

Review Flags
M - Manually Integrated
a - User Assigned ID

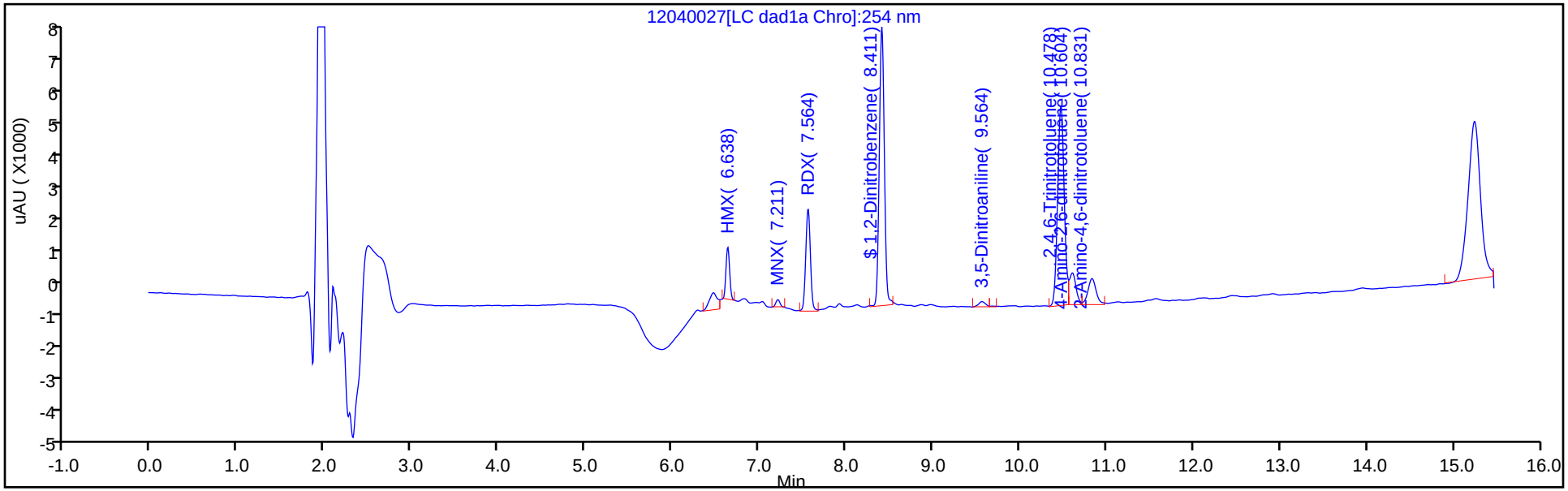
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Eurofins Denver

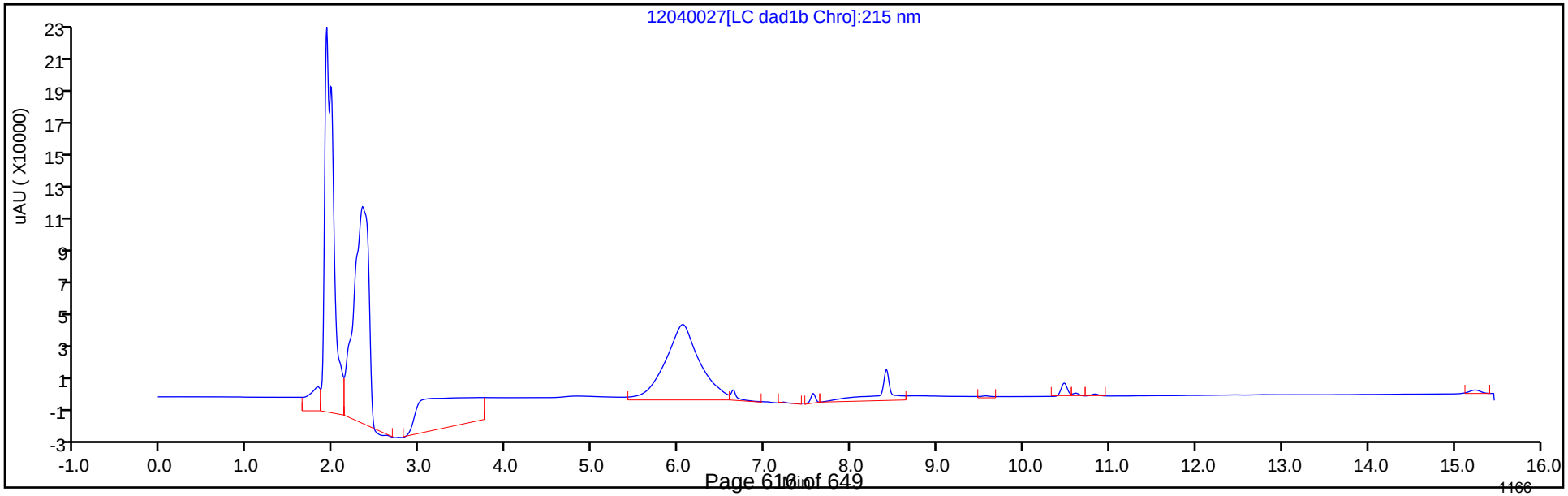
Data File: \\chromfs\denver\chromdata\chhplc_x\20241204-140455.b\12040027.d

Injection Date:	04-Dec-2024 22:50:53	Instrument ID:	CHHPLC_X3	Operator ID:	JZ
Lims ID:	280-200203-A-2-D DU			Worklist Smp#:	27
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	27
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



1166

Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20241204-140455.b\12040027.D
Lims ID: 280-200203-A-2-D DU
Client ID:
Sample Type: DU
Inject. Date: 04-Dec-2024 22:50:53 ALS Bottle#: 27 Worklist Smp#: 27
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-200203-A-2-D DU
Operator ID: JZ Instrument ID: CHHPLC_X3

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20241204-140455.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 05-Dec-2024 11:14:25 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: CTX1637

First Level Reviewer: LV5D Date: 05-Dec-2024 11:09:42

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2500	0.2504	100.18

Eurofins Denver

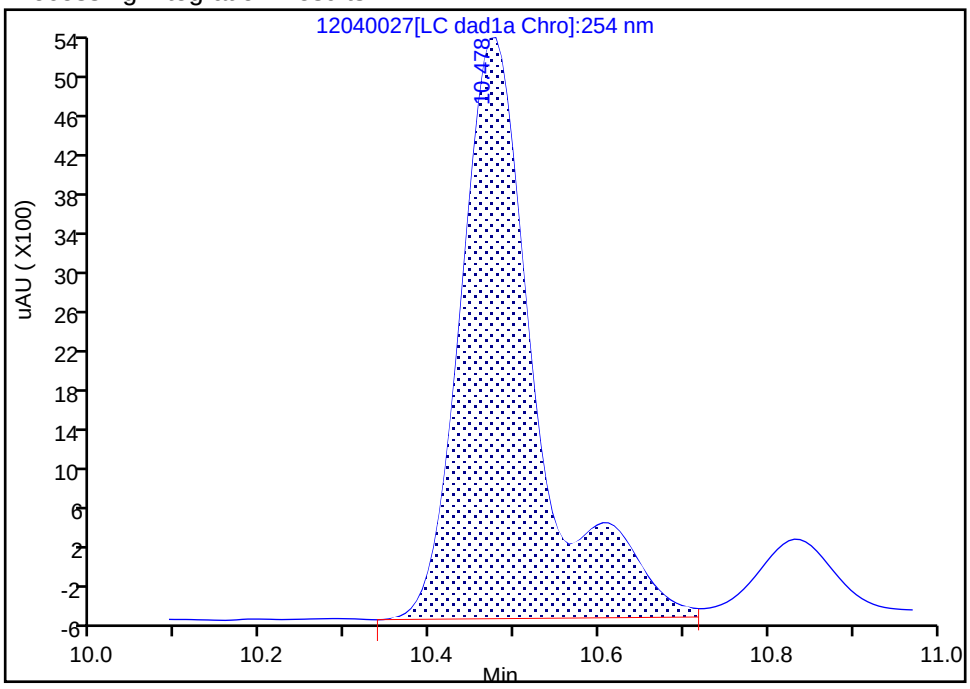
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Injection Date:	04-Dec-2024 22:50:53	Instrument ID:	CHHPLC_X3		
Lims ID:	280-200203-A-2-D DU				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	27	Worklist Smp#:	27
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

17 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

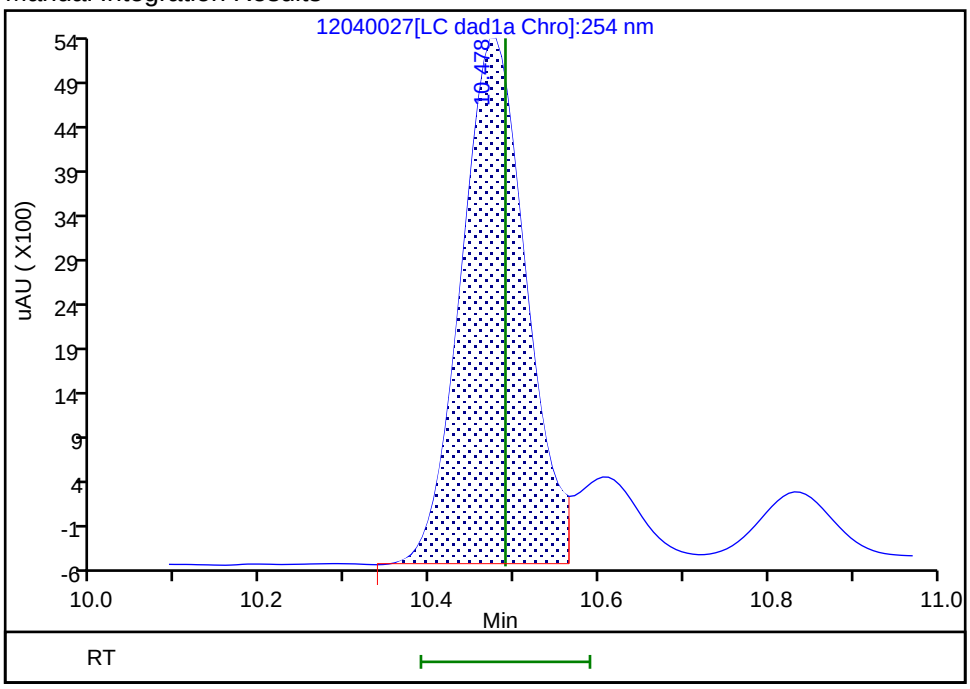
Processing Integration Results

RT: 10.48
Area: 36179
Amount: 0.166494
Amount Units: ug/mL



Manual Integration Results

RT: 10.48
Area: 31099
Amount: 0.143117
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 11:09:38 -07:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

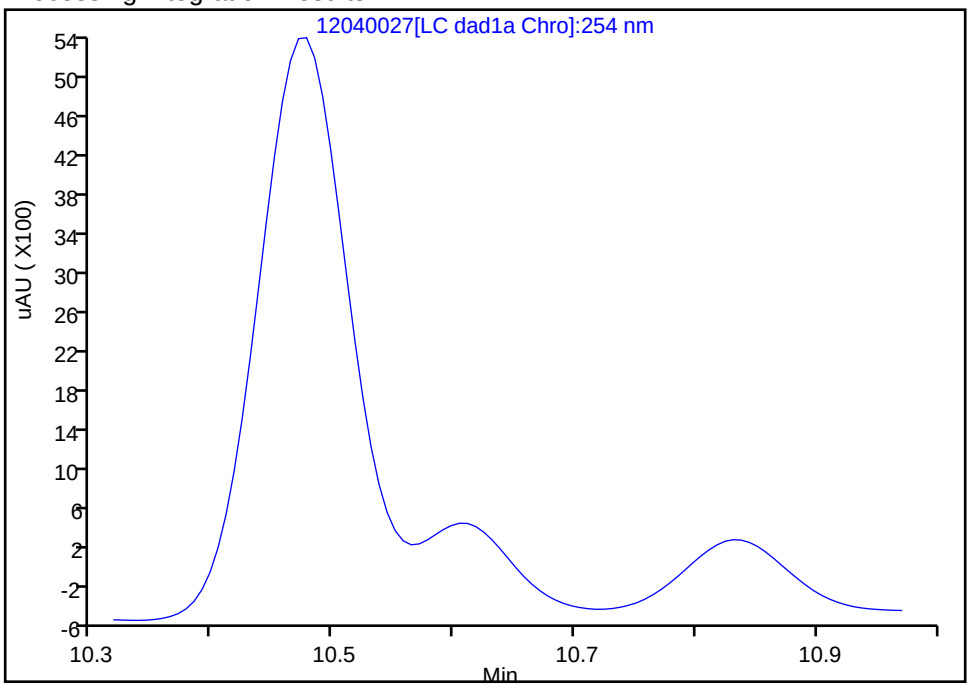
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241204-140455.b\12040027.d				
Injection Date:	04-Dec-2024 22:50:53	Instrument ID:	CHHPLC_X3		
Lims ID:	280-200203-A-2-D DU				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	27	Worklist Smp#:	27
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

18 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

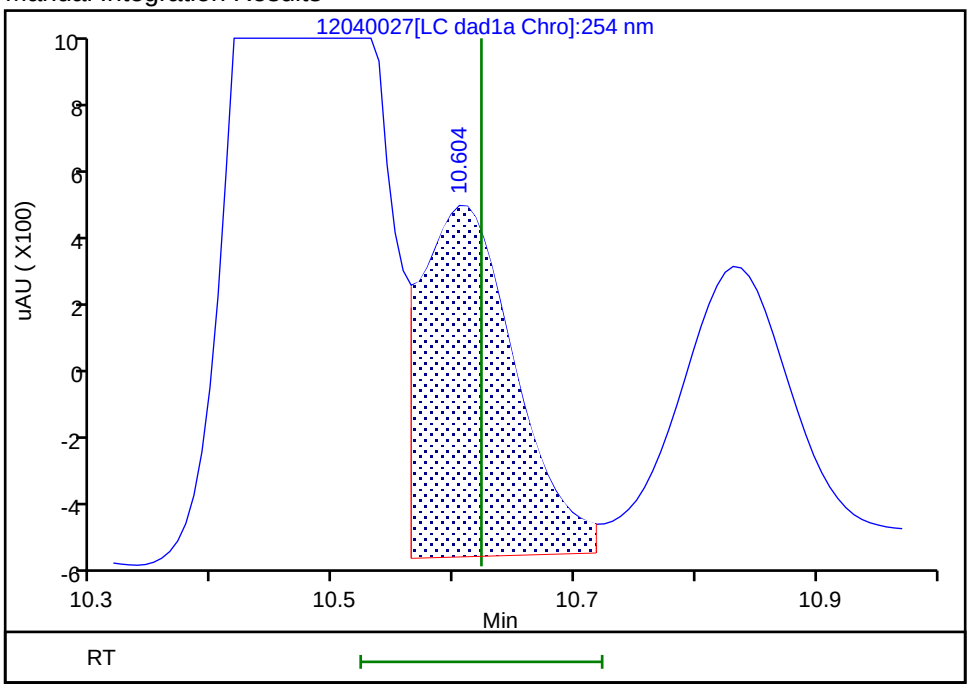
Not Detected
Expected RT: 10.62

Processing Integration Results



Manual Integration Results

RT: 10.60
Area: 5081
Amount: 0.031002
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 11:09:41 -07:00:00 (UTC)
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

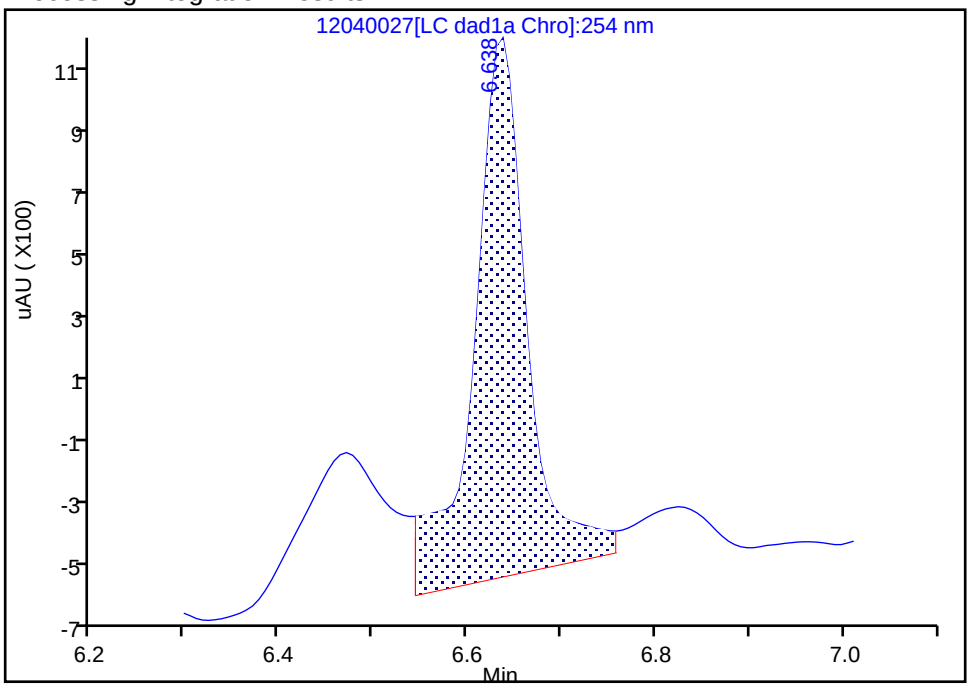
Data File: \\chromfs\denver\chromdata\chhplc_x\20241204-140455.b\12040027.d
Injection Date: 04-Dec-2024 22:50:53 Instrument ID: CHHPLC_X3
Lims ID: 280-200203-A-2-D DU
Client ID:
Operator ID: JZ ALS Bottle#: 27 Worklist Smp#: 27
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

4 HMX, CAS: 2691-41-0

Signal: 1

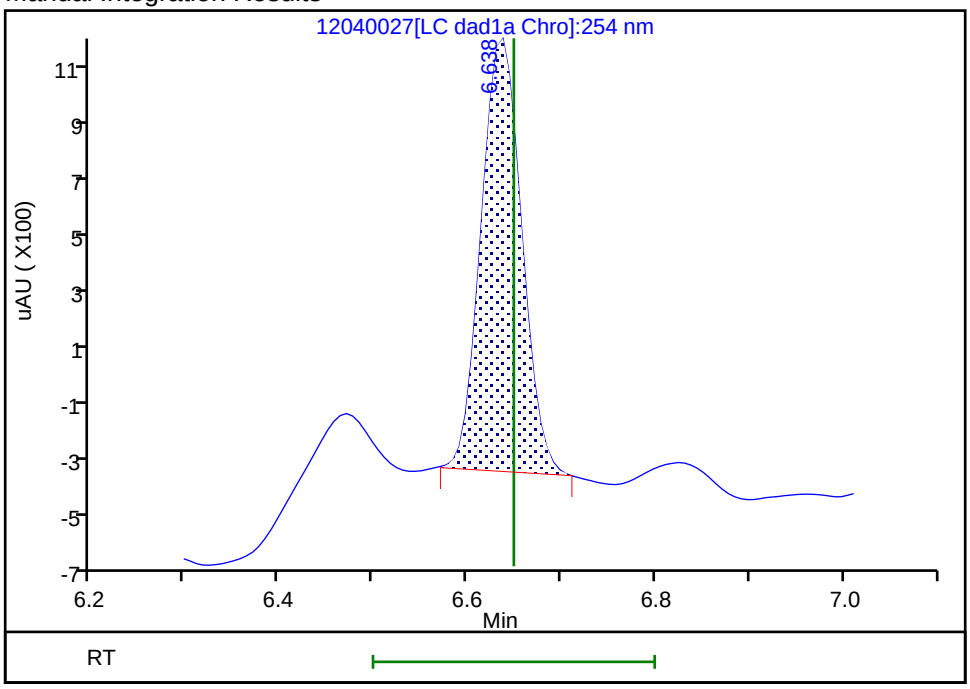
Processing Integration Results

RT: 6.64
Area: 6844
Amount: 0.070810
Amount Units: ug/mL



Manual Integration Results

RT: 6.64
Area: 4564
Amount: 0.047221
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 11:09:21 -07:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-200203-1

SDG No.:

Client Sample ID: P3HWMU-CONTAM-003-002 TRL | Lab Sample ID: 280-200203-2 TRL

Matrix: Solid | Lab File ID: 12040028.D

Analysis Method: 8330B MOD | Date Collected: 12/02/2024 12:44

Extraction Method: 8330B | Date Extracted: 12/03/2024 17:54

Sample wt/vol: +10.27(g) | Date Analyzed: 12/04/2024 23:12

Con. Extract Vol.: 40(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: 8.1 % Solids: 91.9 | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 677391 | Units: mg/Kg

Preparation Batch No.: 677232 | Instrument ID: CHHPLC_X3

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	0.042	U	0.11	0.042	0.015
99-65-0	1,3-Dinitrobenzene	0.042	U	0.11	0.042	0.018
118-96-7	2,4,6-Trinitrotoluene	4.96	M J1	0.11	0.074	0.033
121-14-2	2,4-Dinitrotoluene	0.042	U	0.11	0.042	0.016
606-20-2	2,6-Dinitrotoluene	0.042	U	0.11	0.042	0.020
35572-78-2	2-Amino-4,6-dinitrotoluene	0.123	J1	0.11	0.074	0.035
88-72-2	o-Nitrotoluene	0.11	U	0.21	0.11	0.050
99-08-1	m-Nitrotoluene	0.16	U	0.21	0.16	0.068
19406-51-0	4-Amino-2,6-dinitrotoluene	0.143	M	0.11	0.074	0.032
99-99-0	p-Nitrotoluene	0.11	U	0.21	0.11	0.039
98-95-3	Nitrobenzene	0.21	U	0.32	0.21	0.090
55-63-0	Nitroglycerin	0.74	U	2.1	0.74	0.23
2691-41-0	HMX	0.219	M	0.11	0.074	0.024
78-11-5	PETN	1.1	U	2.1	1.1	0.52
121-82-4	RDX	0.422		0.21	0.11	0.046
479-45-8	Tetryl	0.11	U	0.21	0.11	0.046

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene (Surr)	99		78-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20241204-140455.b\12040028.D
Lims ID: 280-200203-A-2-E TRL
Client ID:
Sample Type: TRL
Inject. Date: 04-Dec-2024 23:12:51 ALS Bottle#: 28 Worklist Smp#: 28
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-200203-A-2-E TRL
Operator ID: JZ Instrument ID: CHHPLC_X3

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20241204-140455.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 05-Dec-2024 11:14:25 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: CTX1637

First Level Reviewer: LV5D Date: 05-Dec-2024 11:10:33

	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	6.483	6.501	-0.018	978		-0.009560	7M
	3 TNX	1		6.511				ND	
	4 HMX	1	6.643	6.649	-0.006	5005		0.0518	M
	5 2,4-diamino-6-nitrotoluene	1		6.681				ND	
	6 DNX	1		6.824				ND	
	7 MNX	1	7.210	7.224	-0.014	798		0.006003	
	8 RDX	1	7.556	7.576	-0.020	10610		0.0996	
	9 2,4,6-Trinitrophenol	1		7.949				ND	
$	10 1,2-Dinitrobenzene	1	8.403	8.436	-0.033	32431	0.2500	0.2487	
	11 1,3,5-Trinitrobenzene	1		8.543				ND	
	12 1,3-Dinitrobenzene	1		9.089				ND	
	13 Nitrobenzene	1		9.402				ND	
	14 3,5-Dinitroaniline	1	9.556	9.589	-0.033	708		0.003370	
	15 Tetryl	1		9.702				ND	
	16 Nitroglycerin	2		10.142				ND	
	17 2,4,6-Trinitrotoluene	1	10.463	10.489	-0.026	254619		1.17	M
	18 4-Amino-2,6-dinitrotoluene	1	10.576	10.622	-0.046	5492		0.0339	Ma
	19 2-Amino-4,6-dinitrotoluene	1	10.816	10.849	-0.033	5939		0.0290	
	20 2,6-Dinitrotoluene	1		10.989				ND	
	21 2,4-Dinitrotoluene	1		11.142				ND	
	22 o-Nitrotoluene	1		11.816				ND	
	23 p-Nitrotoluene	1		12.169				ND	
	24 m-Nitrotoluene	1		12.662				ND	
	25 PETN	2		13.669				ND	
	26 Ammonium Picrate	1		0.000				ND	

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection

Review Flags
M - Manually Integrated
a - User Assigned ID

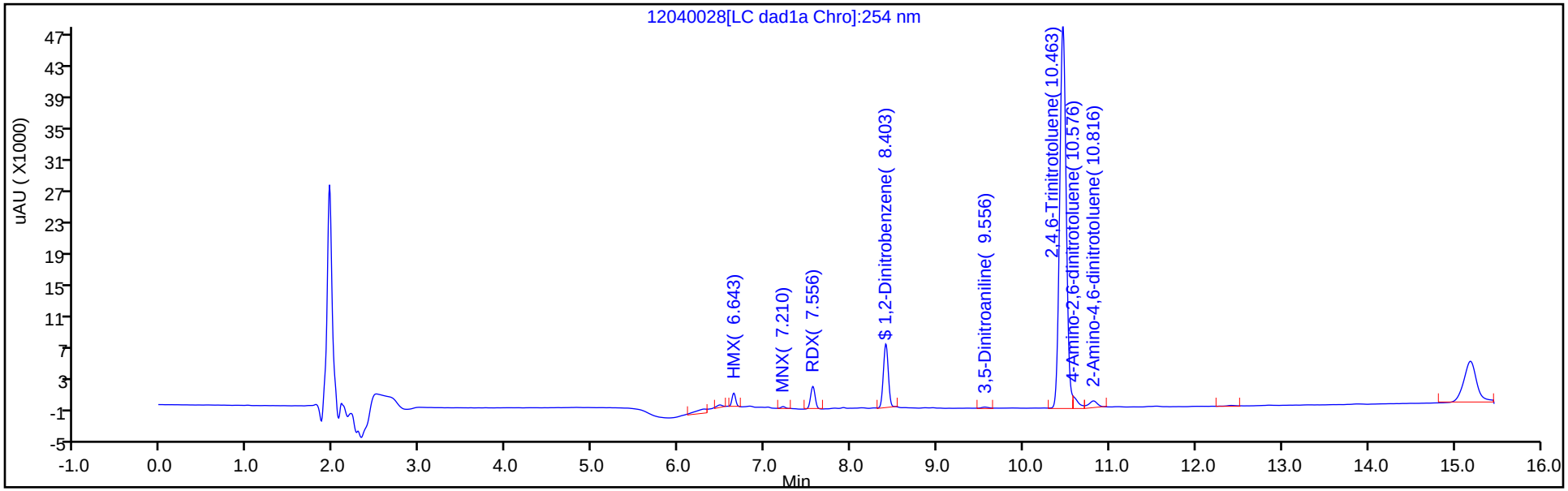
Report Date: 05-Dec-2024 11:14:32 Chrom Revision: 2.3 12-Nov-2024 16:55:22

Eurofins Denver

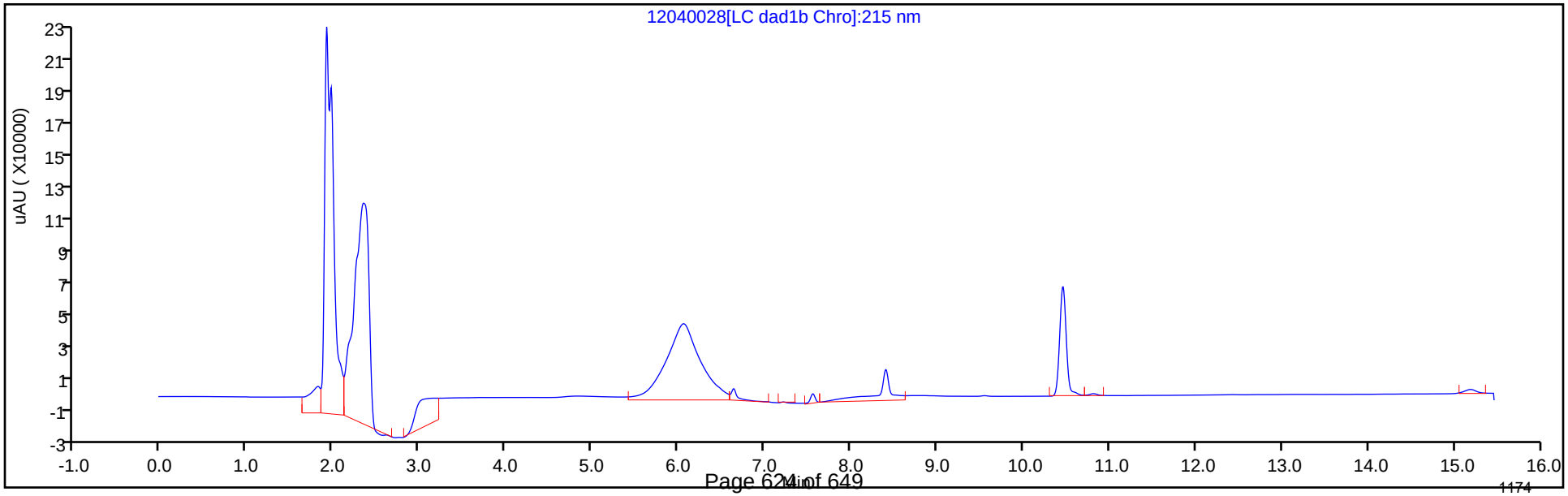
Data File: \\chromfs\denver\chromdata\chhplc_x\20241204-140455.b\12040028.d

Injection Date:	04-Dec-2024 23:12:51	Instrument ID:	CHHPLC_X3	Operator ID:	JZ
Lims ID:	280-200203-A-2-E TRL			Worklist Smp#:	28
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	28
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



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\20241204-140455.b\12040028.D				
Lims ID:	280-200203-A-2-E TRL				
Client ID:					
Sample Type:	TRL				
Inject. Date:	04-Dec-2024 23:12:51	ALS Bottle#:	28	Worklist Smp#:	28
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-200203-A-2-E TRL				
Operator ID:	JZ	Instrument ID:	CHHPLC_X3		
Method:	\\chromfs\Denver\ChromData\CHHPLC_X\20241204-140455.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	05-Dec-2024 11:14:25	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:	CTX1637				

First Level Reviewer: LV5D Date: 05-Dec-2024 11:10:33

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2500	0.2487	99.47

Manual Integration/User Assign Peak Report

Eurofins Denver

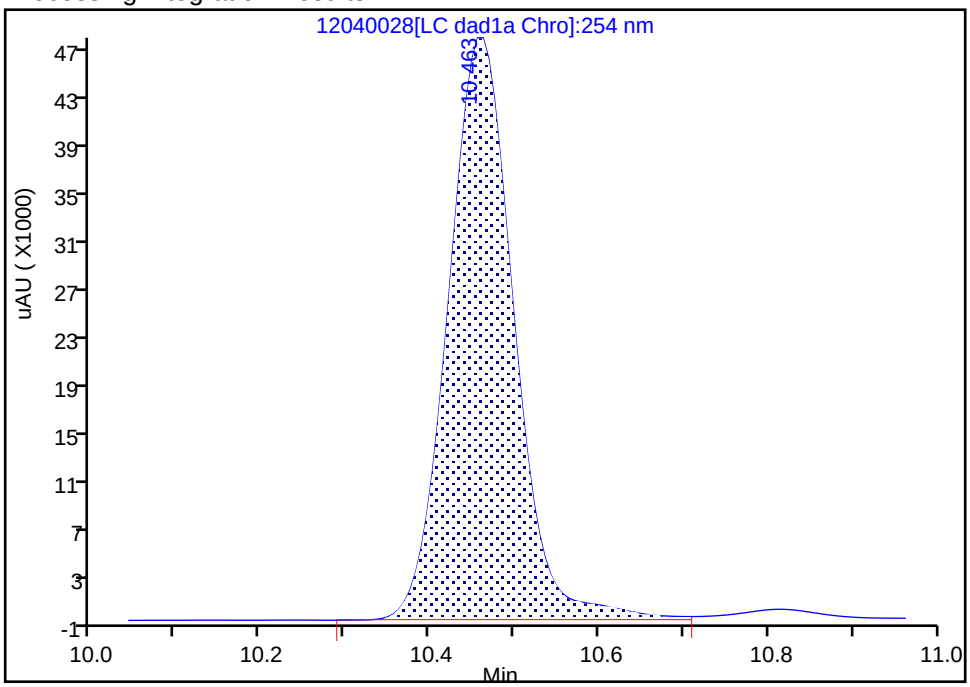
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Injection Date:	04-Dec-2024 23:12:51	Instrument ID:	CHHPLC_X3		
Lims ID:	280-200203-A-2-E TRL				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	28	Worklist Smp#:	28
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

17 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

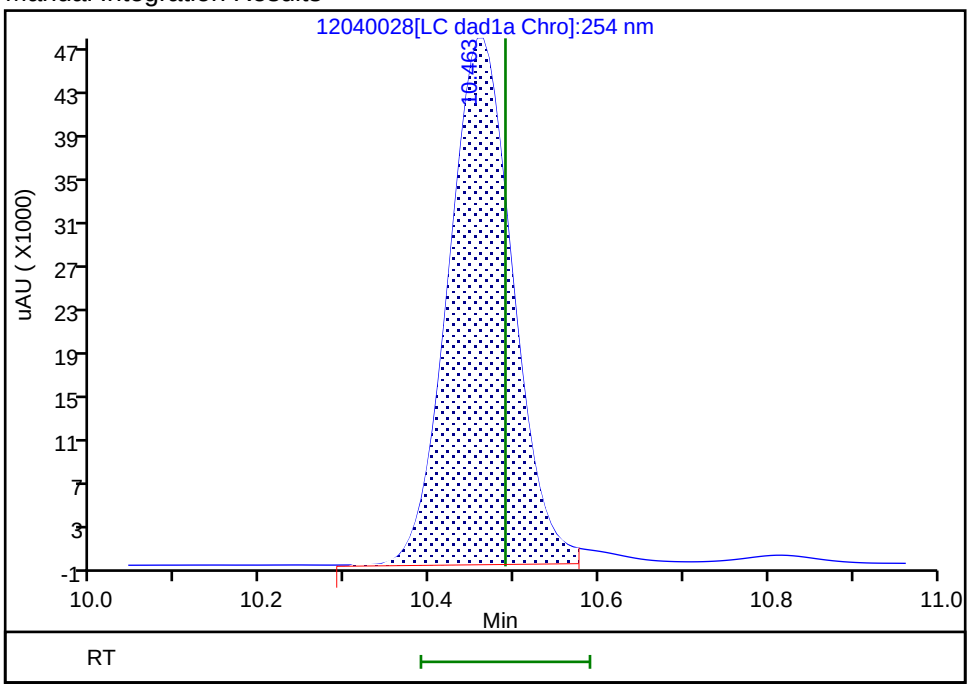
Processing Integration Results

RT: 10.46
Area: 260096
Amount: 1.196953
Amount Units: ug/mL



Manual Integration Results

RT: 10.46
Area: 254619
Amount: 1.171748
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 11:10:30 -07:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

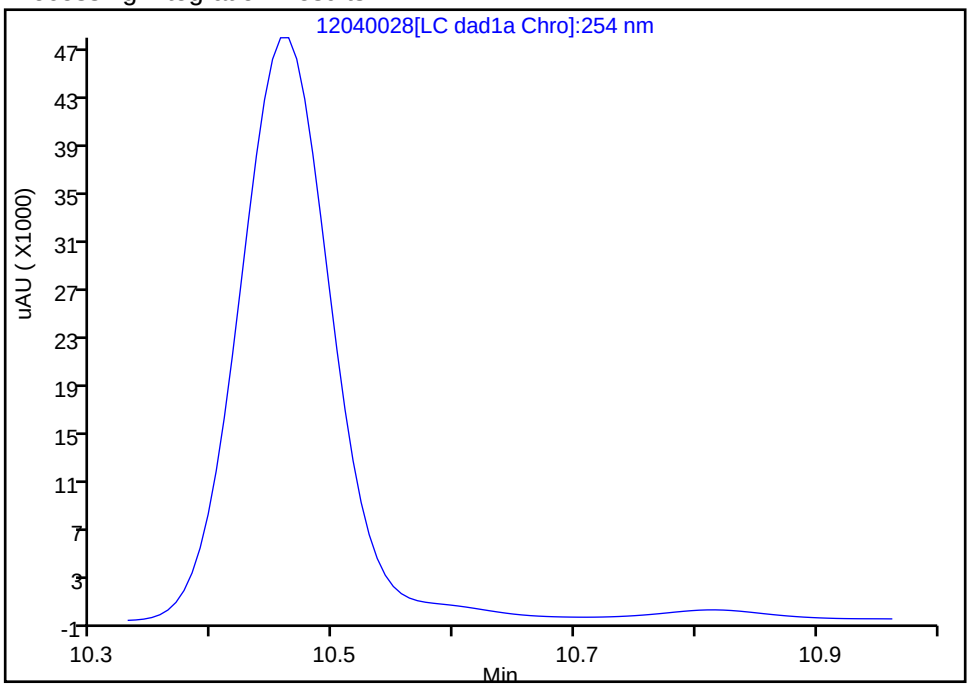
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241204-140455.b\12040028.d				
Injection Date:	04-Dec-2024 23:12:51	Instrument ID:	CHHPLC_X3		
Lims ID:	280-200203-A-2-E TRL				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	28	Worklist Smp#:	28
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

18 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

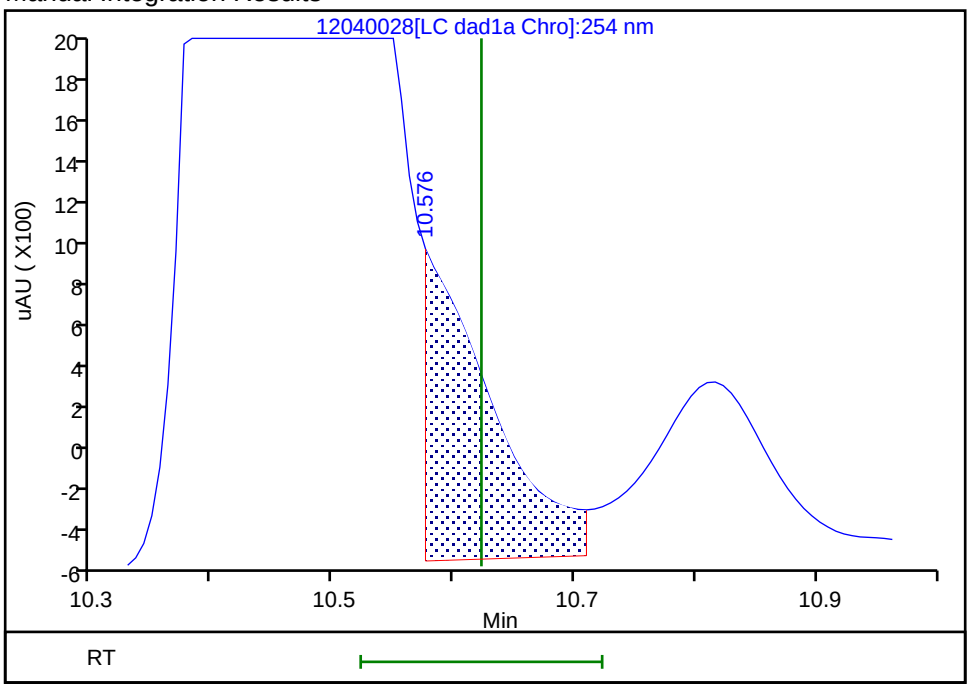
Not Detected
Expected RT: 10.62

Processing Integration Results



Manual Integration Results

RT: 10.58
Area: 5492
Amount: 0.033862
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 11:10:32 -07:00:00 (UTC)
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

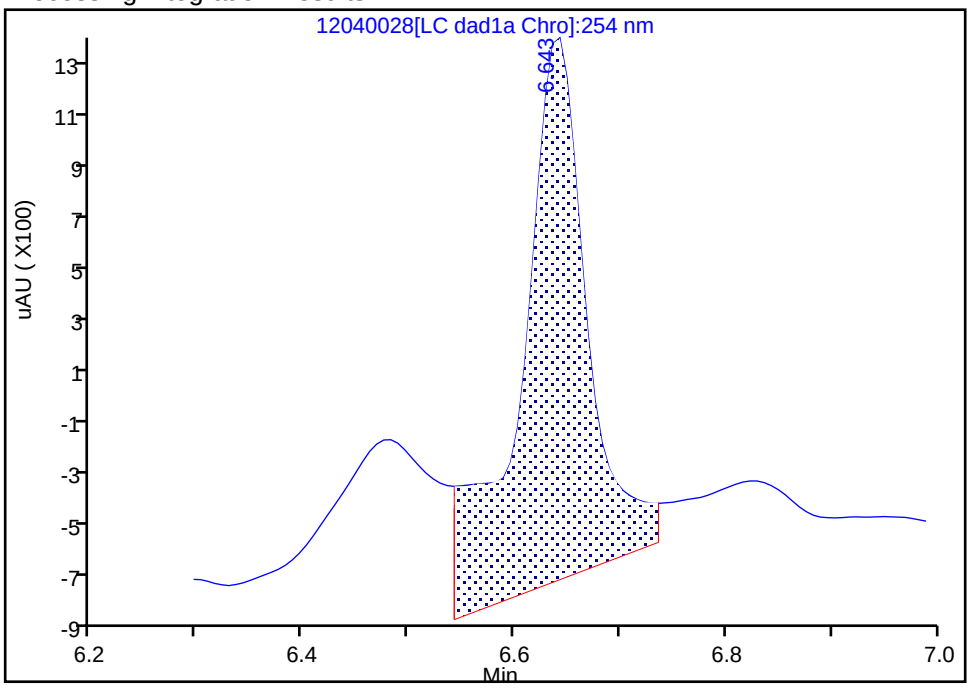
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241204-140455.b\12040028.d				
Injection Date:	04-Dec-2024 23:12:51	Instrument ID:	CHHPLC_X3		
Lims ID:	280-200203-A-2-E TRL				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	28	Worklist Smp#:	28
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

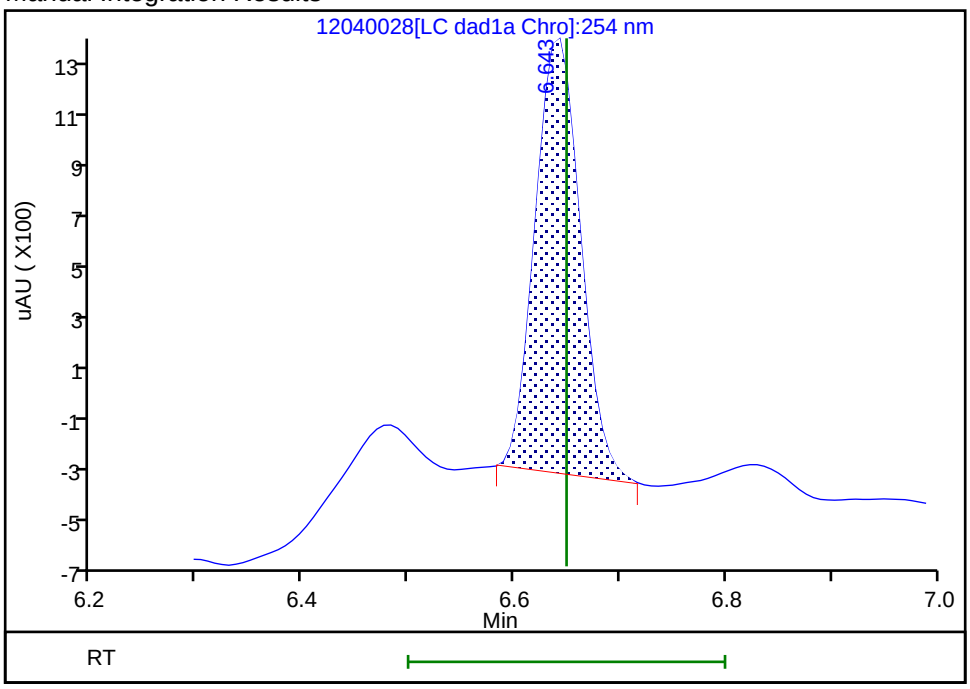
Processing Integration Results

RT: 6.64
Area: 8876
Amount: 0.091834
Amount Units: ug/mL



Manual Integration Results

RT: 6.64
Area: 5005
Amount: 0.051783
Amount Units: ug/mL



Reviewer: LV5D, 05-Dec-2024 11:10:17 -07:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Start Date: 04/24/2024 21:28

Analysis Batch Number: 650851 End Date: 04/25/2024 08:15

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 280-650851/10		04/24/2024 21:28	1	04240010.D	Luna-phenylhex 4.6(mm)
IC 280-650851/11		04/24/2024 22:04	1	04240011.D	Luna-phenylhex 4.6(mm)
IC 280-650851/12		04/24/2024 22:40	1	04240012.D	Luna-phenylhex 4.6(mm)
IC 280-650851/13		04/24/2024 23:16	1	04240013.D	Luna-phenylhex 4.6(mm)
IC 280-650851/14		04/24/2024 23:51	1	04240014.D	Luna-phenylhex 4.6(mm)
IC 280-650851/15		04/25/2024 00:27	1	04240015.D	Luna-phenylhex 4.6(mm)
IC 280-650851/16		04/25/2024 01:03	1	04240016.D	Luna-phenylhex 4.6(mm)
IC 280-650851/17		04/25/2024 01:39	1	04240017.D	Luna-phenylhex 4.6(mm)
IC 280-650851/18		04/25/2024 02:15	1	04240018.D	Luna-phenylhex 4.6(mm)
ICV 280-650851/19		04/25/2024 02:51	1	04240019.D	Luna-phenylhex 4.6(mm)
IC 280-650851/20		04/25/2024 03:27	1		Luna-phenylhex 4.6(mm)
IC 280-650851/21		04/25/2024 04:03	1		Luna-phenylhex 4.6(mm)
IC 280-650851/22		04/25/2024 04:39	1		Luna-phenylhex 4.6(mm)
IC 280-650851/23		04/25/2024 05:15	1		Luna-phenylhex 4.6(mm)
IC 280-650851/24		04/25/2024 05:51	1		Luna-phenylhex 4.6(mm)
IC 280-650851/25		04/25/2024 06:27	1		Luna-phenylhex 4.6(mm)
IC 280-650851/26		04/25/2024 07:03	1		Luna-phenylhex 4.6(mm)
IC 280-650851/27		04/25/2024 07:39	1		Luna-phenylhex 4.6(mm)
ICV 280-650851/28		04/25/2024 08:15	1		Luna-phenylhex 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-200203-1

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.: 280-200203-1

SDG No.:

Instrument ID: CHHPLC_X3 Start Date: 12/04/2024 20:17

Analysis Batch Number: 677391 End Date: 12/04/2024 23:56

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 280-677391/20		12/04/2024 20:17	1	12040020.D	UltraCarb5uODS 4.6(mm)
MB 280-677232/1-A		12/04/2024 20:39	1	12040021.D	UltraCarb5uODS 4.6(mm)
LCS 280-677232/2-A		12/04/2024 21:01	1	12040022.D	UltraCarb5uODS 4.6(mm)
280-200203-1	P3HWMU-CONTAM-001-002	12/04/2024 21:23	1	12040023.D	UltraCarb5uODS 4.6(mm)
280-200203-2	P3HWMU-CONTAM-003-002	12/04/2024 21:45	1	12040024.D	UltraCarb5uODS 4.6(mm)
280-200203-2 MS	P3HWMU-CONTAM-003-002 MS	12/04/2024 22:06	1	12040025.D	UltraCarb5uODS 4.6(mm)
280-200203-2 MSD	P3HWMU-CONTAM-003-002 MSD	12/04/2024 22:28	1	12040026.D	UltraCarb5uODS 4.6(mm)
280-200203-2 DU	P3HWMU-CONTAM-003-002 DU	12/04/2024 22:50	1	12040027.D	UltraCarb5uODS 4.6(mm)
280-200203-2 TRL	P3HWMU-CONTAM-003-002 TRL	12/04/2024 23:12	1	12040028.D	UltraCarb5uODS 4.6(mm)
CCV 280-677391/30		12/04/2024 23:56	1	12040030.D	UltraCarb5uODS 4.6(mm)

8330B MOD

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Instrument ID: CHHPLC_X3 Start Date: 12/05/2024 16:40

Analysis Batch Number: 677520 End Date: 12/05/2024 17:24

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 280-677520/7		12/05/2024 16:40	1	12050007.D	UltraCarb5uODS 4.6(mm)
280-200203-3	P2-ARROYO-005-002	12/05/2024 17:02	200	12050011.D	UltraCarb5uODS 4.6(mm)
CCV 280-677520/12		12/05/2024 17:24	1	12050012.D	UltraCarb5uODS 4.6(mm)

8330B MOD

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Start Date: 12/05/2024 18:06

Analysis Batch Number: 677524 End Date: 12/06/2024 00:05

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 280-677524/7		12/05/2024 18:06	1	12050007.D	Luna-phenylhex 4.6(mm)
ZZZZZ (QC)		12/05/2024 18:42	1		Luna-phenylhex 4.6(mm)
ZZZZZ (QC)		12/05/2024 19:18	1		Luna-phenylhex 4.6(mm)
280-200203-1	P3HWMU-CONTAM-001-002	12/05/2024 19:53	1	12050012.D	Luna-phenylhex 4.6(mm)
280-200203-3	P2-ARROYO-005-002	12/05/2024 23:29	200	12050018.D	Luna-phenylhex 4.6(mm)
CCV 280-677524/19		12/06/2024 00:05	1	12050019.D	Luna-phenylhex 4.6(mm)

8330B MOD

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Instrument ID: CHHPLC_G2_LUNA Start Date: 12/06/2024 15:52

Analysis Batch Number: 677657 End Date: 12/06/2024 19:28

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 280-677657/7		12/06/2024 15:52	1	12060007.D	Luna-phenylhex 4.6(mm)
280-200203-2	P3HWMU-CONTAM-003-002	12/06/2024 16:28	1	12060010.D	Luna-phenylhex 4.6(mm)
ZZZZZ (QC)		12/06/2024 17:04	1		Luna-phenylhex 4.6(mm)
ZZZZZ (QC)		12/06/2024 17:40	1		Luna-phenylhex 4.6(mm)
ZZZZZ (QC)		12/06/2024 18:16	1		Luna-phenylhex 4.6(mm)
ZZZZZ (QC)		12/06/2024 18:52	1		Luna-phenylhex 4.6(mm)
CCV 280-677657/15		12/06/2024 19:28	1	12060015.D	Luna-phenylhex 4.6(mm)

8330B MOD

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Batch Number: 650851 Batch Start Date: 04/24/24 21:28 Batch Analyst: Zhang, Jian

Batch Method: 8330B MOD Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	FinalAmount	8330 LCS 00134	8330IntermStk 00080	8330Surrogate 00154		
IC 280-650851/10		8330B MOD			1 mL		250 uL			
IC 280-650851/11		8330B MOD			1 mL		100 uL			
IC 280-650851/12		8330B MOD			1 mL		70 uL			
IC 280-650851/13		8330B MOD			1 mL		40 uL			
IC 280-650851/14		8330B MOD			1 mL		25 uL			
IC 280-650851/15		8330B MOD			1 mL		10 uL			
IC 280-650851/16		8330B MOD			1 mL		5 uL			
IC 280-650851/17		8330B MOD			1 mL		2 uL			
IC 280-650851/18		8330B MOD			1 mL		1 uL			
ICV 280-650851/19		8330B MOD			1 mL	50 uL		50 uL		

Batch Notes	
Methanol ID	233990

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.: 280-200203-1

SDG No.:

Batch Number: 669870 Batch Start Date: 10/04/24 16:59 Batch Analyst: Zhang, Jian

Batch Method: 8330B MOD 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 MOD			1 mL	125 uL			250 uL	
IC 280-669870/12		8330B MOD			1 mL	50 uL			100 uL	
IC 280-669870/13		8330B MOD			1 mL	35 uL			70 uL	
IC 280-669870/14		8330B MOD			1 mL	20 uL			40 uL	
IC 280-669870/15		8330B MOD			1 mL	12.5 uL			25 uL	
IC 280-669870/16		8330B MOD			1 mL	5 uL			10 uL	
IC 280-669870/17		8330B MOD			1 mL	2.5 uL			5 uL	
IC 280-669870/18		8330B MOD			1 mL	1 uL			2 uL	
IC 280-669870/19		8330B MOD			1 mL	0.5 uL			1 uL	
ICV 280-669870/20		8330B MOD			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.: 280-200203-1

SDG No.:

Batch Number: 677232 Batch Start Date: 12/03/24 17:54 Batch Analyst: Lee, David C

Batch Method: 8330B Batch End Date: 12/04/24 13:59

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	InitialAmount	FinalAmount	8330 LCS 00138	8330Surrogate 00160		
MB 280-677232/1		8330B, 8330B MOD			10 g	40 mL		1 mL		
LCS 280-677232/2		8330B, 8330B MOD			10 g	40 mL	1 mL	1 mL		
280-200203-A-1	P3HWMU-CONTAM-001-002	8330B, 8330B MOD	Solid	T	+10.09 g	40 mL		1 mL		
280-200203-A-2	P3HWMU-CONTAM-003-002	8330B, 8330B MOD	Solid	T	+10.30 g	40 mL		1 mL		
280-200203-A-2 MS	P3HWMU-CONTAM-003-002	8330B, 8330B MOD		T	+10.08 g	40 mL	1 mL	1 mL		
280-200203-A-2 MSD	P3HWMU-CONTAM-003-002	8330B, 8330B MOD		T	+10.87 g	40 mL	1 mL	1 mL		
280-200203-A-2 DU	P3HWMU-CONTAM-003-002	8330B, 8330B MOD		T	+10.11 g	40 mL		1 mL		
280-200203-A-2 TRL	P3HWMU-CONTAM-003-002	8330B, 8330B MOD		T	+10.27 g	40 mL		1 mL		
280-200203-A-3	P2-ARROYO-005-002	8330B, 8330B MOD	Solid	T	+10.46 g	40 mL		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.: 280-200203-1

SDG No.:

Batch Number: 677232 Batch Start Date: 12/03/24 17:54 Batch Analyst: Lee, David C

Batch Method: 8330B Batch End Date: 12/04/24 13:59

Batch Notes	
Solvent Name	0.1%AAinACN
Solvent Lot #	0.1%AAinACN_00248
Prep Solvent Volume Used	20 mL
Analyst ID - Reagent Drop Witness	Reviewer: Self
Analyst ID - Concentration	Spike Analyst: DL;Filtration Analyst: DL
Balance ID	38602403
Balance is Level? (Y/N)	yes
Blank Sand Lot #	ottawa_sand_0012
Pipette ID for Solvent	Firine
Pipette ID	Luz
Sonication Start Time	12/3/24 18:04
Sonication Stop Time	12/4/24 12:04
Filter Type	0.2µm PTFE, Fisherbrand
Filter ID	0000353726
SOP Number	DV-OP-0018
Batch Comment	Shaker Table: Innova

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job Number: 280-200203-1

SDG No.:

Project: Fort Wingate Depot Activity (FWDA)

Client Sample ID	Lab Sample ID
P3HWMU-CONTAM-001-002	280-200203-1
P3HWMU-CONTAM-003-002	280-200203-2
P2-ARROYO-005-002	280-200203-3

Comments:

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job Number: 280-200203-1

SDG Number:

Matrix: Solid Instrument ID: % M 2

Method: Moisture LOQ Date: 11/01/2009 00:00

Analyte	Wavelength/ Mass	LOQ (%)	
Percent Moisture		0.1	

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Instrument ID: % M 2 Analysis Method: Moisture

Start Date: 12/05/2024 12:53 End Date: 12/05/2024 16:33

Lab Sample Id	D/F	Type	Time	Analytes																								
				Moist																								
280-200203-1	1	T	12:53	X																								
280-200203-1 DU	1	T	12:53	X																								
280-200203-2	1	T	12:53	X																								
280-200203-3	1	T	12:53	X																								
ZZZZZZ (Client)			12:53																									
ZZZZZZ (Client)			12:53																									
ZZZZZZ (Client)			12:53																									
ZZZZZZ (Client)			12:53																									
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ZZZZZZ (Client)			14:43																									
ZZZZZZ (Client)			14:43																									
ZZZZZZ (QC)			14:43																									
ZZZZZZ (Client)			14:43																									
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ZZZZZZ (Client)			14:43																									
ZZZZZZ (Client)			14:43																									
ZZZZZZ (Client)			14:43																									
ZZZZZZ (Client)			14:43																									
ZZZZZZ (Client)			14:43																									
ZZZZZZ (Client)			14:43																									
ZZZZZZ (Client)			14:43																									
ZZZZZZ (Client)			14:43																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Instrument ID: % M 2 Analysis Method: Moisture

Start Date: 12/05/2024 12:53 End Date: 12/05/2024 16:33

Lab Sample Id	D/F	Type	Time	Analytes																								
				Moist																								
ZZZZZZ (Client)			14:43																									
ZZZZZZ (Client)			14:43																									
ZZZZZZ (Client)			14:43																									
ZZZZZZ (QC)			14:43																									
ZZZZZZ (Client)			14:43																									
ZZZZZZ (Client)			14:43																									
ZZZZZZ (Client)			16:33																									

Prep Types:
T = Total/NA

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Batch Number: 677519 Batch Start Date: 12/05/24 12:53 Batch Analyst: Long, Emma

Batch Method: Moisture Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	DISH#	DishWeight	SampleMassWet	SampleMassDry	%_Moisture	%_Solid
280-200203-A-1	P3HWMU-CONTAM-001-002	Moisture	Solid	T	1	0.99 g	15.20 g	14.01 g	8.374384236453 2 %	91.625615763554 68 %
280-200203-A-1 DU	P3HWMU-CONTAM-001-002	Moisture		T	2	0.99 g	15.17 g	13.98 g	8.392101551481 01 %	91.607898448519 %
280-200203-A-2	P3HWMU-CONTAM-003-002	Moisture	Solid	T	3	0.98 g	15.63 g	14.45 g	8.054607508532 4 %	91.945392491467 6 %
280-200203-A-3	P2-ARROYO-005-002	Moisture	Solid	T	4	1.01 g	15.19 g	14.21 g	6.911142454160 8 %	93.088857545839 2 %

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	Quarantine_Hazard	AnalysisComment				
280-200203-A-1	P3HWMU-CONTAM-001-002	Moisture	Solid	T	N	ERL				
280-200203-A-1 DU	P3HWMU-CONTAM-001-002	Moisture		T	N	ERL				
280-200203-A-2	P3HWMU-CONTAM-003-002	Moisture	Solid	T	N	ERL				
280-200203-A-3	P2-ARROYO-005-002	Moisture	Solid	T	N	ERL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-200203-1

SDG No.:

Batch Number: 677519 Batch Start Date: 12/05/24 12:53 Batch Analyst: Long, Emma

Batch Method: Moisture Batch End Date:

Batch Notes	
Balance ID	24750836
Balance is Level? (Y/N)	yes
Oven ID	E
Thermometer ID	1354
Date samples were placed in the oven	12/05/2024
Time samples were place in the oven	17:00
Temperature - Start - Uncorrected	103 Degrees C
Oven Temp In	104 Degrees C
Date samples were removed from oven	12/06/2024
Time Samples were removed from oven	09:37
Analyst ID - Weighing	WC DPT (wet)
Temperature - End - Uncorrected	103 Degrees C
Oven Temp Out	104 Degrees C
Date and Time Samples in Desiccator	12/06/2024 09:38
Date and Time Samples out of Desiccator	12/06/2024 11:51
Batch Comment	WC DPT

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

General Chemistry Raw Data Report

Job ID: 280-200203-1

Batch: 677519
Method: Moisture

Analyst Initials: EL
Instrument: Moisture Analyzer

Lab Sample ID: 280-200203-A-1

Analysis Date: Dec 05, 2024 12:53

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	8.3743842364532	%

Lab Sample ID: 280-200203-A-1 DU

Analysis Date: Dec 05, 2024 12:53

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	8.39210155148101	%

Lab Sample ID: 280-200203-A-2

Analysis Date: Dec 05, 2024 12:53

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	8.0546075085324	%

Lab Sample ID: 280-200203-A-3

Analysis Date: Dec 05, 2024 12:53

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	6.9111424541608	%

Shipping and Receiving Documents

Project Name: Parcel 3 Closure and Corrective Action	Project #: 60517380 Task 3	AECOM 12120 Shamrock Plaza #100 Omaha NE 68154	AECOM
Sampler: Jeff Hayes	Project Mgr John C. Carson PE	Analytical Parameters	402.334.8181

Page 1 of 1

Date	Time	Comp	Grab	ID	Matrix	# Containers	Cont Type	VOC's 8260B	SVOC's 8270E	PCB's 8082A	Explosives 8330B	Perchlorates 6865	Metals 6010A.6020B.7471B+Hg	Nitrate 9056A	Cyanide 9014			
12/2/2024	11:53	X		P3HWMU-CONTAM-001-002	soil	1	4oz Jar				X							4C
12/2/2024	12:44	X		P3HWMU-CONTAM-003-002	soil	1	4oz Jar				X							4C
12/2/2024	11:14	X		P2-ARROYO-005-002	soil	1	4oz Jar				X							4C

280-200203 Chain of Custody

Relenquished By: *Jeffrey Hayes*			
Received By: 12/3/24	12/2/2024	FEDEX 7704-2087-2570 overnight	**AECOM Chemist:**
Relenquished By: 9"25	Ship Time: 1600	To: EUROFINS DENVER ATTN: /Shelby McCabe 4955 YARROW STREET ARVADA, CO 80002	Wanda Davis 302-465-1997 Brian Rothmeyer 303-619-6342
Rcv'd for Lab by:	5 day TAT REQUESTED		

1.6 IR PABV CF O Z

NO. 141905

Login Sample Receipt Checklist

Client: AECOM Technical Services Inc

Job Number: 280-200203-1

Login Number: 200203
List Number: 1
Creator: Roehsner, Karen P

List Source: Eurofins Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Brian Rothmeyer
AECOM Technical Services Inc
7595 Technology Way
Denver CO 80237

Generated 12/27/2024 5:54 AM

JOB DESCRIPTION

Fort Wingate Depot Activity (FWDA)

JOB NUMBER

280-200917-1

Eurofins Denver
4955 Yarrow Street
Arvada CO 80002

See page two for job notes and contact information.

my EOL

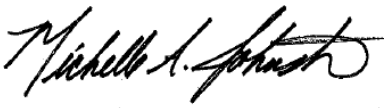
Eurofins Denver

Job Notes

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Authorization



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12/27/2024 5:54 AM

Authorized for release by
Michelle A Johnston, Project Manager II
Michelle.Johnston@et.eurofinsus.com
Designee for
Shelby R McCabe, Project Manager I
Shelby.McCabe@et.eurofinsus.com
303 736-0165

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Qualifiers

HPLC/IC

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

Glossary

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

Job Narrative
280-200917-1

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 sample was received on 12/17/2024 10:10 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.8°C.

Method 8330B MOD - Nitroaromatics and Nitramines (HPLC)
Sample P2-ARROYO-005-003 (280-200917-1) was analyzed for Nitroaromatics and Nitramines (HPLC). The sample was prepared on 12/18/2024 and analyzed on 12/19/2024 and 12/21/2024.

A deviation from the Standard Operating Procedure (SOP) occurred. Details are as follows: Per client request the following samples in preparation batch 280-678945 were treated as discrete samples where they were aliquotted, but did not have ISM performed: P2-ARROYO-005-003 (280-200917-1), (280-200917-A-1 DU), (280-200917-A-1 MS), (280-200917-A-1 MSD) and (280-200917-A-1 TRL). The prep for these samples deviated from SOP as they were not ISM aliquotted as required by DV-OP-0013 section 10.6 and did not have an ISM pre-prep as required by DV-OP-0018 section 1.3.1.

The method blank for preparation batch 280-678945 contained 1,3,5-Trinitrobenzene less than one-half the reporting limit (RL). None of the samples associated with this method blank contained the target compound; therefore, re-extraction and/or re-analysis of samples were not performed. The following samples are impacted: P2-ARROYO-005-003 (280-200917-1), (MB 280-678945/1-A), (280-200917-A-1-D DU), (280-200917-A-1-B MS), (280-200917-A-1-C MSD) and (280-200917-A-1-E TRL).

The sample duplicate/triplicate (DUP/TRL) precision for preparation batch 280-678945 and analytical batch 280-679403 was outside control limits for 2,4,6-Trinitrotoluene. Sample non-homogeneity is suspected. The following samples are impacted: P2-ARROYO-005-003 (280-200917-1), (280-200917-A-1-D DU), (280-200917-A-1-B MS), (280-200917-A-1-C MSD) and (280-200917-A-1-E TRL).

Method Moisture - Percent Moisture
Sample P2-ARROYO-005-003 (280-200917-1) was analyzed for Percent Moisture. The sample was analyzed on 12/19/2024.

Detection Summary

Client: AECOM Technical Services Inc
Job ID: 280-200917-1
Project/Site: Fort Wingate Depot Activity (FWDA)

Client Sample ID: P2-ARROYO-005-003
Lab Sample ID: 280-200917-1

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: P2-ARROYO-005-003
Lab Sample ID: 280-200917-1

Date Collected: 12/16/24 11:14
Matrix: Solid
Date Received: 12/17/24 10:10

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	2.0		0.1	0.1	%			12/19/24 17:47	1

Client Sample ID: P2-ARROYO-005-003
Lab Sample ID: 280-200917-1

Date Collected: 12/16/24 11:14
Matrix: Solid
Date Received: 12/17/24 10:10
Percent Solids: 98.0

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.040	U	0.099	0.014	mg/Kg	☼	12/18/24 12:11	12/19/24 19:46	1
1,3-Dinitrobenzene	0.040	U	0.099	0.016	mg/Kg	☼	12/18/24 12:11	12/21/24 15:31	1
2,4,6-Trinitrotoluene	0.069	U	0.099	0.030	mg/Kg	☼	12/18/24 12:11	12/21/24 15:31	1
2,4-Dinitrotoluene	0.040	U	0.099	0.015	mg/Kg	☼	12/18/24 12:11	12/21/24 15:31	1
2,6-Dinitrotoluene	0.040	U	0.099	0.019	mg/Kg	☼	12/18/24 12:11	12/21/24 15:31	1
2-Amino-4,6-dinitrotoluene	0.069	U	0.099	0.033	mg/Kg	☼	12/18/24 12:11	12/21/24 15:31	1
o-Nitrotoluene	0.099	U	0.20	0.047	mg/Kg	☼	12/18/24 12:11	12/21/24 15:31	1
m-Nitrotoluene	0.15	U	0.20	0.063	mg/Kg	☼	12/18/24 12:11	12/21/24 15:31	1
4-Amino-2,6-dinitrotoluene	0.069	U M	0.099	0.030	mg/Kg	☼	12/18/24 12:11	12/21/24 15:31	1
p-Nitrotoluene	0.099	U	0.20	0.036	mg/Kg	☼	12/18/24 12:11	12/21/24 15:31	1
Nitrobenzene	0.20	U	0.30	0.084	mg/Kg	☼	12/18/24 12:11	12/21/24 15:31	1
Nitroglycerin	0.69	U	2.0	0.21	mg/Kg	☼	12/18/24 12:11	12/21/24 15:31	1
HMX	0.069	U M	0.099	0.022	mg/Kg	☼	12/18/24 12:11	12/21/24 15:31	1
PETN	0.99	U	2.0	0.49	mg/Kg	☼	12/18/24 12:11	12/21/24 15:31	1
RDX	0.099	U	0.20	0.043	mg/Kg	☼	12/18/24 12:11	12/21/24 15:31	1
Tetryl	0.099	U	0.20	0.043	mg/Kg	☼	12/18/24 12:11	12/21/24 15:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene (Surr)	*98*		*78 - 119*	*12/18/24 12:11*	*12/19/24 19:46*	*1*
1,2-Dinitrobenzene (Surr)	*88*		*78 - 119*	*12/18/24 12:11*	*12/21/24 15:31*	*1*

Default Detection Limits

Client: AECOM Technical Services Inc
Job ID: 280-200917-1
Project/Site: Fort Wingate Depot Activity (FWDA)

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

Prep: 8330B

Analyte	LOQ	DL	Units
1,3,5-Trinitrobenzene	0.10	0.014	mg/Kg
1,3-Dinitrobenzene	0.10	0.017	mg/Kg
2,4,6-Trinitrotoluene	0.10	0.031	mg/Kg
2,4-Dinitrotoluene	0.10	0.015	mg/Kg
2,6-Dinitrotoluene	0.10	0.019	mg/Kg
2-Amino-4,6-dinitrotoluene	0.10	0.033	mg/Kg
4-Amino-2,6-dinitrotoluene	0.10	0.030	mg/Kg
HMX	0.10	0.023	mg/Kg
m-Nitrotoluene	0.20	0.064	mg/Kg
Nitrobenzene	0.30	0.085	mg/Kg
Nitroglycerin	2.0	0.22	mg/Kg
o-Nitrotoluene	0.20	0.047	mg/Kg
PETN	2.0	0.49	mg/Kg
p-Nitrotoluene	0.20	0.037	mg/Kg
RDX	0.20	0.043	mg/Kg
Tetryl	0.20	0.044	mg/Kg

General Chemistry

Analyte	LOQ	DL	Units
Percent Moisture	0.1	0.1	%

Surrogate Summary

Client: AECOM Technical Services Inc
Job ID: 280-200917-1
Project/Site: Fort Wingate Depot Activity (FWDA)

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	12DNB2 (78-119)						
280-200917-1	P2-ARROYO-005-003	98						
280-200917-1 DU	P2-ARROYO-005-003	98						
280-200917-1 MS	P2-ARROYO-005-003	100						
280-200917-1 MSD	P2-ARROYO-005-003	102						
280-200917-1 TRL	P2-ARROYO-005-003	100						

Surrogate Legend

12DNB = 1,2-Dinitrobenzene (Surr)

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	12DNB1 (78-119)						
280-200917-1	P2-ARROYO-005-003	88						
280-200917-1 DU	P2-ARROYO-005-003	89						
280-200917-1 MS	P2-ARROYO-005-003	87						
280-200917-1 MSD	P2-ARROYO-005-003	87						
280-200917-1 TRL	P2-ARROYO-005-003	88						
LCS 280-678945/2-A	Lab Control Sample	87						
MB 280-678945/1-A	Method Blank	91						

Surrogate Legend

12DNB = 1,2-Dinitrobenzene (Surr)

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

Lab Sample ID: MB 280-678945/1-A
Matrix: Solid
Analysis Batch: 679403

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 678945

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.0452	J	0.10	0.014	mg/Kg		12/18/24 12:11	12/21/24 14:47	1
1,3-Dinitrobenzene	0.040	U	0.10	0.017	mg/Kg		12/18/24 12:11	12/21/24 14:47	1
2,4,6-Trinitrotoluene	0.070	U	0.10	0.031	mg/Kg		12/18/24 12:11	12/21/24 14:47	1
2,4-Dinitrotoluene	0.040	U	0.10	0.015	mg/Kg		12/18/24 12:11	12/21/24 14:47	1
2,6-Dinitrotoluene	0.040	U	0.10	0.019	mg/Kg		12/18/24 12:11	12/21/24 14:47	1
2-Amino-4,6-dinitrotoluene	0.070	U	0.10	0.033	mg/Kg		12/18/24 12:11	12/21/24 14:47	1
o-Nitrotoluene	0.10	U	0.20	0.047	mg/Kg		12/18/24 12:11	12/21/24 14:47	1
m-Nitrotoluene	0.15	U	0.20	0.064	mg/Kg		12/18/24 12:11	12/21/24 14:47	1
4-Amino-2,6-dinitrotoluene	0.070	U	0.10	0.030	mg/Kg		12/18/24 12:11	12/21/24 14:47	1
p-Nitrotoluene	0.10	U	0.20	0.037	mg/Kg		12/18/24 12:11	12/21/24 14:47	1
Nitrobenzene	0.20	U	0.30	0.085	mg/Kg		12/18/24 12:11	12/21/24 14:47	1
Nitroglycerin	0.70	U	2.0	0.22	mg/Kg		12/18/24 12:11	12/21/24 14:47	1
HMX	0.070	U M	0.10	0.023	mg/Kg		12/18/24 12:11	12/21/24 14:47	1
PETN	1.0	U	2.0	0.49	mg/Kg		12/18/24 12:11	12/21/24 14:47	1
RDX	0.10	U	0.20	0.043	mg/Kg		12/18/24 12:11	12/21/24 14:47	1
Tetryl	0.10	U	0.20	0.044	mg/Kg		12/18/24 12:11	12/21/24 14:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene (Surr)	*91*		*78 - 119*	*12/18/24 12:11*	*12/21/24 14:47*	*1*

Lab Sample ID: LCS 280-678945/2-A
Matrix: Solid
Analysis Batch: 679403

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 678945

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1,3,5-Trinitrobenzene			1.00	0.989		mg/Kg		99	80 - 116		
1,3-Dinitrobenzene			1.00	0.895		mg/Kg		89	73 - 119		
2,4,6-Trinitrotoluene			1.00	0.867		mg/Kg		87	71 - 120		
2,4-Dinitrotoluene			1.00	0.860		mg/Kg		86	75 - 121		
2,6-Dinitrotoluene			1.00	0.893		mg/Kg		89	79 - 117		
2-Amino-4,6-dinitrotoluene			1.00	0.895		mg/Kg		90	71 - 123		
o-Nitrotoluene			1.00	0.899		mg/Kg		90	70 - 124		
m-Nitrotoluene			1.00	0.934		mg/Kg		93	67 - 129		
4-Amino-2,6-dinitrotoluene			1.00	0.882		mg/Kg		88	64 - 127		
p-Nitrotoluene			1.00	0.909		mg/Kg		91	71 - 124		
Nitrobenzene			1.00	0.906		mg/Kg		91	67 - 129		
Nitroglycerin			10.0	9.98		mg/Kg		100	73 - 124		
HMX			1.00	0.804	M	mg/Kg		80	74 - 124		
PETN			10.0	9.33		mg/Kg		93	72 - 128		
RDX			1.00	0.859		mg/Kg		86	67 - 129		
Tetryl			1.00	0.894		mg/Kg		89	68 - 135		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dinitrobenzene (Surr)	*87*		*78 - 119*

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

Lab Sample ID: 280-200917-1 MS
Matrix: Solid
Analysis Batch: 679155

Client Sample ID: P2-ARROYO-005-003
Prep Type: Total/NA
Prep Batch: 678945

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,3,5-Trinitrobenzene	0.040	U	0.935	1.02		mg/Kg	☼	109	80 - 116

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dinitrobenzene (Surr)	*100*		*78 - 119*

Lab Sample ID: 280-200917-1 MS
Matrix: Solid
Analysis Batch: 679403

Client Sample ID: P2-ARROYO-005-003
Prep Type: Total/NA
Prep Batch: 678945

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,3-Dinitrobenzene	0.040	U	0.935	0.820		mg/Kg	☼	88	73 - 119
2,4,6-Trinitrotoluene	0.069	U	0.935	0.854	M	mg/Kg	☼	91	71 - 120
2,4-Dinitrotoluene	0.040	U	0.935	0.789	M	mg/Kg	☼	84	75 - 121
2,6-Dinitrotoluene	0.040	U	0.935	0.810	M	mg/Kg	☼	87	79 - 117
2-Amino-4,6-dinitrotoluene	0.069	U	0.935	0.832	M	mg/Kg	☼	89	71 - 123
o-Nitrotoluene	0.099	U	0.935	0.815		mg/Kg	☼	87	70 - 124
m-Nitrotoluene	0.15	U	0.935	0.842		mg/Kg	☼	90	67 - 129
4-Amino-2,6-dinitrotoluene	0.069	U M	0.935	0.798	M	mg/Kg	☼	85	64 - 127
p-Nitrotoluene	0.099	U	0.935	0.823		mg/Kg	☼	88	71 - 124
Nitrobenzene	0.20	U	0.935	0.820		mg/Kg	☼	88	67 - 129
Nitroglycerin	0.69	U	9.35	9.30		mg/Kg	☼	99	73 - 124
HMX	0.069	U M	0.935	0.706	M	mg/Kg	☼	76	74 - 124
PETN	0.99	U	9.35	8.56	M	mg/Kg	☼	92	72 - 128
RDX	0.099	U	0.935	0.741		mg/Kg	☼	79	67 - 129
Tetryl	0.099	U	0.935	0.809	M	mg/Kg	☼	87	68 - 135

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dinitrobenzene (Surr)	*87*		*78 - 119*

Lab Sample ID: 280-200917-1 MSD
Matrix: Solid
Analysis Batch: 679155

Client Sample ID: P2-ARROYO-005-003
Prep Type: Total/NA
Prep Batch: 678945

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,3,5-Trinitrobenzene	0.040	U	0.981	1.11		mg/Kg	☼	114	80 - 116	9	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dinitrobenzene (Surr)	*102*		*78 - 119*

Lab Sample ID: 280-200917-1 MSD
Matrix: Solid
Analysis Batch: 679403

Client Sample ID: P2-ARROYO-005-003
Prep Type: Total/NA
Prep Batch: 678945

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,3-Dinitrobenzene	0.040	U	0.981	0.865		mg/Kg	☼	88	73 - 119	5	20
2,4,6-Trinitrotoluene	0.069	U	0.981	0.890		mg/Kg	☼	91	71 - 120	4	20
2,4-Dinitrotoluene	0.040	U	0.981	0.841		mg/Kg	☼	86	75 - 121	6	20
2,6-Dinitrotoluene	0.040	U	0.981	0.860		mg/Kg	☼	88	79 - 117	6	20

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

Lab Sample ID: 280-200917-1 MSD — **Client Sample ID: P2-ARROYO-005-003**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 679403 — **Prep Batch: 678945**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-Amino-4,6-dinitrotoluene	0.069	U	0.981	0.869		mg/Kg	☼	89	71 - 123	4	20
o-Nitrotoluene	0.099	U	0.981	0.859		mg/Kg	☼	88	70 - 124	5	20
m-Nitrotoluene	0.15	U	0.981	0.884		mg/Kg	☼	90	67 - 129	5	20
4-Amino-2,6-dinitrotoluene	0.069	U M	0.981	0.852		mg/Kg	☼	87	64 - 127	6	20
p-Nitrotoluene	0.099	U	0.981	0.871		mg/Kg	☼	89	71 - 124	6	20
Nitrobenzene	0.20	U	0.981	0.865		mg/Kg	☼	88	67 - 129	5	20
Nitroglycerin	0.69	U	9.81	9.67		mg/Kg	☼	99	73 - 124	4	20
HMX	0.069	U M	0.981	0.744	M	mg/Kg	☼	76	74 - 124	5	20
PETN	0.99	U	9.81	9.05		mg/Kg	☼	92	72 - 128	6	20
RDX	0.099	U	0.981	0.779		mg/Kg	☼	79	67 - 129	5	20
Tetryl	0.099	U	0.981	0.883		mg/Kg	☼	90	68 - 135	9	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dinitrobenzene (Surr)	*87*		*78 - 119*

Lab Sample ID: 280-200917-1 DU — **Client Sample ID: P2-ARROYO-005-003**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 679155 — **Prep Batch: 678945**

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
1,3,5-Trinitrobenzene	0.040	U		0.039	U	mg/Kg	☼			NC	20

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
1,2-Dinitrobenzene (Surr)	*98*		*78 - 119*

Lab Sample ID: 280-200917-1 DU — **Client Sample ID: P2-ARROYO-005-003**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 679403 — **Prep Batch: 678945**

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
1,3-Dinitrobenzene	0.040	U		0.039	U	mg/Kg	☼			NC	20
2,4,6-Trinitrotoluene	0.069	U		0.0756	J	mg/Kg	☼			NC	20
2,4-Dinitrotoluene	0.040	U		0.039	U	mg/Kg	☼			NC	20
2,6-Dinitrotoluene	0.040	U		0.039	U	mg/Kg	☼			NC	20
2-Amino-4,6-dinitrotoluene	0.069	U		0.069	U	mg/Kg	☼			NC	20
o-Nitrotoluene	0.099	U		0.099	U	mg/Kg	☼			NC	20
m-Nitrotoluene	0.15	U		0.15	U	mg/Kg	☼			NC	20
4-Amino-2,6-dinitrotoluene	0.069	U M		0.069	U	mg/Kg	☼			NC	20
p-Nitrotoluene	0.099	U		0.099	U	mg/Kg	☼			NC	20
Nitrobenzene	0.20	U		0.20	U	mg/Kg	☼			NC	20
Nitroglycerin	0.69	U		0.69	U	mg/Kg	☼			NC	20
HMX	0.069	U M		0.069	U	mg/Kg	☼			NC	20
PETN	0.99	U		0.99	U	mg/Kg	☼			NC	20
RDX	0.099	U		0.099	U	mg/Kg	☼			NC	20
Tetryl	0.099	U		0.099	U	mg/Kg	☼			NC	20

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
1,2-Dinitrobenzene (Surr)	*89*		*78 - 119*

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

Lab Sample ID: 280-200917-1 TRL
Matrix: Solid
Analysis Batch: 679155

Client Sample ID: P2-ARROYO-005-003
Prep Type: Total/NA
Prep Batch: 678945

Analyte	Sample Result	Sample Qualifier		TRL Result	TRL Qualifier	Unit	D			RSD	RSD Limit
1,3,5-Trinitrobenzene	0.040	U		0.038	U	mg/Kg	☼			NC	20

Surrogate	*TRL %Recovery*	*TRL Qualifier*	*Limits*
1,2-Dinitrobenzene (Surr)	*100*		*78 - 119*

Lab Sample ID: 280-200917-1 TRL
Matrix: Solid
Analysis Batch: 679403

Client Sample ID: P2-ARROYO-005-003
Prep Type: Total/NA
Prep Batch: 678945

Analyte	Sample Result	Sample Qualifier		TRL Result	TRL Qualifier	Unit	D			RSD	RSD Limit
1,3-Dinitrobenzene	0.040	U		0.038	U	mg/Kg	☼			NC	20
2,4,6-Trinitrotoluene	0.069	U		0.0584	J M	mg/Kg	☼			NC	20
2,4-Dinitrotoluene	0.040	U		0.038	U	mg/Kg	☼			NC	20
2,6-Dinitrotoluene	0.040	U		0.038	U	mg/Kg	☼			NC	20
2-Amino-4,6-dinitrotoluene	0.069	U		0.067	U	mg/Kg	☼			NC	20
o-Nitrotoluene	0.099	U		0.096	U	mg/Kg	☼			NC	20
m-Nitrotoluene	0.15	U		0.14	U	mg/Kg	☼			NC	20
4-Amino-2,6-dinitrotoluene	0.069	U M		0.067	U	mg/Kg	☼			NC	20
p-Nitrotoluene	0.099	U		0.096	U	mg/Kg	☼			NC	20
Nitrobenzene	0.20	U		0.19	U	mg/Kg	☼			NC	20
Nitroglycerin	0.69	U		0.67	U	mg/Kg	☼			NC	20
HMX	0.069	U M		0.067	U M	mg/Kg	☼			NC	20
PETN	0.99	U		0.96	U	mg/Kg	☼			NC	20
RDX	0.099	U		0.096	U	mg/Kg	☼			NC	20
Tetryl	0.099	U		0.096	U	mg/Kg	☼			NC	20

Surrogate	*TRL %Recovery*	*TRL Qualifier*	*Limits*
1,2-Dinitrobenzene (Surr)	*88*		*78 - 119*

Method: Moisture - Percent Moisture

Lab Sample ID: 280-200917-1 DU
Matrix: Solid
Analysis Batch: 679188

Client Sample ID: P2-ARROYO-005-003
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	2.0			2.0		%				0.7	20

HPLC/IC

Prep Batch: 678945

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-200917-1	P2-ARROYO-005-003	Total/NA	Solid	8330B	
MB 280-678945/1-A	Method Blank	Total/NA	Solid	8330B	
LCS 280-678945/2-A	Lab Control Sample	Total/NA	Solid	8330B	
280-200917-1 MS	P2-ARROYO-005-003	Total/NA	Solid	8330B	
280-200917-1 MSD	P2-ARROYO-005-003	Total/NA	Solid	8330B	
280-200917-1 DU	P2-ARROYO-005-003	Total/NA	Solid	8330B	
280-200917-1 TRL	P2-ARROYO-005-003	Total/NA	Solid	8330B	

Analysis Batch: 679155

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-200917-1	P2-ARROYO-005-003	Total/NA	Solid	8330B MOD	678945
280-200917-1 MS	P2-ARROYO-005-003	Total/NA	Solid	8330B MOD	678945
280-200917-1 MSD	P2-ARROYO-005-003	Total/NA	Solid	8330B MOD	678945
280-200917-1 DU	P2-ARROYO-005-003	Total/NA	Solid	8330B MOD	678945
280-200917-1 TRL	P2-ARROYO-005-003	Total/NA	Solid	8330B MOD	678945

Analysis Batch: 679403

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-200917-1	P2-ARROYO-005-003	Total/NA	Solid	8330B MOD	678945
MB 280-678945/1-A	Method Blank	Total/NA	Solid	8330B MOD	678945
LCS 280-678945/2-A	Lab Control Sample	Total/NA	Solid	8330B MOD	678945
280-200917-1 MS	P2-ARROYO-005-003	Total/NA	Solid	8330B MOD	678945
280-200917-1 MSD	P2-ARROYO-005-003	Total/NA	Solid	8330B MOD	678945
280-200917-1 DU	P2-ARROYO-005-003	Total/NA	Solid	8330B MOD	678945
280-200917-1 TRL	P2-ARROYO-005-003	Total/NA	Solid	8330B MOD	678945

General Chemistry

Analysis Batch: 679188

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-200917-1	P2-ARROYO-005-003	Total/NA	Solid	Moisture	
280-200917-1 DU	P2-ARROYO-005-003	Total/NA	Solid	Moisture	

Client Sample ID: P2-ARROYO-005-003
Lab Sample ID: 280-200917-1

Date Collected: 12/16/24 11:14
Matrix: Solid
Date Received: 12/17/24 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			679188	12/19/24 17:47	LBR	EET DEN

Client Sample ID: P2-ARROYO-005-003
Lab Sample ID: 280-200917-1

Date Collected: 12/16/24 11:14
Matrix: Solid
Date Received: 12/17/24 10:10
Percent Solids: 98.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8330B			+10.31 g	40 mL	678945	12/18/24 12:11	CW	EET DEN
Total/NA	Analysis	8330B MOD		1	1 mL	1 mL	679403	12/21/24 15:31	JZ	EET DEN
Total/NA	Prep	8330B			+10.31 g	40 mL	678945	12/18/24 12:11	CW	EET DEN
Total/NA	Analysis	8330B MOD		1	1 mL	1 mL	679155	12/19/24 19:46	JZ	EET DEN

Laboratory References:

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

Accreditation/Certification Summary

Client: AECOM Technical Services Inc
Job ID: 280-200917-1
Project/Site: Fort Wingate Depot Activity (FWDA)

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: AECOM Technical Services Inc
Job ID: 280-200917-1
Project/Site: Fort Wingate Depot Activity (FWDA)

Method	Method Description	Protocol	Laboratory
8330B MOD	Nitroaromatics and Nitramines (HPLC)	EPA	EET DEN
Moisture	Percent Moisture	EPA	EET DEN
8330B	Sonication Extraction (Explosives)	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: AECOM Technical Services Inc
Job ID: 280-200917-1
Project/Site: Fort Wingate Depot Activity (FWDA)

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-200917-1	P2-ARROYO-005-003	Solid	12/16/24 11:14	12/17/24 10:10

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200917-1

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.: 280-200917-1

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
2,4,6-Trinitrophenol	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
o-Nitrotoluene	11.85	Baseline	LV5D	10/08/24 13:03
p-Nitrotoluene	12.22	Baseline	LV5D	10/08/24 13:03
m-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 Denver Job No.: 280-200917-1

SDG No.:

Instrument ID: CHHPLC_X3 Analysis Batch Number: 669870

Lab Sample ID: IC 280-669870/17 Client Sample ID:

Date Analyzed: 10/04/24 19:11 Lab File ID: 10040017.D GC 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
2,4,6-Trinitrophenol	7.94	Baseline	LV5D	10/08/24 13:04
1,2-Dinitrobenzene (Surr)	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 19:33 Lab File ID: 10040018.D GC 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
2,4,6-Trinitrophenol	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.: 280-200917-1

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
o-Nitrotoluene	11.84	Baseline	LV5D	10/08/24 13:06
m-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.: 280-200917-1

SDG No.:

Instrument ID: CHHPLC_X3 Analysis Batch Number: 679403

Lab Sample ID: CCV 280-679403/7 Client Sample ID:

Date Analyzed: 12/21/24 14:25 Lab File ID: 12210007.D GC Column: UltraCarb5uO ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.58	Baseline	LV5D	12/21/24 15:09

Lab Sample ID: MB 280-678945/1-A Client Sample ID:

Date Analyzed: 12/21/24 14:47 Lab File ID: 12210011.D GC Column: UltraCarb5uO ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.56	Baseline	LV5D	12/21/24 15:37

Lab Sample ID: LCS 280-678945/2-A Client Sample ID:

Date Analyzed: 12/21/24 15:09 Lab File ID: 12210012.D GC Column: UltraCarb5uO ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.57	Baseline	LV5D	12/21/24 15:36

Lab Sample ID: 280-200917-1 Client Sample ID: P2-ARROYO-005-003

Date Analyzed: 12/21/24 15:31 Lab File ID: 12210013.D GC Column: UltraCarb5uO ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.60	Baseline	LV5D	12/26/24 12:27
4-Amino-2,6-dinitrotoluene		Invalid Compound ID	LV5D	12/26/24 12:27

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200917-1

SDG No.:

Instrument ID: CHHPLC_X3 Analysis Batch Number: 679403

Lab Sample ID: 280-200917-1 MS Client Sample ID: P2-ARROYO-005-003 MS

Date Analyzed: 12/21/24 15:53 Lab File ID: 12210014.D GC Column: UltraCarb5uO ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.59	Baseline	LV5D	12/26/24 12:27
Tetryl	9.56	Peak assignment corrected	LV5D	12/26/24 11:48
2,4,6-Trinitrotoluene	10.34	Peak assignment corrected	LV5D	12/26/24 11:48
4-Amino-2,6-dinitrotoluene	10.46	Peak assignment corrected	LV5D	12/26/24 11:48
2-Amino-4,6-dinitrotoluene	10.68	Peak assignment corrected	LV5D	12/26/24 11:48
2,6-Dinitrotoluene	10.83	Peak assignment corrected	LV5D	12/26/24 11:48
2,4-Dinitrotoluene	10.98	Peak assignment corrected	LV5D	12/26/24 11:48
PETN	13.40	Peak assignment corrected	LV5D	12/26/24 11:48

Lab Sample ID: 280-200917-1 MSD Client Sample ID: P2-ARROYO-005-003 MSD

Date Analyzed: 12/21/24 16:15 Lab File ID: 12210015.D GC Column: UltraCarb5uO ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.59	Baseline	LV5D	12/26/24 12:27

Lab Sample ID: 280-200917-1 TRL Client Sample ID: P2-ARROYO-005-003 TRL

Date Analyzed: 12/21/24 16:59 Lab File ID: 12210017.D GC Column: UltraCarb5uO ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.61	Baseline	LV5D	12/26/24 12:28
1,3,5-Trinitrobenzene		Invalid Compound ID	LV5D	12/26/24 12:27
2,4,6-Trinitrotoluene	10.30	Baseline	LV5D	12/26/24 12:27

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200917-1

SDG No.:

Instrument ID: CHHPLC_X3 Analysis Batch Number: 679403

Lab Sample ID: CCV 280-679403/18 Client Sample ID:

Date Analyzed: 12/21/24 17:21 Lab File ID: 12210018.D GC Column: UltraCarb5uO ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.58	Baseline	LV5D	12/26/24 12:28

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200917-1

SDG No.:

Instrument ID: CHHPLC_X5 Analysis Batch Number: 677241

Lab Sample ID: IC 280-677241/15 Client Sample ID:

Date Analyzed: 12/03/24 23:24 Lab File ID: 12030017.D GC Column: Luna-phenylh ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PETN	23.37	Baseline Smoothing	LV5D	12/04/24 11:35

Lab Sample ID: IC 280-677241/16 Client Sample ID:

Date Analyzed: 12/03/24 23:59 Lab File ID: 12030018.D GC Column: Luna-phenylh ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.38	Baseline Smoothing	LV5D	12/04/24 11:15
2,4,6-Trinitrophenol	7.90	Baseline Smoothing	LV5D	12/04/24 11:16
RDX	8.50	Baseline Smoothing	LV5D	12/04/24 11:16
1,2-Dinitrobenzene (Surr)	11.86	Baseline Smoothing	LV5D	12/04/24 11:15
o-Nitrotoluene	15.04	Baseline Smoothing	LV5D	12/04/24 11:16
p-Nitrotoluene	15.26	Baseline Smoothing	LV5D	12/04/24 11:16
4-Amino-2,6-dinitrotoluene	15.67	Baseline Smoothing	LV5D	12/04/24 11:16
m-Nitrotoluene	16.10	Baseline Smoothing	LV5D	12/04/24 11:16
2-Amino-4,6-dinitrotoluene	16.44	Baseline Smoothing	LV5D	12/04/24 11:16
1,3,5-Trinitrobenzene	16.68	Baseline Smoothing	LV5D	12/04/24 11:16
2,6-Dinitrotoluene	17.77	Baseline Smoothing	LV5D	12/04/24 11:16
2,4-Dinitrotoluene	18.20	Baseline Smoothing	LV5D	12/04/24 11:16
2,4,6-Trinitrotoluene	22.12	Baseline Smoothing	LV5D	12/04/24 11:16
PETN	23.37	Baseline Smoothing	LV5D	12/04/24 11:35

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200917-1

SDG No.:

Instrument ID: CHHPLC_X5 Analysis Batch Number: 677241

Lab Sample ID: IC 280-677241/17 Client Sample ID:

Date Analyzed: 12/04/24 00:34 Lab File ID: 12030019.D GC Column: Luna-phenylh ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.37	Baseline Smoothing	LV5D	12/04/24 11:33
2,4,6-Trinitrophenol	7.92	Baseline Smoothing	LV5D	12/04/24 11:33
RDX	8.49	Baseline Smoothing	LV5D	12/04/24 11:33
3,5-Dinitroaniline	13.61	Baseline Smoothing	LV5D	12/04/24 11:32
1,3-Dinitrobenzene	13.94	Baseline Smoothing	LV5D	12/04/24 11:32
o-Nitrotoluene	15.03	Baseline Smoothing	LV5D	12/04/24 11:32
p-Nitrotoluene	15.25	Baseline Smoothing	LV5D	12/04/24 11:32
4-Amino-2,6-dinitrotoluene	15.67	Baseline Smoothing	LV5D	12/04/24 11:32
m-Nitrotoluene	16.08	Baseline Smoothing	LV5D	12/04/24 11:32
2-Amino-4,6-dinitrotoluene	16.43	Baseline Smoothing	LV5D	12/04/24 11:32
1,3,5-Trinitrobenzene	16.69	Baseline Smoothing	LV5D	12/04/24 11:32
2,6-Dinitrotoluene	17.77	Baseline Smoothing	LV5D	12/04/24 11:32
2,4-Dinitrotoluene	18.20	Baseline Smoothing	LV5D	12/04/24 11:32
Tetryl	21.21	Baseline Smoothing	LV5D	12/04/24 11:32
2,4,6-Trinitrotoluene	22.11	Baseline Smoothing	LV5D	12/04/24 11:32
PETN	23.36	Baseline Smoothing	LV5D	12/04/24 11:33

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200917-1

SDG No.:

Instrument ID: CHHPLC_X5 Analysis Batch Number: 677241

Lab Sample ID: IC 280-677241/18 Client Sample ID:

Date Analyzed: 12/04/24 01:09 Lab File ID: 12030020.D GC Column: Luna-phenylh ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.38	Baseline Smoothing	LV5D	12/04/24 11:33
2,4,6-Trinitrophenol	7.90	Baseline Smoothing	LV5D	12/04/24 11:33
RDX	8.48	Baseline Smoothing	LV5D	12/04/24 11:33
Nitrobenzene	11.04	Baseline Smoothing	LV5D	12/04/24 11:34
1,2-Dinitrobenzene (Surr)	11.86	Baseline Smoothing	LV5D	12/04/24 11:34
3,5-Dinitroaniline	13.62	Baseline Smoothing	LV5D	12/04/24 11:34
1,3-Dinitrobenzene	13.94	Baseline Smoothing	LV5D	12/04/24 11:34
Nitroglycerin	14.44	Baseline Smoothing	LV5D	12/04/24 11:35
o-Nitrotoluene	15.02	Baseline Smoothing	LV5D	12/04/24 11:34
p-Nitrotoluene	15.26	Baseline Smoothing	LV5D	12/04/24 11:34
4-Amino-2,6-dinitrotoluene	15.67	Baseline Smoothing	LV5D	12/04/24 11:34
m-Nitrotoluene	16.10	Baseline Smoothing	LV5D	12/04/24 11:34
2-Amino-4,6-dinitrotoluene	16.45	Baseline Smoothing	LV5D	12/04/24 11:34
1,3,5-Trinitrobenzene	16.69	Baseline Smoothing	LV5D	12/04/24 11:34
2,6-Dinitrotoluene	17.77	Baseline Smoothing	LV5D	12/04/24 11:34
2,4-Dinitrotoluene	18.19	Baseline Smoothing	LV5D	12/04/24 11:34
2,4,6-Trinitrotoluene	22.11	Baseline Smoothing	LV5D	12/04/24 11:34
PETN	23.37	Baseline Smoothing	LV5D	12/04/24 11:35

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200917-1

SDG No.:

Instrument ID: CHHPLC_X5 Analysis Batch Number: 679155

Lab Sample ID: 280-200917-1 Client Sample ID: P2-ARROYO-005-003

Date Analyzed: 12/19/24 19:46 Lab File ID: 12190012.D GC Column: Luna-phenylh ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Amino-4,6-dinitrotoluene		Invalid Compound ID	LV5D	12/20/24 20:29
4-Amino-2,6-dinitrotoluene		Invalid Compound ID	LV5D	12/20/24 20:29
2,4,6-Trinitrotoluene	21.87	Baseline Smoothing	LV5D	12/20/24 20:30

Lab Sample ID: 280-200917-1 MS Client Sample ID: P2-ARROYO-005-003 MS

Date Analyzed: 12/19/24 20:21 Lab File ID: 12190013.D GC Column: Luna-phenylh ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
o-Nitrotoluene	14.82	Baseline Smoothing	LV5D	12/20/24 20:29
p-Nitrotoluene	14.91	Baseline Smoothing	LV5D	12/20/24 20:29

Lab Sample ID: 280-200917-1 MSD Client Sample ID: P2-ARROYO-005-003 MSD

Date Analyzed: 12/19/24 20:56 Lab File ID: 12190014.D GC Column: Luna-phenylh ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
o-Nitrotoluene	14.86	Baseline Smoothing	LV5D	12/20/24 20:29
p-Nitrotoluene	14.96	Baseline Smoothing	LV5D	12/20/24 20:29

Lab Sample ID: 280-200917-1 DU Client Sample ID: P2-ARROYO-005-003 DU

Date Analyzed: 12/19/24 21:31 Lab File ID: 12190015.D GC Column: Luna-phenylh ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX		Invalid Compound ID	LV5D	12/20/24 20:29
2,4,6-Trinitrotoluene	21.86	Baseline Smoothing	LV5D	12/20/24 20:29

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200917-1

SDG No.:

Instrument ID: CHHPLC_X5 Analysis Batch Number: 679155

Lab Sample ID: 280-200917-1 TRL Client Sample ID: P2-ARROYO-005-003 TRL

Date Analyzed: 12/19/24 22:06 Lab File ID: 12190016.D GC Column: Luna-phenylh ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Amino-4,6-dinitrotoluene		Invalid Compound ID	LV5D	12/20/24 20:29
4-Amino-2,6-dinitrotoluene		Invalid Compound ID	LV5D	12/20/24 20:29
2,4,6-Trinitrotoluene	21.89	Baseline Smoothing	LV5D	12/20/24 20:29

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200917-1

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_00137	02/14/25	08/14/24	Acetonitrile, Lot Acetonitrile_00092	100 mL	8330 LCSMix2_00118	1 mL	2,6-Dinitrotoluene	10 ug/mL
							2-Amino-4,6-dinitrotoluene	10 ug/mL
							4-Amino-2,6-dinitrotoluene	10 ug/mL
							m-Nitrotoluene	10 ug/mL
							o-Nitrotoluene	10 ug/mL
							p-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
.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
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							m-Nitrotoluene	1000 ug/mL
							o-Nitrotoluene	1000 ug/mL
							p-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
8330 LCS_00138	04/17/25	10/17/24	Acetonitrile, Lot Acetonitrile_00098	100 mL	8330 LCSMix2_00120	1 mL	2,6-Dinitrotoluene	10 ug/mL
							2-Amino-4,6-dinitrotoluene	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200917-1

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	10 ug/mL
							m-Nitrotoluene	10 ug/mL
							o-Nitrotoluene	10 ug/mL
							p-Nitrotoluene	10 ug/mL
							Tetryl	10 ug/mL
					8330_NG_Stk_00154	1 mL	Nitroglycerin	100 ug/mL
					8330_NG_Stk_00155	1 mL	Nitroglycerin	100 ug/mL
					8330_PETN_Stk_00161	1 mL	PETN	100 ug/mL
					8330_PETN_Stk_00162	1 mL	PETN	100 ug/mL
					8330LCSMix1_00157	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_00120	10/17/25		Restek, Lot A199657		(Purchased Reagent)		2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							m-Nitrotoluene	1000 ug/mL
							o-Nitrotoluene	1000 ug/mL
							p-Nitrotoluene	1000 ug/mL
							Tetryl	1000 ug/mL
.8330_NG_Stk_00154	10/17/25		Restek, Lot A0211998		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_NG_Stk_00155	10/17/25		Restek, Lot A0211998		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_PETN_Stk_00161	10/17/25		Restek, Lot A0205209		(Purchased Reagent)		PETN	5000 ug/mL
.8330_PETN_Stk_00162	10/17/25		Restek, Lot A0205209		(Purchased Reagent)		PETN	5000 ug/mL
.8330LCSMix1_00157	10/17/25		Restek, Lot A0196548		(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_00139	06/06/25	12/06/24	Acetonitrile, Lot Acetonitrile_00100	100 mL	3,5-DNA Stock_00062	1 mL	3,5-Dinitroaniline	10 ug/mL
					8330 LCSMix2_00123	1 mL	2,6-Dinitrotoluene	10 ug/mL
							2-Amino-4,6-dinitrotoluene	10 ug/mL
							4-Amino-2,6-dinitrotoluene	10 ug/mL
							m-Nitrotoluene	10 ug/mL
							o-Nitrotoluene	10 ug/mL
							p-Nitrotoluene	10 ug/mL
							Tetryl	10 ug/mL
					8330_NG_Stk_00157	1 mL	Nitroglycerin	100 ug/mL
					8330_NG_Stk_00158	1 mL	Nitroglycerin	100 ug/mL
					8330_PETN_Stk_00163	1 mL	PETN	100 ug/mL
					8330_PETN_Stk_00165	1 mL	PETN	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200917-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					8330LCSMix1_00155	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_00126	1 mL	2,4,6-Trinitrophenol	10 ug/mL
							Ammonium Picrate	10.74 ug/mL
.3,5-DNA Stock_00062	12/06/25		Restek, Lot A0206250		(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
.8330 LCSMix2_00123	12/06/25		Restek, Lot A0211328		(Purchased Reagent)		2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							m-Nitrotoluene	1000 ug/mL
							o-Nitrotoluene	1000 ug/mL
							p-Nitrotoluene	1000 ug/mL
							Tetryl	1000 ug/mL
.8330_NG_Stk_00157	12/06/25		Restek, Lot A0213136		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_NG_Stk_00158	12/06/25		Restek, Lot A0213136		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_PETN_Stk_00163	12/06/25		Restek, Lot A0205209		(Purchased Reagent)		PETN	5000 ug/mL
.8330_PETN_Stk_00165	12/06/25		Restek, Lot A0213161		(Purchased Reagent)		PETN	5000 ug/mL
.8330LCSMix1_00155	12/06/25		Restek, Lot A0196548		(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_00126	12/06/25		Restek, Lot A0195778		(Purchased Reagent)		2,4,6-Trinitrophenol	1000 ug/mL
							Ammonium Picrate	1074 ug/mL
8330IntermStk_00082	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
							2,4-Dinitrotoluene	10 ug/mL
							2,6-Dinitrotoluene	10 ug/mL
							2-Amino-4,6-dinitrotoluene	10 ug/mL
							4-Amino-2,6-dinitrotoluene	10 ug/mL
							HMX	10 ug/mL
							m-Nitrotoluene	10 ug/mL
							Nitrobenzene	10 ug/mL
							o-Nitrotoluene	10 ug/mL
							p-Nitrotoluene	10 ug/mL
							RDX	10 ug/mL

Lab Name: Eurofins Denver Job No.: 280-200917-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Tetryl	10 ug/mL
							1,2-Dinitrobenzene (Surr)	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
							4-Amino-2,6-dinitrotoluene	100 ug/mL
							HMX	100 ug/mL
							m-Nitrotoluene	100 ug/mL
							Nitrobenzene	100 ug/mL
							o-Nitrotoluene	100 ug/mL
							p-Nitrotoluene	100 ug/mL
							RDX	100 ug/mL
							Tetryl	100 ug/mL
					8330SurrStock_00173	1 mL	1,2-Dinitrobenzene (Surr)	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
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							m-Nitrotoluene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							o-Nitrotoluene	1000 ug/mL
							p-Nitrotoluene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..8330SurrStock_00173	01/23/25	AccuStandard, Lot 219051500			(Purchased Reagent)		1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330PAStkPS_00077	08/02/25	AccuStandard, Lot 223031306-01			(Purchased Reagent)		2,4,6-Trinitrophenol	100 ug/mL
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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200917-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Amino-4,6-dinitrotoluene	10 ug/mL
							4-Amino-2,6-dinitrotoluene	10 ug/mL
							HMX	10 ug/mL
							m-Nitrotoluene	10 ug/mL
							Nitrobenzene	10 ug/mL
							o-Nitrotoluene	10 ug/mL
							p-Nitrotoluene	10 ug/mL
							RDX	10 ug/mL
							Tetryl	10 ug/mL
							1,2-Dinitrobenzene (Surr)	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
							4-Amino-2,6-dinitrotoluene	100 ug/mL
							HMX	100 ug/mL
							m-Nitrotoluene	100 ug/mL
							Nitrobenzene	100 ug/mL
							o-Nitrotoluene	100 ug/mL
							p-Nitrotoluene	100 ug/mL
							RDX	100 ug/mL
							Tetryl	100 ug/mL
					8330SurrStock_00174	1 mL	1,2-Dinitrobenzene (Surr)	100 ug/mL
..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
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							m-Nitrotoluene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							o-Nitrotoluene	1000 ug/mL
							p-Nitrotoluene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..8330SurrStock_00174	10/04/25		AccuStandard, Lot 219051500		(Purchased Reagent)		1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330PAStkPS_00078	10/04/25		AccuStandard, Lot 223031306-01		(Purchased Reagent)		2,4,6-Trinitrophenol	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200917-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
8330Surrogate_00159	03/19/25	09/19/24	Acetonitrile, Lot Acetonitrile_00092	500 mL	8330SurrStkSS_00329	1 mL	1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00336	1 mL	1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00337	1 mL	1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00339	1 mL	1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00340	1 mL	1,2-Dinitrobenzene (Surr)	10 ug/mL
.8330SurrStkSS_00329	09/19/25		Restek, Lot A0205460		(Purchased Reagent)		1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00336	09/19/25		Restek, Lot A0211455		(Purchased Reagent)		1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00337	09/19/25		Restek, Lot A0211455		(Purchased Reagent)		1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00339	09/19/25		Restek, Lot A0211455		(Purchased Reagent)		1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00340	09/19/25		Restek, Lot A0211455		(Purchased Reagent)		1,2-Dinitrobenzene (Surr)	1000 ug/mL
8330Surrogate_00160	05/12/25	11/12/24	Acetonitrile, Lot Acetonitrile_00100	500 mL	8330SurrStkSS_00330	1 mL	1,2-Dinitrobenzene (Surr)	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00331	1 mL	1,2-Dinitrobenzene (Surr)	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00338	1 mL	1,2-Dinitrobenzene (Surr)	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00341	1 mL	1,2-Dinitrobenzene (Surr)	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00342	1 mL	1,2-Dinitrobenzene (Surr)	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
.8330SurrStkSS_00330	11/12/25		Restek, Lot A0205460		(Purchased Reagent)		1,2-Dinitrobenzene (Surr)	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00331	11/12/25		Restek, Lot A0205460		(Purchased Reagent)		1,2-Dinitrobenzene (Surr)	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00338	11/12/25		Restek, Lot A0211455		(Purchased Reagent)		1,2-Dinitrobenzene (Surr)	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00341	11/12/25		Restek, Lot A0211455		(Purchased Reagent)		1,2-Dinitrobenzene (Surr)	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00342	11/12/25		Restek, Lot A0211455		(Purchased Reagent)		1,2-Dinitrobenzene (Surr)	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL

Reagent

3,5-DNA Stock_00062

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31661 **Lot No.:** A0206250

Description : 3,5-Dinitroaniline Standard

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

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

Expiration Date : August 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	3,5-Dinitroaniline	618-87-1	10311HS	99%	1,004.0 µg/mL	+/- 37.4502

* 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.

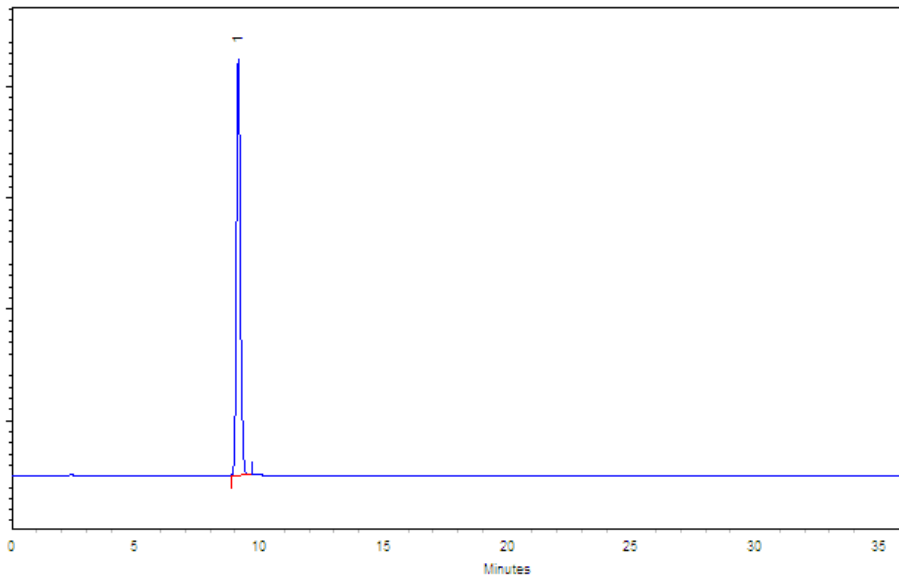
Mobile Phase A:
water:methanol (44:56 V/V)

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.

Morgan Craighead - Mix Technician

Date Mixed: 04-Jan-2024 **Balance Serial #** B345965662

Christie Mills - Operations Lead Tech - ARM QC

Date Passed: 08-Jan-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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330 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

8330 LCS_00138

Preliminary Report

Eurofins Denver

LCS, Lab Control Sample Report

Sample Path: \\chromfs\Denver\ChromData\CHHPLC_X\20241017-138730.b\8330LCS138002.D

Lims ID: 8330LCS138 Inj. Date: 17-Oct-2024 18:17:24

Worklist ID: 280-0138730-072 Instrument: CHHPLC_X3

Method: 8330_X3

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 0B_Sonc_
4 HMX	0.5000	0.4255	85.1	74-124
8 RDX	0.5000	0.4697	93.9	67-129
9 2,4,6-Trinitrophenol	0.5000	0.5416	108.3	38-154
11 1,3,5-Trinitrobenzene	0.5000	0.4836	96.7	80-116
12 1,3-Dinitrobenzene	0.5000	0.4948	99.0	73-119
13 Nitrobenzene	0.5000	0.5006	100.1	67-129
14 3,5-Dinitroaniline	0.5000	0.4922	98.4	86-118
15 Tetryl	0.5000	0.4716	94.3	68-135
16 Nitroglycerin	5.00	5.10	102.1	73-124
17 2,4,6-Trinitrotoluene	0.5000	0.4755	95.1	71-120
18 4-Amino-2,6-dinitrotolu	0.5000	0.5208	104.2	64-127
19 2-Amino-4,6-dinitrotolu	0.5000	0.4862	97.2	71-123
20 2,6-Dinitrotoluene	0.5000	0.5009	100.2	79-117
21 2,4-Dinitrotoluene	0.5000	0.4848	97.0	75-121
22 o-Nitrotoluene	0.5000	0.4959	99.2	70-124
23 p-Nitrotoluene	0.5000	0.4962	99.2	71-124
24 m-Nitrotoluene	0.5000	0.5013	100.3	67-129
25 PETN	5.00	5.07	101.5	72-128

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

280-197465-A-1-G
280-197621-A-48-C
280-197621-A-49-C
280-197621-A-50-C
280-197621-A-51-C
280-197621-A-52-C
280-197621-A-53-C
280-197621-A-54-K
280-197621-A-55-C
280-197621-A-59-C
280-197621-A-60-C
280-197621-A-61-C
280-197621-A-62-C
280-197621-A-63-C
280-197621-A-64-C
280-197621-A-65-F
280-197621-A-66-B
280-197621-A-67-B
280-197621-A-68-B
280-197621-A-69-B
280-197621-A-70-B
280-197621-A-71-B
280-197621-A-72-B
280-197621-A-73-B
280-197621-A-74-B
280-197621-A-75-B
280-197621-A-76-B
280-197621-A-77-B

Reagent

8330 LCS_00139

Preliminary Report

Eurofins Denver

LCS, Lab Control Sample Report

Sample Path: \\chromfs\Denver\ChromData\CHHPLC_X\20241207-140554.b\12070011.D

Lims ID: LCS139 Inj. Date: 07-Dec-2024 14:14:44

Worklist ID: 280-0140554-011 Instrument: CHHPLC_X3

Method: 8330_X3

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 3535A	Limits 2 3535
4 HMX	0.5000	0.4459	89.2	66-115	65-135
8 RDX	0.5000	0.4880	97.6	69-122	68-130
9 2,4,6-Trinitrophenol	0.5000	0.5620	112.4	63-135	80-120
11 1,3,5-Trinitrobenzene	0.5000	0.5456	109.1	62-127	73-125
12 1,3-Dinitrobenzene	0.5000	0.5086	101.7	59-131	78-120
13 Nitrobenzene	0.5000	0.5141	102.8	46-144	65-134
14 3,5-Dinitroaniline	0.5000	0.5032	100.6	55-119	71-117
15 Tetryl	0.5000	0.5083	101.7	56-131	64-128
16 Nitroglycerin	5.00	5.30	106.0	70-125	74-127
17 2,4,6-Trinitrotoluene	0.5000	0.4900	98.0	46-139	71-123
18 4-Amino-2,6-dinitrotolu	0.5000	0.5133	102.7	43-120	76-125
19 2-Amino-4,6-dinitrotolu	0.5000	0.5030	100.6	46-124	79-120
20 2,6-Dinitrotoluene	0.5000	0.5169	103.4	51-130	77-127
21 2,4-Dinitrotoluene	0.5000	0.4892	97.8	53-127	78-120
22 o-Nitrotoluene	0.5000	0.5018	100.4	37-138	70-127
23 p-Nitrotoluene	0.5000	0.5081	101.6	41-137	71-127
24 m-Nitrotoluene	0.5000	0.5109	102.2	31-140	73-125
25 PETN	5.00	5.18	103.6	67-127	73-127

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

280-200272-B-1-A	280-200272-B-2-A	860-88224-C-1-A

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

280-200288-A-1-A	280-200288-B-2-A	280-200349-C-1-A
280-200349-B-2-A	280-200349-C-3-A	280-200349-B-4-A
280-200349-C-5-A	280-200349-C-6-A	280-200351-A-1-A
280-200351-A-2-A	280-200351-A-3-A	280-200351-A-4-A
280-200351-A-5-A	280-200351-A-6-A	280-200351-A-7-A
280-200351-A-8-A	280-200351-B-9-A	280-200351-B-10-A

Reagent

8330 LCSMix2_00118

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

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CERTIFIED REFERENCE MATERIAL

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ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31451 **Lot No.:** 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.

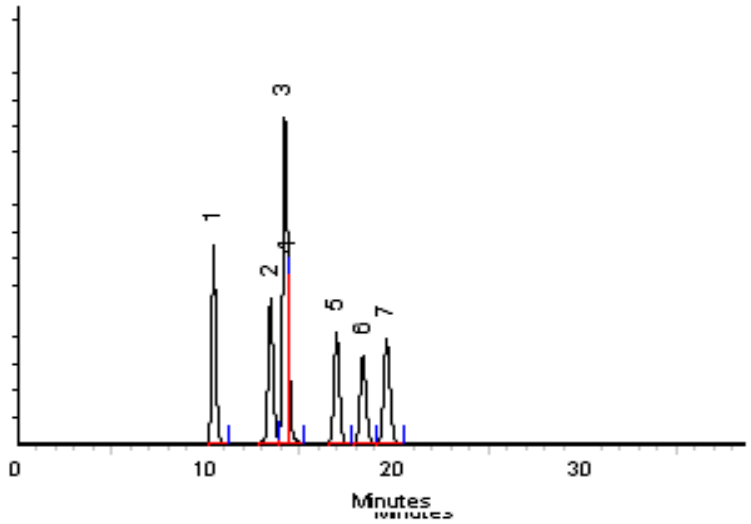
Mobile Phase A:
water:methanol (44:56 V/V)

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330 LCSMix2_00120

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

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CERTIFIED REFERENCE MATERIAL

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Certificate #3222.01

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 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.

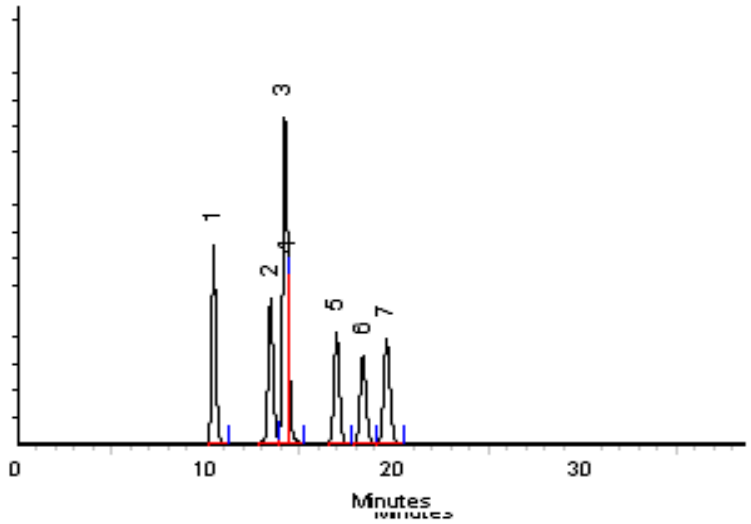
Mobile Phase A:
water:methanol (44:56 V/V)

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330 LCSMix2_00123

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110 Benner Circle
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CERTIFIED REFERENCE MATERIAL

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ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31451 **Lot No.:** A0211328

Description : 8330 Calibration Mix #2

8330 Calibration Std #2 1000µg/mL, Acetonitrile, 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	Tetryl	479-45-8	211028JLM	99%	1,000.0 µg/mL	+/- 46.6518
2	4-Amino-2,6-dinitrotoluene	19406-51-0	A930596-QQ2	99%	1,004.0 µg/mL	+/- 46.8384
3	2-Amino-4,6-dinitrotoluene	35572-78-2	A210503-001	99%	1,004.0 µg/mL	+/- 46.8384
4	2,6-Dinitrotoluene	606-20-2	BCCG1833	99%	1,002.0 µg/mL	+/- 46.7451
5	2-Nitrotoluene	88-72-2	BCBZ7826	99%	1,000.0 µg/mL	+/- 46.6518
6	4-Nitrotoluene	99-99-0	BCCB0171	99%	1,004.0 µg/mL	+/- 46.8384
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.

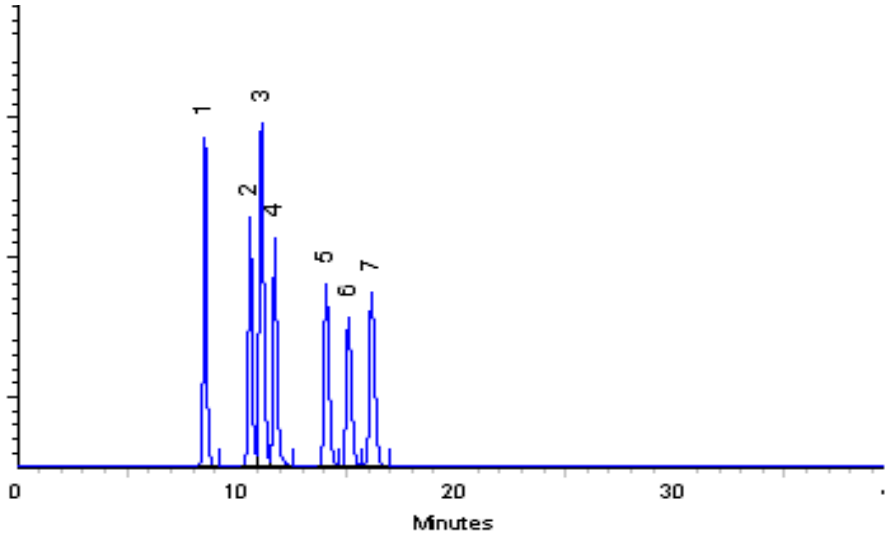
Mobile Phase A:
water:methanol (44:56 V/V)

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.

Matt Fragassi - Mix Technician

Date Mixed: 13-May-2024 **Balance Serial #** 1128342314

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 15-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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330 Stock_TS_00024

Agilent

Trusted Answers

ISO 17034

Reference Material Certificate

Product Information Sheet

Product Name: Stock Standard

Product Number: NAIM-833E-1

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

Lot Number: 0006684308

Lot Issue Date: 01-Jun-2022

Expiration Date: 30-Jun-2025

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

Matrix: acetonitrile

Description:

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

Traceability:

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

Homogeneity:

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

Instructions for Use:

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

Reagent

8330 Stock_TS_00025

Agilent

Trusted Answers

ISO 17034

Reference Material Certificate

Product Information Sheet

Product Name: Stock Standard

Product Number: NAIM-833E-1

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

Lot Number: 0006684308

Lot Issue Date: 01-Jun-2022

Expiration Date: 30-Jun-2025

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

Matrix: acetonitrile

Description:

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

Traceability:

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

Homogeneity:

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

Instructions for Use:

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

Reagent

8330_NG_Stk_00152

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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

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

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

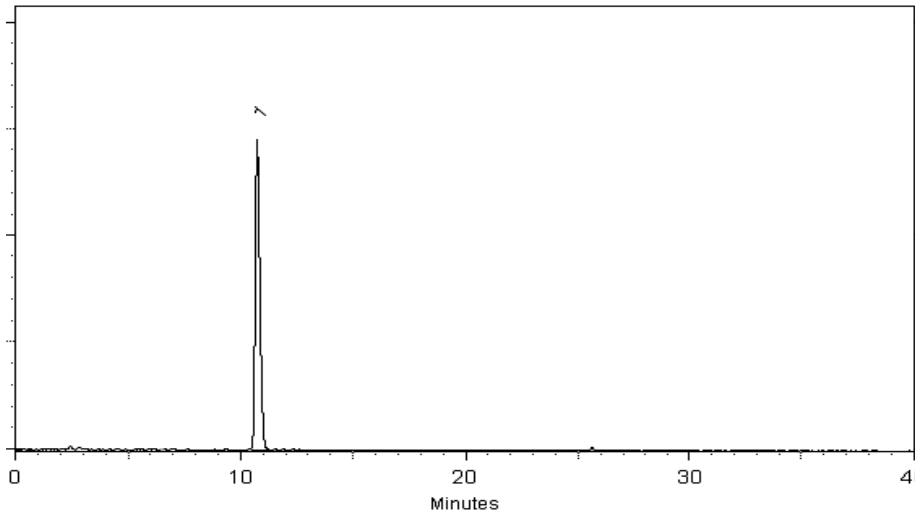
Mobile Phase A:
water:methanol (44:56 V/V)

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330_NG_Stk_00153

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

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

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

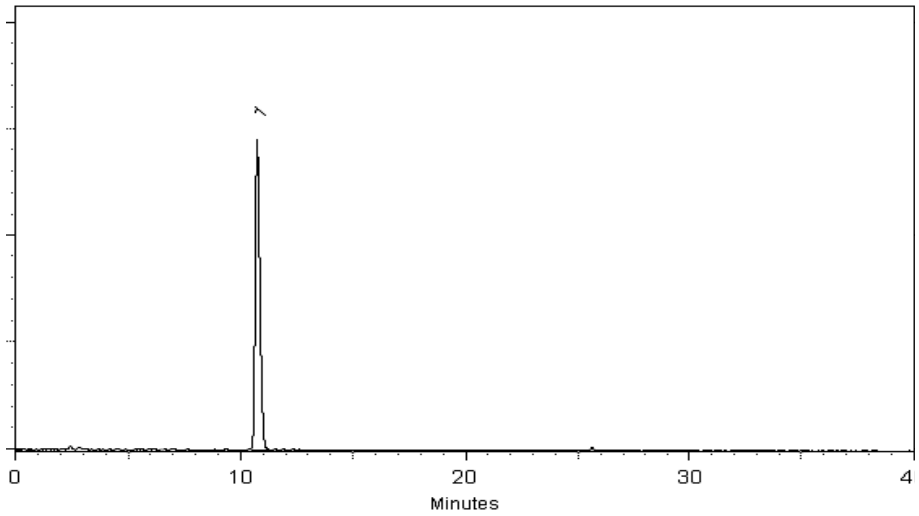
Mobile Phase A:
water:methanol (44:56 V/V)

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330_NG_Stk_00154

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

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

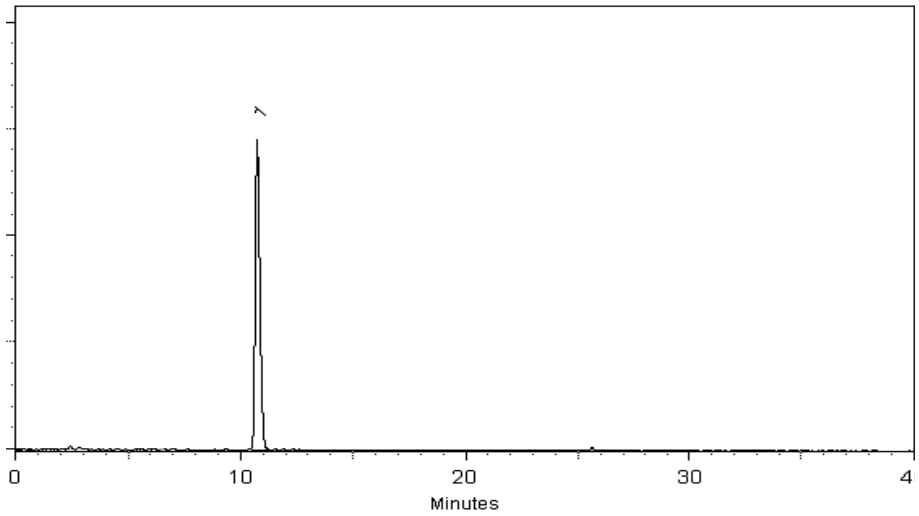
Mobile Phase A:
water:methanol (44:56 V/V)

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330_NG_Stk_00155

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

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

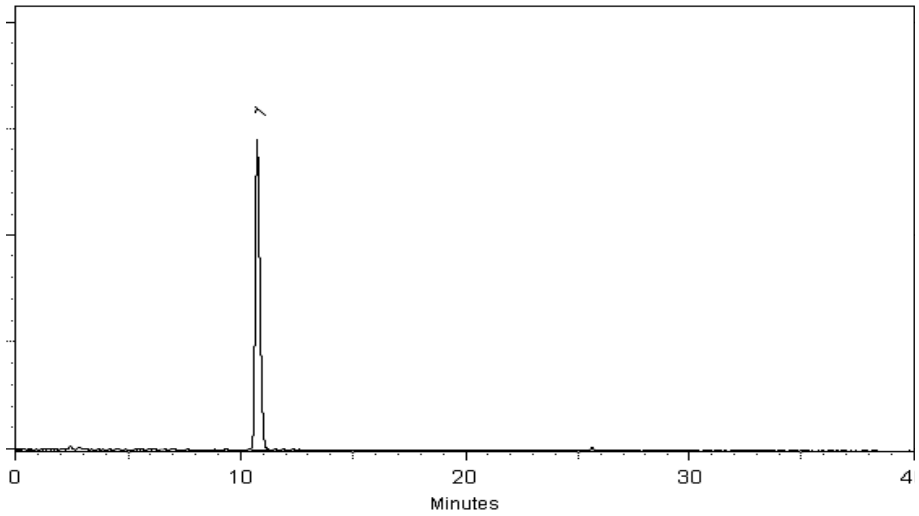
Mobile Phase A:
water:methanol (44:56 V/V)

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330_NG_Stk_00157

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568871 **Lot No.:** A0213136

Description : Custom Nitroglycerin Standard

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

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

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

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Nitroglycerin	55-63-0	200507JLM	99%	5,024.0 µg/mL	+/- 237.1194

* 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.

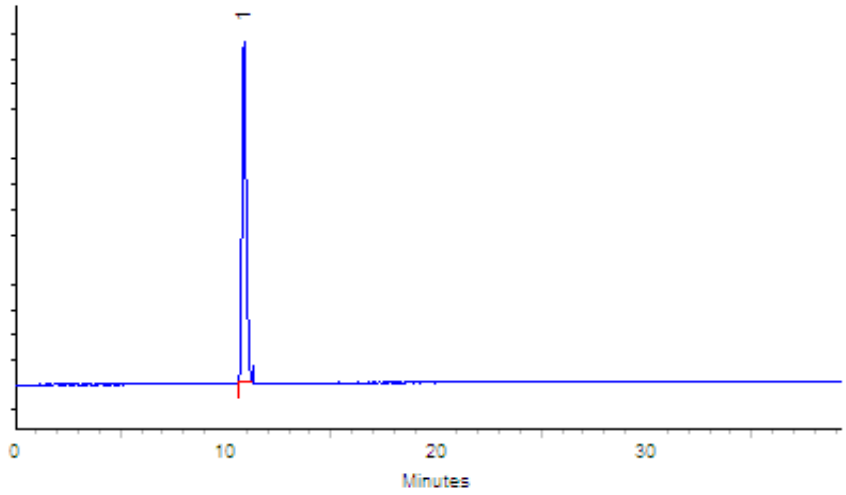
Mobile Phase A:
water:methanol (44:56 V/V)

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.

Morgan Craighead - Mix Technician

Date Mixed: 24-Jun-2024 **Balance Serial #** B251644995

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 26-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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330_NG_Stk_00158

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568871 **Lot No.:** A0213136

Description : Custom Nitroglycerin Standard

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

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

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

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Nitroglycerin	55-63-0	200507JLM	99%	5,024.0 µg/mL	+/- 237.1194

* 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.

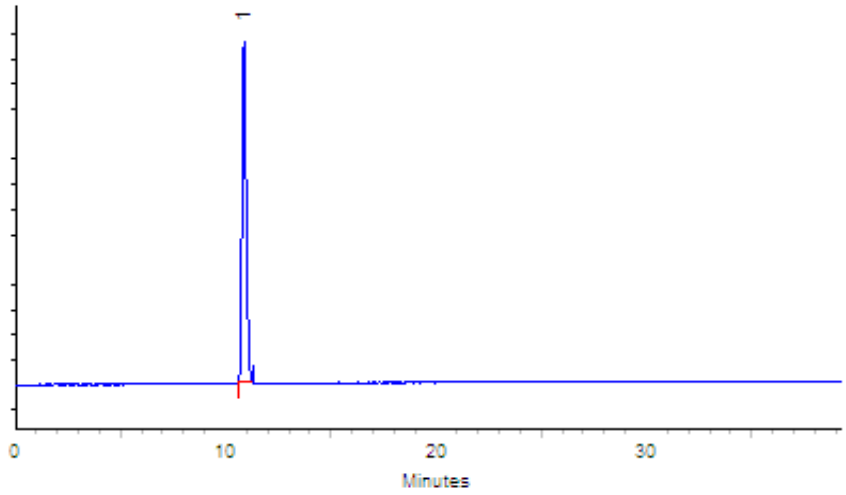
Mobile Phase A:
water:methanol (44:56 V/V)

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.

Morgan Craighead - Mix Technician

Date Mixed: 24-Jun-2024 **Balance Serial #** B251644995

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 26-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:

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  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330_NG1000_00015

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

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

ilac-MRA A2LA ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 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.

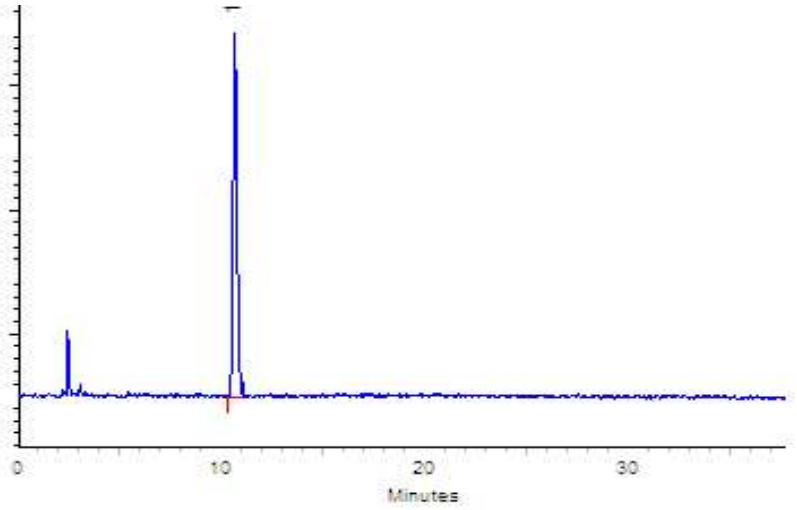
Mobile Phase A:
water:methanol (44:56 V/V)

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330_NG1000_00017

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 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.

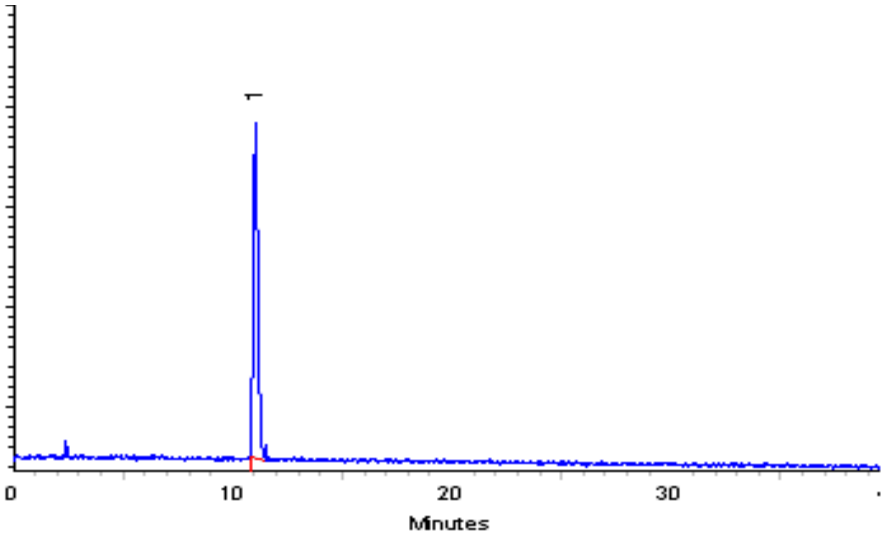
Mobile Phase A:
water:methanol (44:56 V/V)

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330_PETN_Stk_00159

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

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

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

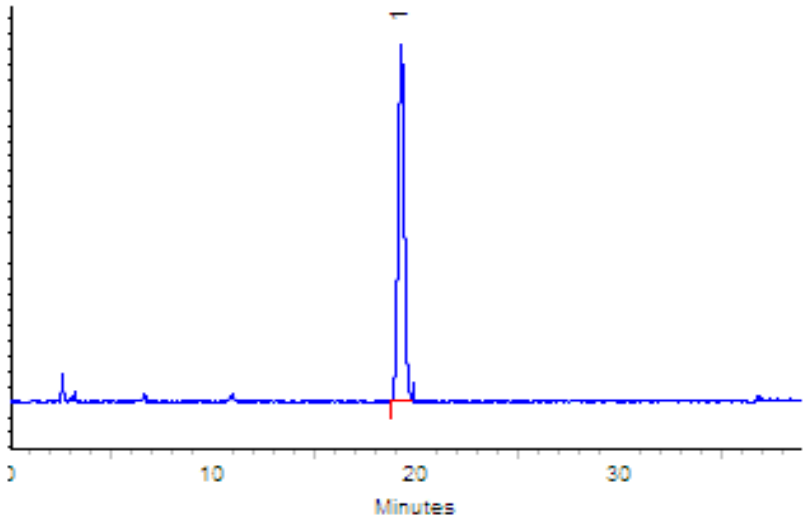
Mobile Phase A:
water:methanol (44:56 V/V)

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330_PETN_Stk_00160

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 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.

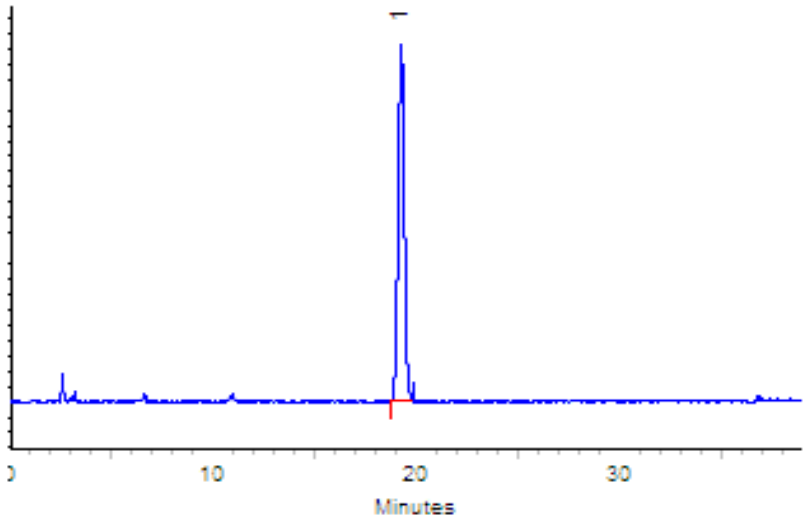
Mobile Phase A:
water:methanol (44:56 V/V)

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

REVIEWED

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330_PETN_Stk_00161

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 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.

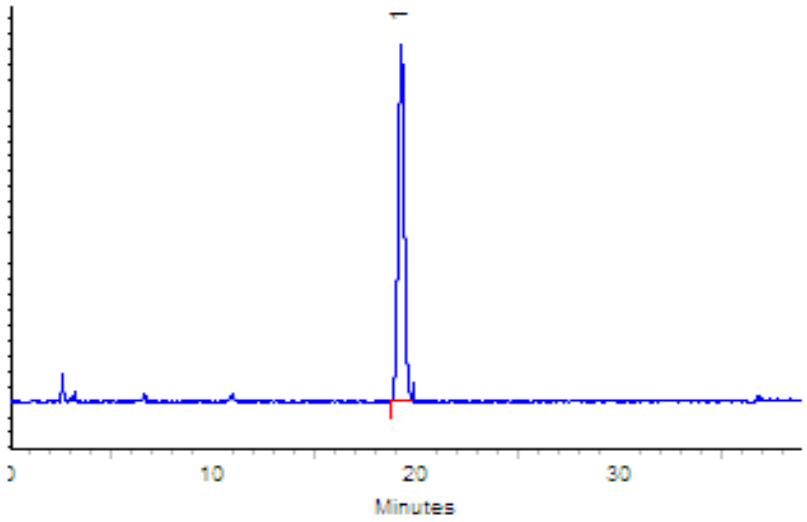
Mobile Phase A:
water:methanol (44:56 V/V)

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm

Inj. Vol
1µl



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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

REVIEWED

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330_PETN_Stk_00162

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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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.

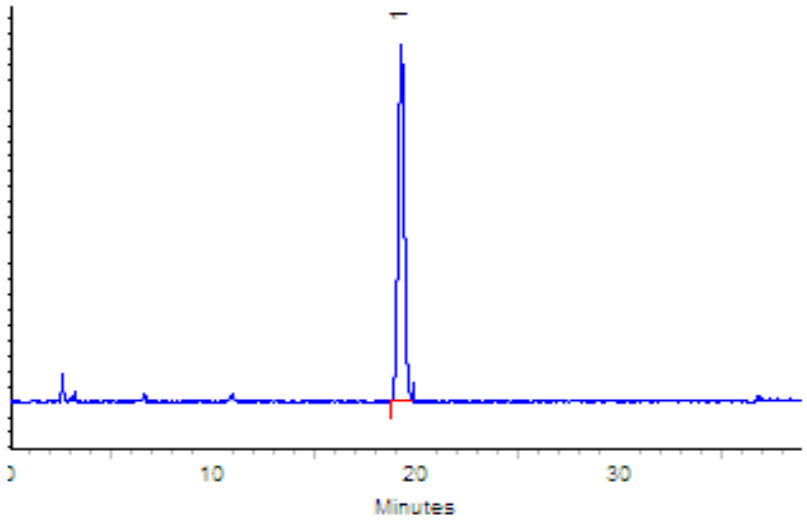
Mobile Phase A:
water:methanol (44:56 V/V)

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm

Inj. Vol
1µl



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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

REVIEWED

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

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

Reagent

8330_PETN_Stk_00163

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

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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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.

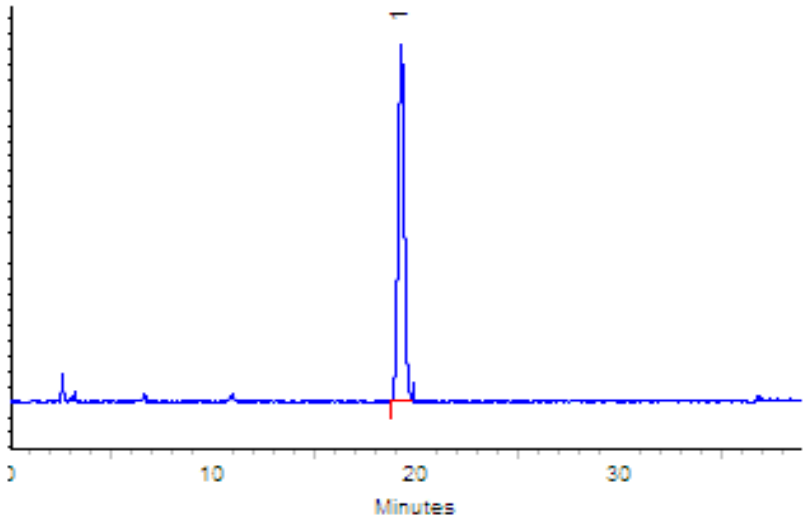
Mobile Phase A:
water:methanol (44:56 V/V)

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm

Inj. Vol
1µl



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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

REVIEWED

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.
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  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330_PETN_Stk_00165

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568872 **Lot No.:** A0213161

Description : Custom PETN Standard

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

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

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

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	PETN	78-11-5	051108JLM	99%	5,040.0 µg/mL	+/- 237.8746

* 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.

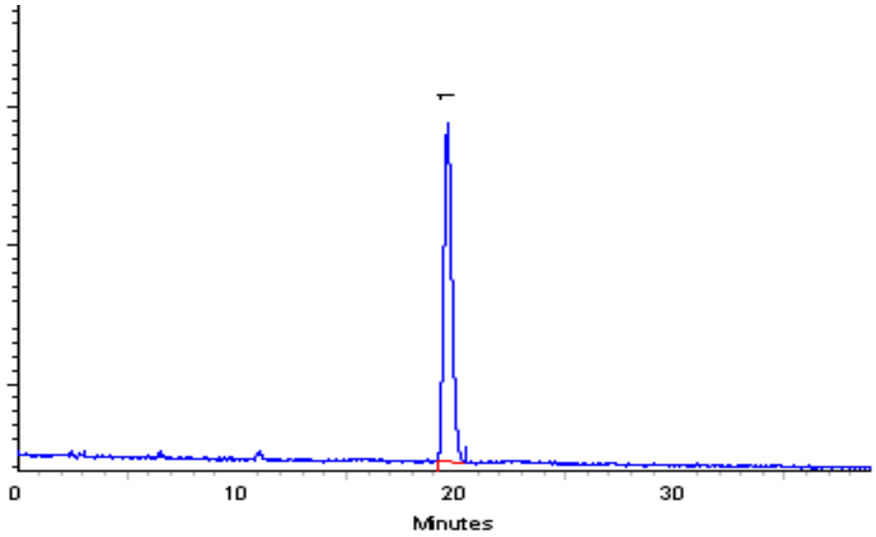
Mobile Phase A:
water:methanol (44:56 V/V)

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.

Brittany Federinko - Operations Tech I

Date Mixed: 25-Jun-2024 **Balance Serial #** 1128360905

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 01-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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330_PETN1000_00018

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 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.

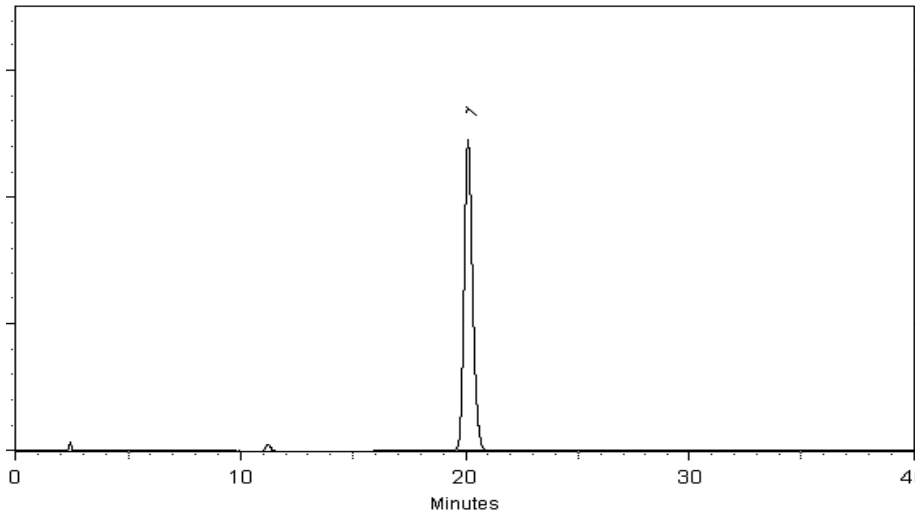
Mobile Phase A:
water:methanol (44:56 V/V)

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210nm & 254nm

Inj. Vol
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.

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330_PETN1000_00020

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 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.

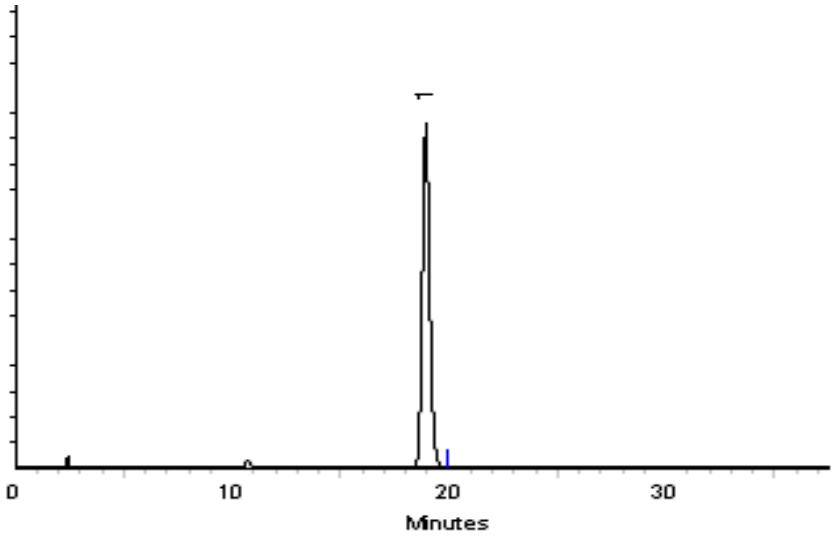
Mobile Phase A:
water:methanol (44:56 V/V)

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 - Operations Tech I

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

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

833035DNAStk_00062

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

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

CERTIFICATE OF ANALYSIS

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



Signal Word: Danger

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

Certified Reference Material

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity[3] %	Prepared Concentration[2] (µg/mL)	Certified Analyte Concentration[1] (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.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

[3] 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

For use in routine laboratory analysis.

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

QR-ORG/INO-001
Rev. 5/18

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: $u_a = \sqrt{(u(\mathrm{V}))^2 + (u(\mathrm{m}))^2 + (u(\mathrm{IV}))^2 + (u(\mathrm{RO}))^2}$ 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

833035DNAStk_00064

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

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

CERTIFICATE OF ANALYSIS

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



Signal Word: Danger

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

Certified Reference Material

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

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

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

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±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.

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

[3] 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

For use in routine laboratory analysis.

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

QR-ORG/INO-001
Rev. 5/18

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: $u_a = \sqrt{(u(\mathrm{V}))^2 + (u(\mathrm{m}))^2 + (u(\mathrm{IV}))^2 + (u(\mathrm{RO}))^2}$ 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

8330LCSMix1_00154

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

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

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ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31450 **Lot No.:** 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.

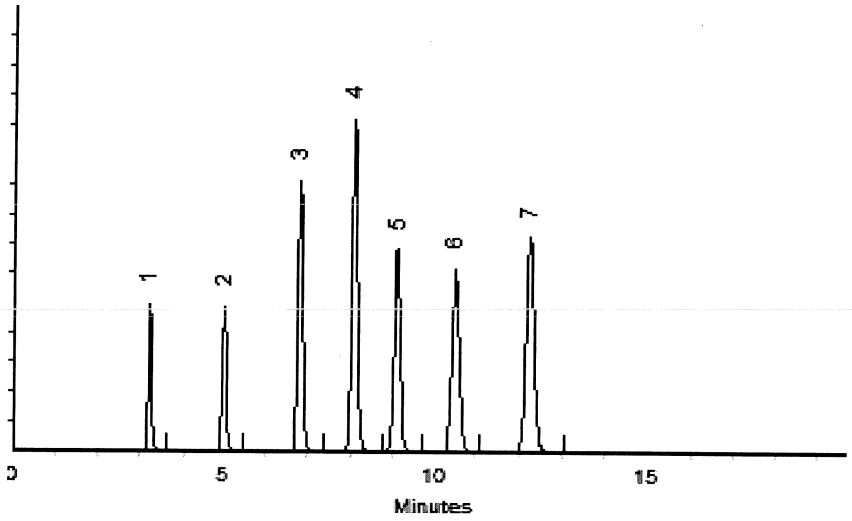
Mobile Phase A:
water:methanol (44:56 V/V)

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 - Operations Tech I

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

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330LCSMix1_00155

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 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.

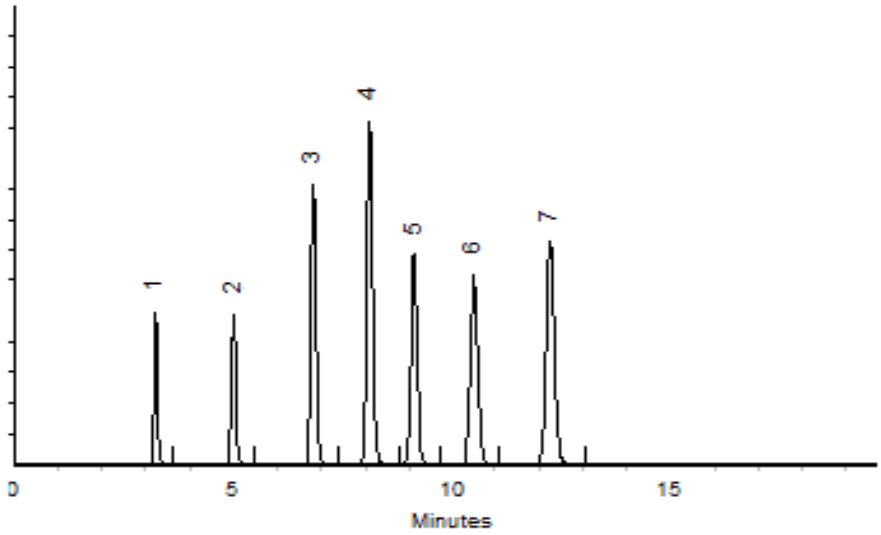
Mobile Phase A:
water:methanol (44:56 V/V)

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 - Operations Tech I

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

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330LCSMix1_00157

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 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.

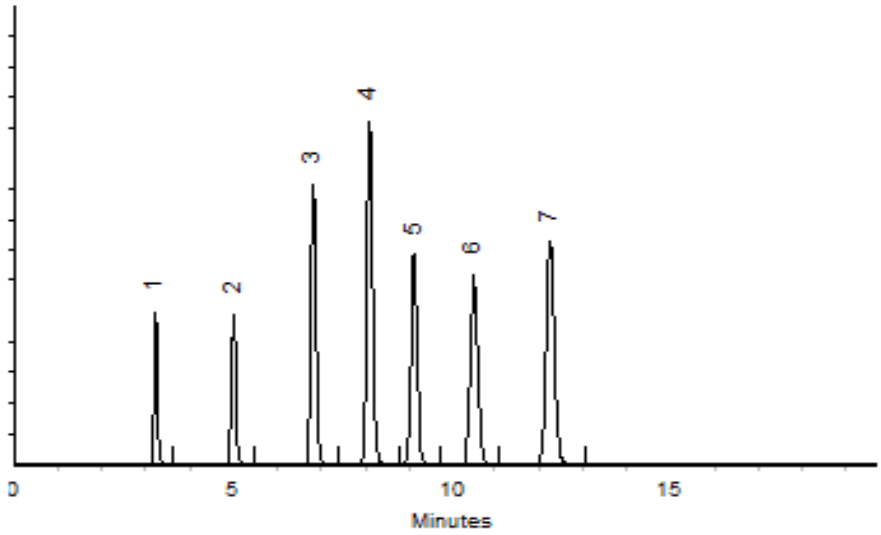
Mobile Phase A:
water:methanol (44:56 V/V)

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 - Operations Tech I

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

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330PAStkPS_00077

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

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

CERTIFICATE OF ANALYSIS

Catalog No: M-8330-ADD-3
Description: Picric acid
Lot: 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

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity[3] %	Prepared Concentration[2] (µg/mL)	Certified Analyte Concentration[1] (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.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

[3] 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

For use in routine laboratory analysis.

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

QR-ORG/INO-001
Rev. 5/18

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: $u_a = \sqrt{(u(\mathrm{V}))^2 + (u(\mathrm{m}))^2 + (u(\mathrm{IV}))^2 + (u(\mathrm{RO}))^2}$ 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

8330PAStkPS_00078

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

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

CERTIFICATE OF ANALYSIS

Catalog No: M-8330-ADD-3
Description: Picric acid
Lot: 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

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

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

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[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/291344-18 & 684/292805-19

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

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

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For use in routine laboratory analysis.

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   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.

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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: $u_a = \sqrt{(u(\mathrm{V}))^2 + (u(\mathrm{m}))^2 + (u(\mathrm{IV}))^2 + (u(\mathrm{RO}))^2}$ 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

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 0B_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

8330Surrogate_00160

Preliminary Report

Eurofins Denver

LCS, Lab Control Sample Report

Sample Path: \\chromfs\Denver\ChromData\CHHPLC_X\20241112-139735.b\11120011.D

Lims ID: 8330Surr160 Inj. Date: 12-Nov-2024 16:34:44

Worklist ID: 280-0139735-011 Instrument: CHHPLC_X3

Method: 8330_X3

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 3535	Limits 2 3535	Limits 3 3535
$ 10 1,2-Dinitrobenzene	0.5000	0.5025	100.5	63-127	83-119	75-118

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

400-265472-G-1-A 400-265472-G-2-A 860-86234-C-1-A
570-205687-H-3-A 570-205687-H-4-A 570-205687-C-12-A
570-205687-C-13-A 400-265472-F-4-A 400-265472-F-5-A
400-265494-B-1-A 400-265494-B-2-A 400-265534-AD-1-A
400-265534-AD-2-A 400-265534-AD-3-A 400-265534-AC-4-A
400-265534-R-5-A

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

280-199123-A-21-A 280-199123-A-22-A 280-199123-A-23-A
280-199123-A-24-A 280-199123-A-25-A 280-199123-A-26-A
280-199123-B-27-A 280-199123-B-28-A 280-199123-B-29-A
280-199123-B-30-A 280-199130-B-2-A 280-199130-B-3-A
280-199130-B-6-A 280-199130-A-15-A 280-199130-A-16-A
280-199130-A-23-A 680-258167-A-2-A 680-258167-B-3-A
680-258167-B-4-A

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

410-194755-B-1-A

Reagent

8330SurrStkSS_00329

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

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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.

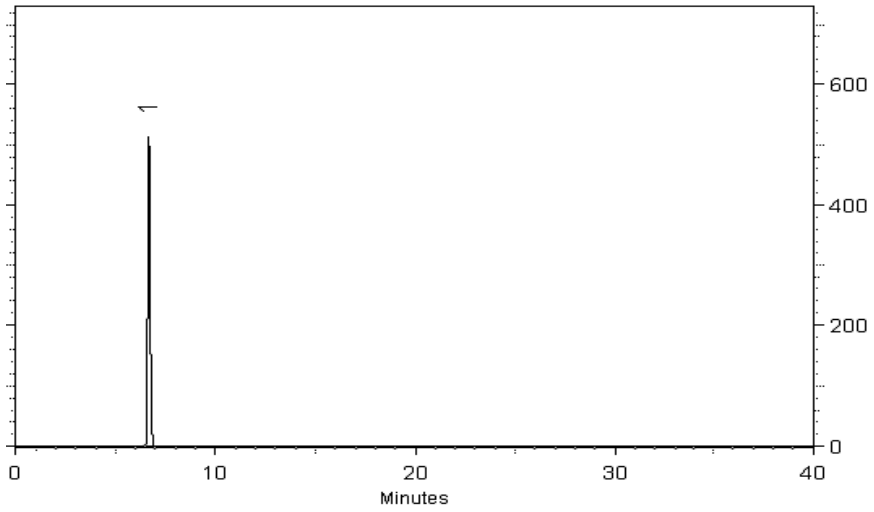
Mobile Phase A:
water:methanol (44:56 V/V)

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330SurrStkSS_00330

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** 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.

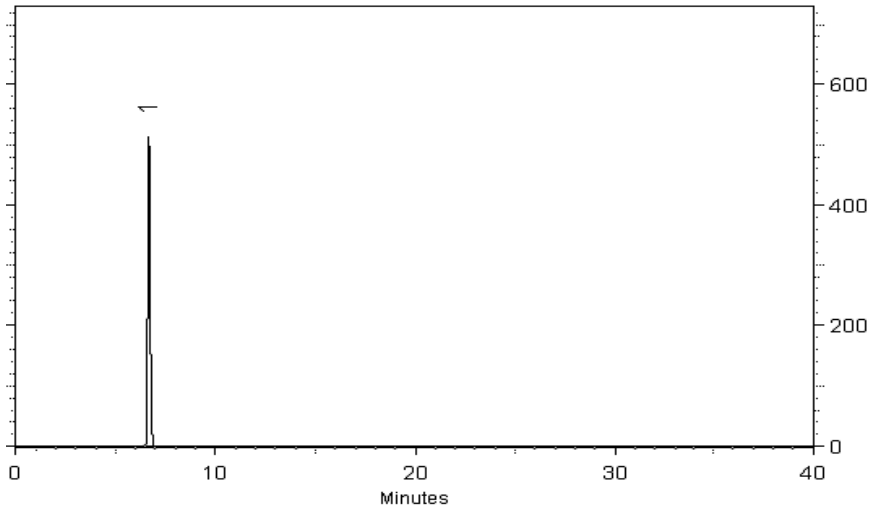
Mobile Phase A:
water:methanol (44:56 V/V)

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330SurrStkSS_00331

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** 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.

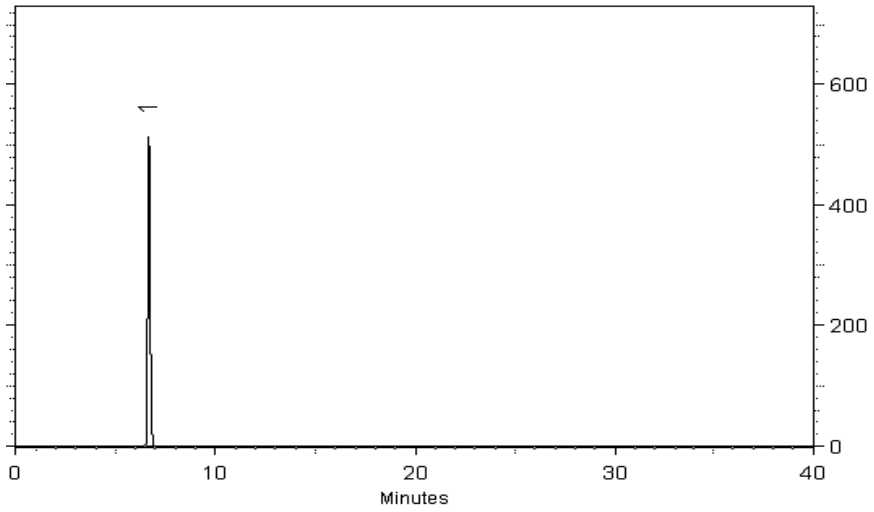
Mobile Phase A:
water:methanol (44:56 V/V)

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330SurrStkSS_00336

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** 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.

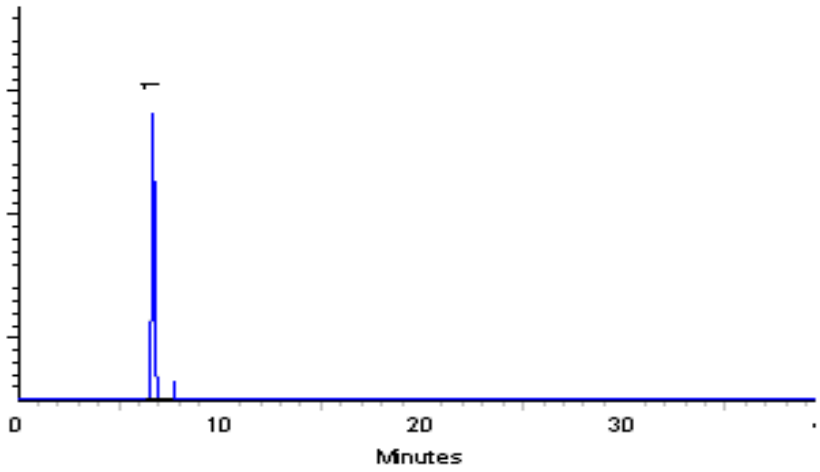
Mobile Phase A:
water:methanol (44:56 V/V)

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 - Operation Tech I

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

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330SurrStkSS_00337

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** 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.

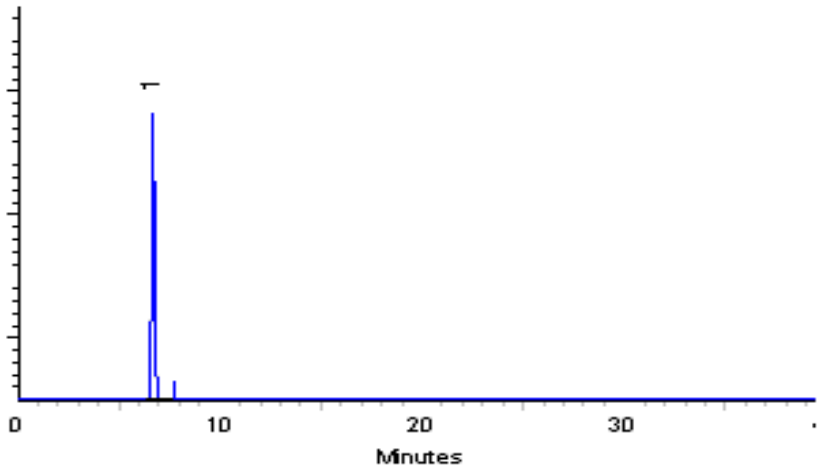
Mobile Phase A:
water:methanol (44:56 V/V)

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 - Operation Tech I

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

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330SurrStkSS_00338

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** 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.

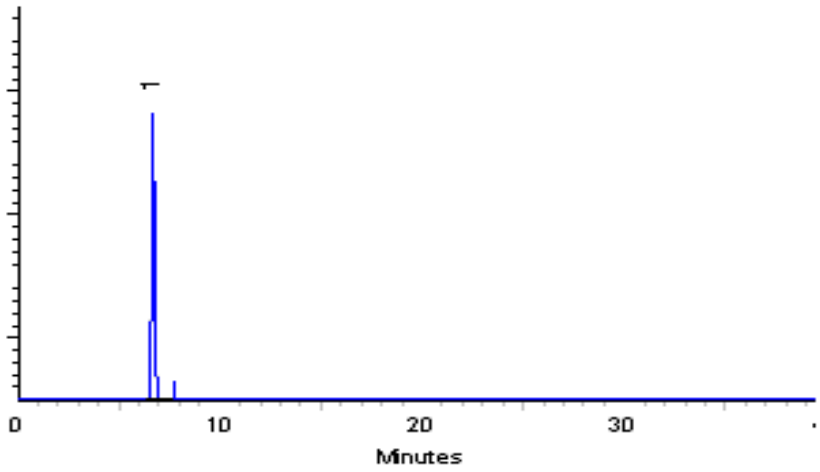
Mobile Phase A:
water:methanol (44:56 V/V)

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 - Operation Tech I

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

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330SurrStkSS_00339

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** 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.

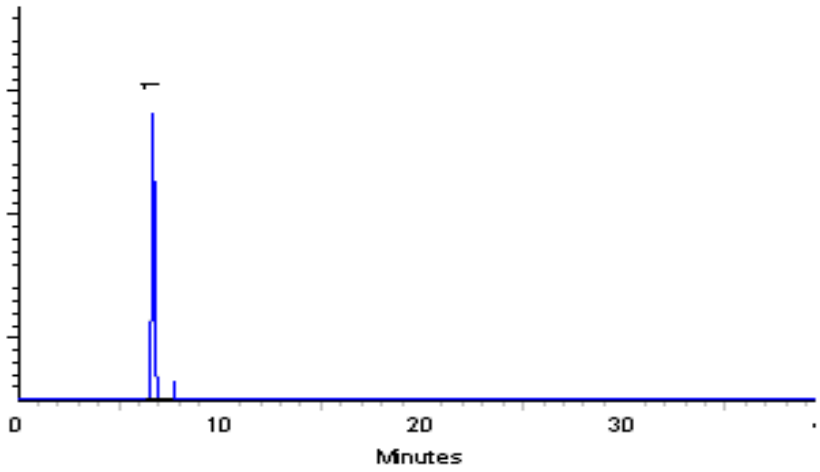
Mobile Phase A:
water:methanol (44:56 V/V)

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 - Operation Tech I

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

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330SurrStkSS_00340

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** 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.

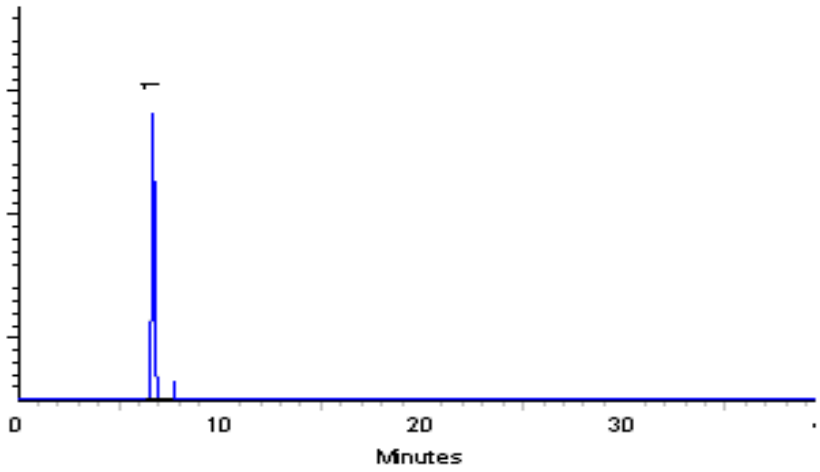
Mobile Phase A:
water:methanol (44:56 V/V)

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 - Operation Tech I

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

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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330SurrStkSS_00341

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** 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.

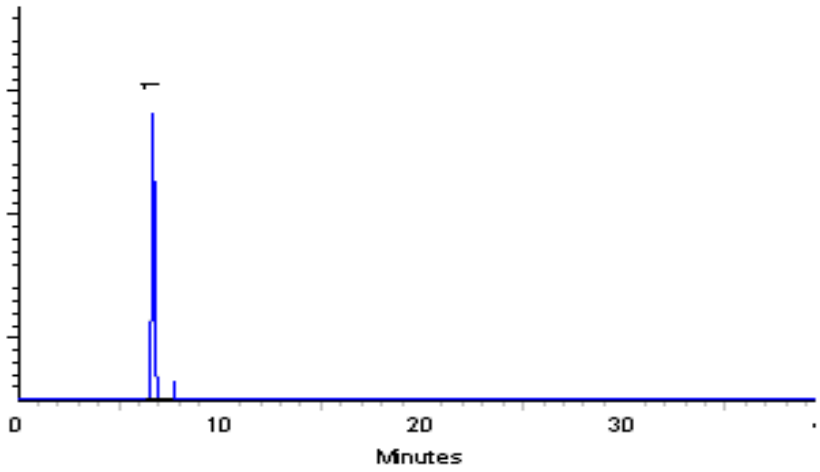
Mobile Phase A:
water:methanol (44:56 V/V)

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 - Operation Tech I

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

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:

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  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330SurrStkSS_00342

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** 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.

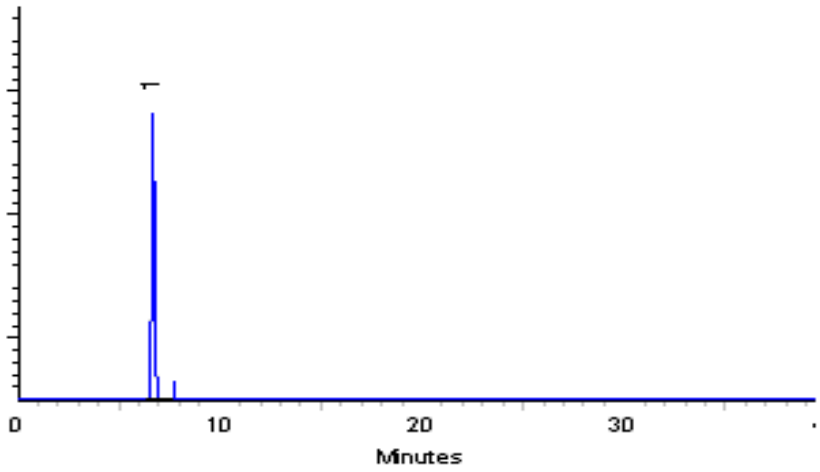
Mobile Phase A:
water:methanol (44:56 V/V)

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 - Operation Tech I

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

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:

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  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330SurrStock_00173

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

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

CERTIFICATE OF ANALYSIS

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



Signal Word: Danger

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

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/FID)	Prepared Concentration[2] (µg/mL)	Certified Analyte Concentration[1] (µg/mL)
1,2-Dinitrobenzene	528-29-0	100.0	1002	1002

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

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

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

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

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

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

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

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

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

Reagent

8330SurrStock_00174

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

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

CERTIFICATE OF ANALYSIS

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



Signal Word: Danger

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

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/FID)	Prepared Concentration[2] (µg/mL)	Certified Analyte Concentration[1] (µg/mL)
1,2-Dinitrobenzene	528-29-0	100.0	1002	1002

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

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

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

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

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

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

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

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

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

Reagent

MNX,TNX,DNX_00118

Agilent
Trusted Answers

ISO 17034

Reference Material Certificate

Product Information Sheet

Product Name:	Custom Standard	**Lot Number:**	0006801479
Product Number:	CUS-23984	**Lot Issue Date:**	21-Jun-2024
Storage Conditions:	Store at Room Temperature (15° to 30°C).	**Expiration Date:**	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 20ºC to 25ºC immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Safety:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this analytical reference material.

Intended Use:
This analytical reference 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.

Agilent
Trusted Answers

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

Sample lot approver:



Monica Bourgeois
QMS Representative

Reagent

PicricARestek_00126

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 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.

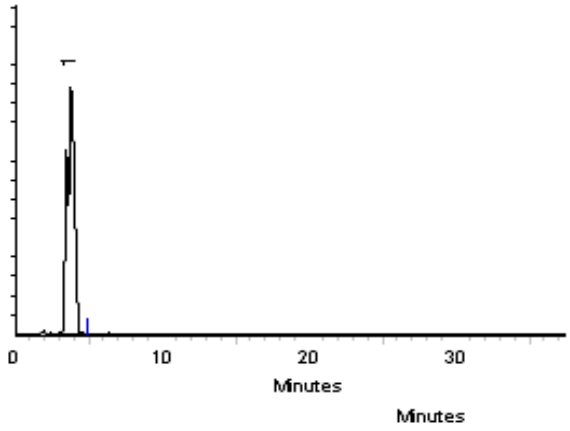
Mobile Phase A:
water:methanol (44:56 V/V)

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

Certified Uncertainty Value Notes:

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

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

8330B_D5_DryWt

Nitroaromatics and Nitramines (HPLC)

FORM II
HPLC/IC SURROGATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-200917-1

SDG No.:

Matrix: Solid 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 #
P2-ARROYO-005-003	280-200917-1	88	
P2-ARROYO-005-003	280-200917-1		98
	MB 280-678945/1-A	91	
	LCS 280-678945/2-A	87	
P2-ARROYO-005-003 MS	280-200917-1 MS	87	
P2-ARROYO-005-003 MS	280-200917-1 MS		100
P2-ARROYO-005-003 MSD	280-200917-1 MSD	87	
P2-ARROYO-005-003 MSD	280-200917-1 MSD		102
P2-ARROYO-005-003 DU	280-200917-1 DU	89	
P2-ARROYO-005-003 DU	280-200917-1 DU		98
P2-ARROYO-005-003 TRL	280-200917-1 TRL	88	
P2-ARROYO-005-003 TRL	280-200917-1 TRL		100

	QC LIMITS
12DNB = 1,2-Dinitrobenzene (Surr)	78-119

Column to be used to flag recovery values

FORM II 8330B MOD

FORM III
HPLC/IC LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-200917-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: 12210012.D

Lab ID: LCS 280-678945/2-A Client ID:

COMPOUND	SPIKE ADDED (mg/Kg)	LCS CONCENTRATION (mg/Kg)	LCS % REC	QC LIMITS REC	#
1,3,5-Trinitrobenzene	1.00	0.989	99	80-116	
1,3-Dinitrobenzene	1.00	0.895	89	73-119	
2,4,6-Trinitrotoluene	1.00	0.867	87	71-120	
2,4-Dinitrotoluene	1.00	0.860	86	75-121	
2,6-Dinitrotoluene	1.00	0.893	89	79-117	
2-Amino-4,6-dinitrotoluene	1.00	0.895	90	71-123	
o-Nitrotoluene	1.00	0.899	90	70-124	
m-Nitrotoluene	1.00	0.934	93	67-129	
4-Amino-2,6-dinitrotoluene	1.00	0.882	88	64-127	
p-Nitrotoluene	1.00	0.909	91	71-124	
Nitrobenzene	1.00	0.906	91	67-129	
Nitroglycerin	10.0	9.98	100	73-124	
HMX	1.00	0.804	80	74-124	M
PETN	10.0	9.33	93	72-128	
RDX	1.00	0.859	86	67-129	
Tetryl	1.00	0.894	89	68-135	

Column to be used to flag recovery and RPD values

FORM III 8330B MOD

FORM III
HPLC/IC MATRIX SPIKE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-200917-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: 12190013.D

Lab ID: 280-200917-1 MS Client ID: P2-ARROYO-005-003 MS

COMPOUND	SPIKE ADDED (mg/Kg)	SAMPLE CONCENTRATION (mg/Kg)	MS CONCENTRATION (mg/Kg)	MS % REC	QC LIMITS REC	#
1,3,5-Trinitrobenzene	0.935	0.040 U	1.02	109	80-116	

Column to be used to flag recovery and RPD values

FORM III 8330B MOD

FORM III
HPLC/IC MATRIX SPIKE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-200917-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: 12210014.D

Lab ID: 280-200917-1 MS Client ID: P2-ARROYO-005-003 MS

COMPOUND	SPIKE ADDED (mg/Kg)	SAMPLE CONCENTRATION (mg/Kg)	MS CONCENTRATION (mg/Kg)	MS % REC	QC LIMITS REC	#
1,3-Dinitrobenzene	0.935	0.040 U	0.820	88	73-119	
2,4,6-Trinitrotoluene	0.935	0.069 U	0.854	91	71-120	M
2,4-Dinitrotoluene	0.935	0.040 U	0.789	84	75-121	M
2,6-Dinitrotoluene	0.935	0.040 U	0.810	87	79-117	M
2-Amino-4,6-dinitrotoluene	0.935	0.069 U	0.832	89	71-123	M
o-Nitrotoluene	0.935	0.099 U	0.815	87	70-124	
m-Nitrotoluene	0.935	0.15 U	0.842	90	67-129	
4-Amino-2,6-dinitrotoluene	0.935	0.069 U	0.798	85	64-127	M
p-Nitrotoluene	0.935	0.099 U	0.823	88	71-124	
Nitrobenzene	0.935	0.20 U	0.820	88	67-129	
Nitroglycerin	9.35	0.69 U	9.30	99	73-124	
HMX	0.935	0.069 U	0.706	76	74-124	M
PETN	9.35	0.99 U	8.56	92	72-128	M
RDX	0.935	0.099 U	0.741	79	67-129	
Tetryl	0.935	0.099 U	0.809	87	68-135	M

Column to be used to flag recovery and RPD values

FORM III 8330B MOD

FORM III
HPLC/IC MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-200917-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: 12190014.D

Lab ID: 280-200917-1 MSD Client ID: P2-ARROYO-005-003 MSD

COMPOUND	SPIKE ADDED (mg/Kg)	MSD CONCENTRATION (mg/Kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,3,5-Trinitrobenzene	0.981	1.11	114	9	20	80-116	

Column to be used to flag recovery and RPD values

FORM III 8330B MOD

FORM III
HPLC/IC MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins Denver Job No.: 280-200917-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: 12210015.D

Lab ID: 280-200917-1 MSD Client ID: P2-ARROYO-005-003 MSD

COMPOUND	SPIKE ADDED (mg/Kg)	MSD CONCENTRATION (mg/Kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,3-Dinitrobenzene	0.981	0.865	88	5	20	73-119	
2,4,6-Trinitrotoluene	0.981	0.890	91	4	20	71-120	
2,4-Dinitrotoluene	0.981	0.841	86	6	20	75-121	
2,6-Dinitrotoluene	0.981	0.860	88	6	20	79-117	
2-Amino-4,6-dinitrotoluene	0.981	0.869	89	4	20	71-123	
o-Nitrotoluene	0.981	0.859	88	5	20	70-124	
m-Nitrotoluene	0.981	0.884	90	5	20	67-129	
4-Amino-2,6-dinitrotoluene	0.981	0.852	87	6	20	64-127	
p-Nitrotoluene	0.981	0.871	89	6	20	71-124	
Nitrobenzene	0.981	0.865	88	5	20	67-129	
Nitroglycerin	9.81	9.67	99	4	20	73-124	
HMX	0.981	0.744	76	5	20	74-124	M
PETN	9.81	9.05	92	6	20	72-128	
RDX	0.981	0.779	79	5	20	67-129	
Tetryl	0.981	0.883	90	9	20	68-135	

Column to be used to flag recovery and RPD values

FORM III 8330B MOD

HPLC/IC DUPLICATE SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200917-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: 12190015.D

Lab ID: 280-200917-1 DU Client ID: P2-ARROYO-005-003 DU

COMPOUND	SAMPLE CONCENTRATION (mg/Kg)	DUPLICATE CONCENTRATION (mg/Kg)	%RPD	%RPD LIMIT	#
1,3,5-Trinitrobenzene	0.040 U	0.039 U	NC	20	

Column to be used to flag %RPD values

8330B MOD

HPLC/IC DUPLICATE SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200917-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: 12210016.D

Lab ID: 280-200917-1 DU Client ID: P2-ARROYO-005-003 DU

COMPOUND	SAMPLE CONCENTRATION (mg/Kg)	DUPLICATE CONCENTRATION (mg/Kg)	%RPD	%RPD LIMIT	#
1,3-Dinitrobenzene	0.040 U	0.039 U	NC	20	
2,4,6-Trinitrotoluene	0.069 U	0.0756 J	NC	20	
2,4-Dinitrotoluene	0.040 U	0.039 U	NC	20	
2,6-Dinitrotoluene	0.040 U	0.039 U	NC	20	
2-Amino-4,6-dinitrotoluene	0.069 U	0.069 U	NC	20	
o-Nitrotoluene	0.099 U	0.099 U	NC	20	
m-Nitrotoluene	0.15 U	0.15 U	NC	20	
4-Amino-2,6-dinitrotoluene	0.069 U	0.069 U	NC	20	
p-Nitrotoluene	0.099 U	0.099 U	NC	20	
Nitrobenzene	0.20 U	0.20 U	NC	20	
Nitroglycerin	0.69 U	0.69 U	NC	20	
HMX	0.069 U	0.069 U	NC	20	
PETN	0.99 U	0.99 U	NC	20	
RDX	0.099 U	0.099 U	NC	20	
Tetryl	0.099 U	0.099 U	NC	20	

Column to be used to flag %RPD values

8330B MOD

HPLC/IC TRIPLICATE SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200917-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: 12190016.D

Lab ID: 280-200917-1 TRL Client ID: P2-ARROYO-005-003 TRL

COMPOUND	SAMPLE CONC. (mg/Kg)	DUPLICATE CONC. (mg/Kg)	TRIPLICATE CONC. (mg/Kg)	%RSD	%RSD LIMIT	#
1,3,5-Trinitrobenzene	0.040 U	0.039 U	0.038 U	NC	20	

Column to be used to flag %RSD

8330B MOD

HPLC/IC TRIPLICATE SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200917-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: 12210017.D

Lab ID: 280-200917-1 TRL Client ID: P2-ARROYO-005-003 TRL

COMPOUND	SAMPLE CONC. (mg/Kg)	DUPLICATE CONC. (mg/Kg)	TRIPLICATE CONC. (mg/Kg)	%RSD	%RSD LIMIT	#
1,3-Dinitrobenzene	0.040 U	0.039 U	0.038 U	NC	20	
2,4,6-Trinitrotoluene	0.069 U	0.0756 J	0.0584 J	NC	20	
2,4-Dinitrotoluene	0.040 U	0.039 U	0.038 U	NC	20	
2,6-Dinitrotoluene	0.040 U	0.039 U	0.038 U	NC	20	
2-Amino-4,6-dinitrotoluene	0.069 U	0.069 U	0.067 U	NC	20	
o-Nitrotoluene	0.099 U	0.099 U	0.096 U	NC	20	
m-Nitrotoluene	0.15 U	0.15 U	0.14 U	NC	20	
4-Amino-2,6-dinitrotoluene	0.069 U	0.069 U	0.067 U	NC	20	
p-Nitrotoluene	0.099 U	0.099 U	0.096 U	NC	20	
Nitrobenzene	0.20 U	0.20 U	0.19 U	NC	20	
Nitroglycerin	0.69 U	0.69 U	0.67 U	NC	20	
HMX	0.069 U	0.069 U	0.067 U	NC	20	
PETN	0.99 U	0.99 U	0.96 U	NC	20	
RDX	0.099 U	0.099 U	0.096 U	NC	20	
Tetryl	0.099 U	0.099 U	0.096 U	NC	20	

Column to be used to flag %RSD

8330B MOD

FORM IV
HPLC/IC METHOD BLANK SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200917-1

SDG No.:

Lab Sample ID: MB 280-678945/1-A

Matrix: Solid Date Extracted: 12/18/2024 12:11

Lab File ID:(1) 12210011.D Lab File ID:(2)

Date Analyzed:(1) 12/21/2024 14:47 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 280-678945/2-A	12/21/2024 15:09	
P2-ARROYO-005-003	280-200917-1	12/21/2024 15:31	12/19/2024 19:46
P2-ARROYO-005-003 MS	280-200917-1 MS	12/21/2024 15:53	12/19/2024 20:21
P2-ARROYO-005-003 MSD	280-200917-1 MSD	12/21/2024 16:15	12/19/2024 20:56
P2-ARROYO-005-003 DU	280-200917-1 DU	12/21/2024 16:37	12/19/2024 21:31
P2-ARROYO-005-003 TRL	280-200917-1 TRL	12/21/2024 16:59	12/19/2024 22:06

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200917-1

SDG No.:

Client Sample ID: P2-ARROYO-005-003 MS Lab Sample ID: 280-200917-1 MS

Instrument ID (1): CHHPLC_X3 Instrument ID (2): CHHPLC_X5

Date Analyzed (1): 12/21/2024 15:53 Date Analyzed (2): 12/19/2024 20:21

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		6.59	6.43	6.73	0.706		19.8
	2		6.22	6.15	6.45	0.861		
RDX	1		7.50	7.33	7.63	0.741		13.1
	2		8.30	8.25	8.55	0.845		
1,3,5-Trinitrobenzene	1		8.44	8.25	8.55	0.903		12.3
	2		16.44	16.38	16.68	1.02		
1,3-Dinitrobenzene	1		8.97	8.78	9.08	0.820		14.5
	2		13.70	13.66	13.96	0.948		
Nitrobenzene	1		9.28	9.08	9.38	0.820		15.2
	2		10.80	10.77	11.07	0.954		
Tetryl	1		9.56	9.35	9.65	0.809		13.8
	2		20.96	20.89	21.19	0.929		
Nitroglycerin	1		10.00	9.77	10.07	9.30		0.0
	2		14.22	14.15	14.45	9.30		
2,4,6-Trinitrotoluene	1		10.34	10.17	10.37	0.854		12.7
	2		21.86	21.79	22.09	0.970		
4-Amino-2,6-dinitrotoluene	1		10.46	10.28	10.48	0.798		15.0
	2		15.40	15.37	15.67	0.928		
2-Amino-4,6-dinitrotoluene	1		10.68	10.50	10.70	0.832		6.9
	2		16.17	16.13	16.43	0.892		
2,6-Dinitrotoluene	1		10.83	10.64	10.84	0.810		7.1
	2		17.51	17.46	17.76	0.870		
2,4-Dinitrotoluene	1		10.98	10.80	11.00	0.789		15.5
	2		17.95	17.89	18.19	0.922		
o-Nitrotoluene	1		11.63	11.38	11.68	0.815		13.7
	2		14.82	14.75	15.05	0.935		
p-Nitrotoluene	1		11.98	11.73	12.03	0.823		15.1
	2		14.91	14.97	15.27	0.957		
m-Nitrotoluene	1		12.46	12.19	12.49	0.842		10.2
	2		15.85	15.79	16.09	0.932		
PETN	1		13.40	13.09	13.39	8.56		10.7
	2		23.13	23.03	23.33	9.53		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins Denver | Job No.: 280-200917-1

SDG No.:

Client Sample ID: P2-ARROYO-005-003 MSD | Lab Sample ID: 280-200917-1 MSD

Instrument ID (1): CHHPLC_X3 | Instrument ID (2): CHHPLC_X5

Date Analyzed (1): 12/21/2024 16:15 | Date Analyzed (2): 12/19/2024 20:56

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		6.59	6.43	6.73	0.744		18.5
	2		6.23	6.15	6.45	0.896		
RDX	1		7.49	7.33	7.63	0.779		11.5
	2		8.31	8.25	8.55	0.874		
1,3,5-Trinitrobenzene	1		8.43	8.25	8.55	0.947		16.1
	2		16.47	16.38	16.68	1.11		
1,3-Dinitrobenzene	1		8.96	8.78	9.08	0.865		13.9
	2		13.73	13.66	13.96	0.994		
Nitrobenzene	1		9.26	9.08	9.38	0.865		14.6
	2		10.83	10.77	11.07	1.00		
Tetryl	1		9.54	9.35	9.65	0.883		10.8
	2		21.02	20.89	21.19	0.983		
Nitroglycerin	1		9.97	9.77	10.07	9.67		0.1
	2		14.26	14.15	14.45	9.69		
2,4,6-Trinitrotoluene	1		10.31	10.17	10.37	0.890		13.0
	2		21.91	21.79	22.09	1.01		
4-Amino-2,6-dinitrotoluene	1		10.43	10.28	10.48	0.852		13.9
	2		15.45	15.37	15.67	0.979		
2-Amino-4,6-dinitrotoluene	1		10.65	10.50	10.70	0.869		5.2
	2		16.22	16.13	16.43	0.915		
2,6-Dinitrotoluene	1		10.79	10.64	10.84	0.860		6.5
	2		17.55	17.46	17.76	0.918		
2,4-Dinitrotoluene	1		10.95	10.80	11.00	0.841		15.1
	2		17.99	17.89	18.19	0.978		
o-Nitrotoluene	1		11.59	11.38	11.68	0.859		17.7
	2		14.86	14.75	15.05	1.03		
p-Nitrotoluene	1		11.94	11.73	12.03	0.871		13.1
	2		14.96	14.97	15.27	0.993		
m-Nitrotoluene	1		12.41	12.19	12.49	0.884		11.1
	2		15.89	15.79	16.09	0.988		
PETN	1		13.35	13.09	13.39	9.05		10.8
	2		23.18	23.03	23.33	10.1		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200917-1

SDG No.:

Client Sample ID: P2-ARROYO-005-003 DU Lab Sample ID: 280-200917-1 DU

Instrument ID (1): CHHPLC_X3 Instrument ID (2): CHHPLC_X5

Date Analyzed (1): 12/21/2024 16:37 Date Analyzed (2): 12/19/2024 21:31

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	
2,4,6-Trinitrotoluene	1		10.31	10.17	10.37	0.0756		12.2
	2		21.86	21.79	22.09	0.0668		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200917-1

SDG No.:

Client Sample ID: P2-ARROYO-005-003 TRL Lab Sample ID: 280-200917-1 TRL

Instrument ID (1): CHHPLC_X3 Instrument ID (2): CHHPLC_X5

Date Analyzed (1): 12/21/2024 16:59 Date Analyzed (2): 12/19/2024 22:06

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	
2,4,6-Trinitrotoluene	1		10.30	10.17	10.37	0.0584		6.7
	2		21.89	21.79	22.09	0.0546		

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-200917-1

SDG No.:

Client Sample ID: P2-ARROYO-005-003 | Lab Sample ID: 280-200917-1

Matrix: Solid | Lab File ID: 12190012.D

Analysis Method: 8330B MOD | Date Collected: 12/16/2024 11:14

Extraction Method: 8330B | Date Extracted: 12/18/2024 12:11

Sample wt/vol: +10.31(g) | Date Analyzed: 12/19/2024 19:46

Con. Extract Vol.: 40(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: Luna-phenylhex ID: 4.6(mm)

% Moisture: 2.0 % Solids: 98.0 | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 679155 | Units: mg/Kg

Preparation Batch No.: 678945 | Instrument ID: CHHPLC_X5

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	0.040	U	0.099	0.040	0.014

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene (Surr)	98		78-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241219-140971.b\12190012.D
Lims ID: 280-200917-A-1-A
Client ID: P2-ARROYO-005-003
Sample Type: Client
Inject. Date: 19-Dec-2024 19:46:48 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-200917-A-1-A
Operator ID: JZ Instrument ID: CHHPLC_X5

Method: \\chromfs\Denver\ChromData\CHHPLC_X5\20241219-140971.b\8330_X5_Luna.m
Limit Group: GCSV - 8330
Last Update: 26-Dec-2024 13:36:28 Calib Date: 04-Dec-2024 01:09:06
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030020.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC mwd1A, 254 nm
Process Host: CTX1722

First Level Reviewer: LV5D Date: 20-Dec-2024 20:29:20

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
	1 2,6-diamino-4-nitrotoluene	1		4.072			ND	7
	2 2,4-diamino-6-nitrotoluene	1		4.546			ND	
	3 TNX	1		5.010			ND	
	4 DNX	1		5.770			ND	
	5 HMX	1		6.303			ND	
	6 MNX	1		7.137			ND	
	7 2,4,6-Trinitrophenol	1		7.809			ND	
	8 RDX	1		8.403			ND	
	9 Nitrobenzene	1		10.916			ND	
$	10 1,2-Dinitrobenzene	1	11.620	11.736	-0.116	65753	0.2453	
	11 3,5-Dinitroaniline	1		13.469			ND	
	12 1,3-Dinitrobenzene	1		13.809			ND	
	13 Nitroglycerin	2		14.303			ND	
	14 o-Nitrotoluene	1		14.896			ND	
	16 p-Nitrotoluene	1		15.116			ND	
	17 4-Amino-2,6-dinitrotoluene	1		15.523			ND	U
	18 m-Nitrotoluene	1		15.943			ND	
	19 2-Amino-4,6-dinitrotoluene	1		16.283			ND	U
	20 1,3,5-Trinitrobenzene	1		16.529			ND	
	15 Triamine Trinitrobenzene	1		16.865			ND	
	21 2,6-Dinitrotoluene	1		17.609			ND	
	22 2,4-Dinitrotoluene	1		18.043			ND	7
	23 Tetryl	1		21.043			ND	
	24 2,4,6-Trinitrotoluene	1	21.867	21.936	-0.069	10607	0.0254	M
	25 PETN	2		23.183			ND	7
	26 Ammonium Picrate	1		0.000			ND	

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection

Review Flags
M - Manually Integrated
U - Marked Undetected

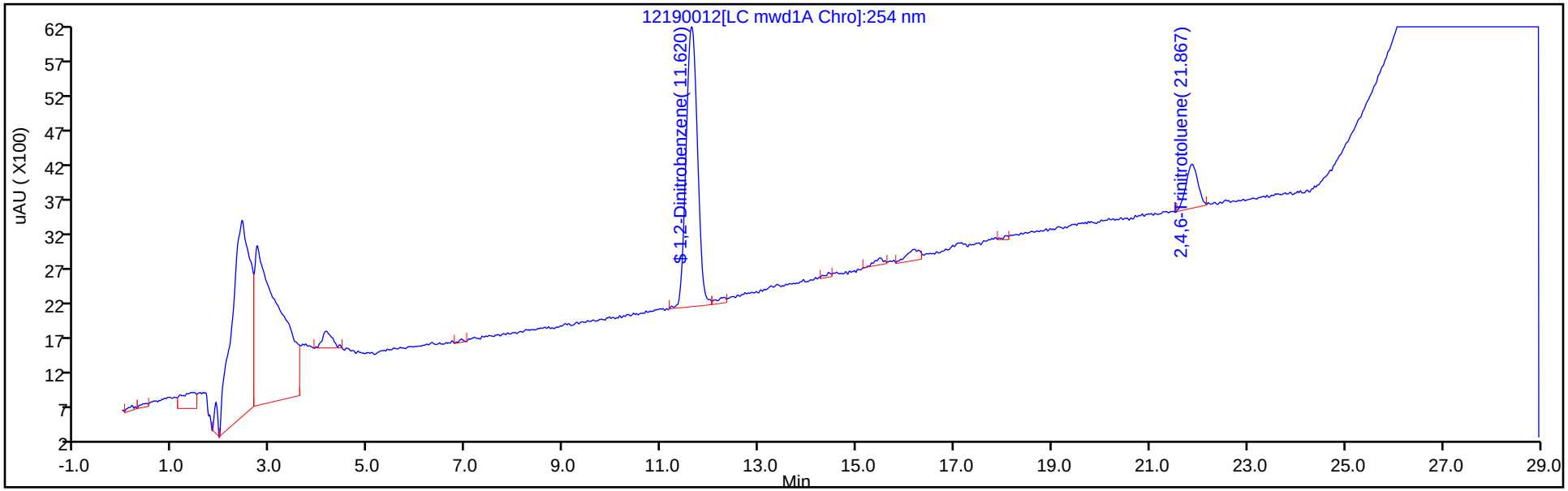
Report Date: 26-Dec-2024 13:36:31 Chrom Revision: 2.3 17-Dec-2024 12:44:46

Eurofins Denver

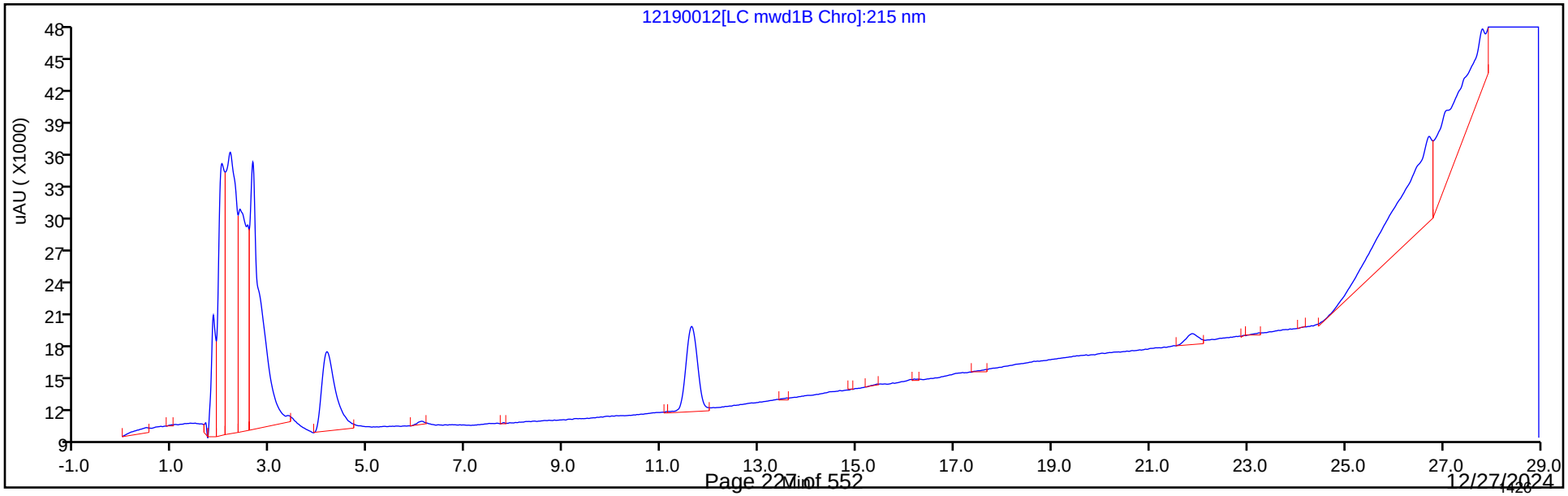
Data File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241219-140971.b\12190012.D

Injection Date:	19-Dec-2024 19:46:48	Instrument ID:	CHHPLC_X5	Operator ID:	JZ
Lims ID:	280-200917-A-1-A	Lab Sample ID:	280-200917-1	Worklist Smp#:	12
Client ID:	P2-ARROYO-005-003				
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
Recovery Report

Data File:	\\chromfs\Denver\ChromData\CHHPLC_X5\20241219-140971.b\12190012.D				
Lims ID:	280-200917-A-1-A				
Client ID:	P2-ARROYO-005-003				
Sample Type:	Client				
Inject. Date:	19-Dec-2024 19:46:48	ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-200917-A-1-A				
Operator ID:	JZ	Instrument ID:	CHHPLC_X5		
Method:	\\chromfs\Denver\ChromData\CHHPLC_X5\20241219-140971.b\8330_X5_Luna.m				
Limit Group:	GCSV - 8330				
Last Update:	26-Dec-2024 13:36:28	Calib Date:	04-Dec-2024 01:09:06		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030020.D				
Column 1 :	Luna-Phenyl hexyl (4.60 mm)		Det: LC mwd1A, 254 nm		
Process Host:	CTX1722				

First Level Reviewer: LV5D Date: 20-Dec-2024 20:29:20

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2500	0.2453	98.13

Manual Integration/User Assign Peak Report

Eurofins Denver

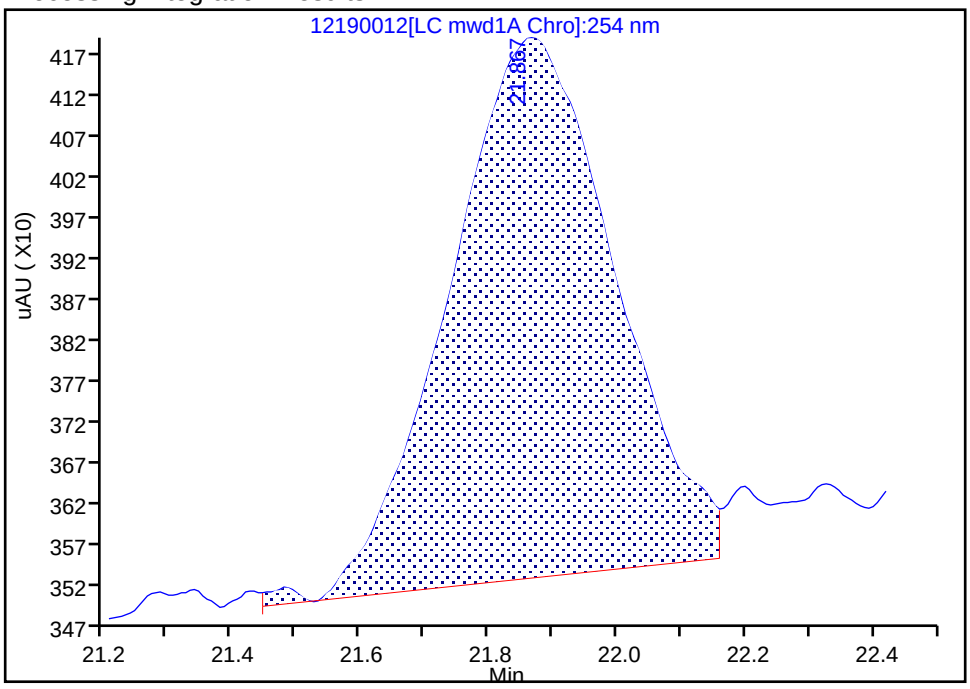
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Injection Date:	19-Dec-2024 19:46:48	Instrument ID:	CHHPLC_X5		
Lims ID:	280-200917-A-1-A	Lab Sample ID:	280-200917-1		
Client ID:	P2-ARROYO-005-003				
Operator ID:	JZ	ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
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

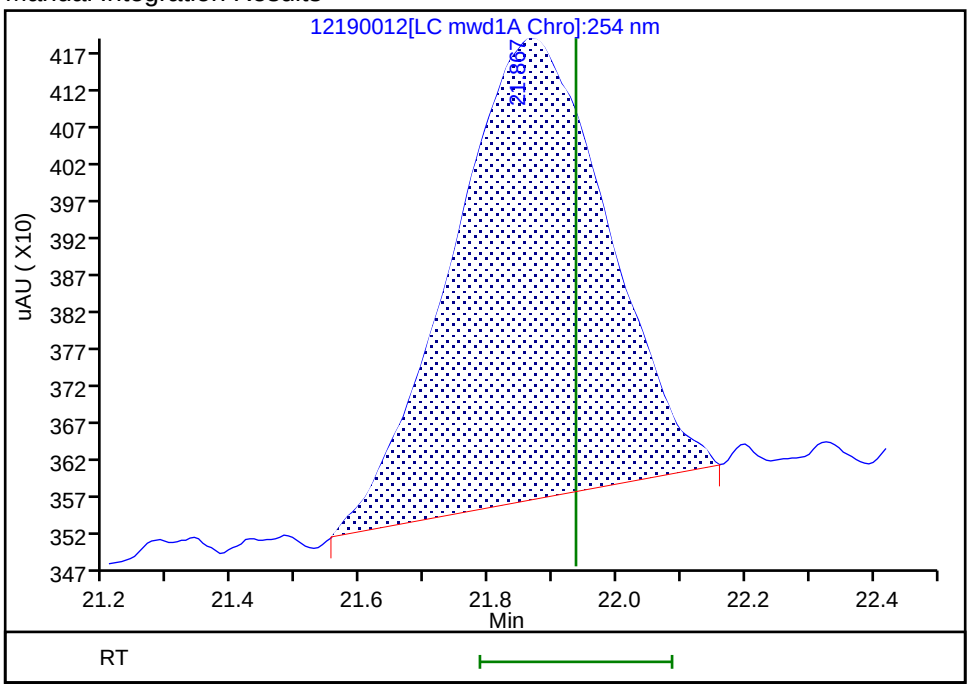
Processing Integration Results

RT: 21.87
Area: 11971
Amount: 0.028664
Amount Units: ug/ml



Manual Integration Results

RT: 21.87
Area: 10607
Amount: 0.025398
Amount Units: ug/ml



Reviewer: LV5D, 20-Dec-2024 20:30:00 -07:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

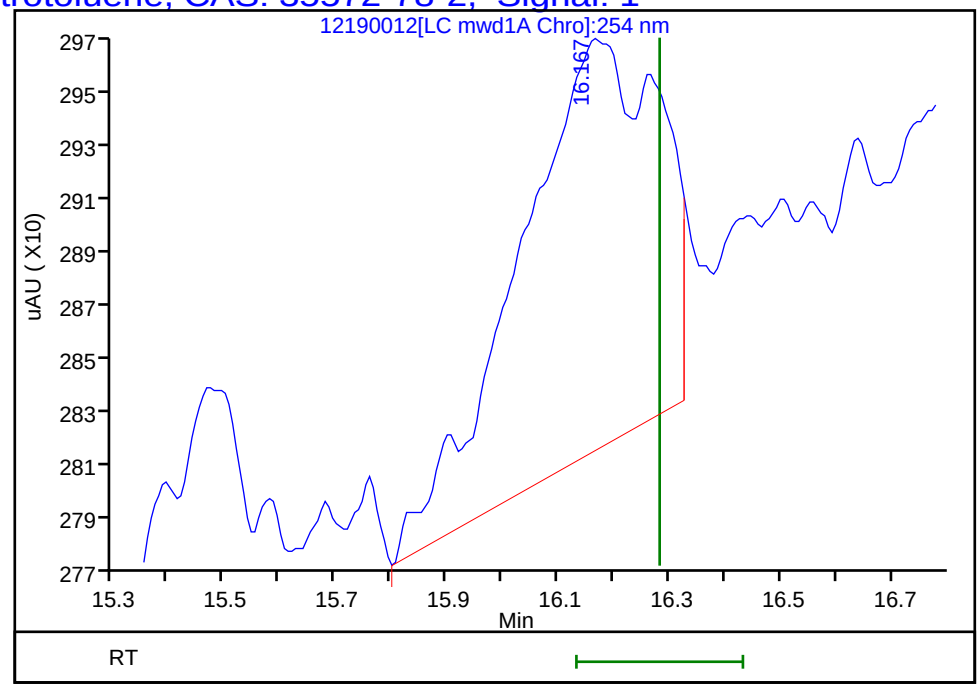
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\CHHPLC_X5\20241219-140971.b\12190012.D				
Injection Date:	19-Dec-2024 19:46:48	Instrument ID:	CHHPLC_X5		
Lims ID:	280-200917-A-1-A	Lab Sample ID:	280-200917-1		
Client ID:	P2-ARROYO-005-003				
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		

19 2-Amino-4,6-dinitrotoluene, CAS: 35572-78-2, Signal: 1

RT: 16.17
Response: 2616
Amount: 0.006603



Reviewer: LV5D, 20-Dec-2024 20:29:20
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

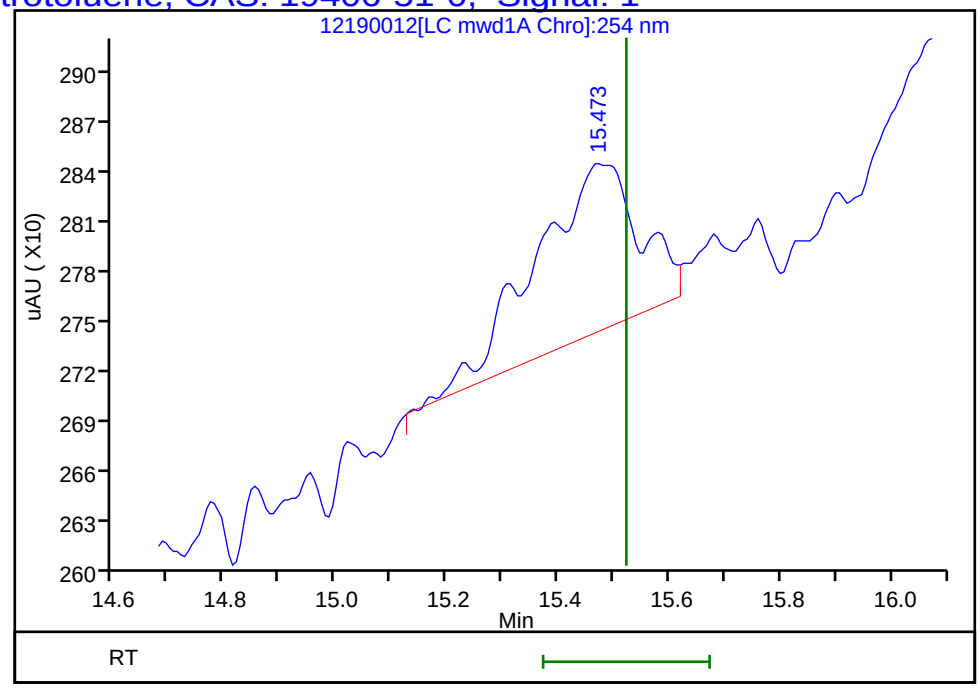
User Disabled Compound Report

Eurofins Denver

Data File:	\\chromfs\Denver\ChromData\CHHPLC_X5\20241219-140971.b\12190012.D				
Injection Date:	19-Dec-2024 19:46:48	Instrument ID:	CHHPLC_X5		
Lims ID:	280-200917-A-1-A	Lab Sample ID:	280-200917-1		
Client ID:	P2-ARROYO-005-003				
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		

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

RT: 15.47
Response: 1294
Amount: 0.004580



Reviewer: LV5D, 20-Dec-2024 20:29:20
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-200917-1

SDG No.:

Client Sample ID: P2-ARROYO-005-003 | Lab Sample ID: 280-200917-1

Matrix: Solid | Lab File ID: 12210013.D

Analysis Method: 8330B MOD | Date Collected: 12/16/2024 11:14

Extraction Method: 8330B | Date Extracted: 12/18/2024 12:11

Sample wt/vol: +10.31(g) | Date Analyzed: 12/21/2024 15:31

Con. Extract Vol.: 40(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: 2.0 % Solids: 98.0 | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 679403 | Units: mg/Kg

Preparation Batch No.: 678945 | Instrument ID: CHHPLC_X3

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-65-0	1,3-Dinitrobenzene	0.040	U	0.099	0.040	0.016
118-96-7	2,4,6-Trinitrotoluene	0.069	U	0.099	0.069	0.030
121-14-2	2,4-Dinitrotoluene	0.040	U	0.099	0.040	0.015
606-20-2	2,6-Dinitrotoluene	0.040	U	0.099	0.040	0.019
35572-78-2	2-Amino-4,6-dinitrotoluene	0.069	U	0.099	0.069	0.033
88-72-2	o-Nitrotoluene	0.099	U	0.20	0.099	0.047
99-08-1	m-Nitrotoluene	0.15	U	0.20	0.15	0.063
19406-51-0	4-Amino-2,6-dinitrotoluene	0.069	U M	0.099	0.069	0.030
99-99-0	p-Nitrotoluene	0.099	U	0.20	0.099	0.036
98-95-3	Nitrobenzene	0.20	U	0.30	0.20	0.084
55-63-0	Nitroglycerin	0.69	U	2.0	0.69	0.21
2691-41-0	HMX	0.069	U M	0.099	0.069	0.022
78-11-5	PETN	0.99	U	2.0	0.99	0.49
121-82-4	RDX	0.099	U	0.20	0.099	0.043
479-45-8	Tetryl	0.099	U	0.20	0.099	0.043

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene (Surr)	88		78-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20241221-141039.b\12210013.D
Lims ID: 280-200917-A-1-A
Client ID: P2-ARROYO-005-003
Sample Type: Client
Inject. Date: 21-Dec-2024 15:31:44 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-200917-A-1-A
Operator ID: JZ Instrument ID: CHHPLC_X3

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20241221-141039.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 26-Dec-2024 12:57:58 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: CTX1722

First Level Reviewer: LV5D Date: 26-Dec-2024 12:27:27

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/mL	Flags
	1 Triamine Trinitrobenzene	1		2.444			ND	
	3 TNX	1		6.428			ND	
	2 2,6-diamino-4-nitrotoluene	1		6.501			ND	
	4 HMX	1	6.597	6.575	0.022	99	0.001024	7M
	5 2,4-diamino-6-nitrotoluene	1		6.681			ND	
	6 DNX	1		6.755			ND	
	7 MNX	1		7.148			ND	
	8 RDX	1		7.475			ND	
	9 2,4,6-Trinitrophenol	1		7.842			ND	
$	10 1,2-Dinitrobenzene	1	8.330	8.295	0.035	28825	0.2210	
	11 1,3,5-Trinitrobenzene	1	8.504	8.402	0.102	2498	0.0115	
	12 1,3-Dinitrobenzene	1		8.929			ND	
	13 Nitrobenzene	1		9.229			ND	
	14 3,5-Dinitroaniline	1		9.408			ND	
	15 Tetryl	1		9.495			ND	
	16 Nitroglycerin	2		9.922			ND	
	17 2,4,6-Trinitrotoluene	1		10.268			ND	
	18 4-Amino-2,6-dinitrotoluene	1		10.382			ND	U
	19 2-Amino-4,6-dinitrotoluene	1		10.602			ND	
	20 2,6-Dinitrotoluene	1		10.742			ND	
	21 2,4-Dinitrotoluene	1		10.895			ND	
	22 o-Nitrotoluene	1		11.528			ND	
	23 p-Nitrotoluene	1		11.875			ND	
	24 m-Nitrotoluene	1		12.335			ND	
	25 PETN	2		13.242			ND	
	26 Ammonium Picrate	1		0.000			ND	

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection

Review Flags
M - Manually Integrated
U - Marked Undetected

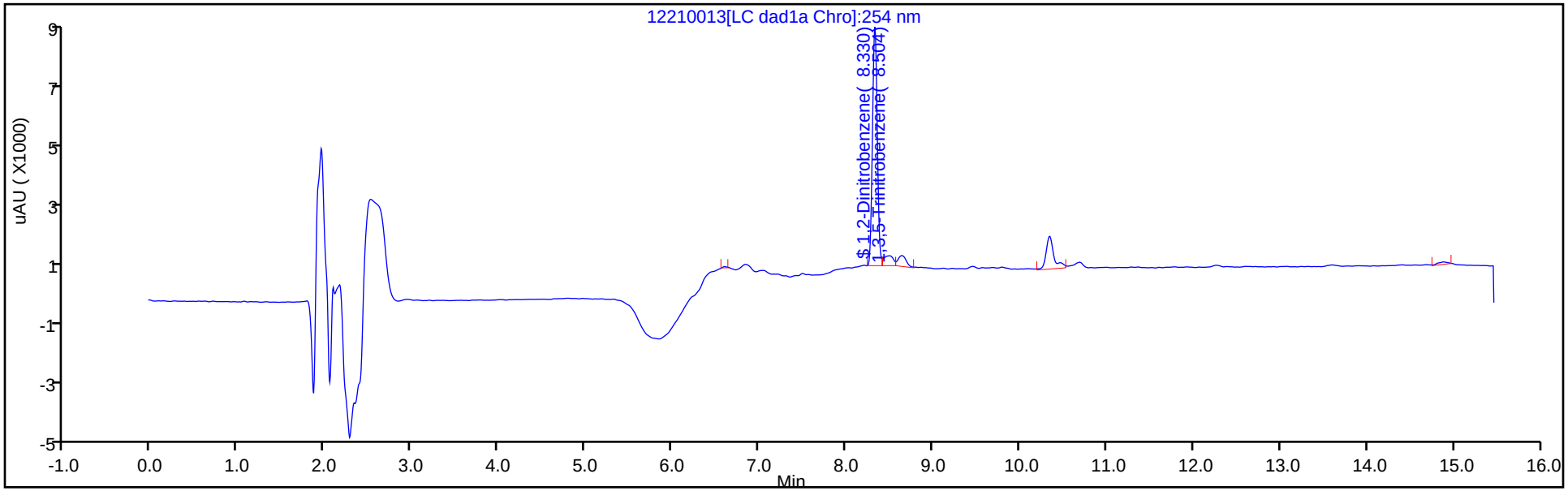
Report Date: 26-Dec-2024 12:58:01 Chrom Revision: 2.3 17-Dec-2024 12:44:46

Eurofins Denver

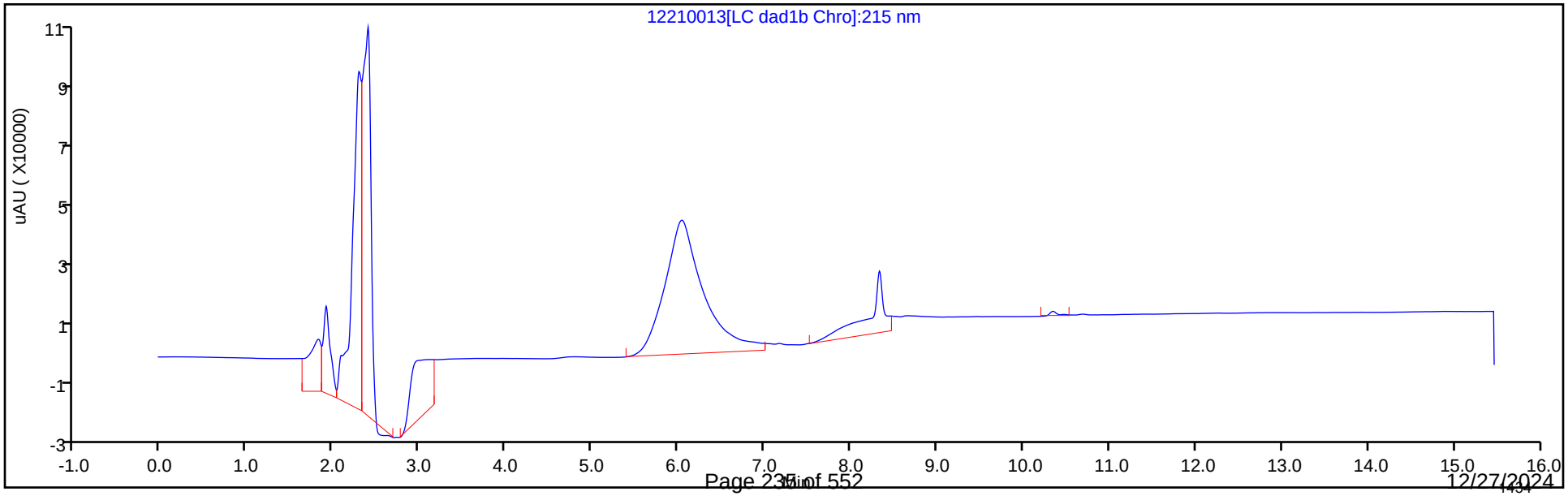
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Injection Date:	21-Dec-2024 15:31:44	Instrument ID:	CHHPLC_X3	Operator ID:	JZ
Lims ID:	280-200917-A-1-A	Lab Sample ID:	280-200917-1	Worklist Smp#:	13
Client ID:	P2-ARROYO-005-003				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	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\20241221-141039.b\12210013.D				
Lims ID:	280-200917-A-1-A				
Client ID:	P2-ARROYO-005-003				
Sample Type:	Client				
Inject. Date:	21-Dec-2024 15:31:44	ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-200917-A-1-A				
Operator ID:	JZ	Instrument ID:	CHHPLC_X3		
Method:	\\chromfs\Denver\ChromData\CHHPLC_X\20241221-141039.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	26-Dec-2024 12:57:58	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:	CTX1722				

First Level Reviewer: LV5D Date: 26-Dec-2024 12:27:27

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2500	0.2210	88.41

User Disabled Compound Report

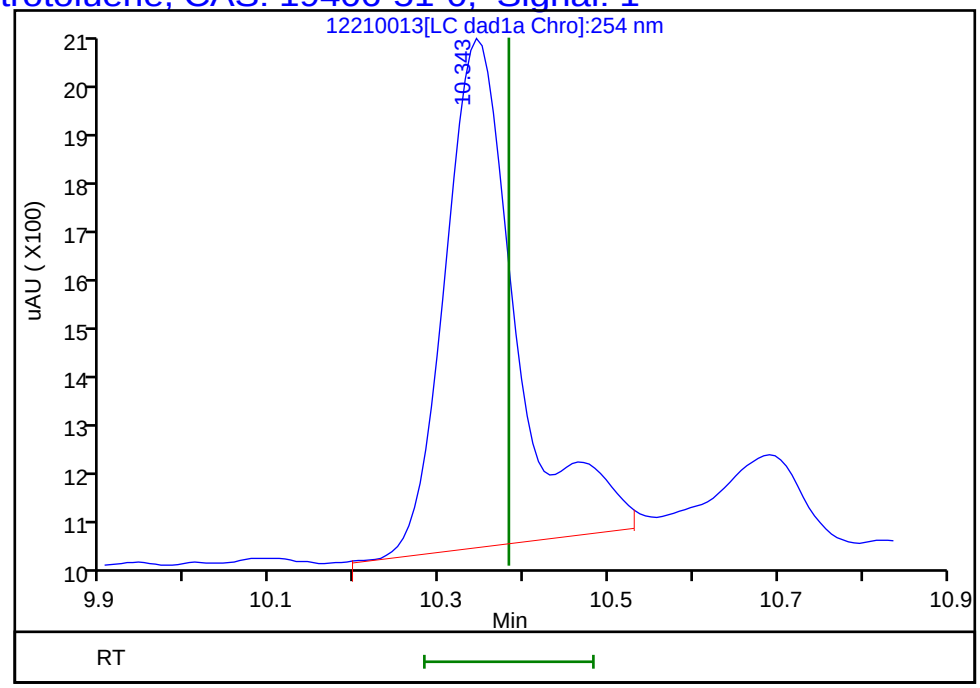
Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc_x\20241221-141039.b\12210013.d

Injection Date:	21-Dec-2024 15:31:44	Instrument ID:	CHHPLC_X3		
Lims ID:	280-200917-A-1-A	Lab Sample ID:	280-200917-1		
Client ID:	P2-ARROYO-005-003				
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 DAD1B, 254 nm		

18 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0, Signal: 1

RT: 10.34
Response: 5767
Amount: 0.035775



Reviewer: LV5D, 26-Dec-2024 12:27:27
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins Denver

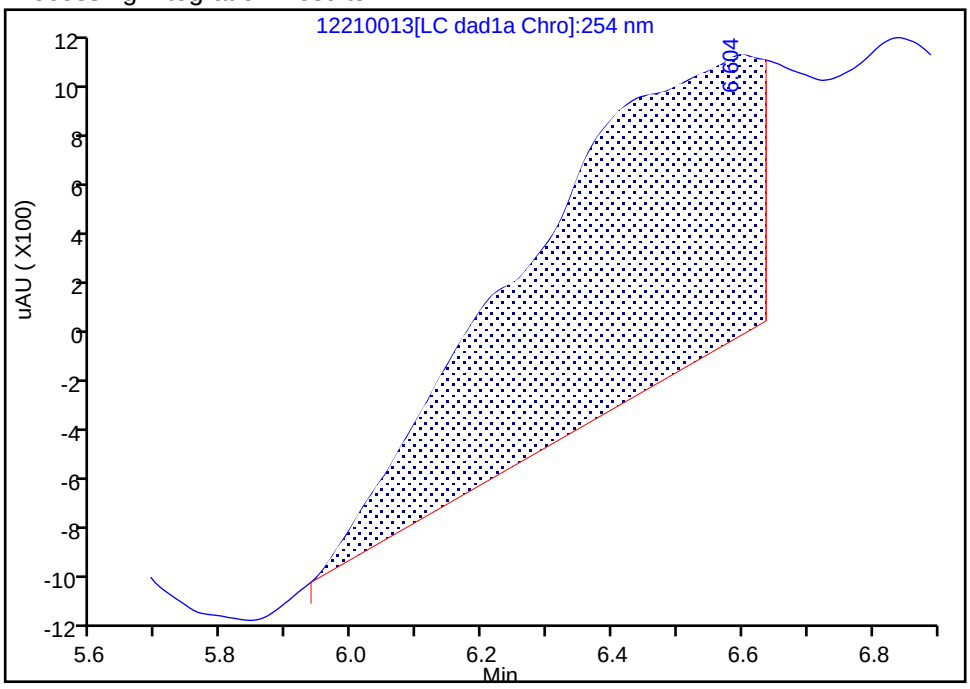
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Injection Date:	21-Dec-2024 15:31:44	Instrument ID:	CHHPLC_X3		
Lims ID:	280-200917-A-1-A	Lab Sample ID:	280-200917-1		
Client ID:	P2-ARROYO-005-003				
Operator ID:	JZ	ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

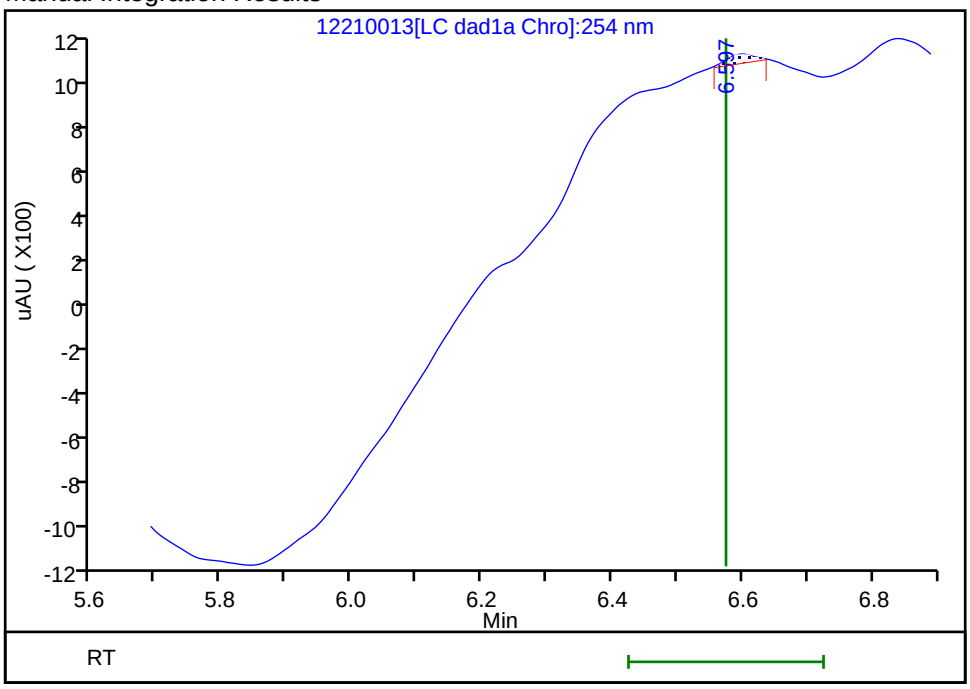
Processing Integration Results

RT: 6.60
Area: 31620
Amount: 0.327150
Amount Units: ug/mL



Manual Integration Results

RT: 6.60
Area: 99
Amount: 0.001024
Amount Units: ug/mL



Reviewer: LV5D, 26-Dec-2024 12:27:26 -07:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: Eurofins Denver | Job No.: 280-200917-1 | 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
2,4,6-Trinitrophenol	+++++	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
o-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
p-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
m-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 (Surr)	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.: 280-200917-1 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		203077.887				1.9		20.0			
HMX	93000 97508 95522	106250 97445	99580 96131	87750 96690	Ave		96652.9365				5.1		20.0			
DNX	140460 150134 150243	140060 149128	146114 149306	141349 147581	Ave		146041.715				2.9		20.0			
MNX	139160 134612 134910	126735 131392	131962 133087	131422 133128	Ave		132934.348				2.5		20.0			
RDX	126400 106776 105154	104900 106223	107720 104480	107730 106956	Lin2	173.498292	104832.257							0.9990		0.9900
2,4,6-Trinitrophenol	+++++ 75344 74908	77950 75140	76140 74266	73910 75756	Ave		75426.7643				1.7		20.0			
1,3,5-Trinitrobenzene	220300 214216 215272	214050 212963	233920 212653	214070 218705	Ave		217349.773				3.1		20.0			
1,3-Dinitrobenzene	301200 294592 296094	302700 296218	301160 293594	296590 301939	Ave		298231.910				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.: 280-200917-1 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		195177.925				2.1		20.0			
3,5-Dinitroaniline	223700 227780 235024	233250 231803	231220 229723	232920 238621	Lin2	-77.787847	233196.469							1.0000		0.9900
Tetryl	164200 169664 172761	155150 166958	171240 168961	171300 179110	Lin2	-117.30615	171283.726							0.9990		0.9900
Nitroglycerin	61210 65034 64690	60715 64271	64318 63656	63200 65375	Lin2	-403.23201	64455.8736							1.0000		0.9900
2,4,6-Trinitrotoluene	225700 213288 217208	219100 214585	218880 212211	216850 217864	Ave		217298.492				1.8		20.0			
4-Amino-2,6-dinitrotoluene	209900 146676 143972	167850 143735	155020 144779	151470 148480	Lin2	625.424427	143718.940							0.9990		0.9900
2-Amino-4,6-dinitrotoluene	202900 201384 207688	211200 199510	204980 198944	206120 208057	Ave		204531.476				2.0		20.0			
2,6-Dinitrotoluene	160000 139512 134291	146450 143753	146900 142416	143340 141490	Lin2	188.154614	140280.930							0.9990		0.9900
2,4-Dinitrotoluene	296800 287776 296269	296350 284400	286560 284846	297230 296080	Ave		291812.279				2.0		20.0			
o-Nitrotoluene	127300 124236 126481	120550 124605	129460 124796	124870 126917	Ave		125468.324				2.0		20.0			
p-Nitrotoluene	122900 107584 109290	117150 107470	113220 107763	106240 109373	Lin2	157.366410	107910.700							1.0000		0.9900
m-Nitrotoluene	159800 134928 138727	149600 135250	138940 134671	133450 138022	Lin2	249.900612	135119.434							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.: 280-200917-1 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								
PETN	70530 72744 73523	68860 72834	72696 72584	71766 74375	Ave		72212.329 2				2.3		20.0			
1,2-Dinitrobenzene (Surr)	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.: 280-200917-1 | 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 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
TNX	Ave	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
2,4,6-Trinitrophenol	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.: 280-200917-1 | 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 57501	2929 99691	7345 141490	14334 335728	34878	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
2,4-Dinitrotoluene	Ave	2968 113760	5927 199392	14328 296080	29723 740672	71944	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
o-Nitrotoluene	Ave	1273 49842	2411 87357	6473 126917	12487 316203	31059	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
p-Nitrotoluene	Lin2	1229 42988	2343 75434	5661 109373	10624 273226	26896	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
m-Nitrotoluene	Lin2	1598 54100	2992 94270	6947 138022	13345 346817	33732	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
PETN	Ave	7053 291336	13772 508089	36348 743747	71766 1838063	181859	0.100 4.00	0.200 7.00	0.500 10.0	1.00 25.0	2.50
1,2-Dinitrobenzene (Surr)	Ave	1315 51425	2530 89703	6795 130220	13238 328696	32250	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250

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.)	Dlt 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

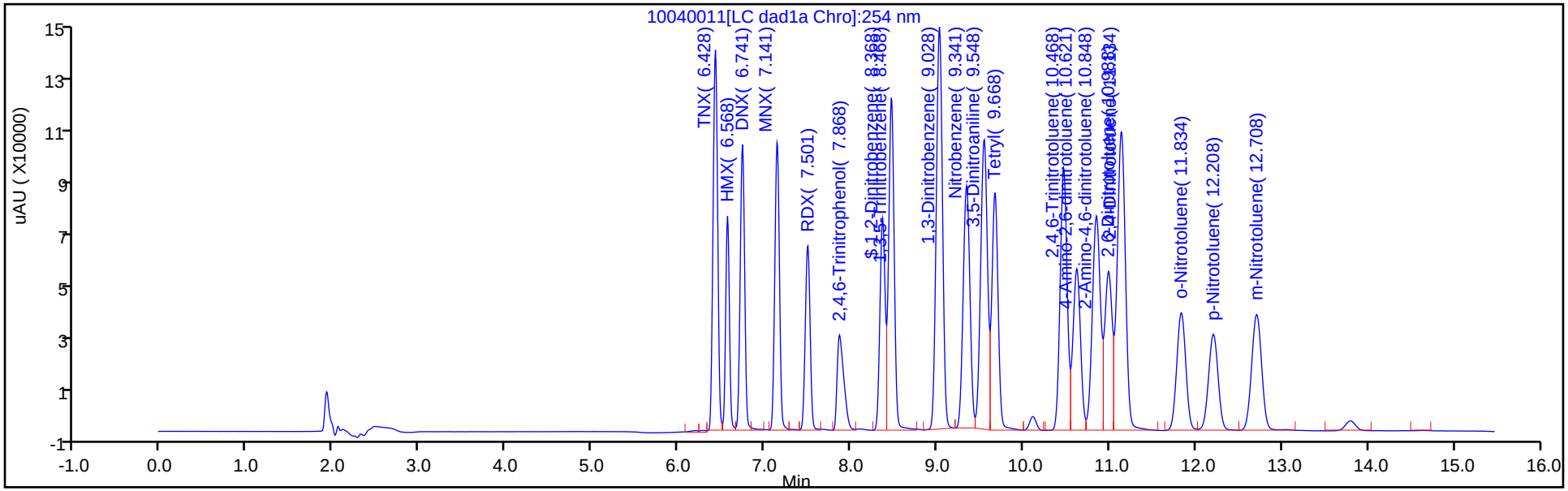
Report Date: 08-Oct-2024 13:19:10 Chrom Revision: 2.3 24-Sep-2024 15:19:46

Eurofins Denver

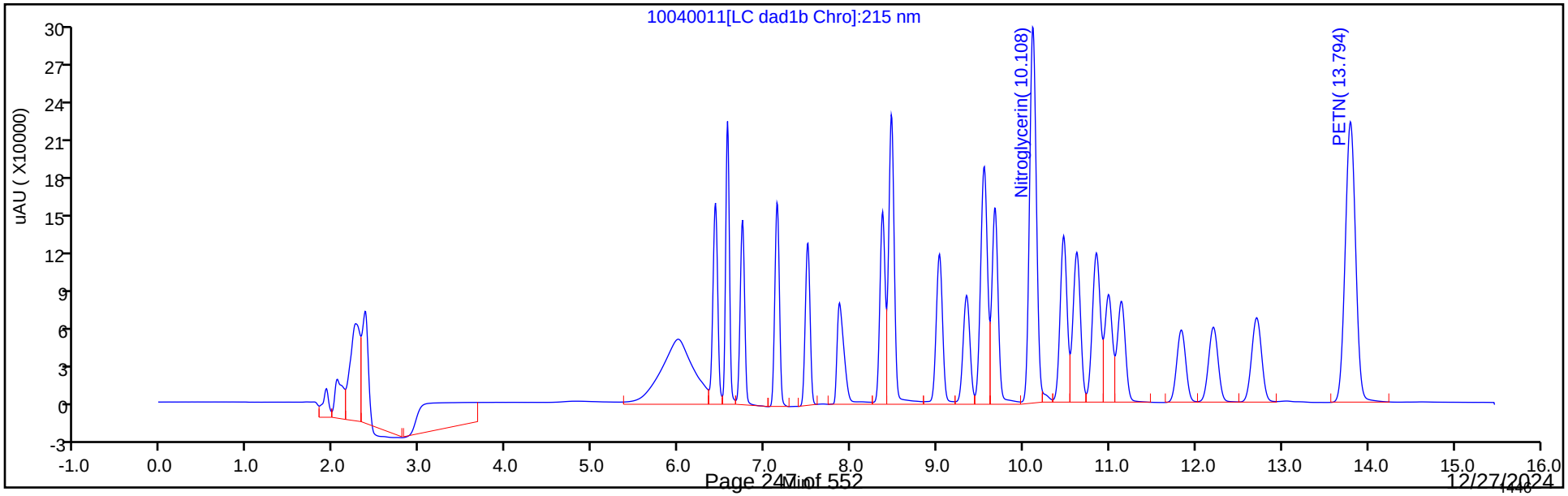
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040011.d

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



Manual Integration/User Assign Peak Report

Eurofins Denver

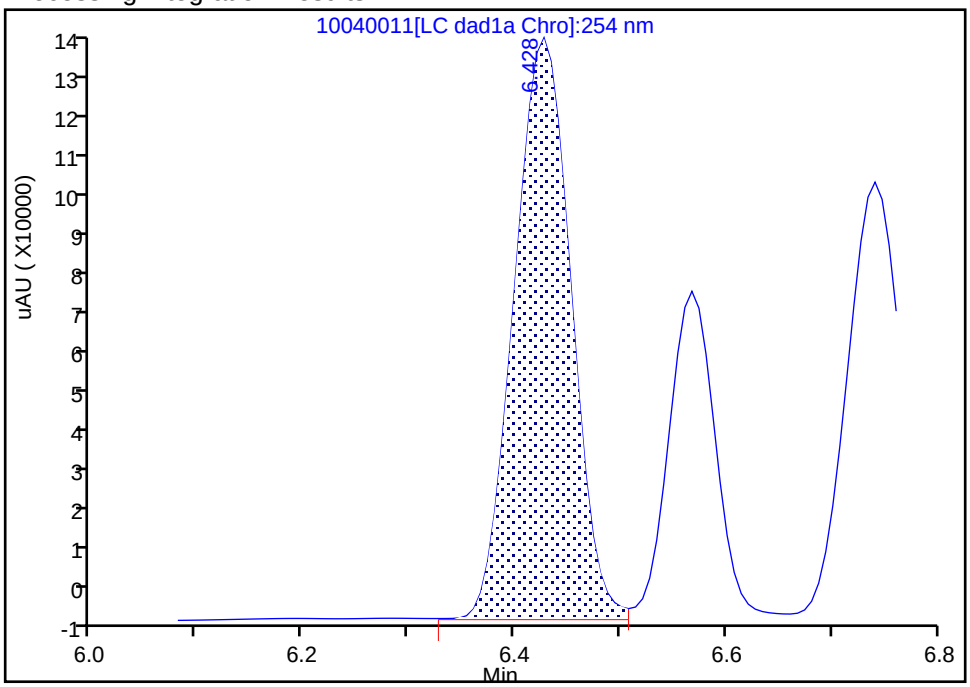
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Injection Date:	04-Oct-2024 16:59:29	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 9				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

3 TNX, CAS: 13980-04-6

Signal: 1

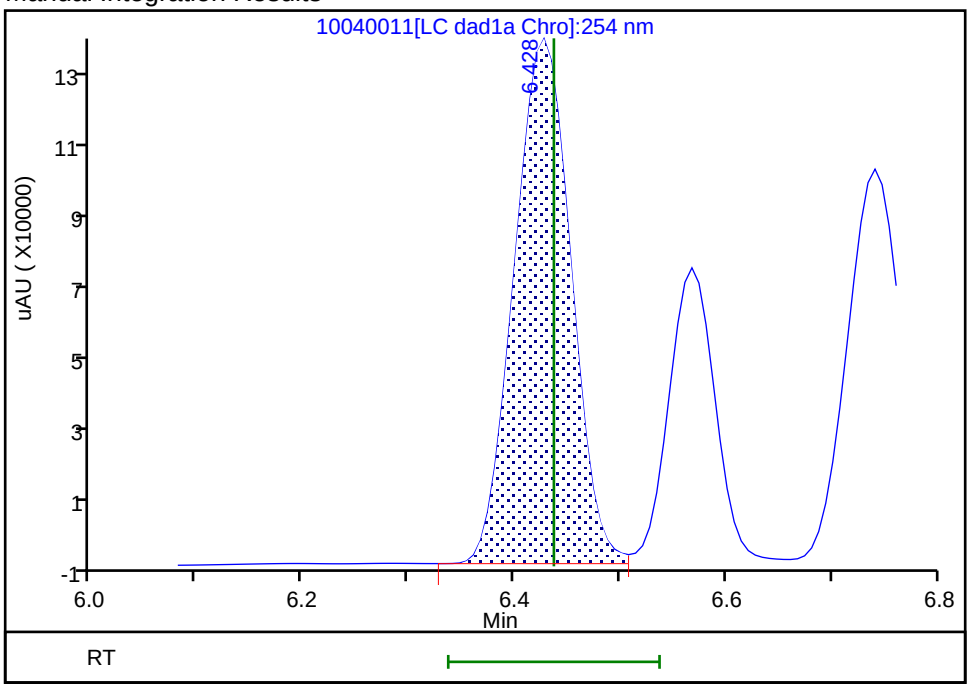
Processing Integration Results

RT: 6.43
Area: 518719
Amount: 2.507500
Amount Units: ug/mL



Manual Integration Results

RT: 6.43
Area: 516807
Amount: 2.544871
Amount Units: ug/mL



Reviewer: LV5D, 04-Oct-2024 17:24:16 -06:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

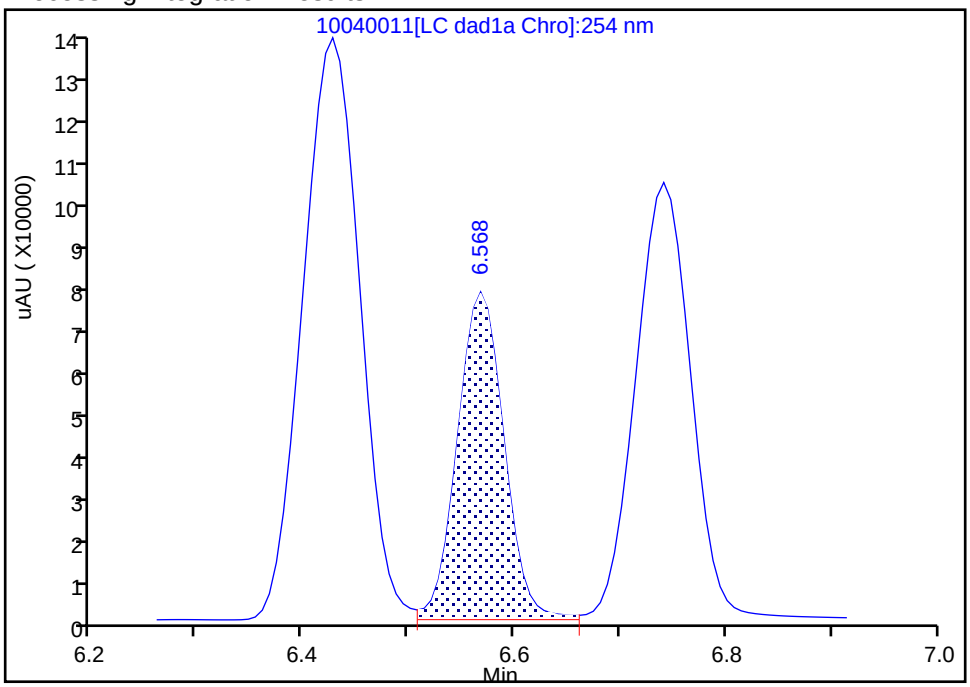
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040011.d				
Injection Date:	04-Oct-2024 16:59:29	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 9				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

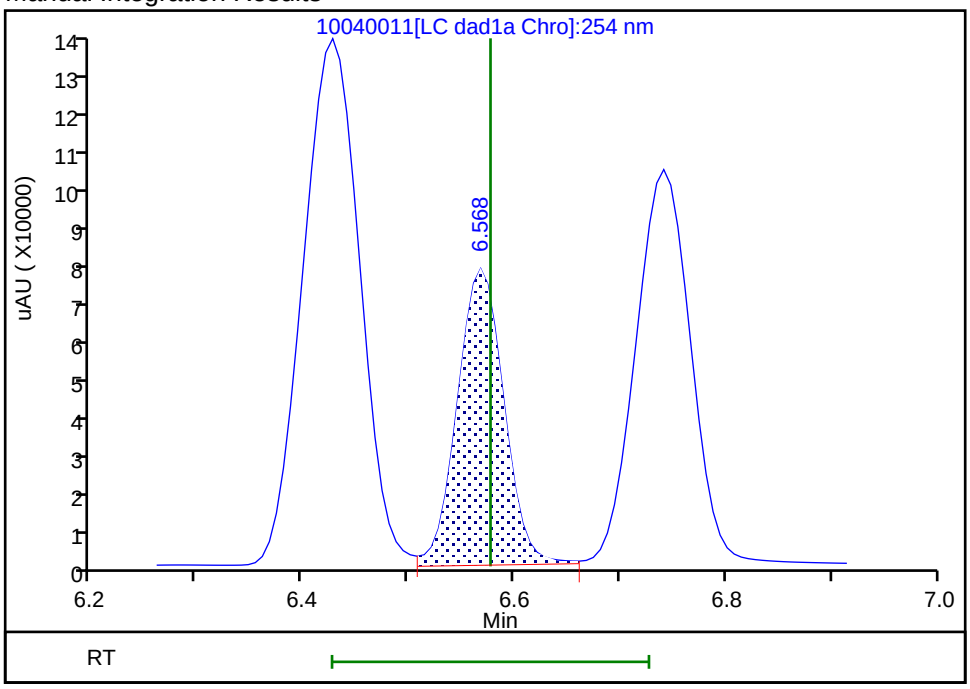
Processing Integration Results

RT: 6.57
Area: 239730
Amount: 2.500000
Amount Units: ug/mL



Manual Integration Results

RT: 6.57
Area: 238805
Amount: 2.470747
Amount Units: ug/mL



Reviewer: LV5D, 04-Oct-2024 17:24:16 -06:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

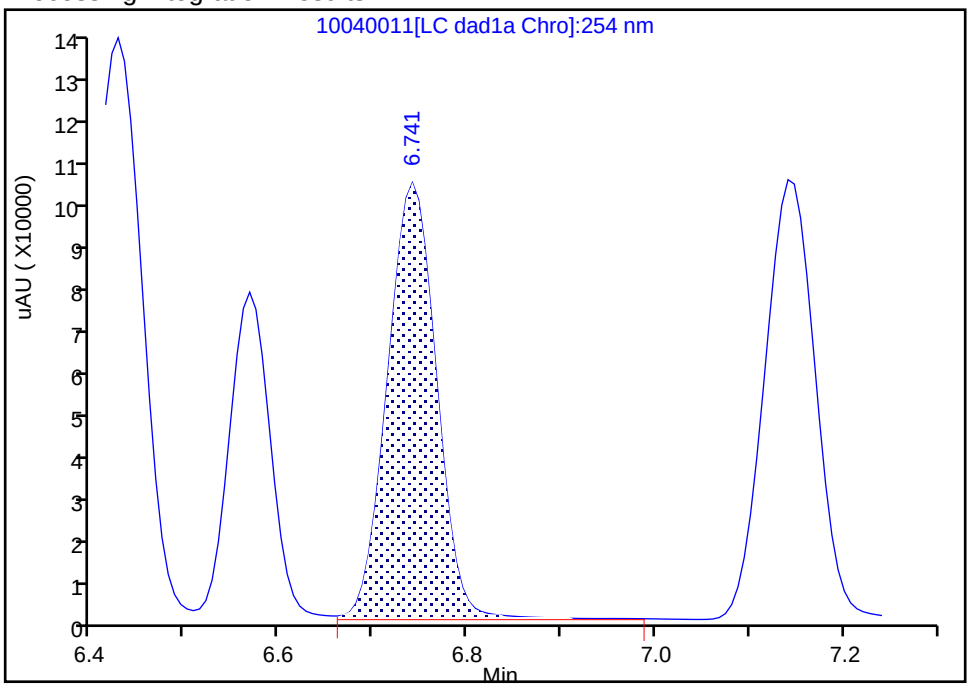
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040011.d				
Injection Date:	04-Oct-2024 16:59:29	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 9				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

6 DNX, CAS: 80251-29-2

Signal: 1

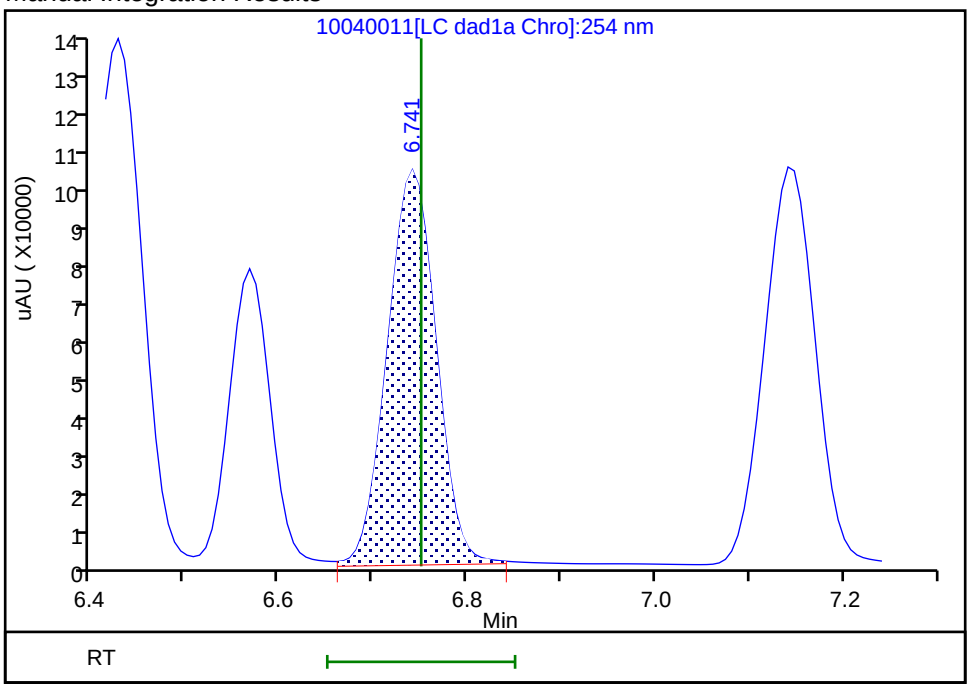
Processing Integration Results

RT: 6.74
Area: 379790
Amount: 2.502500
Amount Units: ug/mL



Manual Integration Results

RT: 6.74
Area: 375984
Amount: 2.574497
Amount Units: ug/mL



Reviewer: LV5D, 04-Oct-2024 17:24:19 -06:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

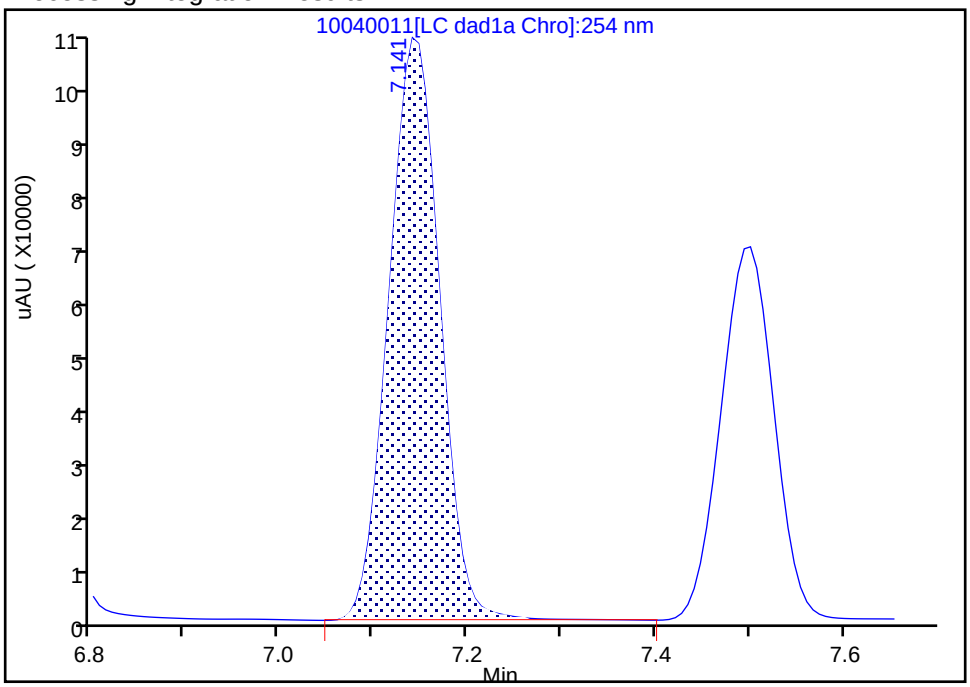
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040011.d				
Injection Date:	04-Oct-2024 16:59:29	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 9				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

7 MNX, CAS: 5755-27-1

Signal: 1

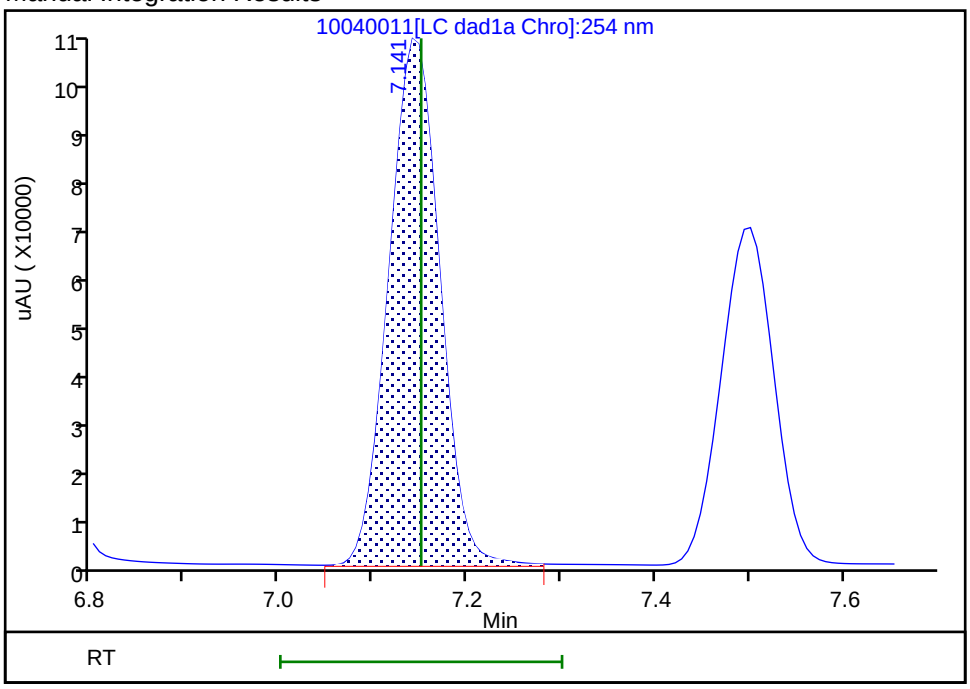
Processing Integration Results

RT: 7.14
Area: 394458
Amount: 2.917500
Amount Units: ug/mL



Manual Integration Results

RT: 7.14
Area: 393599
Amount: 2.960853
Amount Units: ug/mL



Reviewer: LV5D, 04-Oct-2024 17:24:24 -06:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

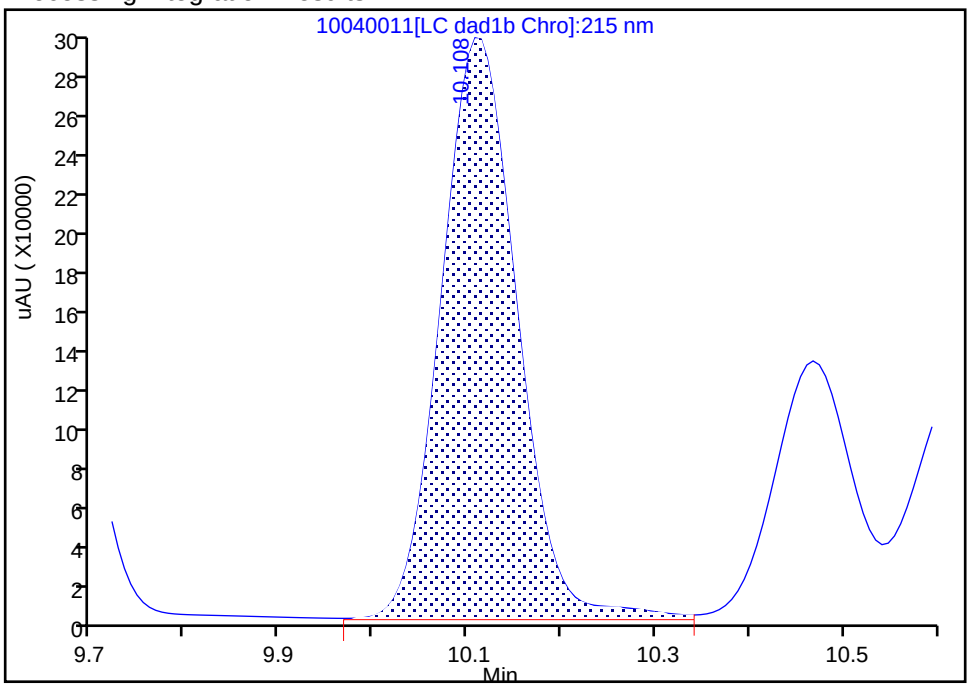
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040011.d				
Injection Date:	04-Oct-2024 16:59:29	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 9				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1C, 215 nm		

16 Nitroglycerin, CAS: 55-63-0

Signal: 1

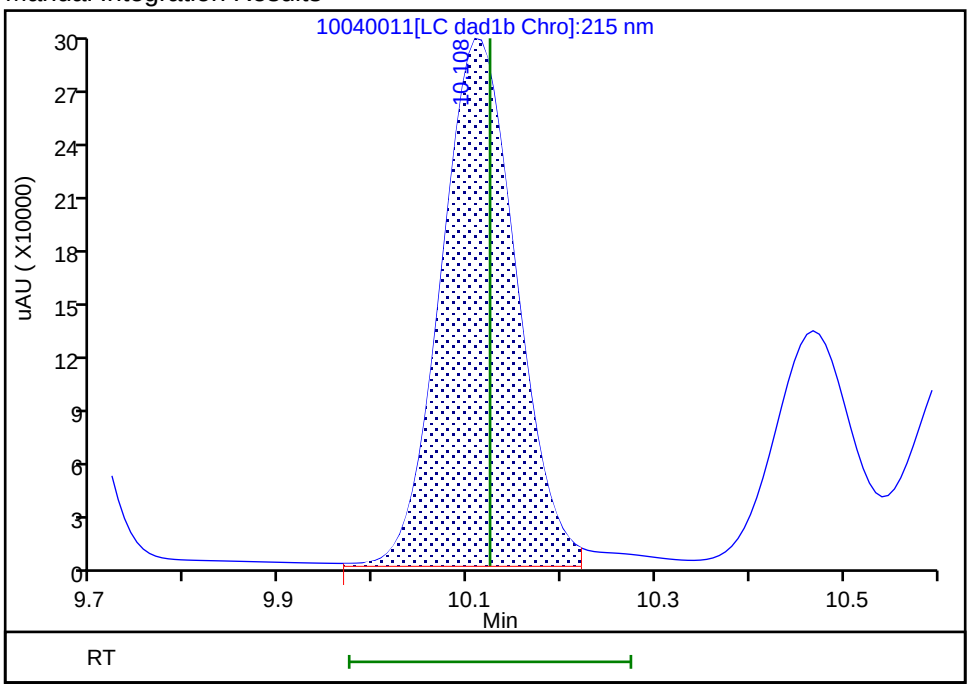
Processing Integration Results

RT: 10.11
Area: 1655248
Amount: 23.821068
Amount Units: ug/mL



Manual Integration Results

RT: 10.11
Area: 1617250
Amount: 25.097065
Amount Units: ug/mL



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

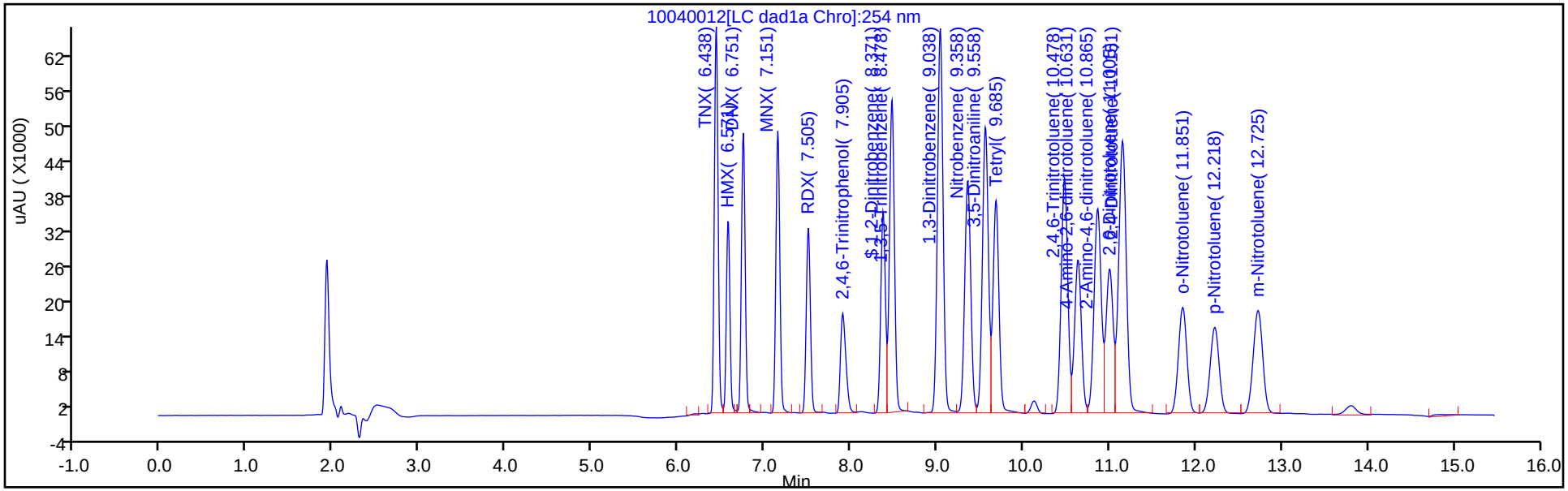
Report Date: 08-Oct-2024 13:19:12 Chrom Revision: 2.3 24-Sep-2024 15:19:46

Eurofins Denver

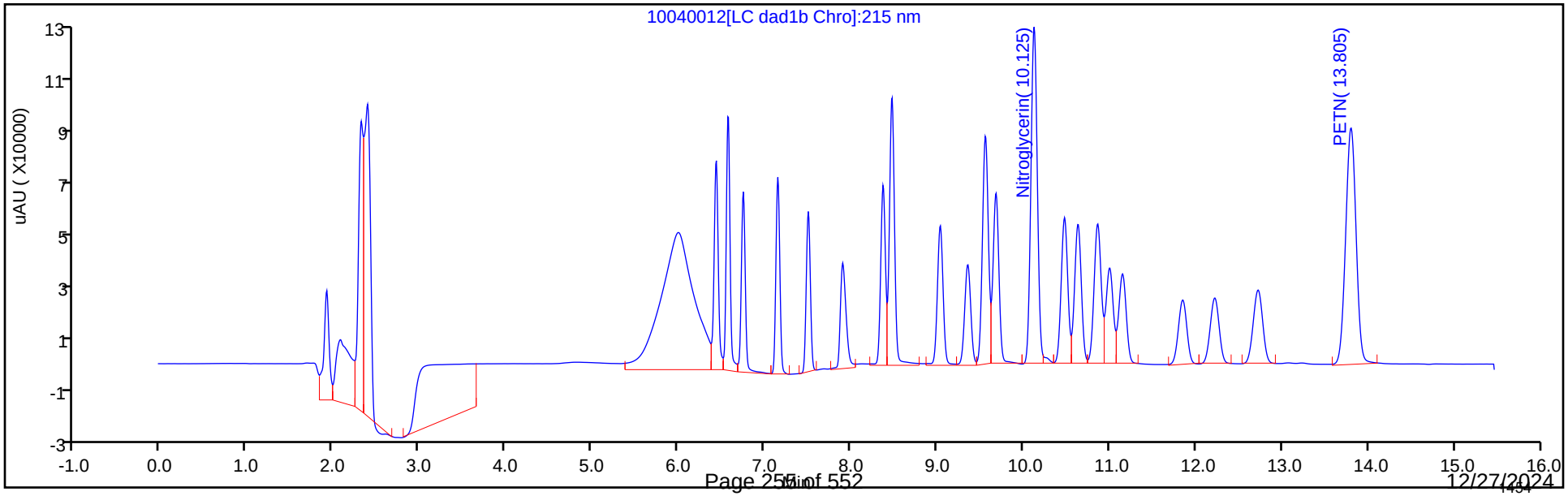
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040012.d

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



Manual Integration/User Assign Peak Report

Eurofins Denver

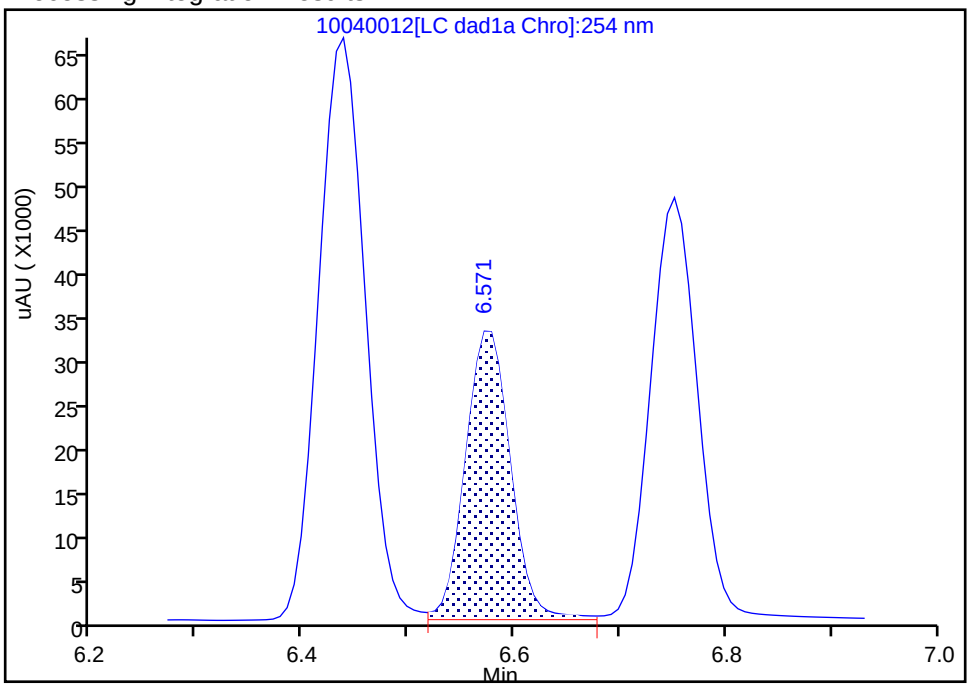
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040012.d				
Injection Date:	04-Oct-2024 17:21:25	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 8				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

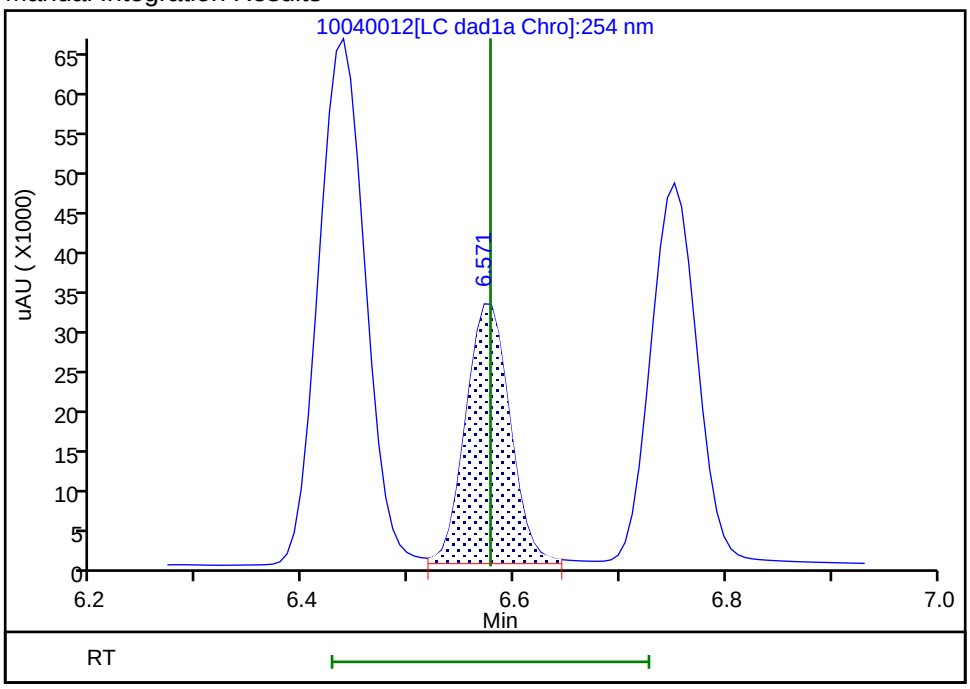
Processing Integration Results

RT: 6.57
Area: 97637
Amount: 1.048050
Amount Units: ug/mL



Manual Integration Results

RT: 6.57
Area: 96690
Amount: 1.000383
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 12:59:37 -06:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

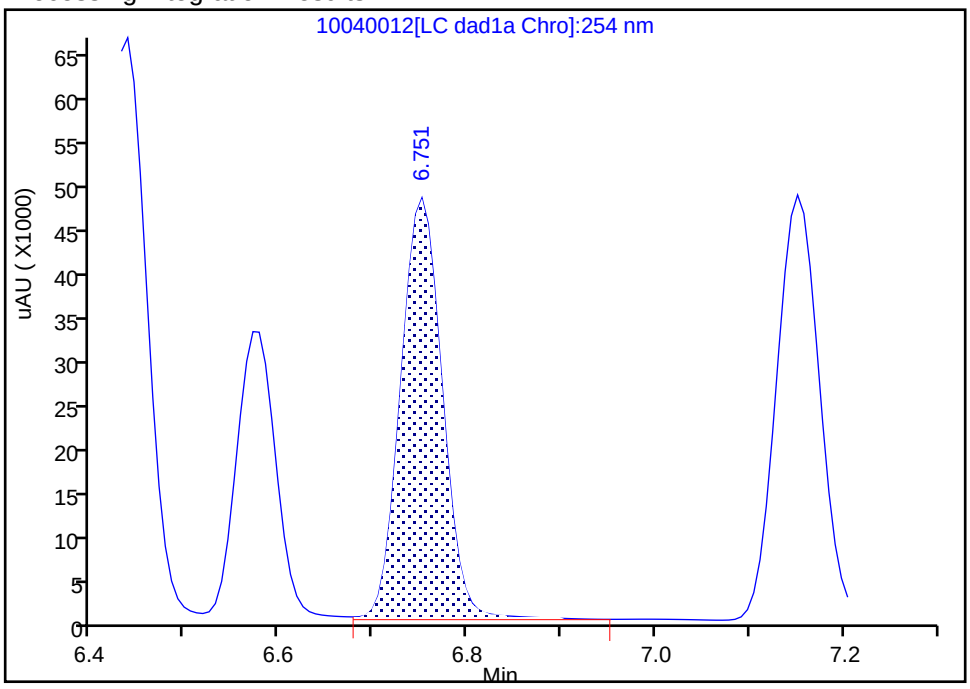
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040012.d				
Injection Date:	04-Oct-2024 17:21:25	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 8				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

6 DNX, CAS: 80251-29-2

Signal: 1

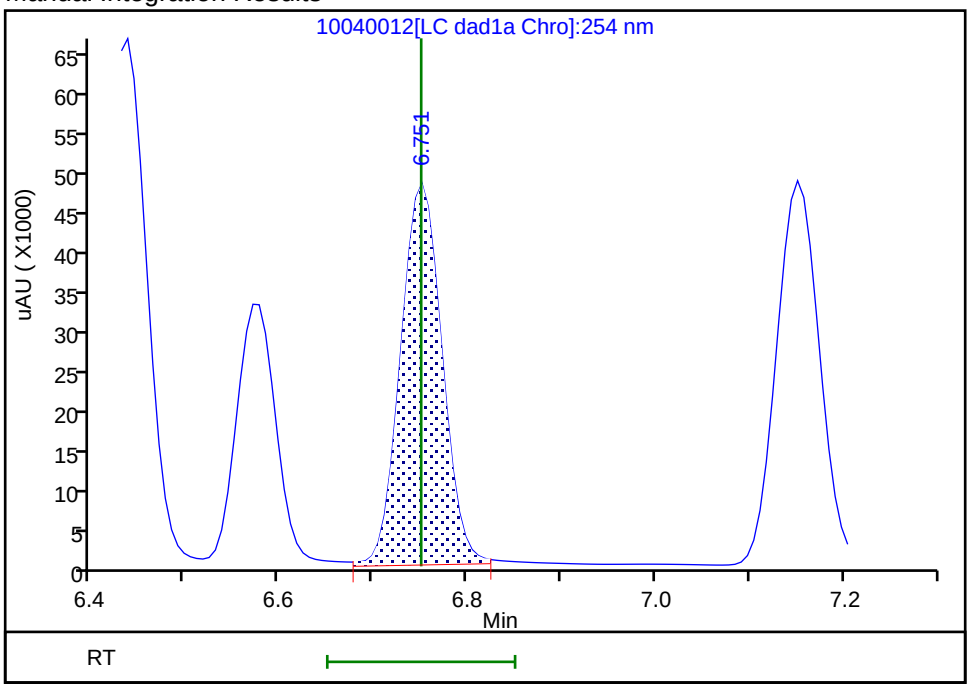
Processing Integration Results

RT: 6.75
Area: 149634
Amount: 0.974610
Amount Units: ug/mL



Manual Integration Results

RT: 6.75
Area: 147729
Amount: 1.011553
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 12:59:36 -06:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

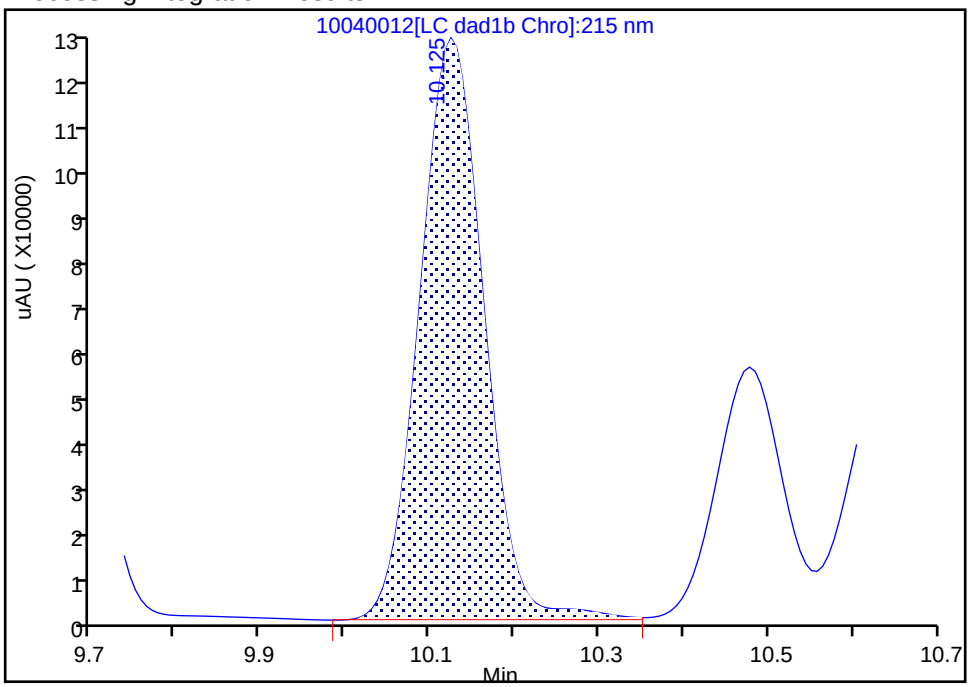
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040012.d				
Injection Date:	04-Oct-2024 17:21:25	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 8				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1C, 215 nm		

16 Nitroglycerin, CAS: 55-63-0

Signal: 1

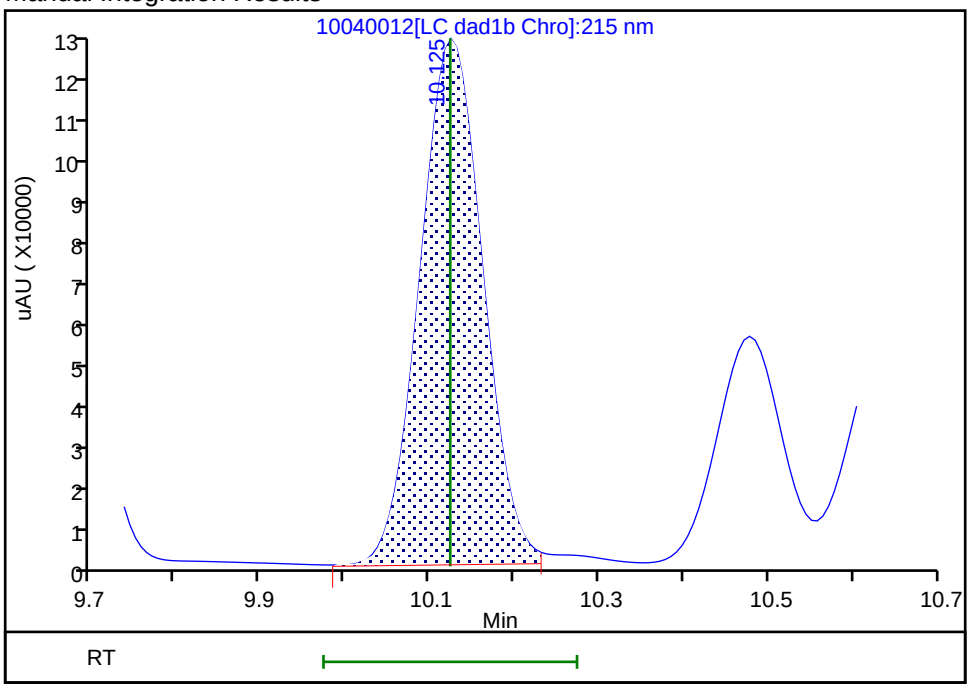
Processing Integration Results

RT: 10.12
Area: 665997
Amount: 9.607872
Amount Units: ug/mL



Manual Integration Results

RT: 10.12
Area: 653746
Amount: 10.148792
Amount Units: ug/mL



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

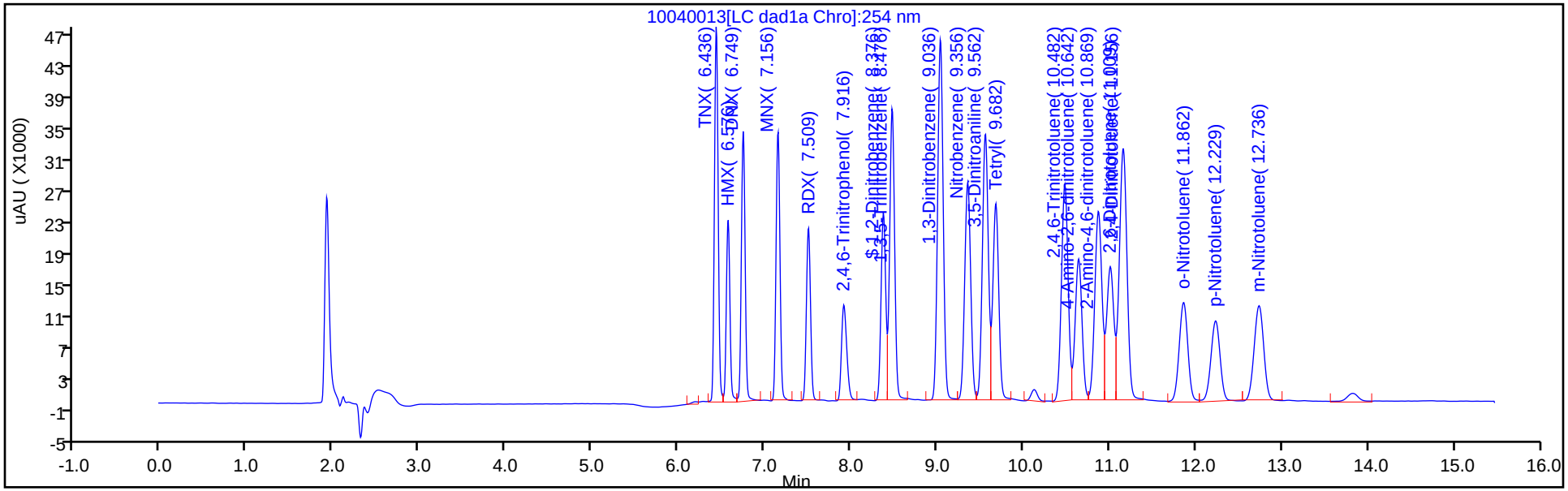
Report Date: 08-Oct-2024 13:19:14 Chrom Revision: 2.3 24-Sep-2024 15:19:46

Eurofins Denver

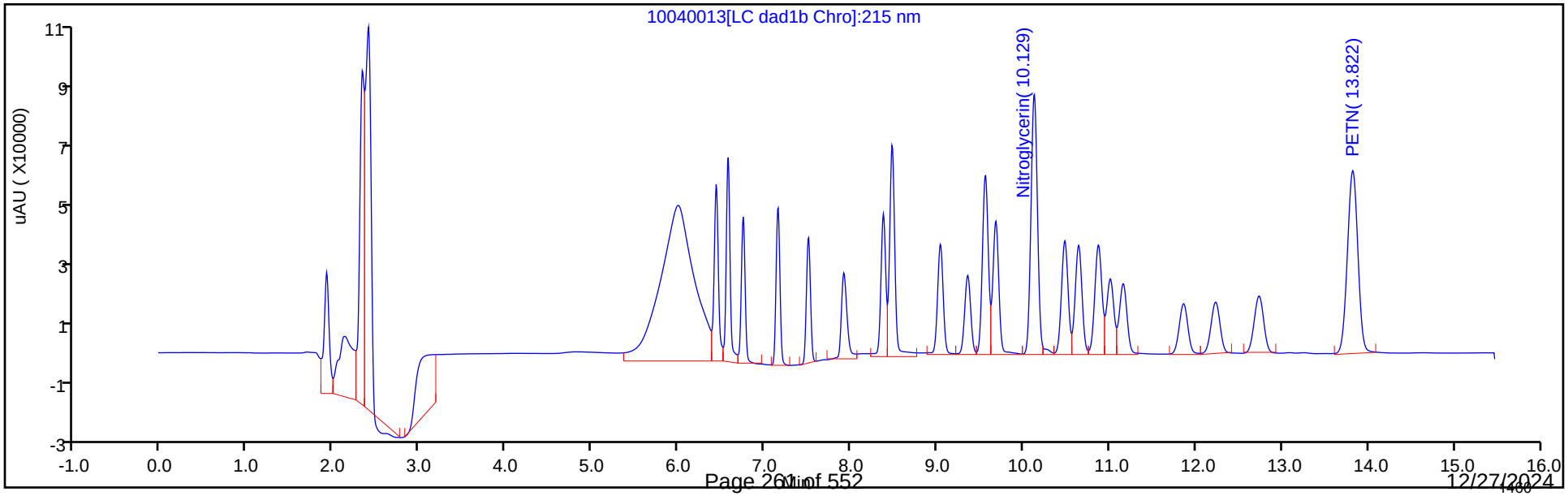
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040013.d

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



Manual Integration/User Assign Peak Report

Eurofins Denver

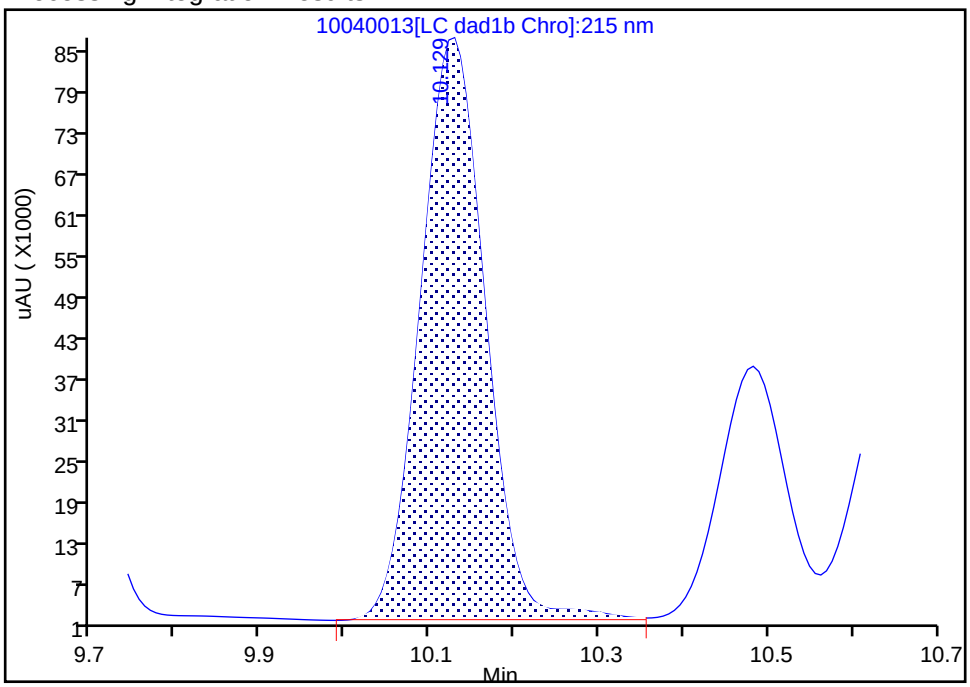
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040013.d				
Injection Date:	04-Oct-2024 17:43:18	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 7				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1C, 215 nm		

16 Nitroglycerin, CAS: 55-63-0

Signal: 1

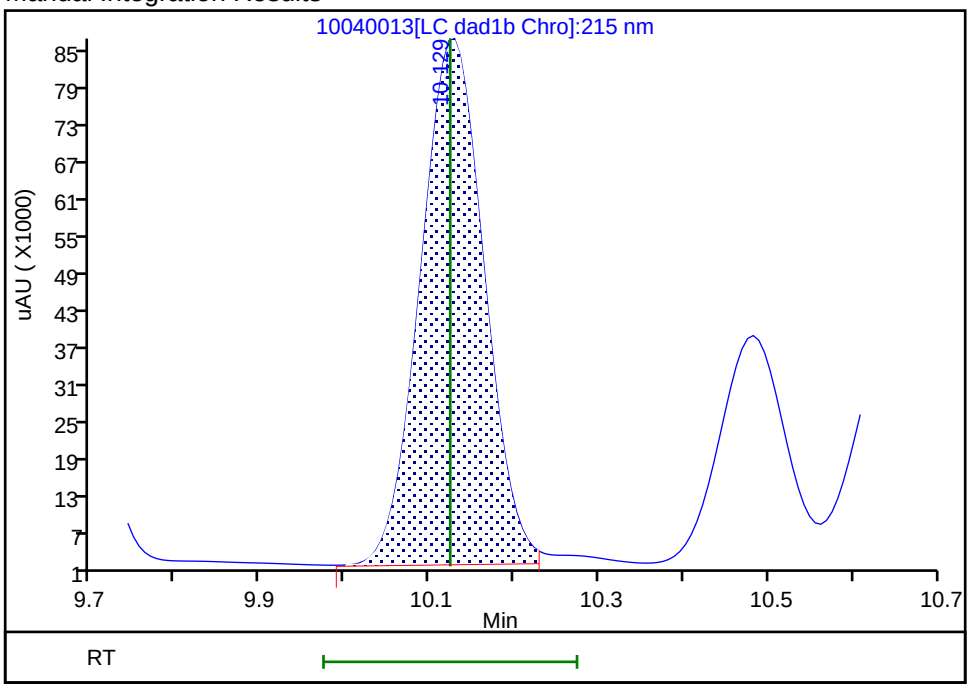
Processing Integration Results

RT: 10.13
Area: 453503
Amount: 6.555243
Amount Units: ug/mL



Manual Integration Results

RT: 10.13
Area: 445595
Amount: 6.919435
Amount Units: ug/mL



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

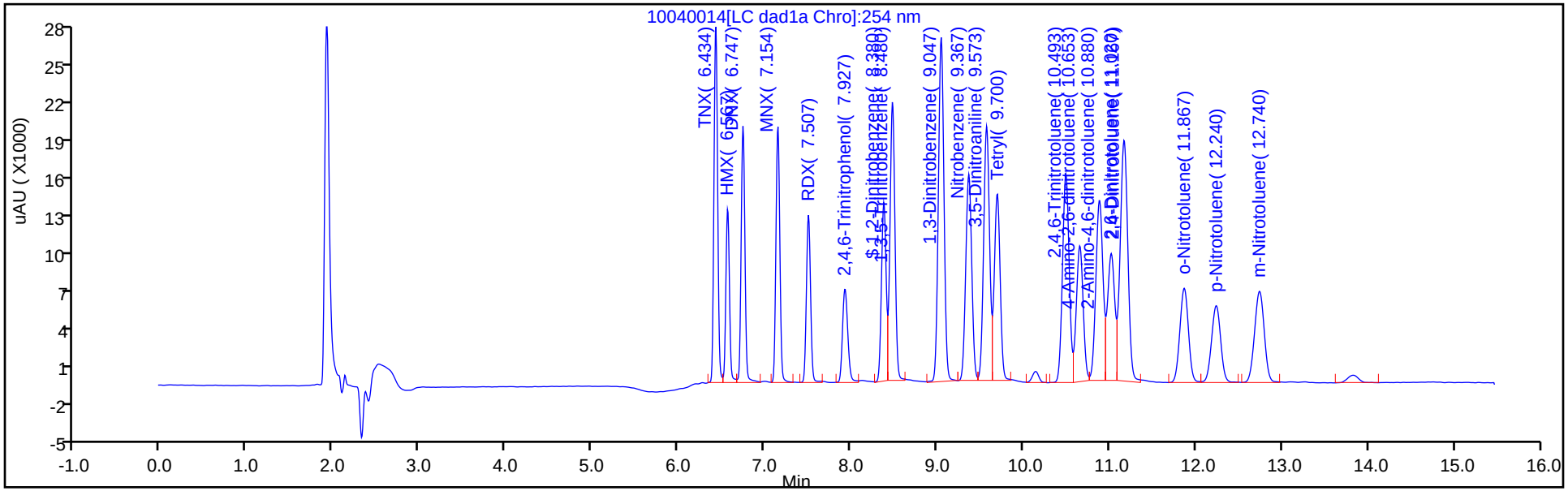
Report Date: 08-Oct-2024 13:19:16 Chrom Revision: 2.3 24-Sep-2024 15:19:46

Eurofins Denver

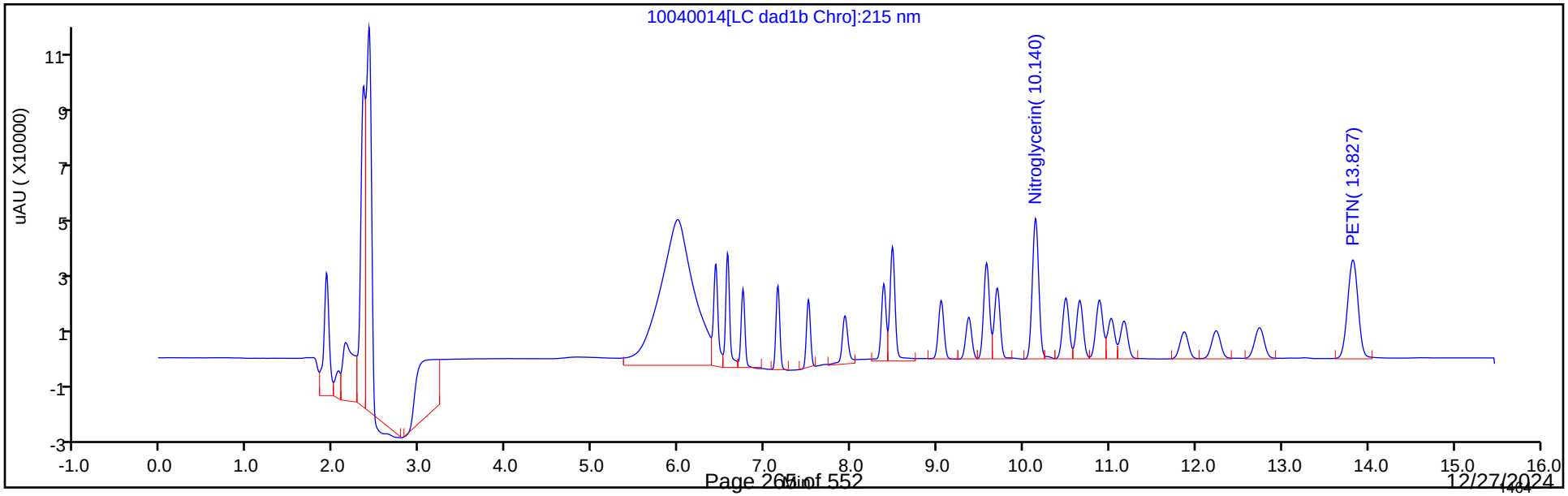
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040014.d

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



Manual Integration/User Assign Peak Report

Eurofins Denver

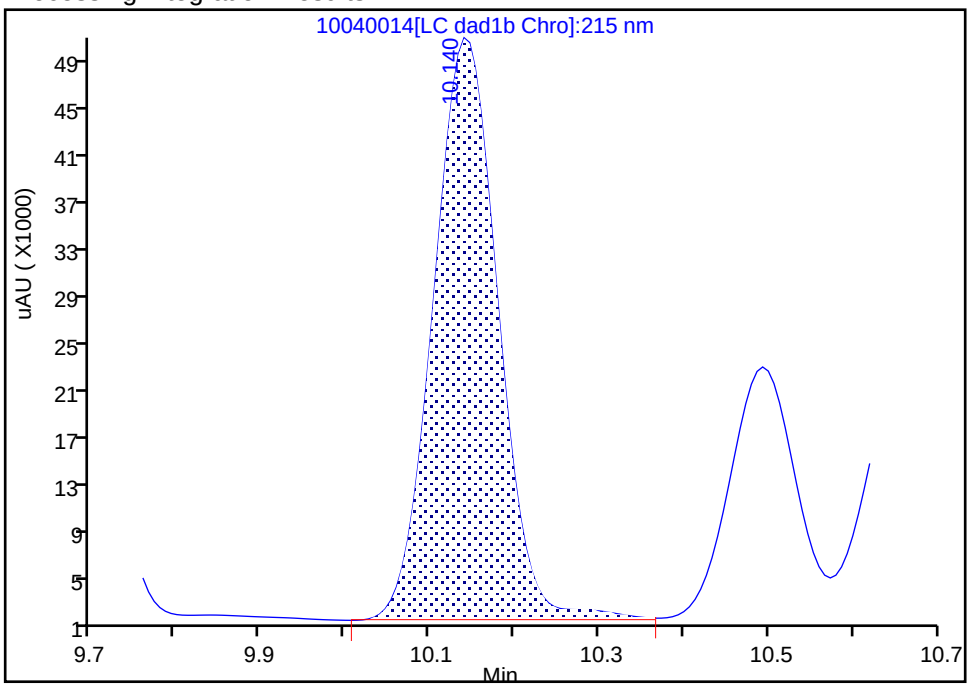
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040014.d				
Injection Date:	04-Oct-2024 18:05:18	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 6				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1C, 215 nm		

16 Nitroglycerin, CAS: 55-63-0

Signal: 1

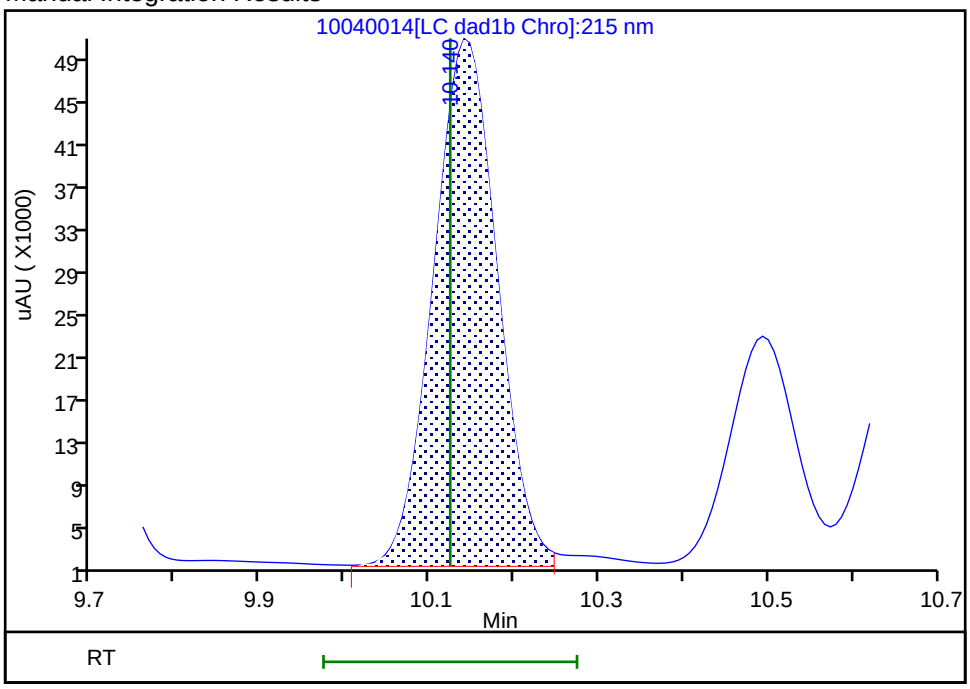
Processing Integration Results

RT: 10.14
Area: 261803
Amount: 3.791159
Amount Units: ug/mL



Manual Integration Results

RT: 10.14
Area: 257082
Amount: 3.994752
Amount Units: ug/mL



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

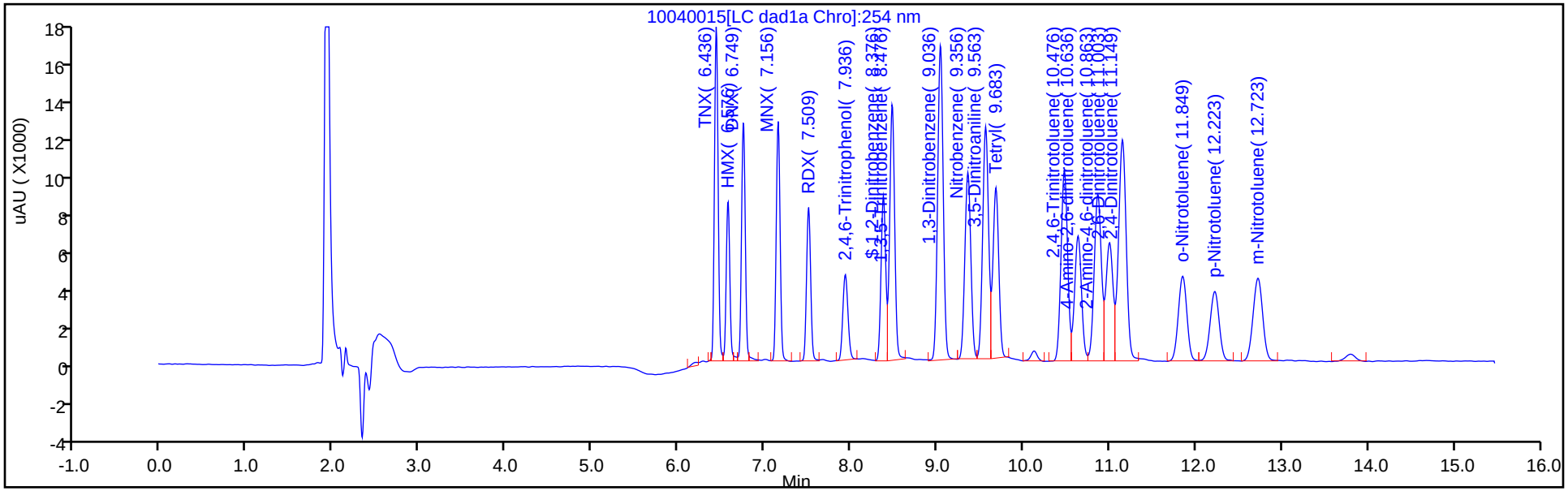
Report Date: 08-Oct-2024 13:19:18 Chrom Revision: 2.3 24-Sep-2024 15:19:46

Eurofins Denver

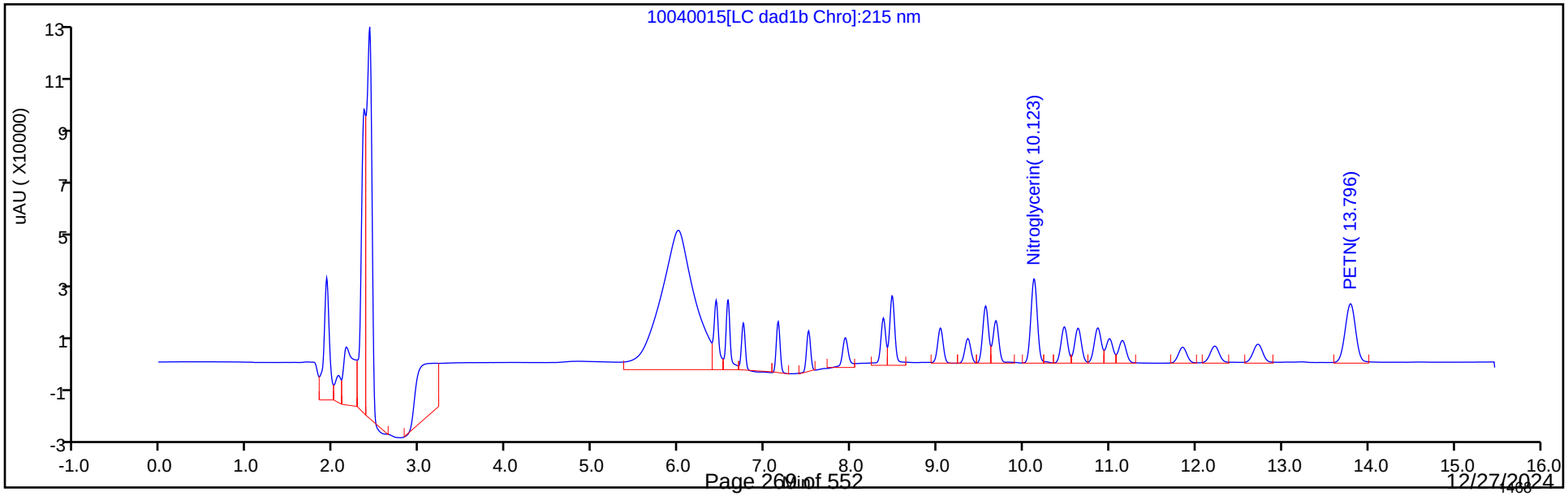
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040015.d

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



Manual Integration/User Assign Peak Report

Eurofins Denver

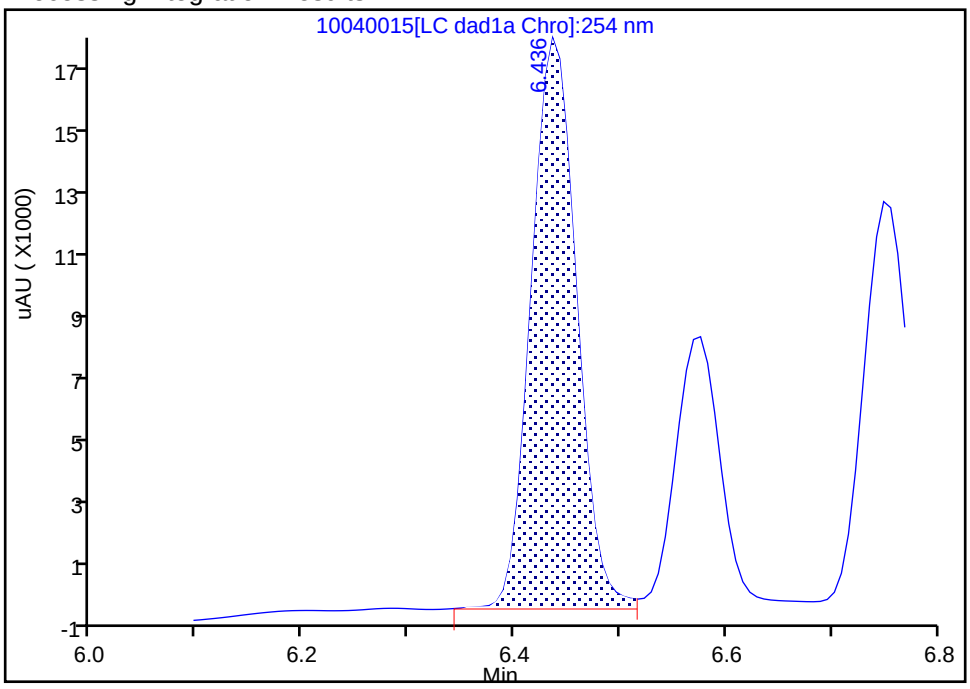
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040015.d				
Injection Date:	04-Oct-2024 18:27:10	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 5				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

3 TNX, CAS: 13980-04-6

Signal: 1

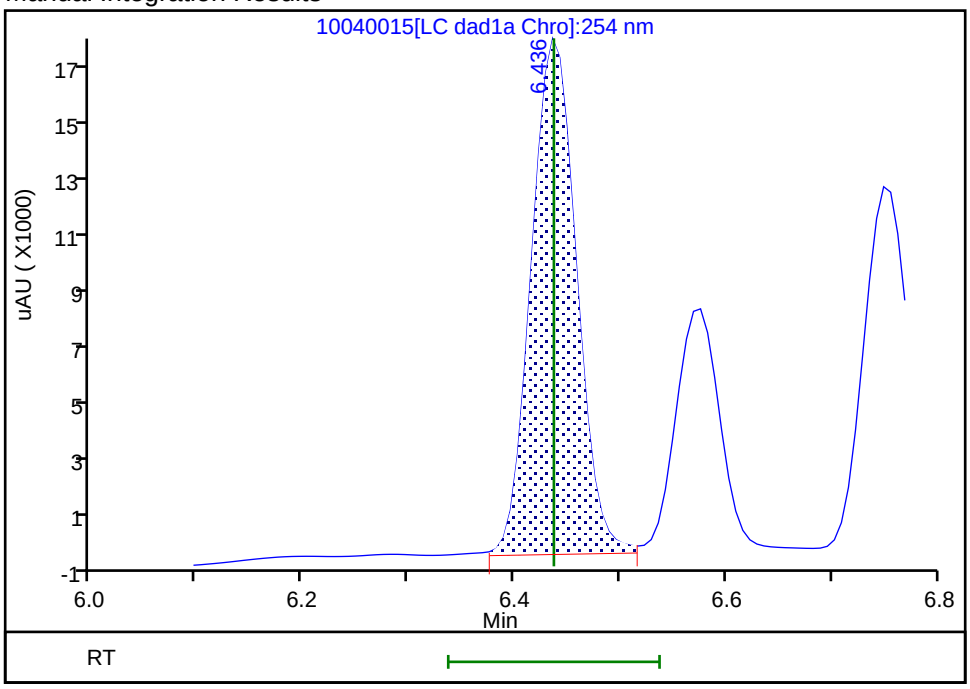
Processing Integration Results

RT: 6.44
Area: 52071
Amount: 0.246404
Amount Units: ug/mL



Manual Integration Results

RT: 6.44
Area: 51995
Amount: 0.256035
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:01:42 -06:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

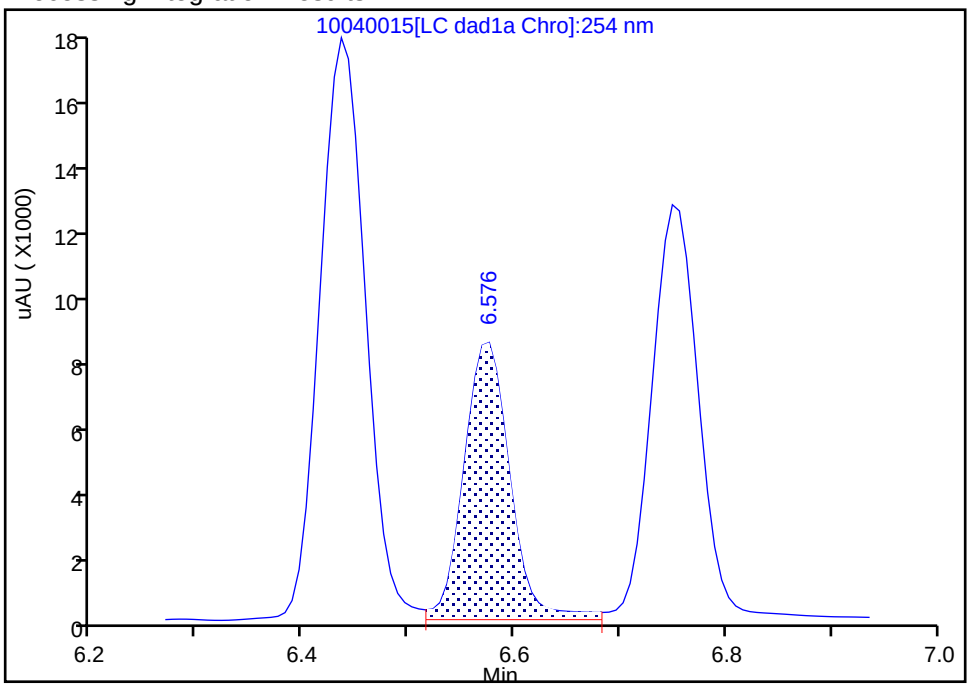
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Injection Date:	04-Oct-2024 18:27:10	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 5				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

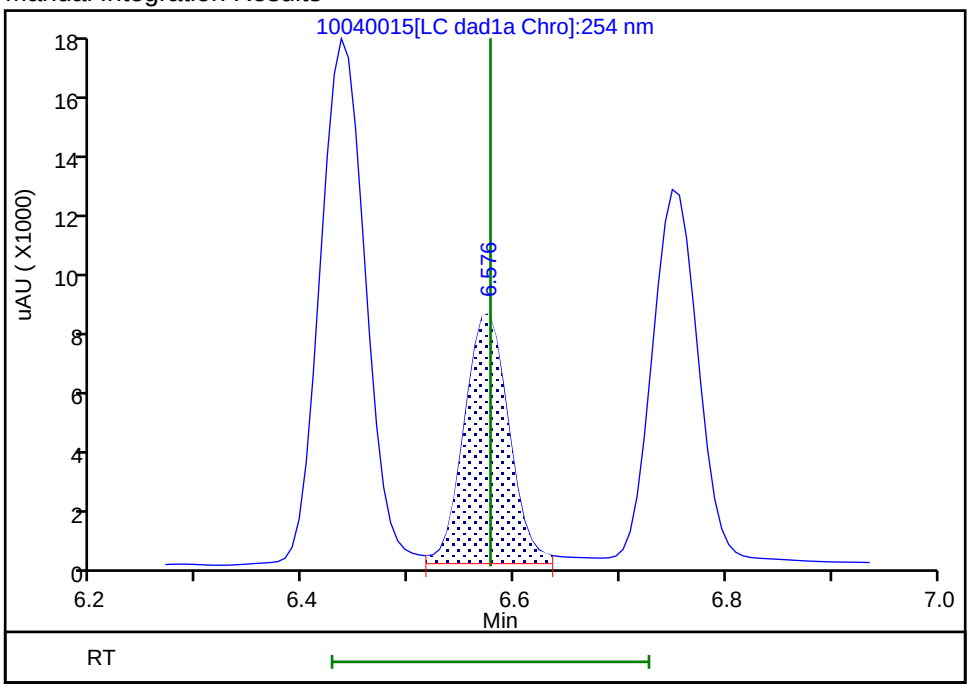
Processing Integration Results

RT: 6.58
Area: 24952
Amount: 0.261690
Amount Units: ug/mL



Manual Integration Results

RT: 6.58
Area: 24377
Amount: 0.252212
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:01:43 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

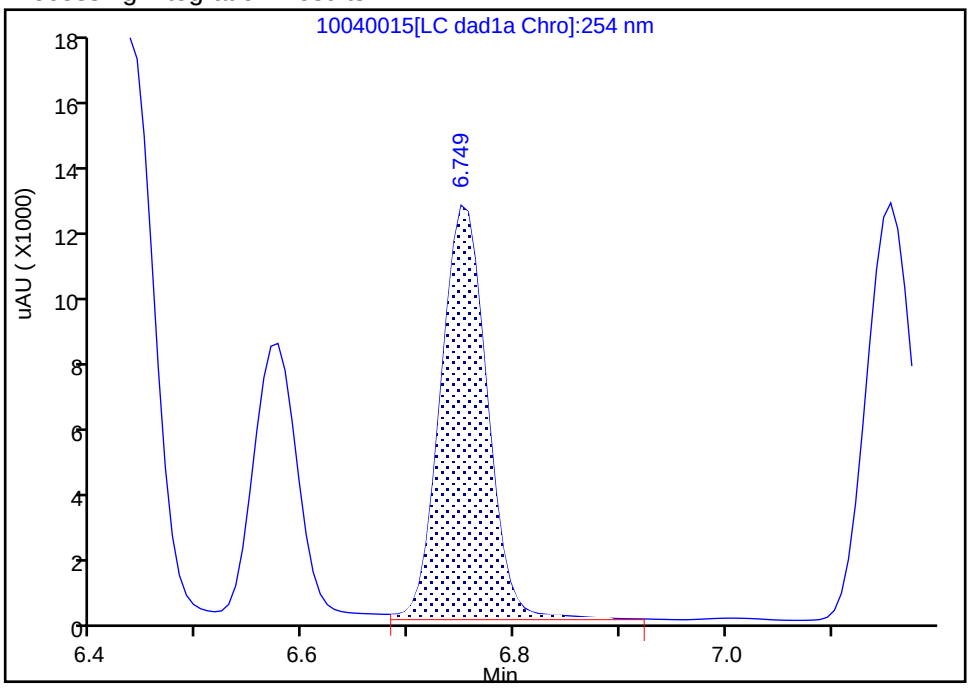
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040015.d				
Injection Date:	04-Oct-2024 18:27:10	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 5				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

6 DNX, CAS: 80251-29-2

Signal: 1

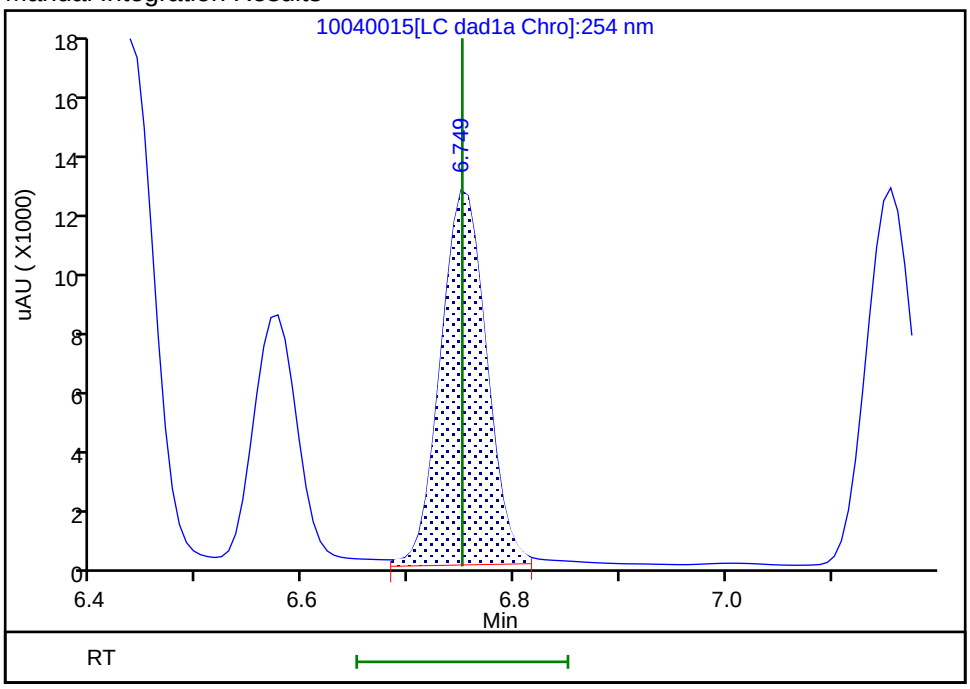
Processing Integration Results

RT: 6.75
Area: 38135
Amount: 0.248727
Amount Units: ug/mL



Manual Integration Results

RT: 6.75
Area: 37571
Amount: 0.257262
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:01:45 -06:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

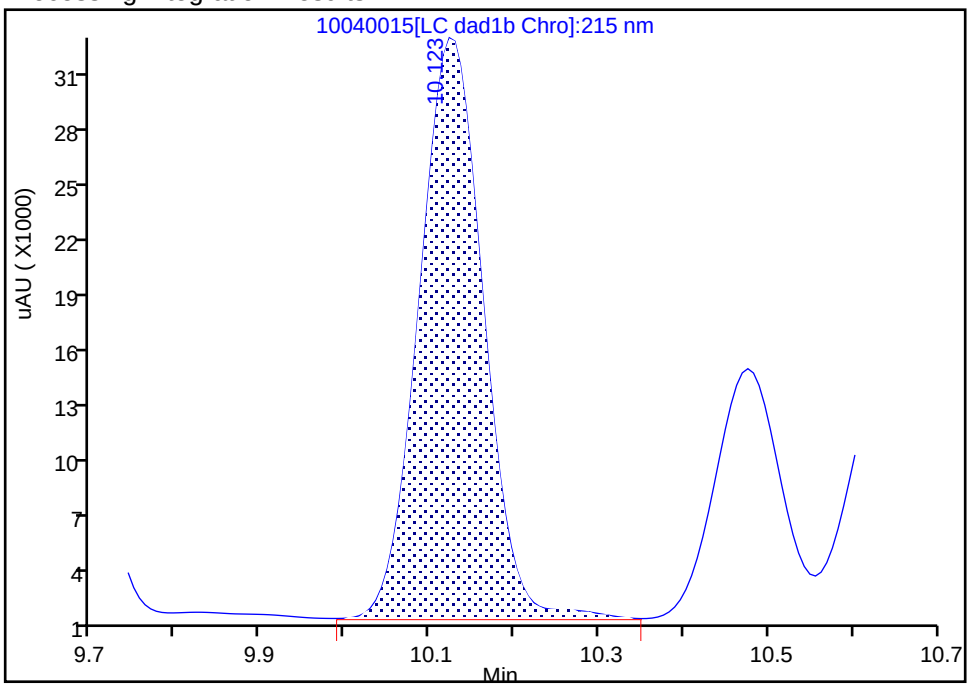
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Injection Date: 04-Oct-2024 18:27:10 Instrument ID: CHHPLC_X3
Lims ID: IC INT/DMT 5
Client ID:
Operator ID: JZ ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1C, 215 nm

16 Nitroglycerin, CAS: 55-63-0

Signal: 1

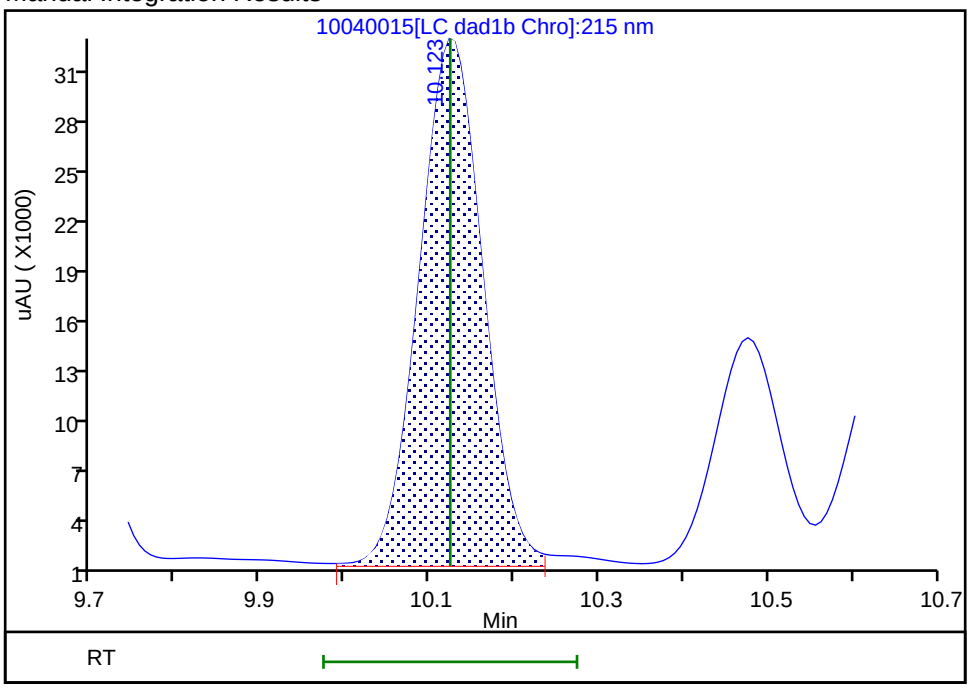
Processing Integration Results

RT: 10.12
Area: 165170
Amount: 2.396371
Amount Units: ug/mL



Manual Integration Results

RT: 10.12
Area: 162585
Amount: 2.528679
Amount Units: ug/mL



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

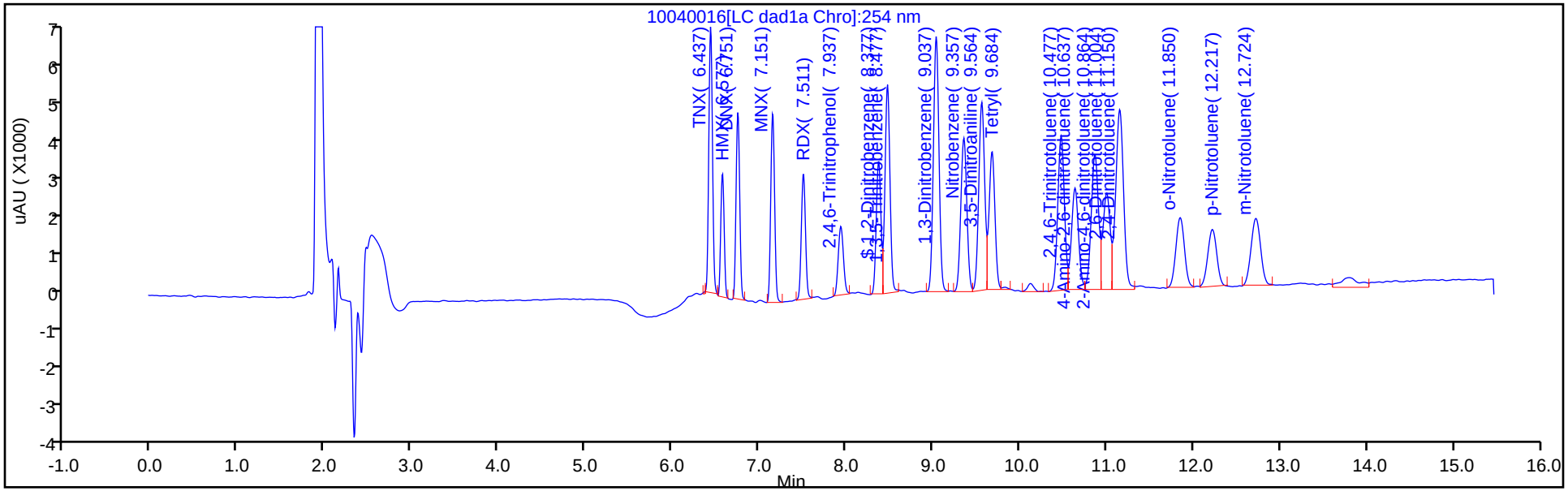
Report Date: 08-Oct-2024 13:19:20 Chrom Revision: 2.3 24-Sep-2024 15:19:46

Eurofins Denver

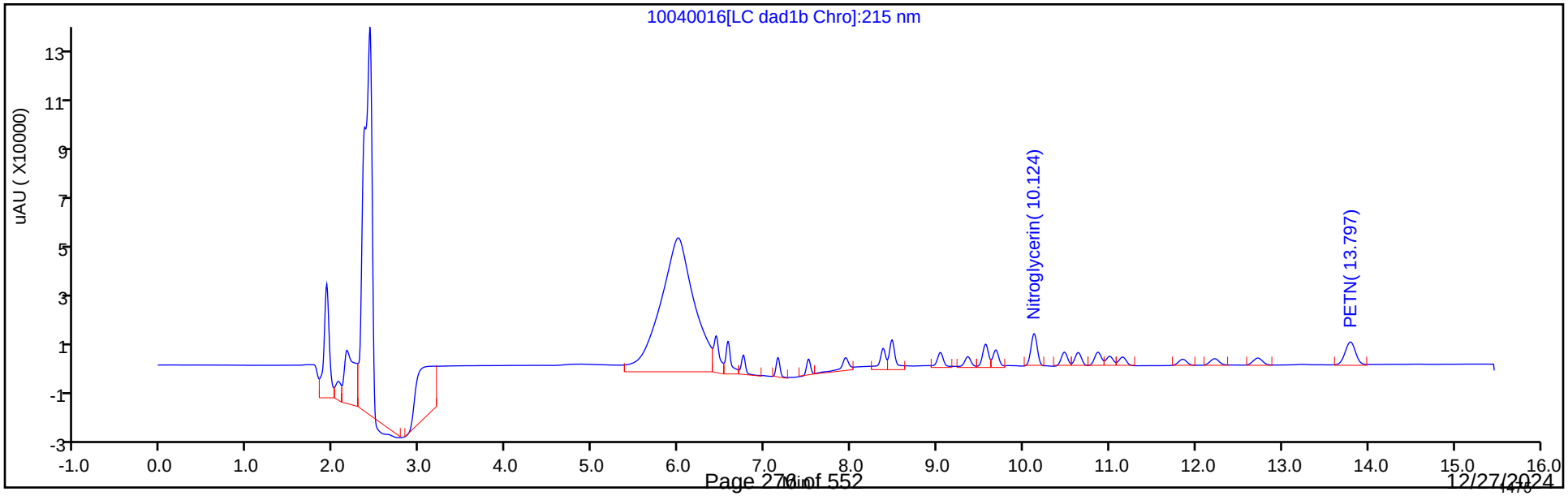
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040016.d

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



Manual Integration/User Assign Peak Report

Eurofins Denver

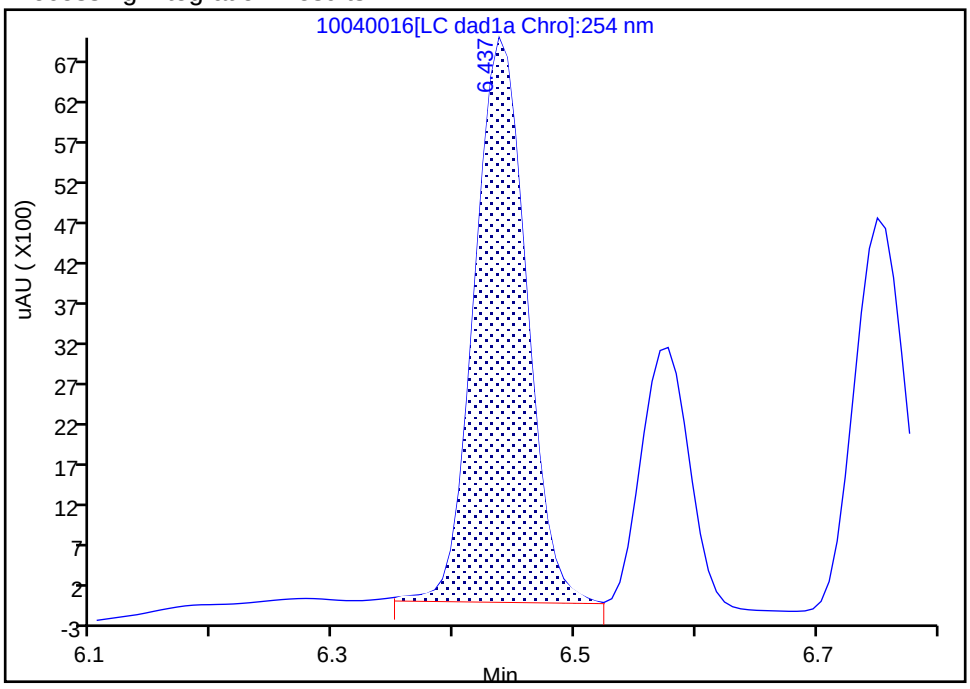
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Injection Date:	04-Oct-2024 18:49:07	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 4				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

3 TNX, CAS: 13980-04-6

Signal: 1

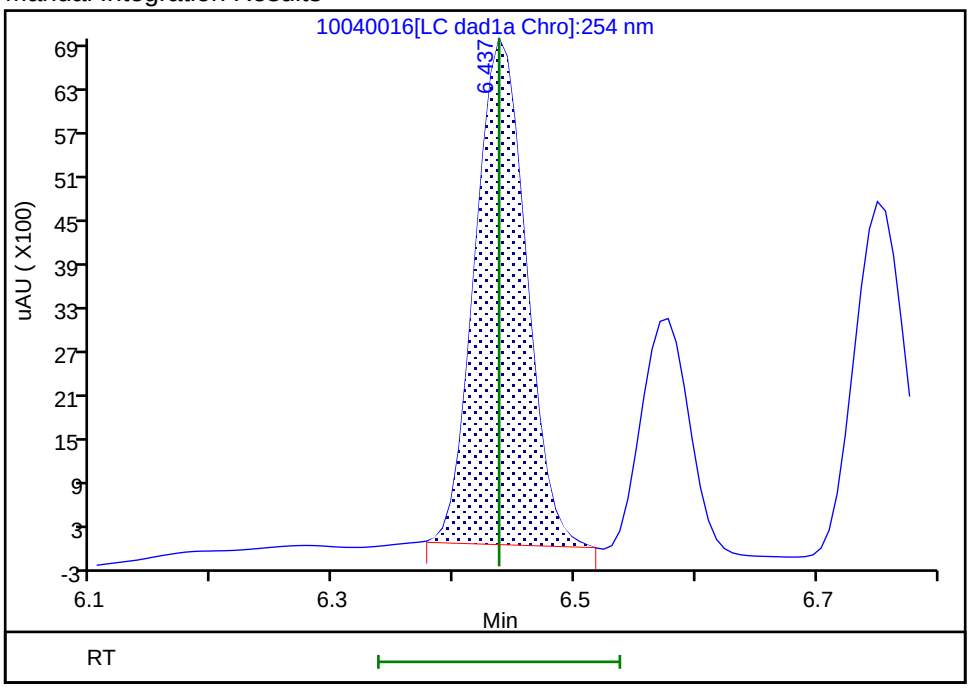
Processing Integration Results

RT: 6.44
Area: 20842
Amount: 0.098642
Amount Units: ug/mL



Manual Integration Results

RT: 6.44
Area: 20335
Amount: 0.100134
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:02:31 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

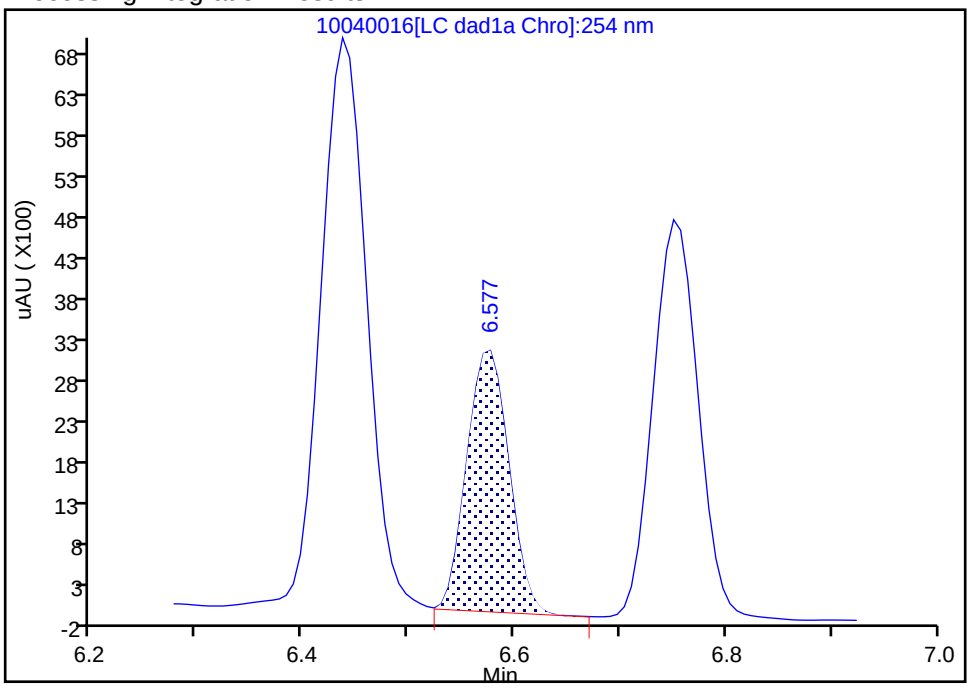
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Injection Date:	04-Oct-2024 18:49:07	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 4				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

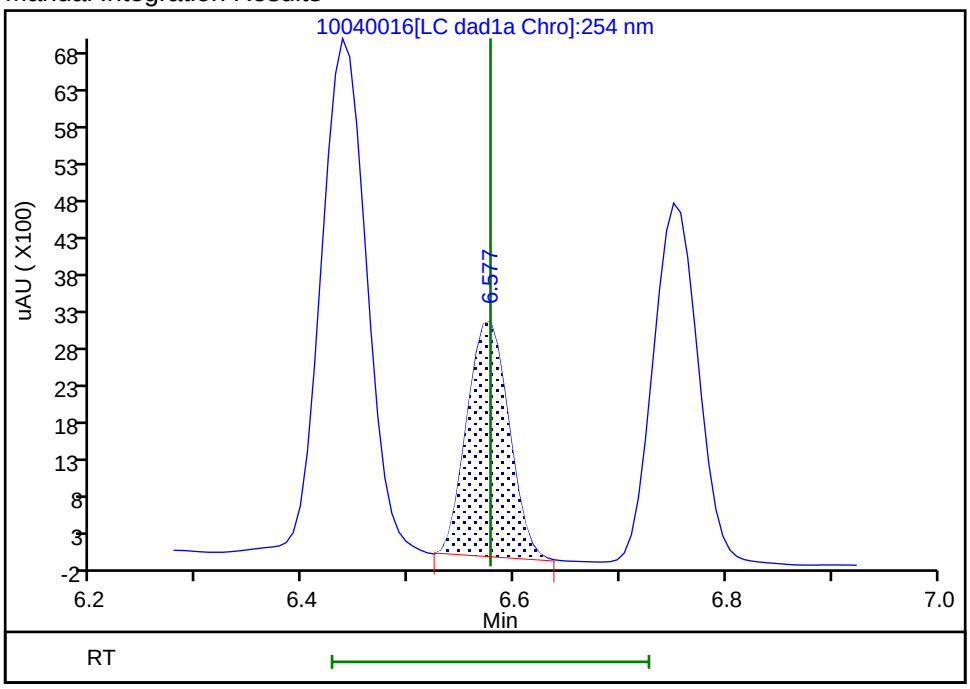
Processing Integration Results

RT: 6.58
Area: 8824
Amount: 0.087114
Amount Units: ug/mL



Manual Integration Results

RT: 6.58
Area: 8775
Amount: 0.090789
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:02:33 -06:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

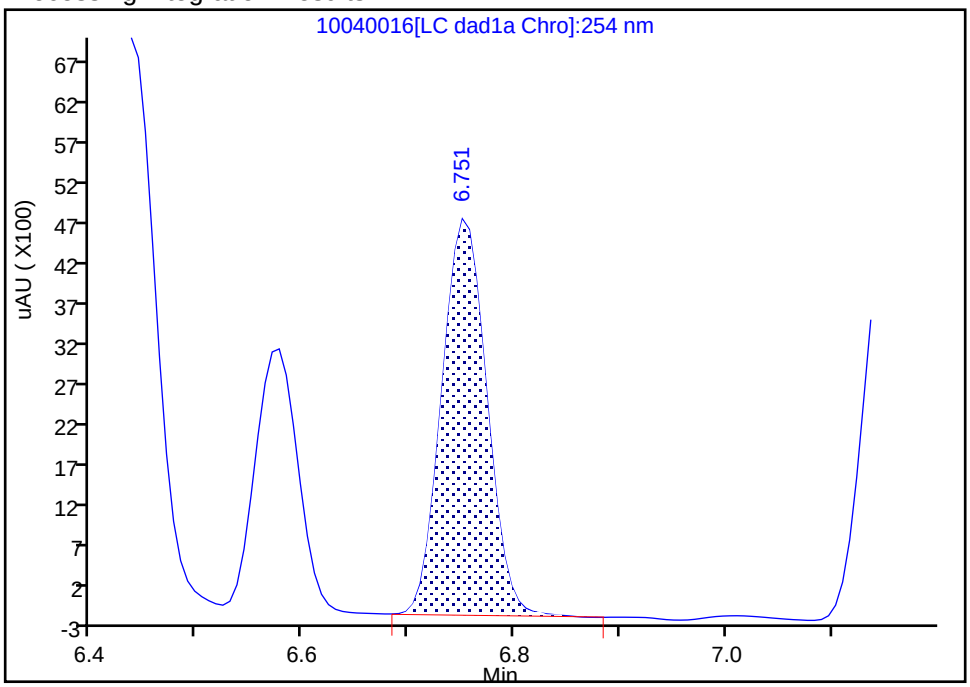
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Injection Date:	04-Oct-2024 18:49:07	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 4				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

6 DNX, CAS: 80251-29-2

Signal: 1

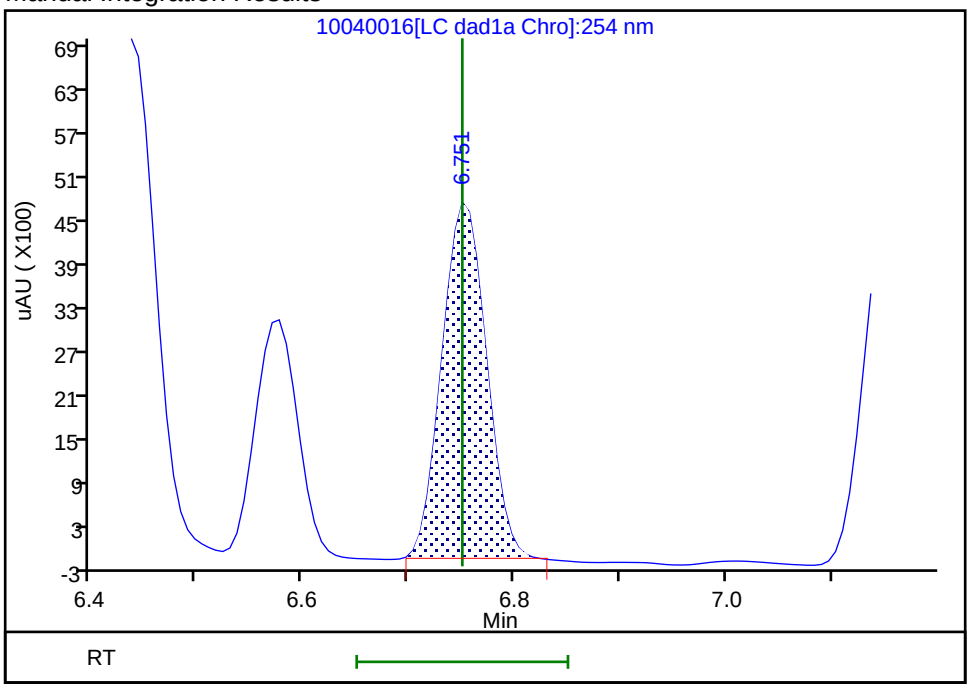
Processing Integration Results

RT: 6.75
Area: 14575
Amount: 0.095218
Amount Units: ug/mL



Manual Integration Results

RT: 6.75
Area: 14149
Amount: 0.096883
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:02:38 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

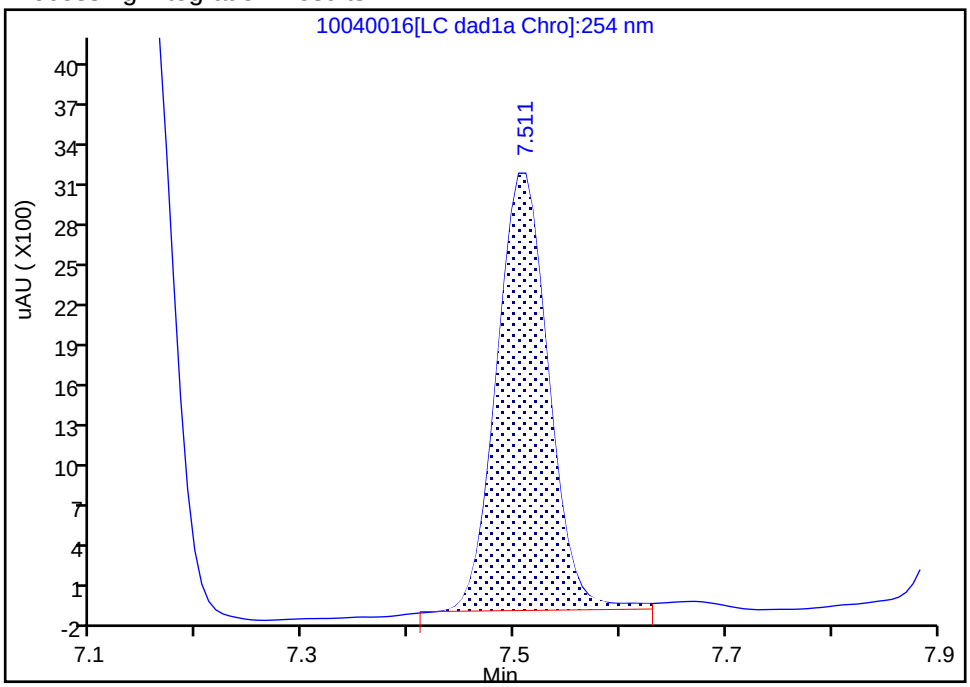
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Injection Date:	04-Oct-2024 18:49:07	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 4				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

8 RDX, CAS: 121-82-4

Signal: 1

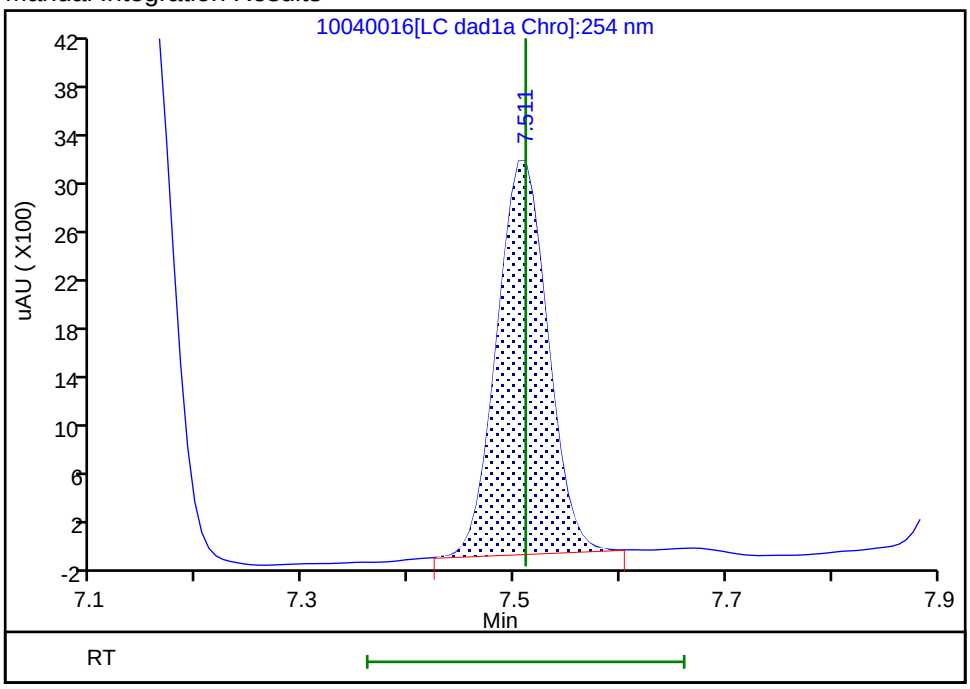
Processing Integration Results

RT: 7.51
Area: 11085
Amount: 0.100964
Amount Units: ug/mL



Manual Integration Results

RT: 7.51
Area: 10773
Amount: 0.101109
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:02:47 -06:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

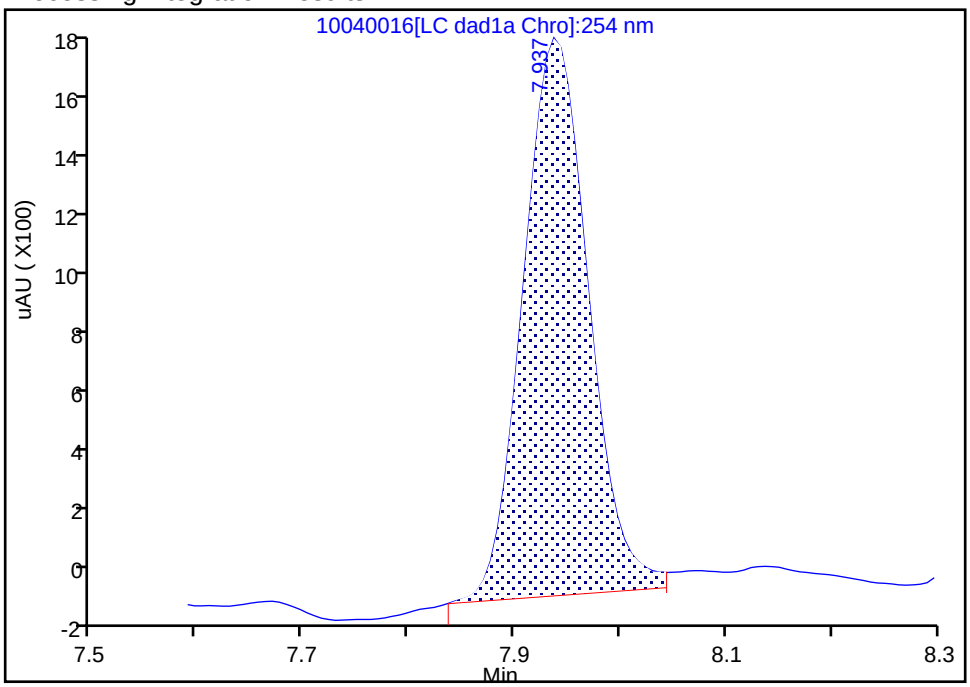
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040016.d				
Injection Date:	04-Oct-2024 18:49:07	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 4				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit 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

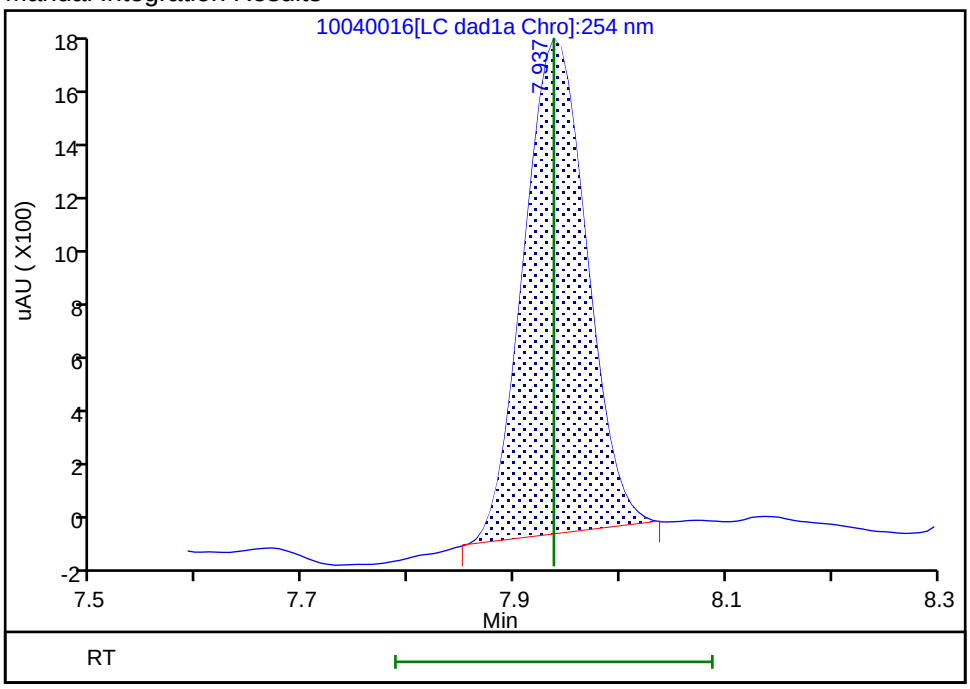
Processing Integration Results

RT: 7.94
Area: 7772
Amount: 0.095498
Amount Units: ug/mL



Manual Integration Results

RT: 7.94
Area: 7391
Amount: 0.097989
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:02:51 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

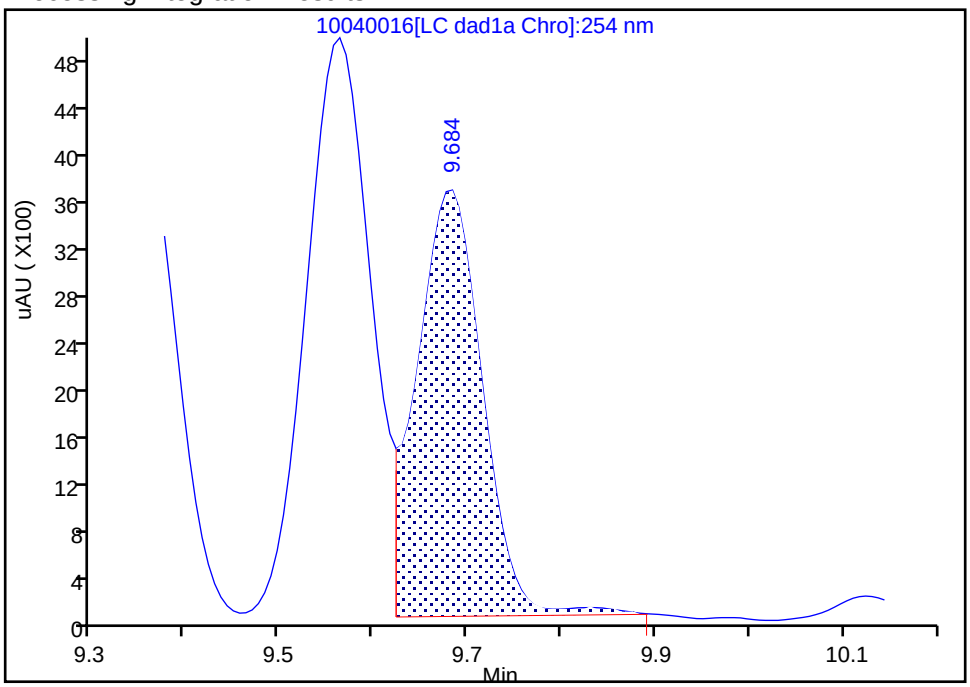
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Injection Date:	04-Oct-2024 18:49:07	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 4				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

15 Tetryl, CAS: 479-45-8

Signal: 1

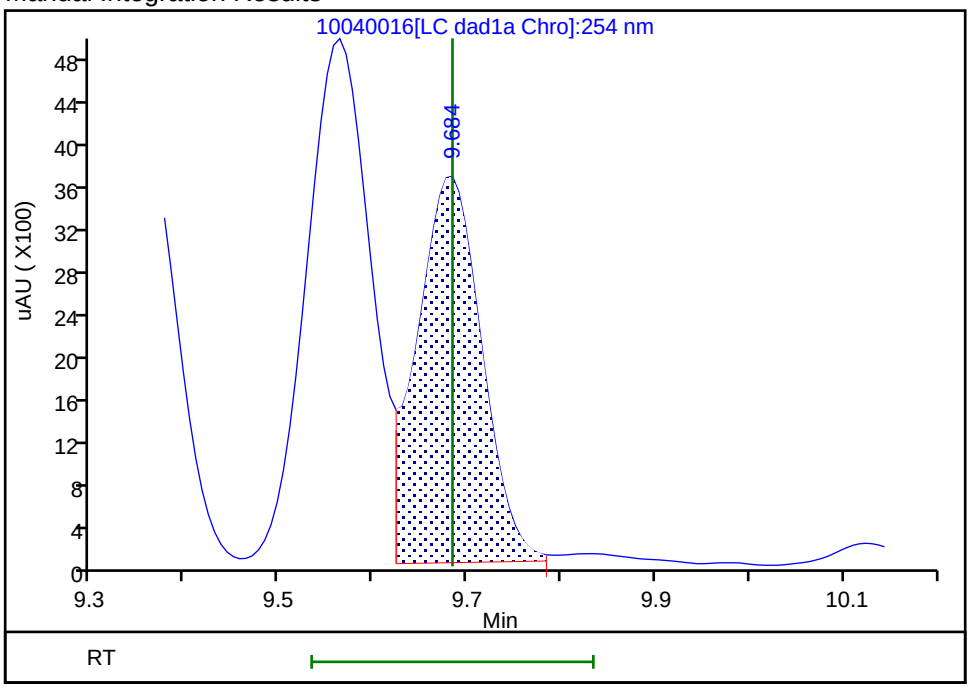
Processing Integration Results

RT: 9.68
Area: 17446
Amount: 0.103129
Amount Units: ug/mL



Manual Integration Results

RT: 9.68
Area: 17130
Amount: 0.100694
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:03:04 -06:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

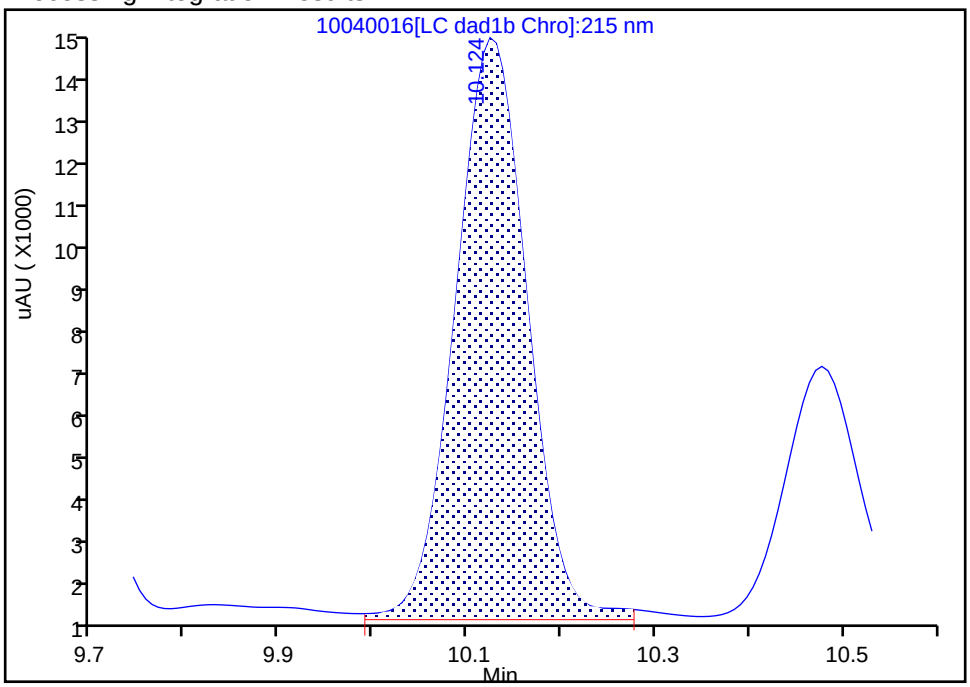
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040016.d				
Injection Date:	04-Oct-2024 18:49:07	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 4				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1C, 215 nm		

16 Nitroglycerin, CAS: 55-63-0

Signal: 1

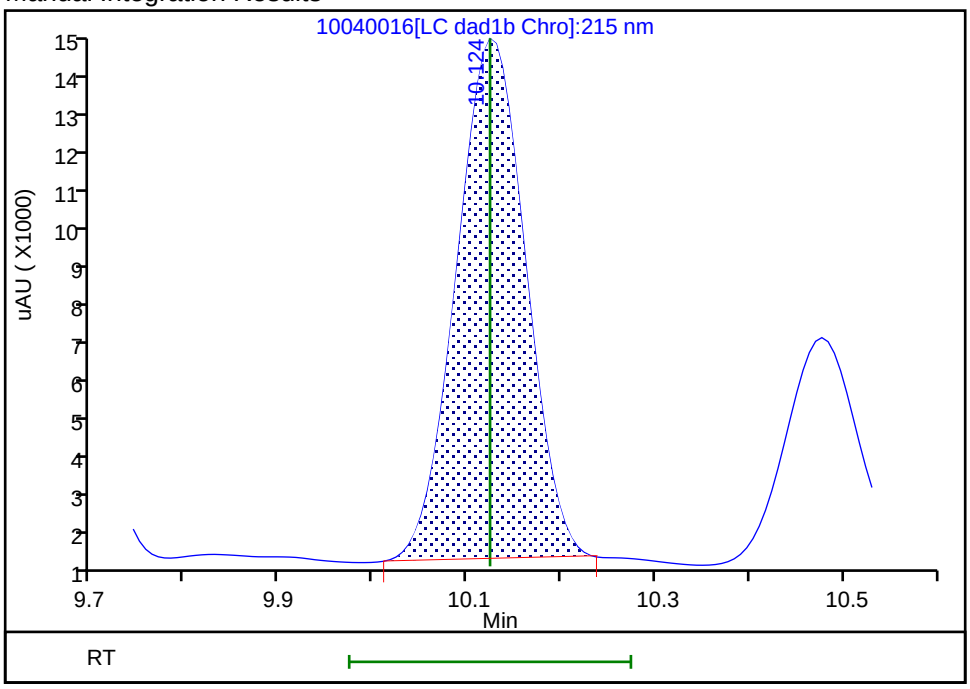
Processing Integration Results

RT: 10.12
Area: 67088
Amount: 0.959514
Amount Units: ug/mL



Manual Integration Results

RT: 10.12
Area: 63200
Amount: 0.986772
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:03:11 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

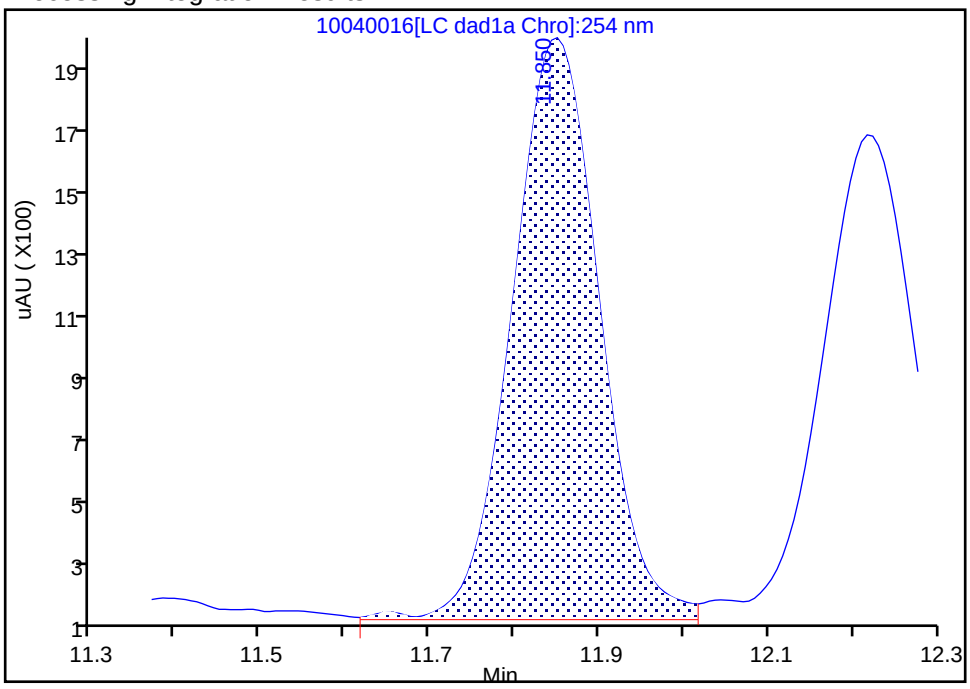
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Injection Date:	04-Oct-2024 18:49:07	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 4				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

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

Signal: 1

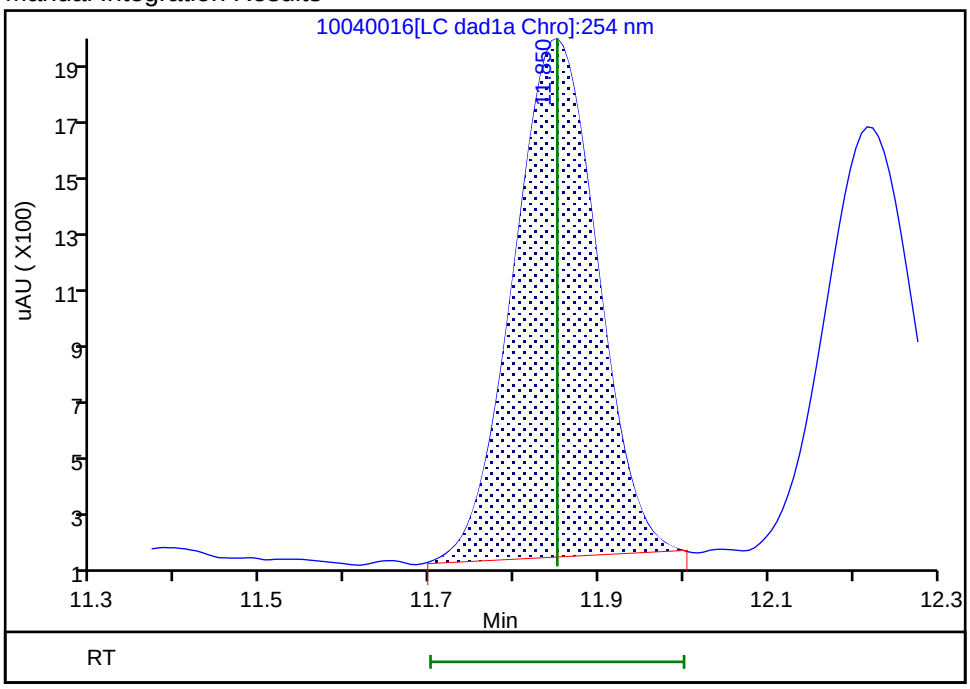
Processing Integration Results

RT: 11.85
Area: 13314
Amount: 0.103639
Amount Units: ug/mL



Manual Integration Results

RT: 11.85
Area: 12487
Amount: 0.099523
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:03:36 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins Denver

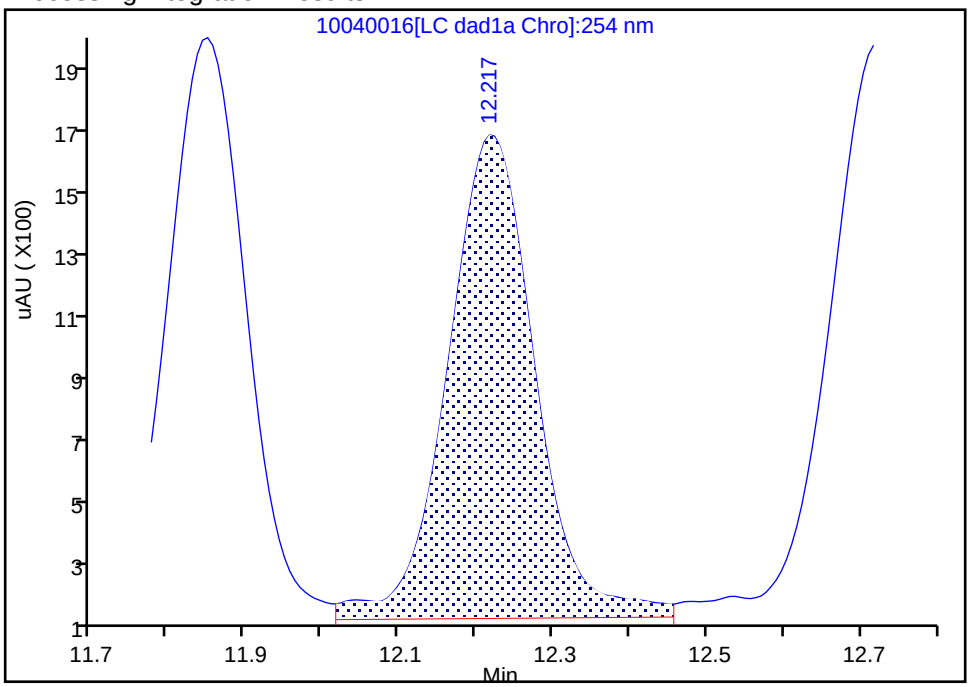
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040016.d
Injection Date: 04-Oct-2024 18:49:07 Instrument ID: CHHPLC_X3
Lims ID: IC INT/DMT 4
Client ID:
Operator ID: JZ ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

23 p-Nitrotoluene, CAS: 99-99-0

Signal: 1

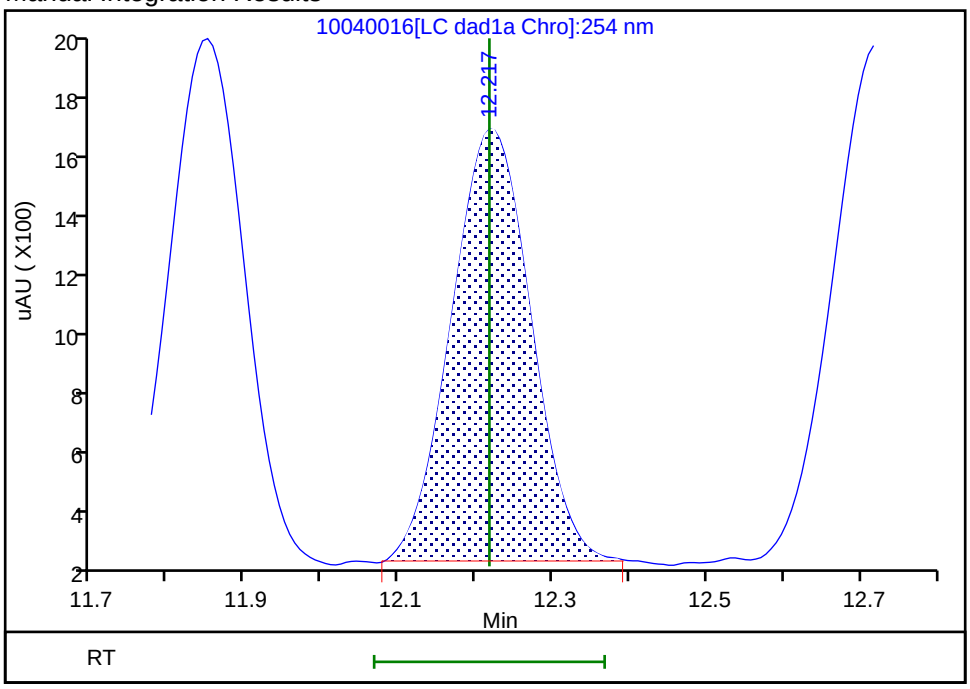
Processing Integration Results

RT: 12.22
Area: 12196
Amount: 0.107960
Amount Units: ug/mL



Manual Integration Results

RT: 12.22
Area: 10624
Amount: 0.096993
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:03:40 -06:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

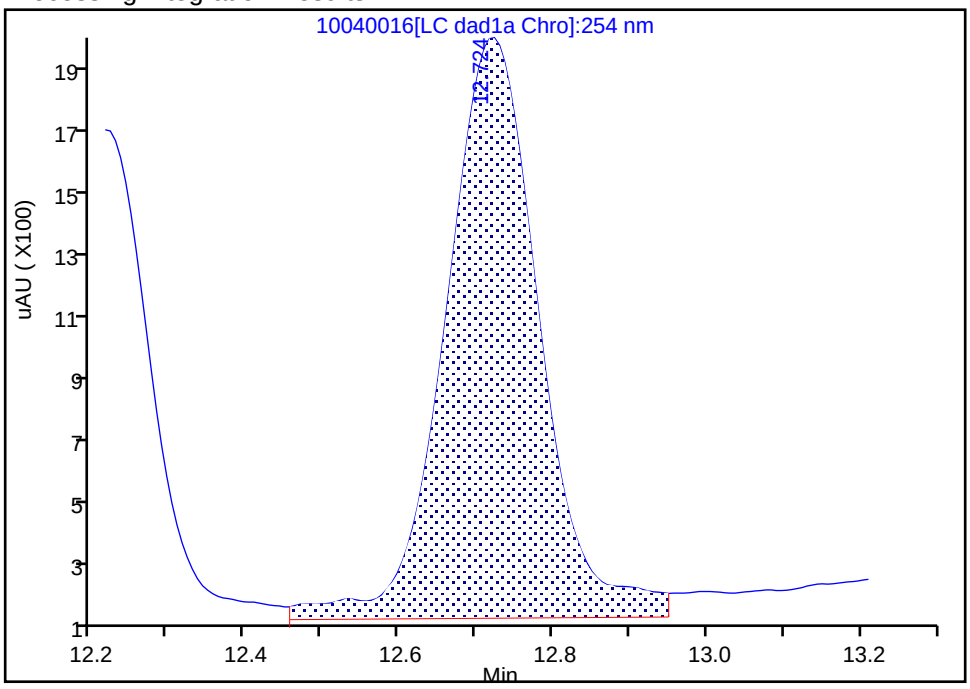
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040016.d				
Injection Date:	04-Oct-2024 18:49:07	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 4				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

24 m-Nitrotoluene, CAS: 99-08-1

Signal: 1

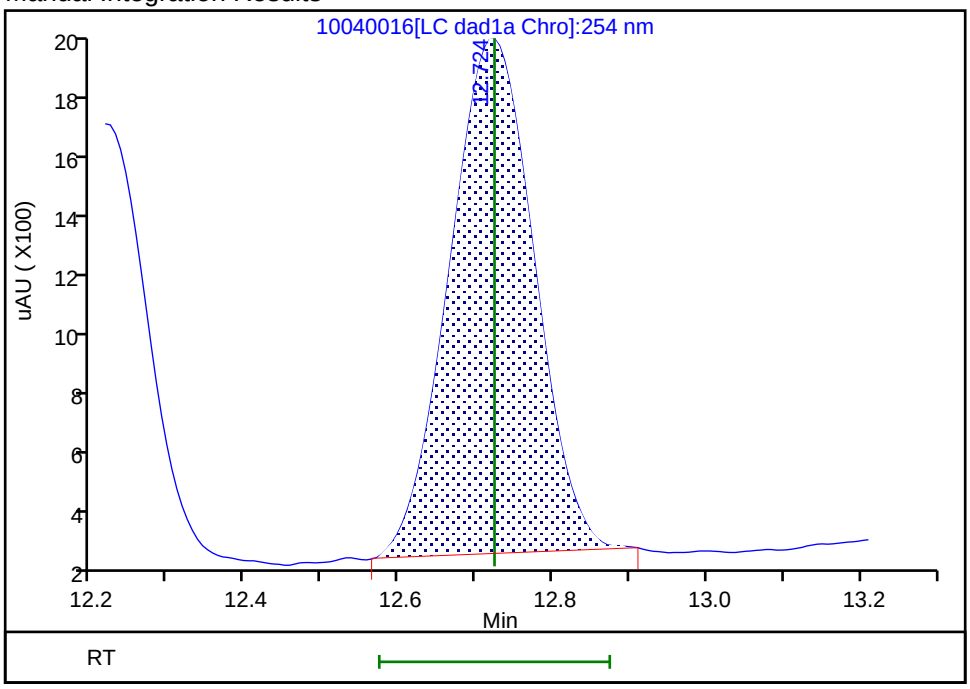
Processing Integration Results

RT: 12.72
Area: 15464
Amount: 0.107416
Amount Units: ug/mL



Manual Integration Results

RT: 12.72
Area: 13345
Amount: 0.096915
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:03:43 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

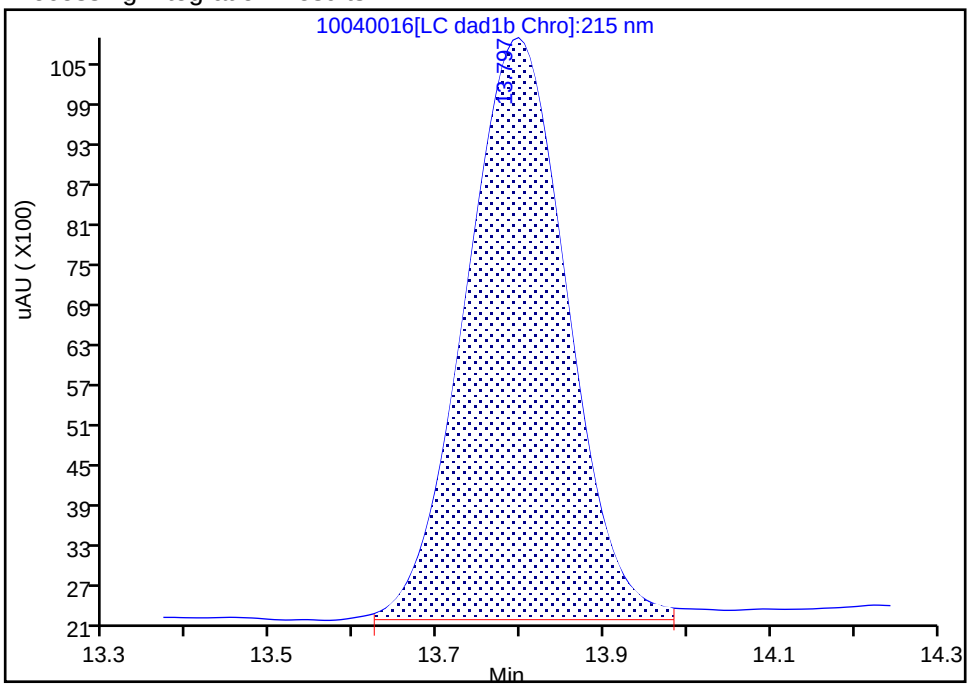
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040016.d				
Injection Date:	04-Oct-2024 18:49:07	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 4				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1C, 215 nm		

25 PETN, CAS: 78-11-5

Signal: 1

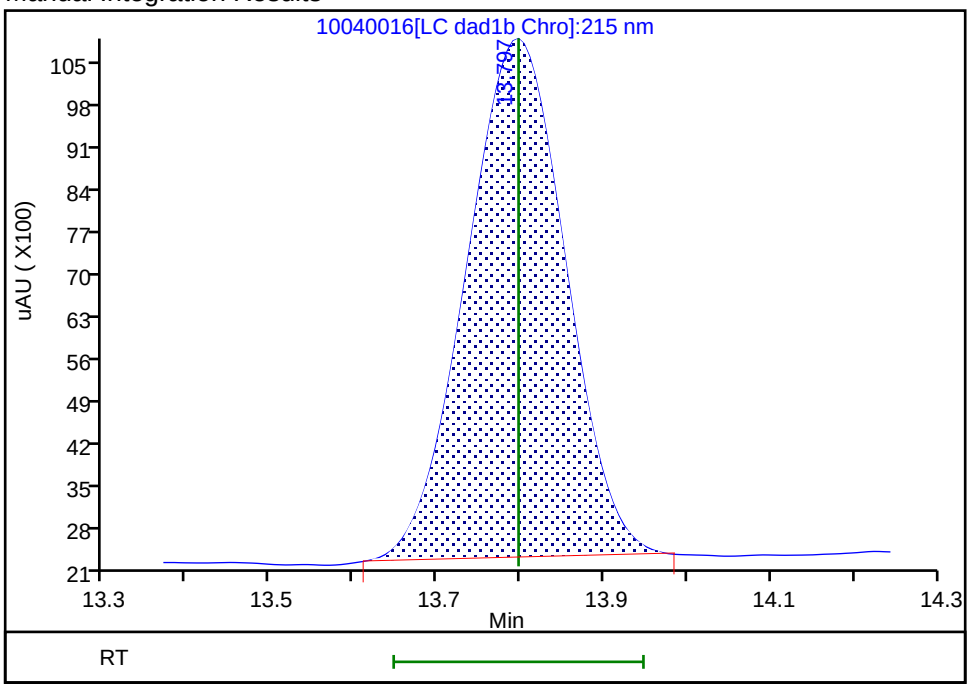
Processing Integration Results

RT: 13.80
Area: 74197
Amount: 1.031477
Amount Units: ug/mL



Manual Integration Results

RT: 13.80
Area: 71766
Amount: 0.993819
Amount Units: ug/mL



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

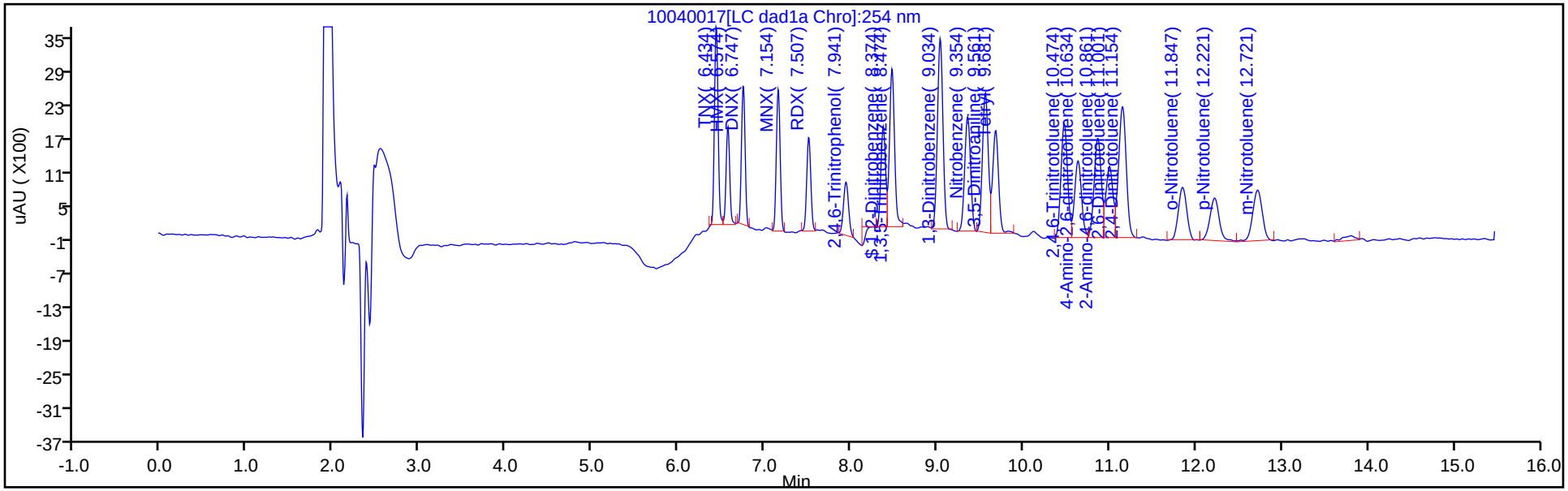
Report Date: 08-Oct-2024 13:19:22 Chrom Revision: 2.3 24-Sep-2024 15:19:46

Eurofins Denver

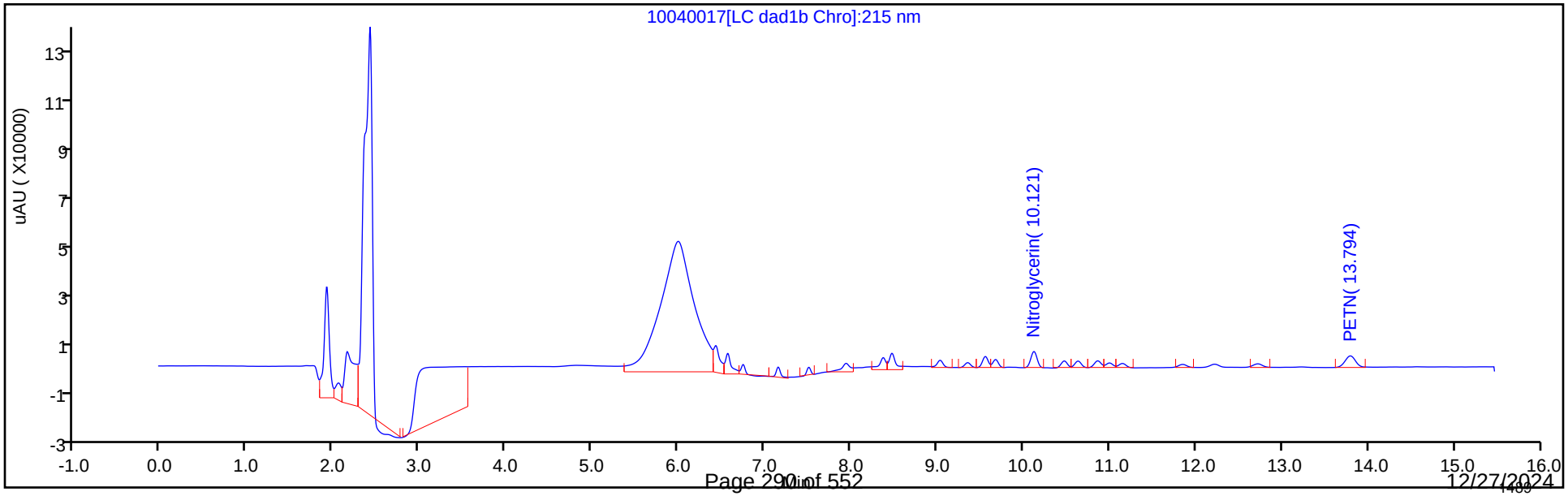
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040017.d

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



12/27/2024
5:54:56 AM

Manual Integration/User Assign Peak Report

Eurofins Denver

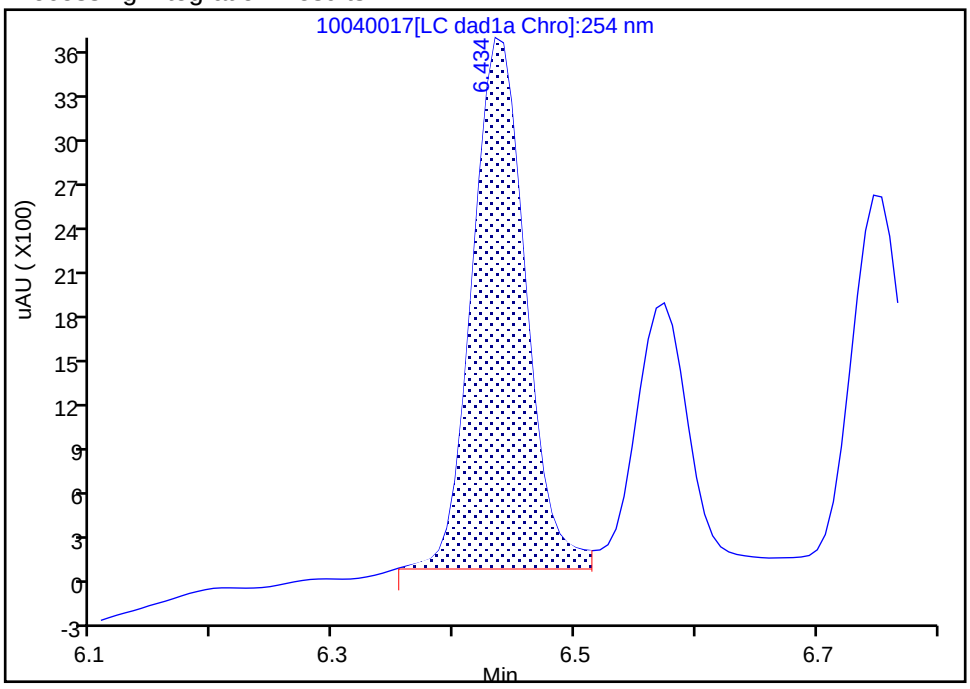
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Injection Date:	04-Oct-2024 19:11:05	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 3				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

3 TNX, CAS: 13980-04-6

Signal: 1

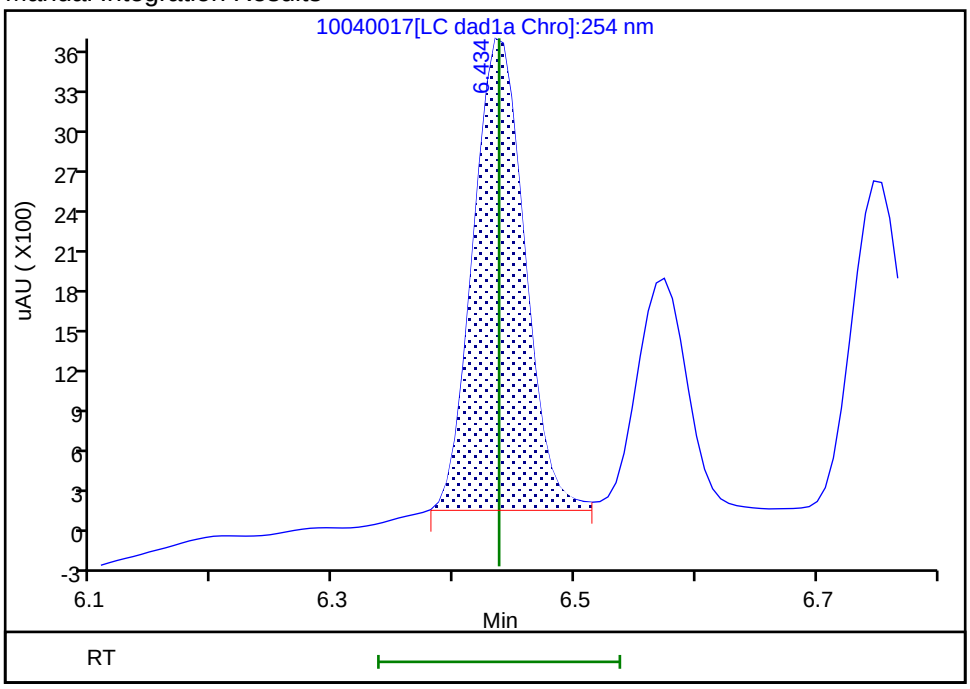
Processing Integration Results

RT: 6.43
Area: 10875
Amount: 0.051607
Amount Units: ug/mL



Manual Integration Results

RT: 6.43
Area: 10367
Amount: 0.051049
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:05:07 -06:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

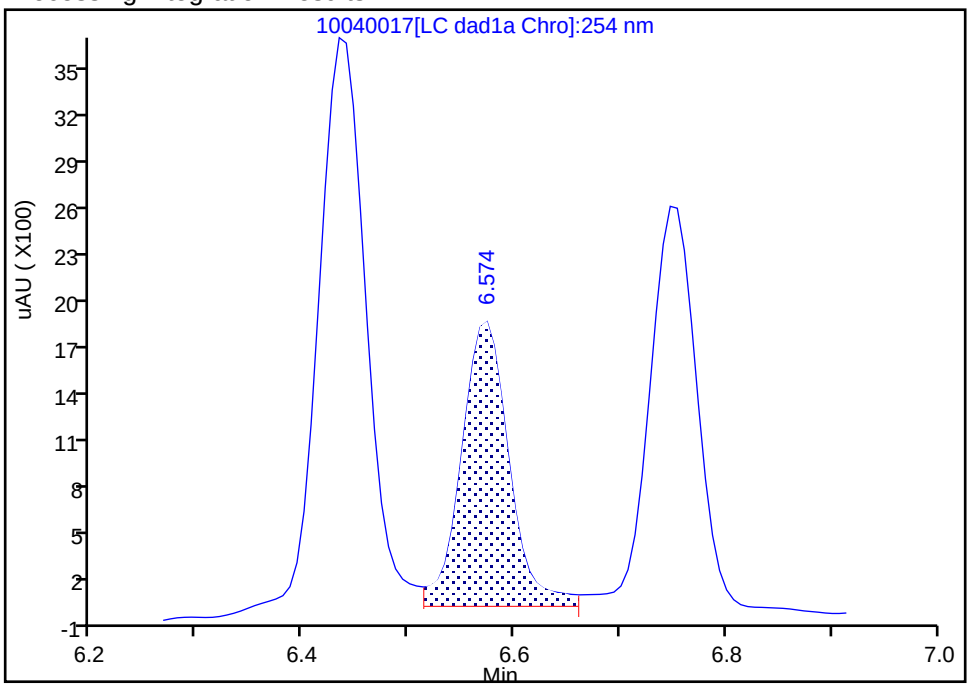
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040017.d
Injection Date: 04-Oct-2024 19:11:05 Instrument ID: CHHPLC_X3
Lims ID: IC INT/DMT 3
Client ID:
Operator ID: JZ ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

4 HMX, CAS: 2691-41-0

Signal: 1

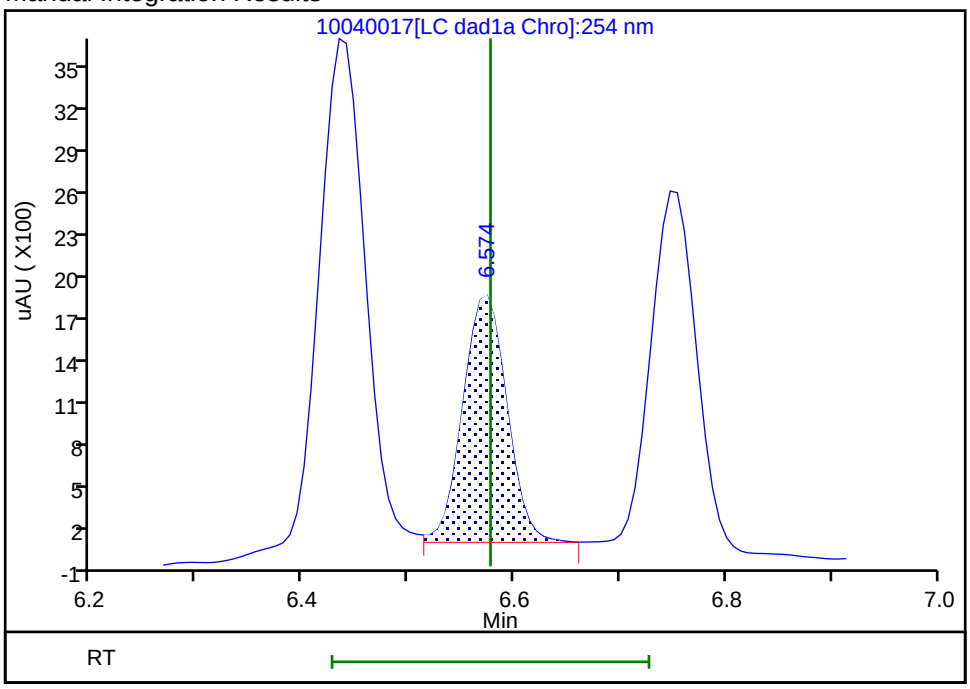
Processing Integration Results

RT: 6.57
Area: 5573
Amount: 0.051766
Amount Units: ug/mL



Manual Integration Results

RT: 6.57
Area: 4979
Amount: 0.051514
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:05:03 -06:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

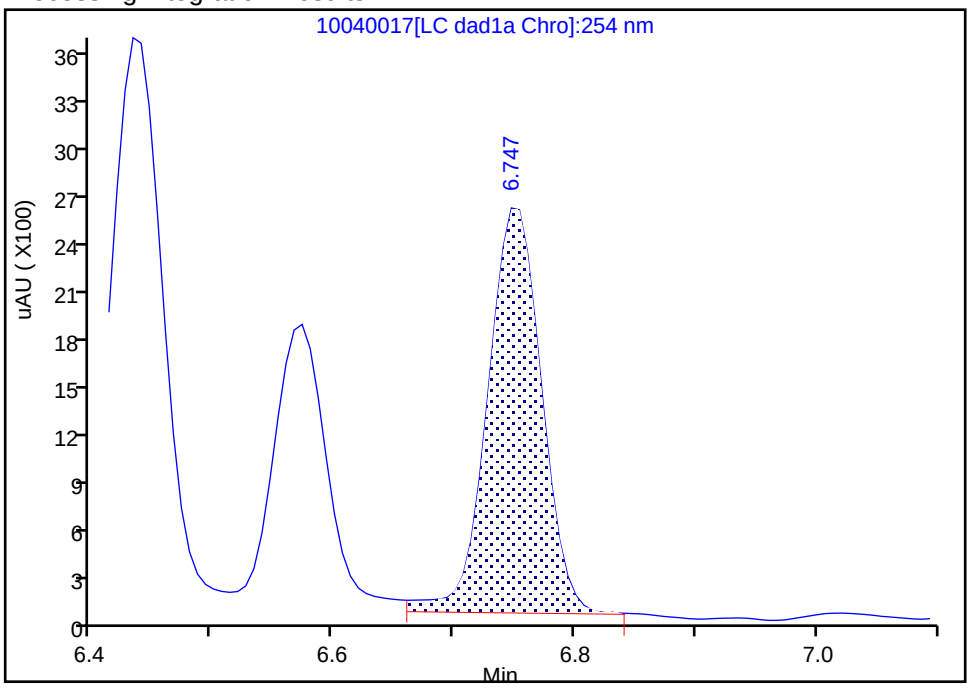
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Injection Date:	04-Oct-2024 19:11:05	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 3				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

6 DNX, CAS: 80251-29-2

Signal: 1

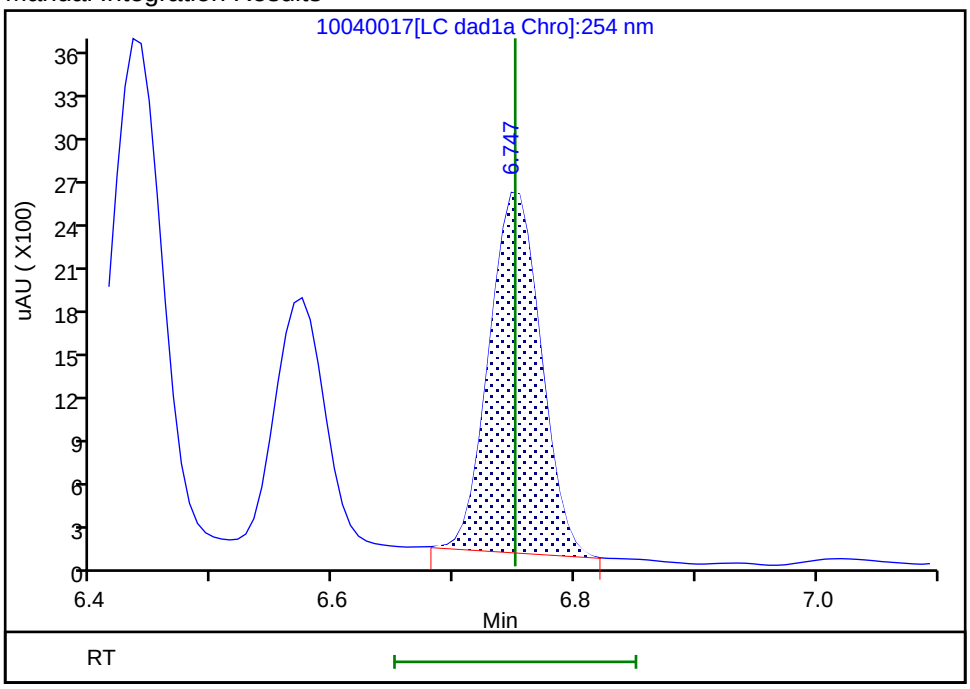
Processing Integration Results

RT: 6.75
Area: 7771
Amount: 0.050925
Amount Units: ug/mL



Manual Integration Results

RT: 6.75
Area: 7313
Amount: 0.050075
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:04:59 -06:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

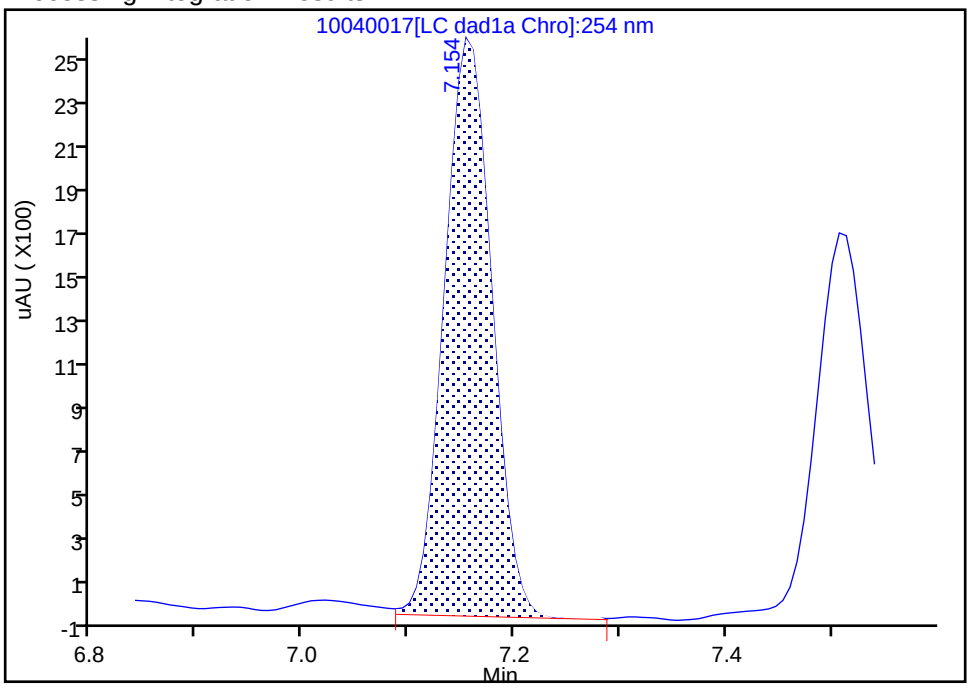
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040017.d				
Injection Date:	04-Oct-2024 19:11:05	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 3				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

7 MNX, CAS: 5755-27-1

Signal: 1

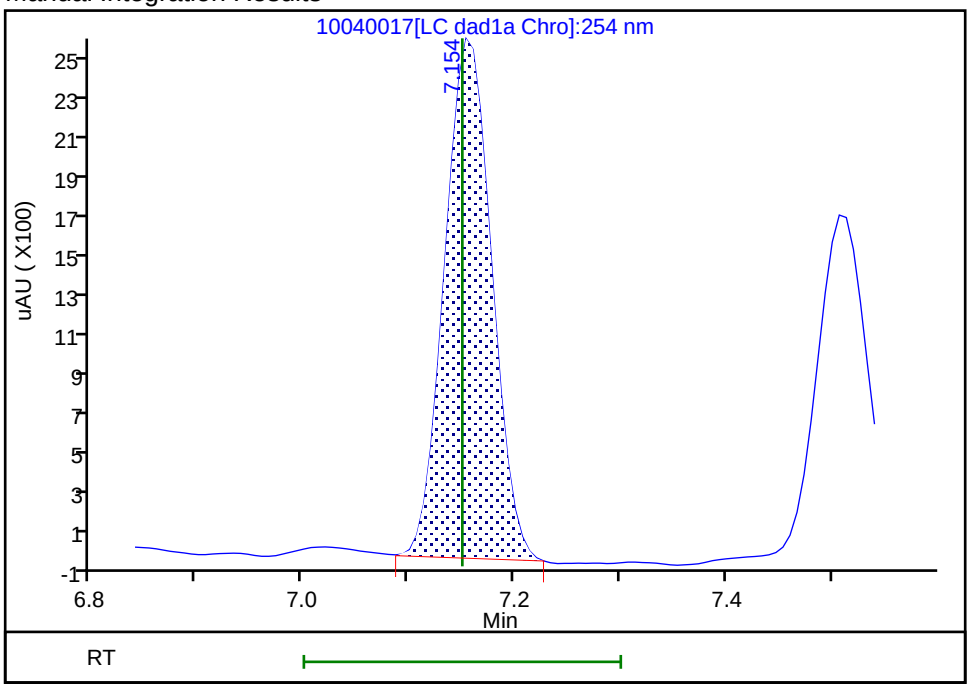
Processing Integration Results

RT: 7.15
Area: 7839
Amount: 0.058573
Amount Units: ug/mL



Manual Integration Results

RT: 7.15
Area: 7700
Amount: 0.057923
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:04:53 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

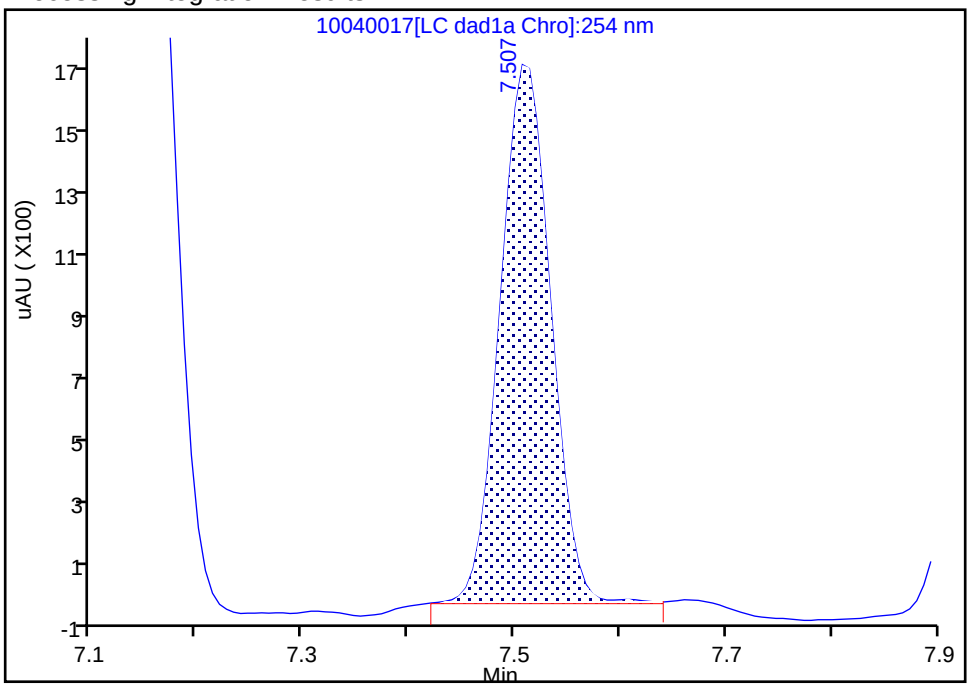
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040017.d
Injection Date: 04-Oct-2024 19:11:05 Instrument ID: CHHPLC_X3
Lims ID: IC INT/DMT 3
Client ID:
Operator ID: JZ ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

8 RDX, CAS: 121-82-4

Signal: 1

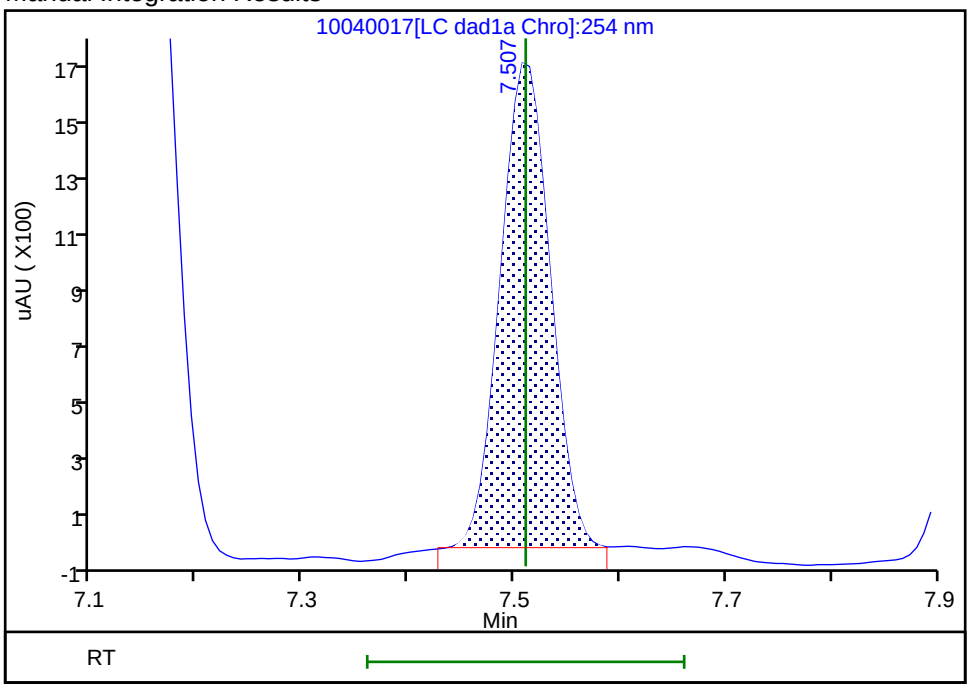
Processing Integration Results

RT: 7.51
Area: 5457
Amount: 0.049860
Amount Units: ug/mL



Manual Integration Results

RT: 7.51
Area: 5386
Amount: 0.049722
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:04:45 -06:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

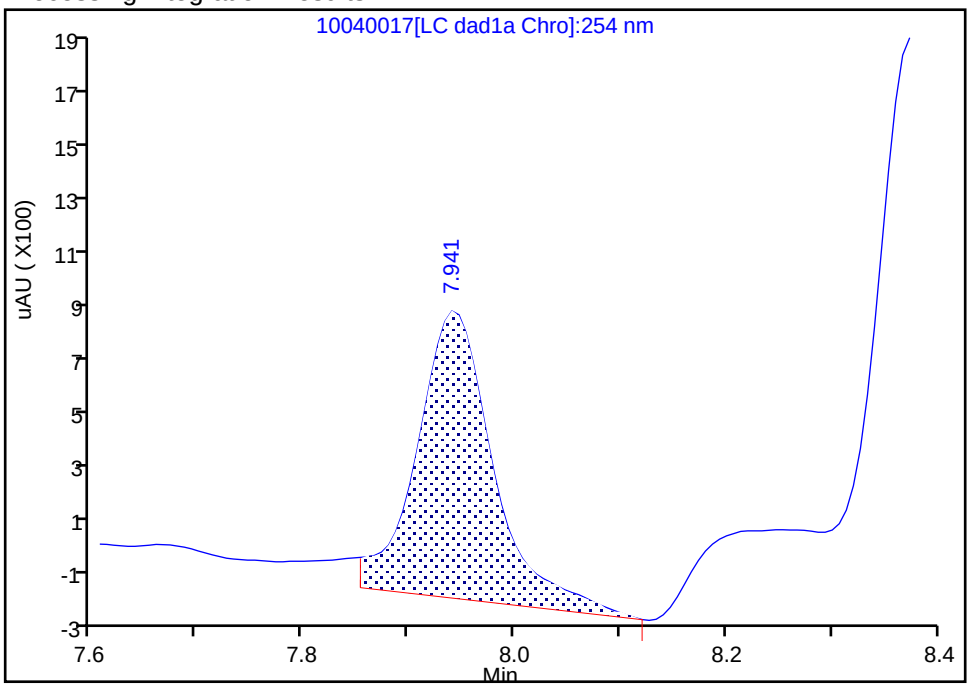
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040017.d				
Injection Date:	04-Oct-2024 19:11:05	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 3				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit 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

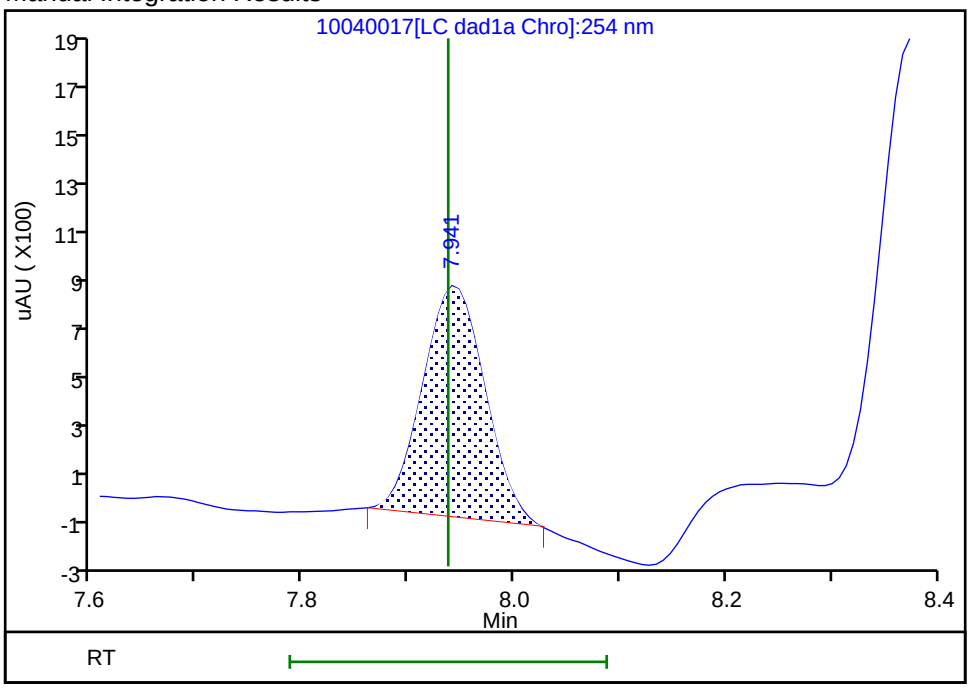
Processing Integration Results

RT: 7.94
Area: 5246
Amount: 0.064797
Amount Units: ug/mL



Manual Integration Results

RT: 7.94
Area: 3807
Amount: 0.050473
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:04:36 -06:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

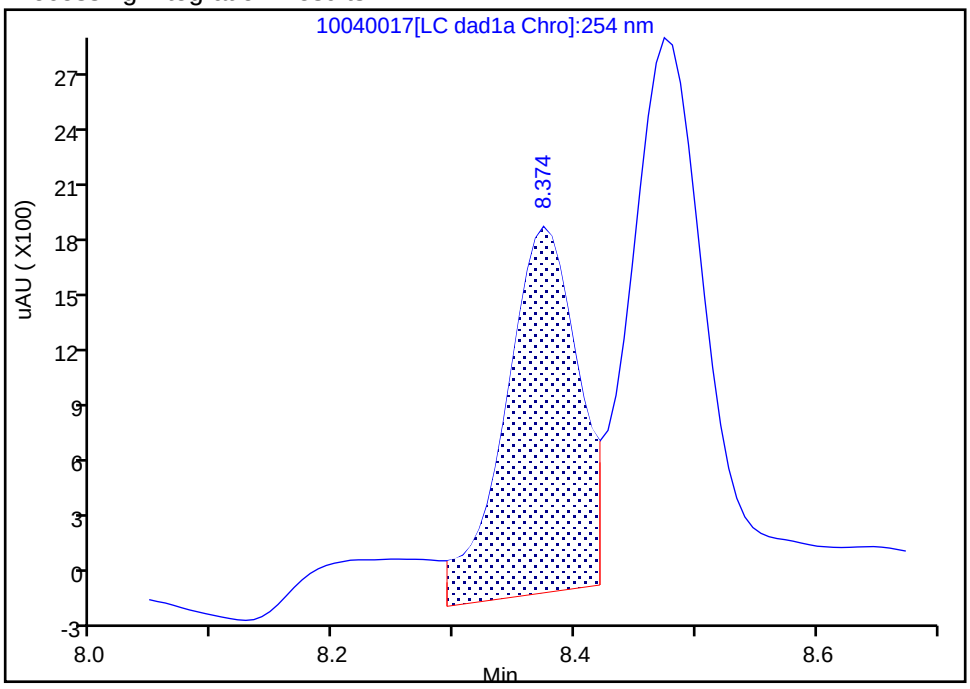
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040017.d
Injection Date: 04-Oct-2024 19:11:05 Instrument ID: CHHPLC_X3
Lims ID: IC INT/DMT 3
Client ID:
Operator ID: JZ ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

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

Signal: 1

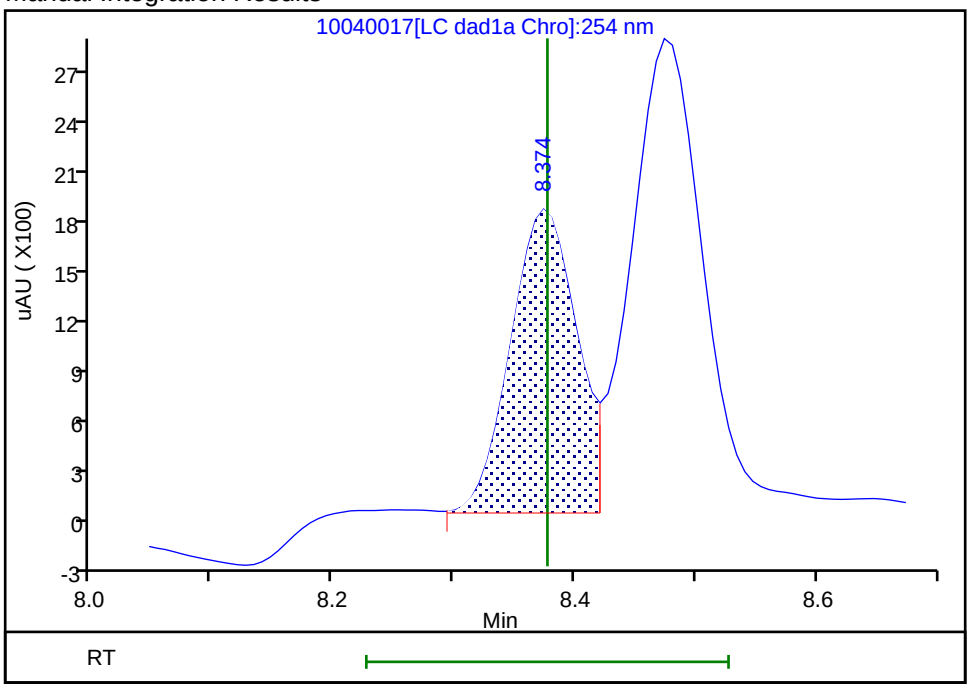
Processing Integration Results

RT: 8.37
Area: 8186
Amount: 0.061318
Amount Units: ug/mL



Manual Integration Results

RT: 8.37
Area: 6795
Amount: 0.052105
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:04:29 -06:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

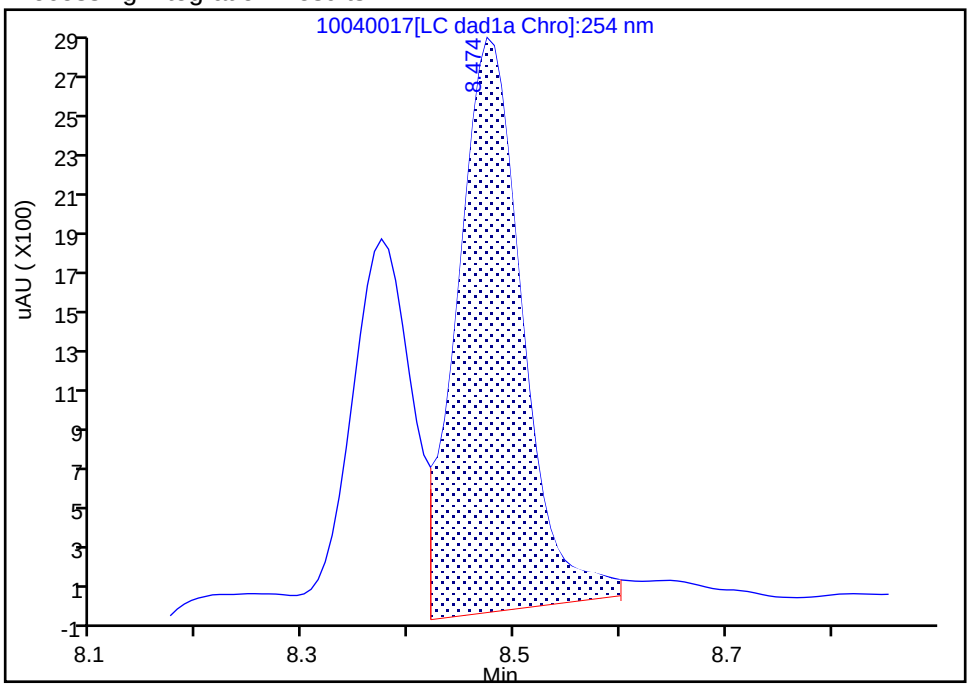
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Injection Date:	04-Oct-2024 19:11:05	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 3				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

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

Signal: 1

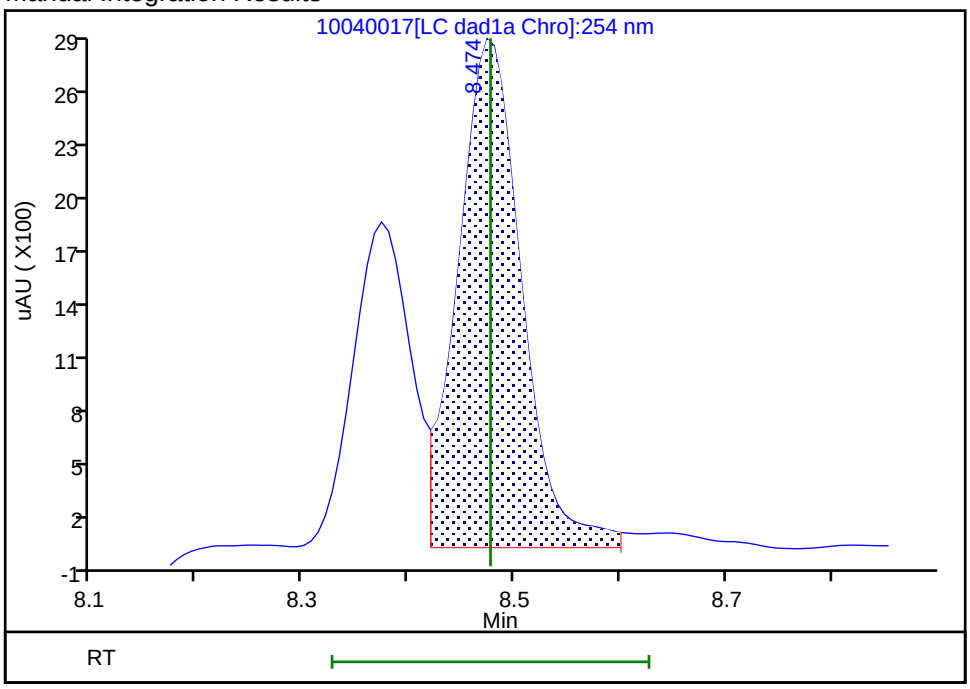
Processing Integration Results

RT: 8.47
Area: 12317
Amount: 0.056311
Amount Units: ug/mL



Manual Integration Results

RT: 8.47
Area: 11696
Amount: 0.053812
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:04:29 -06:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline

Eurofins Denver

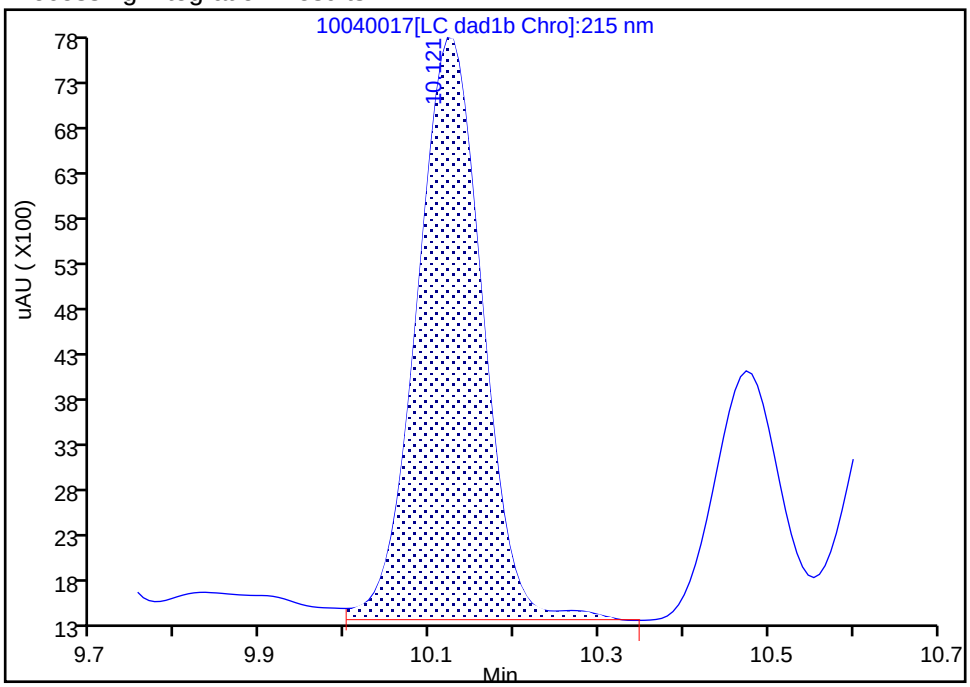
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040017.d				
Injection Date:	04-Oct-2024 19:11:05	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 3				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1C, 215 nm		

16 Nitroglycerin, CAS: 55-63-0

Signal: 1

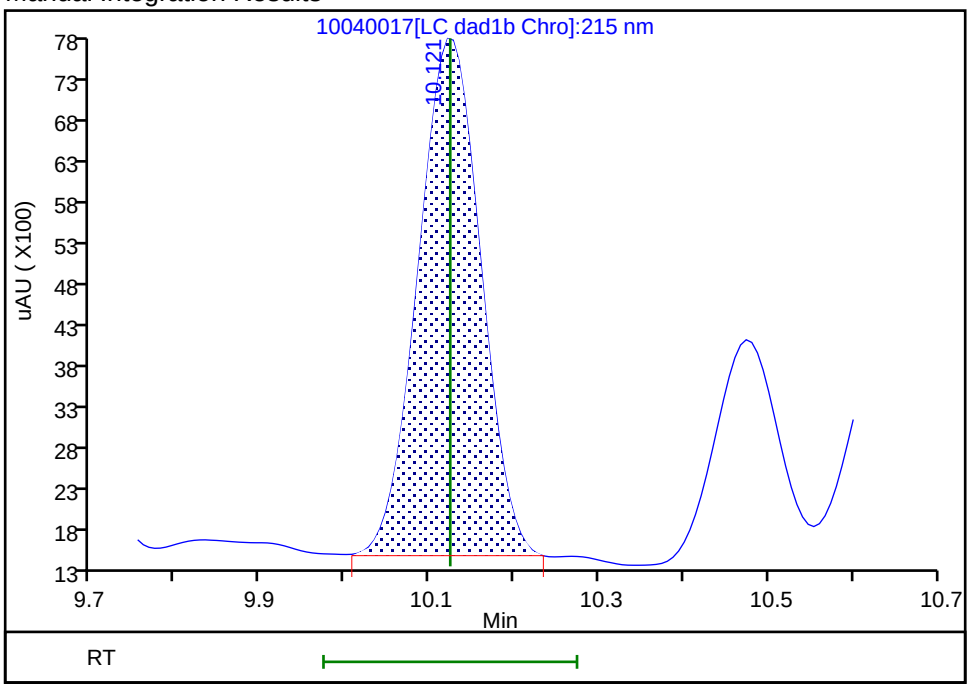
Processing Integration Results

RT: 10.12
Area: 34193
Amount: 0.496918
Amount Units: ug/mL



Manual Integration Results

RT: 10.12
Area: 32159
Amount: 0.505186
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:09:34 -06:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

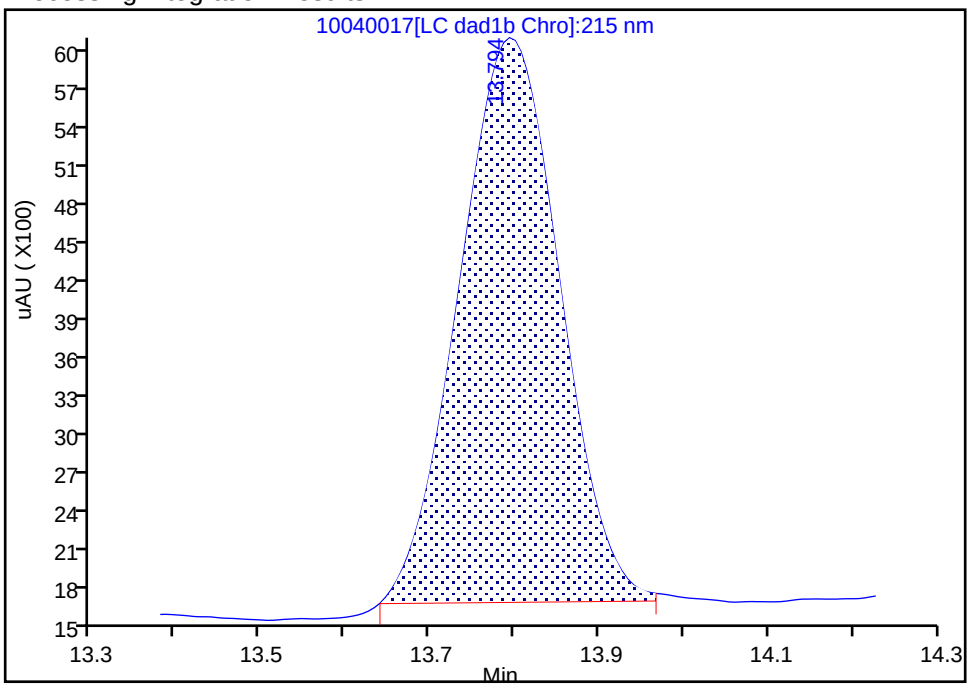
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040017.d				
Injection Date:	04-Oct-2024 19:11:05	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 3				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1C, 215 nm		

25 PETN, CAS: 78-11-5

Signal: 1

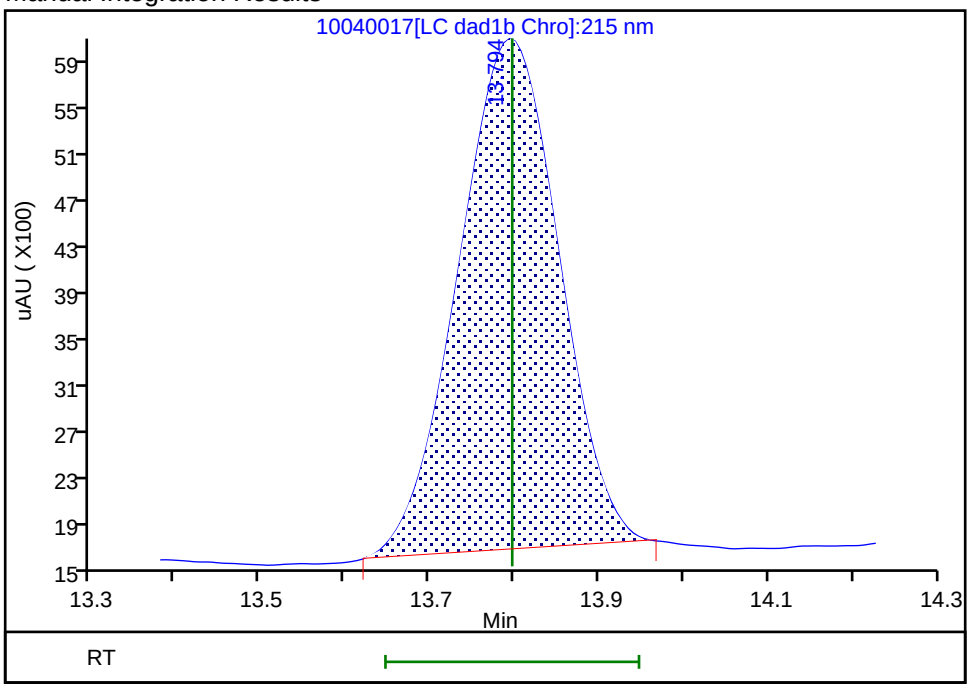
Processing Integration Results

RT: 13.79
Area: 36213
Amount: 0.505564
Amount Units: ug/mL



Manual Integration Results

RT: 13.79
Area: 36348
Amount: 0.503349
Amount Units: ug/mL



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

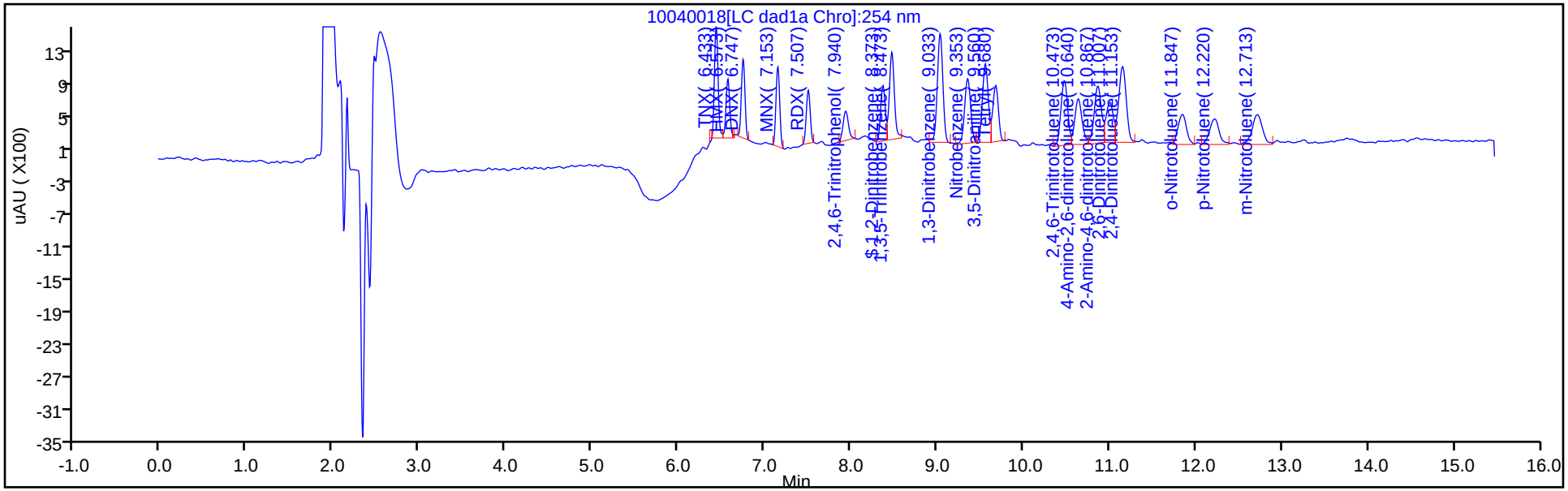
Report Date: 08-Oct-2024 13:19:23 Chrom Revision: 2.3 24-Sep-2024 15:19:46

Eurofins Denver

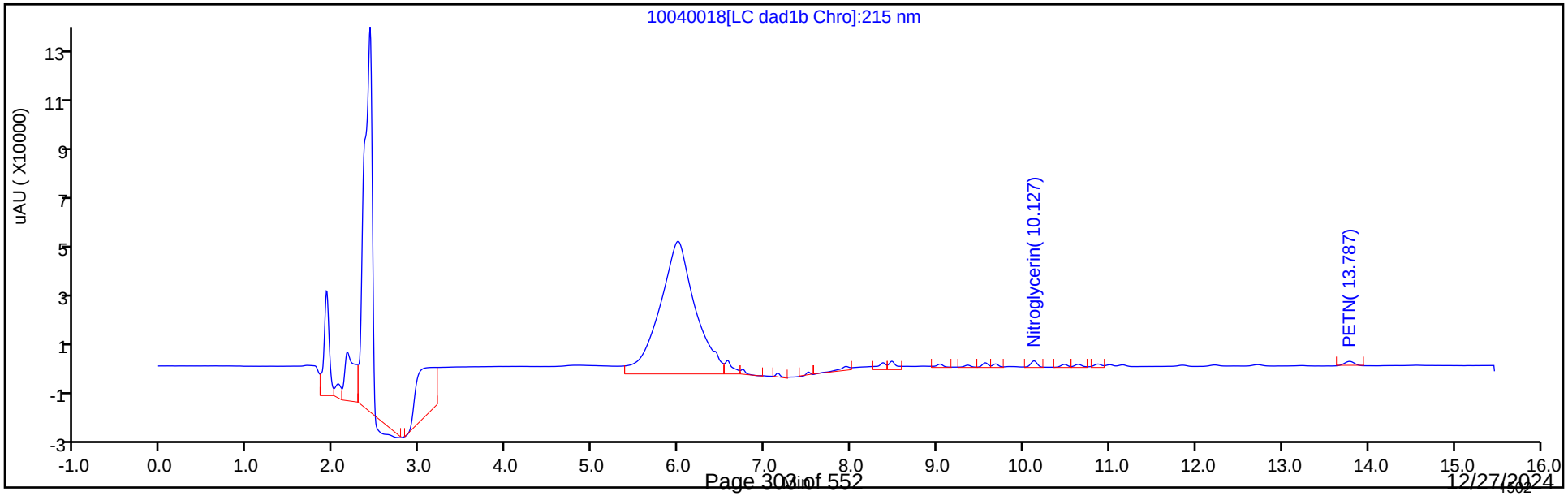
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040018.d

Injection Date:	04-Oct-2024 19:33:04	Instrument ID:	CHHPLC_X3	Operator ID:	JZ
Lims ID:	IC INT/DMT 2			Worklist Smp#:	18
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



12/27/2024
5:54:56 AM

Manual Integration/User Assign Peak Report

Eurofins Denver

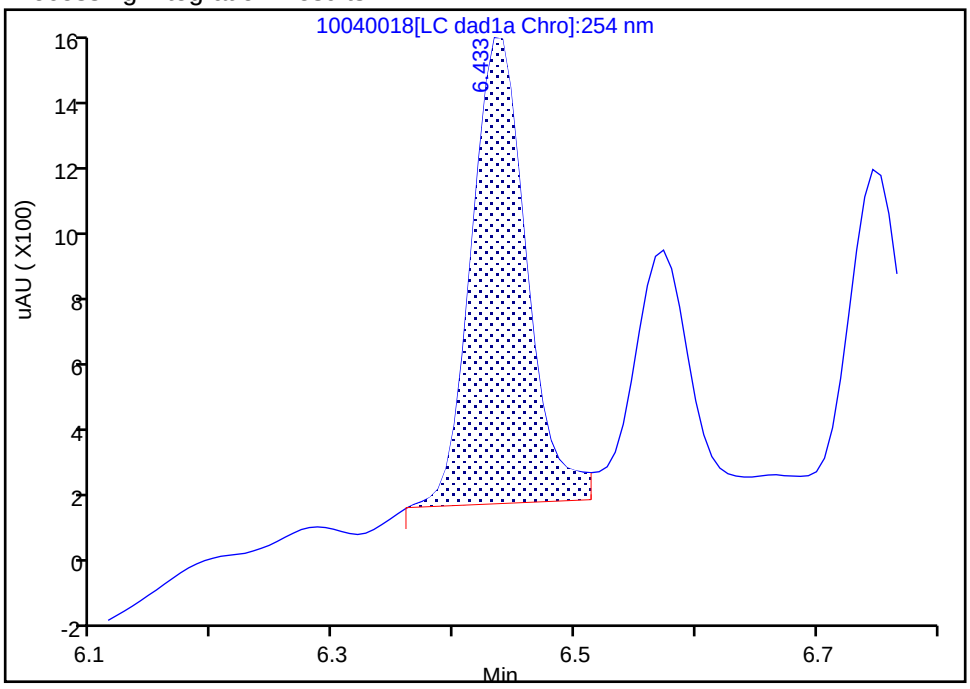
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Injection Date:	04-Oct-2024 19:33:04	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 2				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

3 TNX, CAS: 13980-04-6

Signal: 1

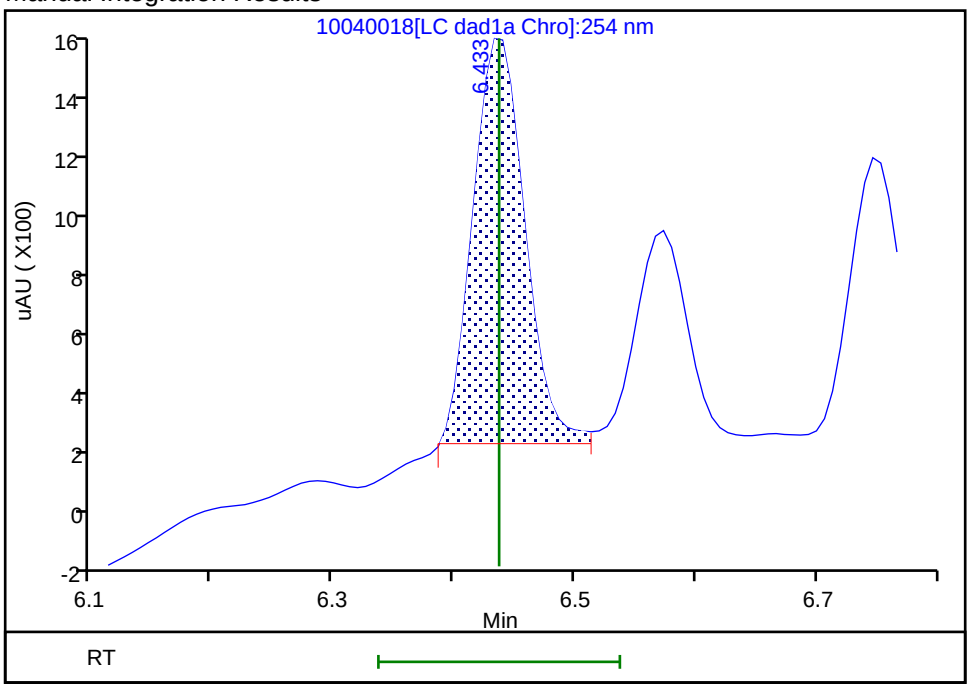
Processing Integration Results

RT: 6.43
Area: 4490
Amount: 0.021421
Amount Units: ug/mL



Manual Integration Results

RT: 6.43
Area: 4020
Amount: 0.019795
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:05:26 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

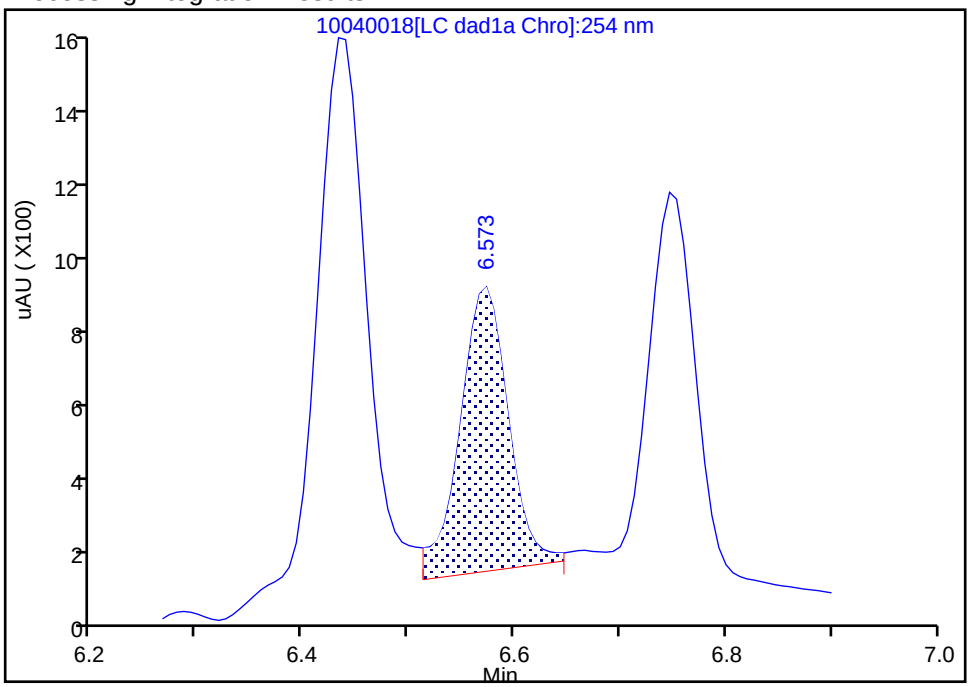
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Injection Date:	04-Oct-2024 19:33:04	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 2				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

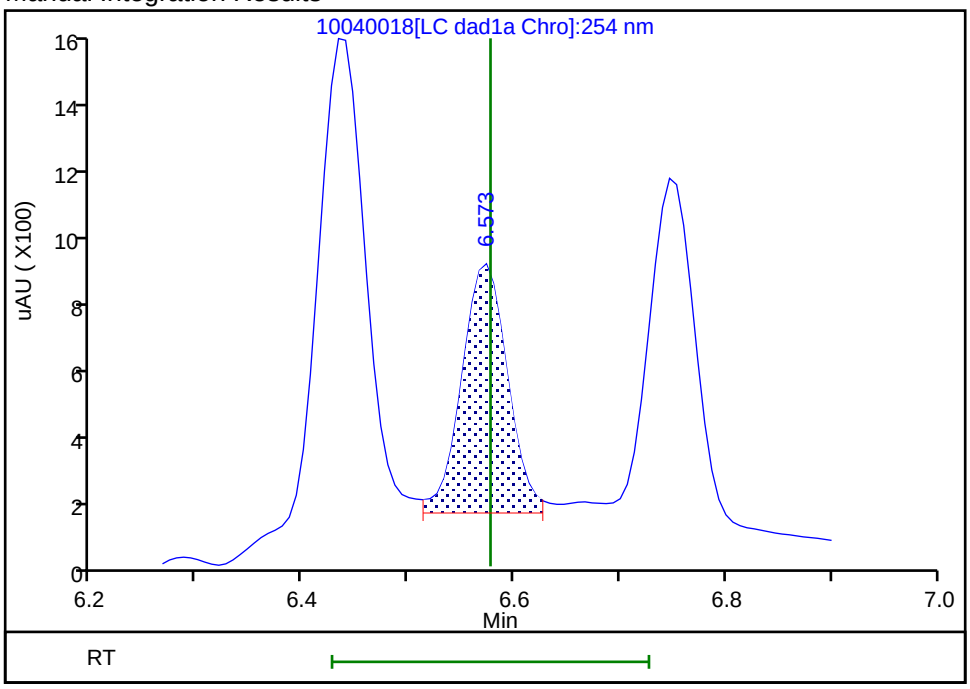
Processing Integration Results

RT: 6.57
Area: 2344
Amount: 0.018346
Amount Units: ug/mL



Manual Integration Results

RT: 6.57
Area: 2125
Amount: 0.021986
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:05:28 -06:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

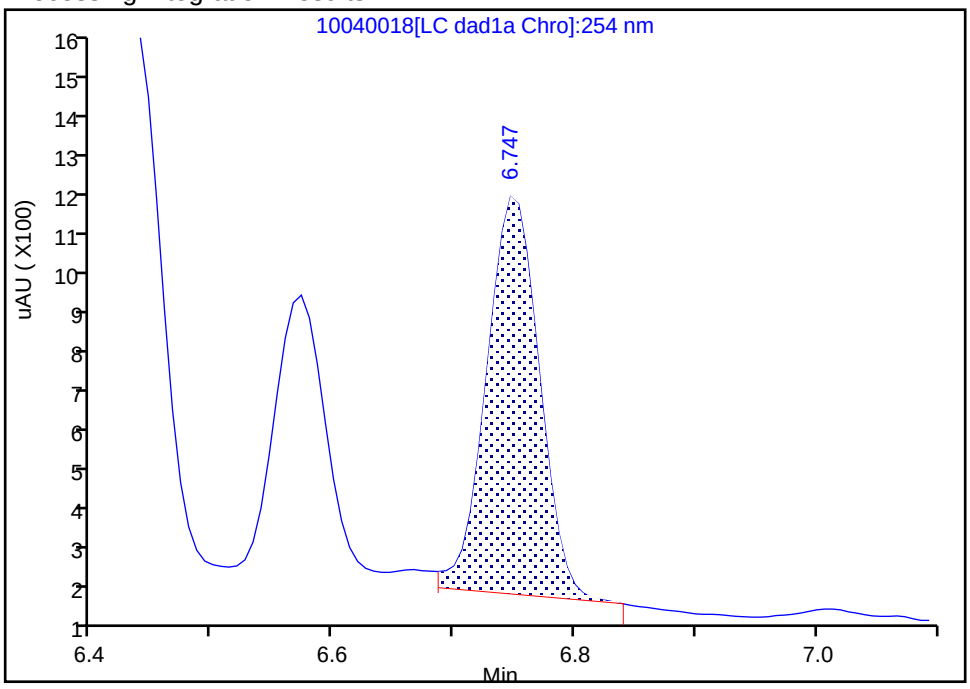
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Injection Date: 04-Oct-2024 19:33:04 Instrument ID: CHHPLC_X3
Lims ID: IC INT/DMT 2
Client ID:
Operator ID: JZ ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

6 DNX, CAS: 80251-29-2

Signal: 1

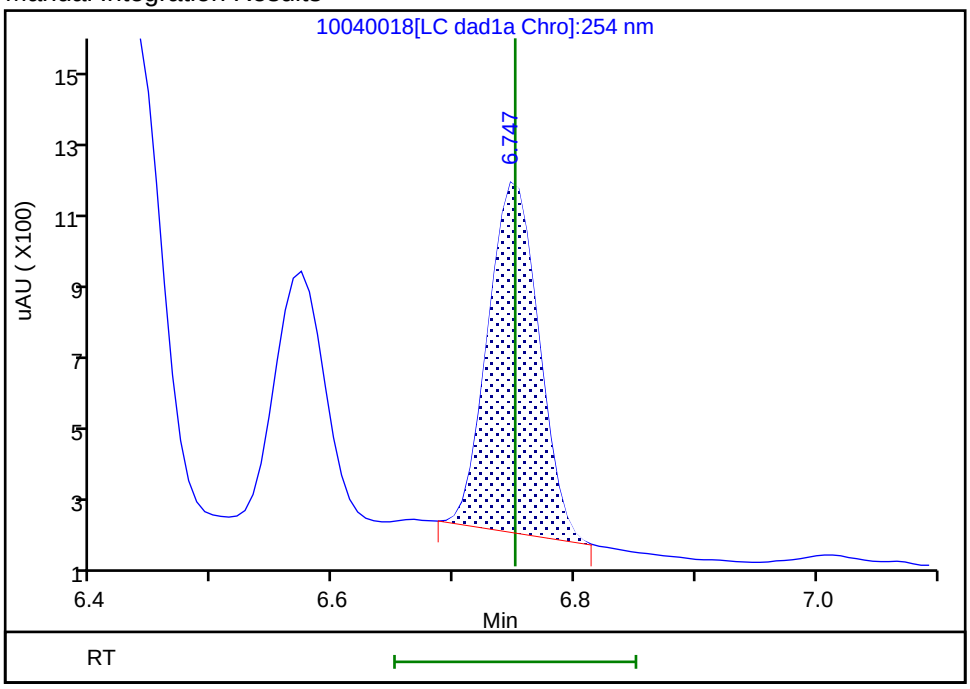
Processing Integration Results

RT: 6.75
Area: 3002
Amount: 0.019805
Amount Units: ug/mL



Manual Integration Results

RT: 6.75
Area: 2804
Amount: 0.019200
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:05:36 -06:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins Denver

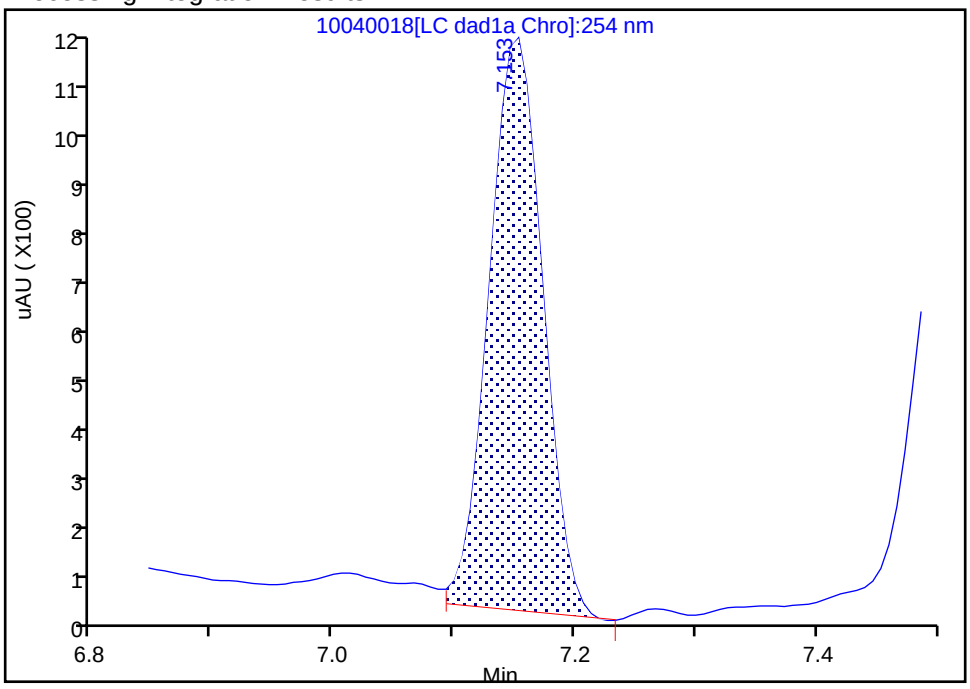
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040018.d				
Injection Date:	04-Oct-2024 19:33:04	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 2				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

7 MNX, CAS: 5755-27-1

Signal: 1

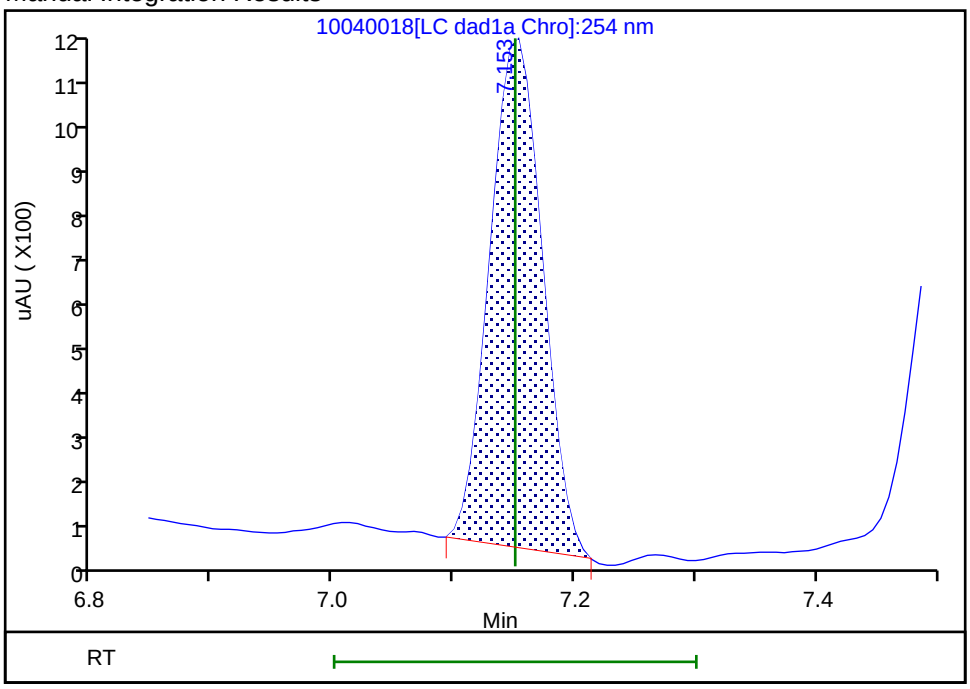
Processing Integration Results

RT: 7.15
Area: 3091
Amount: 0.023142
Amount Units: ug/mL



Manual Integration Results

RT: 7.15
Area: 2958
Amount: 0.022252
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:05:43 -06:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

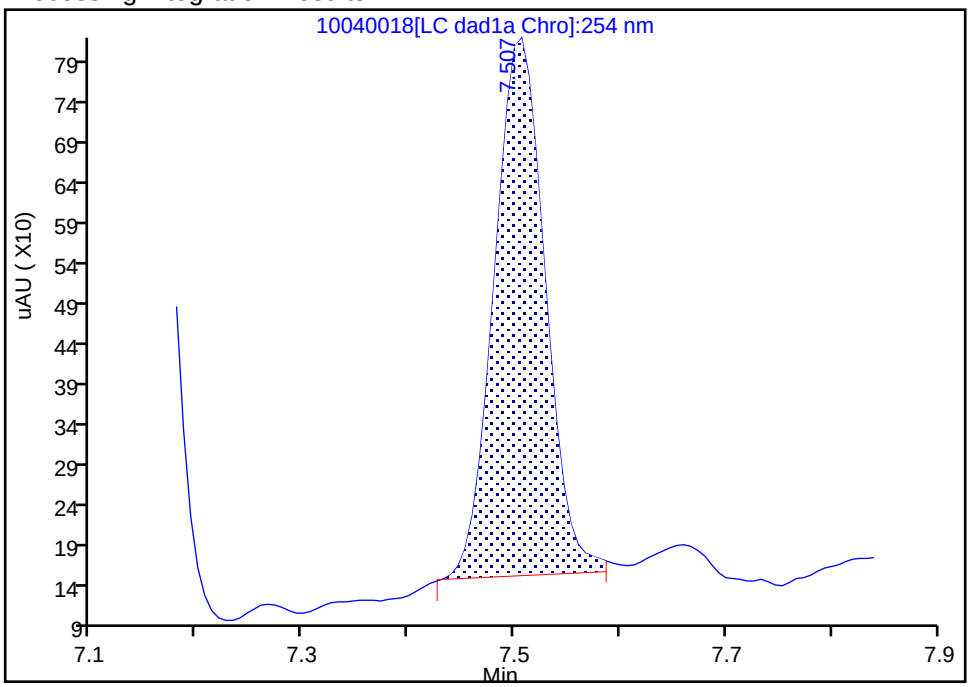
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040018.d				
Injection Date:	04-Oct-2024 19:33:04	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 2				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

8 RDX, CAS: 121-82-4

Signal: 1

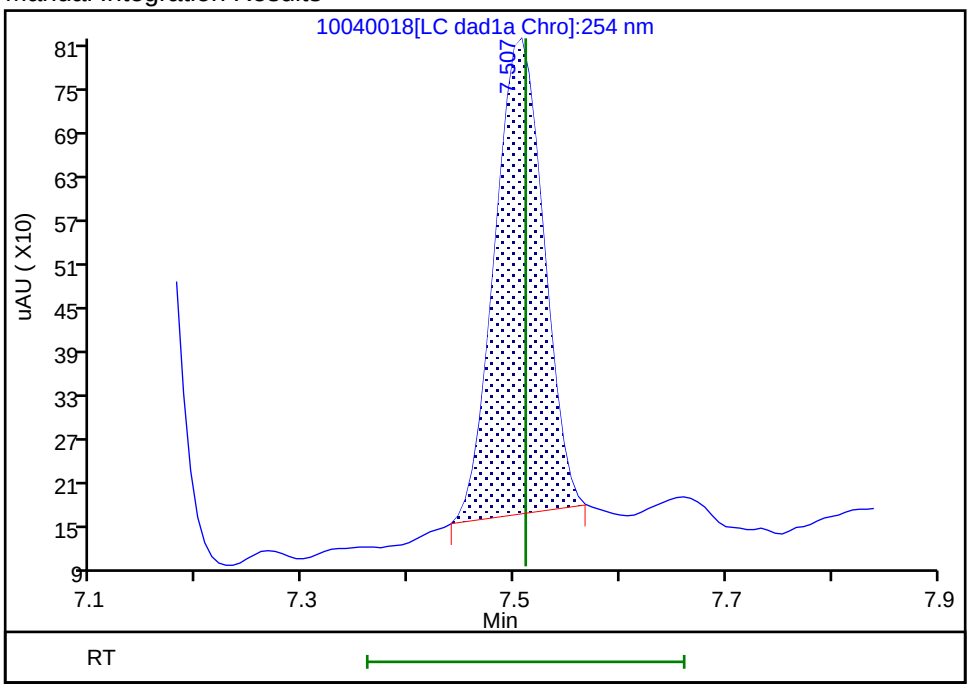
Processing Integration Results

RT: 7.51
Area: 2243
Amount: 0.020524
Amount Units: ug/mL



Manual Integration Results

RT: 7.51
Area: 2098
Amount: 0.018358
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:05:48 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

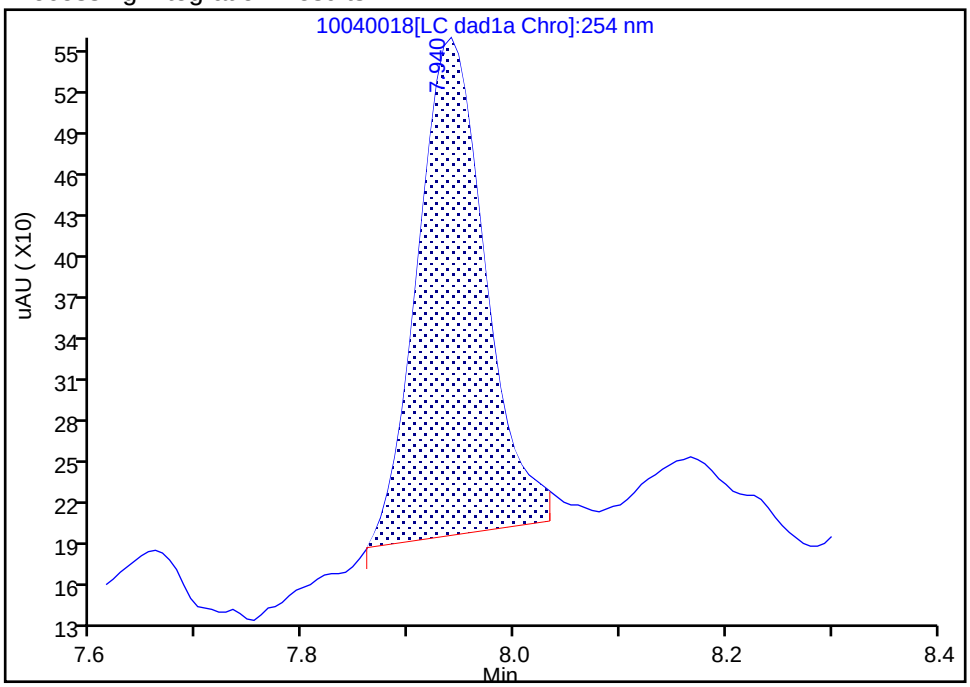
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Injection Date:	04-Oct-2024 19:33:04	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 2				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

9 2,4,6-Trinitrophenol, CAS: 88-89-1

Signal: 1

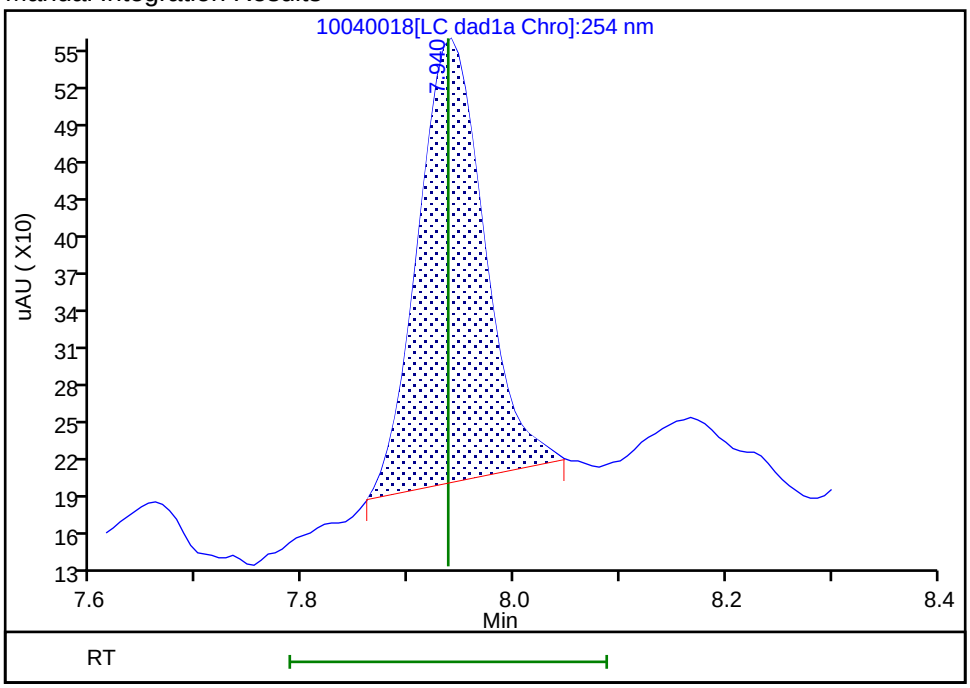
Processing Integration Results

RT: 7.94
Area: 1610
Amount: 0.020704
Amount Units: ug/mL



Manual Integration Results

RT: 7.94
Area: 1559
Amount: 0.020669
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:05:52 -06:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

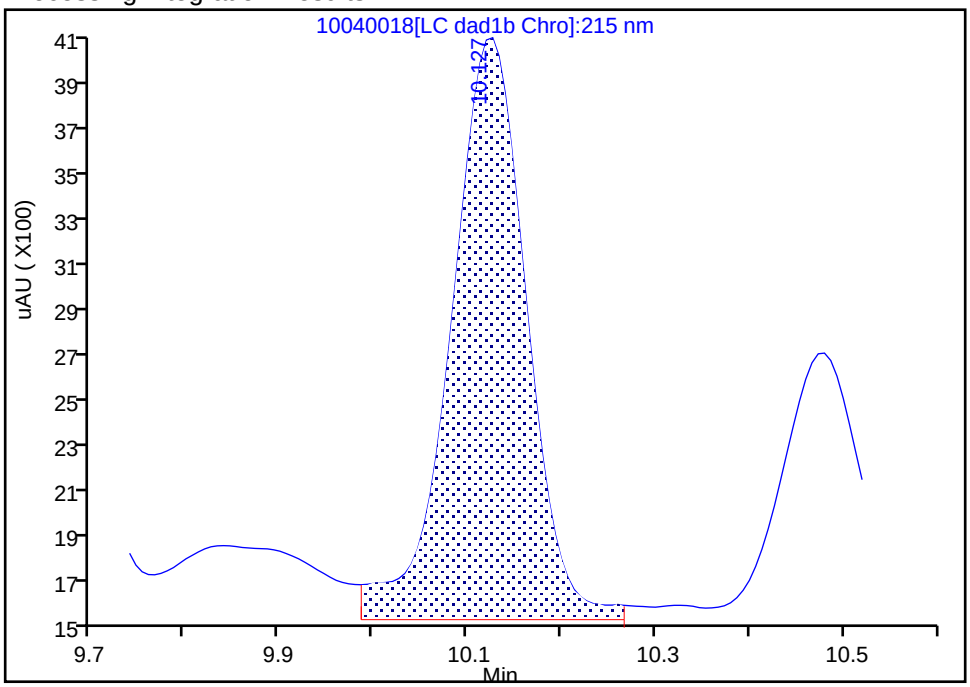
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040018.d				
Injection Date:	04-Oct-2024 19:33:04	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 2				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1C, 215 nm		

16 Nitroglycerin, CAS: 55-63-0

Signal: 1

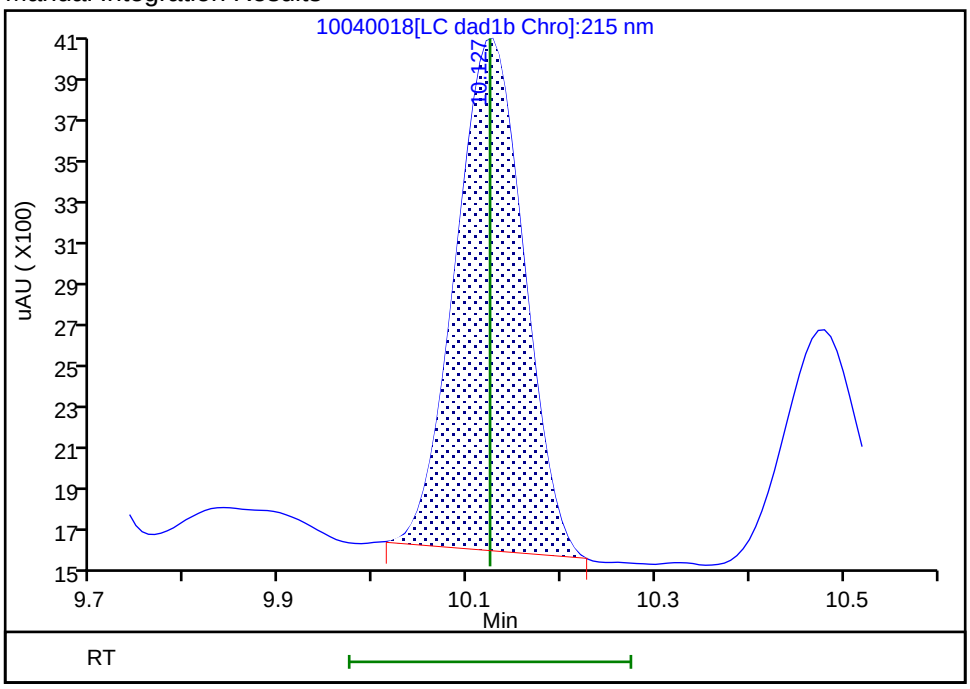
Processing Integration Results

RT: 10.13
Area: 14150
Amount: 0.206998
Amount Units: ug/mL



Manual Integration Results

RT: 10.13
Area: 12143
Amount: 0.194648
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:09:41 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

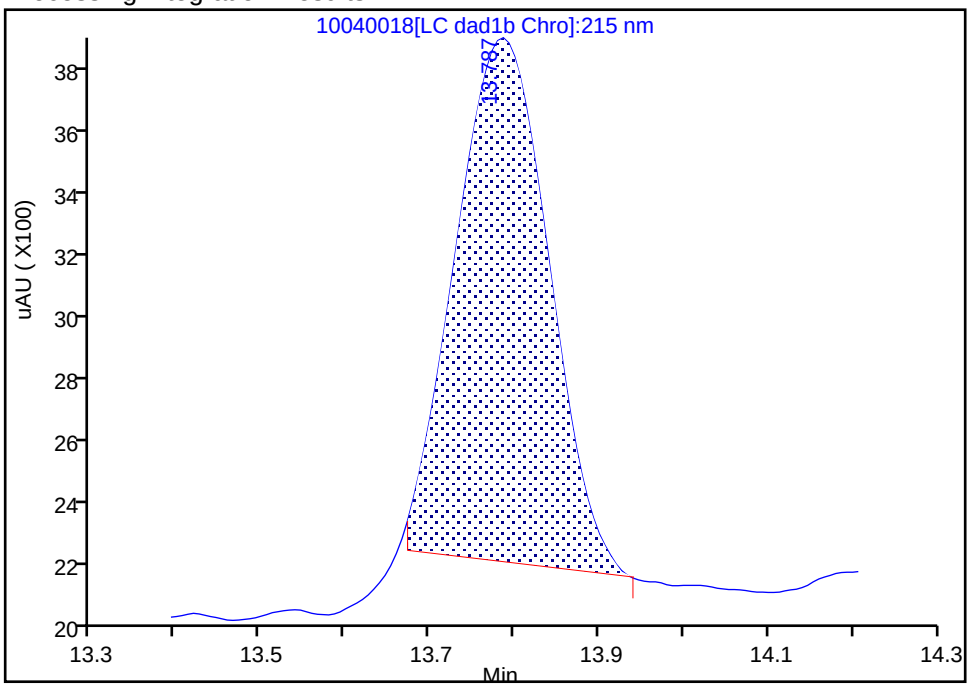
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040018.d
Injection Date: 04-Oct-2024 19:33:04 Instrument ID: CHHPLC_X3
Lims ID: IC INT/DMT 2
Client ID:
Operator ID: JZ ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1C, 215 nm

25 PETN, CAS: 78-11-5

Signal: 1

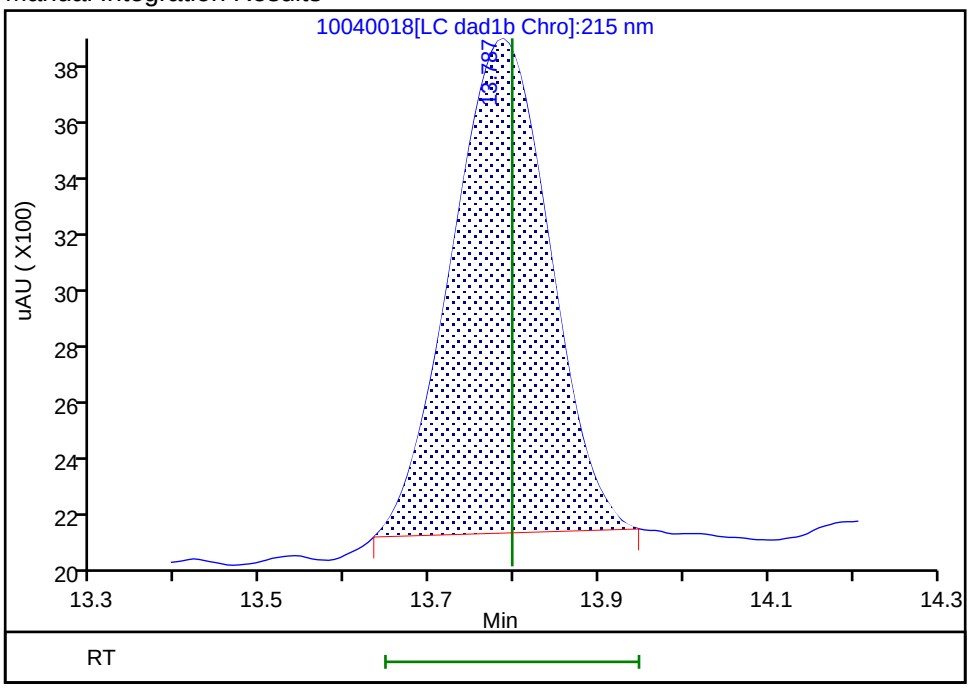
Processing Integration Results

RT: 13.79
Area: 12556
Amount: 0.175210
Amount Units: ug/mL



Manual Integration Results

RT: 13.79
Area: 13772
Amount: 0.190715
Amount Units: ug/mL



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

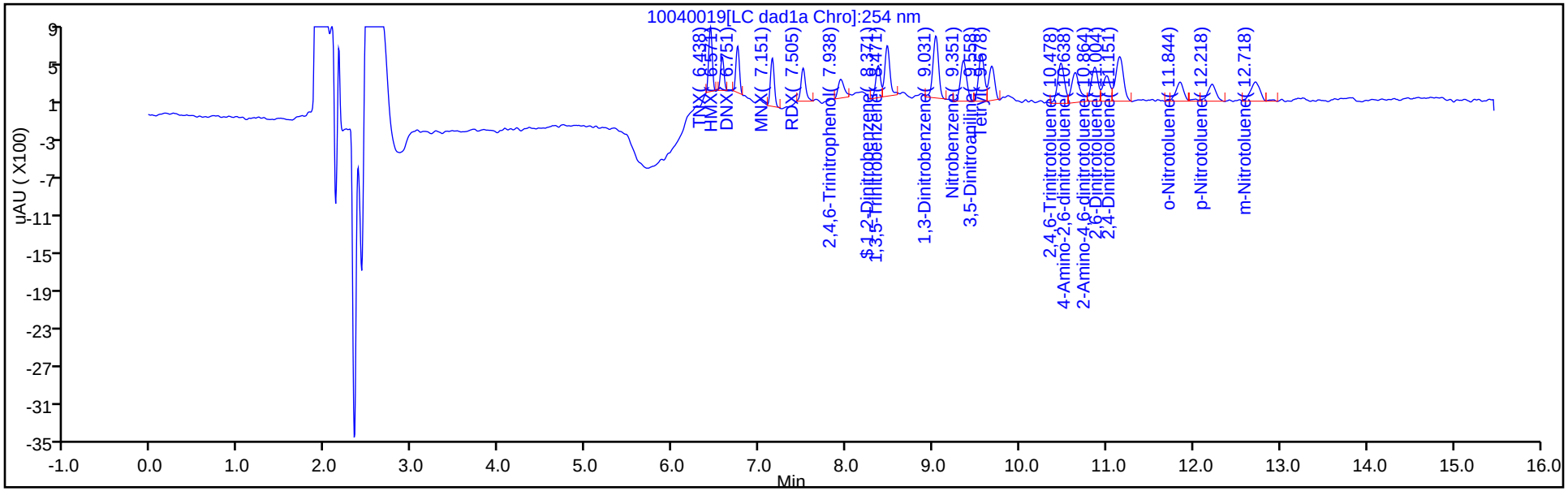
Report Date: 08-Oct-2024 13:19:26 Chrom Revision: 2.3 24-Sep-2024 15:19:46

Eurofins Denver

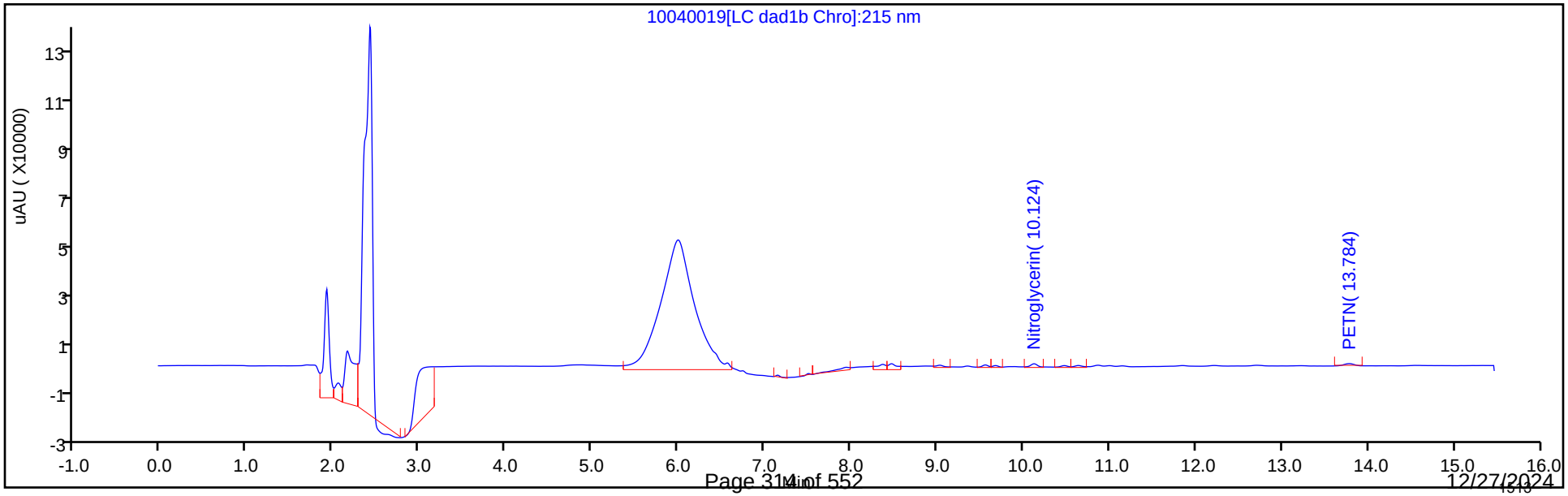
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040019.d

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



12/27/2024
5:54:56 AM

Manual Integration/User Assign Peak Report

Eurofins Denver

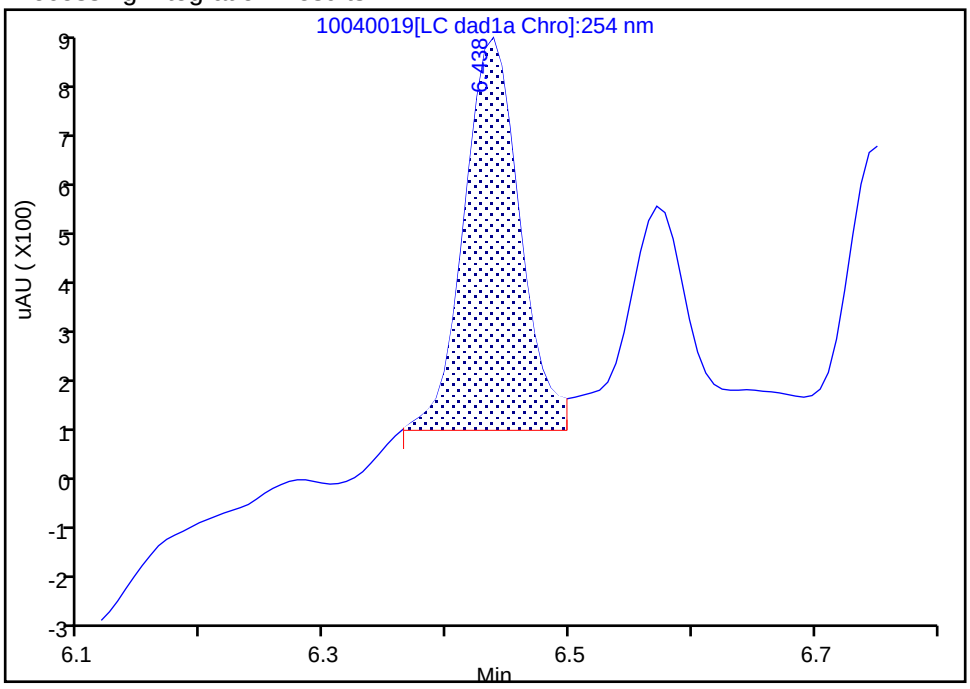
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040019.d				
Injection Date:	04-Oct-2024 19:55:02	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 1				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	19	Worklist Smp#:	19
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

3 TNX, CAS: 13980-04-6

Signal: 1

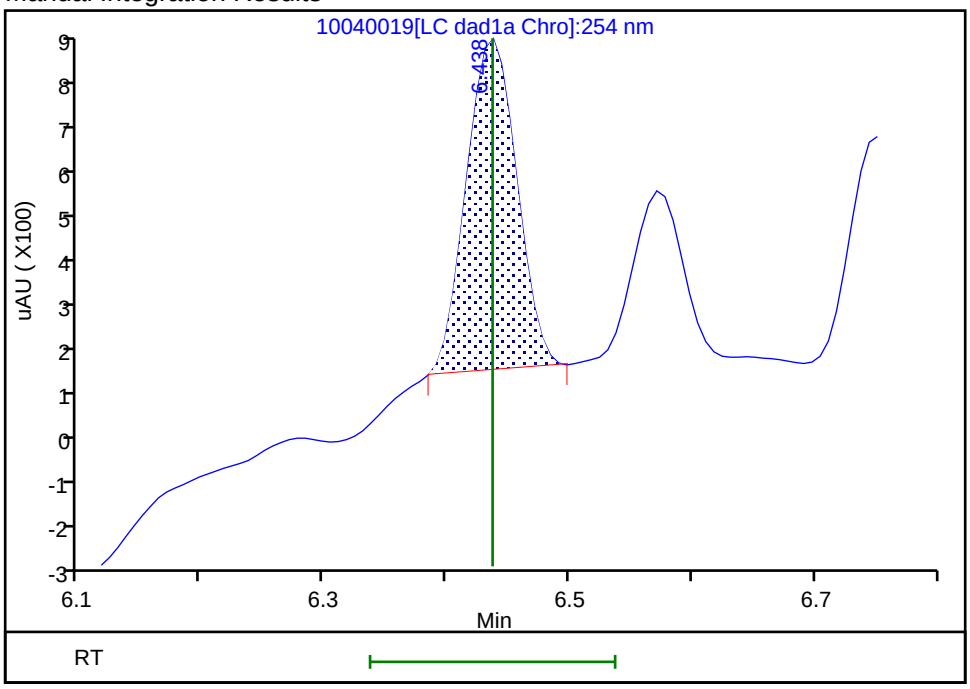
Processing Integration Results

RT: 6.44
Area: 2305
Amount: 0.011135
Amount Units: ug/mL



Manual Integration Results

RT: 6.44
Area: 1951
Amount: 0.009607
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:07:17 -06:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

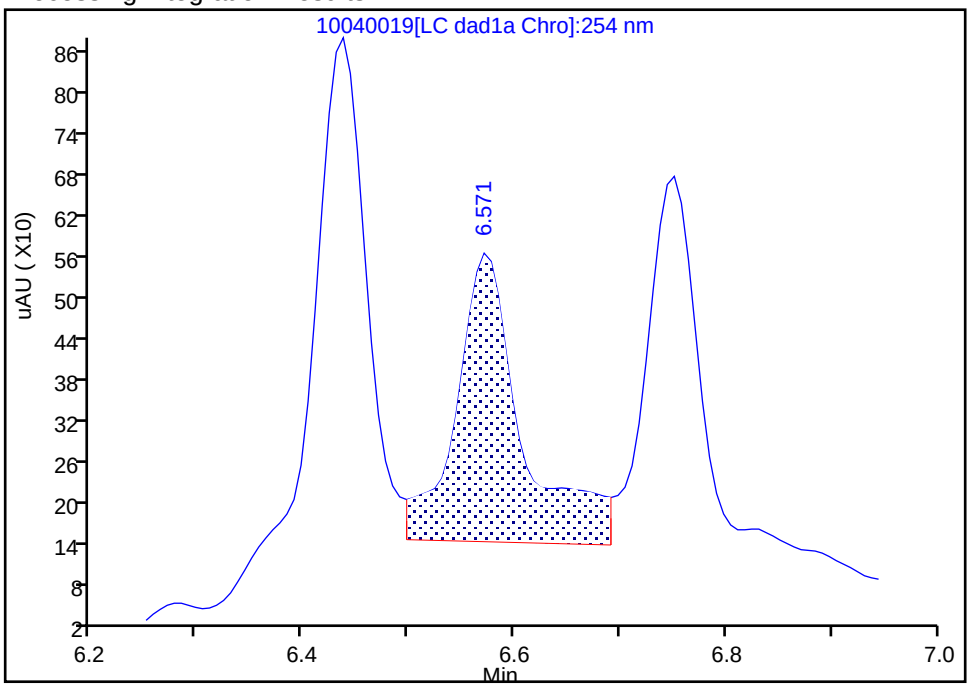
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040019.d				
Injection Date:	04-Oct-2024 19:55:02	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 1				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	19	Worklist Smp#:	19
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

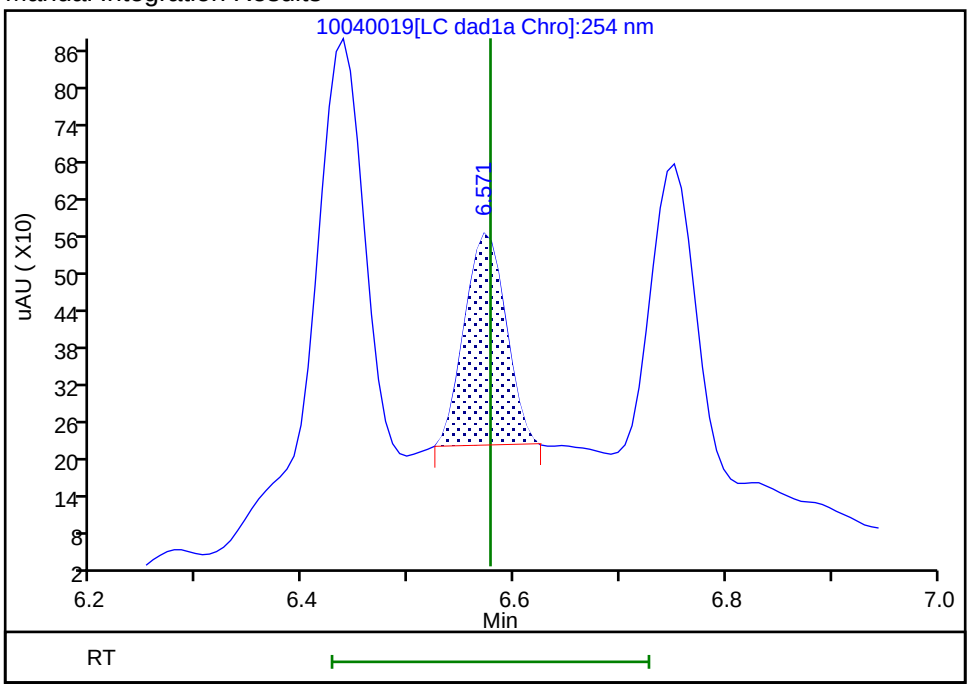
Processing Integration Results

RT: 6.57
Area: 1819
Amount: 0.013460
Amount Units: ug/mL



Manual Integration Results

RT: 6.57
Area: 930
Amount: 0.009622
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:07:10 -06:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins Denver

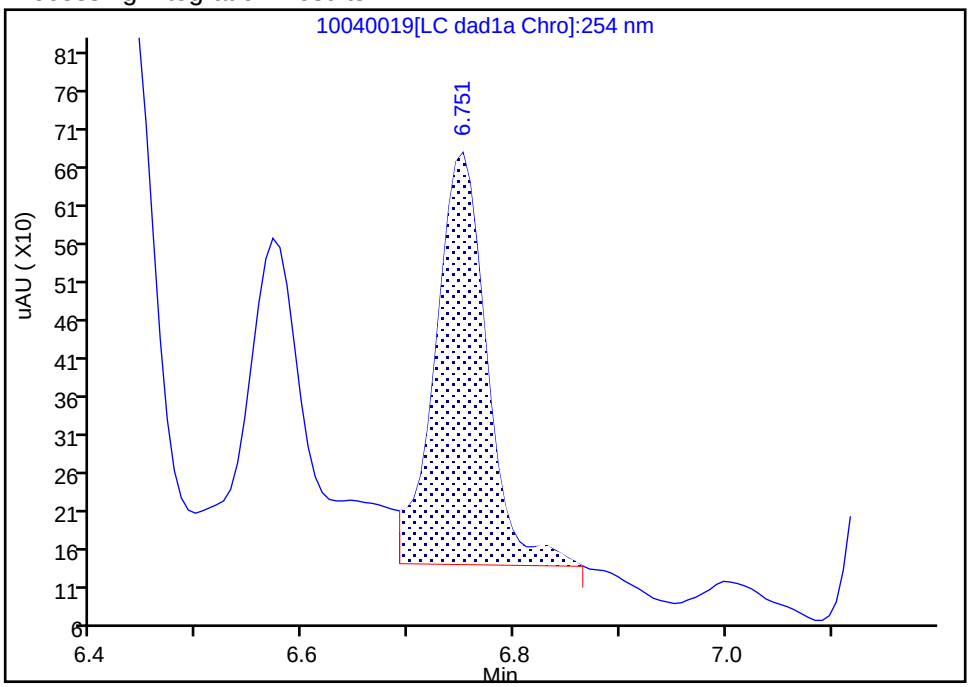
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040019.d				
Injection Date:	04-Oct-2024 19:55:02	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 1				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	19	Worklist Smp#:	19
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

6 DNX, CAS: 80251-29-2

Signal: 1

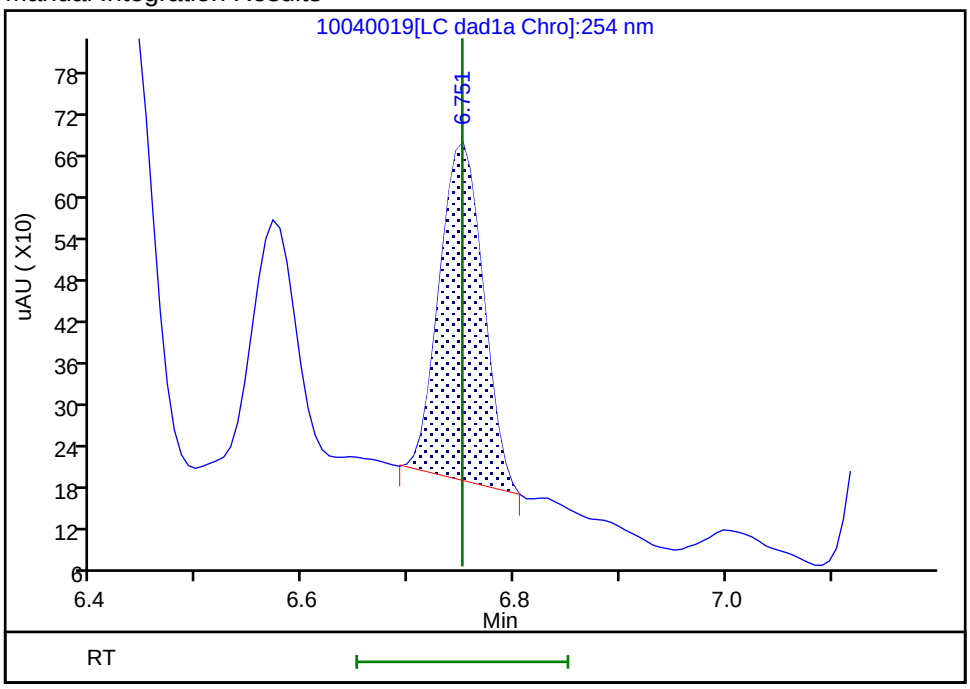
Processing Integration Results

RT: 6.75
Area: 1806
Amount: 0.012001
Amount Units: ug/mL



Manual Integration Results

RT: 6.75
Area: 1406
Amount: 0.009627
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:07:06 -06:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

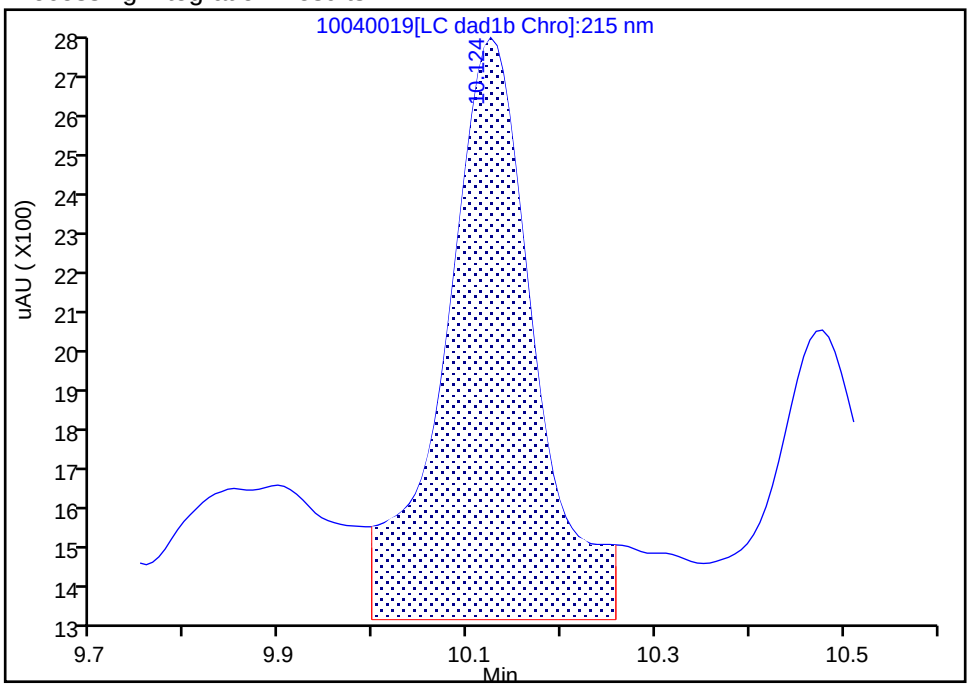
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040019.d
Injection Date: 04-Oct-2024 19:55:02 Instrument ID: CHHPLC_X3
Lims ID: IC INT/DMT 1
Client ID:
Operator ID: JZ ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1C, 215 nm

16 Nitroglycerin, CAS: 55-63-0

Signal: 1

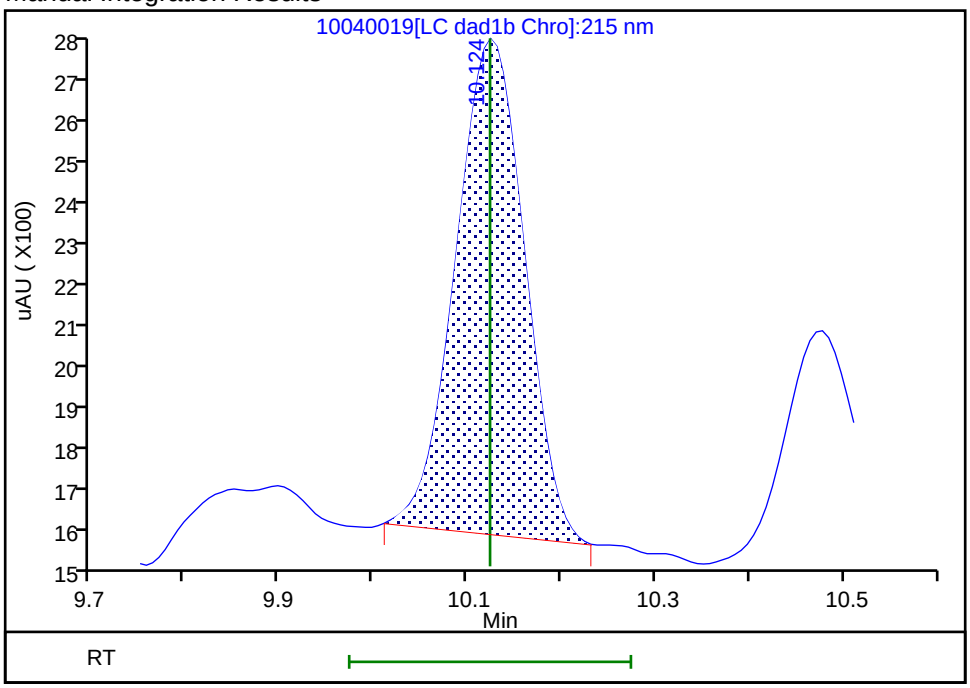
Processing Integration Results

RT: 10.12
Area: 9393
Amount: 0.139687
Amount Units: ug/mL



Manual Integration Results

RT: 10.12
Area: 6121
Amount: 0.101220
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:09:48 -06:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

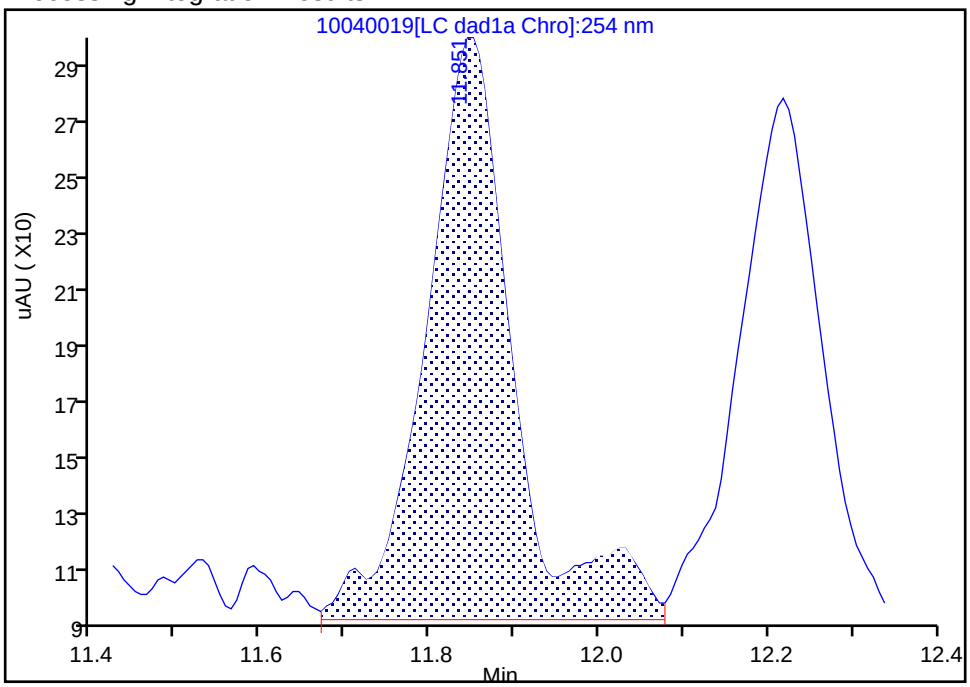
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040019.d
Injection Date: 04-Oct-2024 19:55:02 Instrument ID: CHHPLC_X3
Lims ID: IC INT/DMT 1
Client ID:
Operator ID: JZ ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

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

Signal: 1

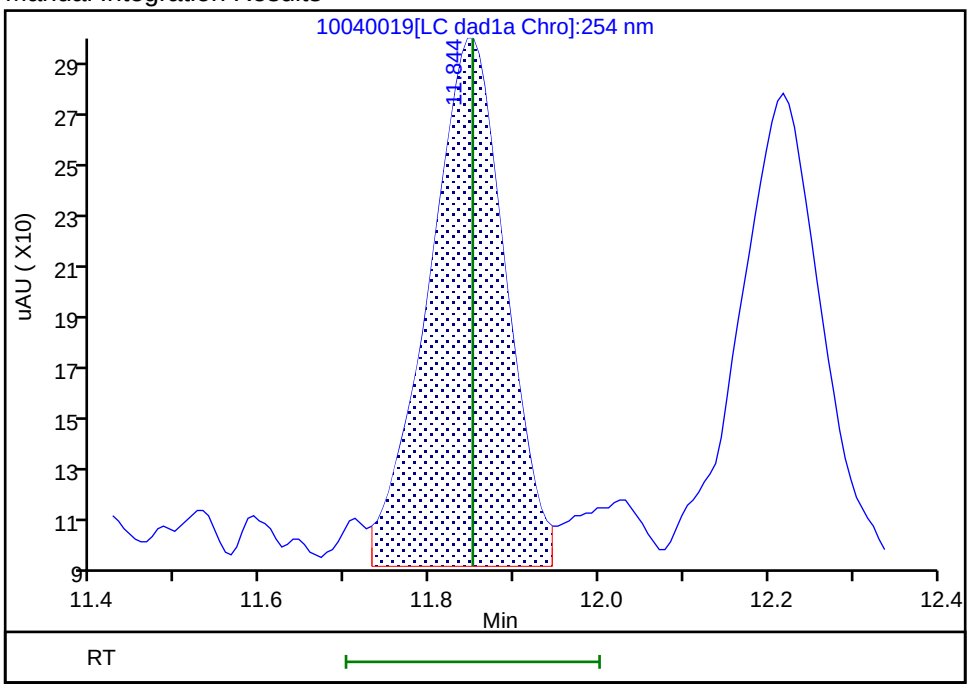
Processing Integration Results

RT: 11.85
Area: 1460
Amount: 0.011447
Amount Units: ug/mL



Manual Integration Results

RT: 11.84
Area: 1273
Amount: 0.010146
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:06:44 -06:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

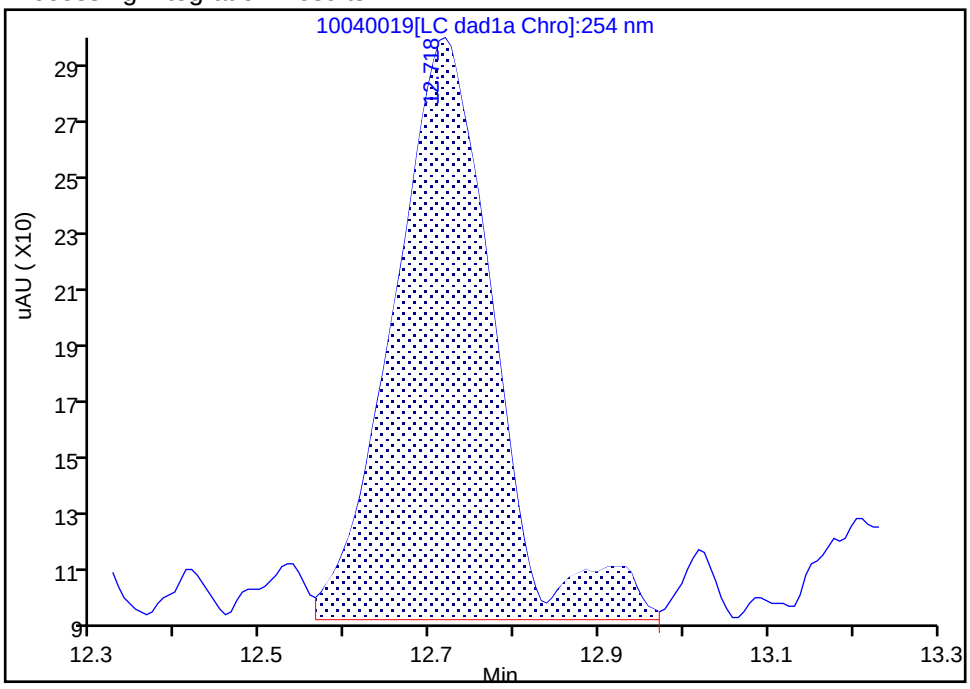
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Injection Date:	04-Oct-2024 19:55:02	Instrument ID:	CHHPLC_X3		
Lims ID:	IC INT/DMT 1				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	19	Worklist Smp#:	19
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

24 m-Nitrotoluene, CAS: 99-08-1

Signal: 1

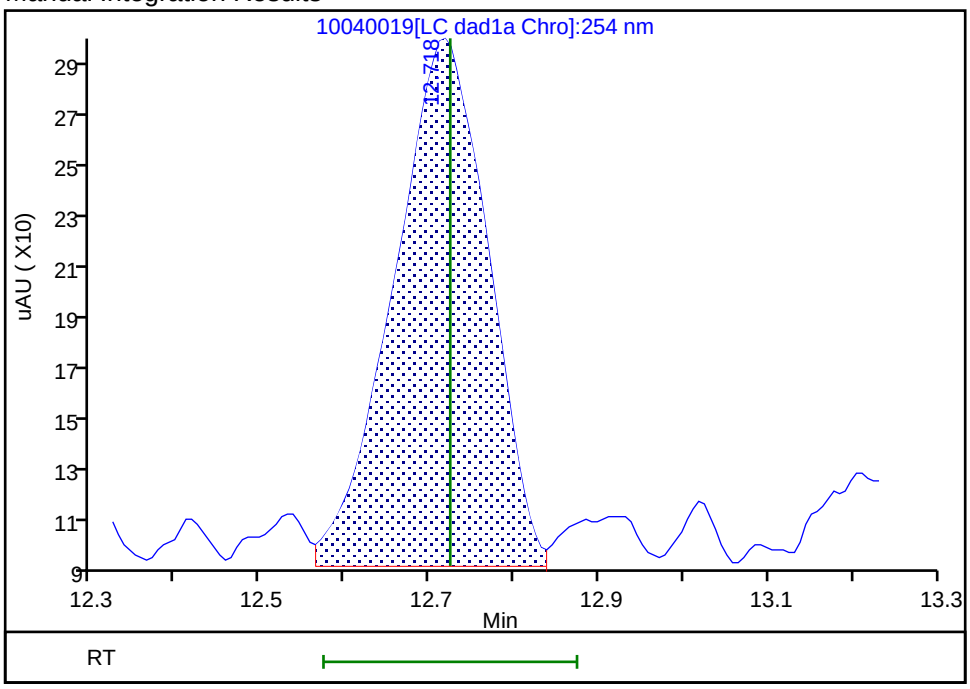
Processing Integration Results

RT: 12.72
Area: 1709
Amount: 0.012068
Amount Units: ug/mL



Manual Integration Results

RT: 12.72
Area: 1598
Amount: 0.009977
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:06:32 -06:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

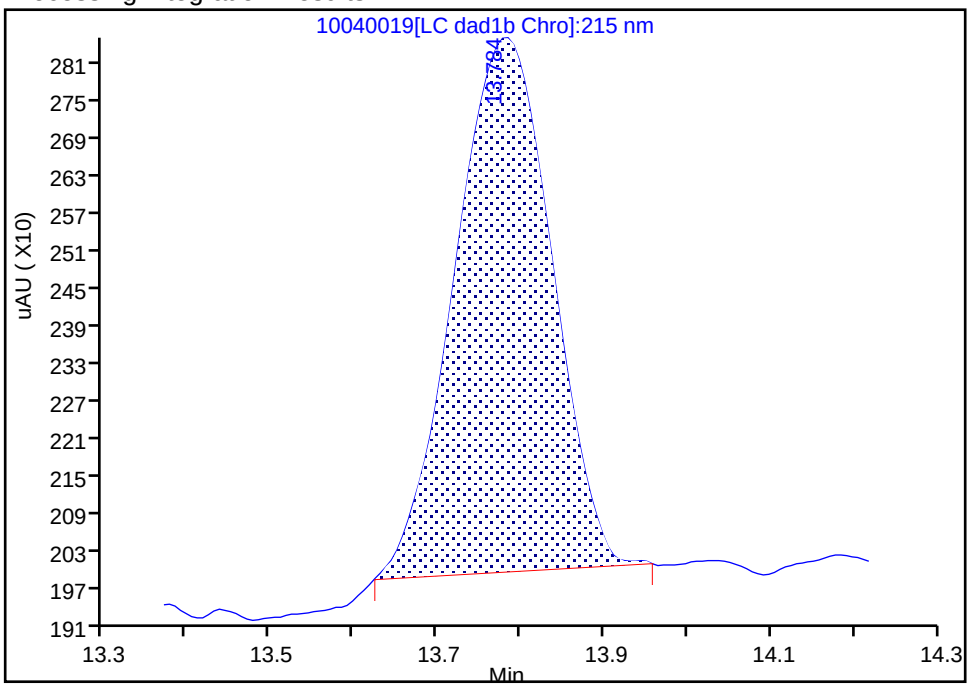
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040019.d
Injection Date: 04-Oct-2024 19:55:02 Instrument ID: CHHPLC_X3
Lims ID: IC INT/DMT 1
Client ID:
Operator ID: JZ ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1C, 215 nm

25 PETN, CAS: 78-11-5

Signal: 1

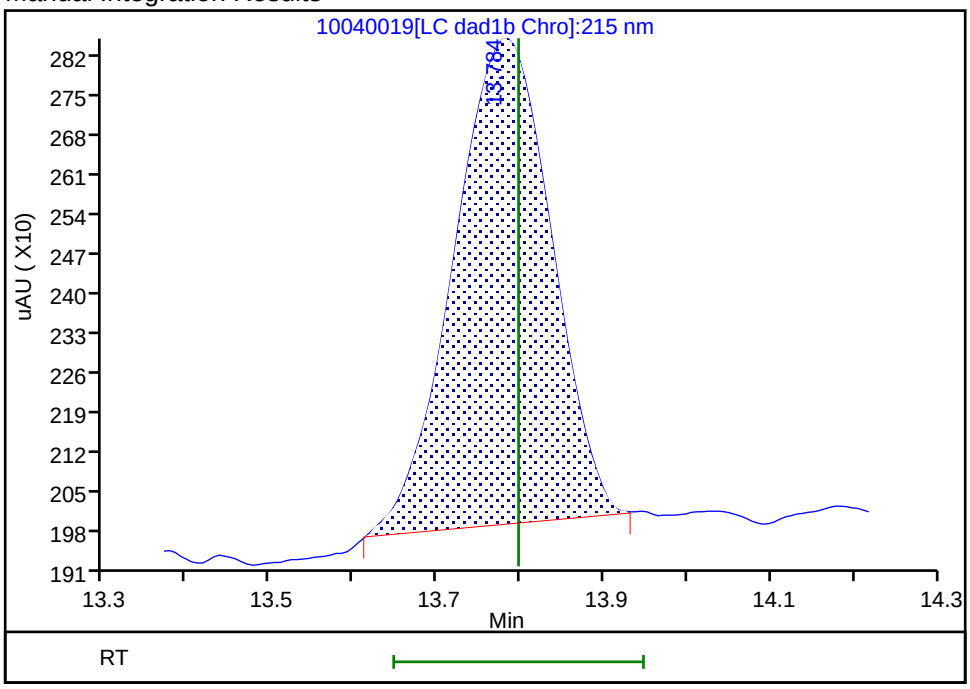
Processing Integration Results

RT: 13.78
Area: 6952
Amount: 0.096421
Amount Units: ug/mL



Manual Integration Results

RT: 13.78
Area: 7053
Amount: 0.097670
Amount Units: ug/mL



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

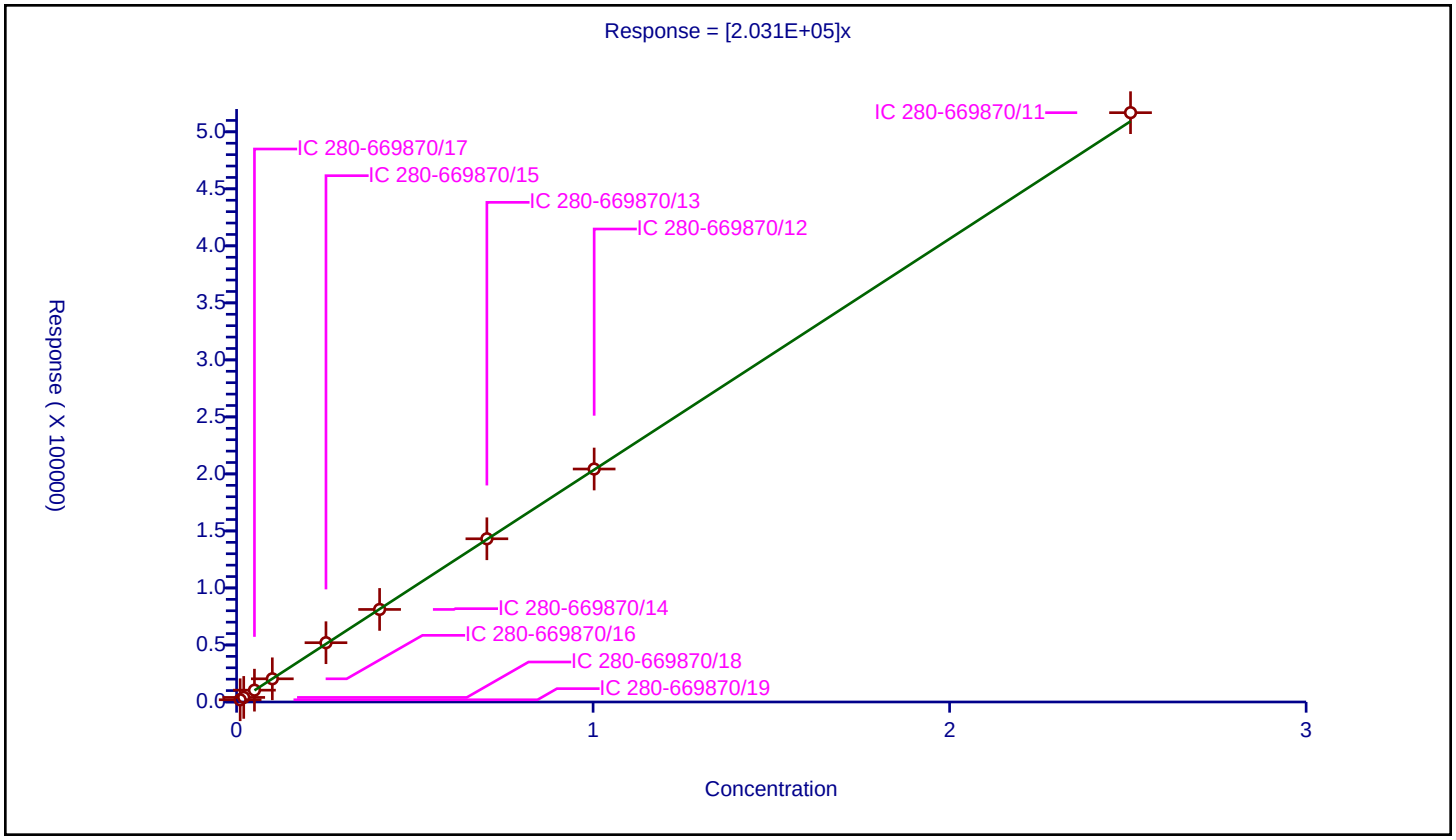
Curve Coefficients

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

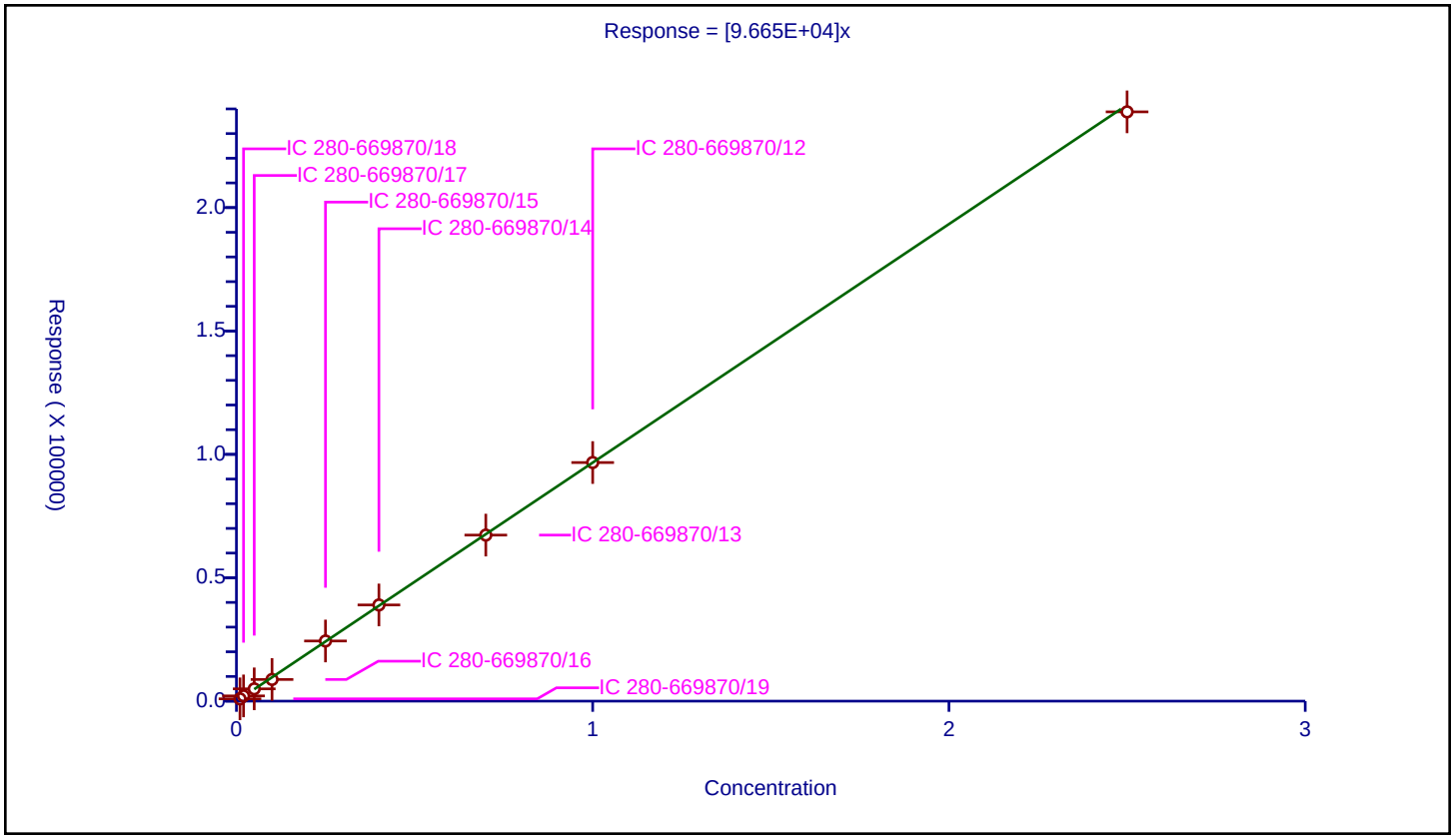
Curve Coefficients

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

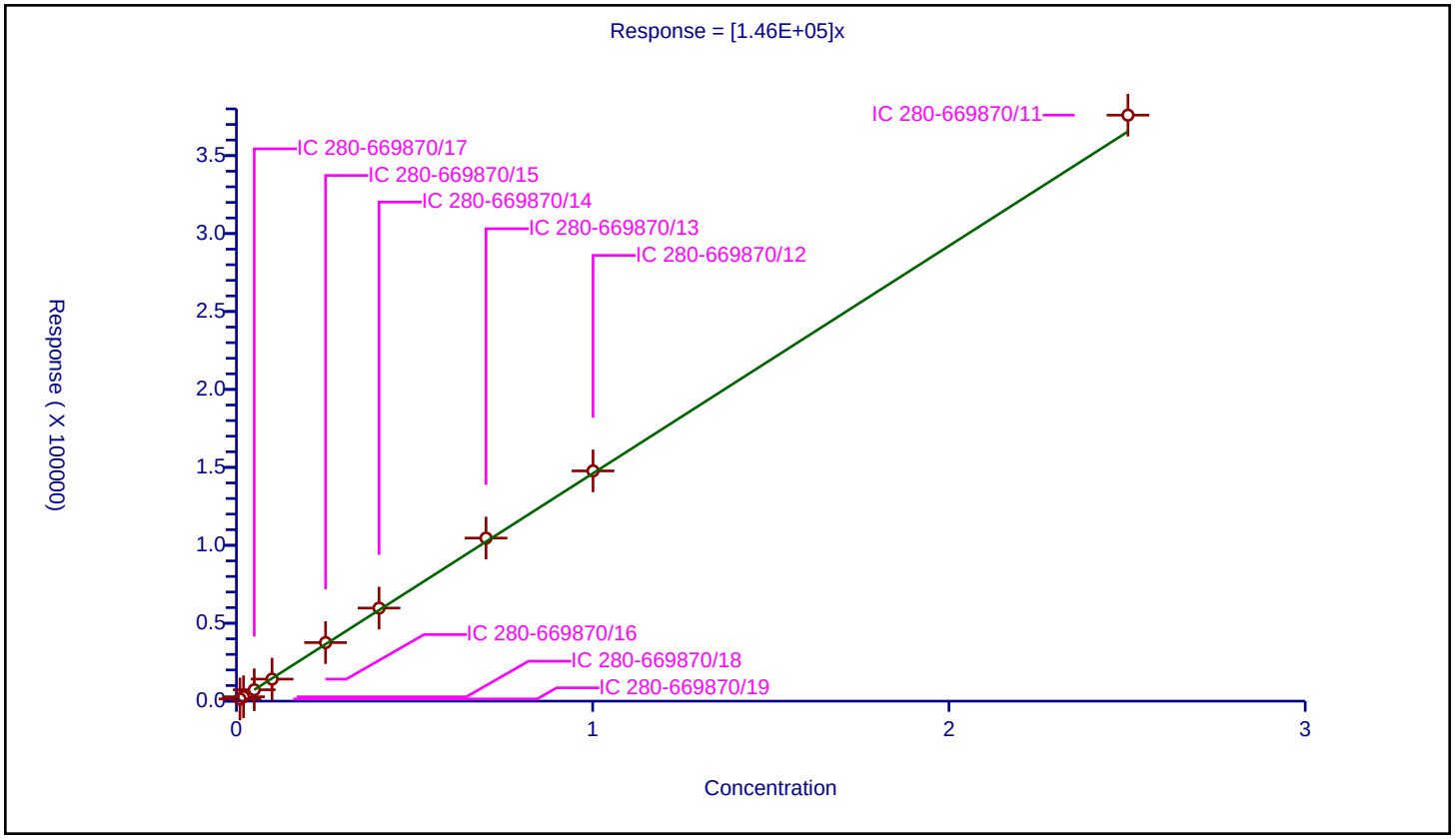
Curve Coefficients

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

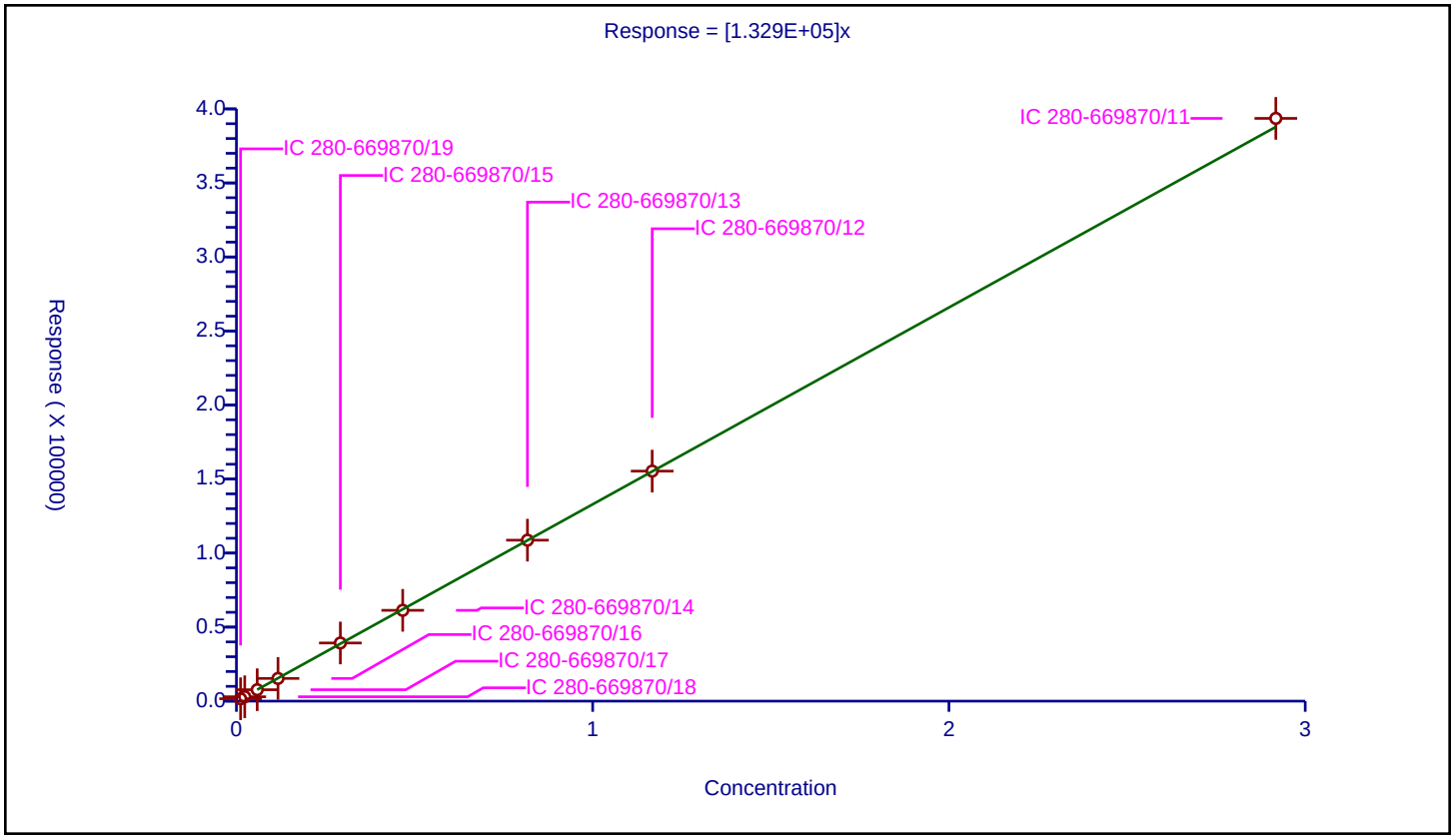
Curve Coefficients

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

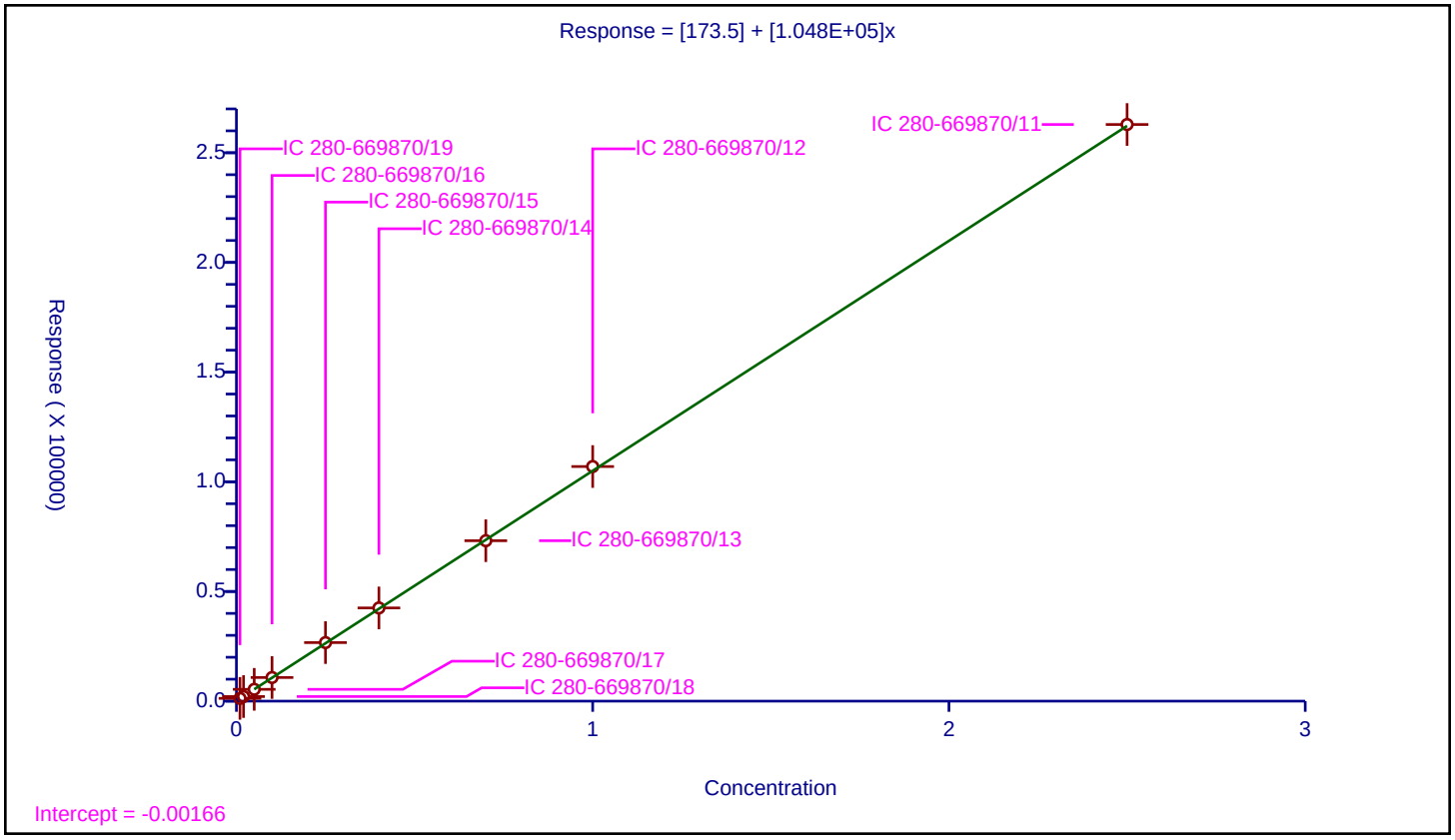
Curve Coefficients

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
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

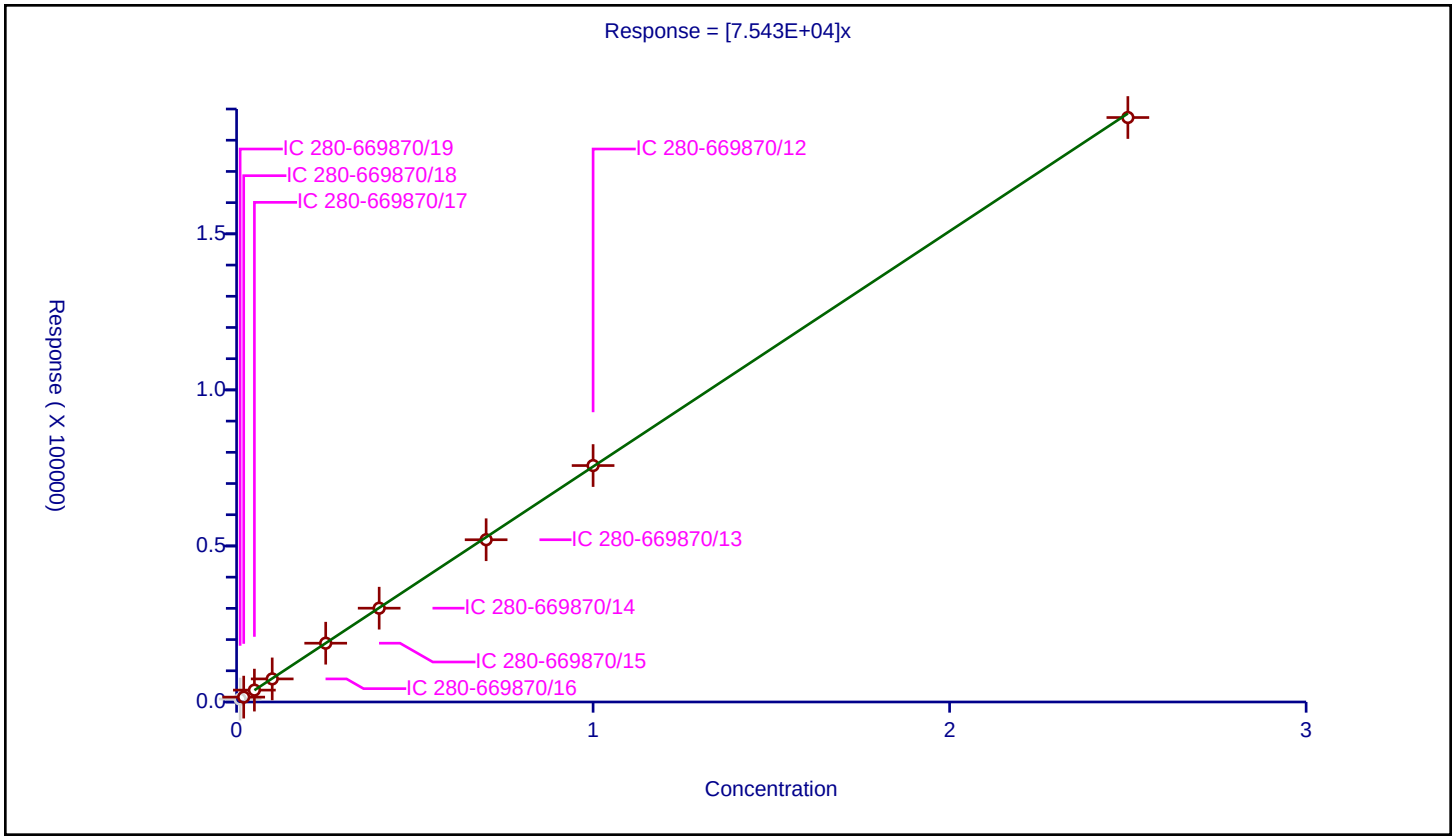
Curve Coefficients

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

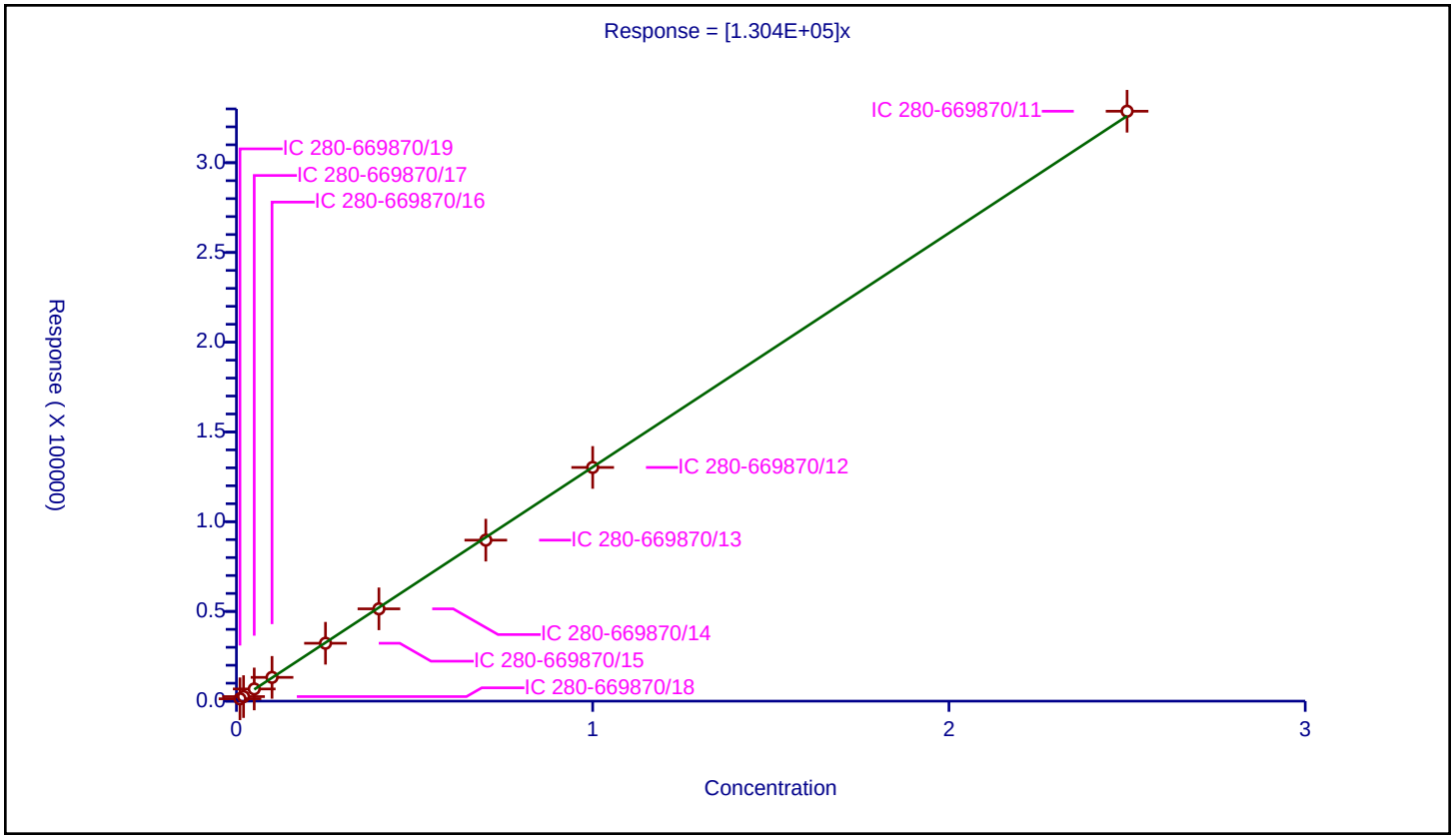
Curve Coefficients

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

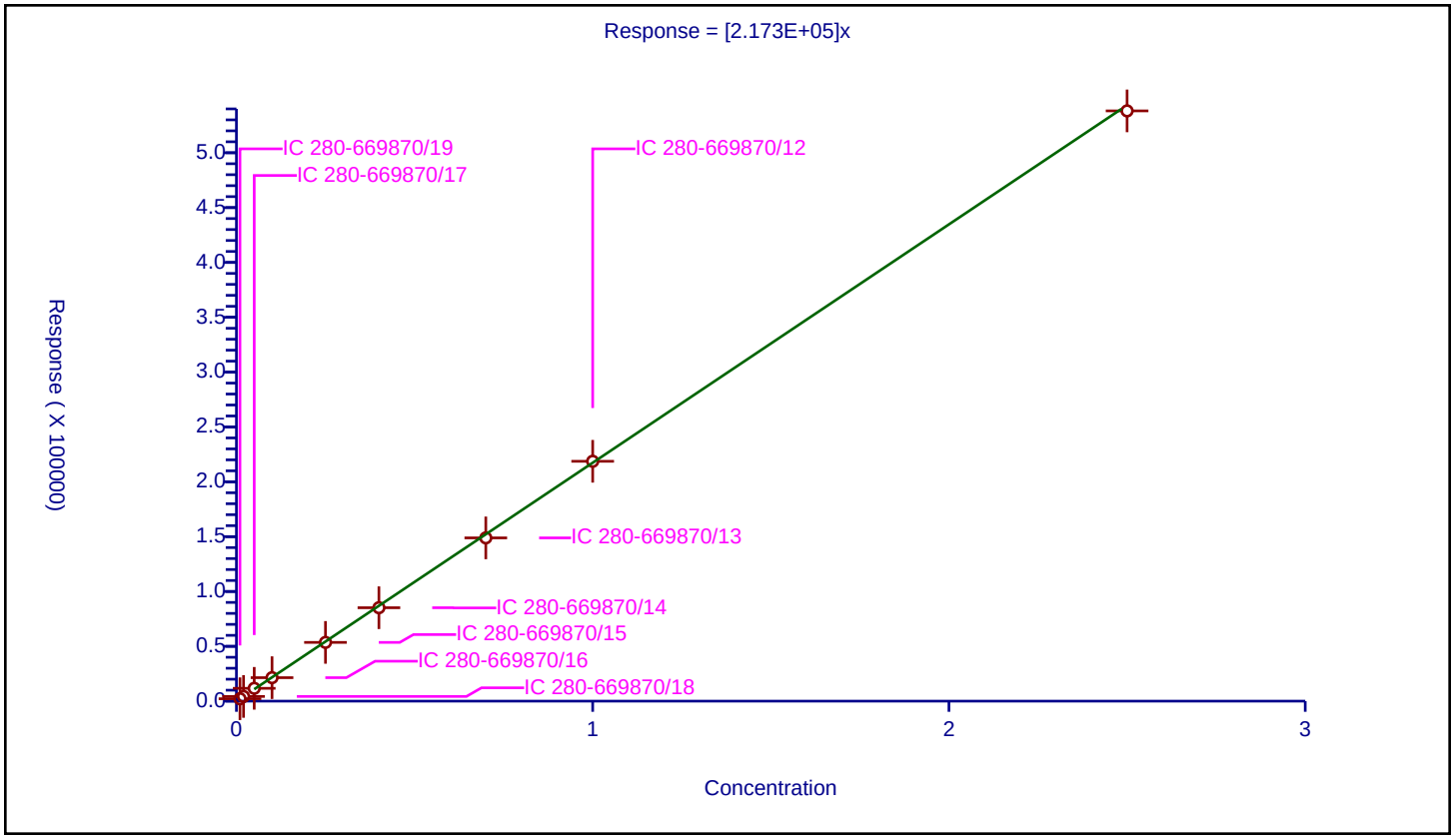
Curve Coefficients

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

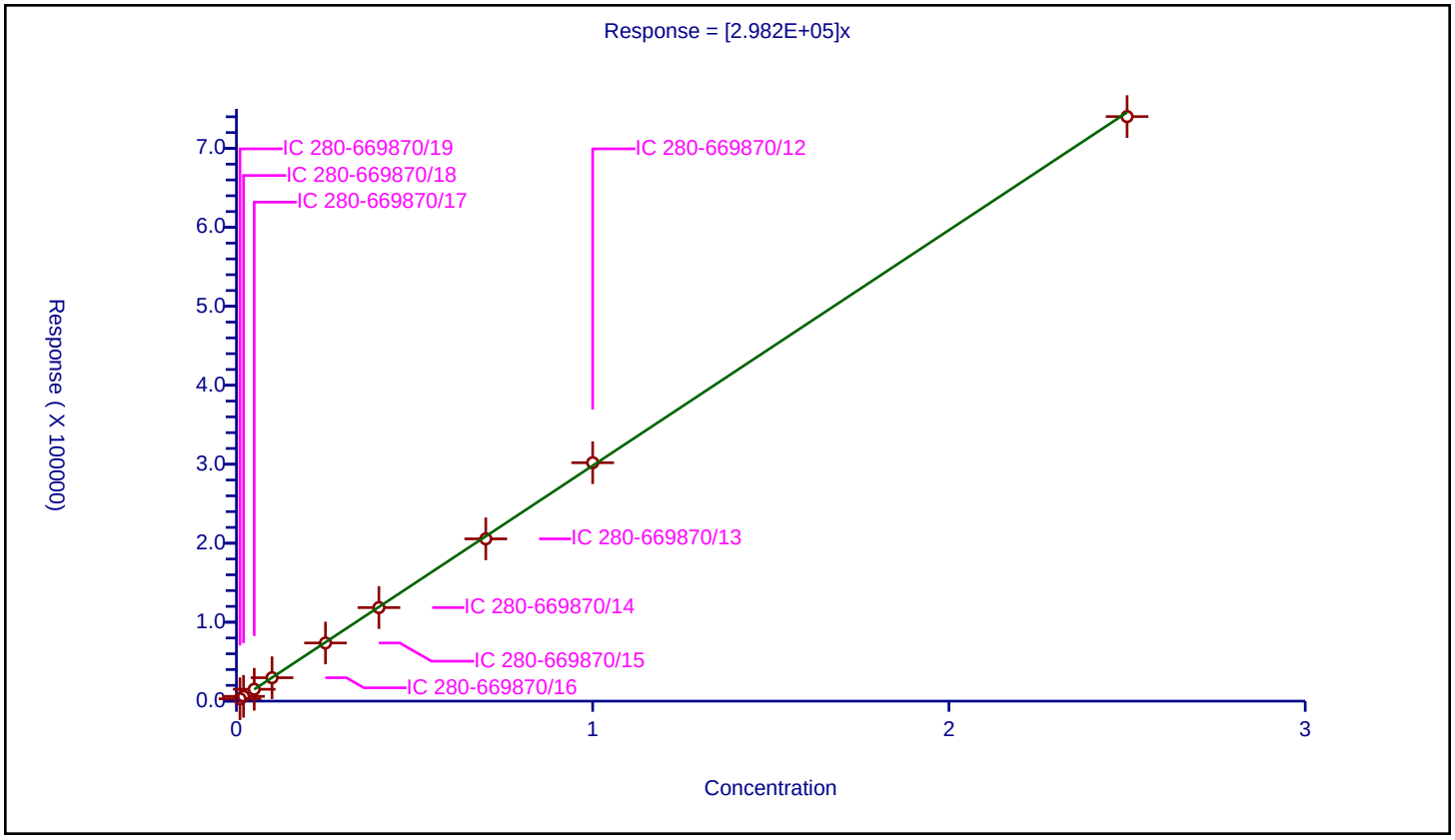
Curve Coefficients

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

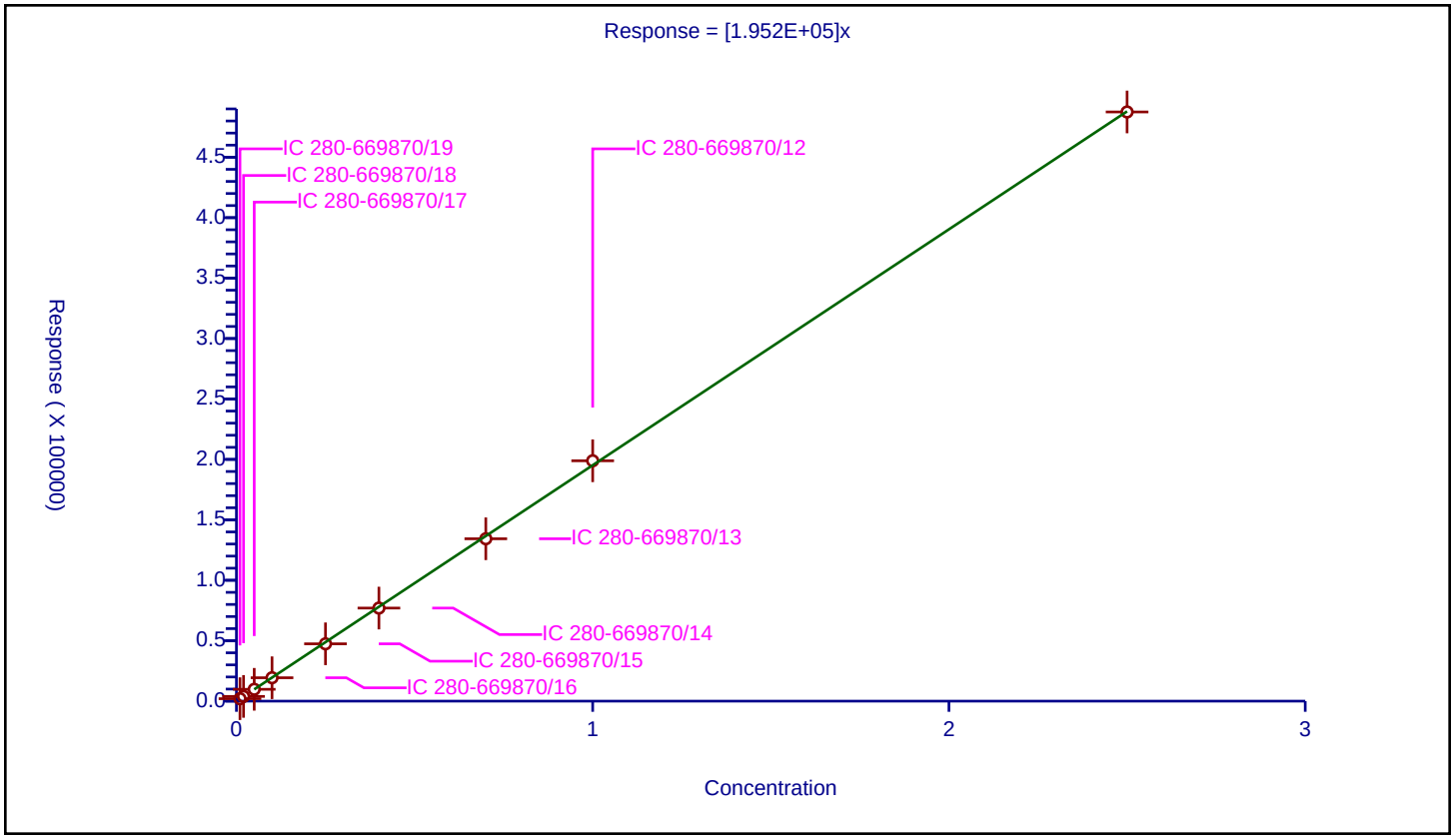
Curve Coefficients

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

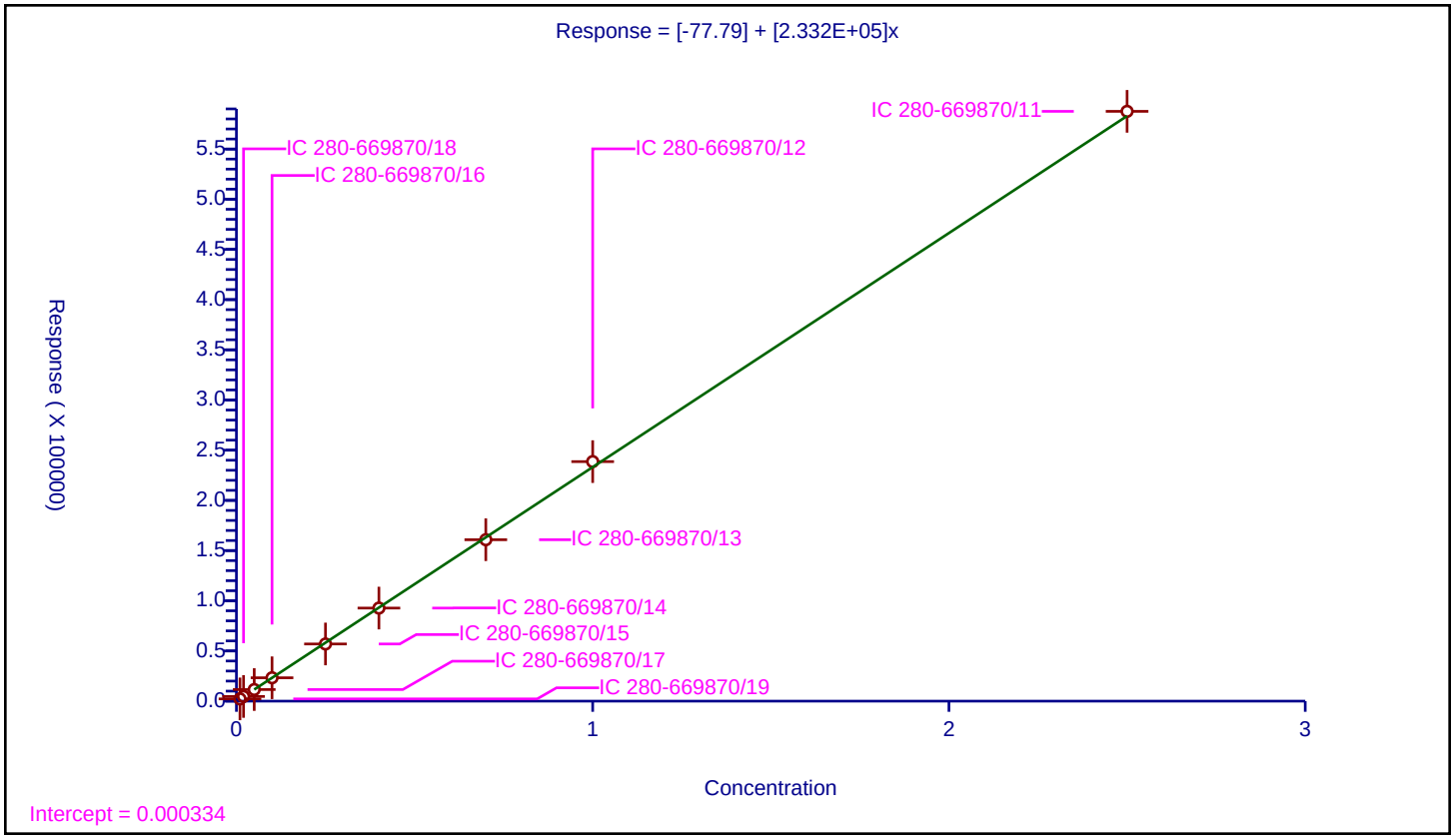
Curve Coefficients

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

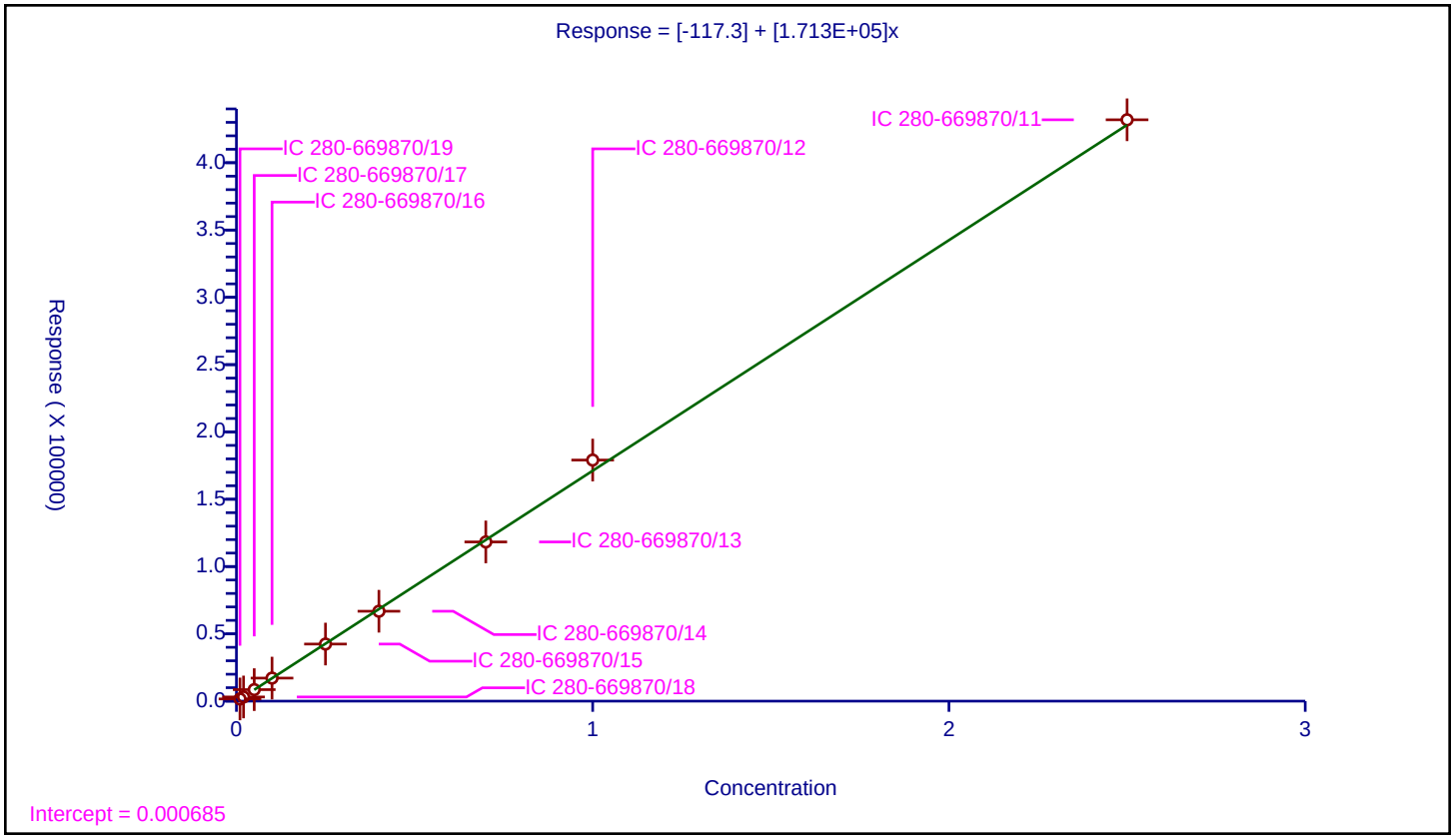
Curve Coefficients

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

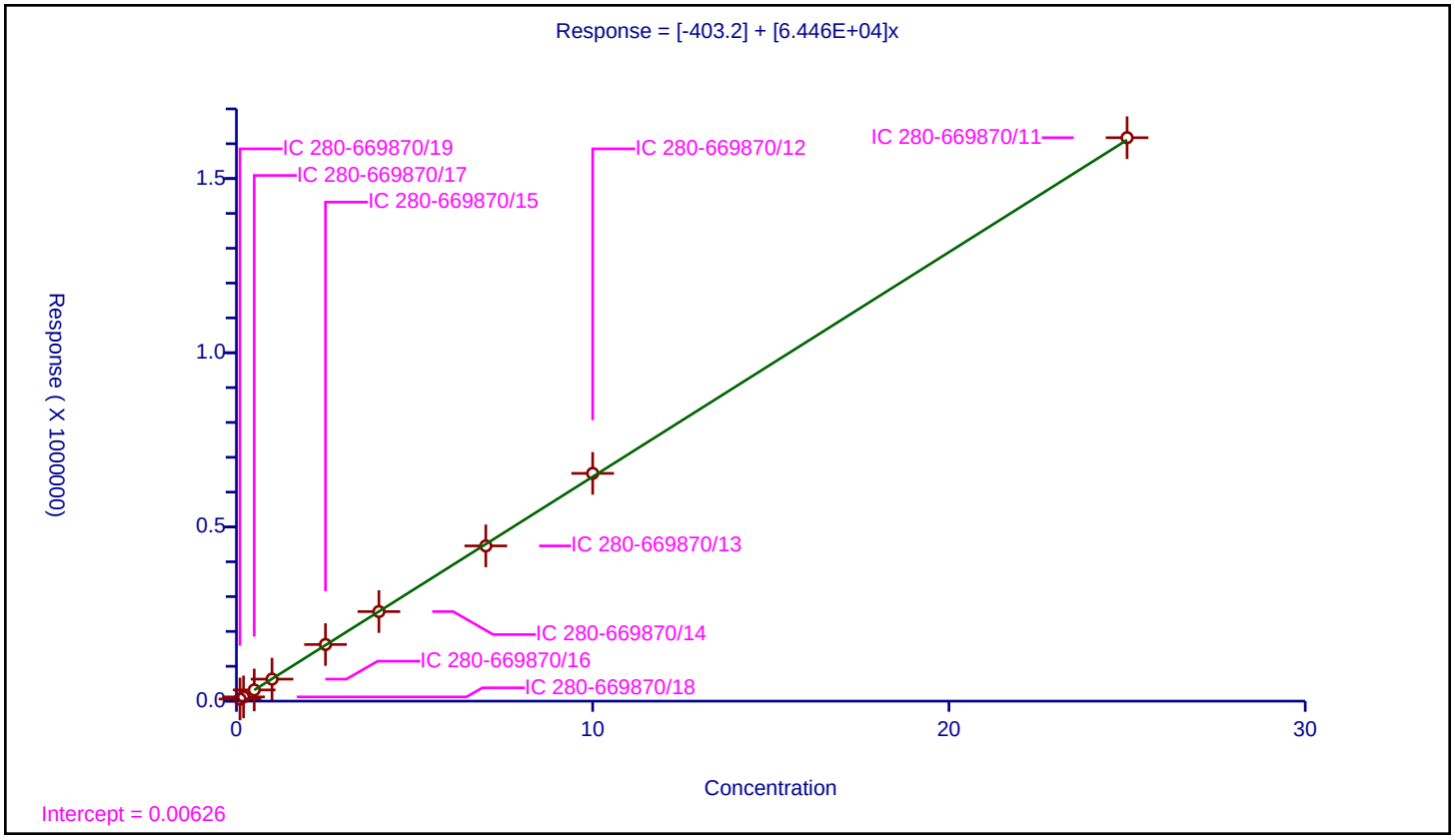
Curve Coefficients

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

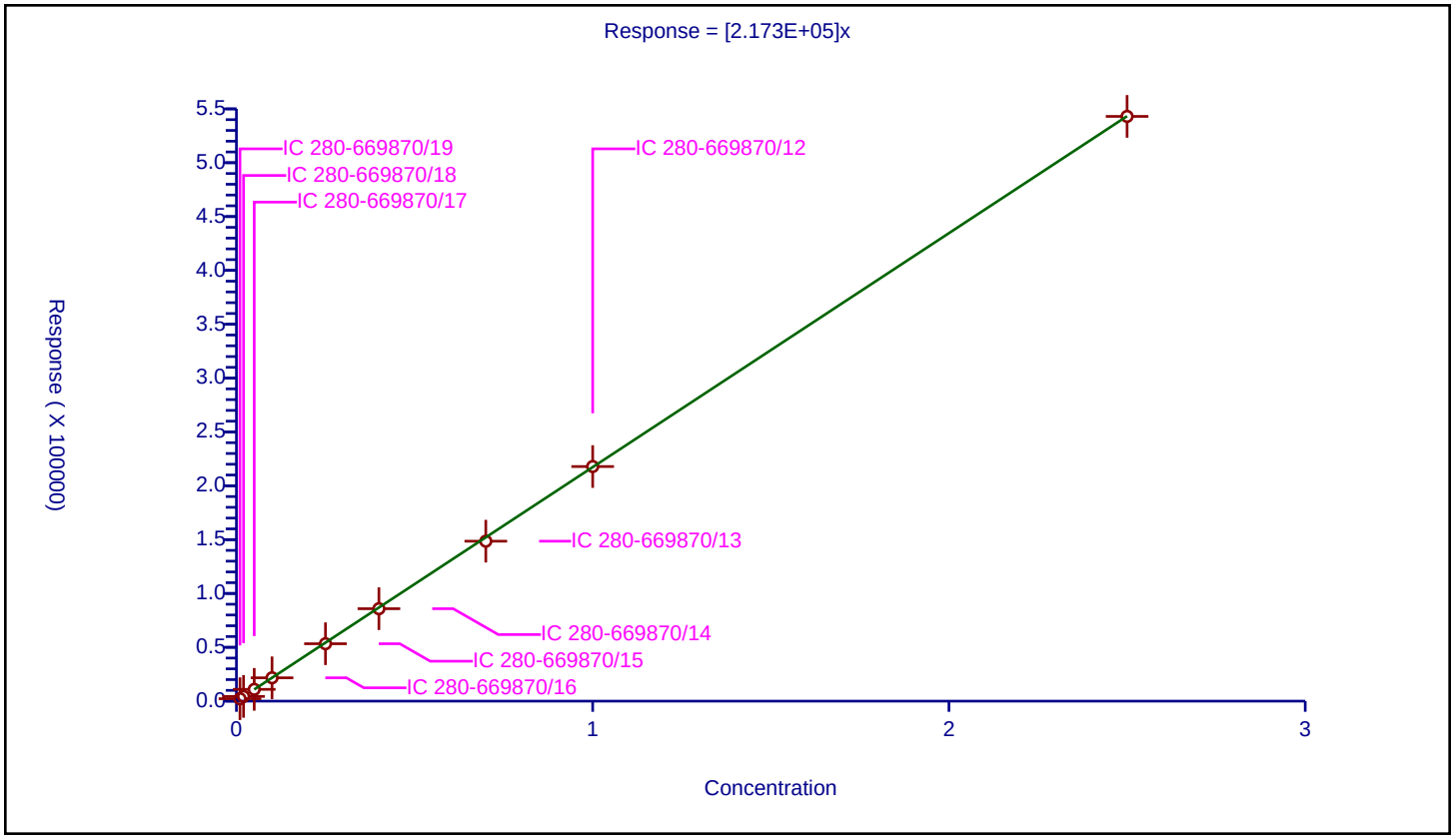
Curve Coefficients

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

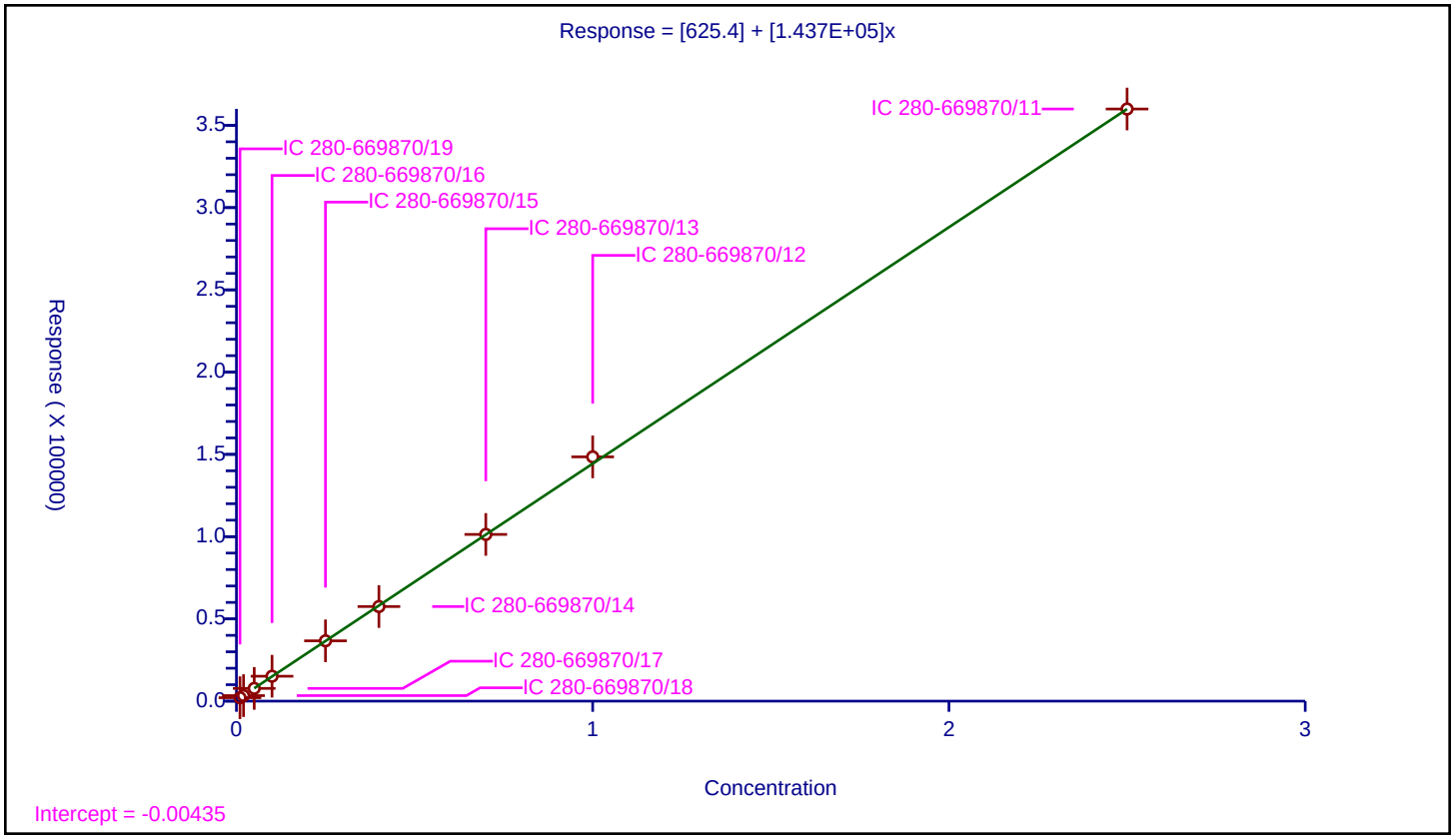
Curve Coefficients

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

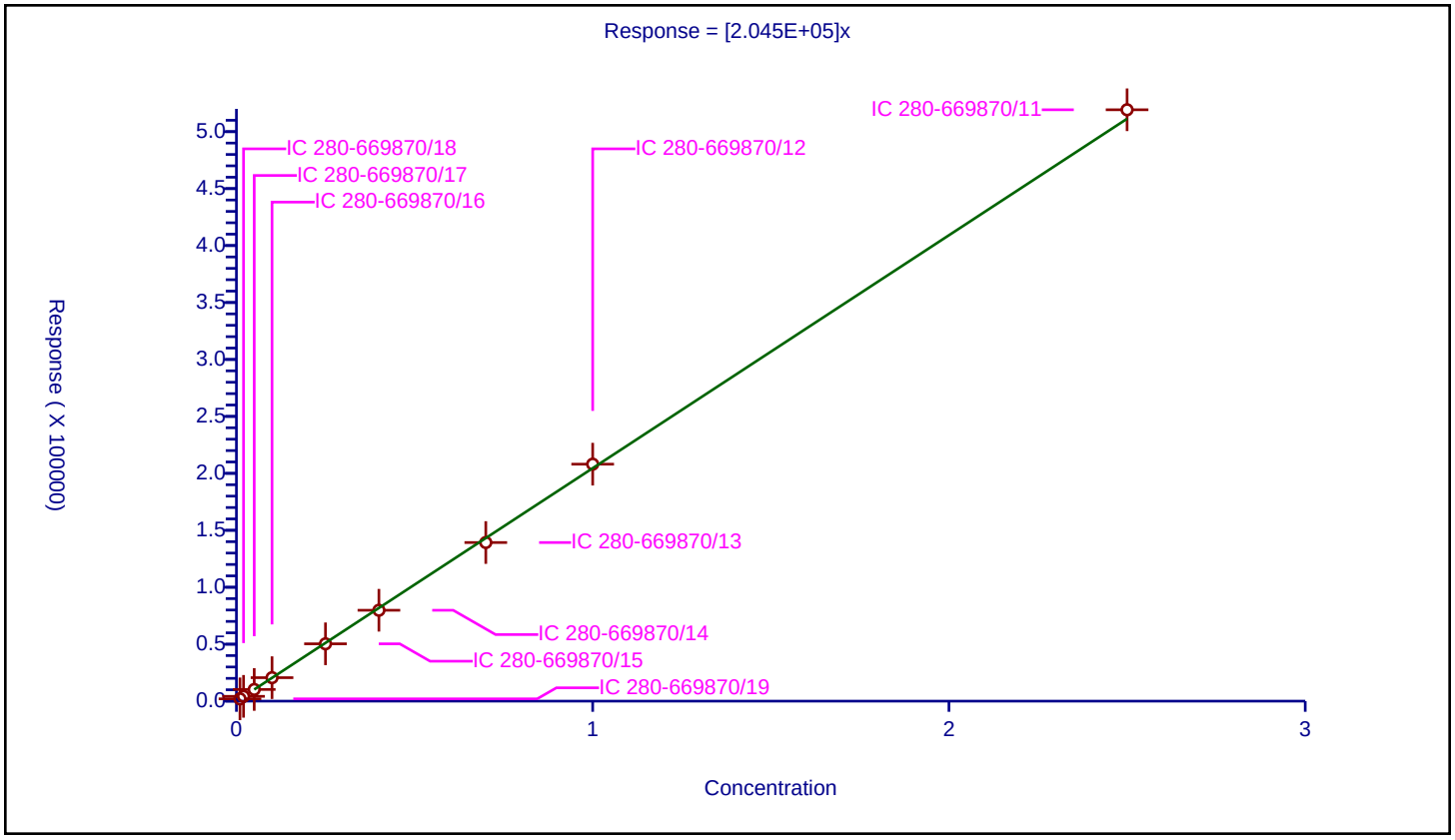
Curve Coefficients

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

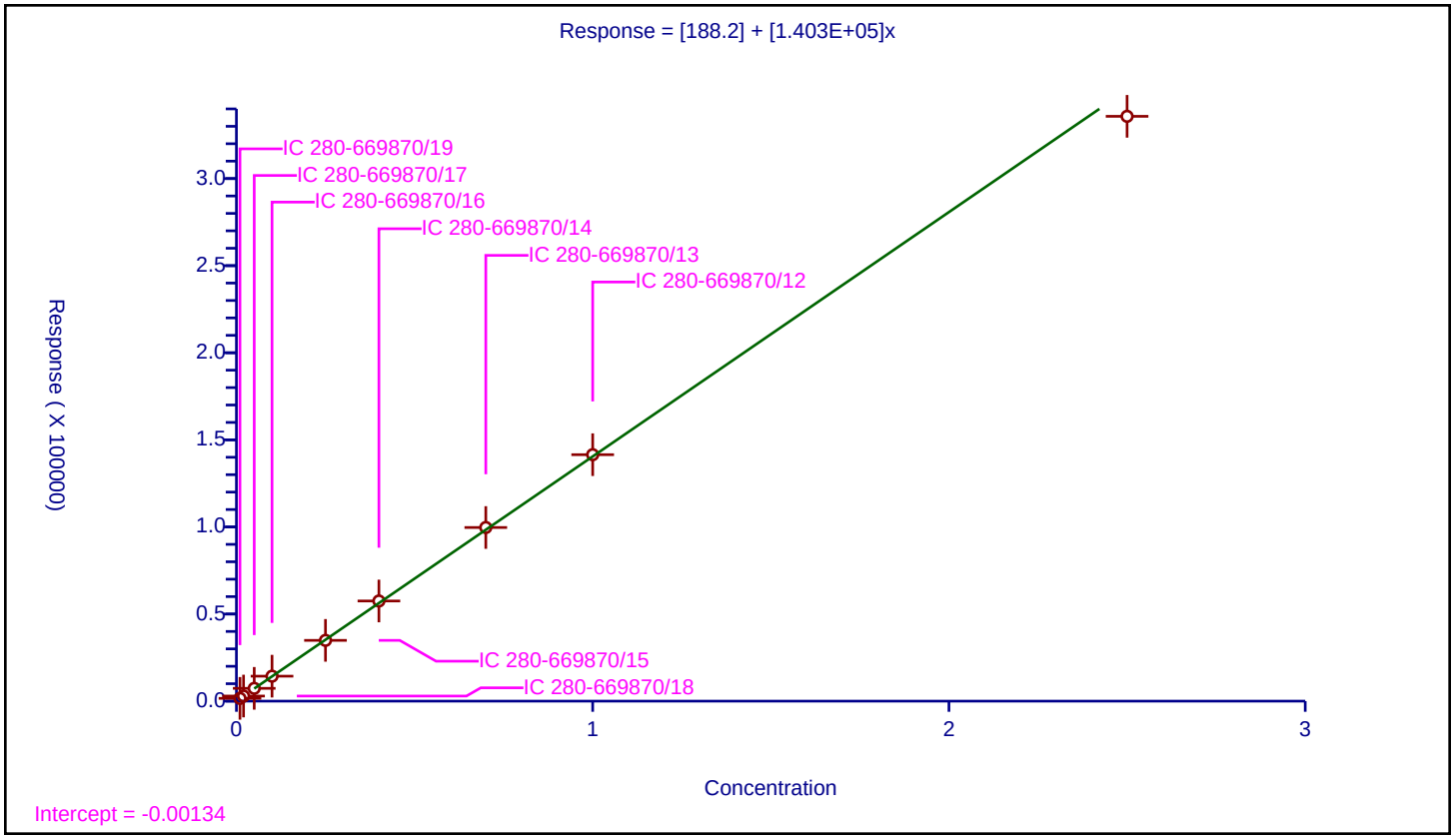
Curve Coefficients

Intercept:	188.2
Slope:	1.403E+05

Error Coefficients

Relative Standard Deviation:	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

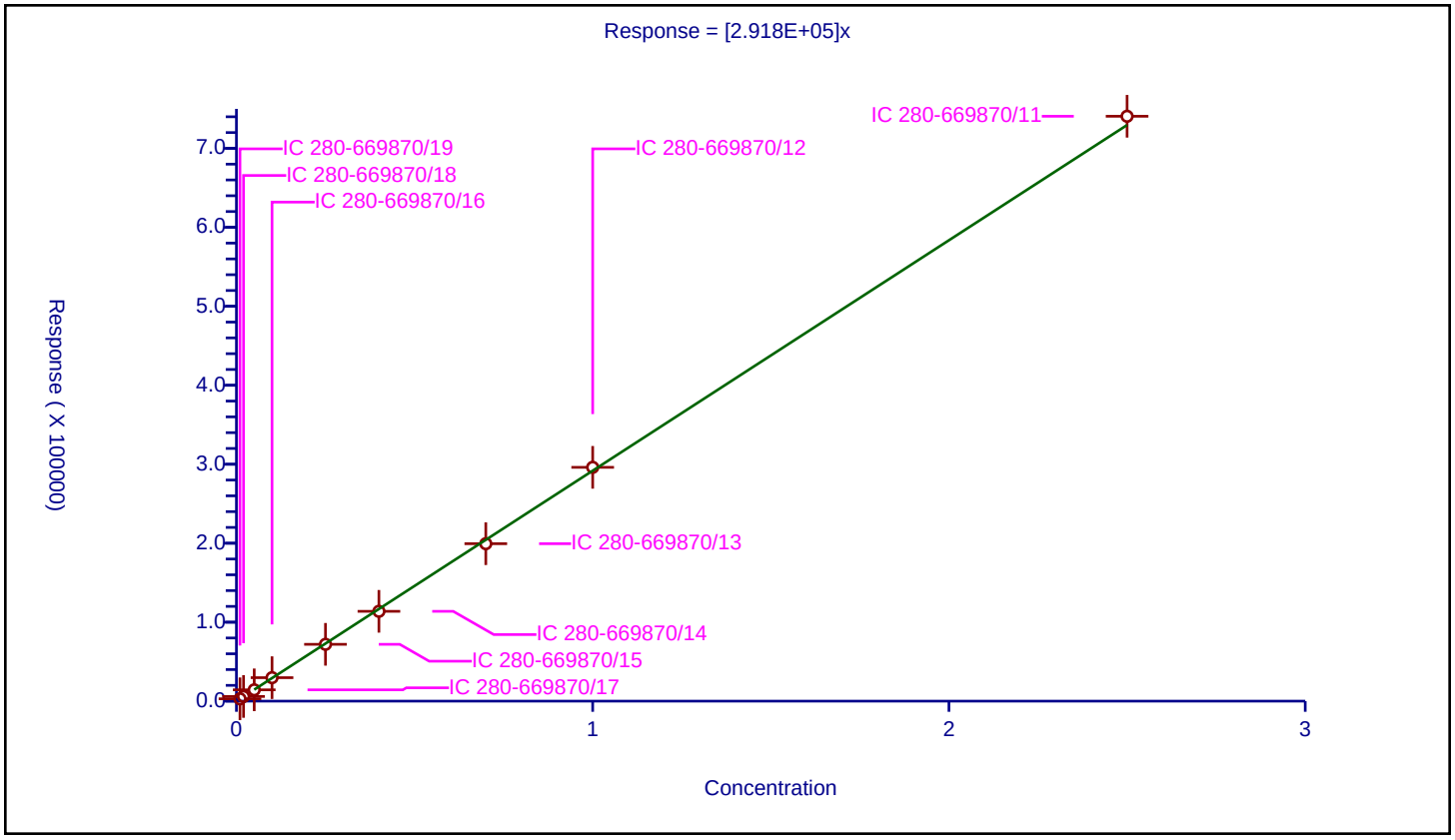
Curve Coefficients

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

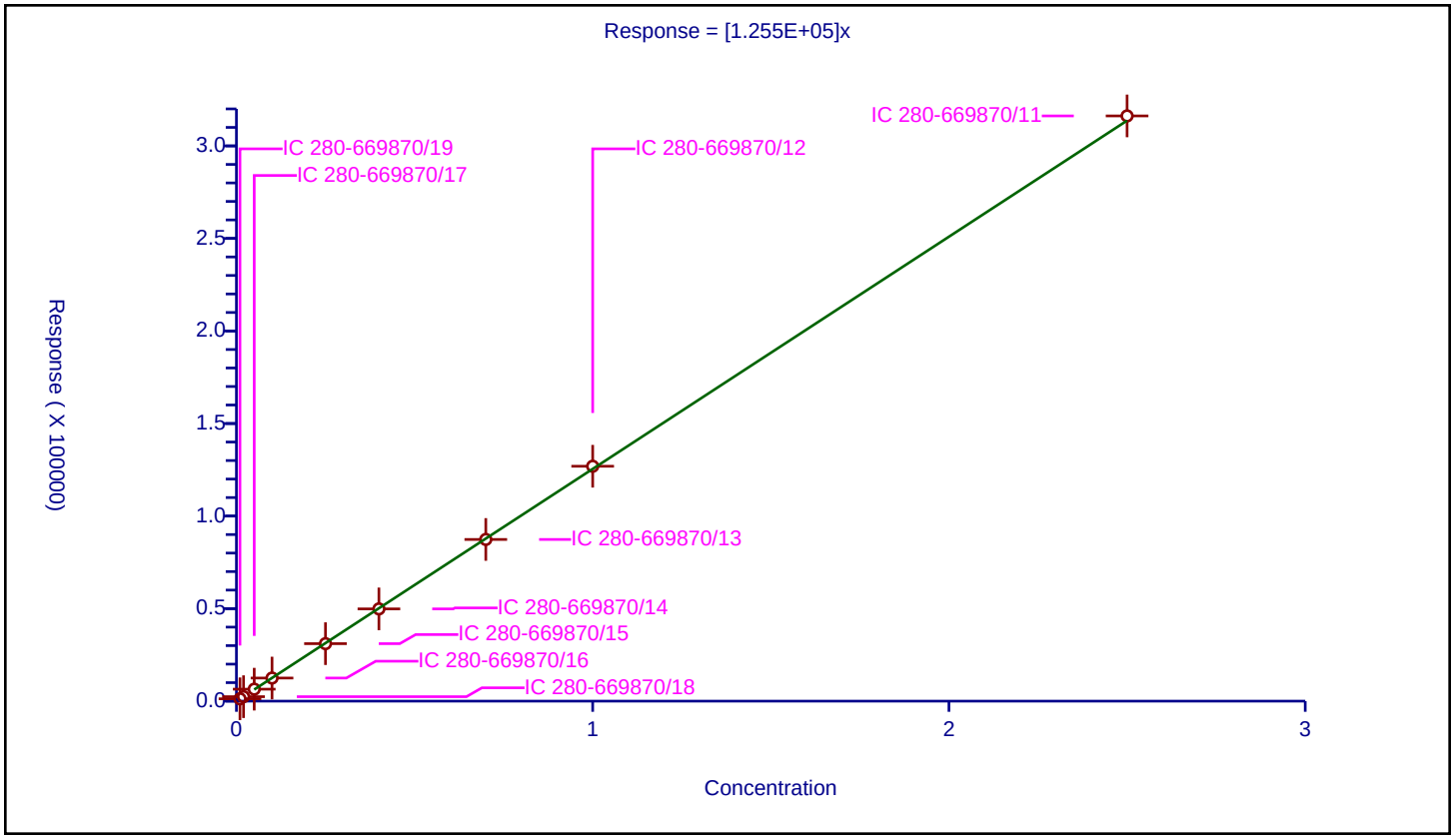
Curve Coefficients

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

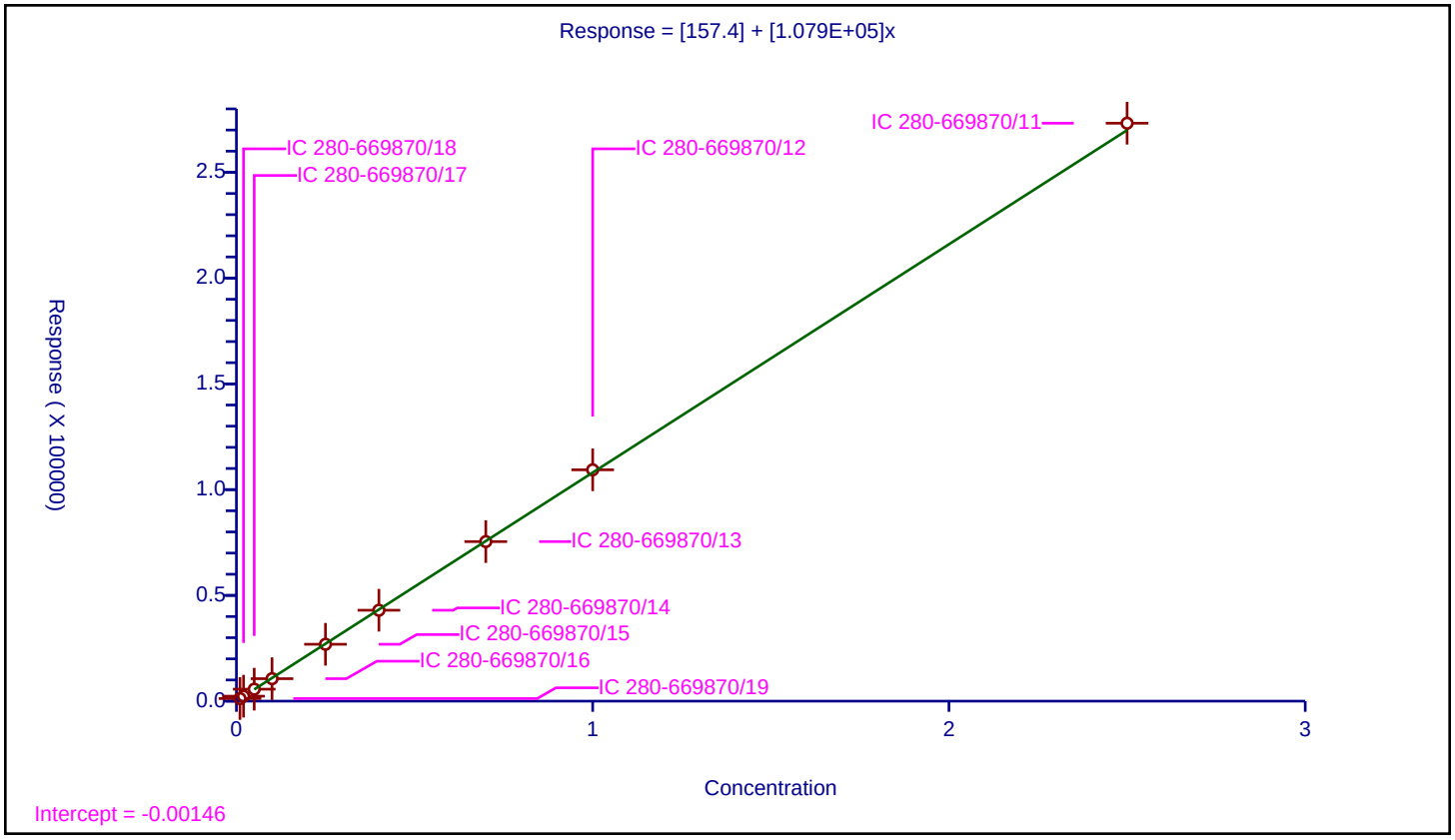
Curve Coefficients

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

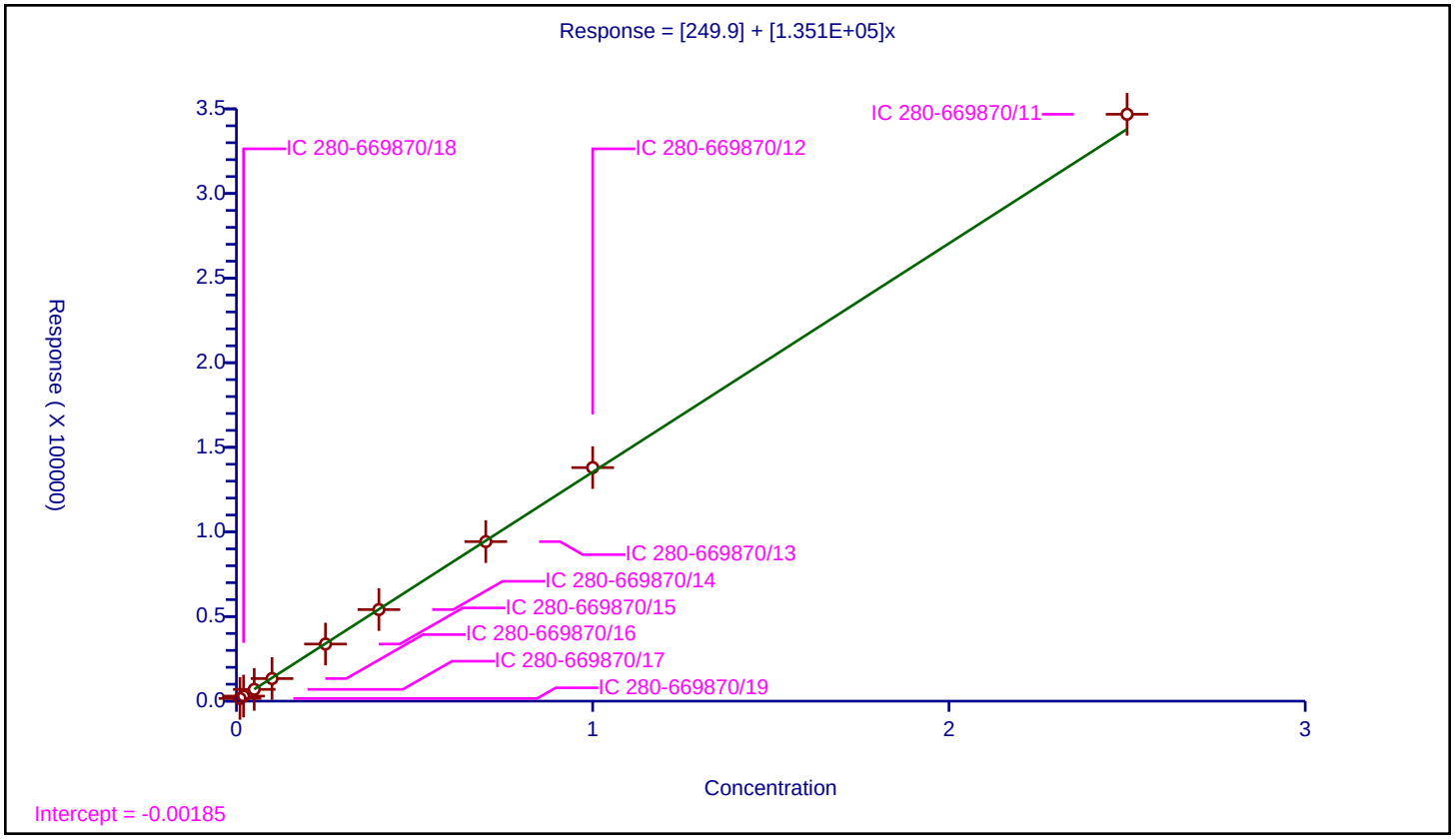
Curve Coefficients

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

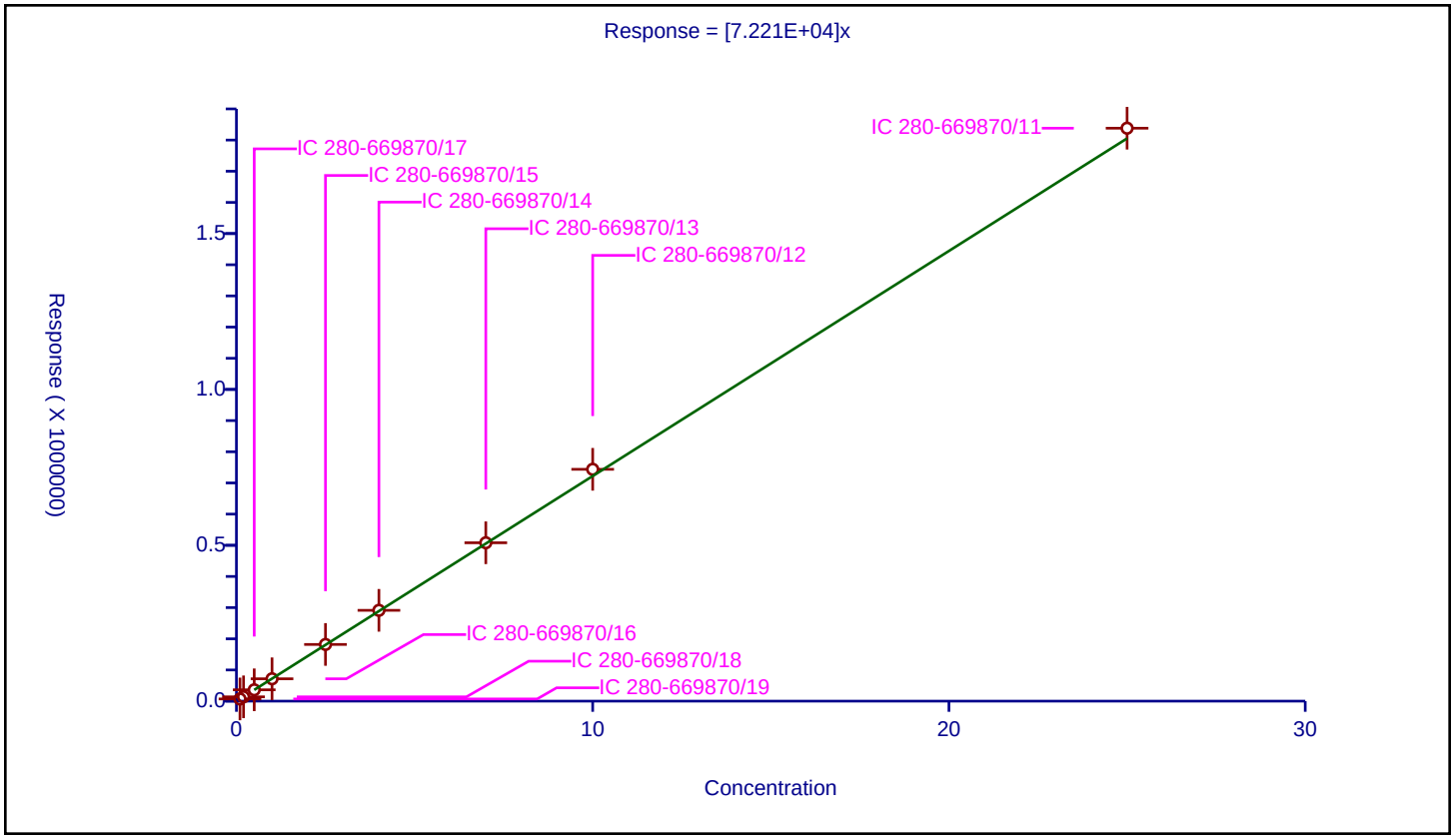
Curve Coefficients

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.: 280-200917-1 | Analy Batch No.: 677241

SDG No.:

Instrument ID: CHHPLC_X5 | GC Column: Luna-phenyl ID: 4.6(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 12/03/2024 20:29 | Calibration End Date: 12/04/2024 01:09 | Calibration ID: 99512

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-677241/18	12030020.D
Level 2	IC 280-677241/17	12030019.D
Level 3	IC 280-677241/16	12030018.D
Level 4	IC 280-677241/15	12030017.D
Level 5	IC 280-677241/14	12030016.D
Level 6	IC 280-677241/13	12030015.D
Level 7	IC 280-677241/12	12030014.D
Level 8	IC 280-677241/11	12030013.D
Level 9	IC 280-677241/10	12030012.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	6.382	6.372	6.376	6.372	6.364	6.358	6.359	6.362	6.329		6.214 - 6.514	6.364
2,4,6-Trinitrophenol	+++++	7.919	7.902	7.899	7.858	7.838	7.813	7.789	7.676		7.708 - 8.008	7.837
RDX	8.482	8.492	8.496	8.499	8.484	8.478	8.473	8.476	8.429		8.334 - 8.634	8.479
Nitrobenzene	11.035	11.032	11.035	11.025	11.011	11.011	11.006	11.009	10.962		10.861 - 11.161	11.014
3,5-Dinitroaniline	13.622	13.605	13.609	13.599	13.584	13.578	13.579	13.582	13.536		13.434 - 13.734	13.588
1,3-Dinitrobenzene	13.935	13.939	13.942	13.925	13.918	13.911	13.913	13.915	13.876		13.768 - 14.068	13.919
Nitroglycerin	14.435	14.432	14.442	14.425	14.424	14.405	14.413	14.415	14.389		14.274 - 14.574	14.420
o-Nitrotoluene	15.015	15.025	15.042	15.025	15.018	14.998	15.006	15.009	14.982		14.868 - 15.168	15.013
p-Nitrotoluene	15.262	15.252	15.262	15.245	15.238	15.225	15.233	15.235	15.196		15.088 - 15.388	15.239
4-Amino-2,6-dinitrotoluene	15.669	15.665	15.669	15.652	15.651	15.631	15.639	15.642	15.609		15.501 - 15.801	15.647
m-Nitrotoluene	16.102	16.079	16.095	16.072	16.071	16.051	16.059	16.062	16.029		15.921 - 16.221	16.069
2-Amino-4,6-dinitrotoluene	16.449	16.432	16.435	16.419	16.418	16.391	16.399	16.402	16.369		16.268 - 16.568	16.413
1,3,5-Trinitrobenzene	16.689	16.685	16.682	16.665	16.658	16.638	16.653	16.649	16.629		16.508 - 16.808	16.661
2,6-Dinitrotoluene	17.769	17.765	17.769	17.752	17.744	17.725	17.733	17.735	17.709		17.594 - 17.894	17.745
2,4-Dinitrotoluene	18.189	18.199	18.202	18.192	18.184	18.158	18.166	18.169	18.149		18.034 - 18.334	18.179
Tetryl	21.229	21.212	21.222	21.219	21.204	21.178	21.186	21.189	21.169		21.054 - 21.354	21.201
2,4,6-Trinitrotoluene	22.109	22.112	22.116	22.119	22.104	22.078	22.079	22.089	22.069		21.954 - 22.254	22.097
PETN	23.369	23.359	23.369	23.365	23.351	23.325	23.326	23.329	23.323		23.201 - 23.501	23.346
1,2-Dinitrobenzene (Surr)	11.855	11.859	11.862	11.852	11.838	11.831	11.833	11.835	11.796		11.688 - 11.988	11.840

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

Lab Name: Eurofins Denver Job No.: 280-200917-1 Analy Batch No.: 677241

SDG No.:

Instrument ID: CHHPLC_X5 GC Column: Luna-phenyl ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/03/2024 20:29 Calibration End Date: 12/04/2024 01:09 Calibration ID: 99512

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-677241/18	12030020.D
Level 2	IC 280-677241/17	12030019.D
Level 3	IC 280-677241/16	12030018.D
Level 4	IC 280-677241/15	12030017.D
Level 5	IC 280-677241/14	12030016.D
Level 6	IC 280-677241/13	12030015.D
Level 7	IC 280-677241/12	12030014.D
Level 8	IC 280-677241/11	12030013.D
Level 9	IC 280-677241/10	12030012.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	166400 183276 179050	158600 180605	176840 179471	191690 178105	Ave		177115.225				5.4		20.0			
2,4,6-Trinitrophenol	+++++ 149696 147488	127300 149618	141580 147999	152370 146466	Lin2	-429.34976	150108.659							0.9990		0.9900
RDX	218400 212028 206456	196250 210645	204540 207420	214520 204769	Ave		208336.400				3.1		20.0			
Nitrobenzene	369900 377896 377636	431050 375083	390800 373520	381210 371635	Ave		383192.167				5.0		20.0			
3,5-Dinitroaniline	505800 451352 447125	472300 447615	462000 450143	452310 447267	Lin2	569.145478	447572.951							1.0000		0.9900
1,3-Dinitrobenzene	652500 580520 580103	607900 578873	600440 574920	587140 572216	Ave		592734.589				4.3		20.0			
Nitroglycerin	120310 129172 126311	144035 127669	132616 126753	129436 125949	Ave		129138.901				5.0		20.0			
o-Nitrotoluene	270600 239940 240560	268300 241180	251820 242583	248730 238401	Ave		249123.762				4.9		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
CURVE EVALUATION

Lab Name: Eurofins Denver Job No.: 280-200917-1 Analy Batch No.: 677241

SDG No.:

Instrument ID: CHHPLC_X5 GC Column: Luna-phenyl ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/03/2024 20:29 Calibration End Date: 12/04/2024 01:09 Calibration ID: 99512

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								
p-Nitrotoluene	184800 214520 213178	221550 209640	221660 208017	215950 207659	Ave		210774.949				5.2		20.0			
4-Amino-2,6-dinitrotoluene	273300 280060 276443	307550 277315	288660 276881	288170 274551	Ave		282547.848				3.8		20.0			
m-Nitrotoluene	267900 270064 268132	284050 267370	277860 265779	272780 264182	Ave		270901.841				2.4		20.0			
2-Amino-4,6-dinitrotoluene	368100 404896 393856	398050 394378	408760 400037	405720 391601	Ave		396155.249				3.0		20.0			
1,3,5-Trinitrobenzene	418400 407808 409911	440250 409840	416640 402589	425240 404635	Ave		415034.752				2.9		20.0			
2,6-Dinitrotoluene	264200 276304 271655	333850 269763	292320 270227	289530 269065	Ave		281879.316				7.7		20.0			
2,4-Dinitrotoluene	484800 559024 551601	574600 550870	552720 548754	576680 545655	Ave		549411.565				4.8		20.0			
Tetryl	352100 320032 314059	323600 316753	332900 316634	333950 313080	Ave		324789.776				3.9		20.0			
2,4,6-Trinitrotoluene	427100 426168 411910	393650 417765	417700 415460	437210 411674	Ave		417626.378				2.9		20.0			
PETN	136370 142211 139328	127790 141033	137910 139955	138072 139139	Ave		137978.636				3.0		20.0			
1,2-Dinitrobenzene (Surr)	287600 264172 259101	297200 263628	253300 259824	268820 258514	Ave		268017.621				5.5		20.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Denver | Job No.: 280-200917-1 | Analy Batch No.: 677241

SDG No.:

Instrument ID: CHHPLC_X5 | GC Column: Luna-pheny ID: 4.6(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 12/03/2024 20:29 | Calibration End Date: 12/04/2024 01:09 | Calibration ID: 99512

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-677241/18	12030020.D
Level 2	IC 280-677241/17	12030019.D
Level 3	IC 280-677241/16	12030018.D
Level 4	IC 280-677241/15	12030017.D
Level 5	IC 280-677241/14	12030016.D
Level 6	IC 280-677241/13	12030015.D
Level 7	IC 280-677241/12	12030014.D
Level 8	IC 280-677241/11	12030013.D
Level 9	IC 280-677241/10	12030012.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
HMX	Ave	1664 72242	3172 125630	8842 178105	19169 447624	45819	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
2,4,6-Trinitrophenol	Lin2	+++++ 59847	2546 103599	7079 146466	15237 368720	37424	+++++ 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
RDX	Ave	2184 84258	3925 145194	10227 204769	21452 516139	53007	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
Nitrobenzene	Ave	3699 150033	8621 261464	19540 371635	38121 944090	94474	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
3,5-Dinitroaniline	Lin2	5058 179046	9446 315100	23100 447267	45231 1117813	112838	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
1,3-Dinitrobenzene	Ave	6525 231549	12158 402444	30022 572216	58714 1450257	145130	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
Nitroglycerin	Ave	12031 510674	28807 887274	66308 1259485	129436 3157777	322929	0.100 4.00	0.200 7.00	0.500 10.0	1.00 25.0	2.50
o-Nitrotoluene	Ave	2706 96472	5366 169808	12591 238401	24873 601400	59985	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
p-Nitrotoluene	Ave	1848 83856	4431 145612	11083 207659	21595 532946	53630	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
4-Amino-2,6-dinitrotoluene	Ave	2733 110926	6151 193817	14433 274551	28817 691108	70015	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
m-Nitrotoluene	Ave	2679 106948	5681 186045	13893 264182	27278 670330	67516	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
2-Amino-4,6-dinitrotoluene	Ave	3681 157751	7961 280026	20438 391601	40572 984639	101224	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
1,3,5-Trinitrobenzene	Ave	4184 163936	8805 281812	20832 404635	42524 1024778	101952	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
2,6-Dinitrotoluene	Ave	2642 107905	6677 189159	14616 269065	28953 679138	69076	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
2,4-Dinitrotoluene	Ave	4848	11492	27636	57668	139756	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.: 280-200917-1 | Analy Batch No.: 677241

SDG No.:

Instrument ID: CHHPLC_X5 | GC Column: Luna-pheny ID: 4.6(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 12/03/2024 20:29 | Calibration End Date: 12/04/2024 01:09 | Calibration ID: 99512

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
		220348	384128	545655	1379002		0.400	0.700	1.00	2.50	
Tetryl	Ave	3521 126701	6472 221644	16645 313080	33395 785148	80008	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
2,4,6-Trinitrotoluene	Ave	4271 167106	7873 290822	20885 411674	43721 1029776	106542	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250
PETN	Ave	13637 564133	25558 979682	68955 1391387	138072 3483200	355528	0.100 4.00	0.200 7.00	0.500 10.0	1.00 25.0	2.50
1,2-Dinitrobenzene (Surr)	Ave	2876 105451	5944 181877	12665 258514	26882 647752	66043	0.0100 0.400	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250

Curve Type Legend:

Ave = Average
Lin2 = Linear 1/conc^2

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030012.D
Lims ID: IC INT 9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 03-Dec-2024 20:29:43 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\20241203-140414.b\8330_X5_Luna.m
Limit Group: GCSV - 8330
Last Update: 04-Dec-2024 17:40:50 Calib Date: 04-Dec-2024 01:09:06
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030020.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC mwd1A, 254 nm
Process Host: CTX1637

First Level Reviewer: LV5D Date: 04-Dec-2024 11:35:54

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
5 HMX	1	6.329	6.364	-0.035	447624	2.50	2.53	
7 2,4,6-Trinitrophenol	1	7.676	7.858	-0.182	368720	2.50	2.46	
8 RDX	1	8.429	8.484	-0.055	516139	2.50	2.48	
9 Nitrobenzene	1	10.962	11.011	-0.049	944090	2.50	2.46	
$ 10 1,2-Dinitrobenzene	1	11.796	11.838	-0.042	647752	2.50	2.42	
11 3,5-Dinitroaniline	1	13.536	13.584	-0.048	1117813	2.50	2.50	
12 1,3-Dinitrobenzene	1	13.876	13.918	-0.042	1450257	2.50	2.45	
13 Nitroglycerin	2	14.389	14.424	-0.035	3157777	25.0	24.5	
14 o-Nitrotoluene	1	14.982	15.018	-0.036	601400	2.50	2.41	
16 p-Nitrotoluene	1	15.196	15.238	-0.042	532946	2.50	2.53	
17 4-Amino-2,6-dinitrotoluene	1	15.609	15.651	-0.042	691108	2.50	2.45	
18 m-Nitrotoluene	1	16.029	16.071	-0.042	670330	2.50	2.47	
19 2-Amino-4,6-dinitrotoluene	1	16.369	16.418	-0.049	984639	2.50	2.49	
20 1,3,5-Trinitrobenzene	1	16.629	16.658	-0.029	1024778	2.50	2.47	
21 2,6-Dinitrotoluene	1	17.709	17.744	-0.035	679138	2.50	2.41	
22 2,4-Dinitrotoluene	1	18.149	18.184	-0.035	1379002	2.50	2.51	
23 Tetryl	1	21.169	21.204	-0.035	785148	2.50	2.42	
24 2,4,6-Trinitrotoluene	1	22.069	22.104	-0.035	1029776	2.50	2.47	
25 PETN	2	23.323	23.351	-0.028	3483200	25.0	25.2	

QC Flag Legend
Processing Flags

Reagents:
8330IntermStk_00082 Amount Added: 250.00 Units: uL

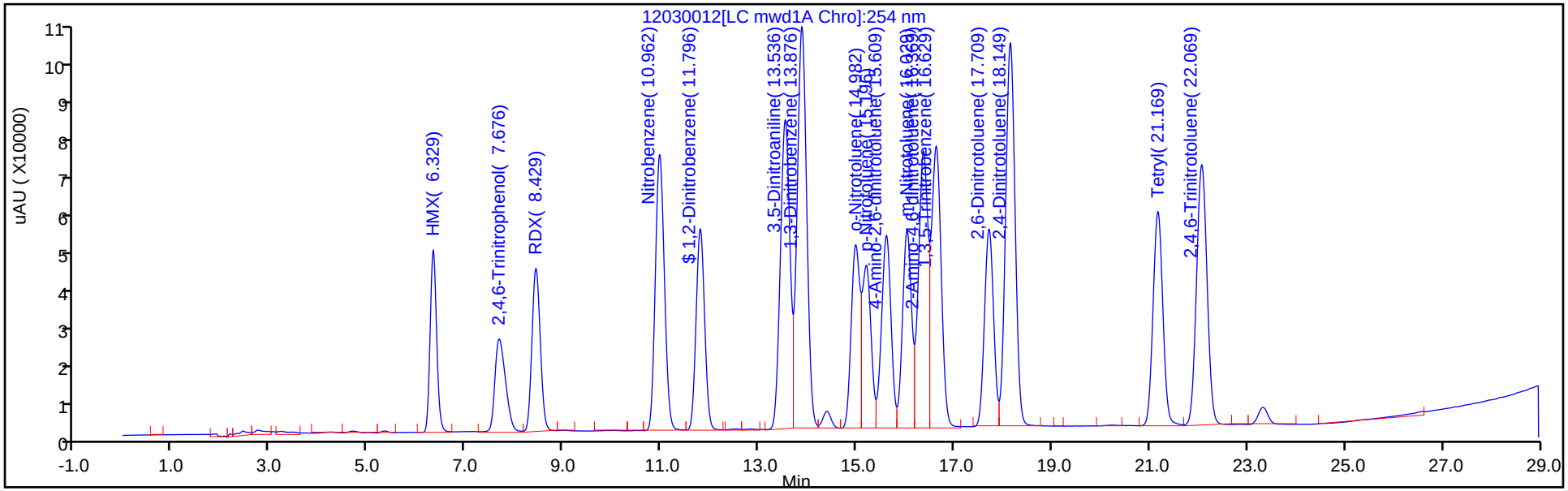
Report Date: 04-Dec-2024 17:40:50 Chrom Revision: 2.3 12-Nov-2024 16:55:22

Eurofins Denver

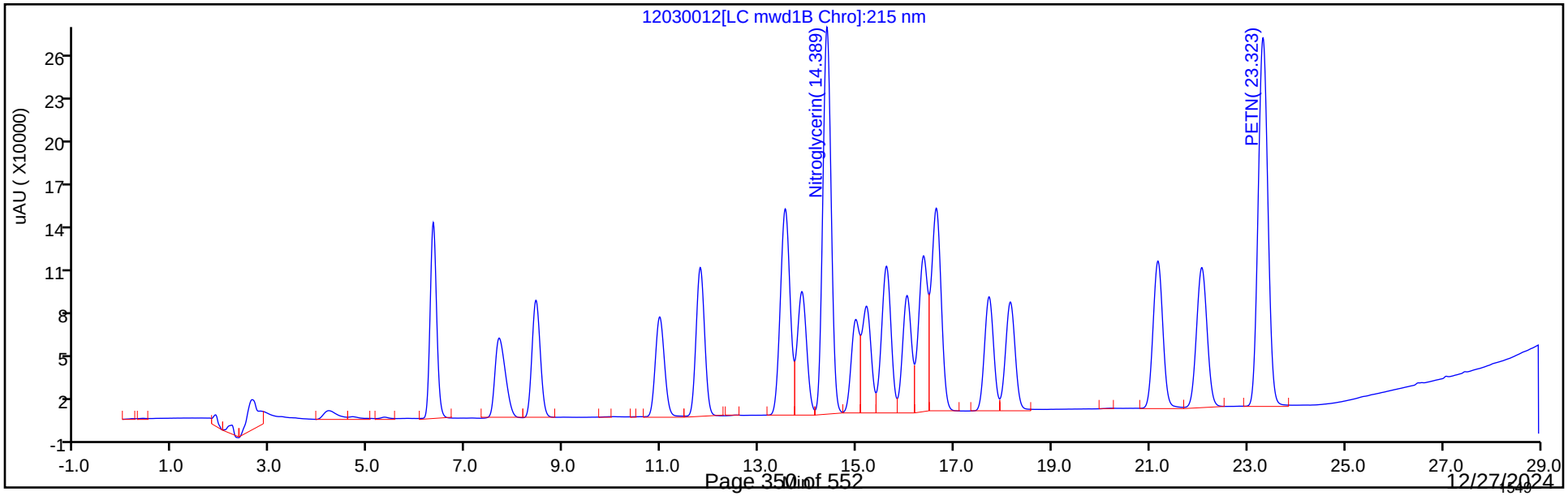
Data File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030012.D

Injection Date:	03-Dec-2024 20:29:43	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
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030013.D
Lims ID: IC INT 8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 03-Dec-2024 21:04:40 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\20241203-140414.b\8330_X5_Luna.m
Limit Group: GCSV - 8330
Last Update: 04-Dec-2024 17:40:50 Calib Date: 04-Dec-2024 01:09:06
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030020.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC mwd1A, 254 nm
Process Host: CTX1637

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
5	HMX	1	6.362	6.364	-0.002	178105	1.00	1.01	
7	2,4,6-Trinitrophenol	1	7.789	7.858	-0.069	146466	1.00	0.9786	
8	RDX	1	8.476	8.484	-0.008	204769	1.00	0.9829	
9	Nitrobenzene	1	11.009	11.011	-0.002	371635	1.00	0.9698	
$ 10	1,2-Dinitrobenzene	1	11.835	11.838	-0.003	258514	1.00	0.9645	
11	3,5-Dinitroaniline	1	13.582	13.584	-0.002	447267	1.00	1.00	
12	1,3-Dinitrobenzene	1	13.915	13.918	-0.003	572216	1.00	0.9654	
13	Nitroglycerin	2	14.415	14.424	-0.009	1259485	10.0	9.75	
14	o-Nitrotoluene	1	15.009	15.018	-0.009	238401	1.00	0.9570	
16	p-Nitrotoluene	1	15.235	15.238	-0.003	207659	1.00	0.9852	
17	4-Amino-2,6-dinitrotoluene	1	15.642	15.651	-0.009	274551	1.00	0.9717	
18	m-Nitrotoluene	1	16.062	16.071	-0.009	264182	1.00	0.9752	
19	2-Amino-4,6-dinitrotoluene	1	16.402	16.418	-0.016	391601	1.00	0.9885	
20	1,3,5-Trinitrobenzene	1	16.649	16.658	-0.009	404635	1.00	0.9749	
21	2,6-Dinitrotoluene	1	17.735	17.744	-0.009	269065	1.00	0.9545	
22	2,4-Dinitrotoluene	1	18.169	18.184	-0.015	545655	1.00	0.99	
23	Tetryl	1	21.189	21.204	-0.015	313080	1.00	0.9639	
24	2,4,6-Trinitrotoluene	1	22.089	22.104	-0.015	411674	1.00	0.9857	
25	PETN	2	23.329	23.351	-0.022	1391387	10.0	10.1	

Reagents:

8330IntermStk_00082 Amount Added: 100.00 Units: uL

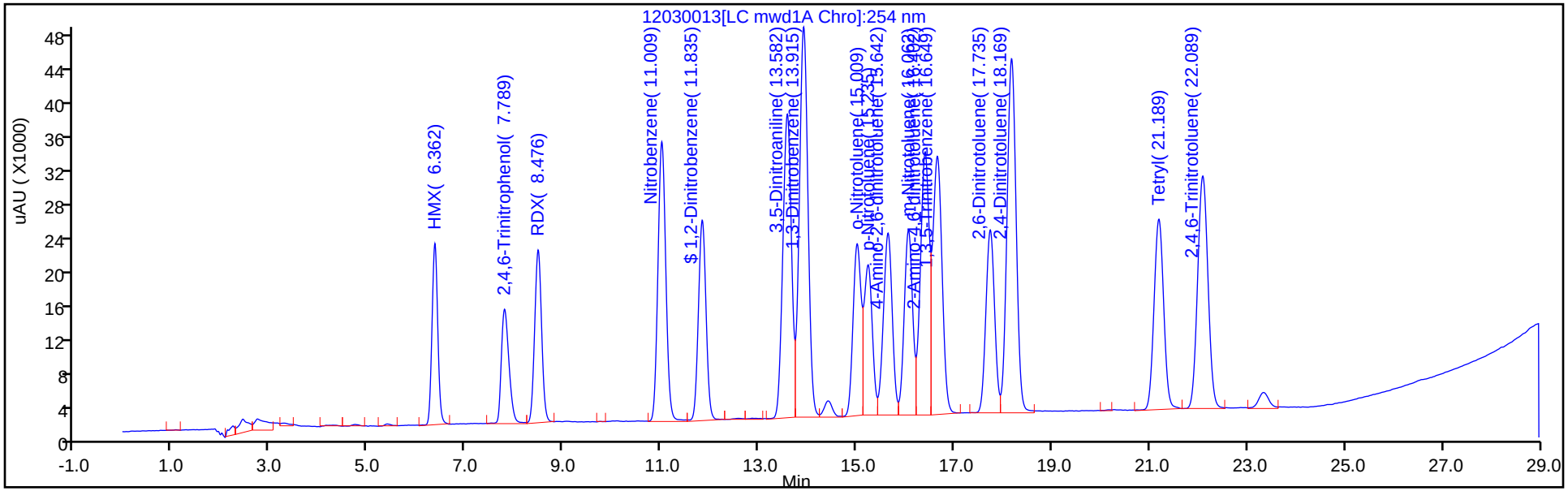
Report Date: 04-Dec-2024 17:40:50 Chrom Revision: 2.3 12-Nov-2024 16:55:22

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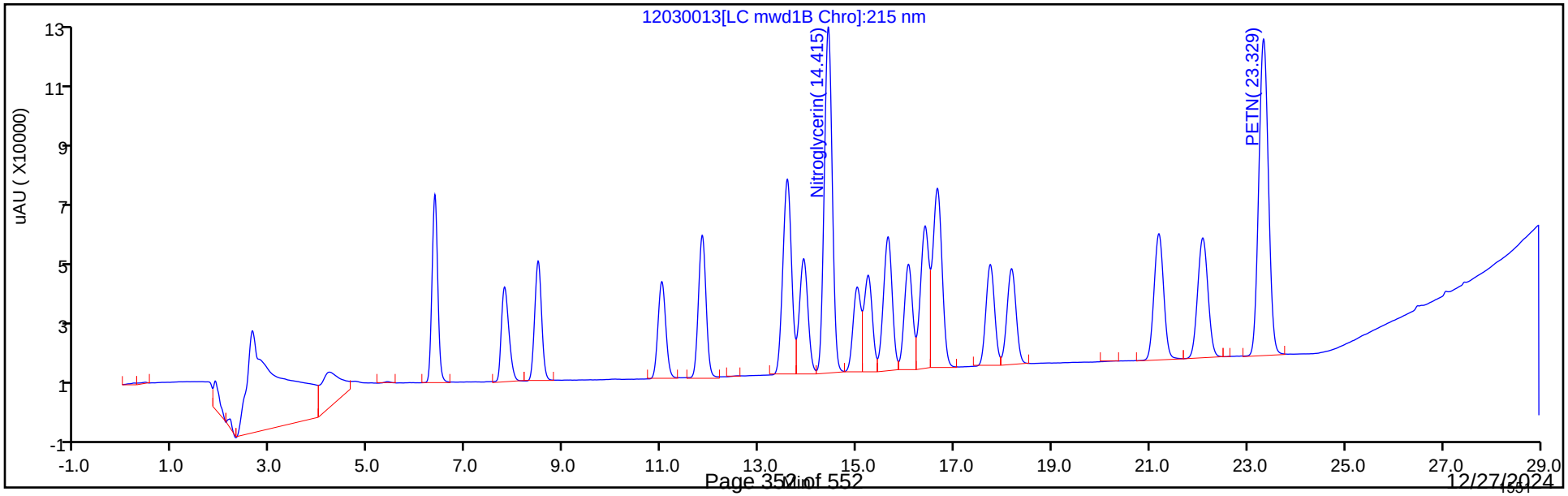
Data File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030013.D

Injection Date:	03-Dec-2024 21:04:40	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



12/27/2024
5:54:56 AM

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Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030014.D
Lims ID: IC INT 7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 03-Dec-2024 21:39:35 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\20241203-140414.b\8330_X5_Luna.m
Limit Group: GCSV - 8330
Last Update: 04-Dec-2024 17:40:51 Calib Date: 04-Dec-2024 01:09:06
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030020.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC mwd1A, 254 nm
Process Host: CTX1637

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
5	HMX	1	6.359	6.364	-0.005	125630	0.7000	0.7093	
7	2,4,6-Trinitrophenol	1	7.813	7.858	-0.045	103599	0.7000	0.6930	
8	RDX	1	8.473	8.484	-0.011	145194	0.7000	0.6969	
9	Nitrobenzene	1	11.006	11.011	-0.005	261464	0.7000	0.6823	
$ 10	1,2-Dinitrobenzene	1	11.833	11.838	-0.005	181877	0.7000	0.6786	
11	3,5-Dinitroaniline	1	13.579	13.584	-0.005	315100	0.7000	0.7027	
12	1,3-Dinitrobenzene	1	13.913	13.918	-0.005	402444	0.7000	0.6790	
13	Nitroglycerin	2	14.413	14.424	-0.011	887274	7.00	6.87	
14	o-Nitrotoluene	1	15.006	15.018	-0.012	169808	0.7000	0.6816	
16	p-Nitrotoluene	1	15.233	15.238	-0.005	145612	0.7000	0.6908	
17	4-Amino-2,6-dinitrotoluene	1	15.639	15.651	-0.012	193817	0.7000	0.6860	
18	m-Nitrotoluene	1	16.059	16.071	-0.012	186045	0.7000	0.6868	
19	2-Amino-4,6-dinitrotoluene	1	16.399	16.418	-0.019	280026	0.7000	0.7069	
20	1,3,5-Trinitrobenzene	1	16.653	16.658	-0.005	281812	0.7000	0.6790	
21	2,6-Dinitrotoluene	1	17.733	17.744	-0.011	189159	0.7000	0.6711	
22	2,4-Dinitrotoluene	1	18.166	18.184	-0.018	384128	0.7000	0.6992	
23	Tetryl	1	21.186	21.204	-0.018	221644	0.7000	0.6824	
24	2,4,6-Trinitrotoluene	1	22.079	22.104	-0.025	290822	0.7000	0.6964	
25	PETN	2	23.326	23.351	-0.025	979682	7.00	7.10	

Reagents:

8330IntermStk_00082 Amount Added: 70.00 Units: uL

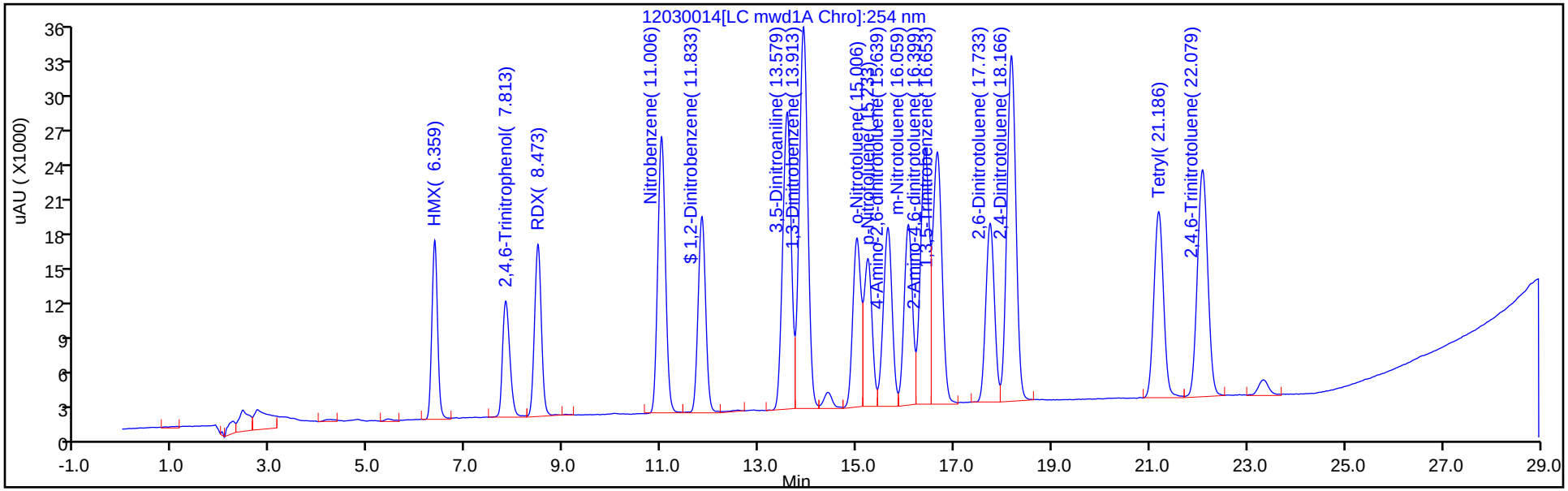
Report Date: 04-Dec-2024 17:40:51 Chrom Revision: 2.3 12-Nov-2024 16:55:22

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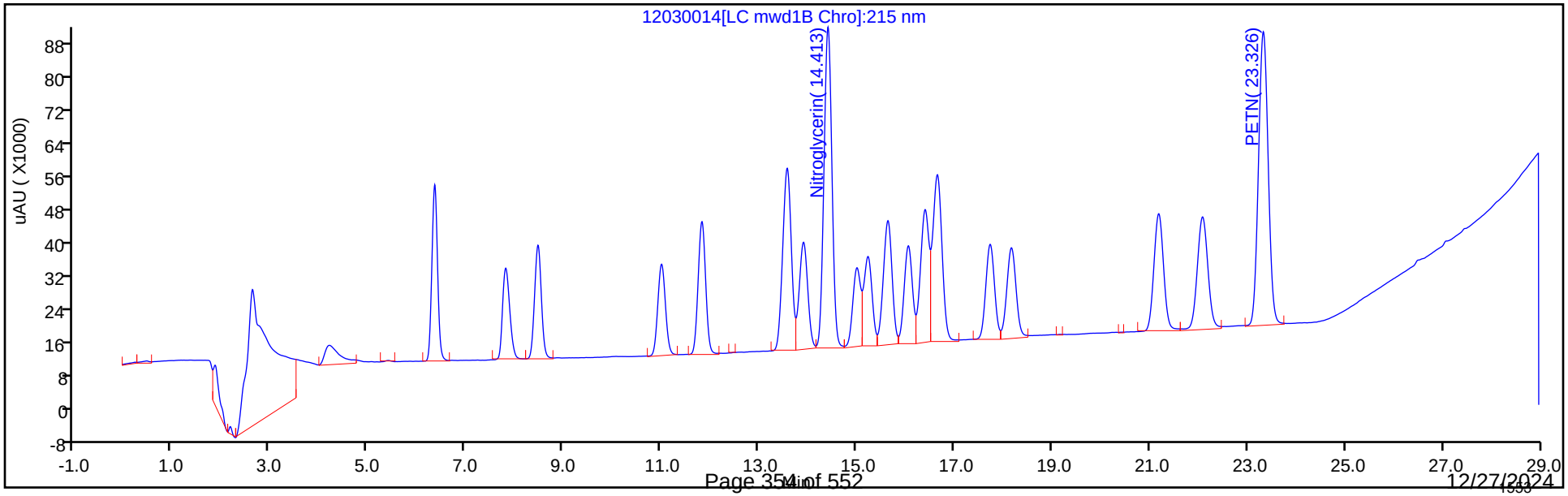
Data File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030014.D

Injection Date:	03-Dec-2024 21:39:35	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



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5:54:56 AM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030015.D
Lims ID: IC INT 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 03-Dec-2024 22:14:30 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\20241203-140414.b\8330_X5_Luna.m
Limit Group: GCSV - 8330
Last Update: 04-Dec-2024 17:40:52 Calib Date: 04-Dec-2024 01:09:06
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030020.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC mwd1A, 254 nm
Process Host: CTX1637

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	5 HMX	1	6.358	6.364	-0.006	72242	0.4000	0.4079	
	7 2,4,6-Trinitrophenol	1	7.838	7.858	-0.020	59847	0.4000	0.4016	
	8 RDX	1	8.478	8.484	-0.006	84258	0.4000	0.4044	
	9 Nitrobenzene	1	11.011	11.011	0.000	150033	0.4000	0.3915	
$	10 1,2-Dinitrobenzene	1	11.831	11.838	-0.007	105451	0.4000	0.3934	
	11 3,5-Dinitroaniline	1	13.578	13.584	-0.006	179046	0.4000	0.3988	
	12 1,3-Dinitrobenzene	1	13.911	13.918	-0.007	231549	0.4000	0.3906	
	13 Nitroglycerin	2	14.405	14.424	-0.019	510674	4.00	3.95	
	14 o-Nitrotoluene	1	14.998	15.018	-0.020	96472	0.4000	0.3872	
	16 p-Nitrotoluene	1	15.225	15.238	-0.013	83856	0.4000	0.3978	
	17 4-Amino-2,6-dinitrotoluene	1	15.631	15.651	-0.020	110926	0.4000	0.3926	
	18 m-Nitrotoluene	1	16.051	16.071	-0.020	106948	0.4000	0.3948	
	19 2-Amino-4,6-dinitrotoluene	1	16.391	16.418	-0.027	157751	0.4000	0.3982	
	20 1,3,5-Trinitrobenzene	1	16.638	16.658	-0.020	163936	0.4000	0.3950	
	21 2,6-Dinitrotoluene	1	17.725	17.744	-0.019	107905	0.4000	0.3828	
	22 2,4-Dinitrotoluene	1	18.158	18.184	-0.026	220348	0.4000	0.4011	
	23 Tetryl	1	21.178	21.204	-0.026	126701	0.4000	0.3901	
	24 2,4,6-Trinitrotoluene	1	22.078	22.104	-0.026	167106	0.4000	0.4001	
	25 PETN	2	23.325	23.351	-0.026	564133	4.00	4.09	

Reagents:

8330IntermStk_00082 Amount Added: 40.00 Units: uL

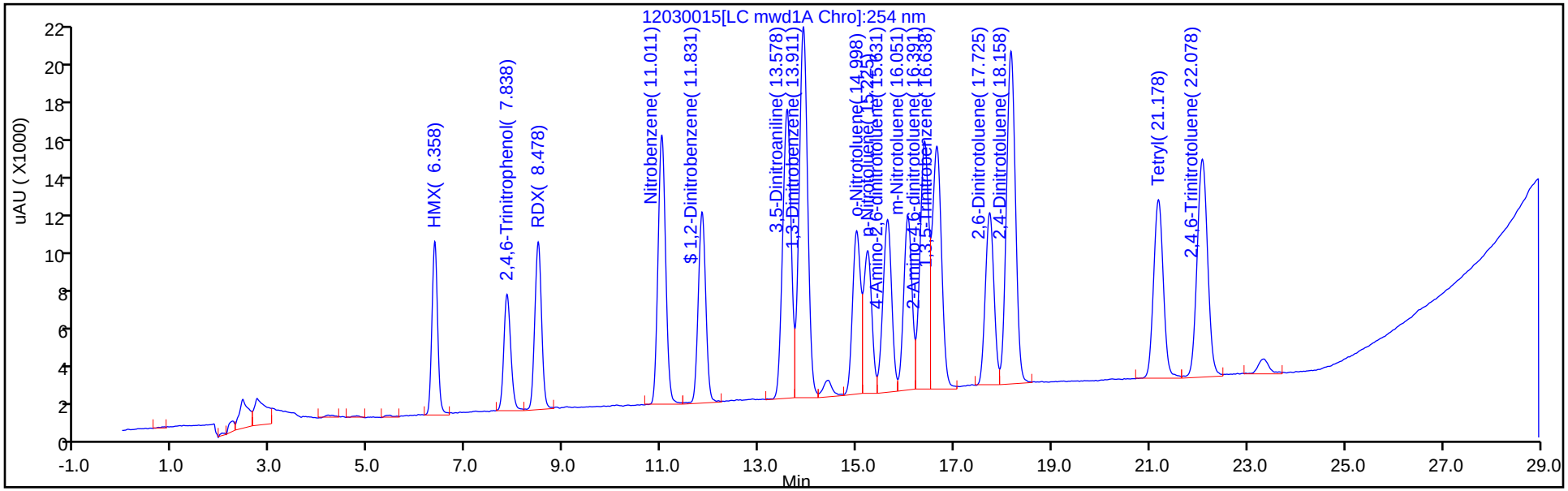
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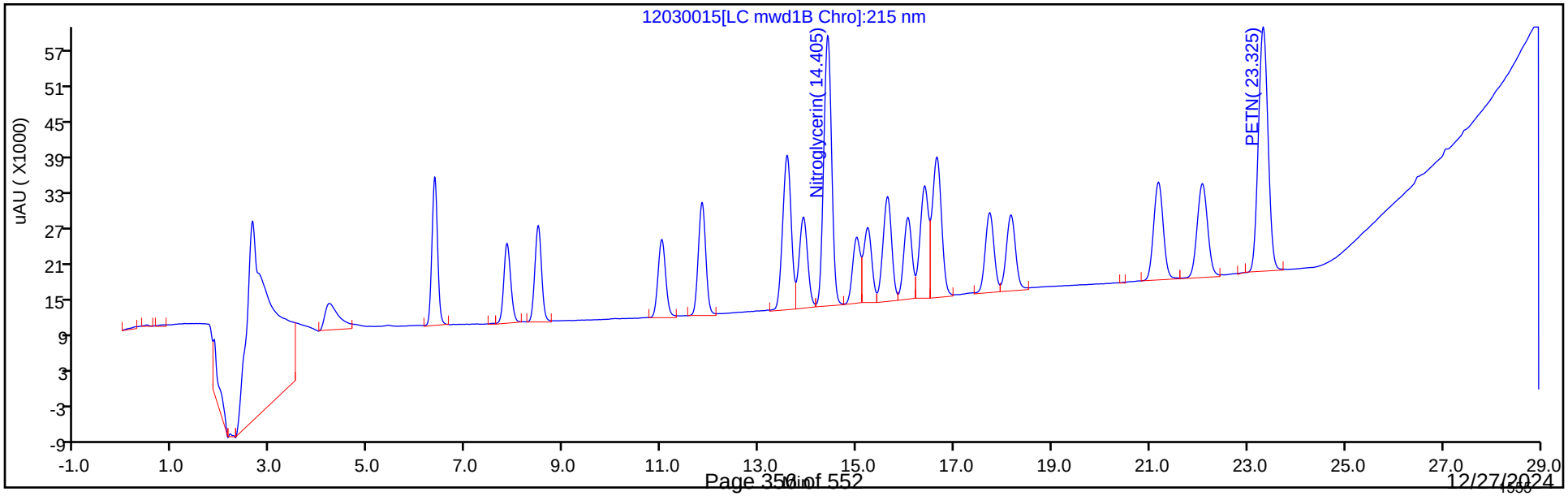
Data File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030015.D

Injection Date:	03-Dec-2024 22:14:30	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



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5:54:56 AM

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030016.D
Lims ID: IC INT 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 03-Dec-2024 22:49:25 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\20241203-140414.b\8330_X5_Luna.m
Limit Group: GCSV - 8330
Last Update: 04-Dec-2024 17:40:53 Calib Date: 04-Dec-2024 01:09:06
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030020.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC mwd1A, 254 nm
Process Host: CTX1637

First Level Reviewer: LV5D Date: 04-Dec-2024 11:36:23

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
5 HMX	1	6.364	6.364	0.000	45819	0.2500	0.2587	
7 2,4,6-Trinitrophenol	1	7.858	7.858	0.000	37424	0.2500	0.2522	
8 RDX	1	8.484	8.484	0.000	53007	0.2500	0.2544	
9 Nitrobenzene	1	11.011	11.011	0.000	94474	0.2500	0.2465	
$ 10 1,2-Dinitrobenzene	1	11.838	11.838	0.000	66043	0.2500	0.2464	
11 3,5-Dinitroaniline	1	13.584	13.584	0.000	112838	0.2500	0.2508	
12 1,3-Dinitrobenzene	1	13.918	13.918	0.000	145130	0.2500	0.2448	
13 Nitroglycerin	2	14.424	14.424	0.000	322929	2.50	2.50	
14 o-Nitrotoluene	1	15.018	15.018	0.000	59985	0.2500	0.2408	
16 p-Nitrotoluene	1	15.238	15.238	0.000	53630	0.2500	0.2544	
17 4-Amino-2,6-dinitrotoluene	1	15.651	15.651	0.000	70015	0.2500	0.2478	
18 m-Nitrotoluene	1	16.071	16.071	0.000	67516	0.2500	0.2492	
19 2-Amino-4,6-dinitrotoluene	1	16.418	16.418	0.000	101224	0.2500	0.2555	
20 1,3,5-Trinitrobenzene	1	16.658	16.658	0.000	101952	0.2500	0.2456	
21 2,6-Dinitrotoluene	1	17.744	17.744	0.000	69076	0.2500	0.2451	
22 2,4-Dinitrotoluene	1	18.184	18.184	0.000	139756	0.2500	0.2544	
23 Tetryl	1	21.204	21.204	0.000	80008	0.2500	0.2463	
24 2,4,6-Trinitrotoluene	1	22.104	22.104	0.000	106542	0.2500	0.2551	
25 PETN	2	23.351	23.351	0.000	355528	2.50	2.58	

QC Flag Legend
Processing Flags

Reagents:
8330IntermStk_00082 Amount Added: 25.00 Units: uL

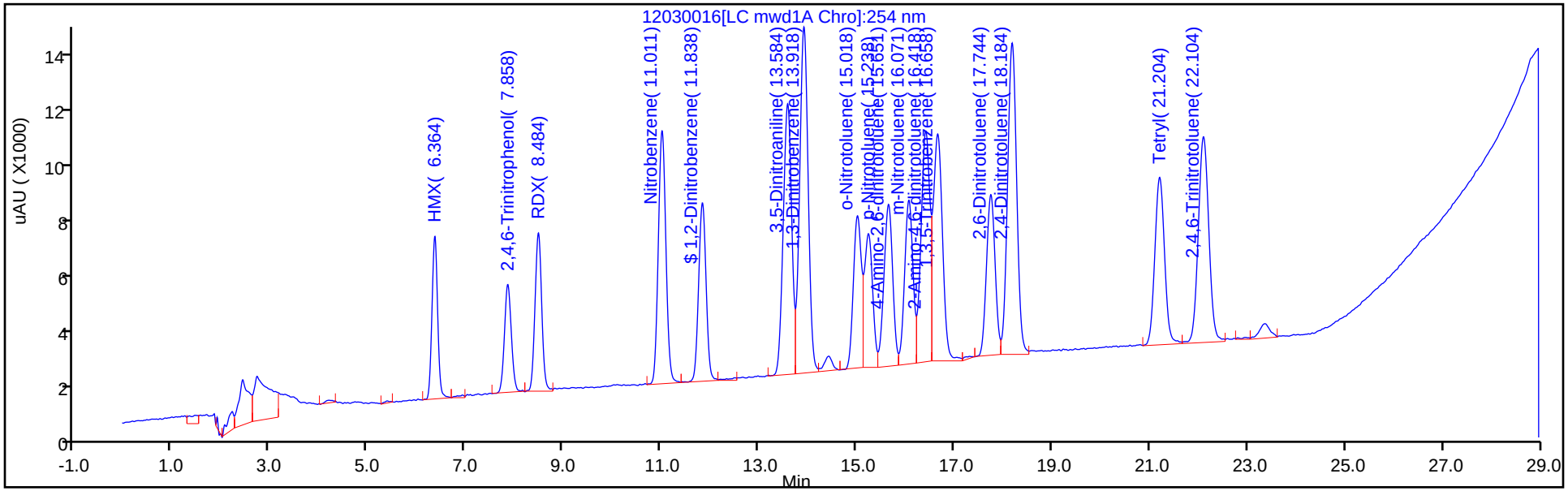
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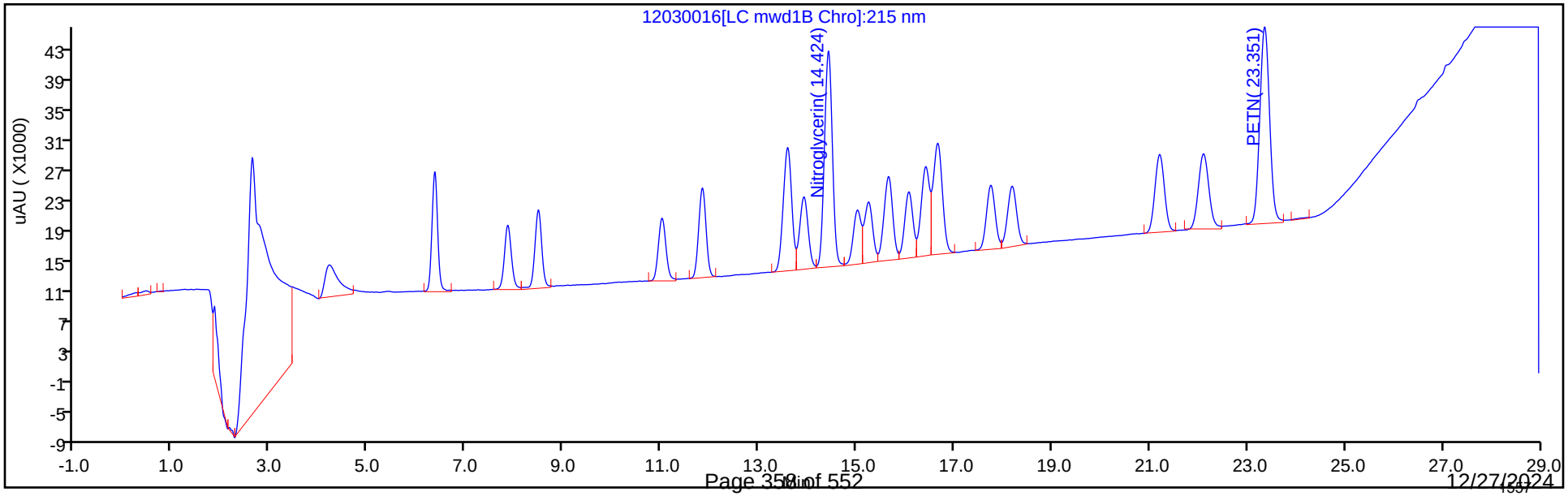
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Injection Date:	03-Dec-2024 22:49:25	Instrument ID:	CHHPLC_X5	Operator ID:	JZ
Lims ID:	IC INT 5			Worklist Smp#:	14
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		

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
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030017.D
Lims ID: IC INT 4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 03-Dec-2024 23:24:18 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\20241203-140414.b\8330_X5_Luna.m
Limit Group: GCSV - 8330
Last Update: 04-Dec-2024 17:40:53 Calib Date: 04-Dec-2024 01:09:06
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030020.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC mwd1A, 254 nm
Process Host: CTX1637

First Level Reviewer: LV5D Date: 04-Dec-2024 11:35:27

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
5 HMX	1	6.372	6.364	0.008	19169	0.1000	0.1082	
7 2,4,6-Trinitrophenol	1	7.899	7.858	0.041	15237	0.1000	0.1044	
8 RDX	1	8.499	8.484	0.015	21452	0.1000	0.1030	
9 Nitrobenzene	1	11.025	11.011	0.014	38121	0.1000	0.0995	
$ 10 1,2-Dinitrobenzene	1	11.852	11.838	0.014	26882	0.1000	0.1003	
11 3,5-Dinitroaniline	1	13.599	13.584	0.015	45231	0.1000	0.0998	
12 1,3-Dinitrobenzene	1	13.925	13.918	0.007	58714	0.1000	0.0991	
13 Nitroglycerin	2	14.425	14.424	0.001	129436	1.00	1.00	
14 o-Nitrotoluene	1	15.025	15.018	0.007	24873	0.1000	0.0998	
16 p-Nitrotoluene	1	15.245	15.238	0.007	21595	0.1000	0.1025	
17 4-Amino-2,6-dinitrotoluene	1	15.652	15.651	0.001	28817	0.1000	0.1020	
18 m-Nitrotoluene	1	16.072	16.071	0.001	27278	0.1000	0.1007	
19 2-Amino-4,6-dinitrotoluene	1	16.419	16.418	0.001	40572	0.1000	0.1024	
20 1,3,5-Trinitrobenzene	1	16.665	16.658	0.007	42524	0.1000	0.1025	
21 2,6-Dinitrotoluene	1	17.752	17.744	0.008	28953	0.1000	0.1027	
22 2,4-Dinitrotoluene	1	18.192	18.184	0.008	57668	0.1000	0.1050	
23 Tetryl	1	21.219	21.204	0.015	33395	0.1000	0.1028	
24 2,4,6-Trinitrotoluene	1	22.119	22.104	0.015	43721	0.1000	0.1047	
25 PETN	2	23.365	23.351	0.014	138072	1.00	1.00	M

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00082 Amount Added: 10.00 Units: uL

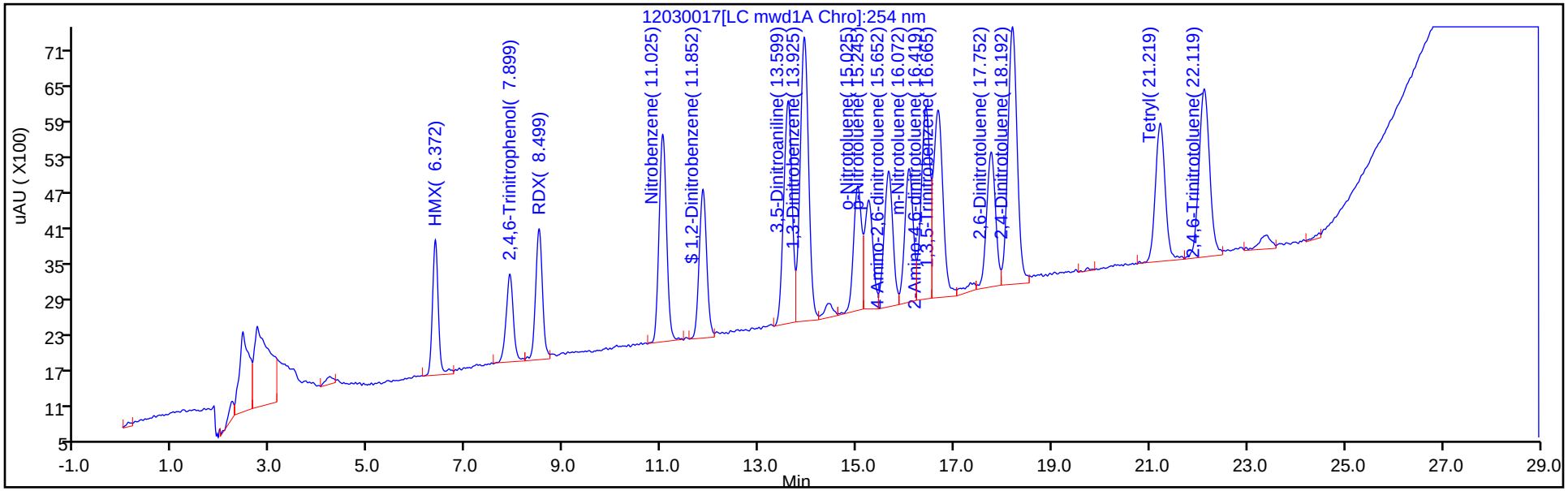
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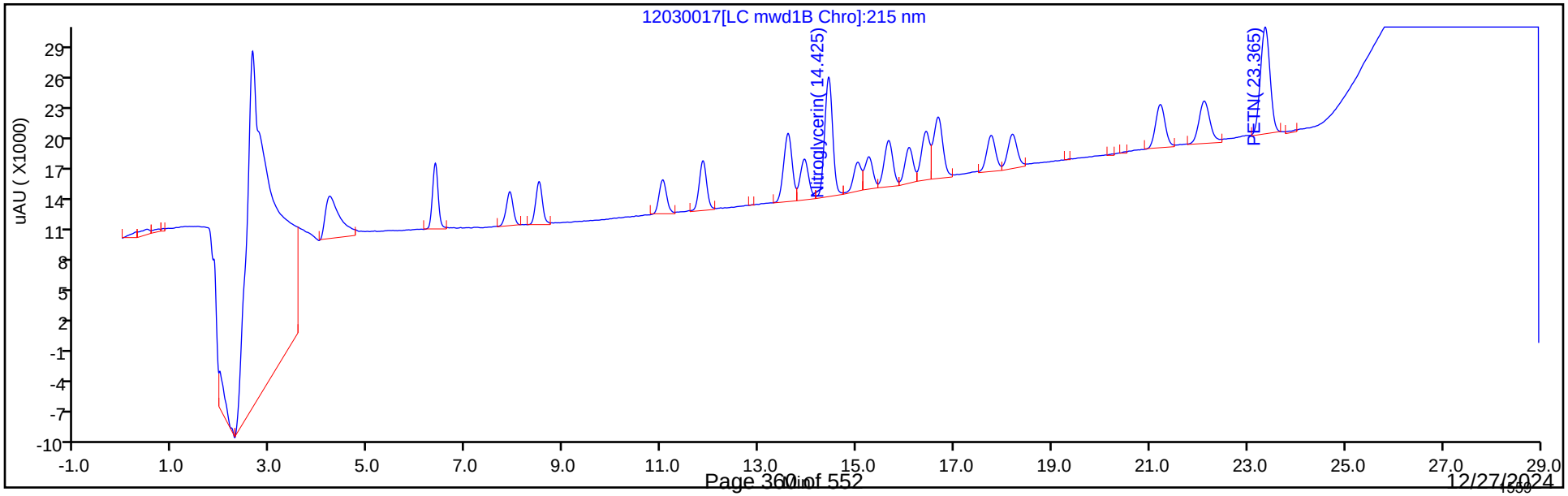
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Injection Date:	03-Dec-2024 23:24:18	Instrument ID:	CHHPLC_X5	Operator ID:	JZ
Lims ID:	IC INT 4			Worklist Smp#:	15
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		

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



Manual Integration/User Assign Peak Report

Eurofins Denver

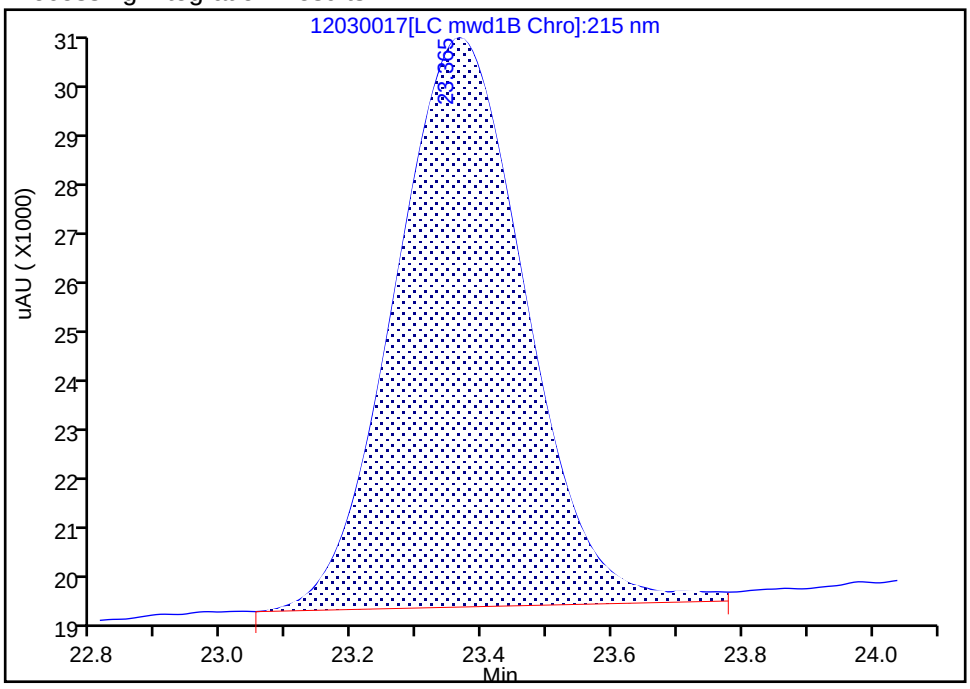
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Lims ID:	IC INT 4				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1B, 215 nm		

25 PETN, CAS: 78-11-5

Signal: 1

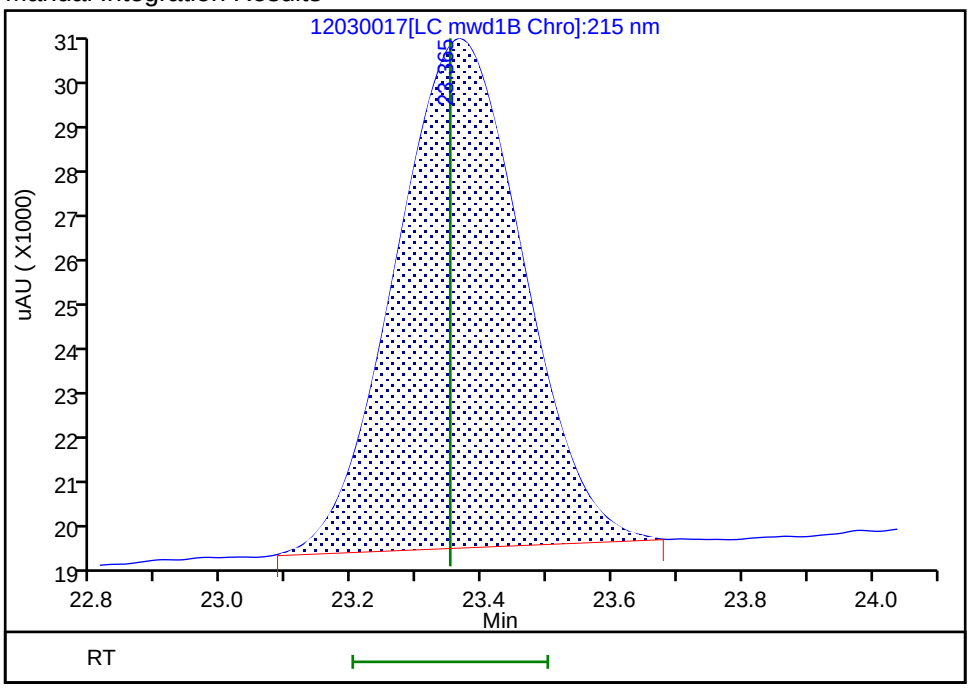
Processing Integration Results

RT: 23.37
Area: 143438
Amount: 1.035094
Amount Units: ug/ml



Manual Integration Results

RT: 23.37
Area: 138072
Amount: 1.000677
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:35:25 -07:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030018.D
Lims ID: IC INT 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 03-Dec-2024 23:59:16 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\20241203-140414.b\8330_X5_Luna.m
Limit Group: GCSV - 8330
Last Update: 04-Dec-2024 17:40:54 Calib Date: 04-Dec-2024 01:09:06
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030020.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC mwd1A, 254 nm
Process Host: CTX1637

First Level Reviewer: LV5D Date: 04-Dec-2024 11:16:25

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
5 HMX	1	6.376	6.364	0.012	8842	0.0500	0.0499	M
7 2,4,6-Trinitrophenol	1	7.902	7.858	0.044	7079	0.0500	0.0500	M
8 RDX	1	8.496	8.484	0.012	10227	0.0500	0.0491	M
9 Nitrobenzene	1	11.035	11.011	0.024	19540	0.0500	0.0510	
$ 10 1,2-Dinitrobenzene	1	11.862	11.838	0.024	12665	0.0500	0.0473	M
11 3,5-Dinitroaniline	1	13.609	13.584	0.025	23100	0.0500	0.0503	
12 1,3-Dinitrobenzene	1	13.942	13.918	0.024	30022	0.0500	0.0506	
13 Nitroglycerin	2	14.442	14.424	0.018	66308	0.5000	0.5135	
14 o-Nitrotoluene	1	15.042	15.018	0.024	12591	0.0500	0.0505	M
16 p-Nitrotoluene	1	15.262	15.238	0.024	11083	0.0500	0.0526	M
17 4-Amino-2,6-dinitrotoluene	1	15.669	15.651	0.018	14433	0.0500	0.0511	M
18 m-Nitrotoluene	1	16.095	16.071	0.024	13893	0.0500	0.0513	M
19 2-Amino-4,6-dinitrotoluene	1	16.435	16.418	0.017	20438	0.0500	0.0516	M
20 1,3,5-Trinitrobenzene	1	16.682	16.658	0.024	20832	0.0500	0.0502	M
21 2,6-Dinitrotoluene	1	17.769	17.744	0.025	14616	0.0500	0.0519	M
22 2,4-Dinitrotoluene	1	18.202	18.184	0.018	27636	0.0500	0.0503	M
23 Tetryl	1	21.222	21.204	0.018	16645	0.0500	0.0512	
24 2,4,6-Trinitrotoluene	1	22.116	22.104	0.012	20885	0.0500	0.0500	M
25 PETN	2	23.369	23.351	0.018	68955	0.5000	0.4998	M

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00082 Amount Added: 5.00 Units: uL

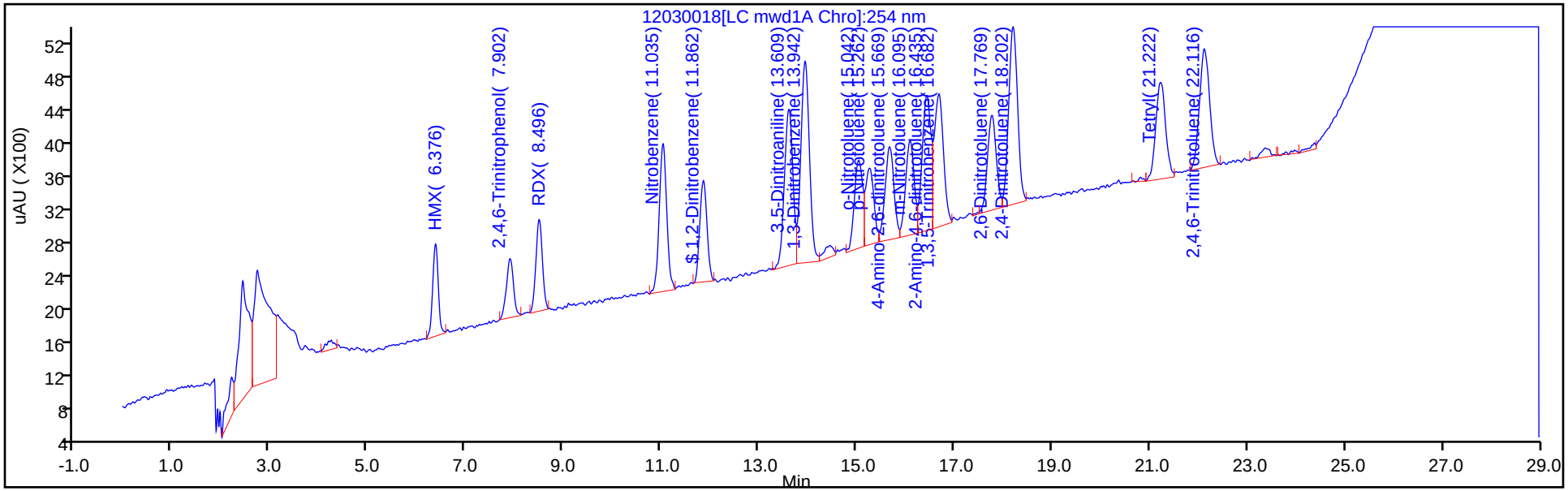
Report Date: 04-Dec-2024 17:40:54 Chrom Revision: 2.3 12-Nov-2024 16:55:22

Eurofins Denver

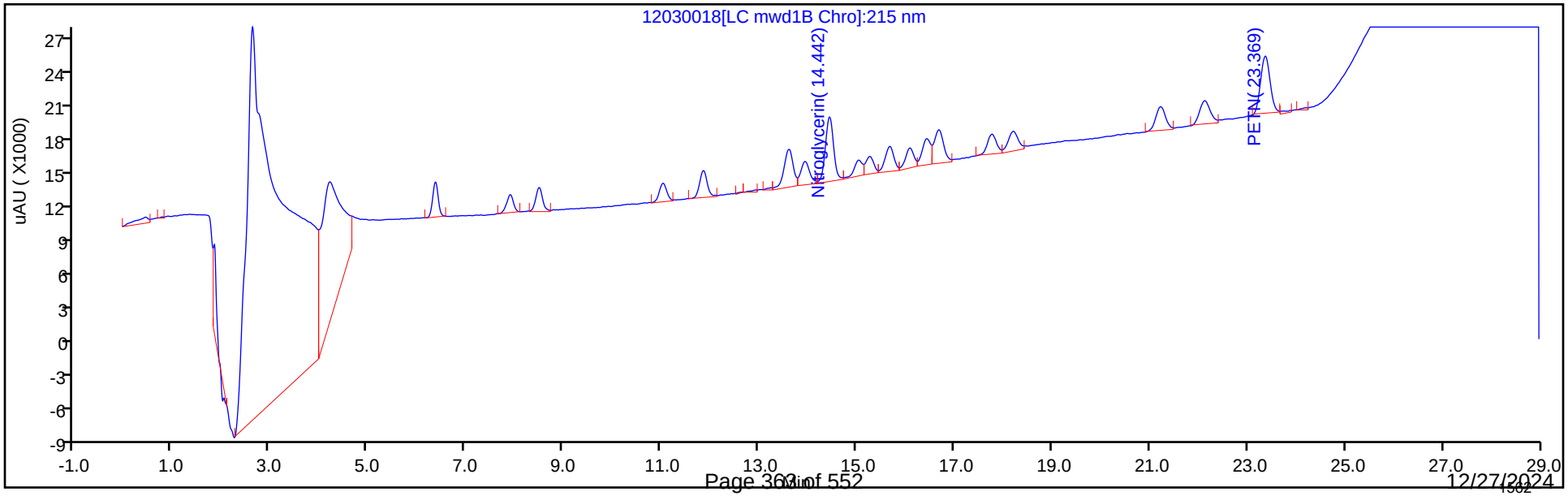
Data File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030018.D

Injection Date:	03-Dec-2024 23:59:16	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



Manual Integration/User Assign Peak Report

Eurofins Denver

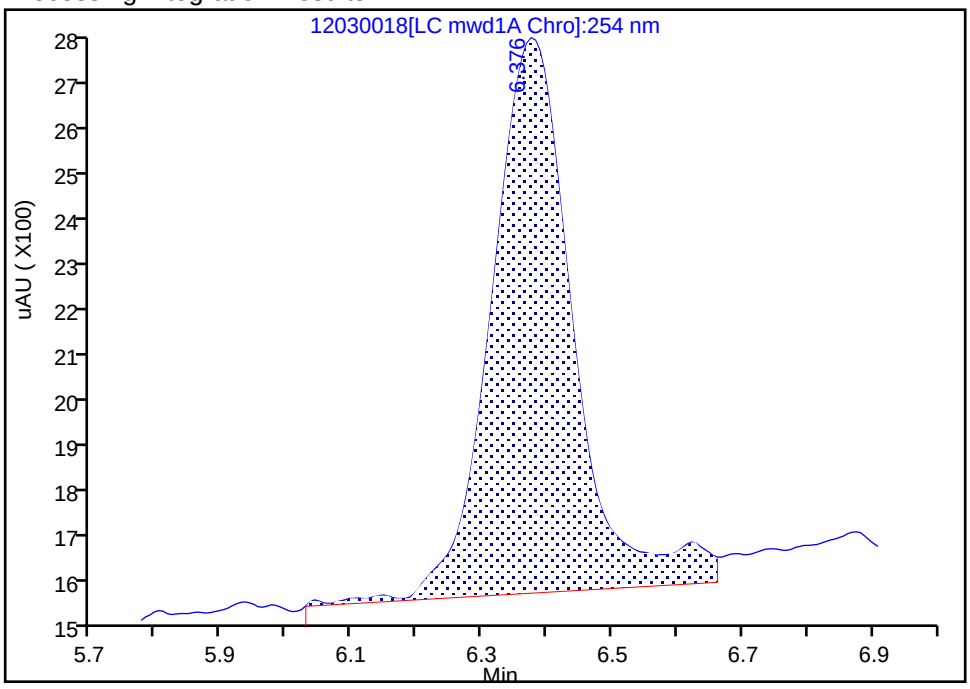
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Lims ID:	IC INT 3				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1A, 254 nm		

5 HMX, CAS: 2691-41-0

Signal: 1

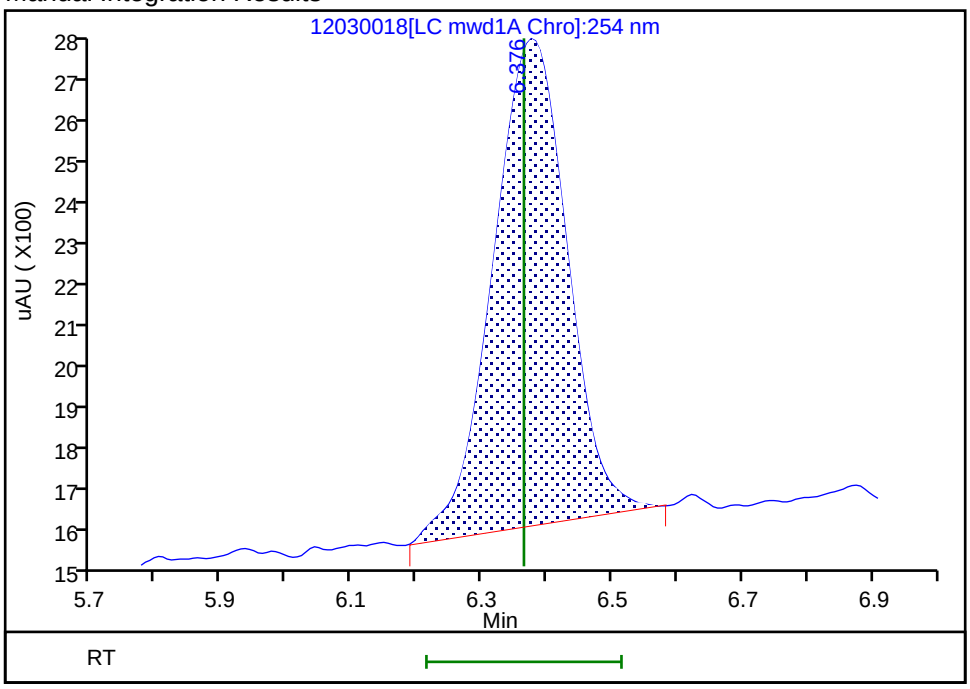
Processing Integration Results

RT: 6.38
Area: 10027
Amount: 0.050746
Amount Units: ug/ml



Manual Integration Results

RT: 6.38
Area: 8842
Amount: 0.049922
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:15:33 -07:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

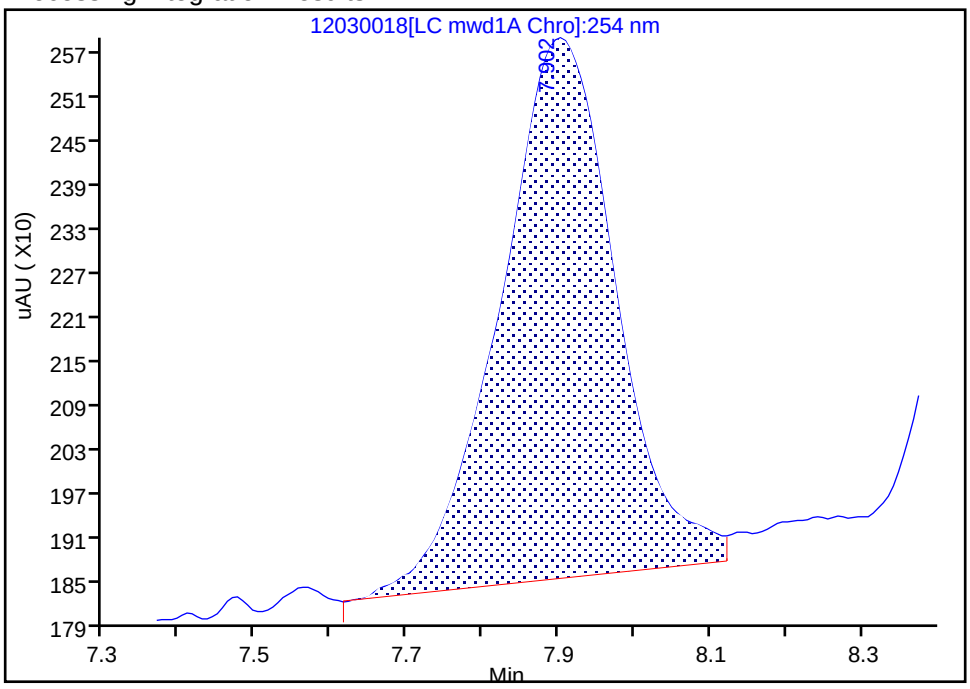
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Injection Date:	03-Dec-2024 23:59:16	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 3				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1A, 254 nm		

7 2,4,6-Trinitrophenol, CAS: 88-89-1

Signal: 1

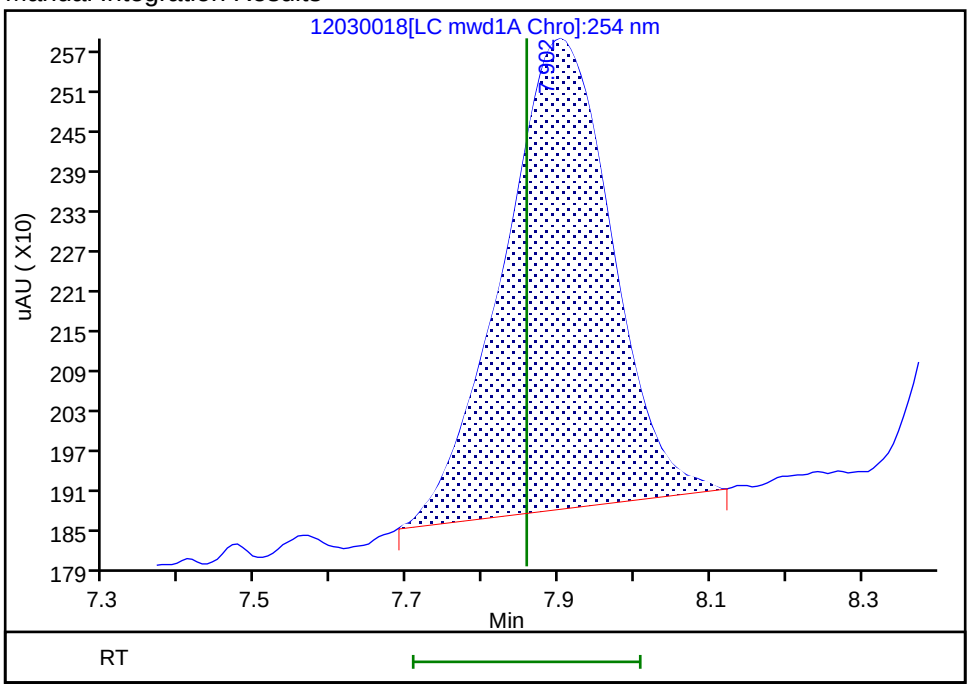
Processing Integration Results

RT: 7.90
Area: 7871
Amount: 0.045980
Amount Units: ug/ml



Manual Integration Results

RT: 7.90
Area: 7079
Amount: 0.050019
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:16:23 -07:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

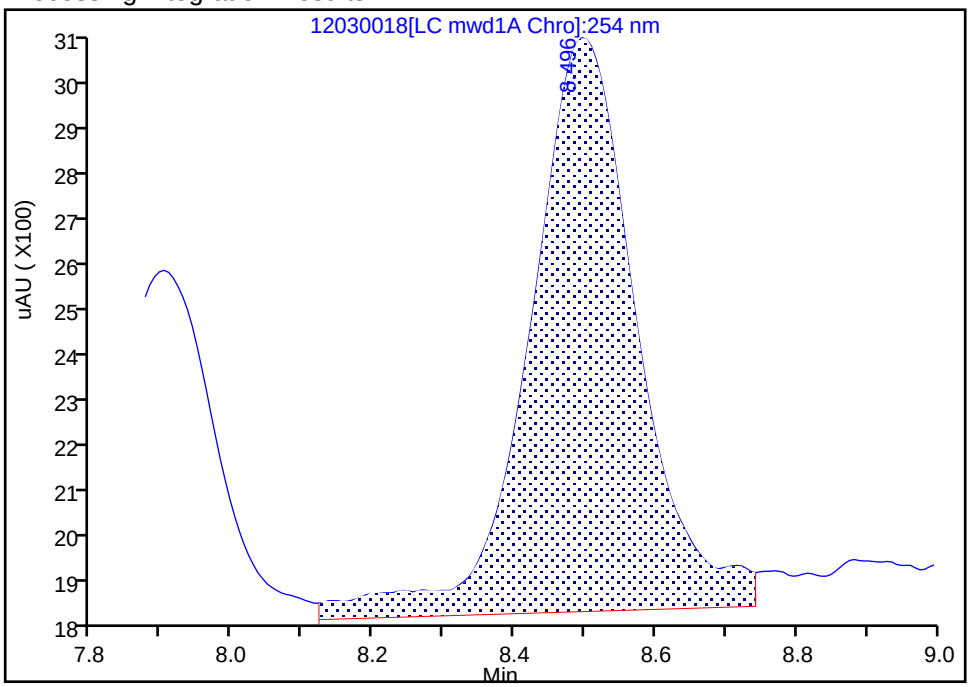
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Injection Date:	03-Dec-2024 23:59:16	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 3				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1A, 254 nm		

8 RDX, CAS: 121-82-4

Signal: 1

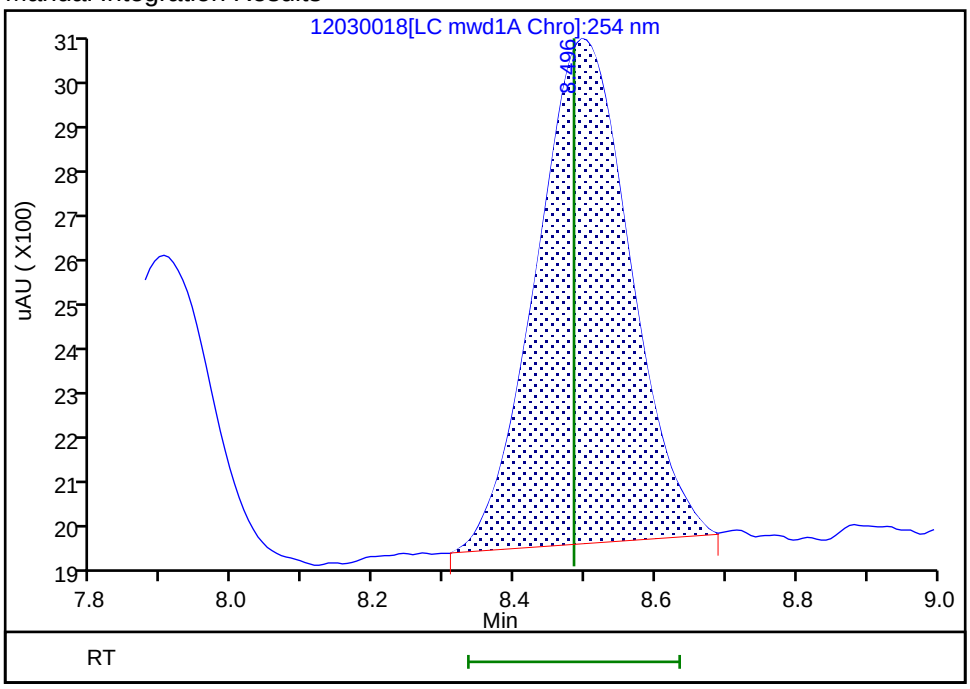
Processing Integration Results

RT: 8.50
Area: 12470
Amount: 0.050903
Amount Units: ug/ml



Manual Integration Results

RT: 8.50
Area: 10227
Amount: 0.049089
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:16:21 -07:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

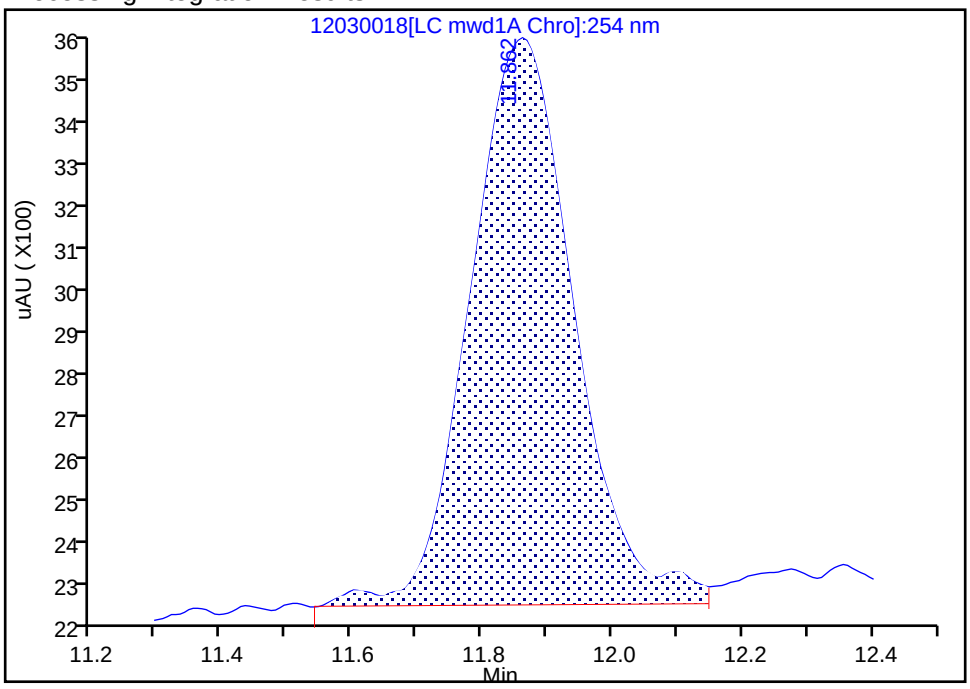
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Injection Date:	03-Dec-2024 23:59:16	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 3				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1A, 254 nm		

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

Signal: 1

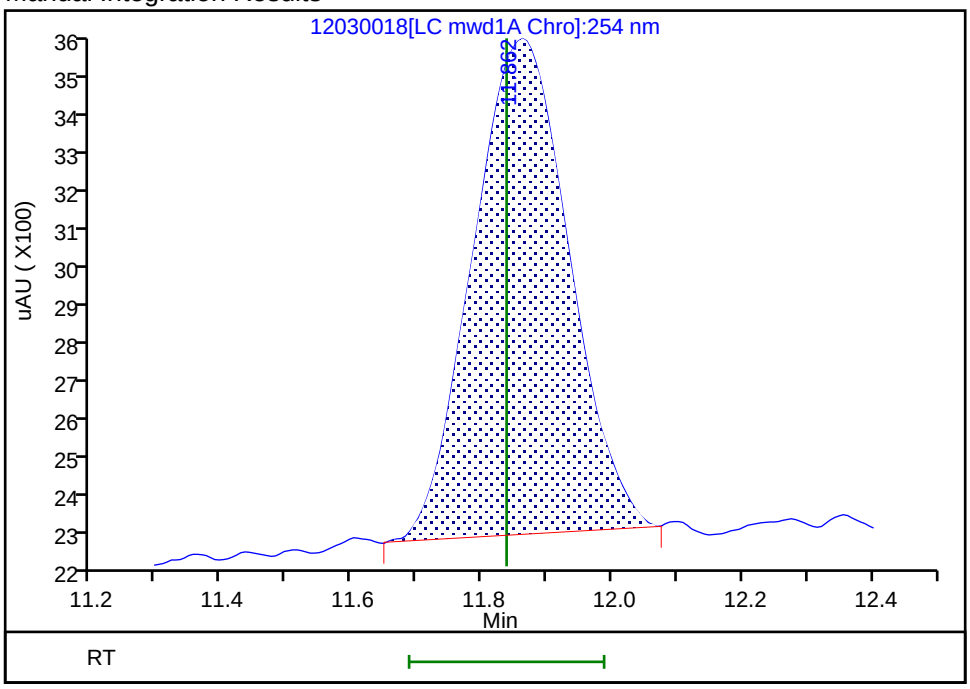
Processing Integration Results

RT: 11.86
Area: 14139
Amount: 0.050183
Amount Units: ug/ml



Manual Integration Results

RT: 11.86
Area: 12665
Amount: 0.047254
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:15:52 -07:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

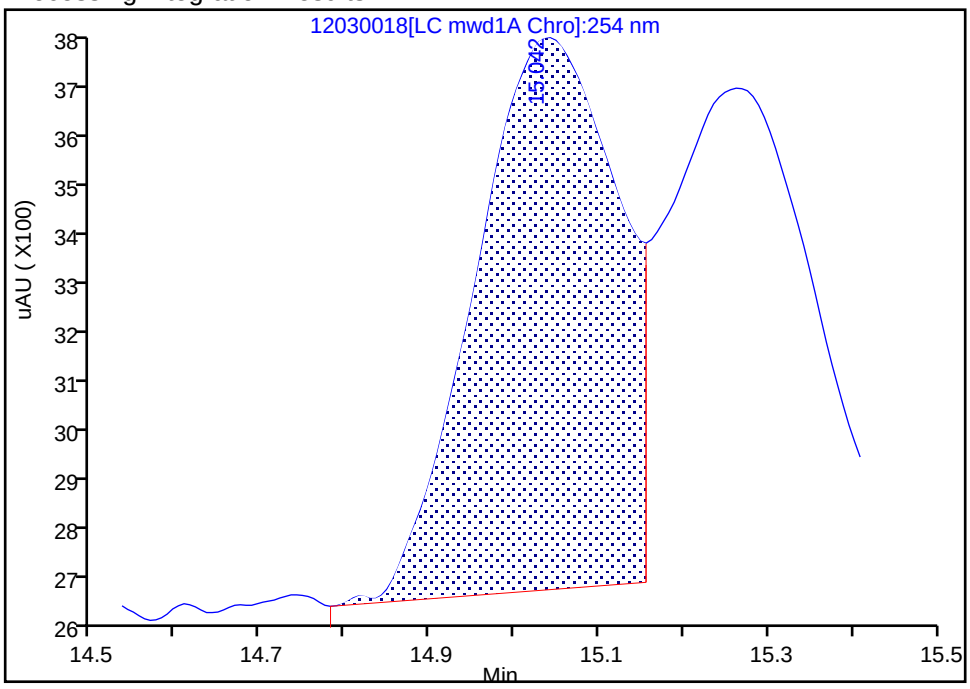
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Injection Date:	03-Dec-2024 23:59:16	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 3				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1A, 254 nm		

14 o-Nitrotoluene, CAS: 88-72-2

Signal: 1

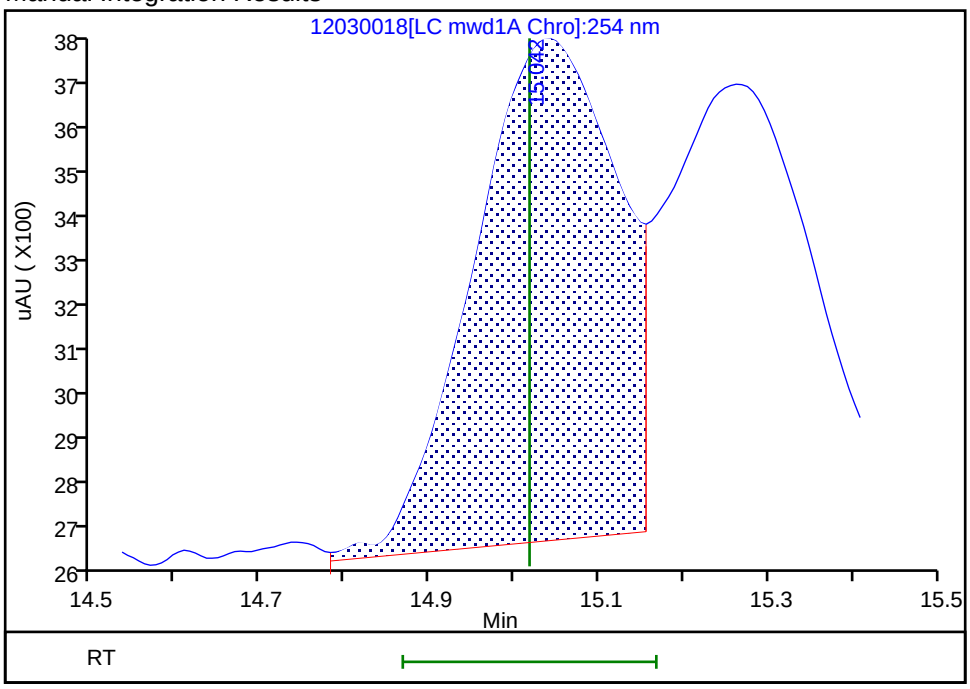
Processing Integration Results

RT: 15.04
Area: 12400
Amount: 0.044817
Amount Units: ug/ml



Manual Integration Results

RT: 15.04
Area: 12591
Amount: 0.050541
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:16:00 -07:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

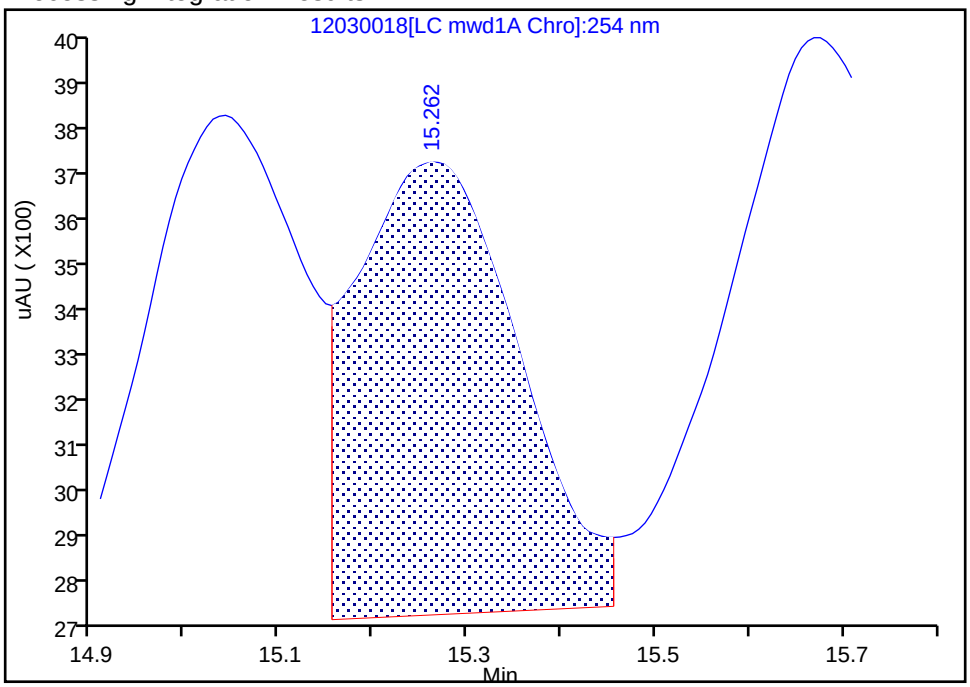
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Injection Date:	03-Dec-2024 23:59:16	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 3				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1A, 254 nm		

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

Signal: 1

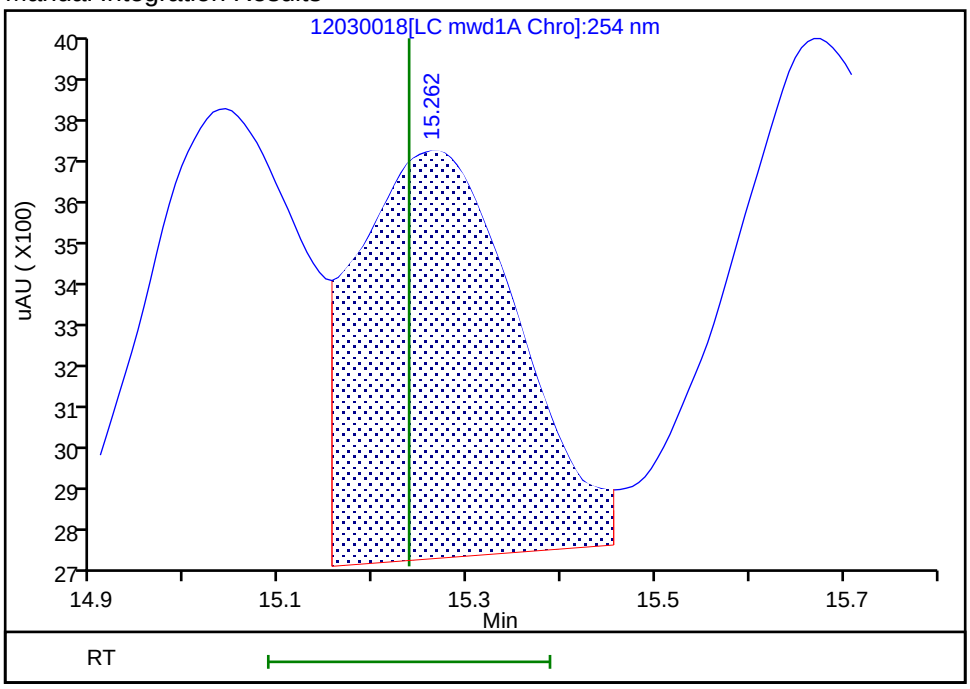
Processing Integration Results

RT: 15.26
Area: 11218
Amount: 0.054255
Amount Units: ug/ml



Manual Integration Results

RT: 15.26
Area: 11083
Amount: 0.052582
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:16:00 -07:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

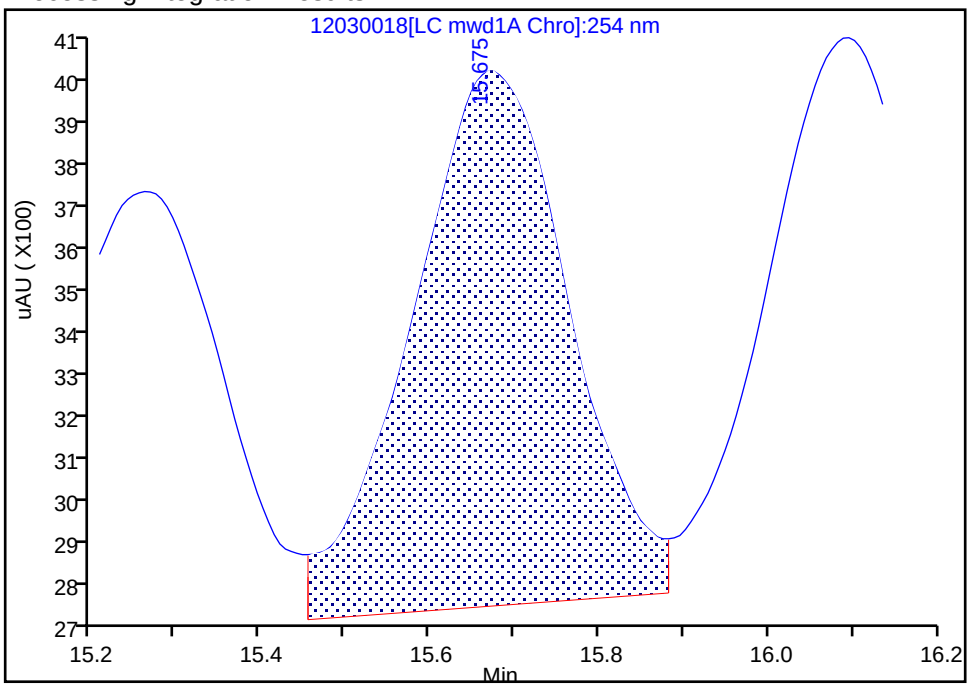
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Injection Date:	03-Dec-2024 23:59:16	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 3				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1A, 254 nm		

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

Signal: 1

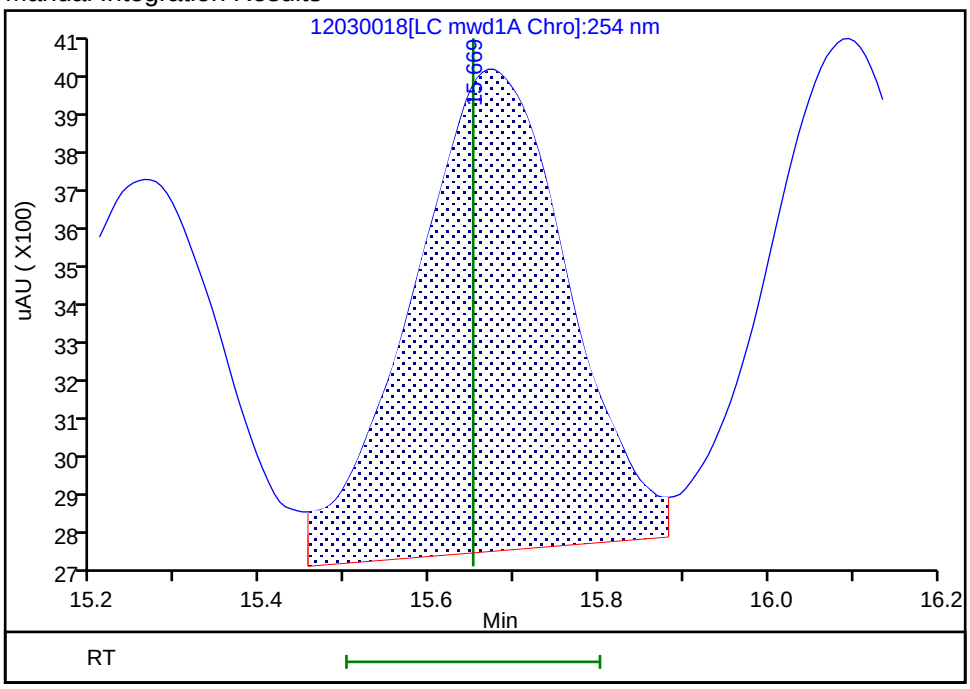
Processing Integration Results

RT: 15.68
Area: 14958
Amount: 0.051999
Amount Units: ug/ml



Manual Integration Results

RT: 15.67
Area: 14433
Amount: 0.051082
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:16:00 -07:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

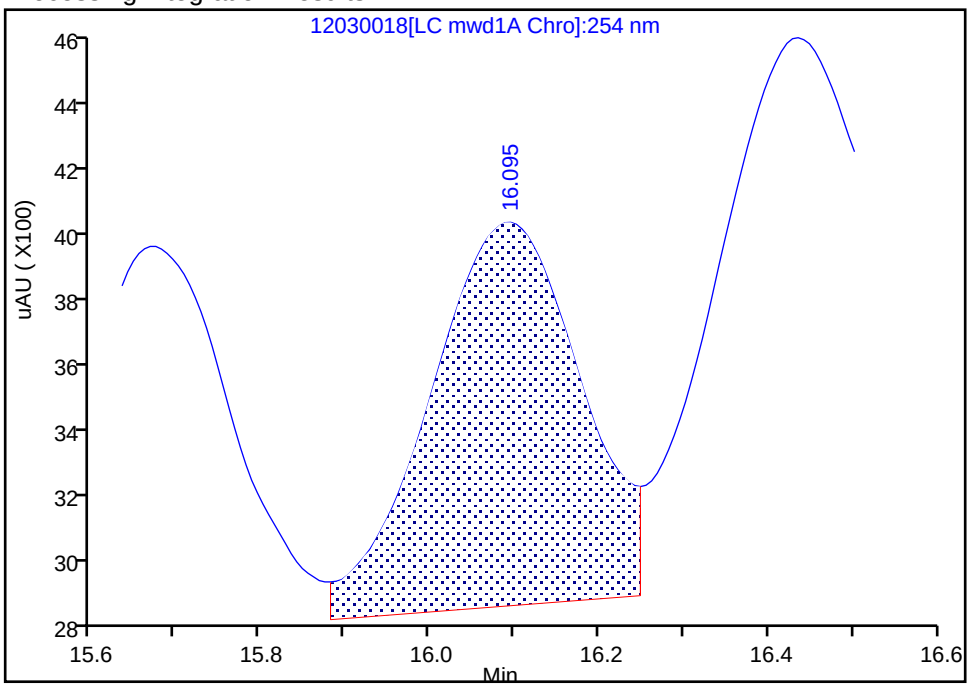
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Lims ID:	IC INT 3				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1A, 254 nm		

18 m-Nitrotoluene, CAS: 99-08-1

Signal: 1

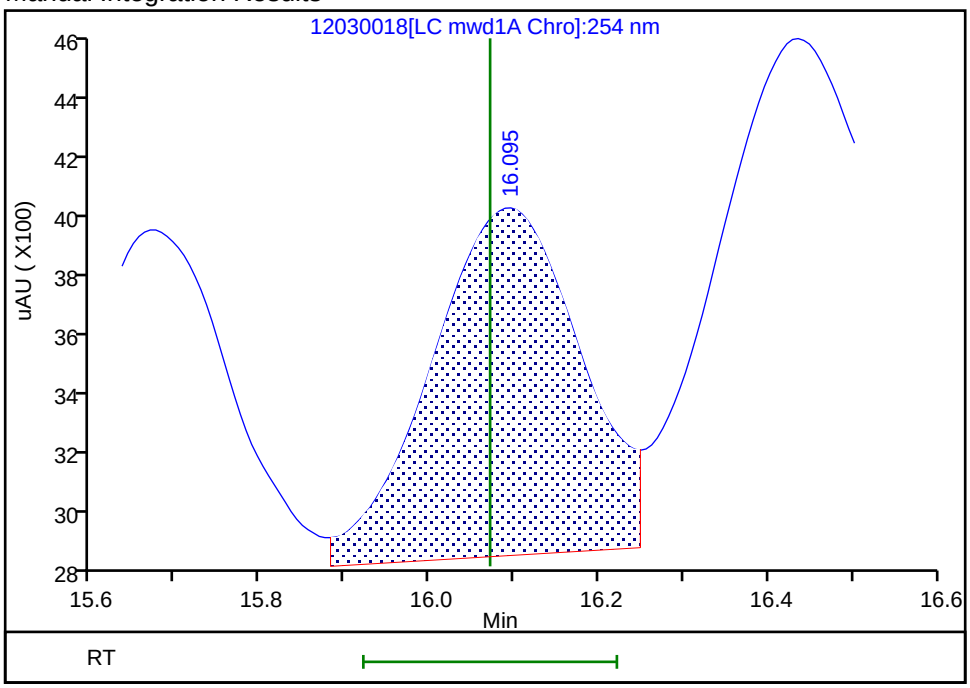
Processing Integration Results

RT: 16.10
Area: 14256
Amount: 0.053386
Amount Units: ug/ml



Manual Integration Results

RT: 16.10
Area: 13893
Amount: 0.051284
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:16:00 -07:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

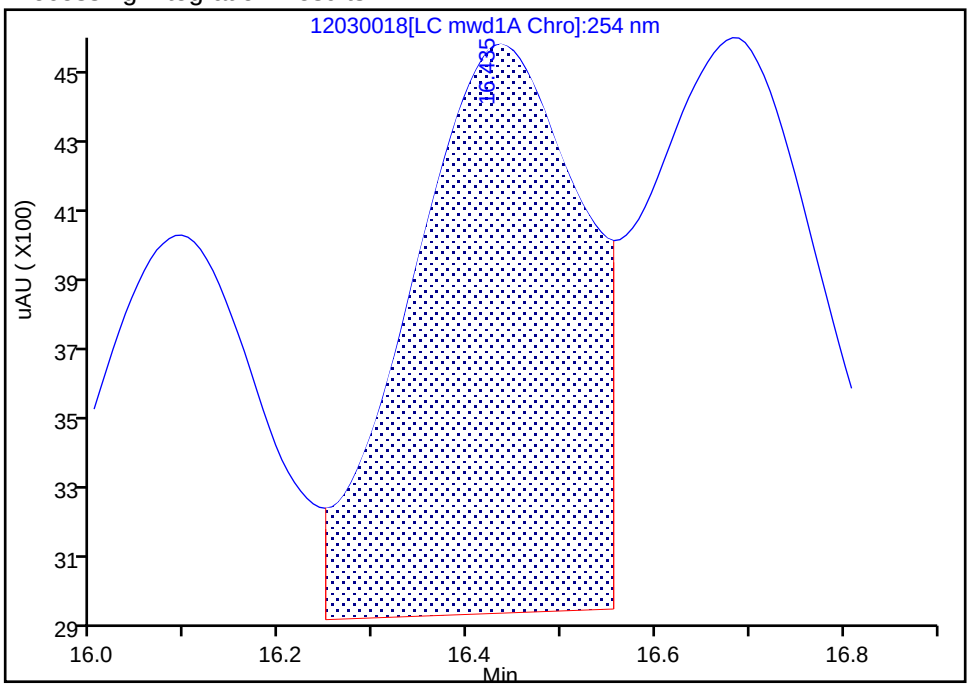
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Injection Date:	03-Dec-2024 23:59:16	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 3				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1A, 254 nm		

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

Signal: 1

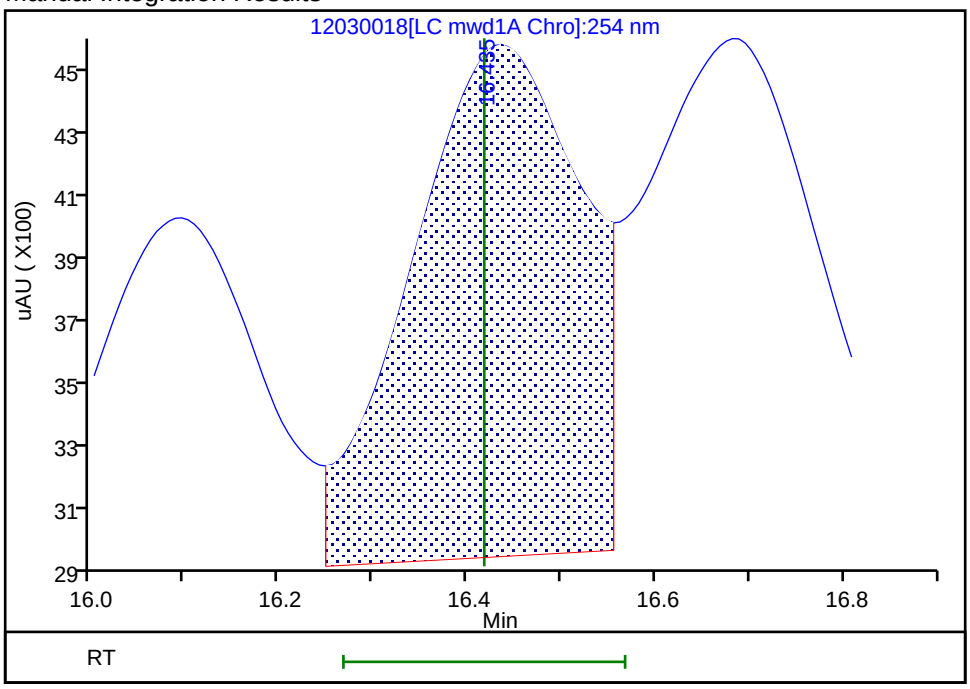
Processing Integration Results

RT: 16.44
Area: 20714
Amount: 0.047364
Amount Units: ug/ml



Manual Integration Results

RT: 16.44
Area: 20438
Amount: 0.051591
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:16:00 -07:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

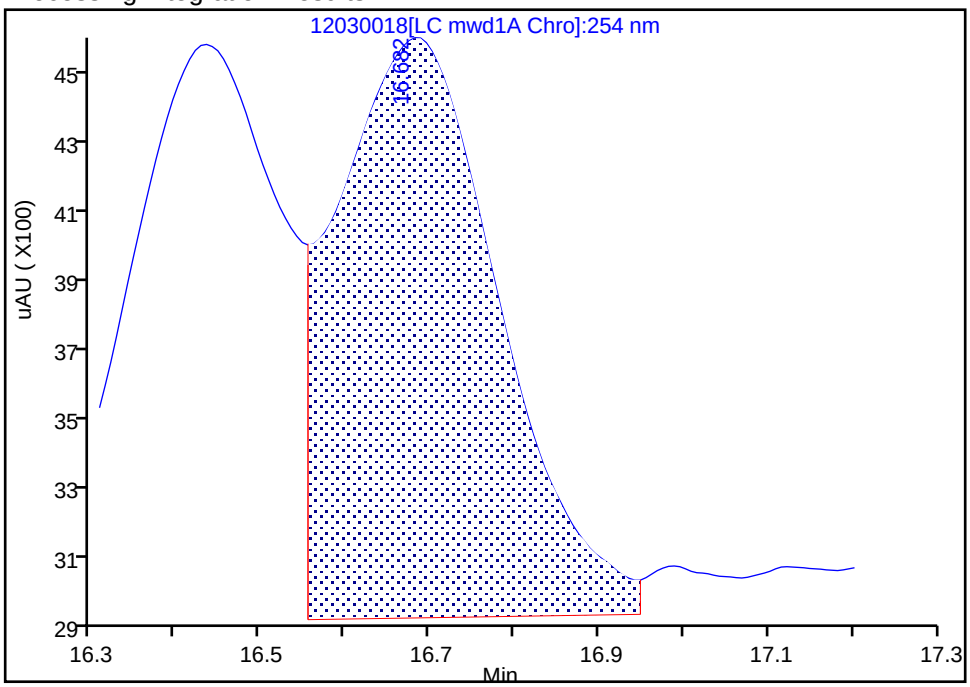
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Injection Date:	03-Dec-2024 23:59:16	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 3				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1A, 254 nm		

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

Signal: 1

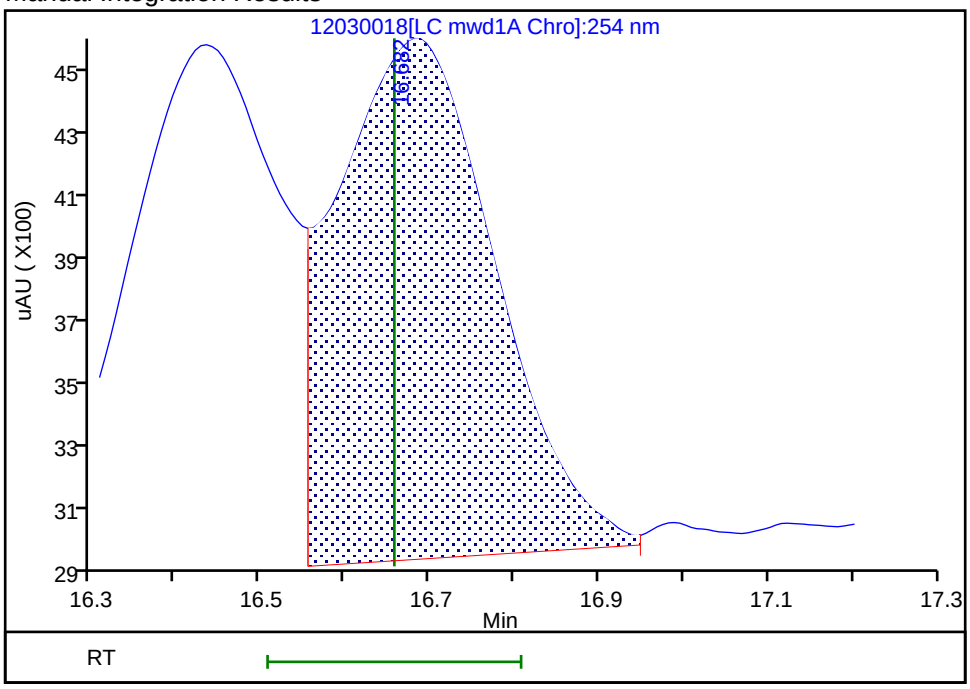
Processing Integration Results

RT: 16.68
Area: 21894
Amount: 0.051635
Amount Units: ug/ml



Manual Integration Results

RT: 16.68
Area: 20832
Amount: 0.050193
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:16:00 -07:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

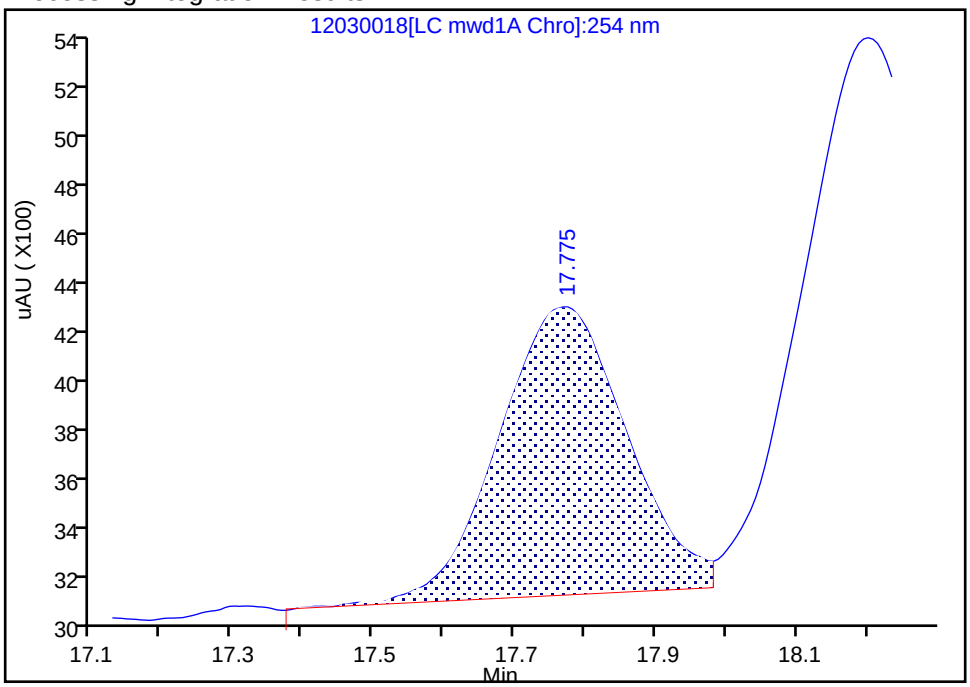
Data File:	\\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030018.D				
Injection Date:	03-Dec-2024 23:59:16	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 3				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1A, 254 nm		

21 2,6-Dinitrotoluene, CAS: 606-20-2

Signal: 1

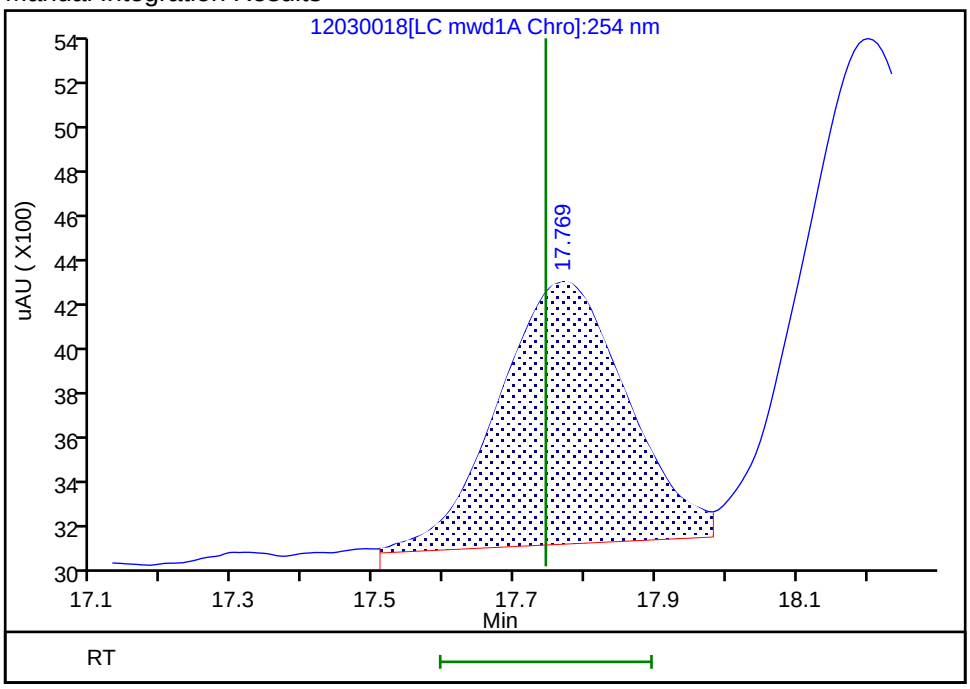
Processing Integration Results

RT: 17.78
Area: 14617
Amount: 0.050017
Amount Units: ug/ml



Manual Integration Results

RT: 17.77
Area: 14616
Amount: 0.051852
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:16:06 -07:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

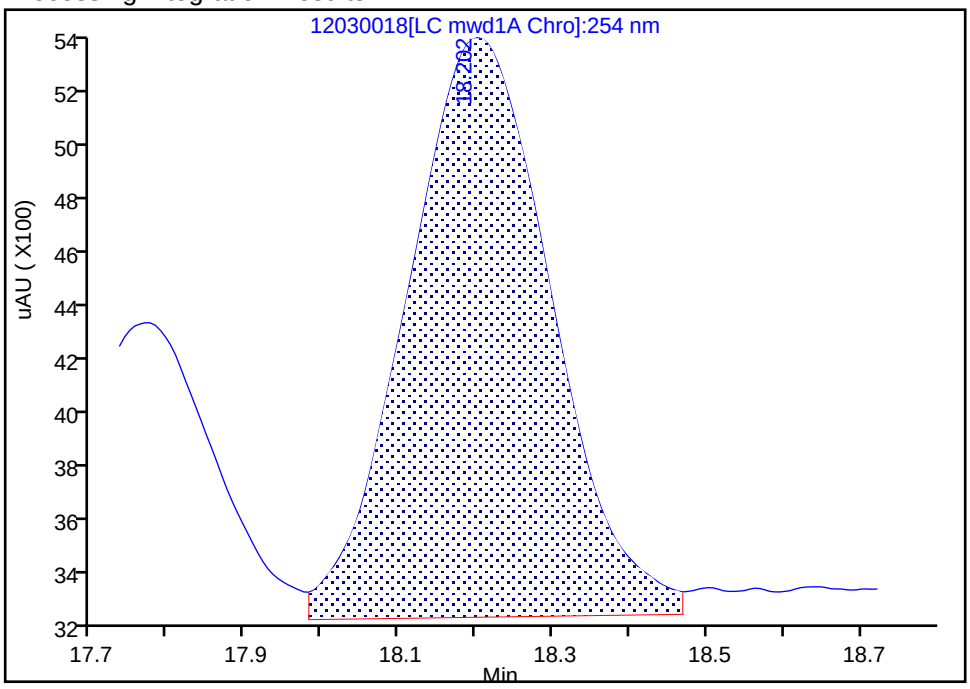
Data File:	\\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030018.D				
Injection Date:	03-Dec-2024 23:59:16	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 3				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1A, 254 nm		

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

Signal: 1

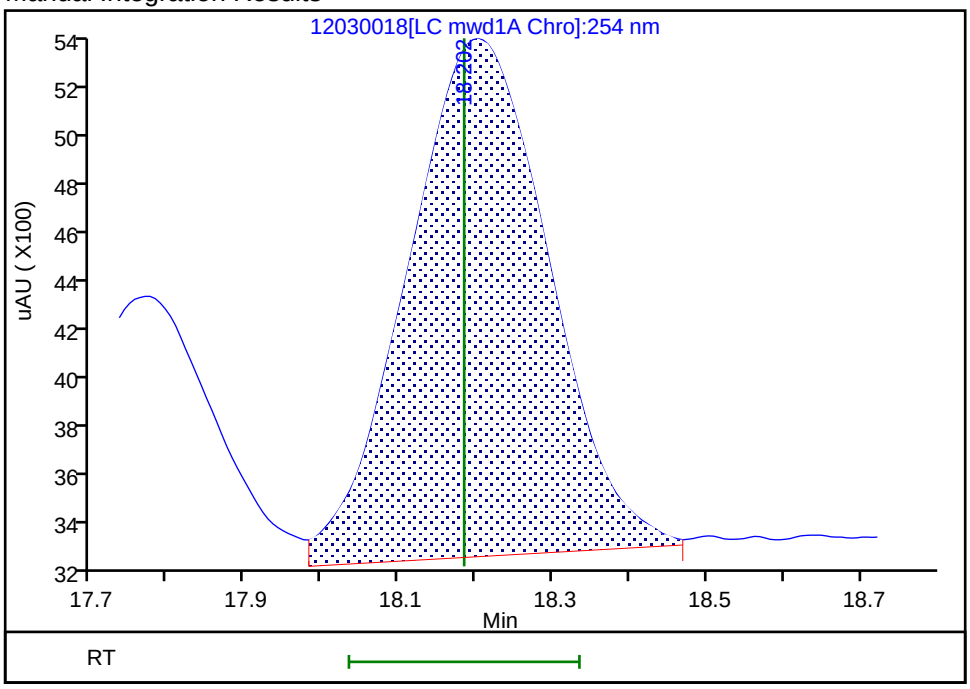
Processing Integration Results

RT: 18.20
Area: 28483
Amount: 0.048918
Amount Units: ug/ml



Manual Integration Results

RT: 18.20
Area: 27636
Amount: 0.050301
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:16:03 -07:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Eurofins Denver

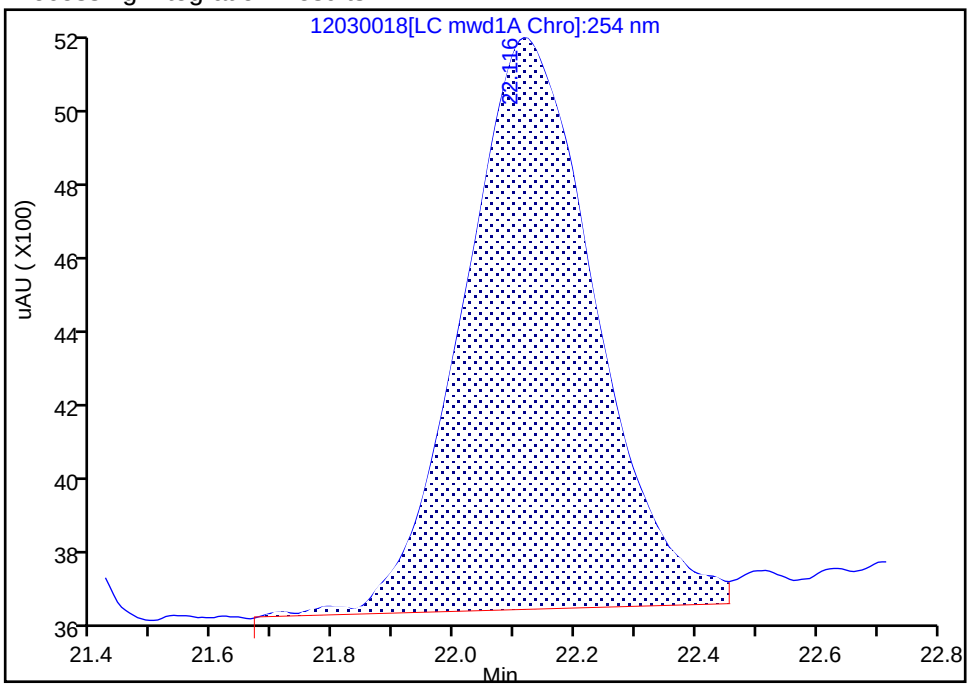
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Injection Date:	03-Dec-2024 23:59:16	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 3				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1A, 254 nm		

24 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

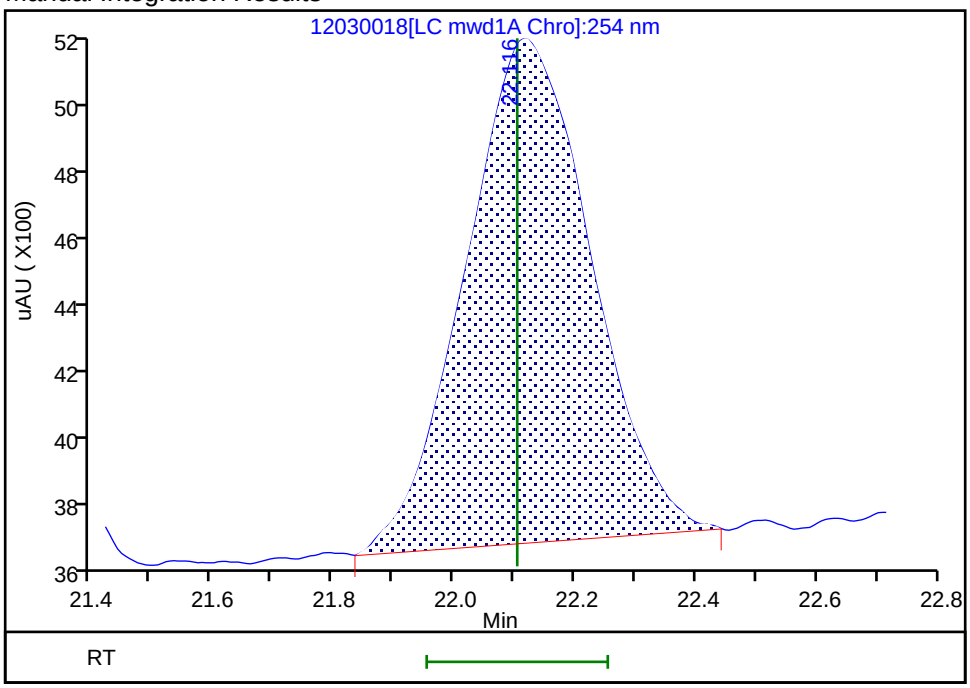
Processing Integration Results

RT: 22.12
Area: 22522
Amount: 0.050504
Amount Units: ug/ml



Manual Integration Results

RT: 22.12
Area: 20885
Amount: 0.050009
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:16:12 -07:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

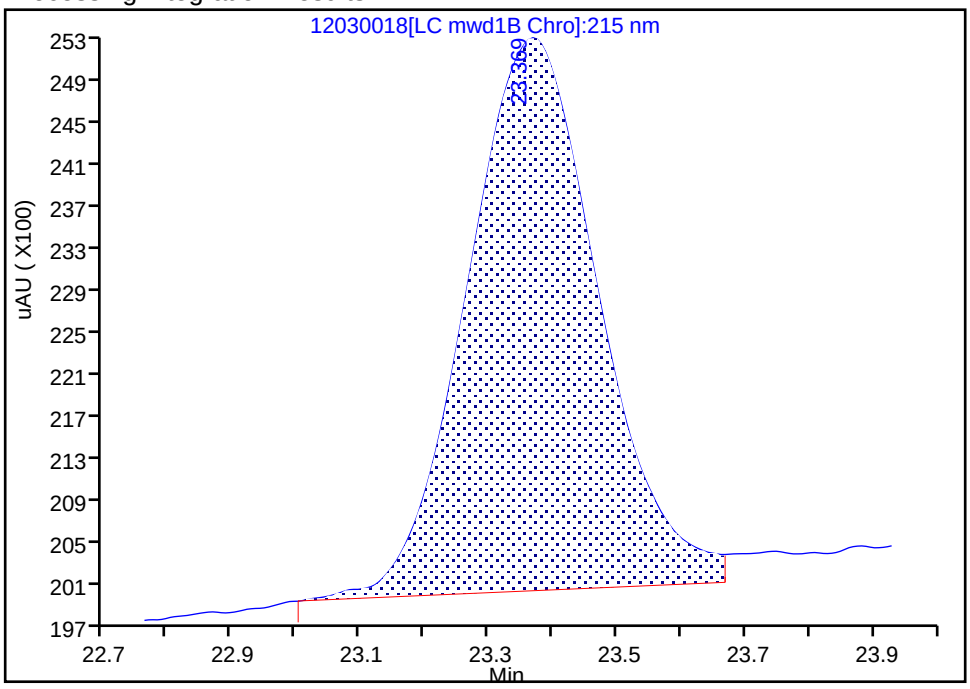
Data File:	\\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030018.D				
Injection Date:	03-Dec-2024 23:59:16	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 3				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1B, 215 nm		

25 PETN, CAS: 78-11-5

Signal: 1

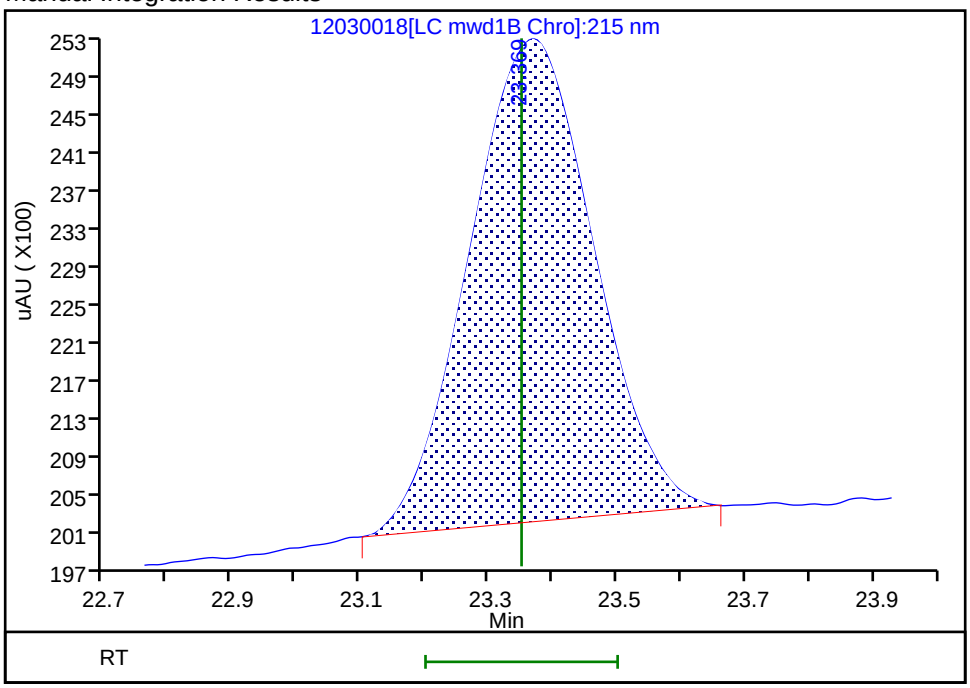
Processing Integration Results

RT: 23.37
Area: 75209
Amount: 0.537343
Amount Units: ug/ml



Manual Integration Results

RT: 23.37
Area: 68955
Amount: 0.499751
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:35:21 -07:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030019.D
Lims ID: IC INT 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 04-Dec-2024 00:34:11 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\20241203-140414.b\8330_X5_Luna.m
Limit Group: GCSV - 8330
Last Update: 04-Dec-2024 17:40:55 Calib Date: 04-Dec-2024 01:09:06
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030020.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC mwd1A, 254 nm
Process Host: CTX1637

First Level Reviewer: LV5D Date: 04-Dec-2024 11:33:19

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
5 HMX	1	6.372	6.364	0.008	3172	0.0200	0.0179	M
7 2,4,6-Trinitrophenol	1	7.919	7.858	0.061	2546	0.0200	0.0198	M
8 RDX	1	8.492	8.484	0.008	3925	0.0200	0.0188	M
9 Nitrobenzene	1	11.032	11.011	0.021	8621	0.0200	0.0225	
$ 10 1,2-Dinitrobenzene	1	11.859	11.838	0.021	5944	0.0200	0.0222	
11 3,5-Dinitroaniline	1	13.605	13.584	0.021	9446	0.0200	0.0198	M
12 1,3-Dinitrobenzene	1	13.939	13.918	0.021	12158	0.0200	0.0205	M
13 Nitroglycerin	2	14.432	14.424	0.008	28807	0.2000	0.2231	
14 o-Nitrotoluene	1	15.025	15.018	0.007	5366	0.0200	0.0215	M
16 p-Nitrotoluene	1	15.252	15.238	0.014	4431	0.0200	0.0210	Ma
17 4-Amino-2,6-dinitrotoluene	1	15.665	15.651	0.014	6151	0.0200	0.0218	M
18 m-Nitrotoluene	1	16.079	16.071	0.008	5681	0.0200	0.0210	M
19 2-Amino-4,6-dinitrotoluene	1	16.432	16.418	0.014	7961	0.0200	0.0201	M
20 1,3,5-Trinitrobenzene	1	16.685	16.658	0.027	8805	0.0200	0.0212	M
21 2,6-Dinitrotoluene	1	17.765	17.744	0.021	6677	0.0200	0.0237	M
22 2,4-Dinitrotoluene	1	18.199	18.184	0.015	11492	0.0200	0.0209	M
23 Tetryl	1	21.212	21.204	0.008	6472	0.0200	0.0199	M
24 2,4,6-Trinitrotoluene	1	22.112	22.104	0.008	7873	0.0200	0.0189	M
25 PETN	2	23.359	23.351	0.008	25558	0.2000	0.1852	M

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

8330IntermStk_00082 Amount Added: 2.00 Units: uL

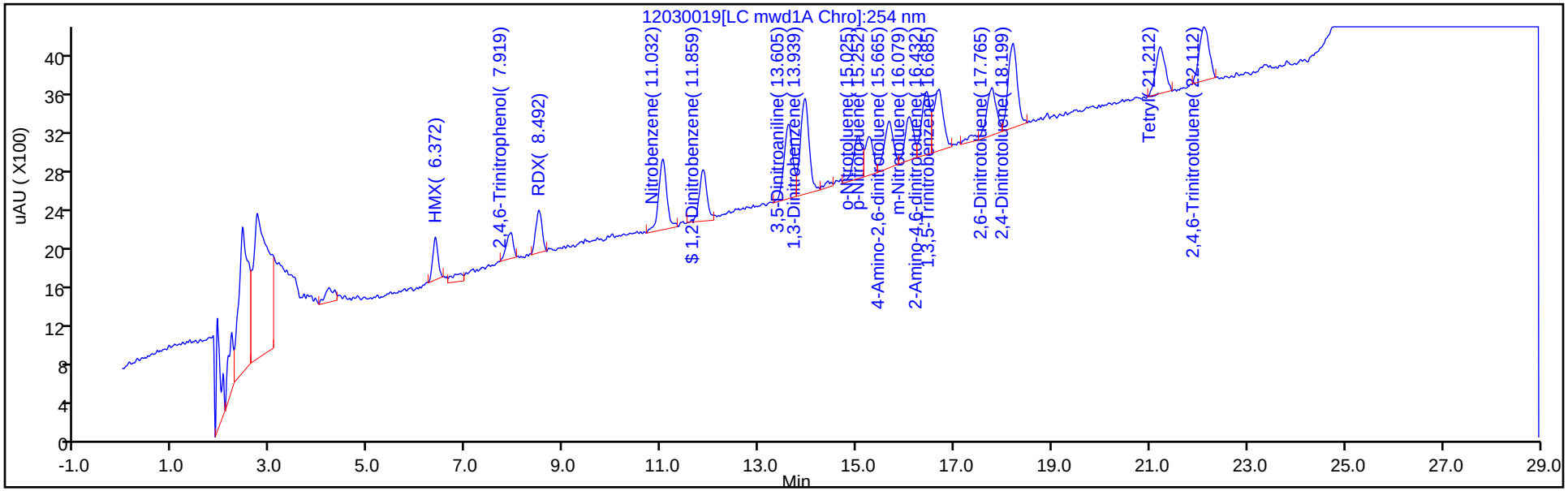
Report Date: 04-Dec-2024 17:40:55 Chrom Revision: 2.3 12-Nov-2024 16:55:22

Eurofins Denver

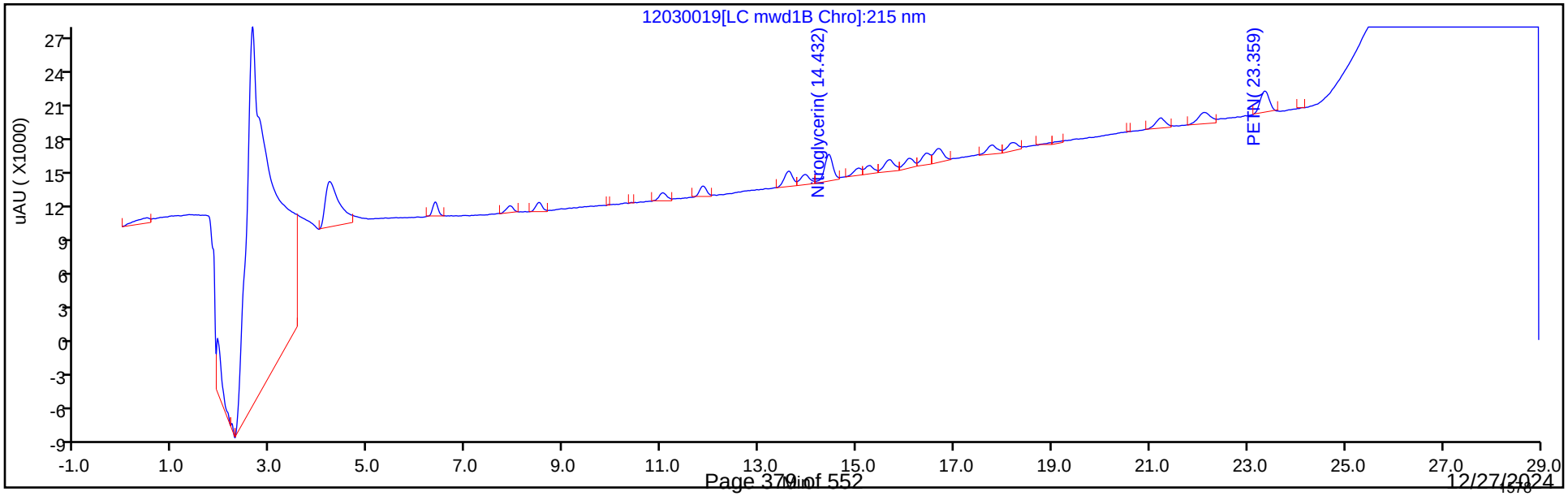
Data File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030019.D

Injection Date:	04-Dec-2024 00:34:11	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



Manual Integration/User Assign Peak Report

Eurofins Denver

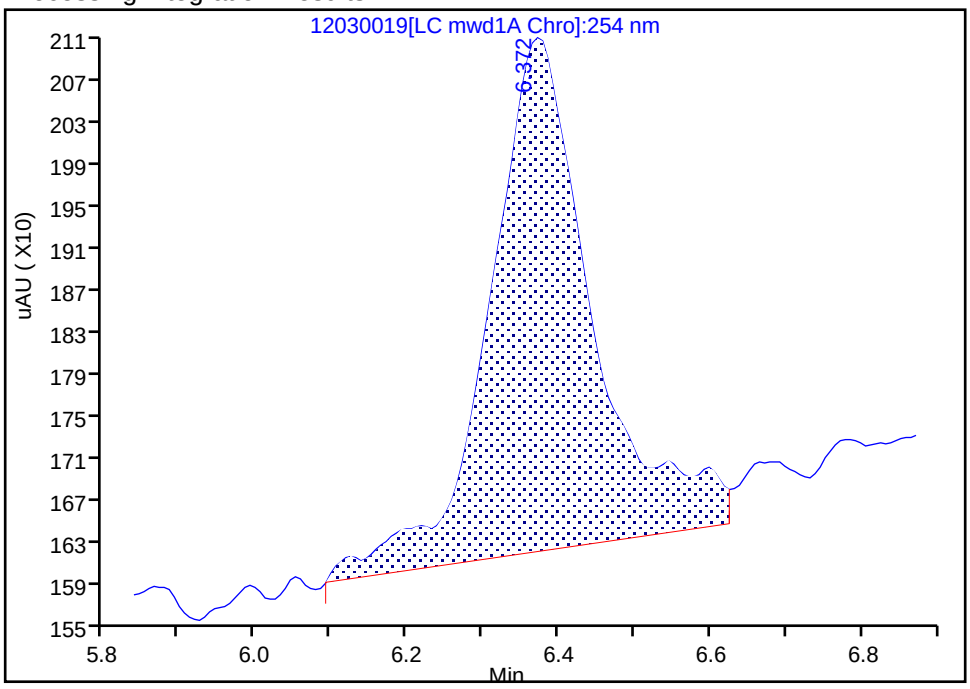
Data File:	\\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030019.D				
Injection Date:	04-Dec-2024 00:34:11	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 2				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1A, 254 nm		

5 HMX, CAS: 2691-41-0

Signal: 1

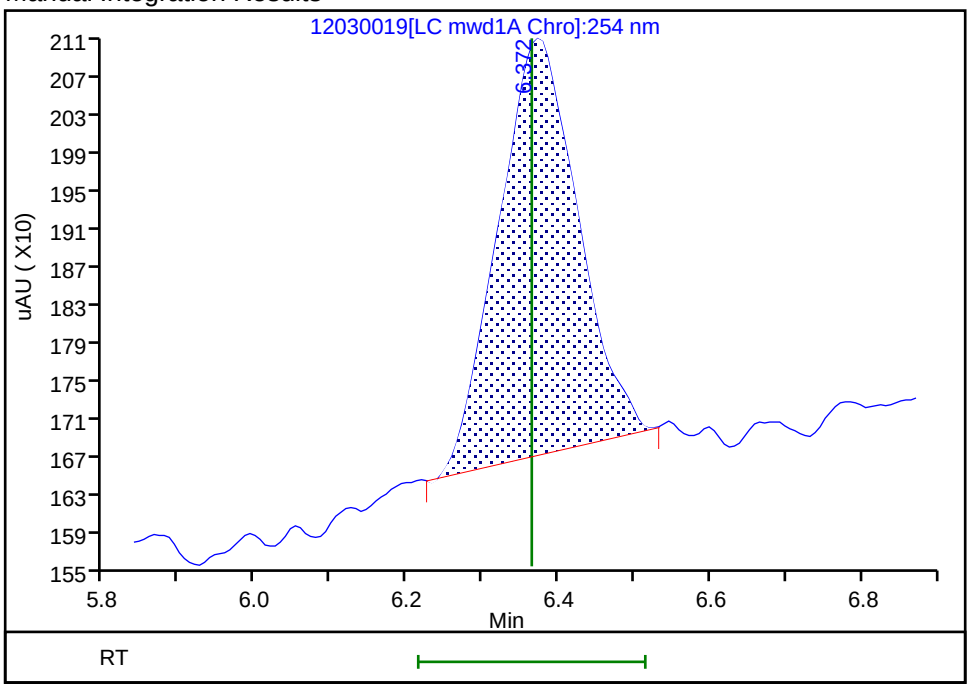
Processing Integration Results

RT: 6.37
Area: 4634
Amount: 0.023769
Amount Units: ug/ml



Manual Integration Results

RT: 6.37
Area: 3172
Amount: 0.017909
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:33:16 -07:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

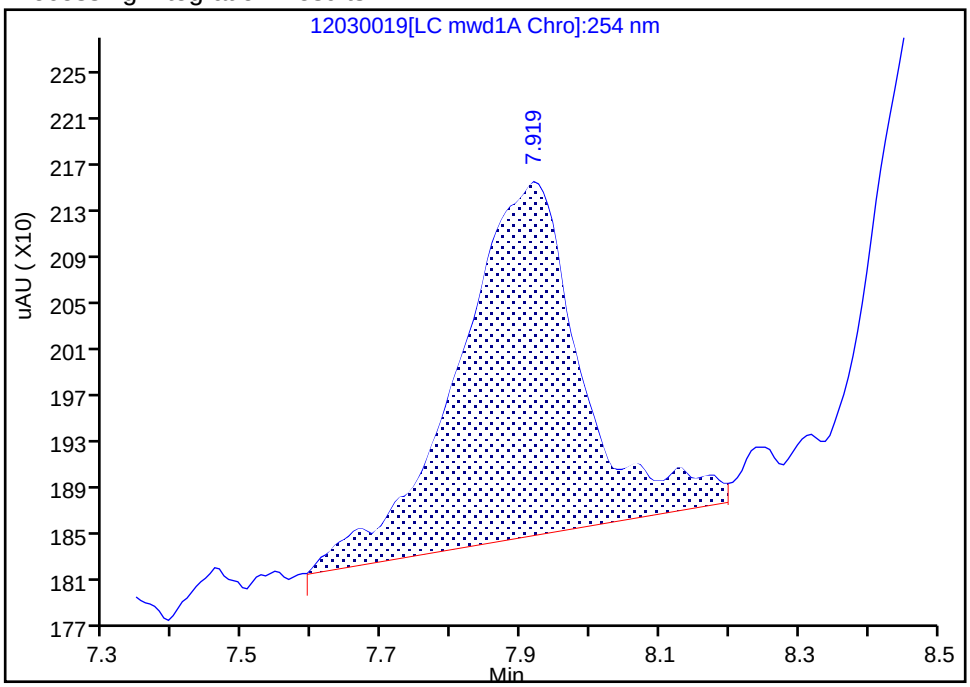
Data File:	\\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030019.D				
Injection Date:	04-Dec-2024 00:34:11	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 2				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit 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

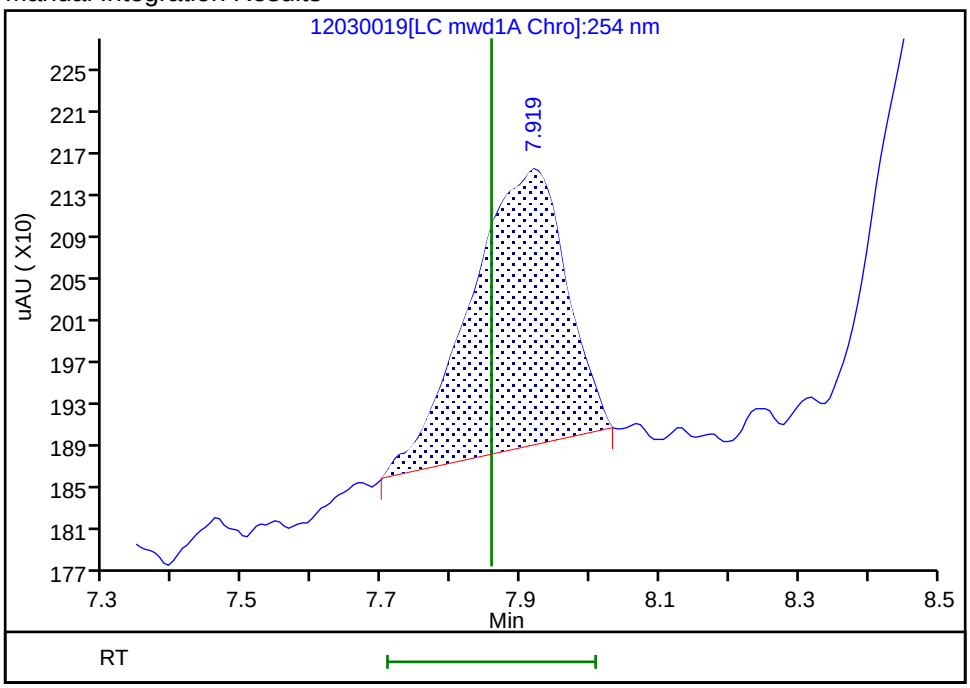
Processing Integration Results

RT: 7.92
Area: 3779
Amount: 0.018624
Amount Units: ug/ml



Manual Integration Results

RT: 7.92
Area: 2546
Amount: 0.019821
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:33:12 -07:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

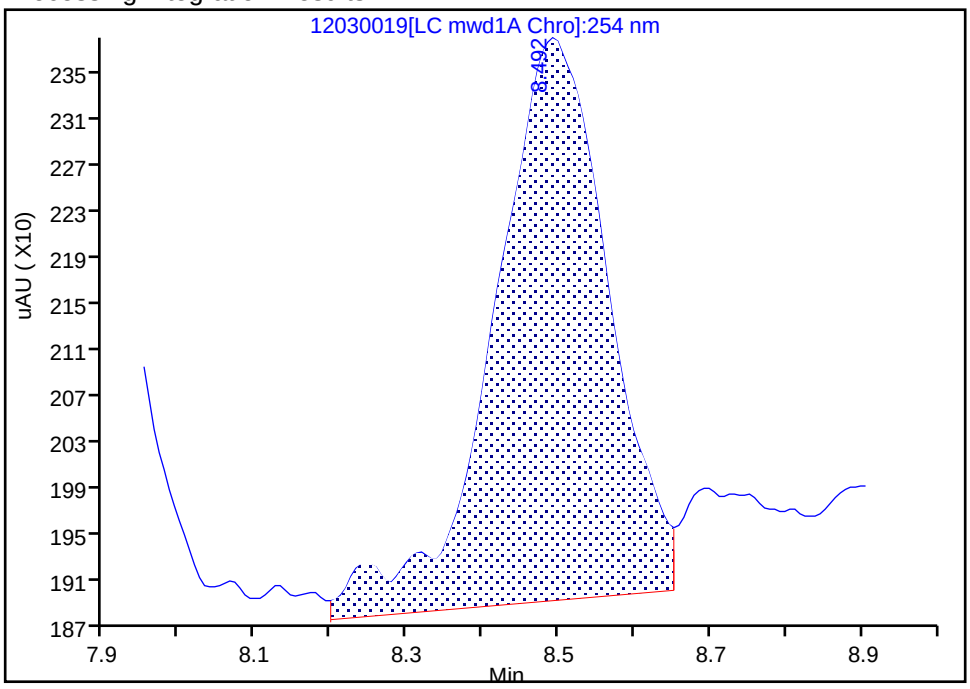
Data File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030019.D
Injection Date: 04-Dec-2024 00:34:11 Instrument ID: CHHPLC_X5
Lims ID: IC INT 2
Client ID:
Operator ID: JZ ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X5_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC mwd1A, 254 nm

8 RDX, CAS: 121-82-4

Signal: 1

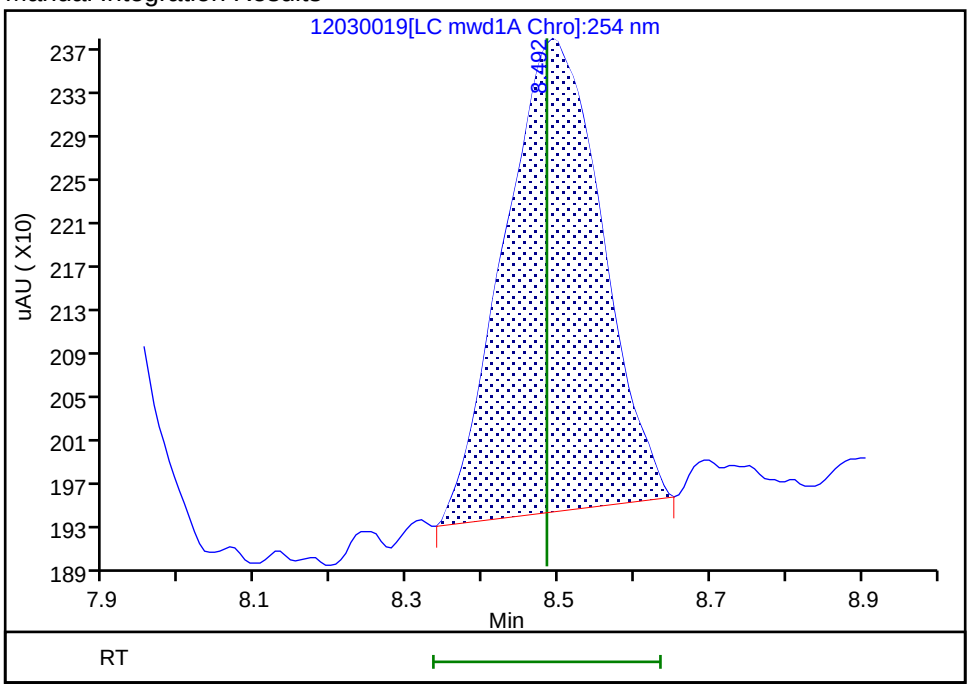
Processing Integration Results

RT: 8.49
Area: 5179
Amount: 0.016403
Amount Units: ug/ml



Manual Integration Results

RT: 8.49
Area: 3925
Amount: 0.018840
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:33:08 -07:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

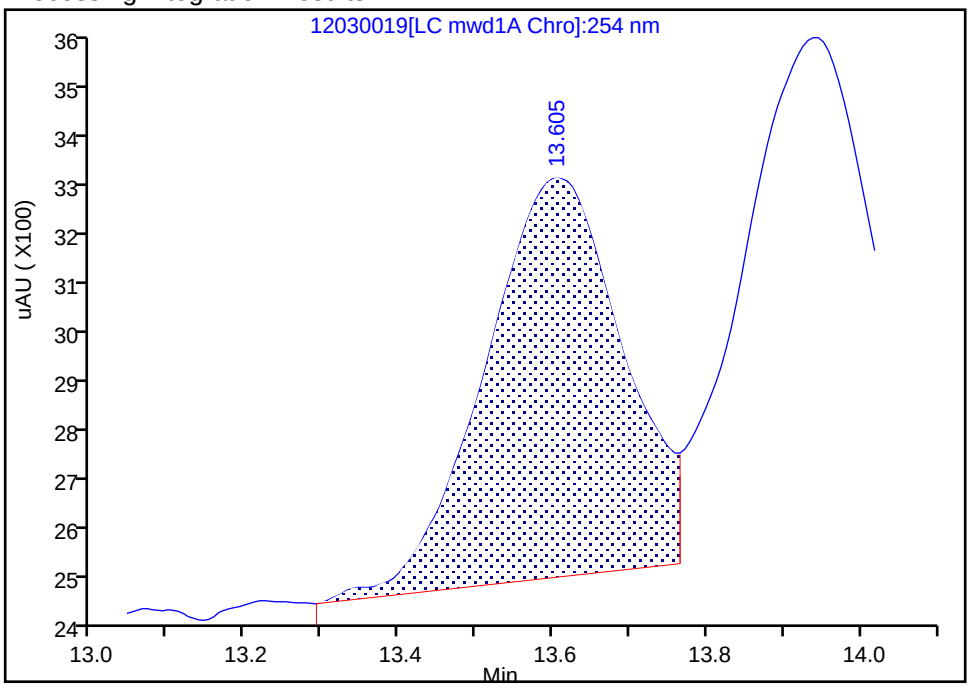
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Injection Date:	04-Dec-2024 00:34:11	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 2				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1A, 254 nm		

11 3,5-Dinitroaniline, CAS: 618-87-1

Signal: 1

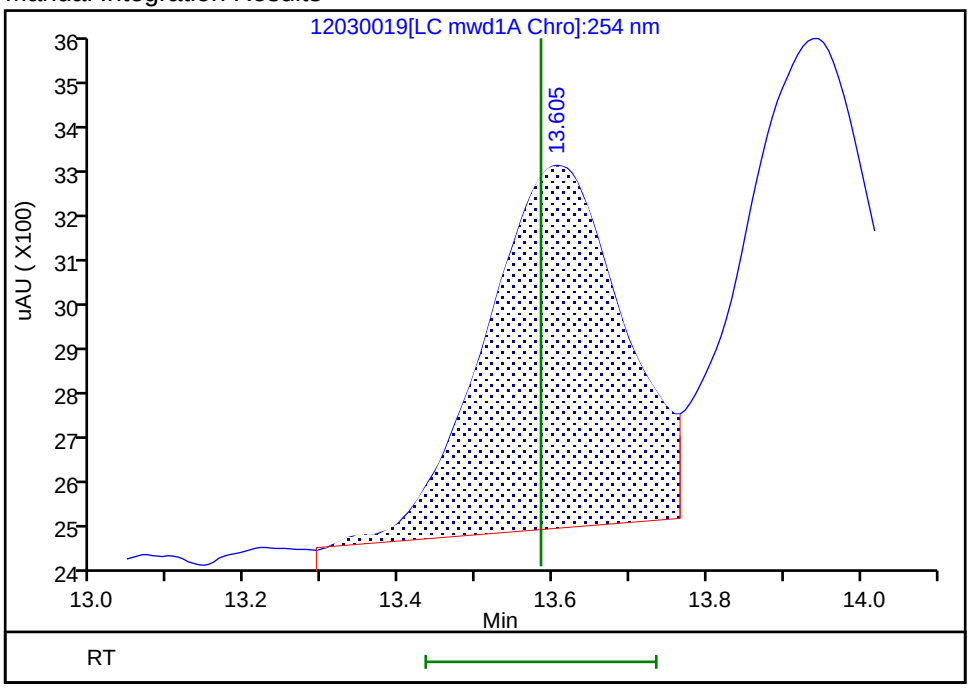
Processing Integration Results

RT: 13.61
Area: 9403
Amount: 0.019678
Amount Units: ug/ml



Manual Integration Results

RT: 13.61
Area: 9446
Amount: 0.019833
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:32:40 -07:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Eurofins Denver

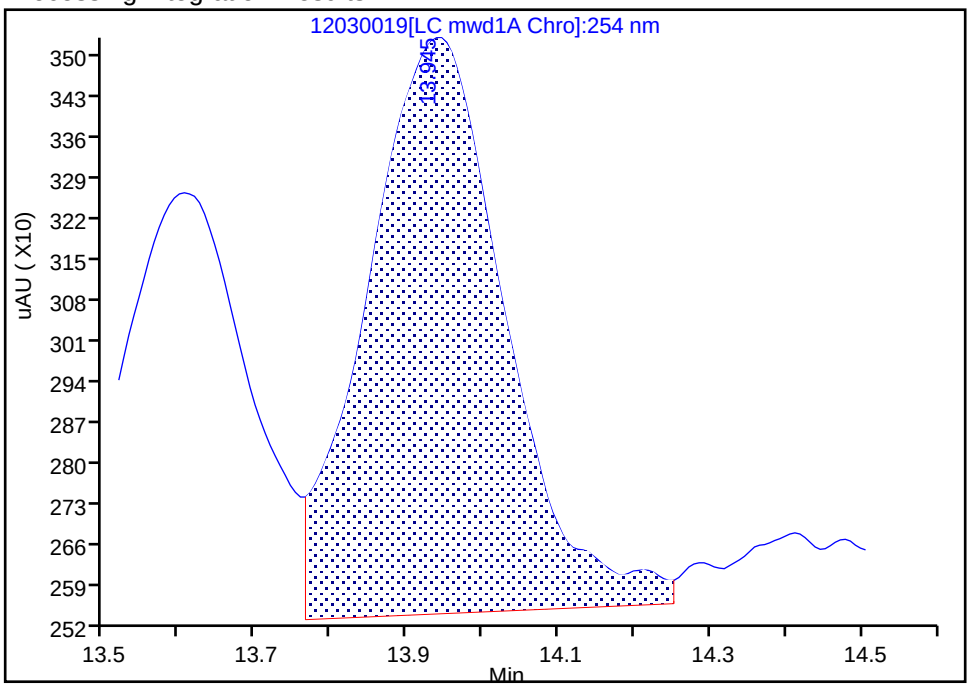
Data File:	\\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030019.D				
Injection Date:	04-Dec-2024 00:34:11	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 2				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit 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

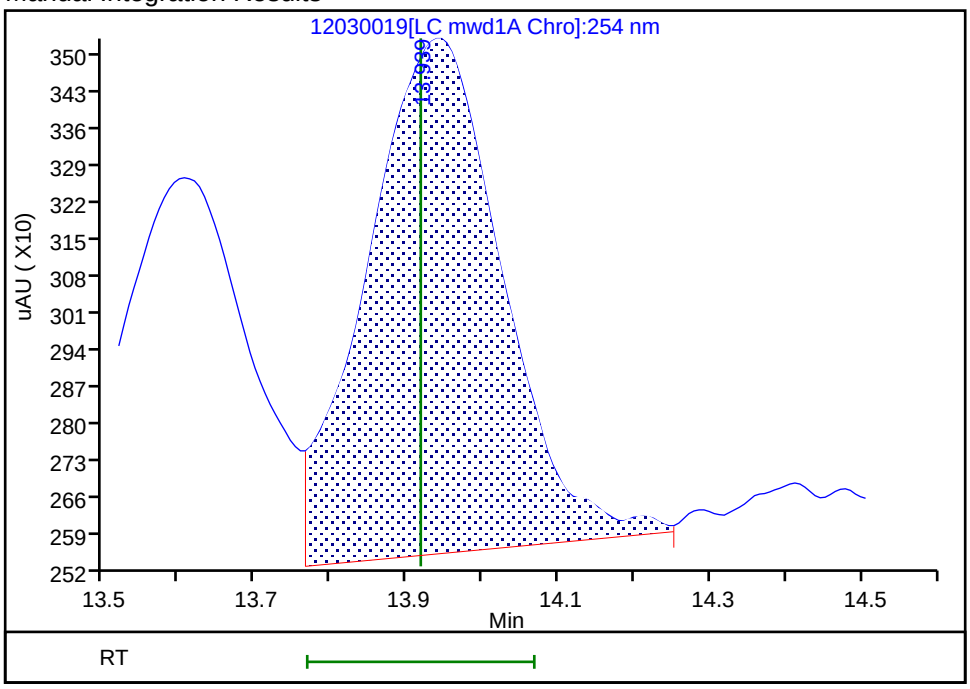
Processing Integration Results

RT: 13.95
Area: 12480
Amount: 0.020587
Amount Units: ug/ml



Manual Integration Results

RT: 13.94
Area: 12158
Amount: 0.020512
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:32:40 -07:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

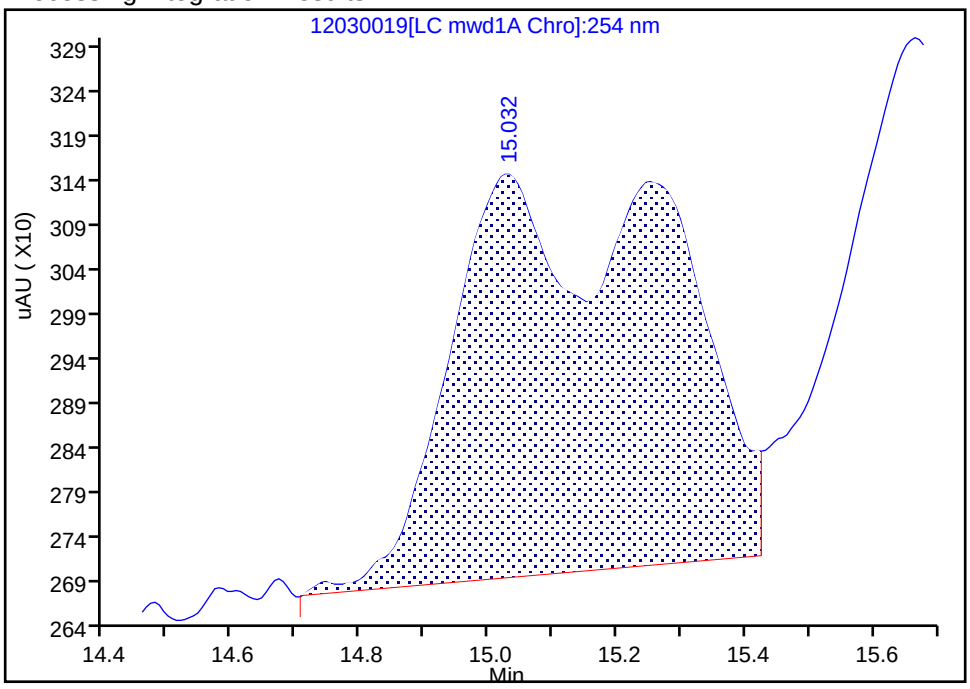
Data File:	\\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030019.D				
Injection Date:	04-Dec-2024 00:34:11	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 2				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1A, 254 nm		

14 o-Nitrotoluene, CAS: 88-72-2

Signal: 1

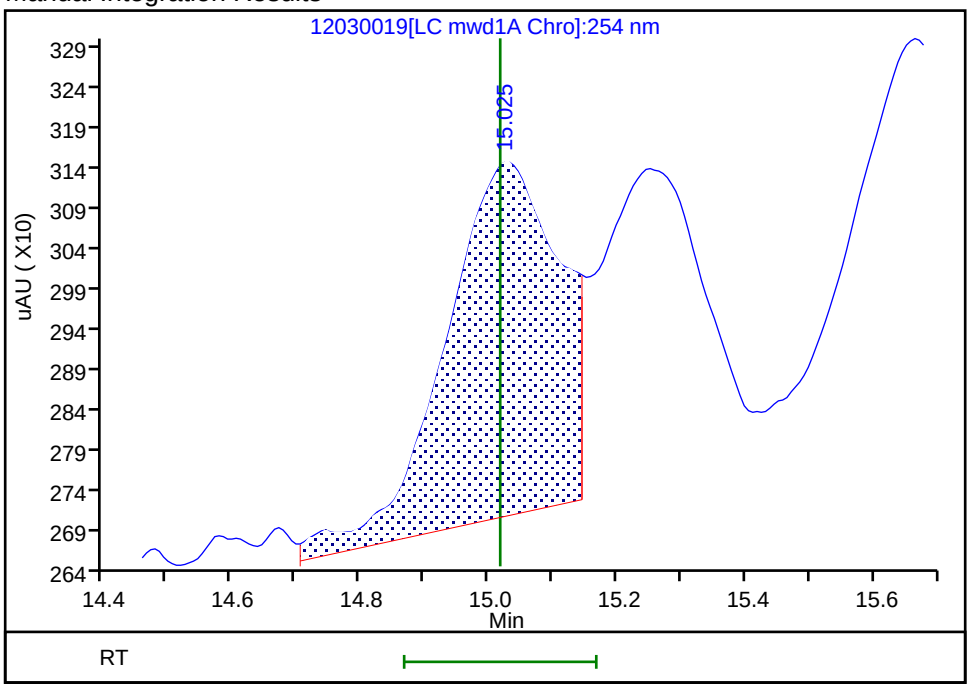
Processing Integration Results

RT: 15.03
Area: 10512
Amount: 0.036826
Amount Units: ug/ml



Manual Integration Results

RT: 15.03
Area: 5366
Amount: 0.021539
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:32:36 -07:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

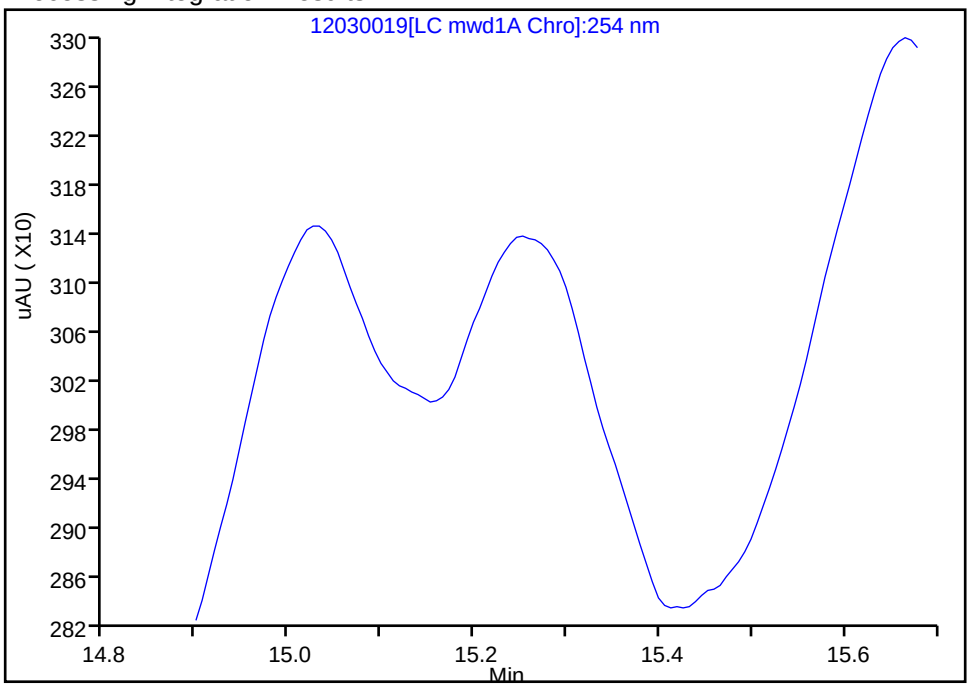
Data File:	\\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030019.D				
Injection Date:	04-Dec-2024 00:34:11	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 2				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1A, 254 nm		

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

Signal: 1

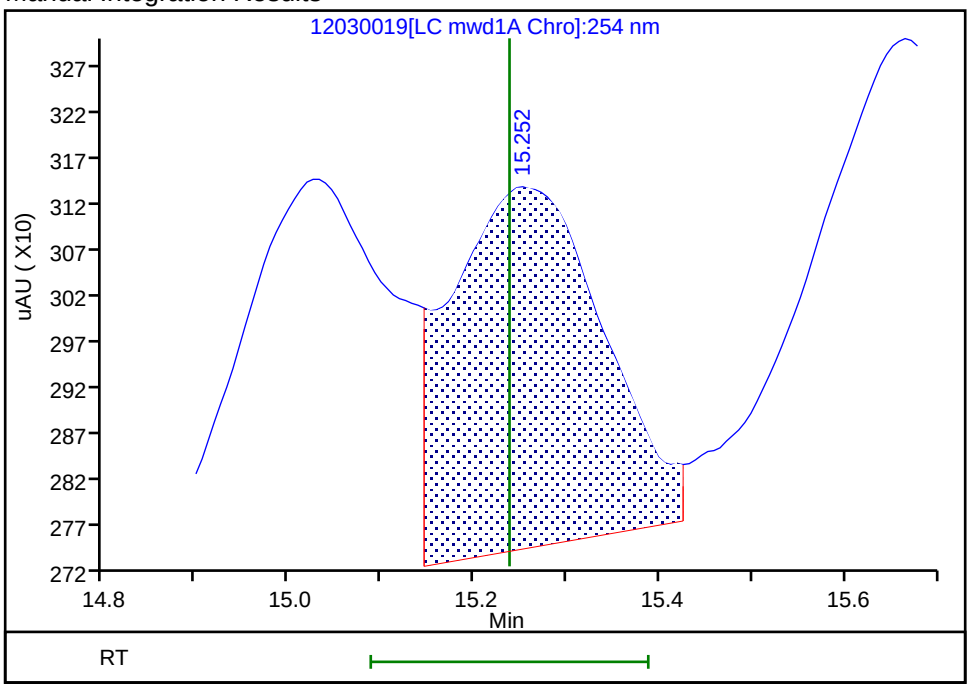
Not Detected
Expected RT: 15.24

Processing Integration Results



Manual Integration Results

RT: 15.25
Area: 4431
Amount: 0.021022
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:32:36 -07:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

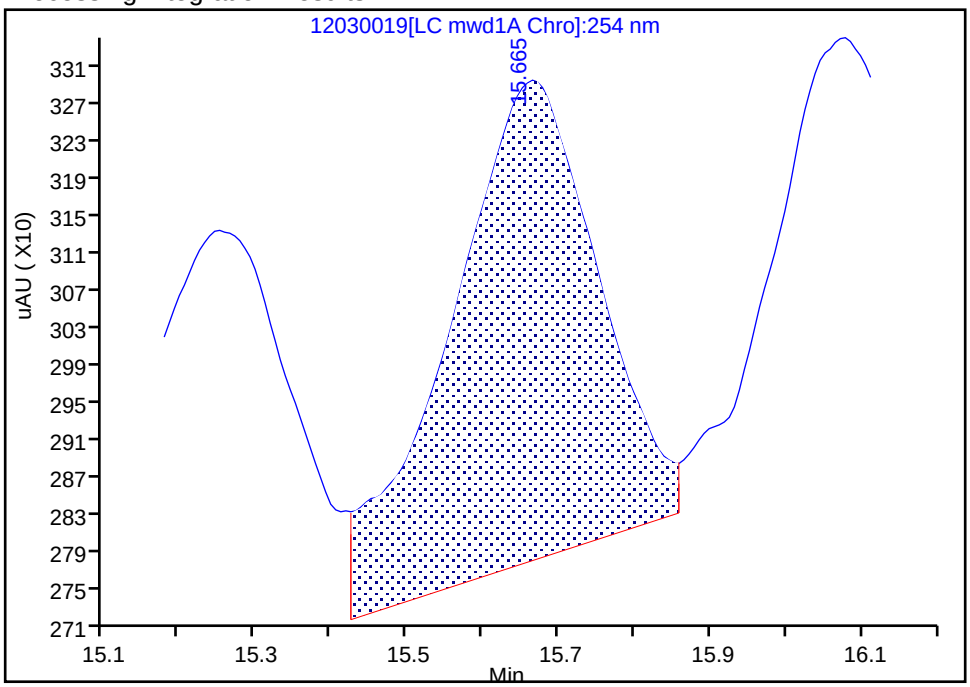
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Injection Date:	04-Dec-2024 00:34:11	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 2				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1A, 254 nm		

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

Signal: 1

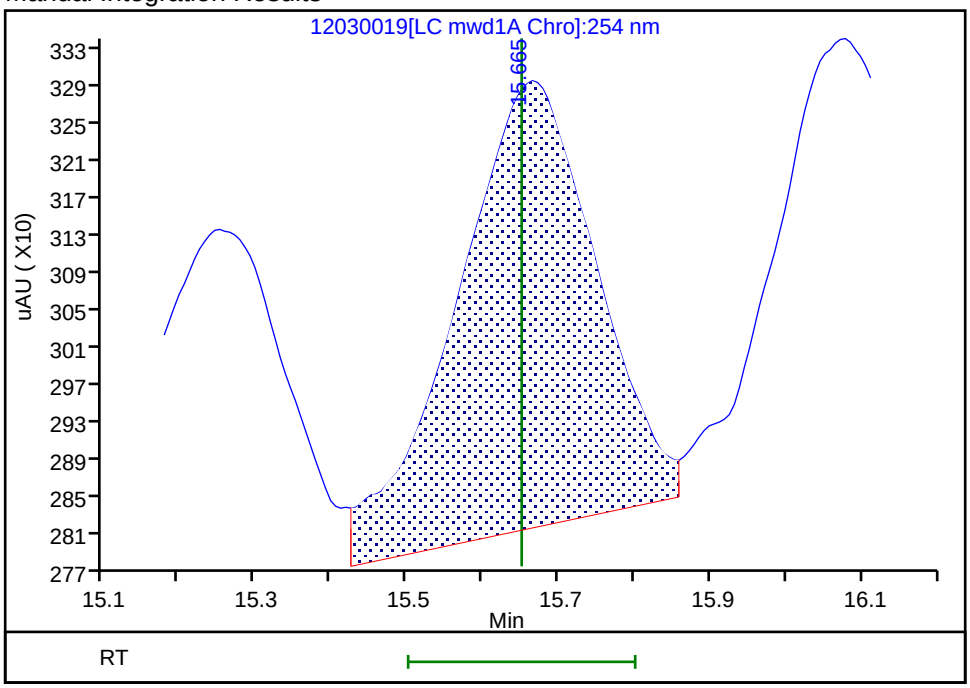
Processing Integration Results

RT: 15.67
Area: 7009
Amount: 0.024465
Amount Units: ug/ml



Manual Integration Results

RT: 15.67
Area: 6151
Amount: 0.021770
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:32:36 -07:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

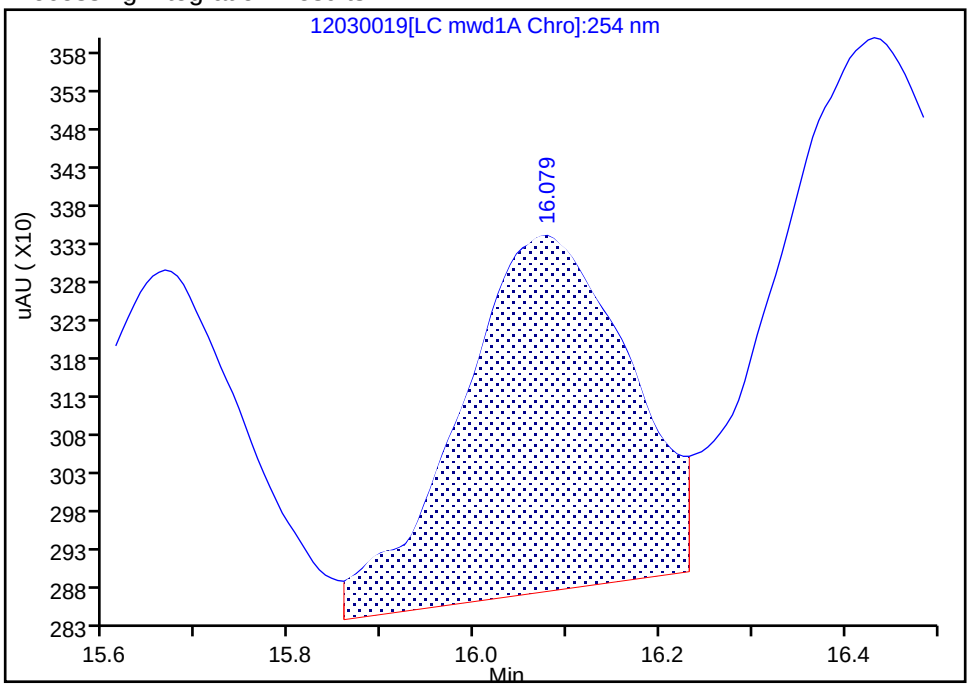
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Injection Date:	04-Dec-2024 00:34:11	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 2				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1A, 254 nm		

18 m-Nitrotoluene, CAS: 99-08-1

Signal: 1

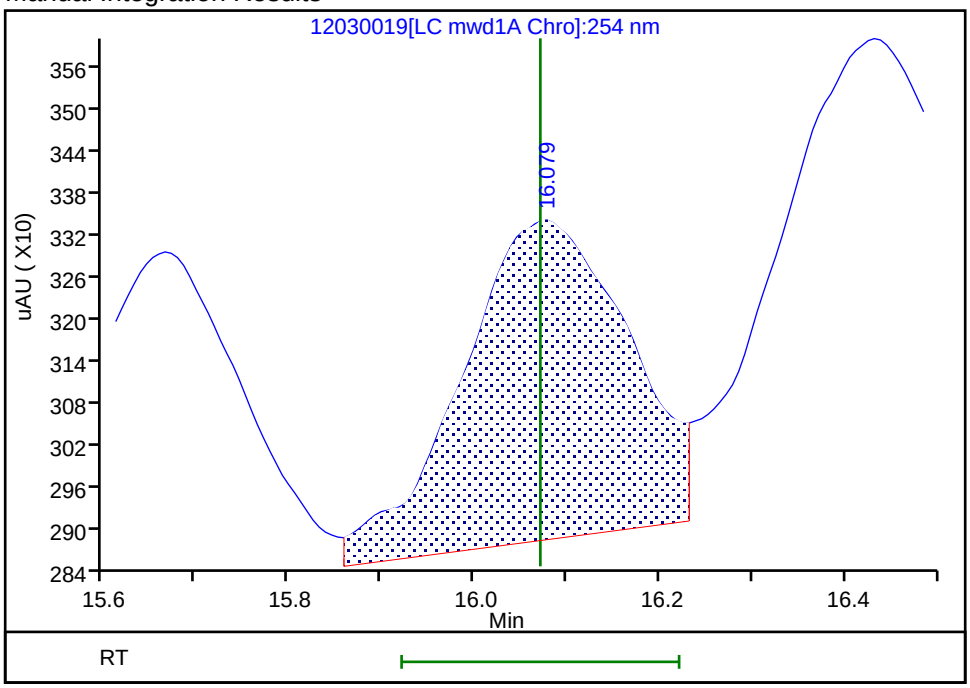
Processing Integration Results

RT: 16.08
Area: 5950
Amount: 0.022349
Amount Units: ug/ml



Manual Integration Results

RT: 16.08
Area: 5681
Amount: 0.020971
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:32:36 -07:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

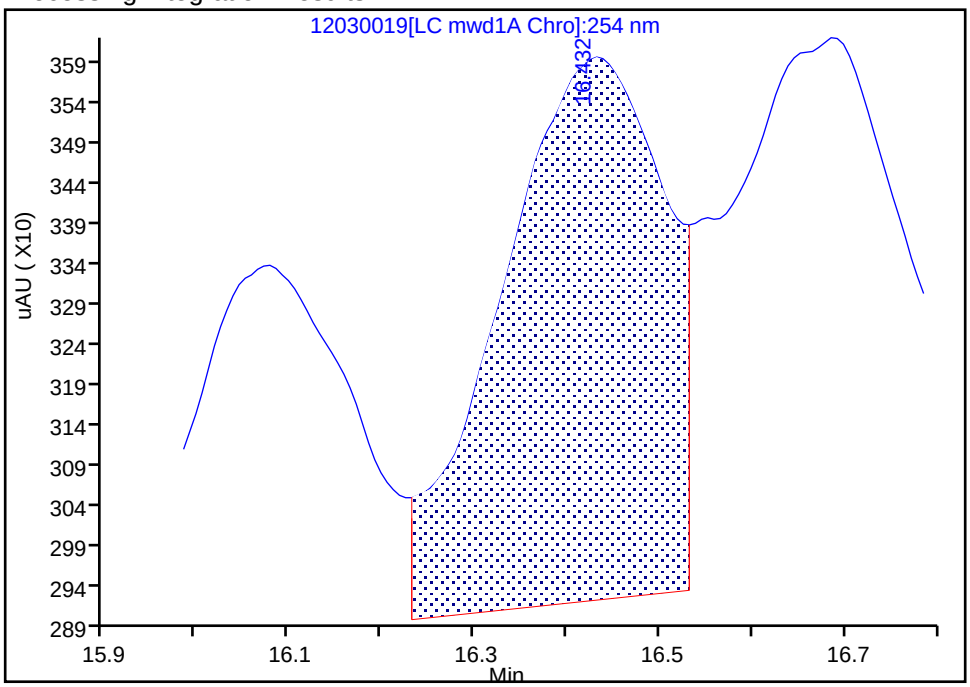
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Injection Date:	04-Dec-2024 00:34:11	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 2				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1A, 254 nm		

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

Signal: 1

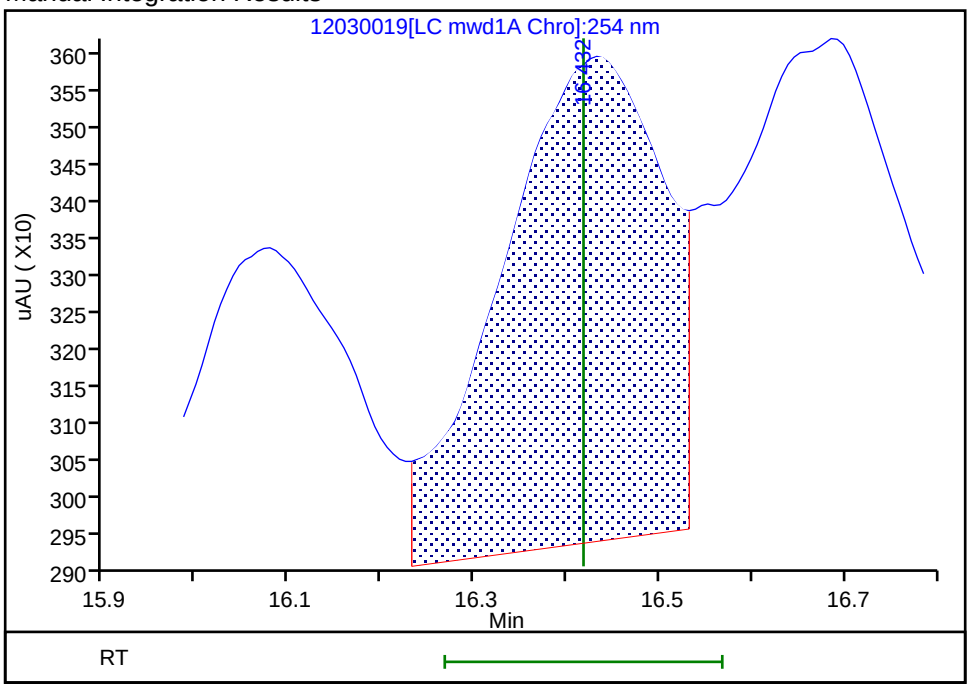
Processing Integration Results

RT: 16.43
Area: 8294
Amount: 0.015770
Amount Units: ug/ml



Manual Integration Results

RT: 16.43
Area: 7961
Amount: 0.020096
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:32:36 -07:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

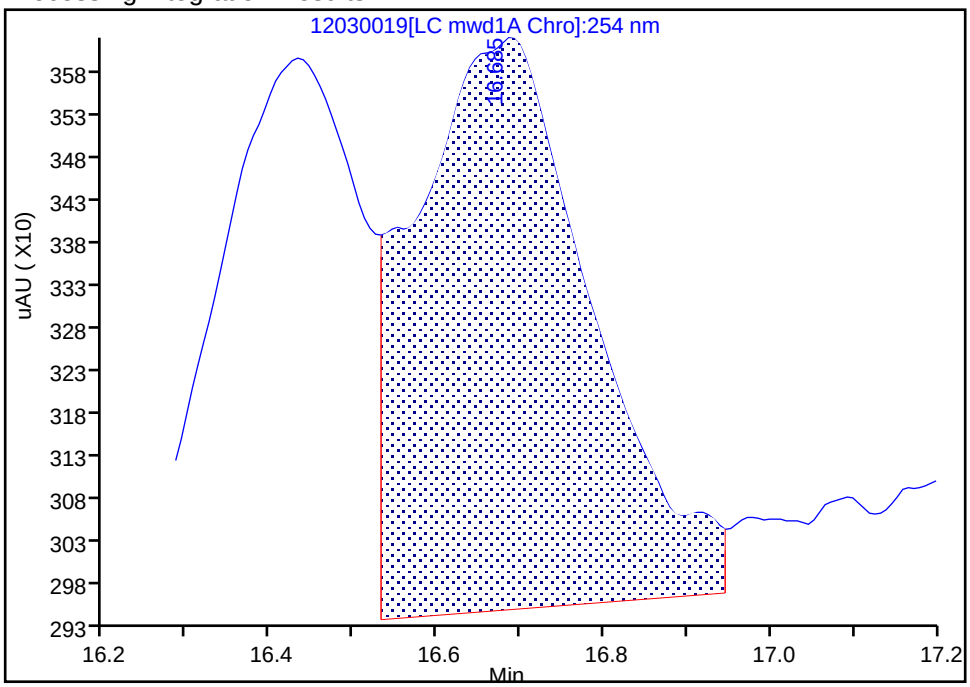
Data File:	\\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030019.D				
Injection Date:	04-Dec-2024 00:34:11	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 2				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit 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

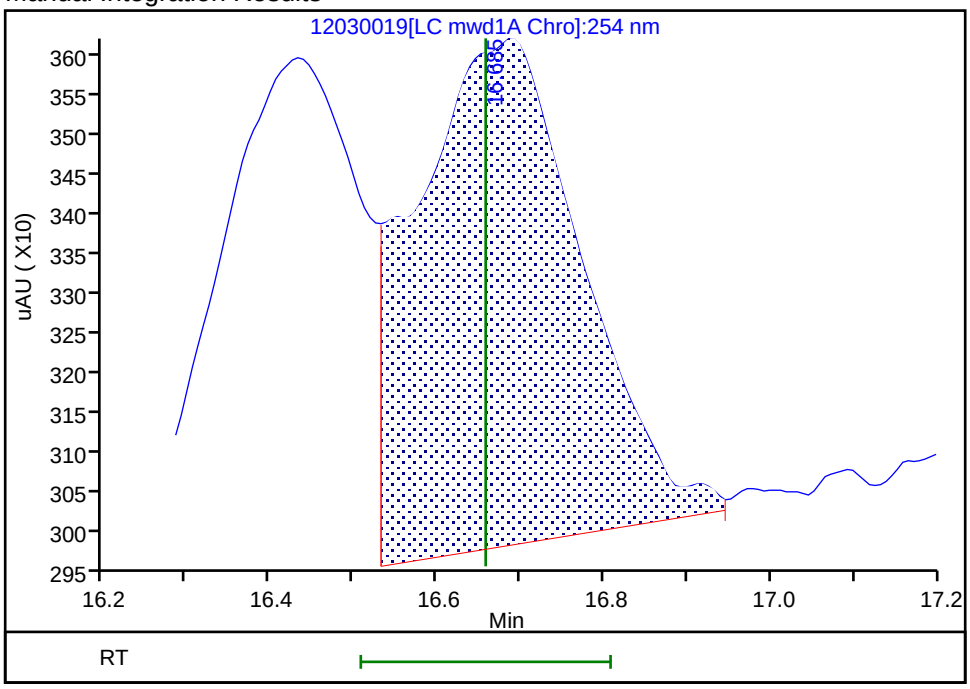
Processing Integration Results

RT: 16.69
Area: 9884
Amount: 0.023457
Amount Units: ug/ml



Manual Integration Results

RT: 16.69
Area: 8805
Amount: 0.021215
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:32:36 -07:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Eurofins Denver

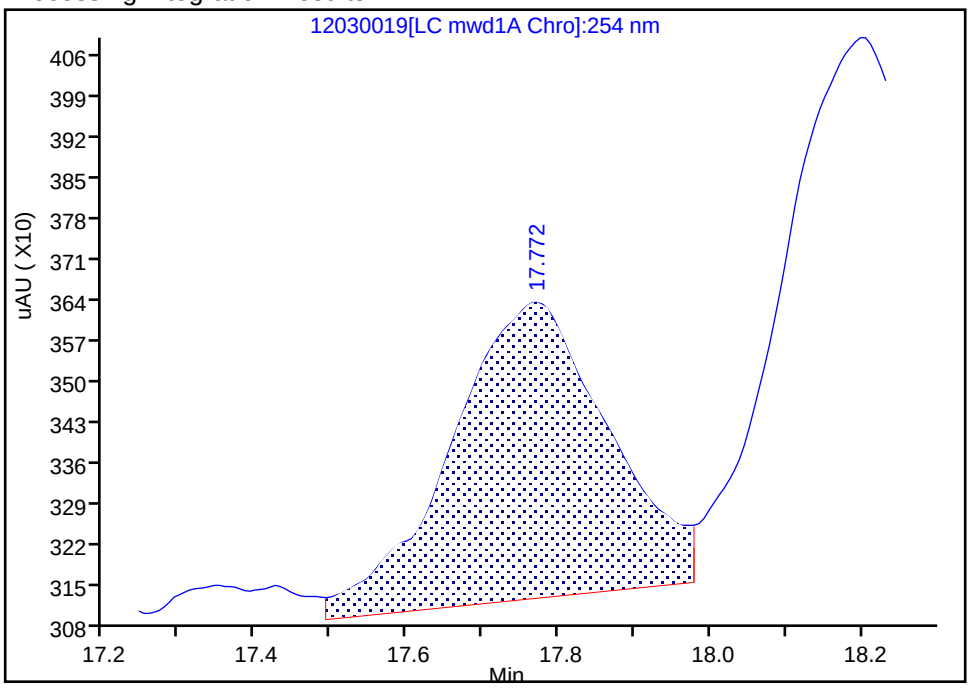
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Injection Date:	04-Dec-2024 00:34:11	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 2				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1A, 254 nm		

21 2,6-Dinitrotoluene, CAS: 606-20-2

Signal: 1

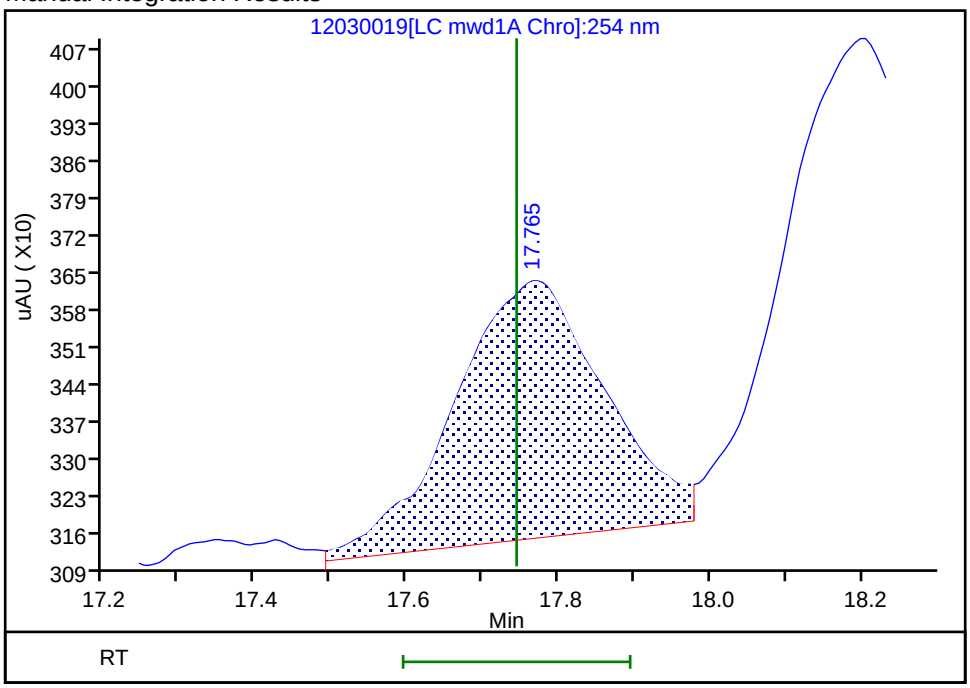
Processing Integration Results

RT: 17.77
Area: 7378
Amount: 0.025246
Amount Units: ug/ml



Manual Integration Results

RT: 17.77
Area: 6677
Amount: 0.023687
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:32:38 -07:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

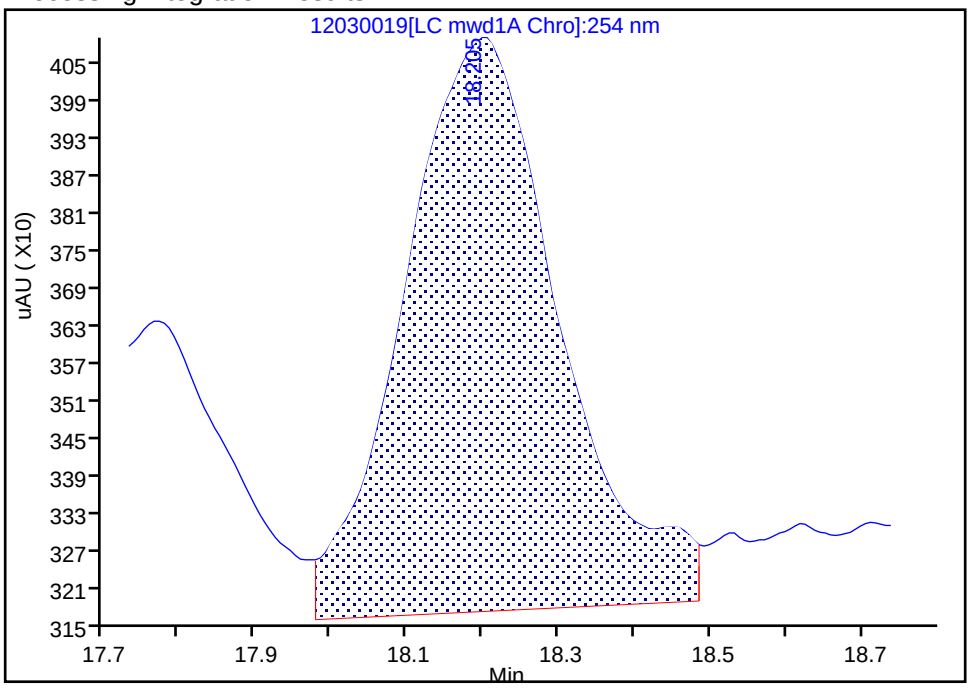
Data File:	\\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030019.D				
Injection Date:	04-Dec-2024 00:34:11	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 2				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1A, 254 nm		

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

Signal: 1

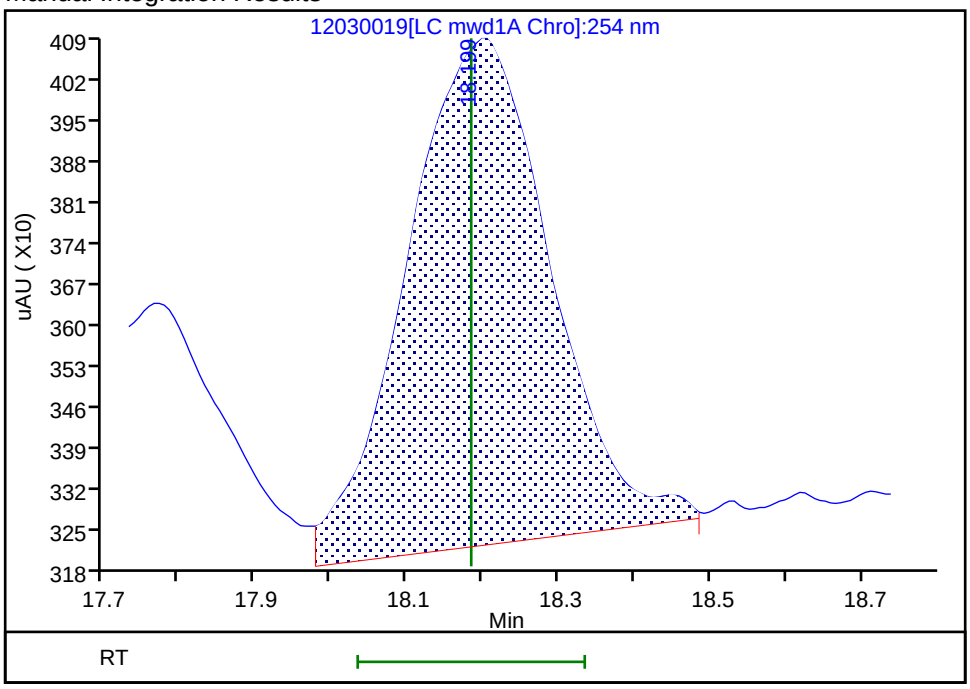
Processing Integration Results

RT: 18.21
Area: 13194
Amount: 0.022733
Amount Units: ug/ml



Manual Integration Results

RT: 18.20
Area: 11492
Amount: 0.020917
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:32:38 -07:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

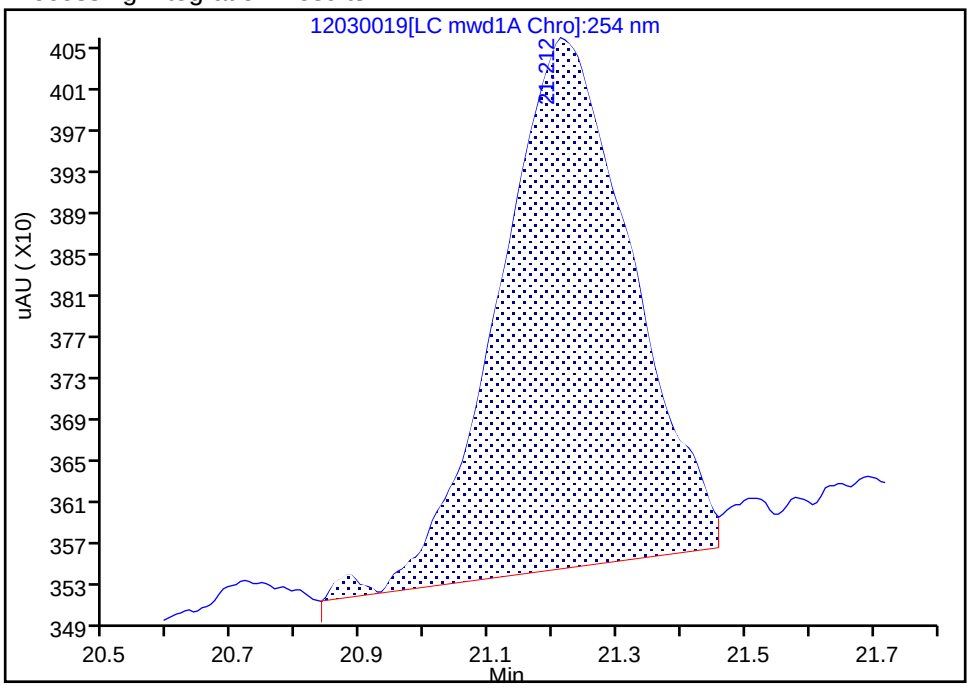
Data File:	\\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030019.D				
Injection Date:	04-Dec-2024 00:34:11	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 2				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1A, 254 nm		

23 Tetryl, CAS: 479-45-8

Signal: 1

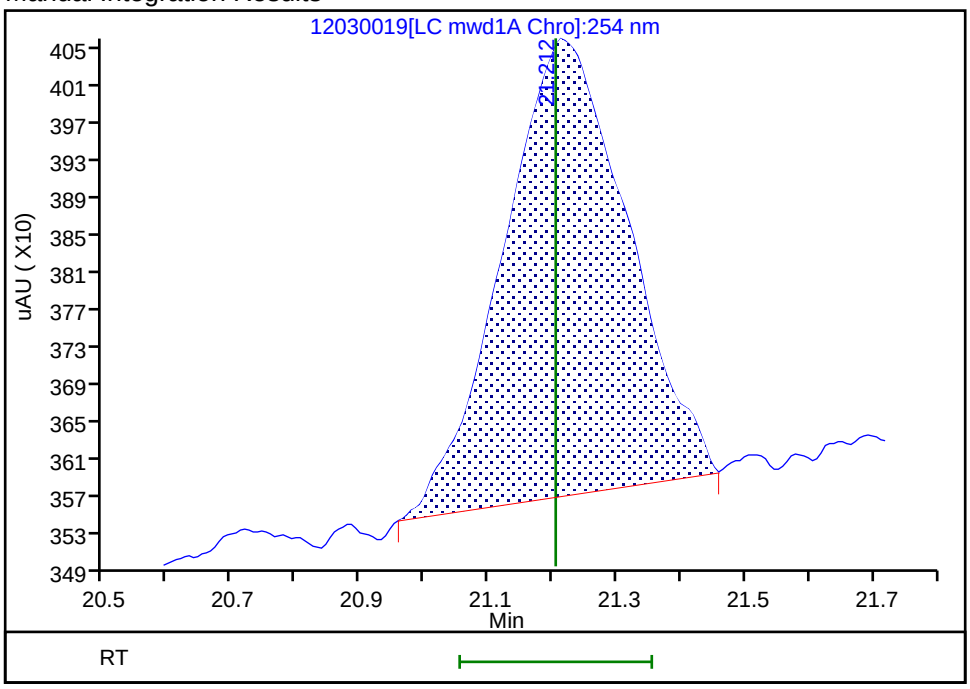
Processing Integration Results

RT: 21.21
Area: 7295
Amount: 0.022149
Amount Units: ug/ml



Manual Integration Results

RT: 21.21
Area: 6472
Amount: 0.019927
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:32:58 -07:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

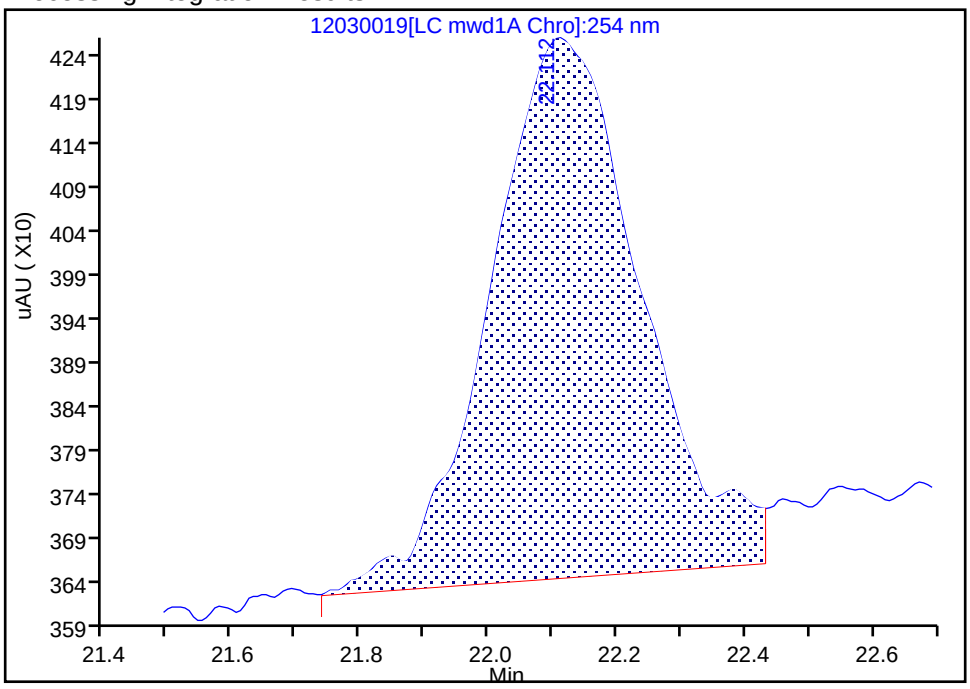
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Injection Date:	04-Dec-2024 00:34:11	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 2				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1A, 254 nm		

24 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

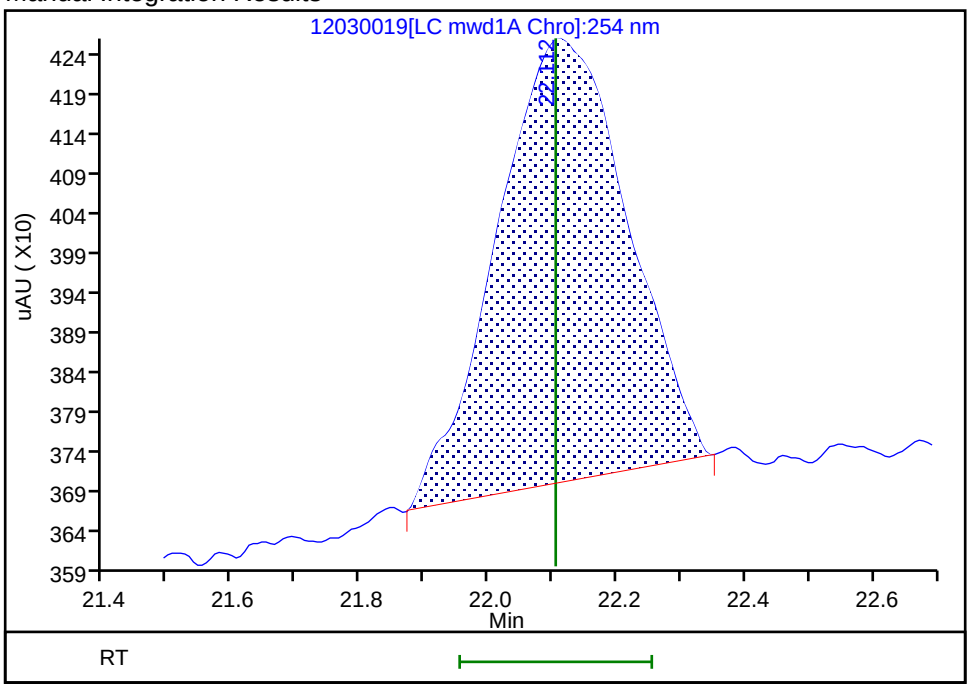
Processing Integration Results

RT: 22.11
Area: 9949
Amount: 0.022494
Amount Units: ug/ml



Manual Integration Results

RT: 22.11
Area: 7873
Amount: 0.018852
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:32:50 -07:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

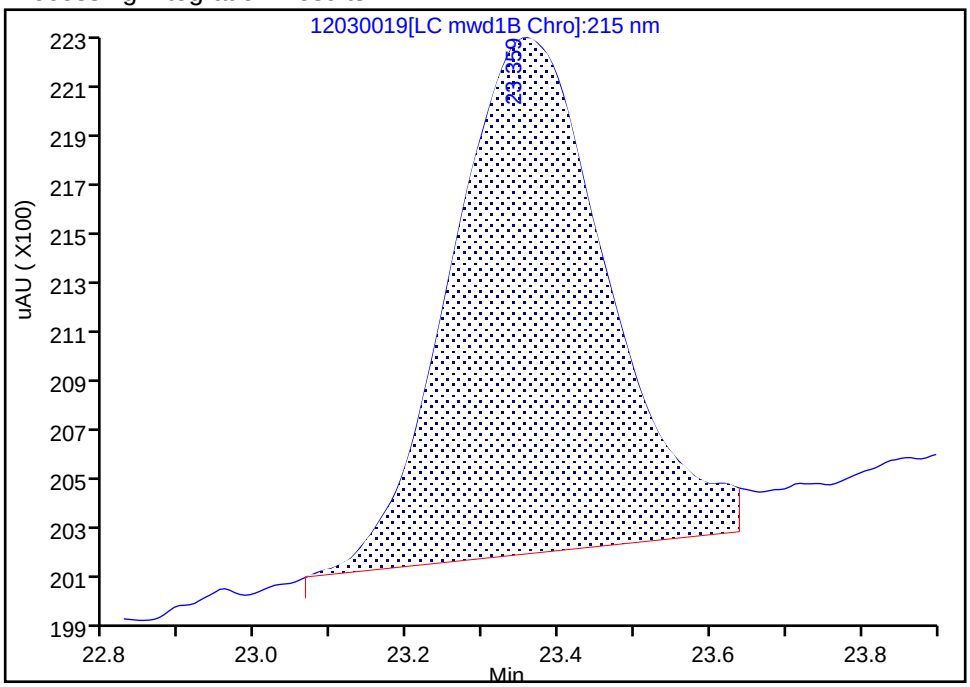
Data File:	\\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030019.D				
Injection Date:	04-Dec-2024 00:34:11	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 2				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1B, 215 nm		

25 PETN, CAS: 78-11-5

Signal: 1

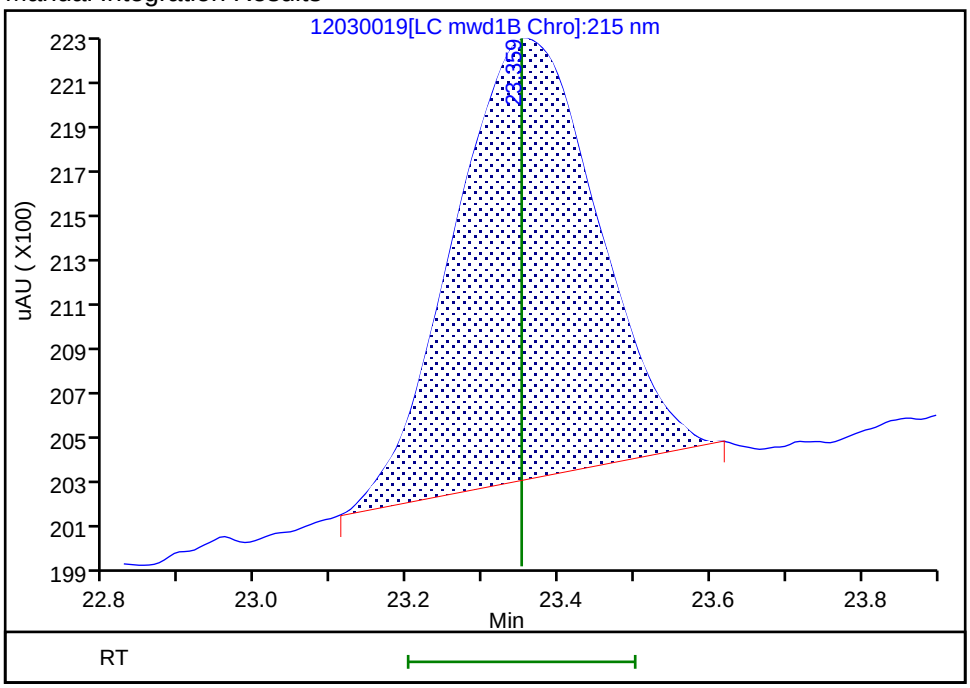
Processing Integration Results

RT: 23.36
Area: 29483
Amount: 0.203919
Amount Units: ug/ml



Manual Integration Results

RT: 23.36
Area: 25558
Amount: 0.185232
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:33:02 -07:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030020.D
Lims ID: IC INT 1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 04-Dec-2024 01:09:06 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\20241203-140414.b\8330_X5_Luna.m
Limit Group: GCSV - 8330
Last Update: 04-Dec-2024 17:40:56 Calib Date: 04-Dec-2024 01:09:06
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030020.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC mwd1A, 254 nm
Process Host: CTX1637

First Level Reviewer: LV5D Date: 04-Dec-2024 11:35:14

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
5 HMX	1	6.382	6.364	0.018	1664	0.0100	0.009395	M
7 2,4,6-Trinitrophenol	1	7.895	7.858	0.037	1295	0.0100	0.0115	M
8 RDX	1	8.482	8.484	-0.002	2184	0.0100	0.0105	M
9 Nitrobenzene	1	11.035	11.011	0.024	3699	0.0100	0.009653	M
$ 10 1,2-Dinitrobenzene	1	11.855	11.838	0.017	2876	0.0100	0.0107	M
11 3,5-Dinitroaniline	1	13.622	13.584	0.038	5058	0.0100	0.0100	M
12 1,3-Dinitrobenzene	1	13.935	13.918	0.017	6525	0.0100	0.0110	M
13 Nitroglycerin	2	14.435	14.424	0.011	12031	0.1000	0.0932	M
14 o-Nitrotoluene	1	15.015	15.018	-0.003	2706	0.0100	0.0109	M
16 p-Nitrotoluene	1	15.262	15.238	0.024	1848	0.0100	0.008768	M
17 4-Amino-2,6-dinitrotoluene	1	15.669	15.651	0.018	2733	0.0100	0.009673	M
18 m-Nitrotoluene	1	16.102	16.071	0.031	2679	0.0100	0.009889	M
19 2-Amino-4,6-dinitrotoluene	1	16.449	16.418	0.031	3681	0.0100	0.009292	M
20 1,3,5-Trinitrobenzene	1	16.689	16.658	0.031	4184	0.0100	0.0101	Ma
21 2,6-Dinitrotoluene	1	17.769	17.744	0.025	2642	0.0100	0.009373	M
22 2,4-Dinitrotoluene	1	18.189	18.184	0.005	4848	0.0100	0.008824	M
23 Tetryl	1	21.229	21.204	0.025	3521	0.0100	0.0108	
24 2,4,6-Trinitrotoluene	1	22.109	22.104	0.005	4271	0.0100	0.0102	M
25 PETN	2	23.369	23.351	0.018	13637	0.1000	0.0988	M

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

8330IntermStk_00082 Amount Added: 1.00 Units: uL

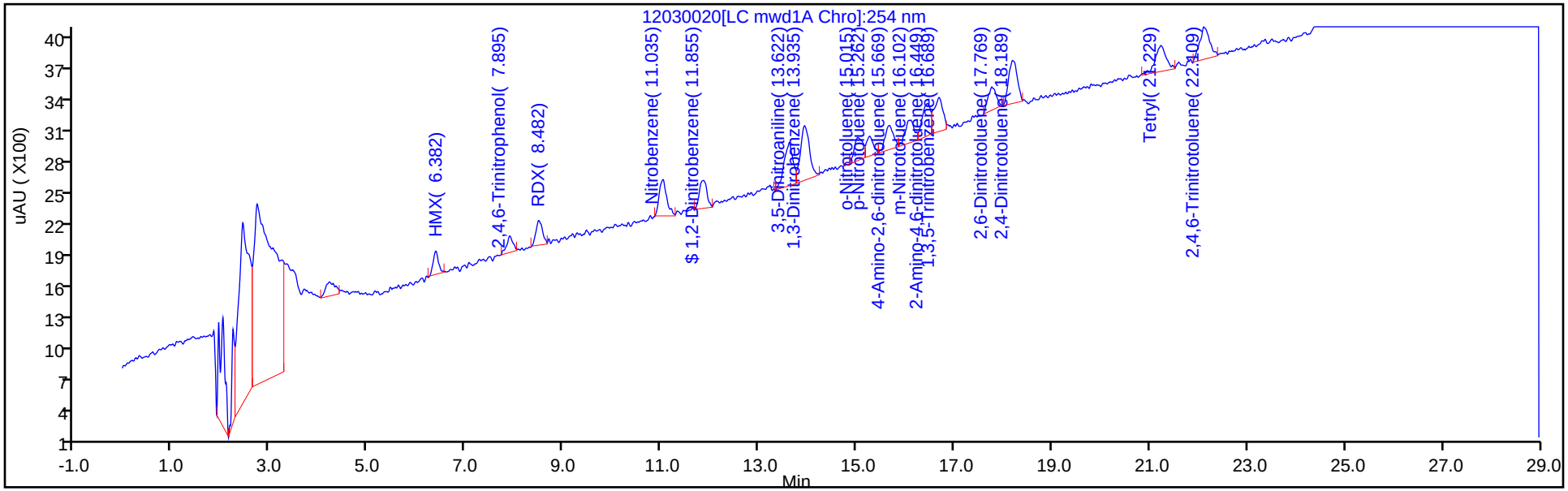
Report Date: 04-Dec-2024 17:40:56 Chrom Revision: 2.3 12-Nov-2024 16:55:22

Eurofins Denver

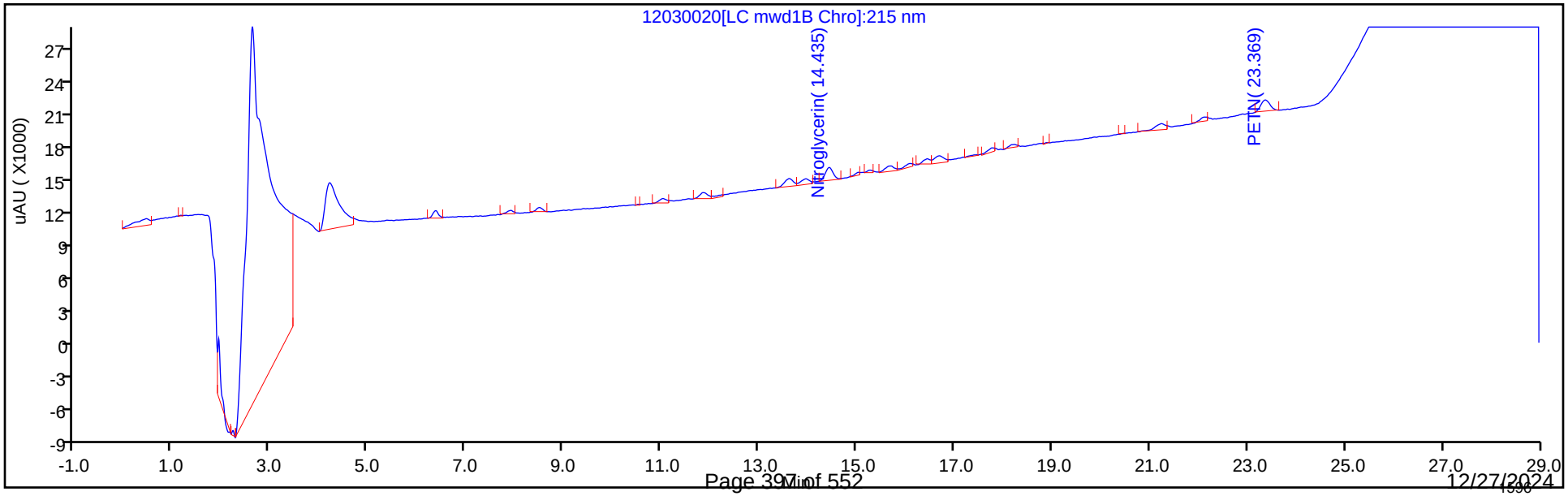
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Injection Date:	04-Dec-2024 01:09:06	Instrument ID:	CHHPLC_X5	Operator ID:	JZ
Lims ID:	IC INT 1			Worklist Smp#:	18
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		

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



Manual Integration/User Assign Peak Report

Eurofins Denver

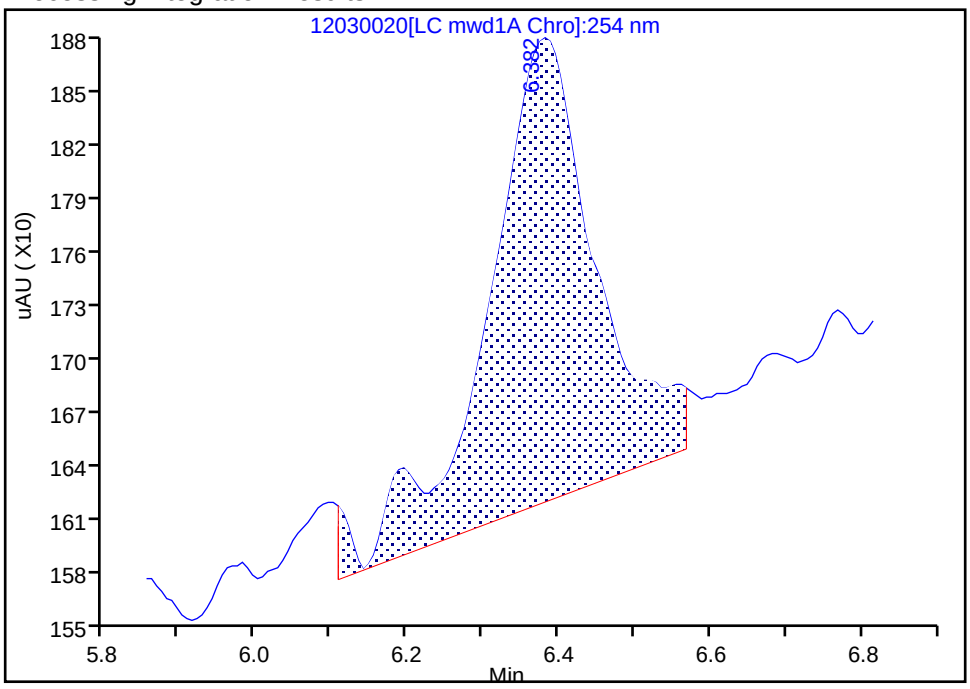
Data File:	\\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030020.D				
Injection Date:	04-Dec-2024 01:09:06	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 1				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1A, 254 nm		

5 HMX, CAS: 2691-41-0

Signal: 1

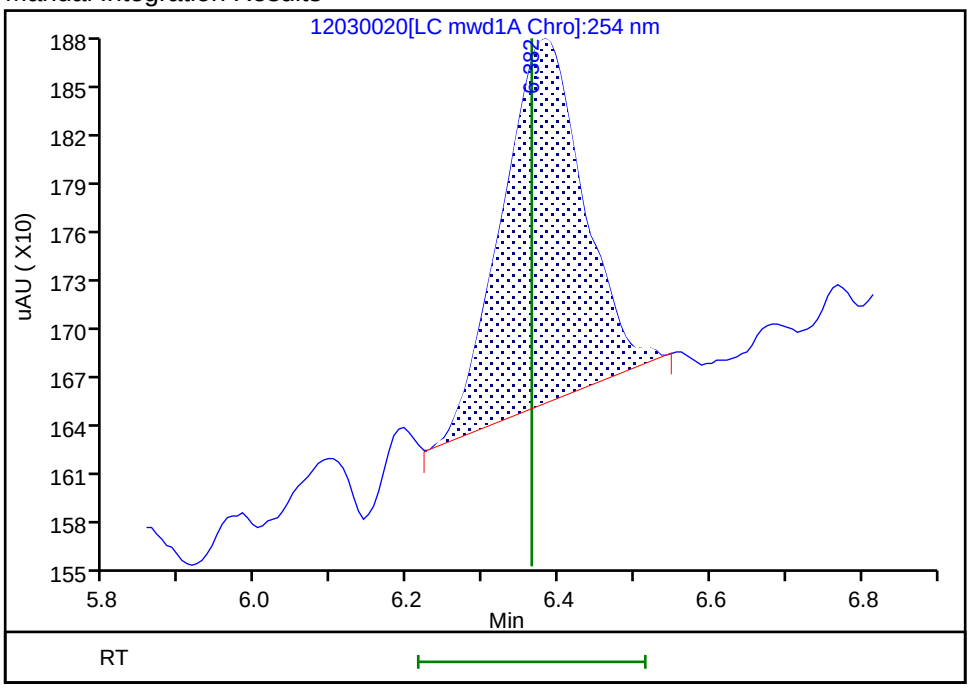
Processing Integration Results

RT: 6.38
Area: 2539
Amount: 0.013589
Amount Units: ug/ml



Manual Integration Results

RT: 6.38
Area: 1664
Amount: 0.009395
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:33:53 -07:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

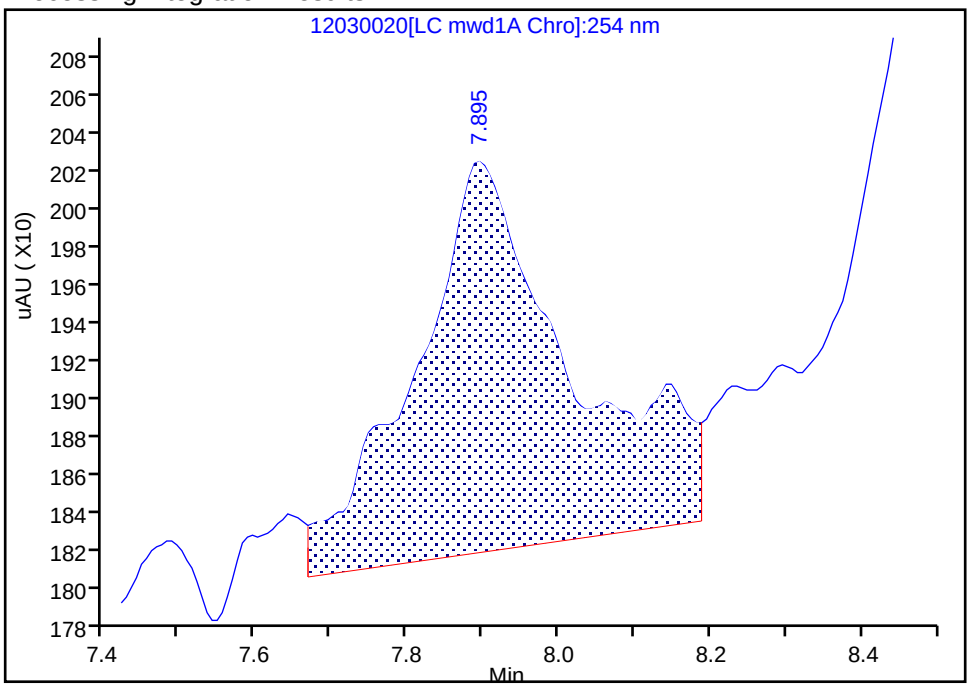
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Injection Date:	04-Dec-2024 01:09:06	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 1				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1A, 254 nm		

7 2,4,6-Trinitrophenol, CAS: 88-89-1

Signal: 1

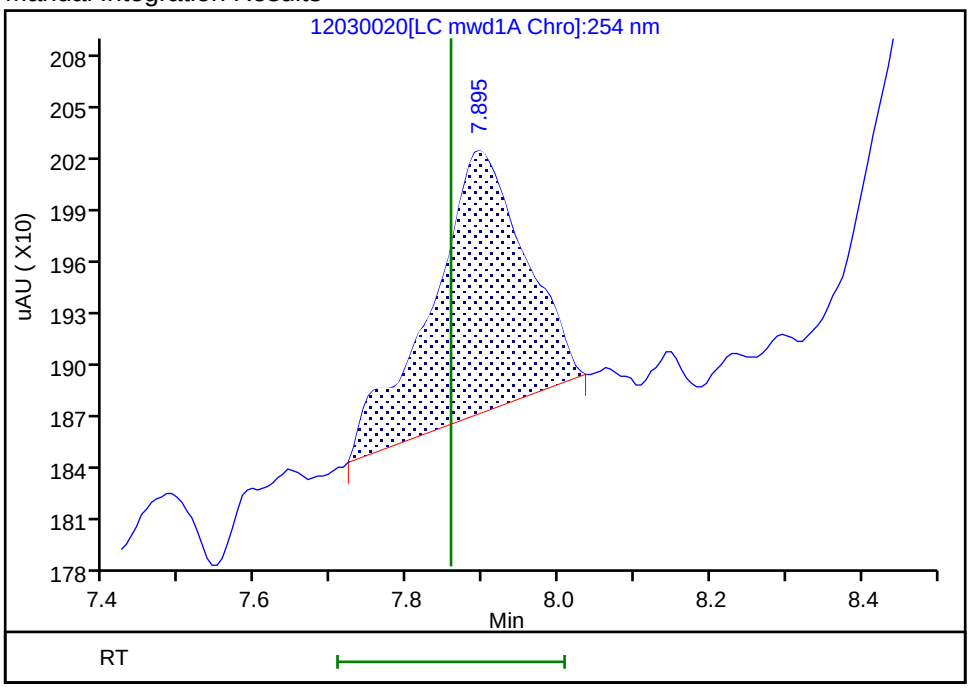
Processing Integration Results

RT: 7.90
Area: 2918
Amount: 0.018058
Amount Units: ug/ml



Manual Integration Results

RT: 7.90
Area: 1295
Amount: 0.011487
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:33:49 -07:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

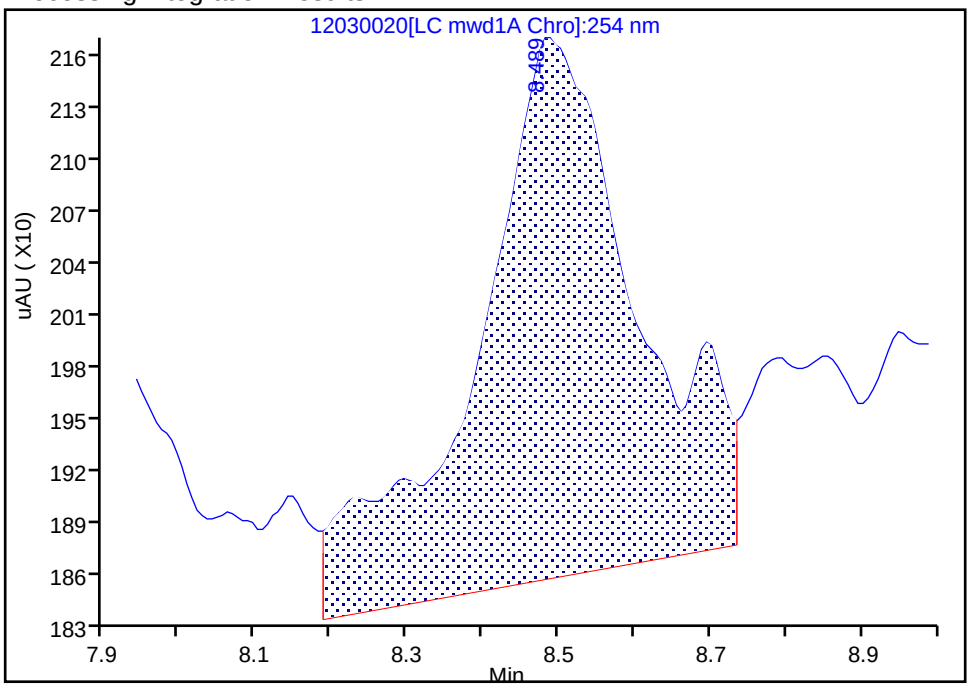
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Injection Date:	04-Dec-2024 01:09:06	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 1				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1A, 254 nm		

8 RDX, CAS: 121-82-4

Signal: 1

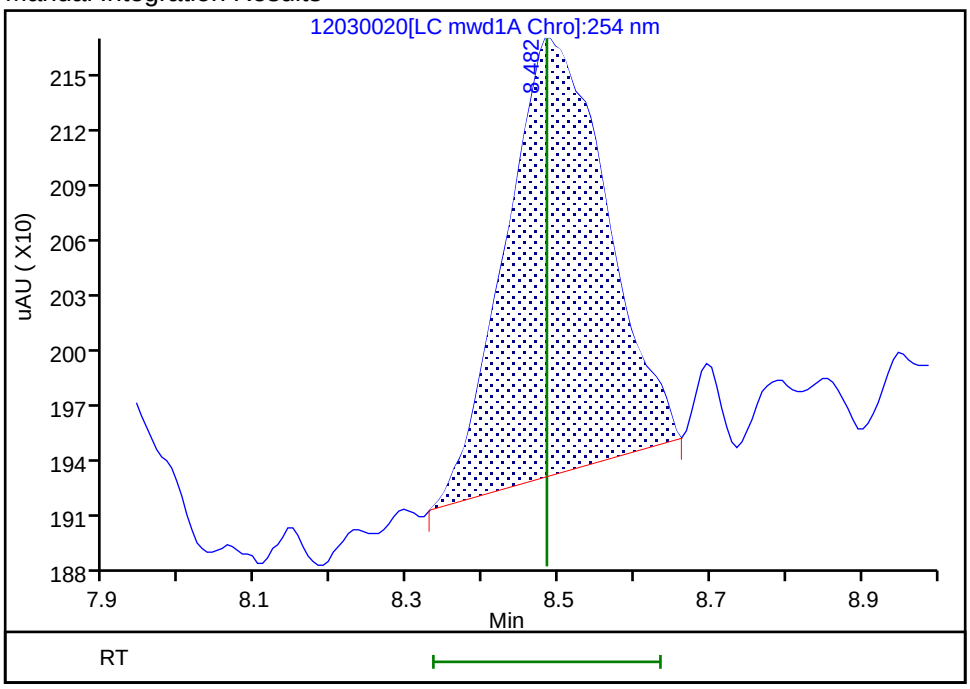
Processing Integration Results

RT: 8.49
Area: 4664
Amount: 0.019772
Amount Units: ug/ml



Manual Integration Results

RT: 8.48
Area: 2184
Amount: 0.010483
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:33:41 -07:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

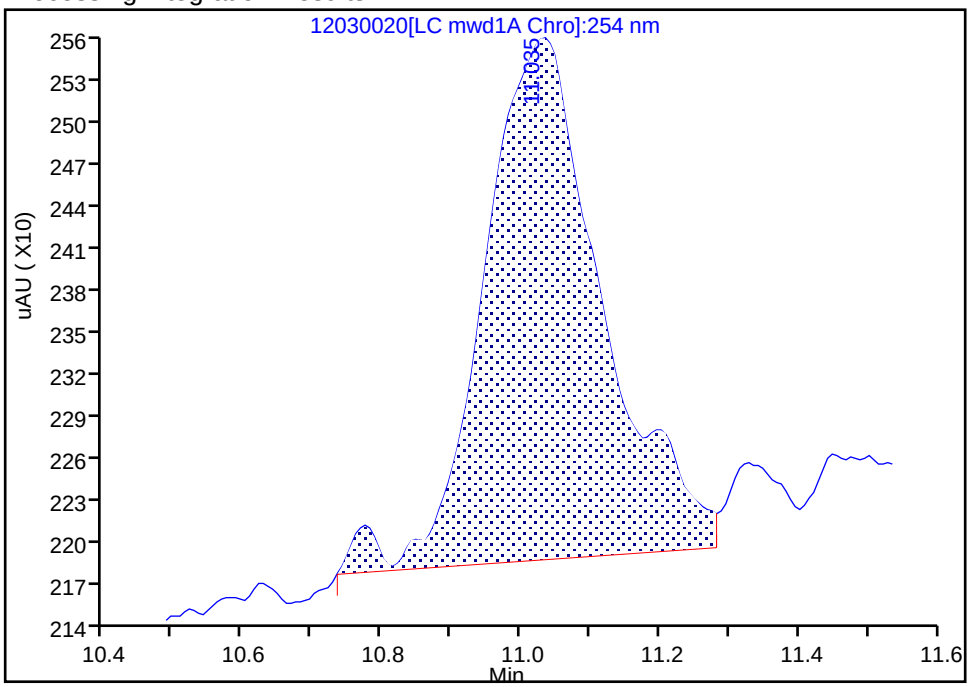
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Injection Date:	04-Dec-2024 01:09:06	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 1				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1A, 254 nm		

9 Nitrobenzene, CAS: 98-95-3

Signal: 1

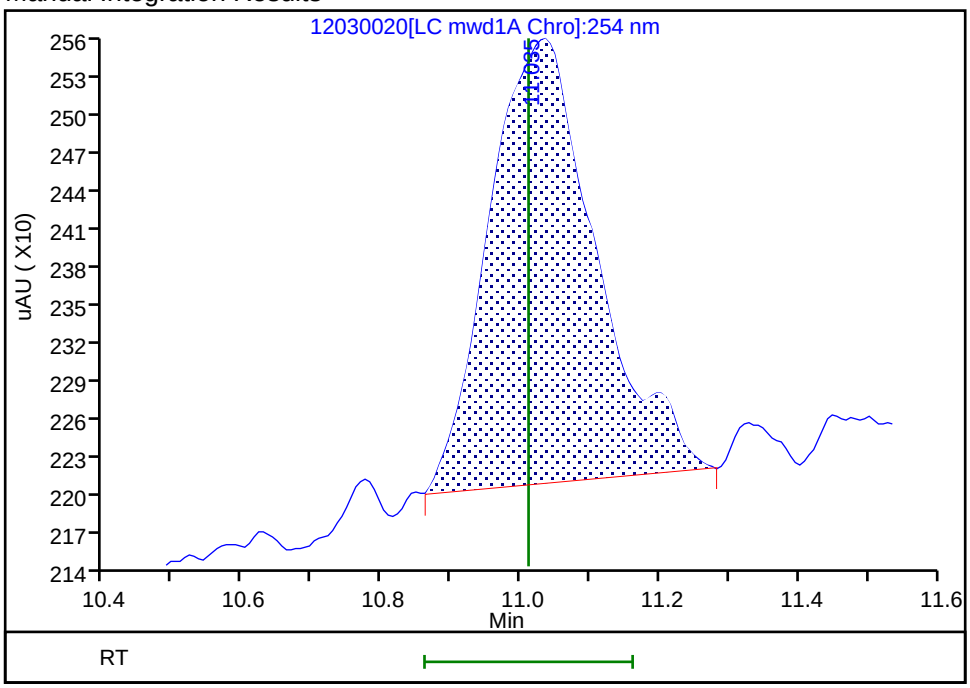
Processing Integration Results

RT: 11.04
Area: 4361
Amount: 0.011166
Amount Units: ug/ml



Manual Integration Results

RT: 11.04
Area: 3699
Amount: 0.009653
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:34:06 -07:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

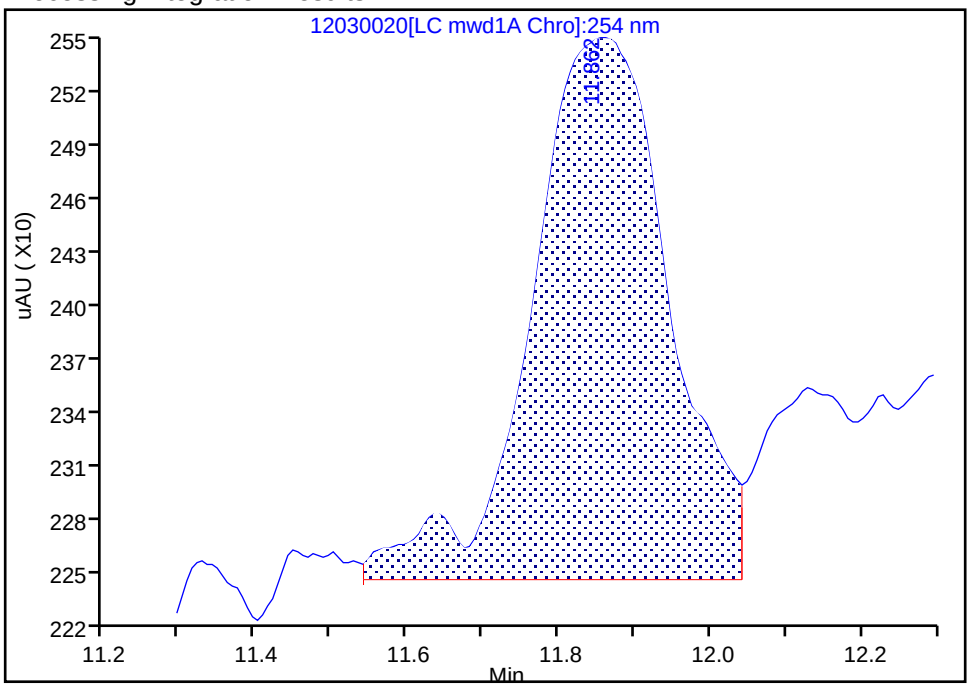
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Injection Date:	04-Dec-2024 01:09:06	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 1				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1A, 254 nm		

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

Signal: 1

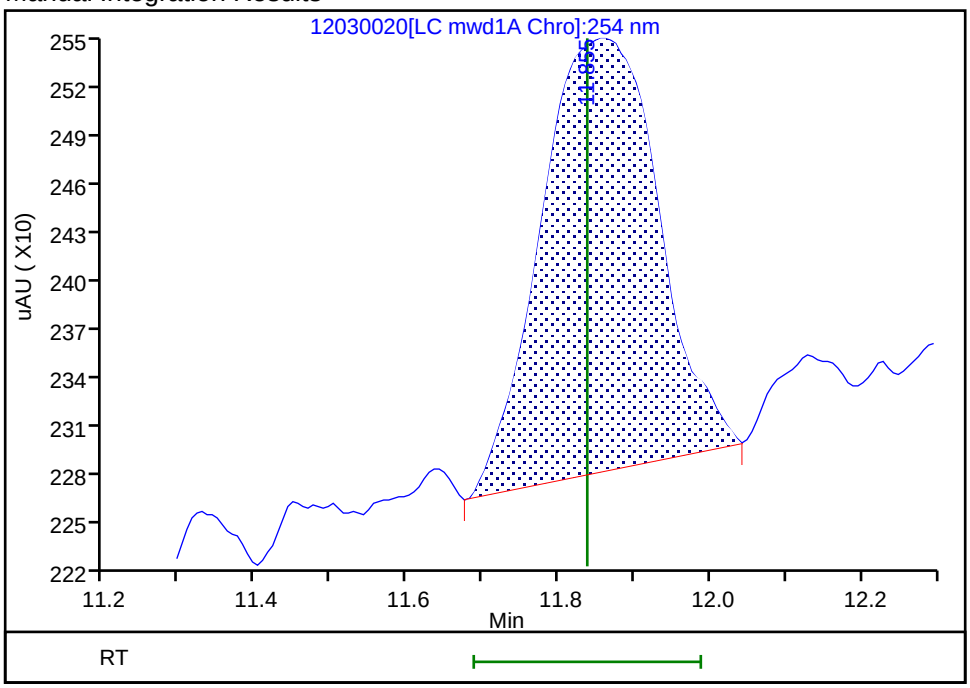
Processing Integration Results

RT: 11.86
Area: 3817
Amount: 0.013707
Amount Units: ug/ml



Manual Integration Results

RT: 11.86
Area: 2876
Amount: 0.010731
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:34:10 -07:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Denver

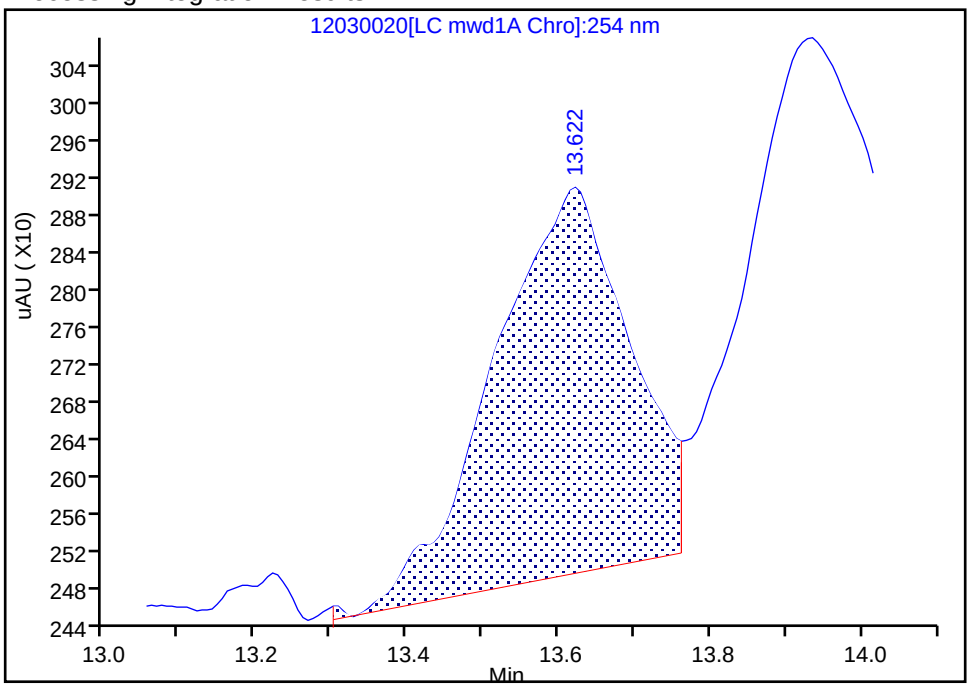
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Injection Date:	04-Dec-2024 01:09:06	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 1				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1A, 254 nm		

11 3,5-Dinitroaniline, CAS: 618-87-1

Signal: 1

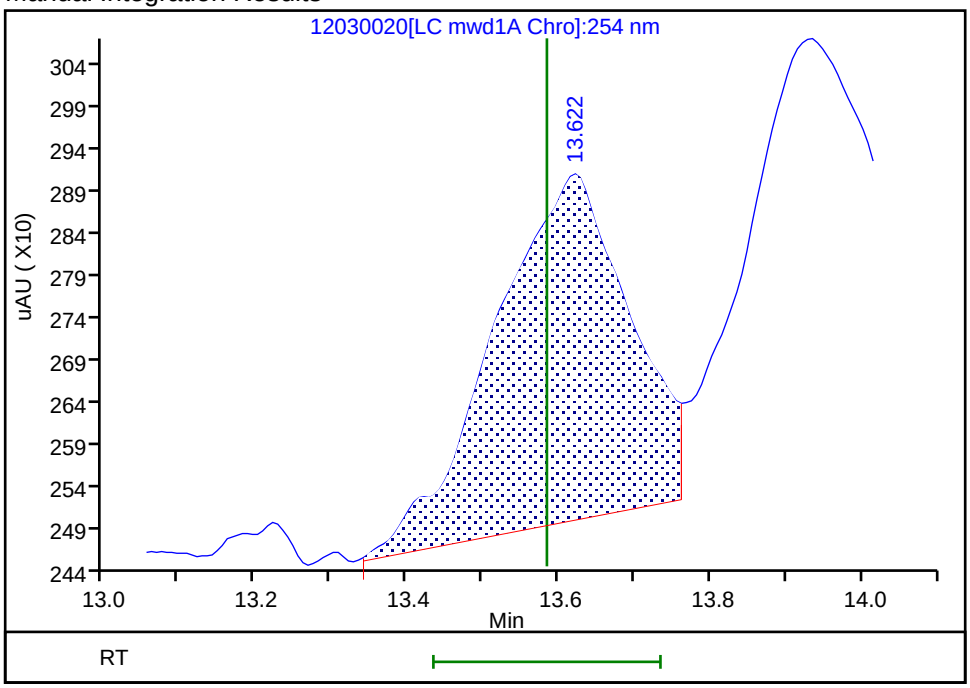
Processing Integration Results

RT: 13.62
Area: 5106
Amount: 0.010051
Amount Units: ug/ml



Manual Integration Results

RT: 13.62
Area: 5058
Amount: 0.010029
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:34:19 -07:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

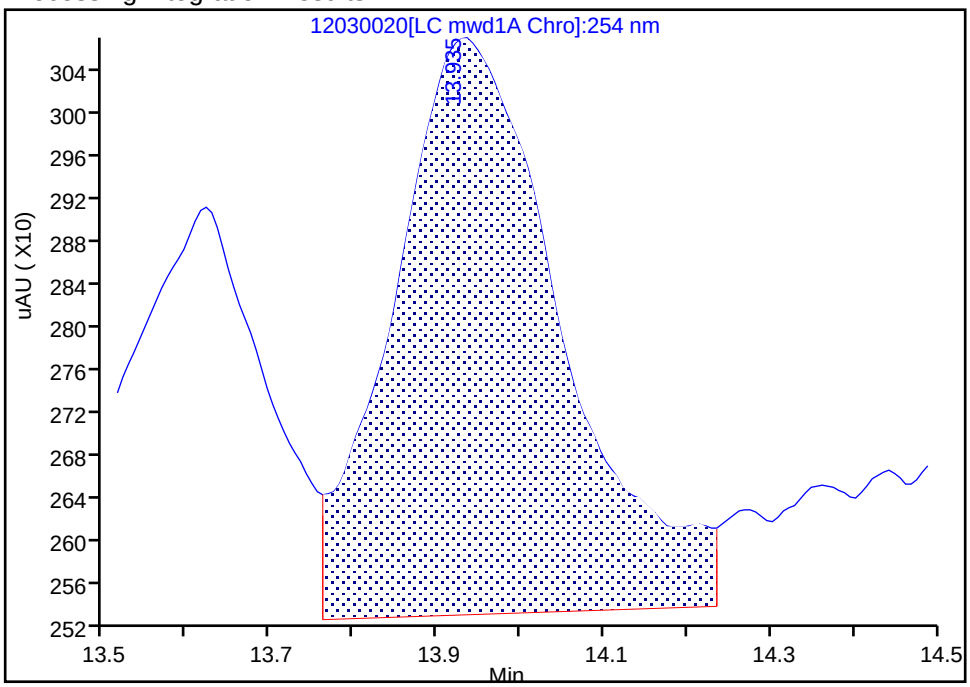
Data File:	\\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030020.D				
Injection Date:	04-Dec-2024 01:09:06	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 1				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit 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

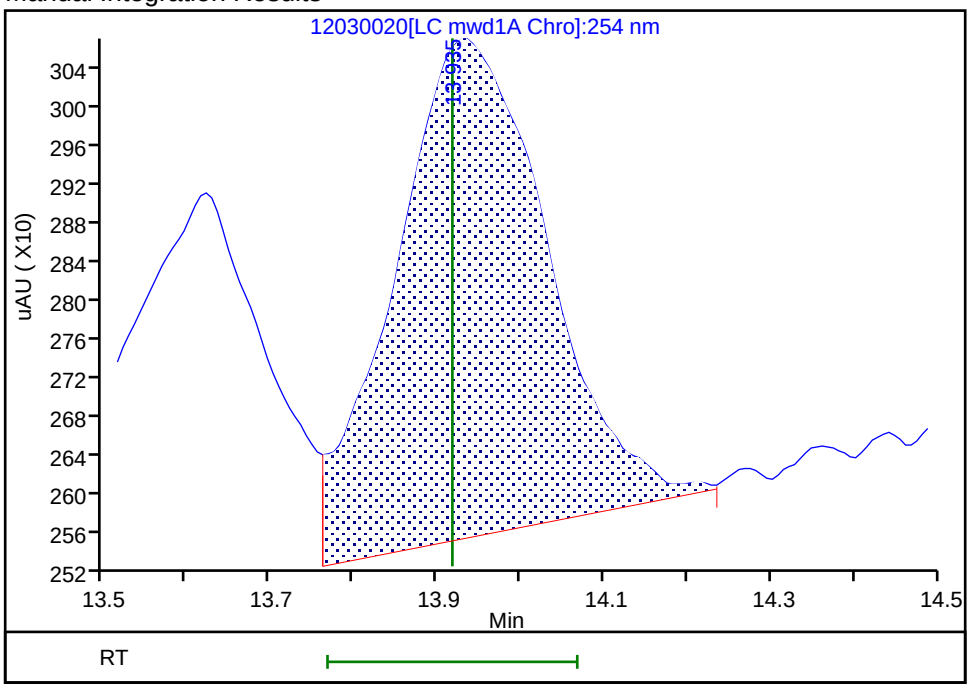
Processing Integration Results

RT: 13.94
Area: 7576
Amount: 0.012534
Amount Units: ug/ml



Manual Integration Results

RT: 13.94
Area: 6525
Amount: 0.011008
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:34:16 -07:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Eurofins Denver

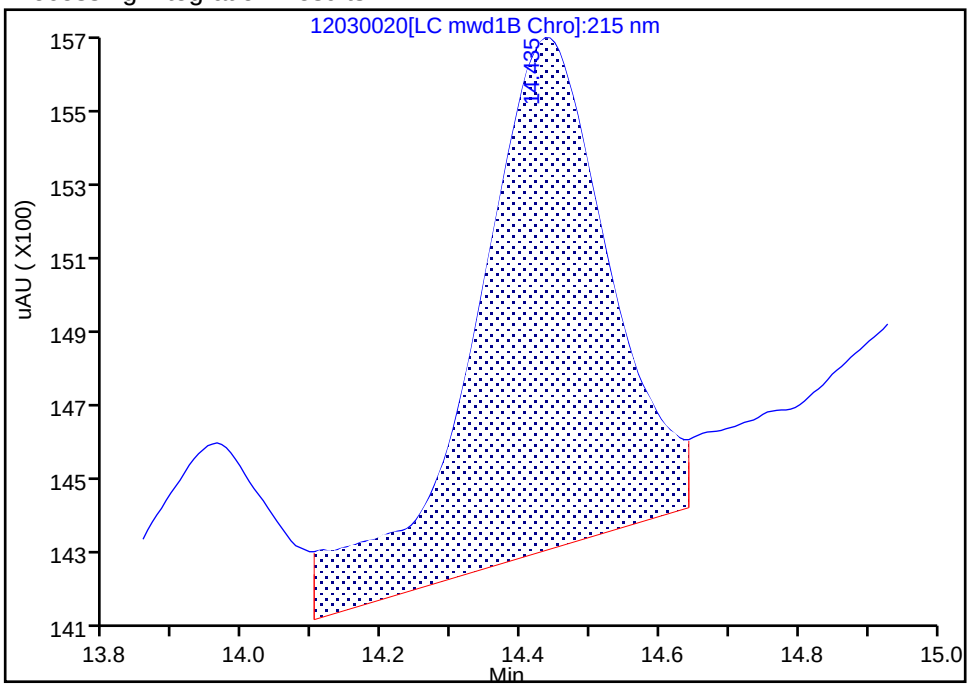
Data File:	\\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030020.D				
Injection Date:	04-Dec-2024 01:09:06	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 1				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1B, 215 nm		

13 Nitroglycerin, CAS: 55-63-0

Signal: 1

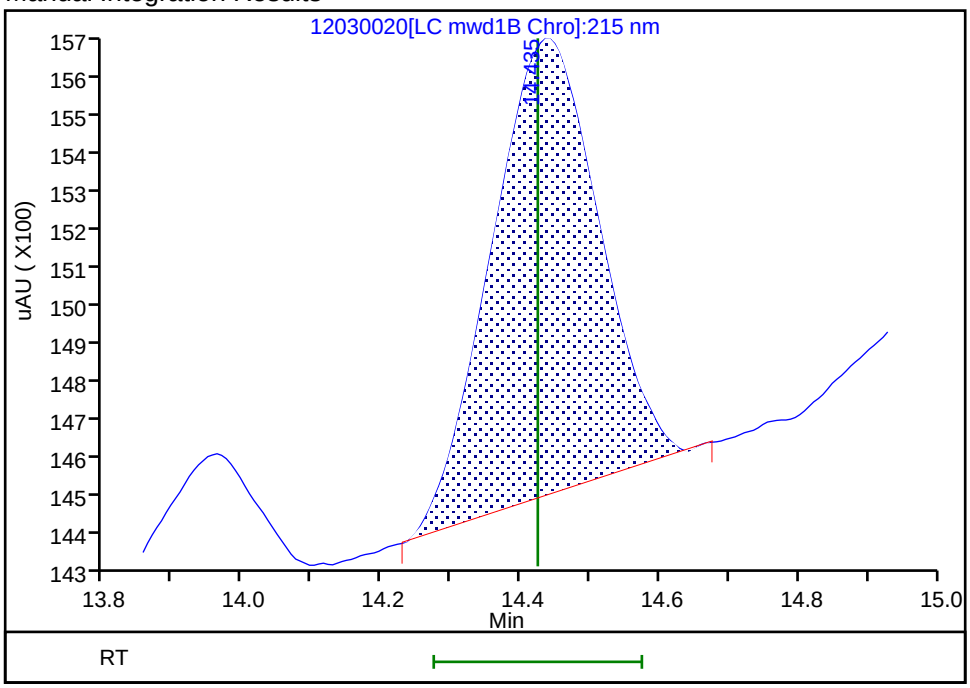
Processing Integration Results

RT: 14.44
Area: 17370
Amount: 0.128599
Amount Units: ug/ml



Manual Integration Results

RT: 14.44
Area: 12031
Amount: 0.093163
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:35:05 -07:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

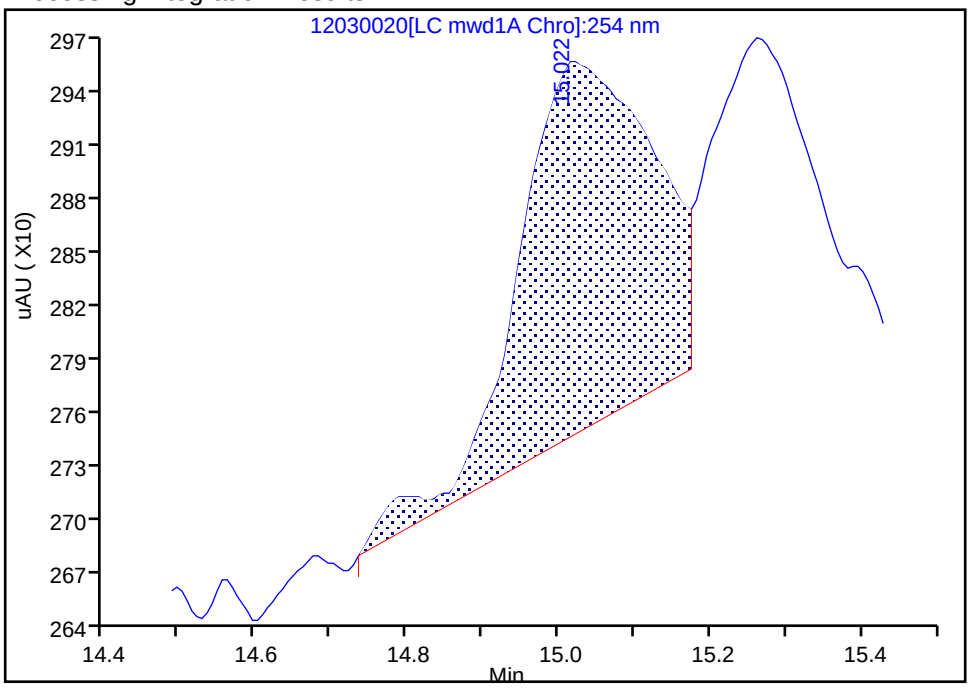
Data File:	\\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030020.D				
Injection Date:	04-Dec-2024 01:09:06	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 1				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1A, 254 nm		

14 o-Nitrotoluene, CAS: 88-72-2

Signal: 1

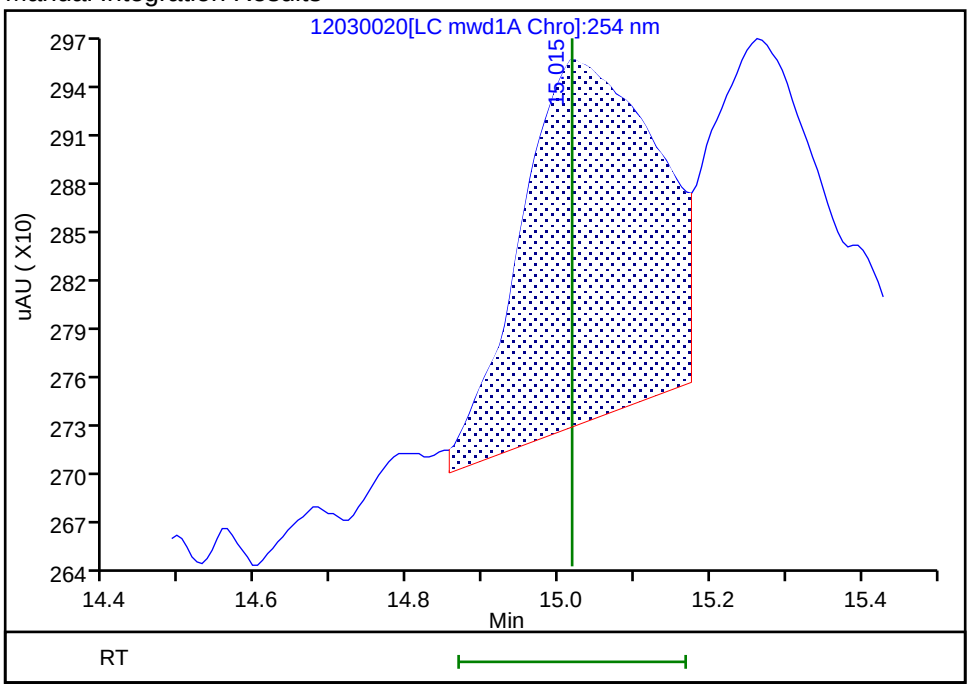
Processing Integration Results

RT: 15.02
Area: 2456
Amount: 0.009970
Amount Units: ug/ml



Manual Integration Results

RT: 15.02
Area: 2706
Amount: 0.010862
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:34:35 -07:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

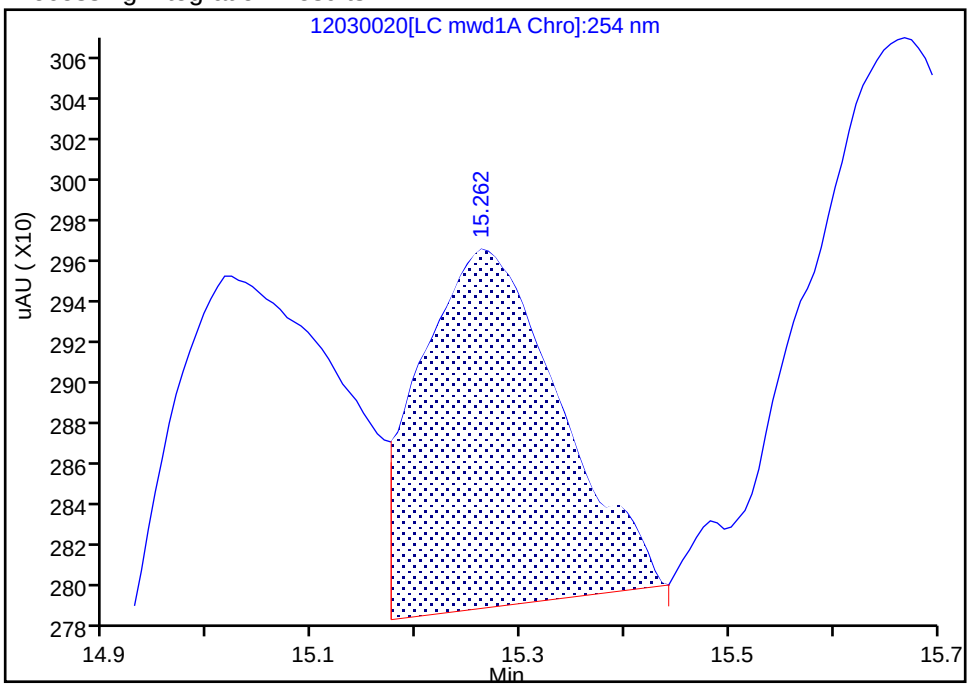
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Injection Date:	04-Dec-2024 01:09:06	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 1				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1A, 254 nm		

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

Signal: 1

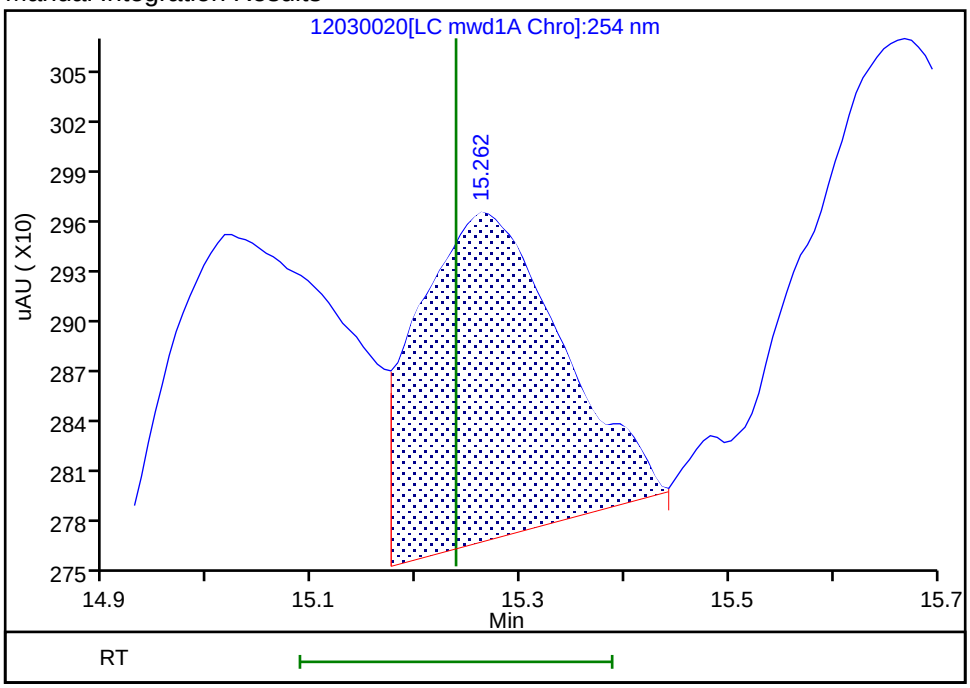
Processing Integration Results

RT: 15.26
Area: 1608
Amount: 0.007727
Amount Units: ug/ml



Manual Integration Results

RT: 15.26
Area: 1848
Amount: 0.008768
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:34:30 -07:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

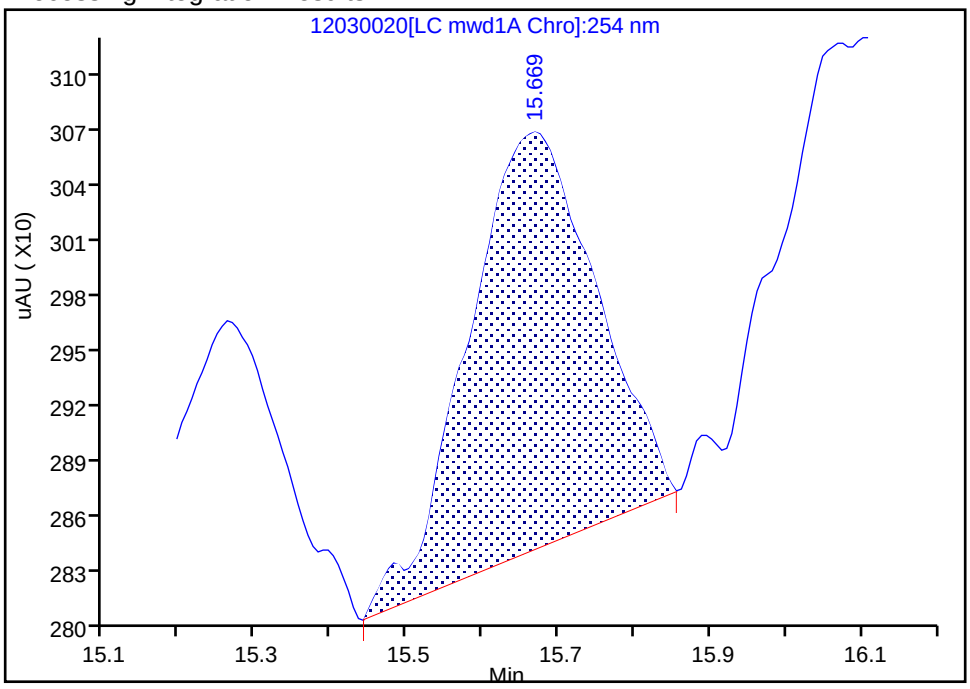
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Injection Date: 04-Dec-2024 01:09:06 Instrument ID: CHHPLC_X5
Lims ID: IC INT 1
Client ID:
Operator ID: JZ ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X5_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC mwd1A, 254 nm

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

Signal: 1

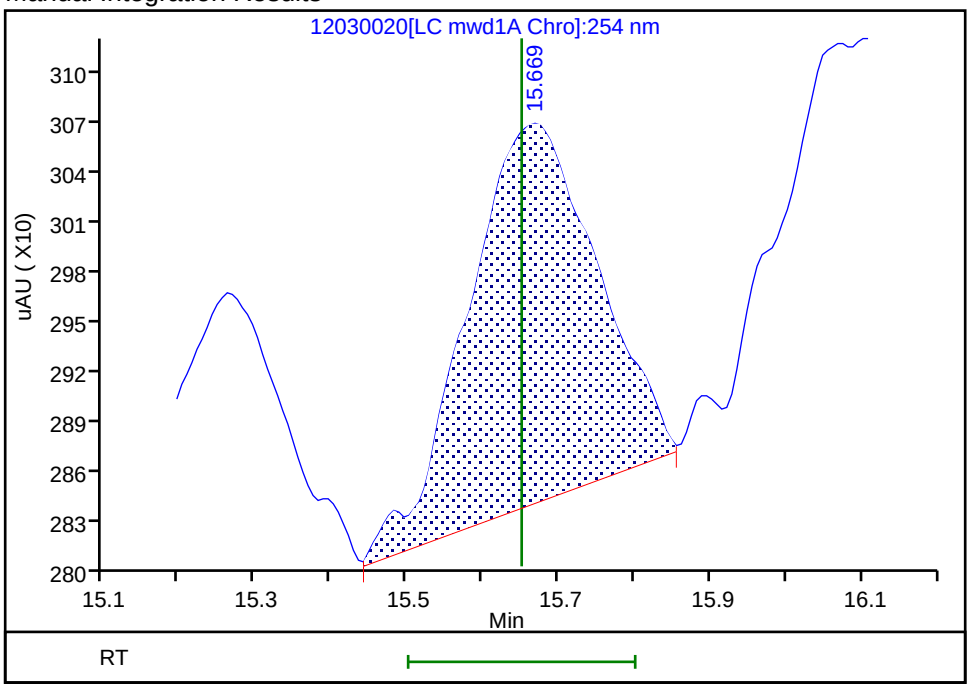
Processing Integration Results

RT: 15.67
Area: 2659
Amount: 0.009438
Amount Units: ug/ml



Manual Integration Results

RT: 15.67
Area: 2733
Amount: 0.009673
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:34:30 -07:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

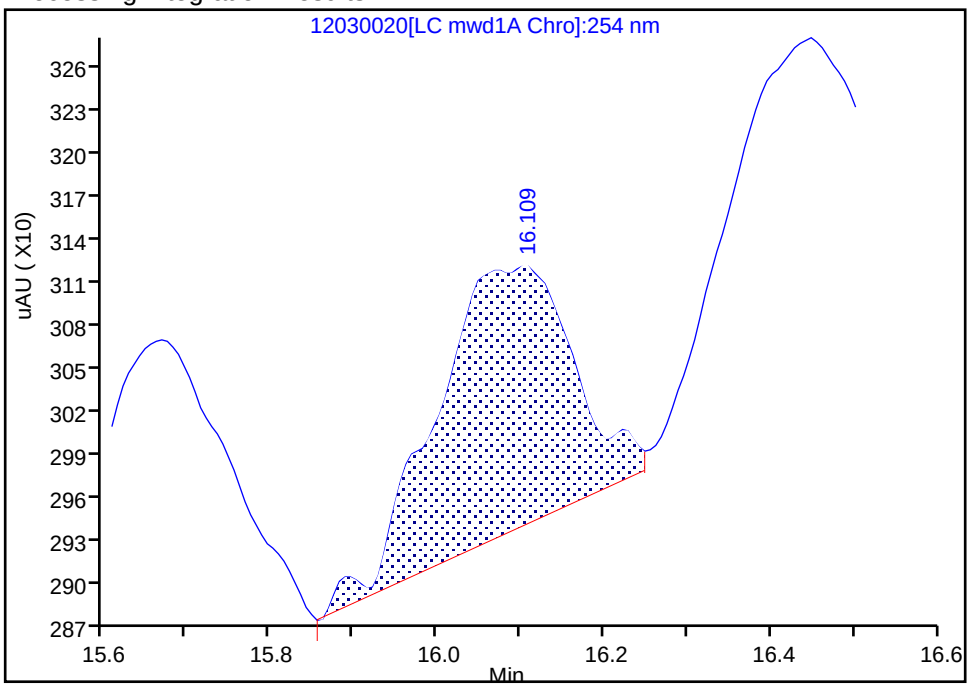
Data File:	\\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030020.D				
Injection Date:	04-Dec-2024 01:09:06	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 1				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1A, 254 nm		

18 m-Nitrotoluene, CAS: 99-08-1

Signal: 1

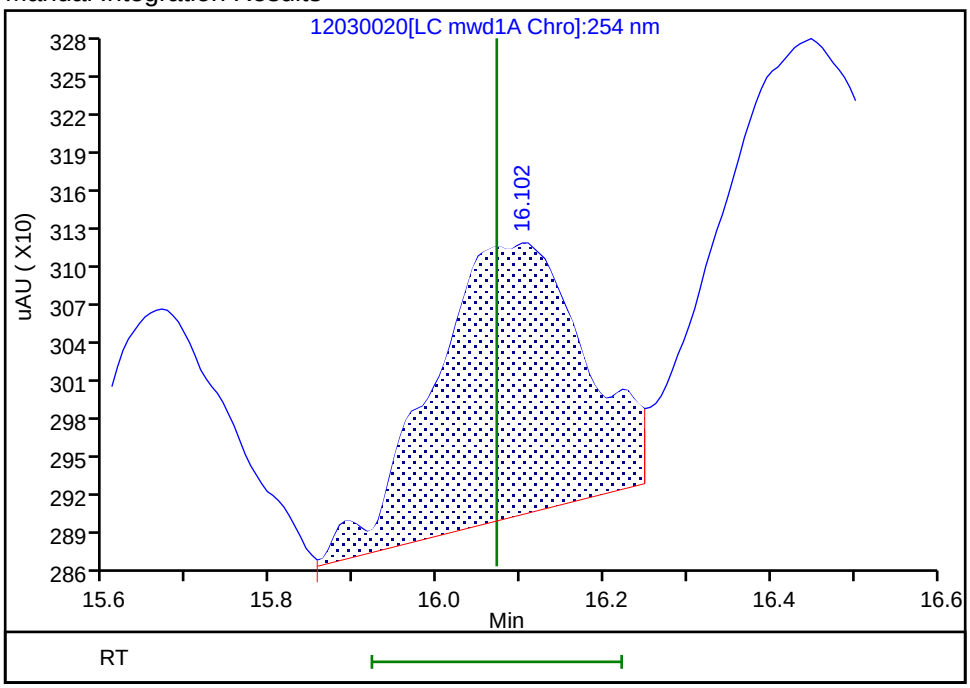
Processing Integration Results

RT: 16.11
Area: 2124
Amount: 0.008023
Amount Units: ug/ml



Manual Integration Results

RT: 16.10
Area: 2679
Amount: 0.009889
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:34:30 -07:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

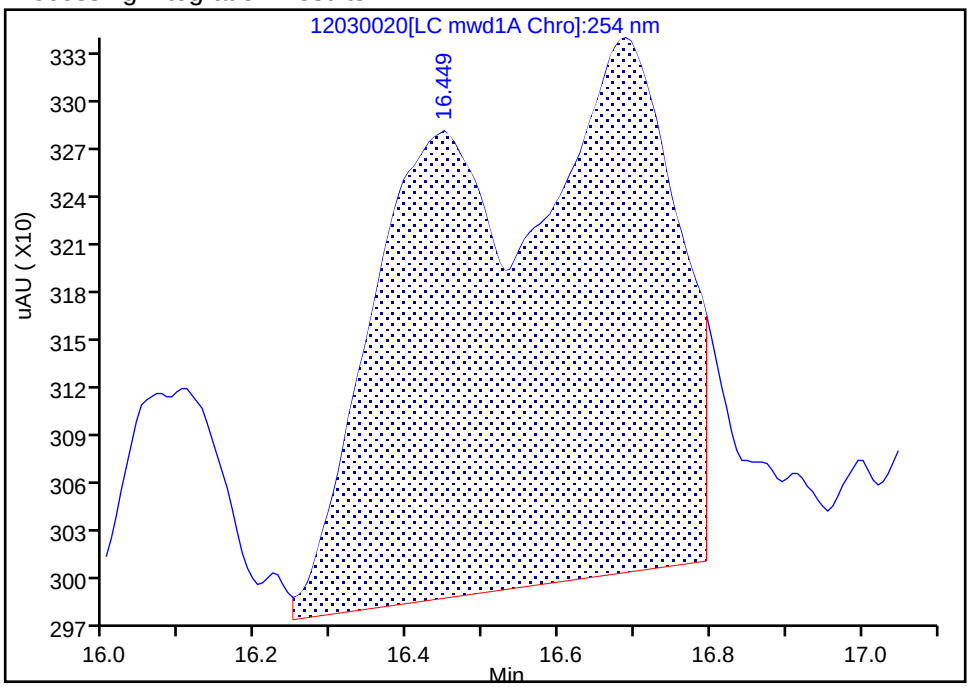
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Injection Date:	04-Dec-2024 01:09:06	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 1				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1A, 254 nm		

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

Signal: 1

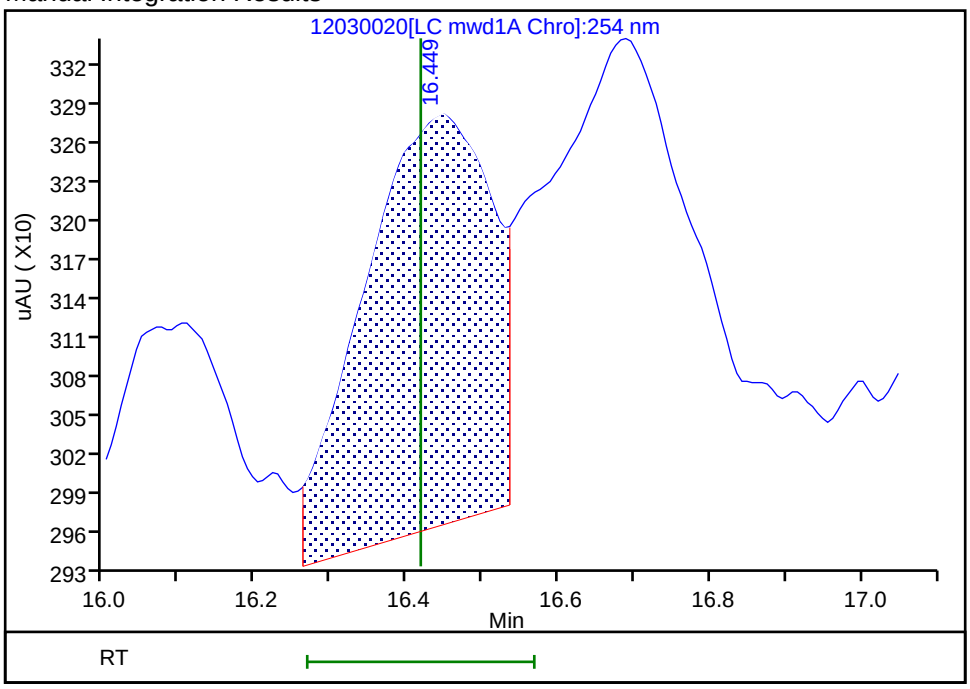
Processing Integration Results

RT: 16.45
Area: 7151
Amount: 0.013088
Amount Units: ug/ml



Manual Integration Results

RT: 16.45
Area: 3681
Amount: 0.009292
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:34:30 -07:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

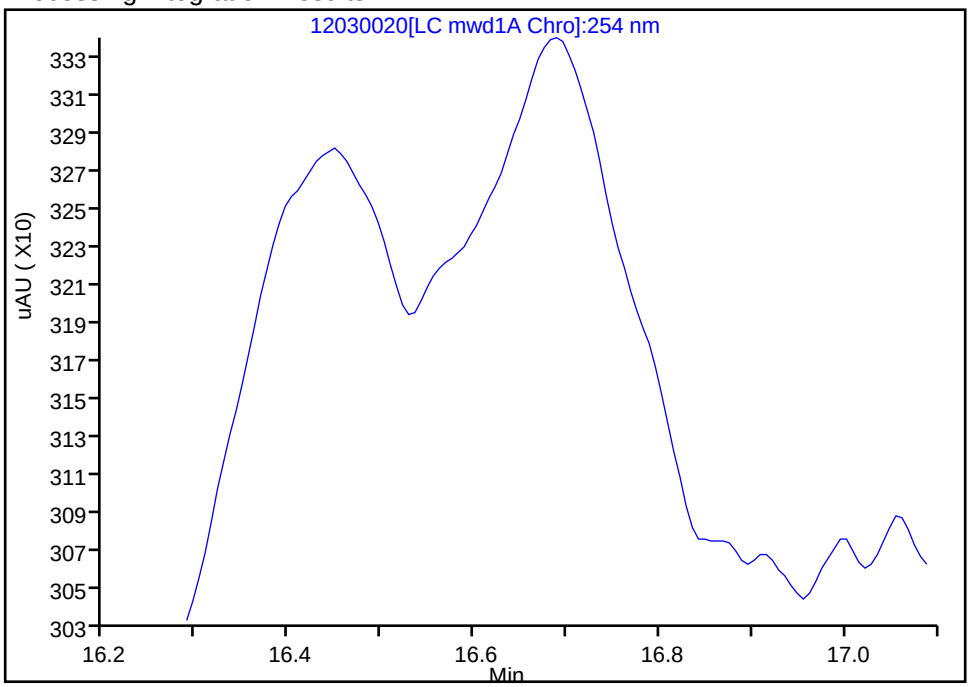
Data File:	\\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030020.D				
Injection Date:	04-Dec-2024 01:09:06	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 1				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit 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

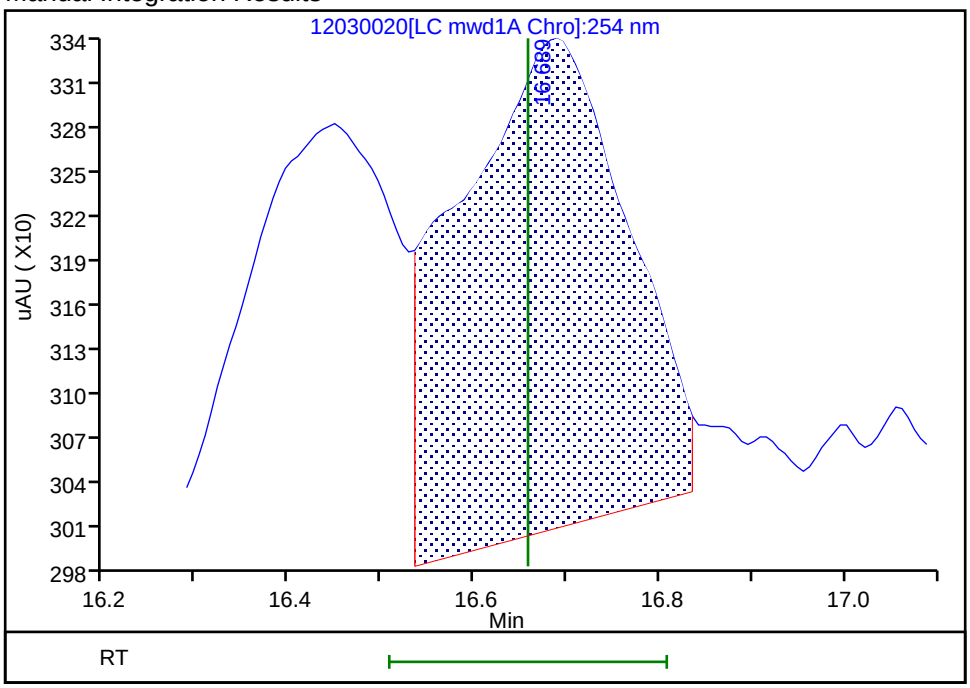
Not Detected
Expected RT: 16.66

Processing Integration Results



Manual Integration Results

RT: 16.69
Area: 4184
Amount: 0.010081
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:34:30 -07:00:00 (UTC)
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

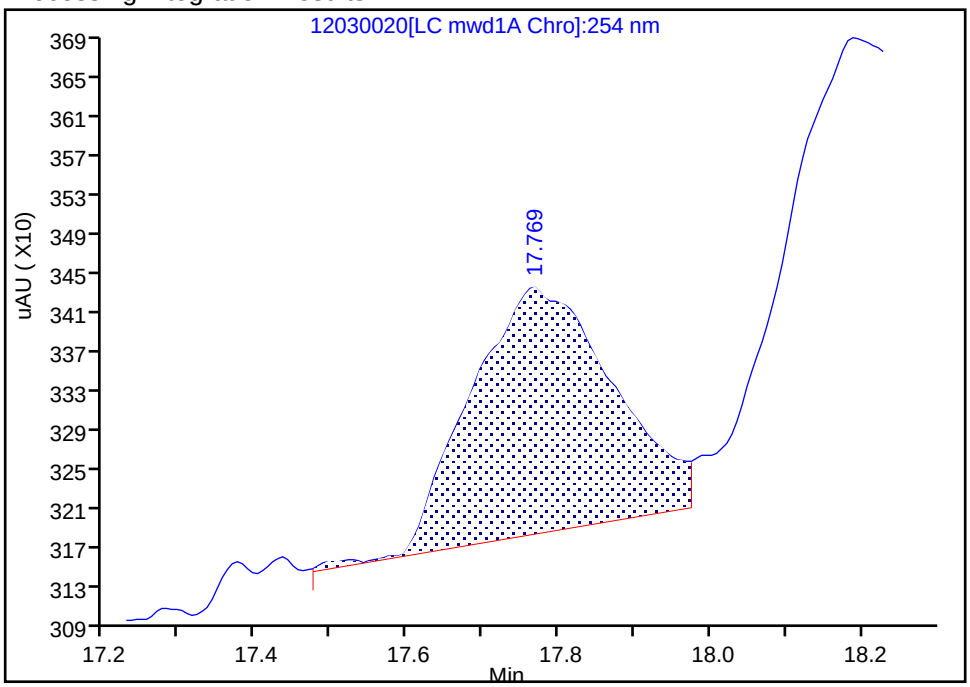
Data File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030020.D
Injection Date: 04-Dec-2024 01:09:06 Instrument ID: CHHPLC_X5
Lims ID: IC INT 1
Client ID:
Operator ID: JZ ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X5_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC mwd1A, 254 nm

21 2,6-Dinitrotoluene, CAS: 606-20-2

Signal: 1

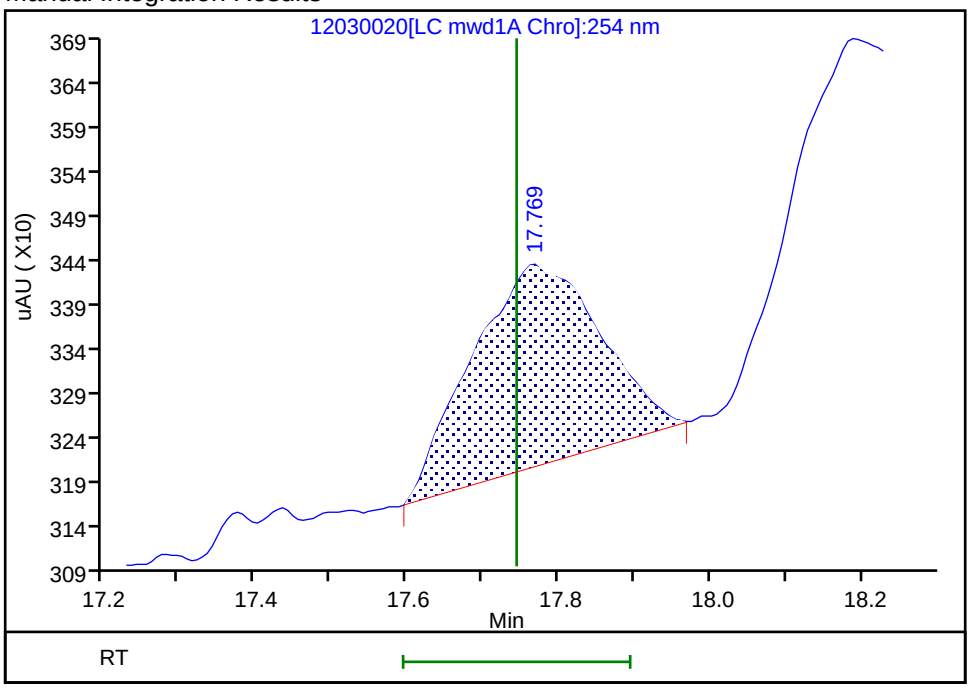
Processing Integration Results

RT: 17.77
Area: 3224
Amount: 0.011181
Amount Units: ug/ml



Manual Integration Results

RT: 17.77
Area: 2642
Amount: 0.009373
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:34:47 -07:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

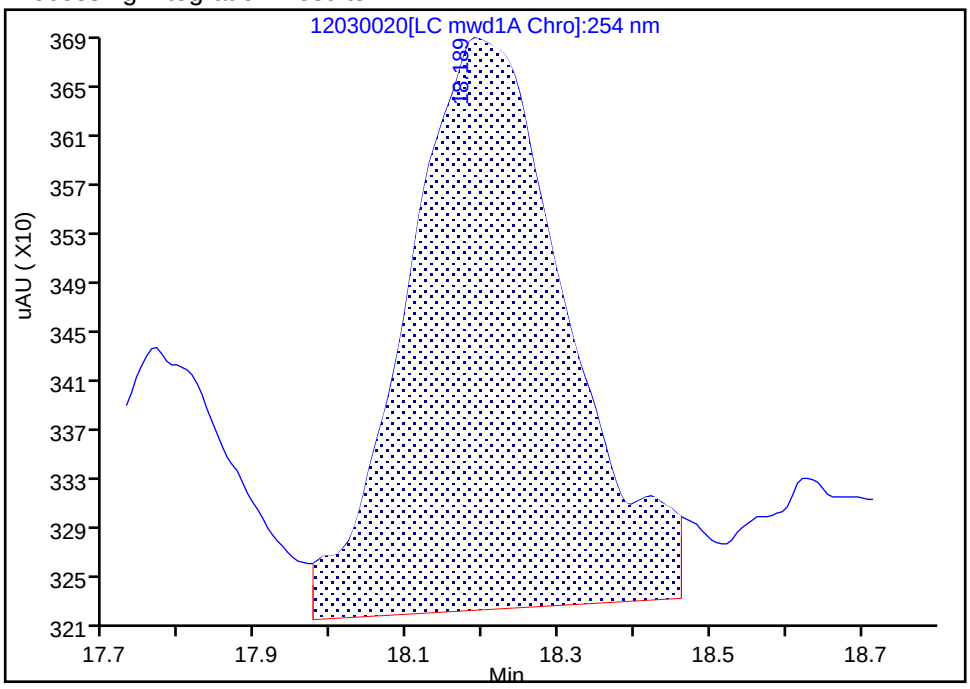
Data File:	\\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030020.D				
Injection Date:	04-Dec-2024 01:09:06	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 1				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit 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

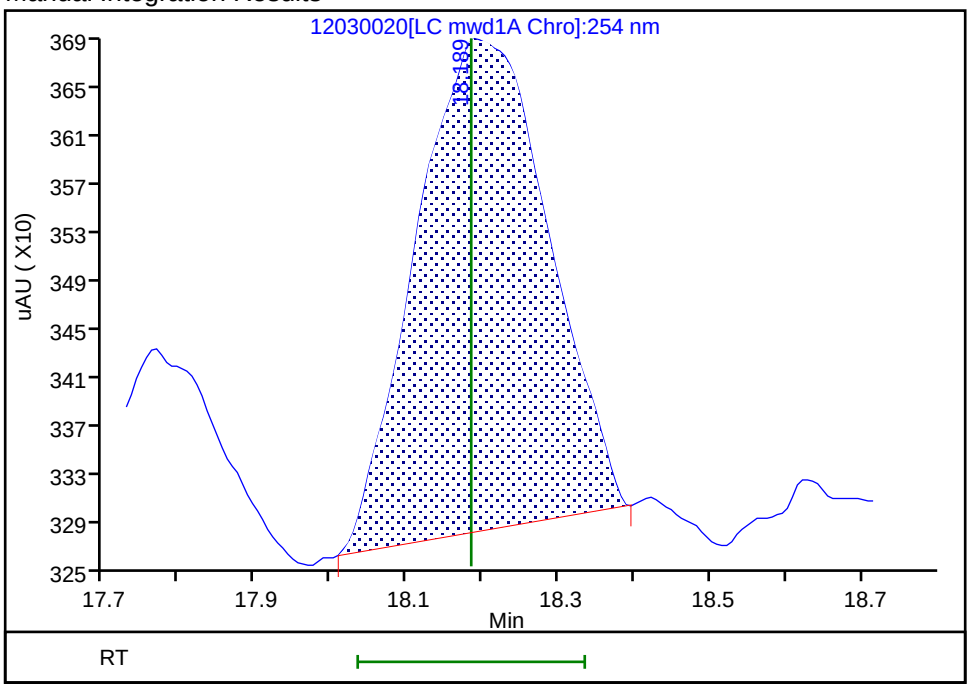
Processing Integration Results

RT: 18.19
Area: 6784
Amount: 0.011883
Amount Units: ug/ml



Manual Integration Results

RT: 18.19
Area: 4848
Amount: 0.008824
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:34:45 -07:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

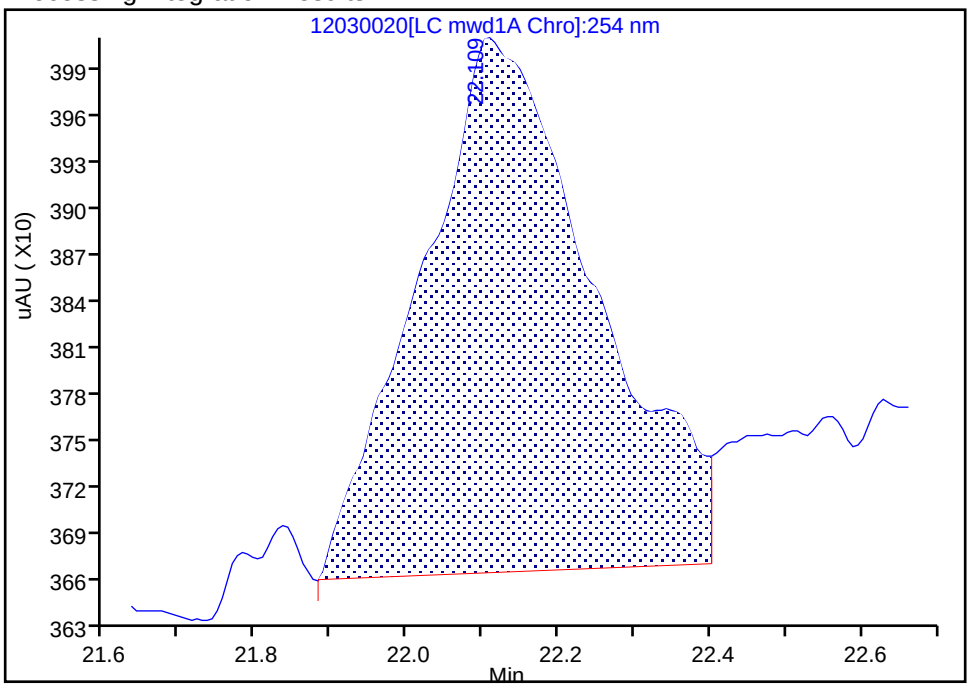
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Injection Date:	04-Dec-2024 01:09:06	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 1				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1A, 254 nm		

24 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

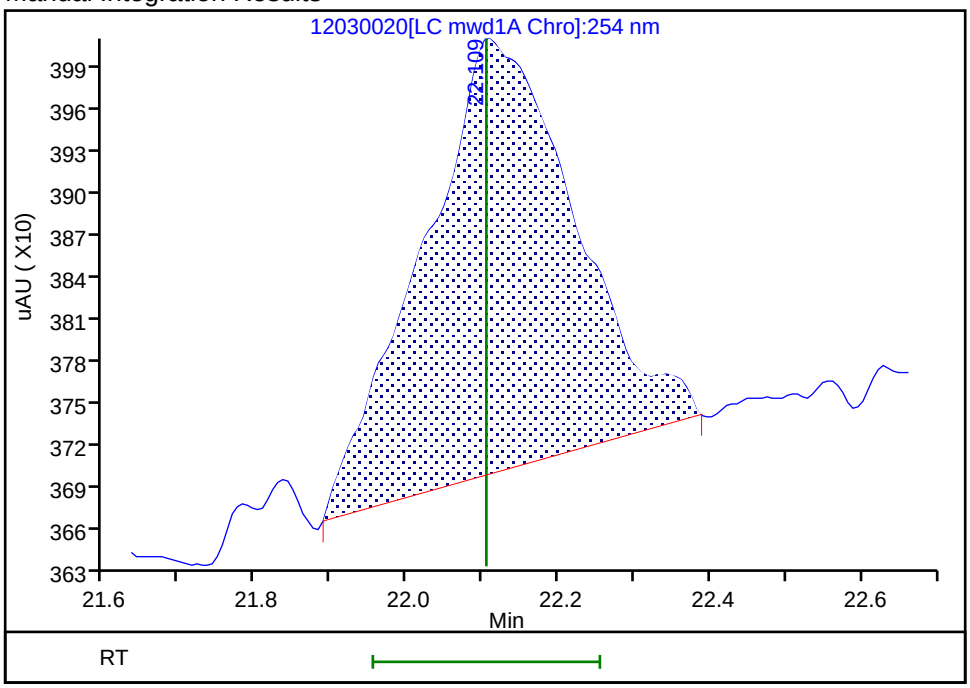
Processing Integration Results

RT: 22.11
Area: 5454
Amount: 0.012661
Amount Units: ug/ml



Manual Integration Results

RT: 22.11
Area: 4271
Amount: 0.010227
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:34:56 -07:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

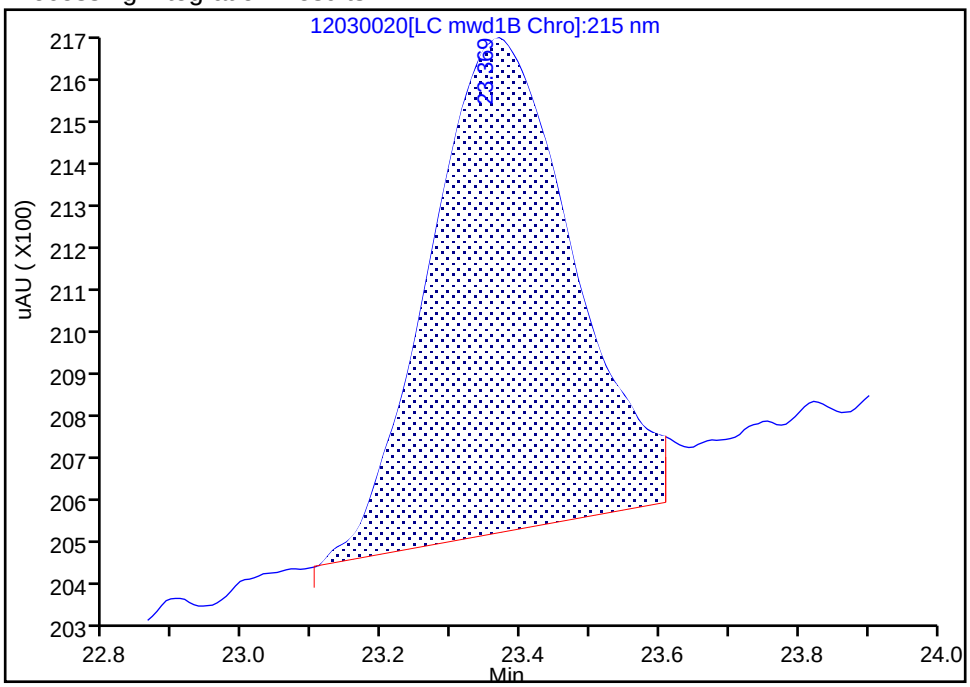
Data File:	\\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030020.D				
Injection Date:	04-Dec-2024 01:09:06	Instrument ID:	CHHPLC_X5		
Lims ID:	IC INT 1				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1B, 215 nm		

25 PETN, CAS: 78-11-5

Signal: 1

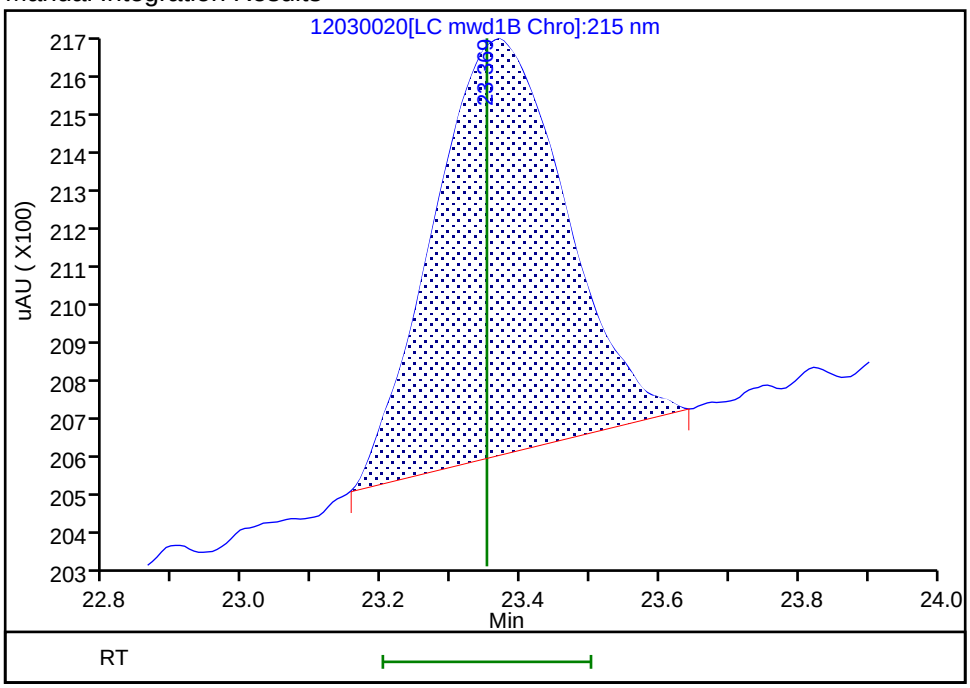
Processing Integration Results

RT: 23.37
Area: 15830
Amount: 0.111165
Amount Units: ug/ml



Manual Integration Results

RT: 23.37
Area: 13637
Amount: 0.098834
Amount Units: ug/ml



Reviewer: LV5D, 04-Dec-2024 11:35:08 -07:00:00 (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

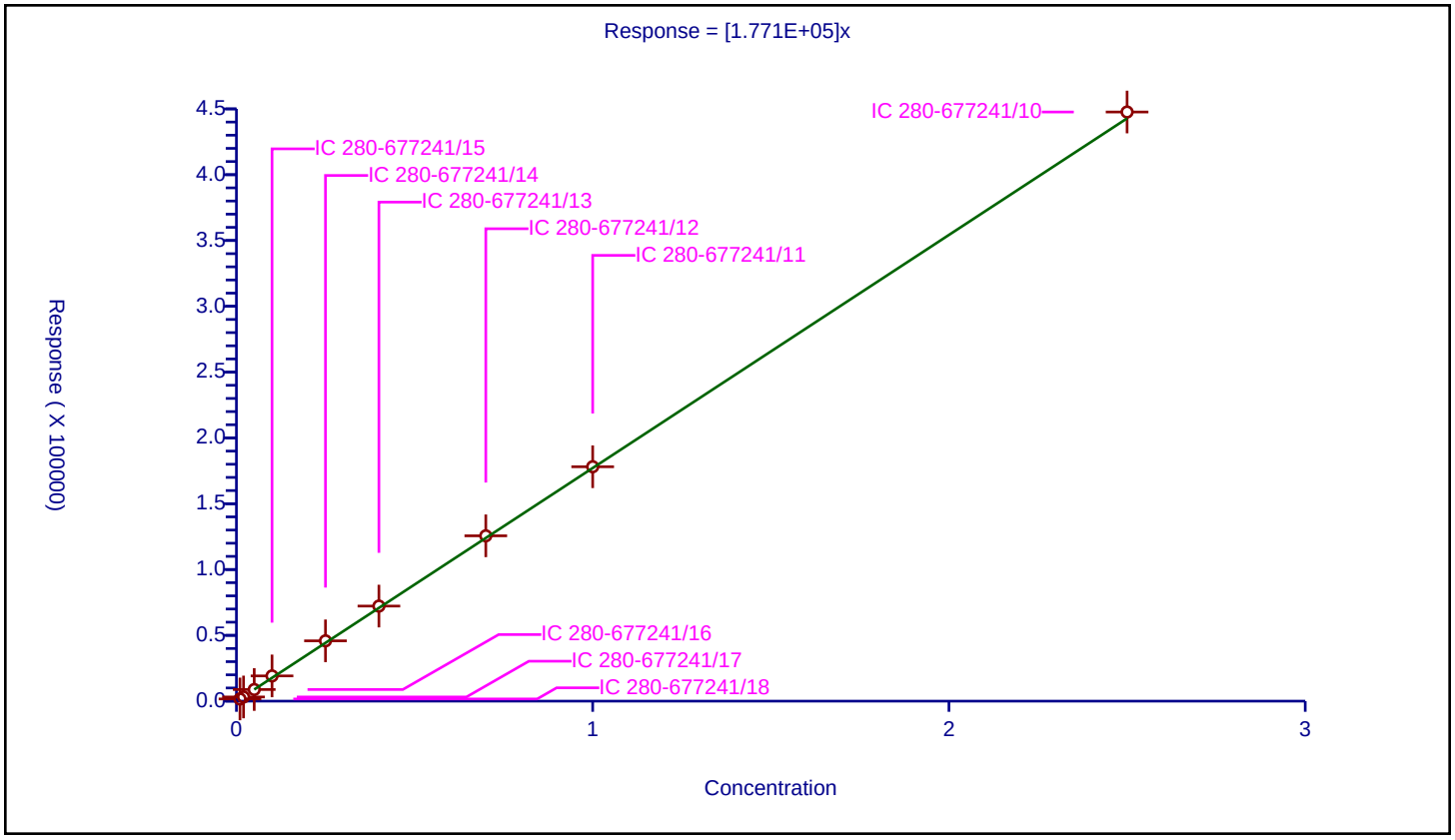
Curve Coefficients

Intercept:	0
Slope:	1.771E+05

Error Coefficients

Relative Standard Deviation:	5.4

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-677241/18	0.01	1664.0			166400.0	Y
2	IC 280-677241/17	0.02	3172.0			158600.0	Y
3	IC 280-677241/16	0.05	8842.0			176840.0	Y
4	IC 280-677241/15	0.1	19169.0			191690.0	Y
5	IC 280-677241/14	0.25	45819.0			183276.0	Y
6	IC 280-677241/13	0.4	72242.0			180605.0	Y
7	IC 280-677241/12	0.7	125630.0			179471.428571	Y
8	IC 280-677241/11	1.0	178105.0			178105.0	Y
9	IC 280-677241/10	2.5	447624.0			179049.6	Y



Calibration / 2,4,6-Trinitrophenol

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

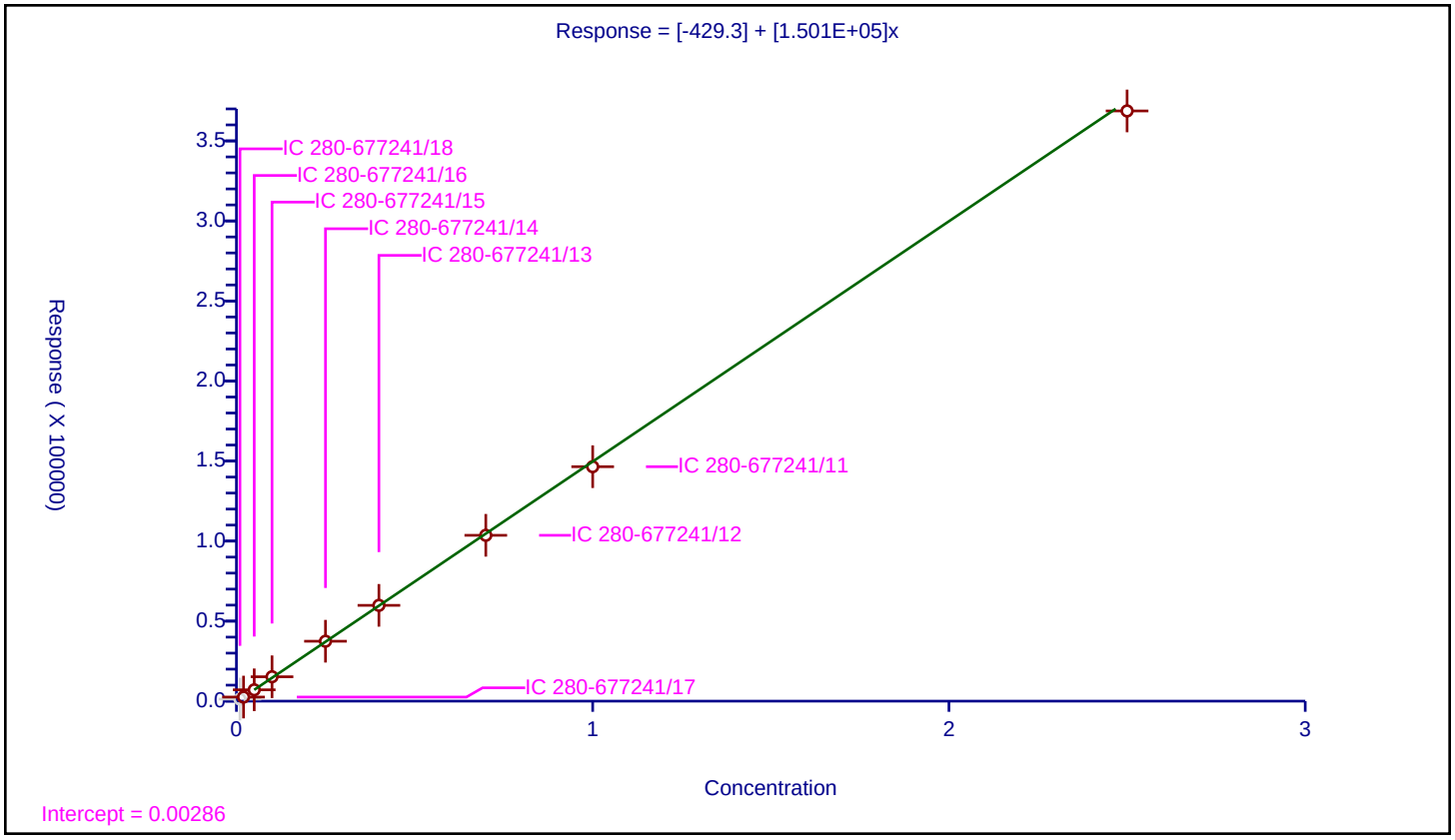
Curve Coefficients

Intercept:	-429.3
Slope:	1.501E+05

Error Coefficients

Relative Standard Deviation:	2.2

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-677241/18	0.01	1295.0			129500.0	N
2	IC 280-677241/17	0.02	2546.0			127300.0	Y
3	IC 280-677241/16	0.05	7079.0			141580.0	Y
4	IC 280-677241/15	0.1	15237.0			152370.0	Y
5	IC 280-677241/14	0.25	37424.0			149696.0	Y
6	IC 280-677241/13	0.4	59847.0			149617.5	Y
7	IC 280-677241/12	0.7	103599.0			147998.571429	Y
8	IC 280-677241/11	1.0	146466.0			146466.0	Y
9	IC 280-677241/10	2.5	368720.0			147488.0	Y



Calibration / RDX

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

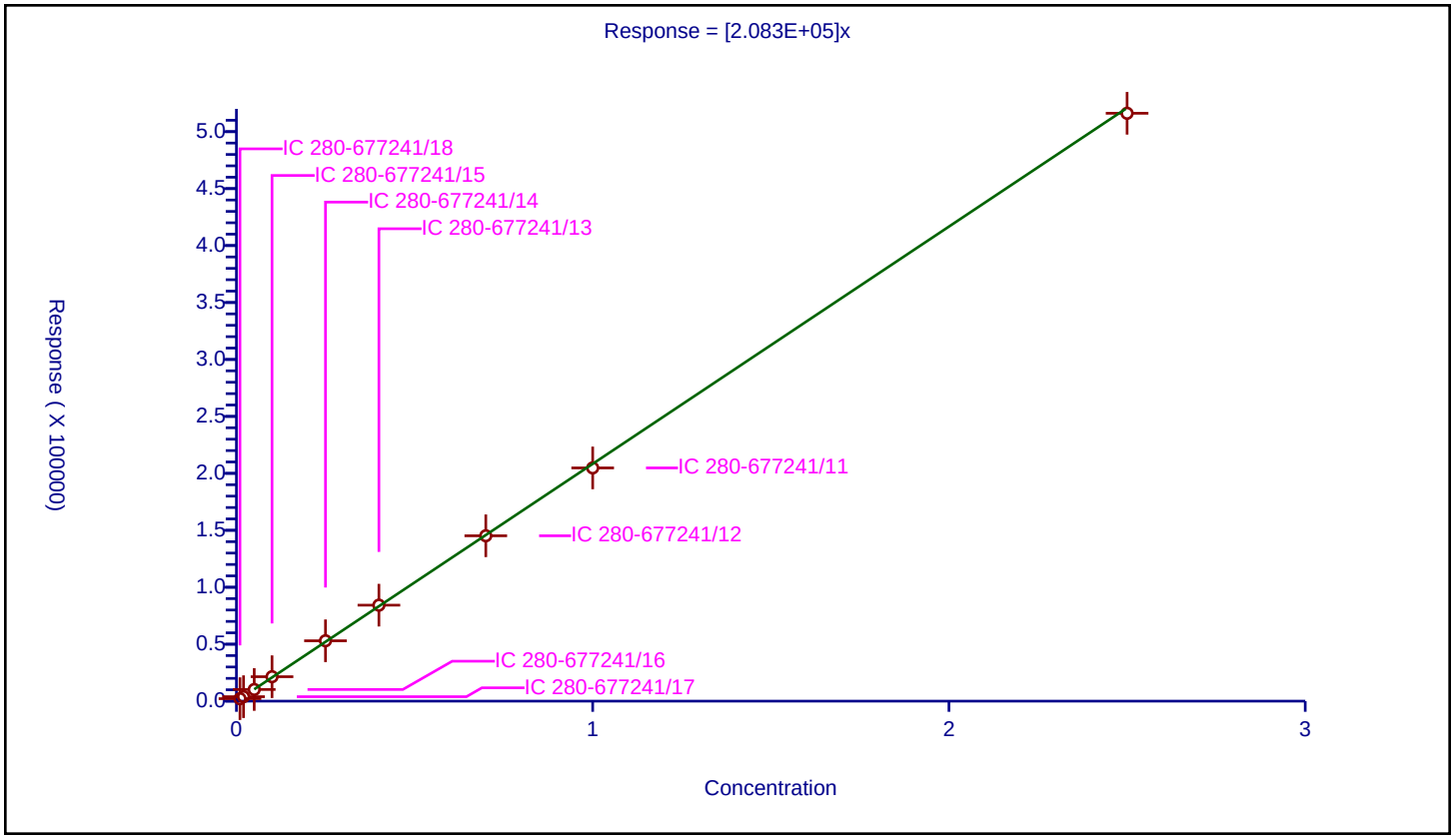
Curve Coefficients

Intercept:	0
Slope:	2.083E+05

Error Coefficients

Relative Standard Deviation:	3.1

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-677241/18	0.01	2184.0			218400.0	Y
2	IC 280-677241/17	0.02	3925.0			196250.0	Y
3	IC 280-677241/16	0.05	10227.0			204540.0	Y
4	IC 280-677241/15	0.1	21452.0			214520.0	Y
5	IC 280-677241/14	0.25	53007.0			212028.0	Y
6	IC 280-677241/13	0.4	84258.0			210645.0	Y
7	IC 280-677241/12	0.7	145194.0			207420.0	Y
8	IC 280-677241/11	1.0	204769.0			204769.0	Y
9	IC 280-677241/10	2.5	516139.0			206455.6	Y



Calibration / Nitrobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

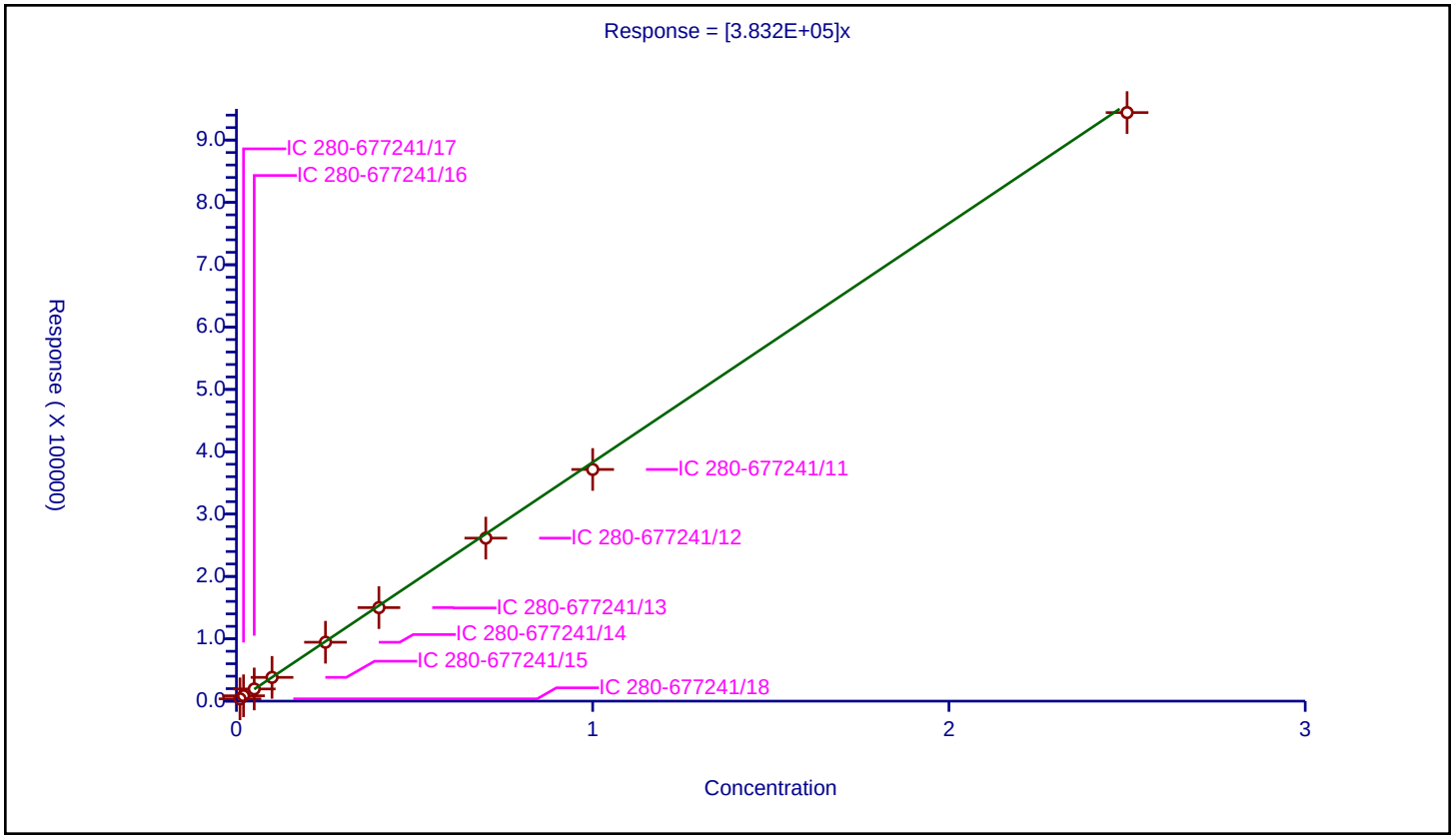
Curve Coefficients

Intercept:	0
Slope:	3.832E+05

Error Coefficients

Relative Standard Deviation:	5.0

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-677241/18	0.01	3699.0			369900.0	Y
2	IC 280-677241/17	0.02	8621.0			431050.0	Y
3	IC 280-677241/16	0.05	19540.0			390800.0	Y
4	IC 280-677241/15	0.1	38121.0			381210.0	Y
5	IC 280-677241/14	0.25	94474.0			377896.0	Y
6	IC 280-677241/13	0.4	150033.0			375082.5	Y
7	IC 280-677241/12	0.7	261464.0			373520.0	Y
8	IC 280-677241/11	1.0	371635.0			371635.0	Y
9	IC 280-677241/10	2.5	944090.0			377636.0	Y



Calibration / 1,2-Dinitrobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

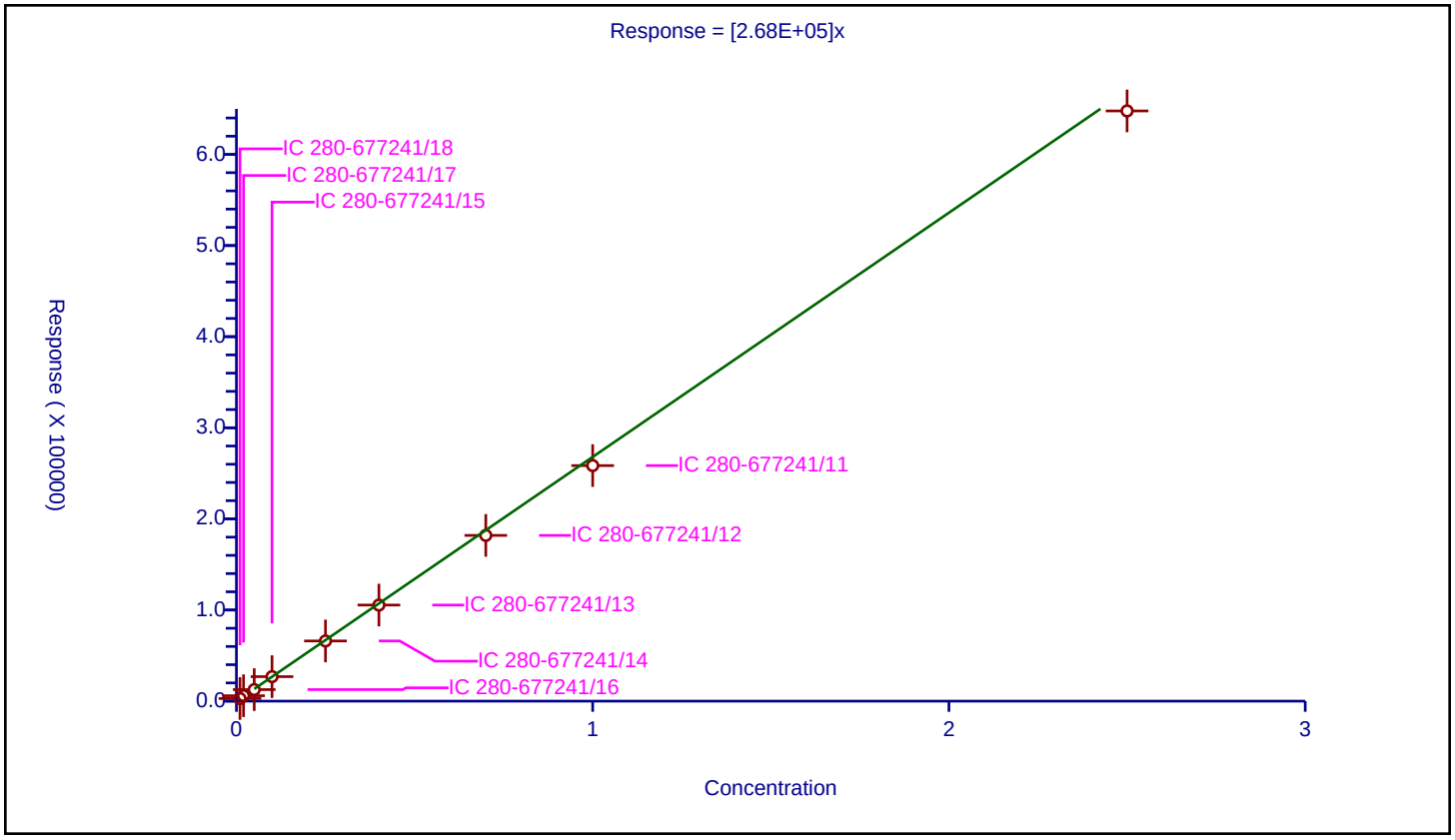
Curve Coefficients

Intercept:	0
Slope:	2.68E+05

Error Coefficients

Relative Standard Deviation:	5.5

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-677241/18	0.01	2876.0			287600.0	Y
2	IC 280-677241/17	0.02	5944.0			297200.0	Y
3	IC 280-677241/16	0.05	12665.0			253300.0	Y
4	IC 280-677241/15	0.1	26882.0			268820.0	Y
5	IC 280-677241/14	0.25	66043.0			264172.0	Y
6	IC 280-677241/13	0.4	105451.0			263627.5	Y
7	IC 280-677241/12	0.7	181877.0			259824.285714	Y
8	IC 280-677241/11	1.0	258514.0			258514.0	Y
9	IC 280-677241/10	2.5	647752.0			259100.8	Y



Calibration / 3,5-Dinitroaniline

Curve Type:	Linear
Weighting:	Conc_Sq
Origin:	None
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

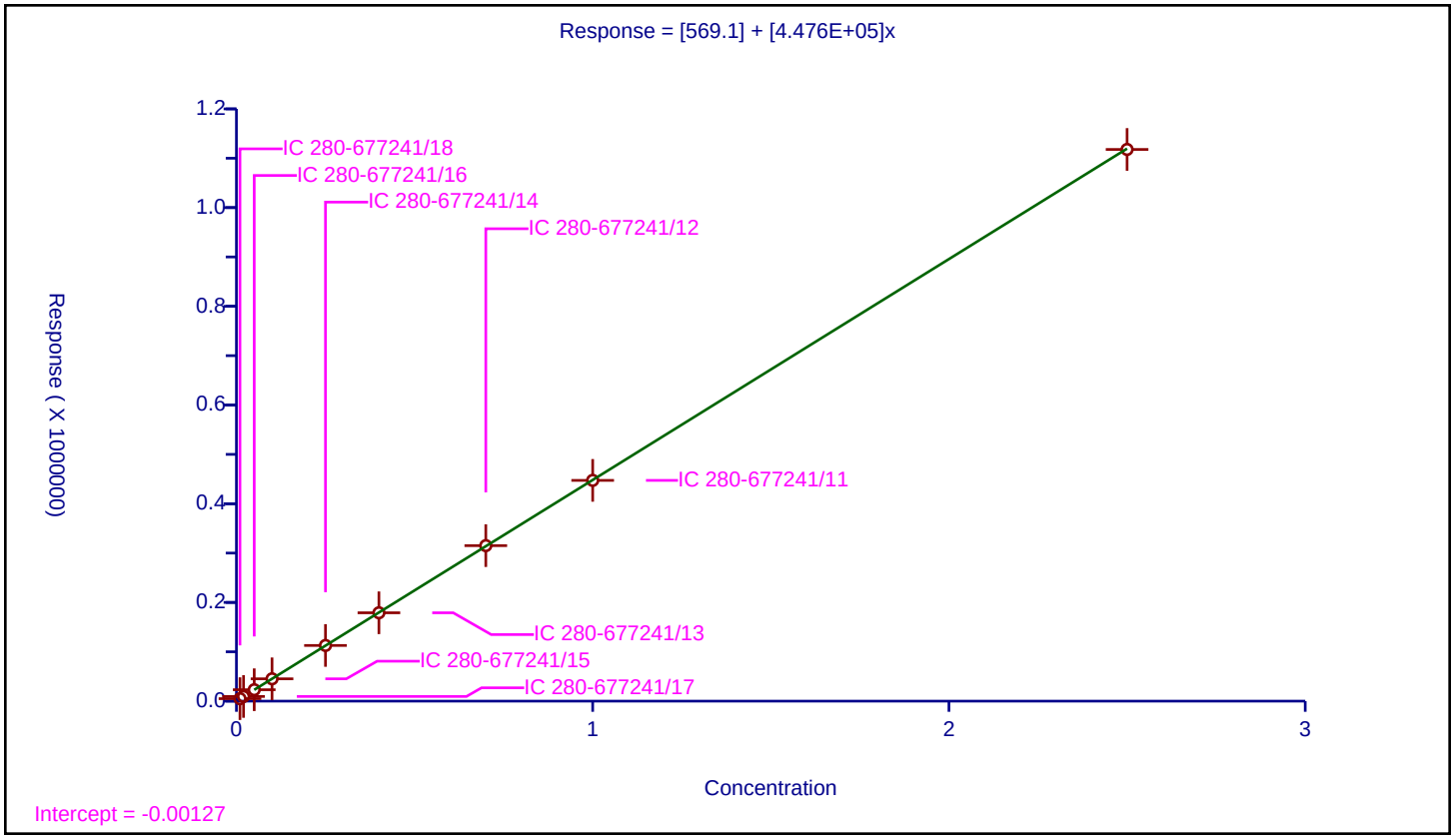
Curve Coefficients

Intercept:	569.1
Slope:	4.476E+05

Error Coefficients

Relative Standard Deviation:	0.5

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-677241/18	0.01	5058.0			505800.0	Y
2	IC 280-677241/17	0.02	9446.0			472300.0	Y
3	IC 280-677241/16	0.05	23100.0			462000.0	Y
4	IC 280-677241/15	0.1	45231.0			452310.0	Y
5	IC 280-677241/14	0.25	112838.0			451352.0	Y
6	IC 280-677241/13	0.4	179046.0			447615.0	Y
7	IC 280-677241/12	0.7	315100.0			450142.857143	Y
8	IC 280-677241/11	1.0	447267.0			447267.0	Y
9	IC 280-677241/10	2.5	1117813.0			447125.2	Y



Calibration / 1,3-Dinitrobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

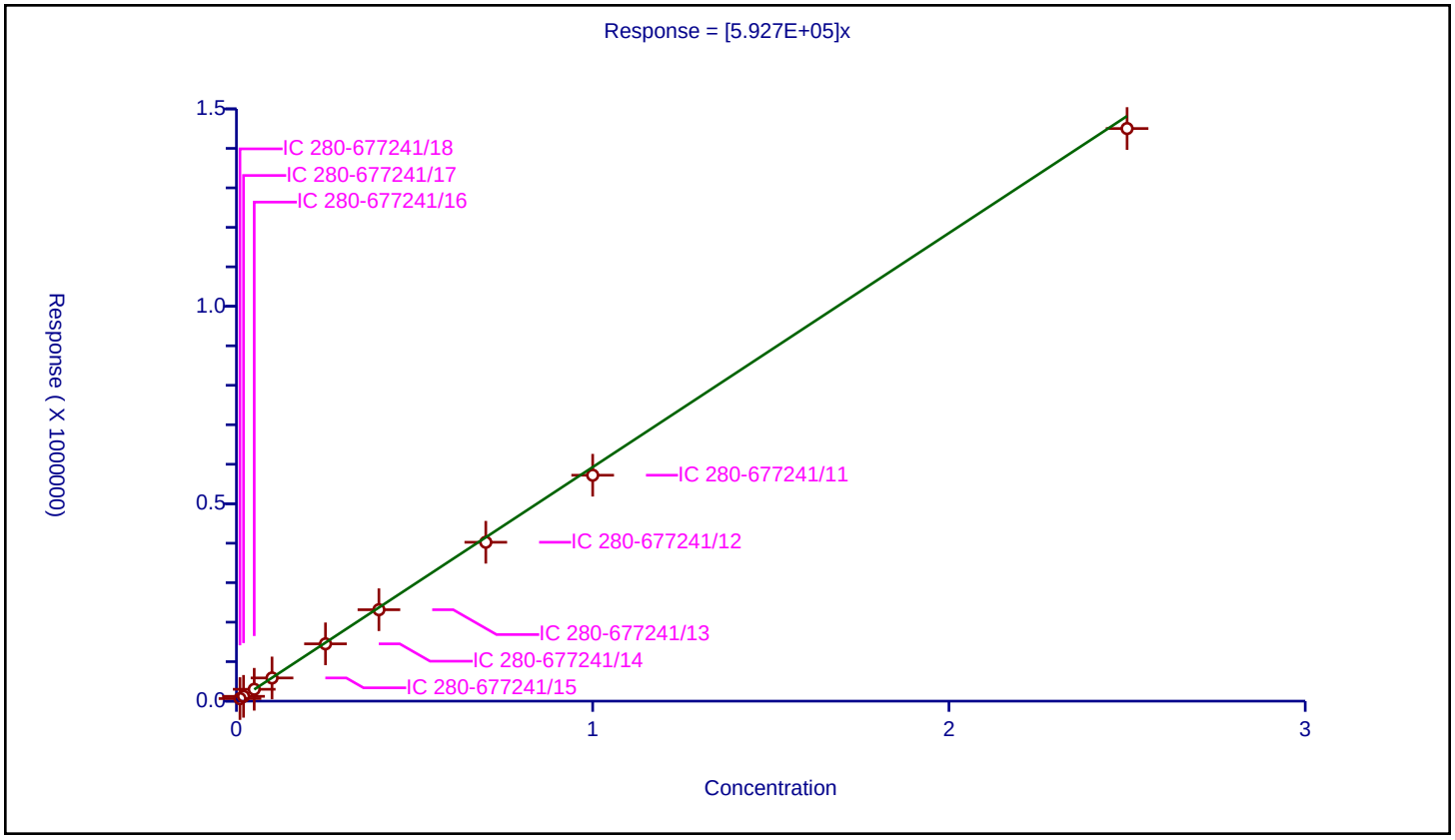
Curve Coefficients

Intercept:	0
Slope:	5.927E+05

Error Coefficients

Relative Standard Deviation:	4.3

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-677241/18	0.01	6525.0			652500.0	Y
2	IC 280-677241/17	0.02	12158.0			607900.0	Y
3	IC 280-677241/16	0.05	30022.0			600440.0	Y
4	IC 280-677241/15	0.1	58714.0			587140.0	Y
5	IC 280-677241/14	0.25	145130.0			580520.0	Y
6	IC 280-677241/13	0.4	231549.0			578872.5	Y
7	IC 280-677241/12	0.7	402444.0			574920.0	Y
8	IC 280-677241/11	1.0	572216.0			572216.0	Y
9	IC 280-677241/10	2.5	1450257.0			580102.8	Y



Calibration / Nitroglycerin

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

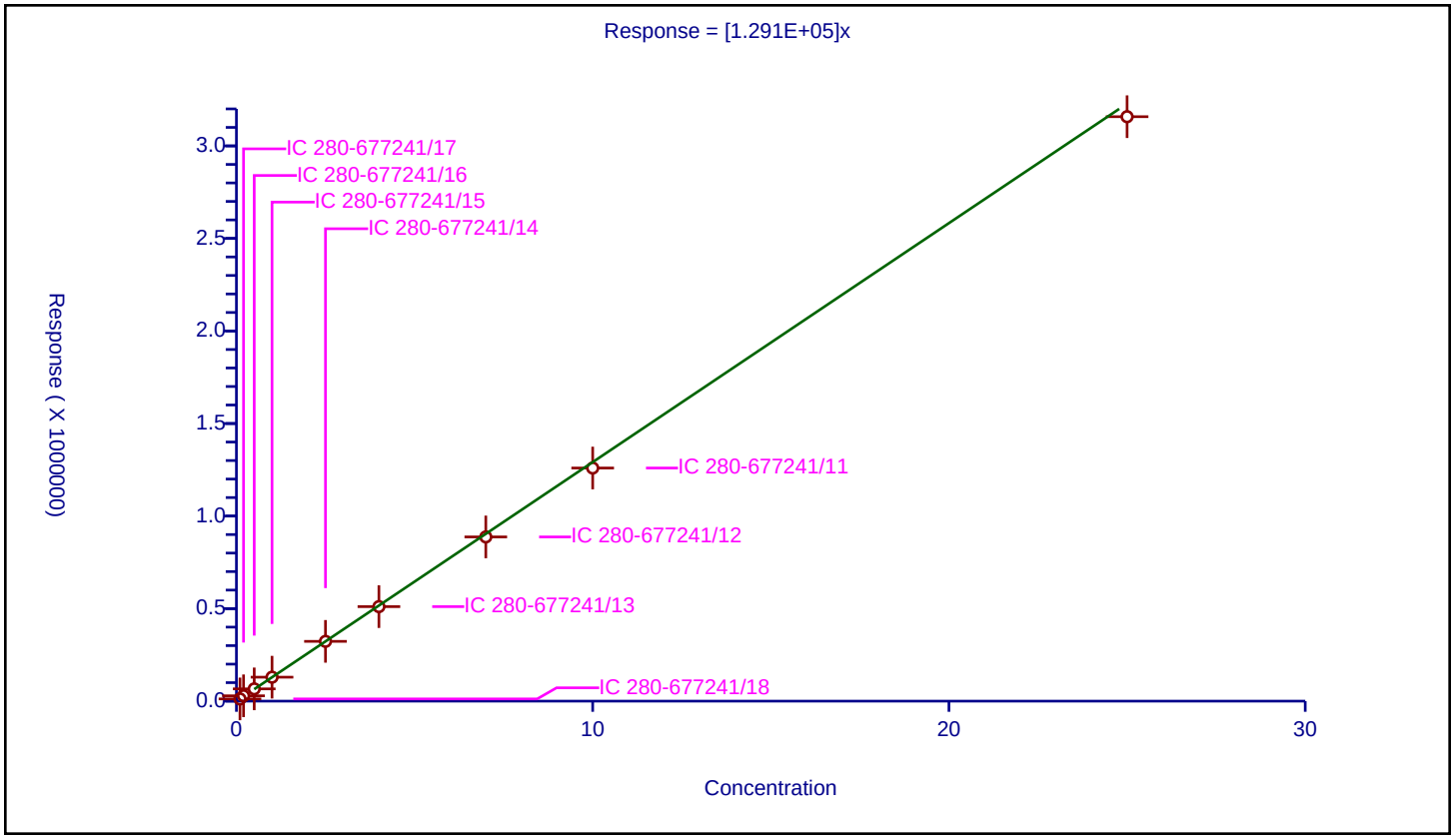
Curve Coefficients

Intercept:	0
Slope:	1.291E+05

Error Coefficients

Relative Standard Deviation:	5.0

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-677241/18	0.1	12031.0			120310.0	Y
2	IC 280-677241/17	0.2	28807.0			144035.0	Y
3	IC 280-677241/16	0.5	66308.0			132616.0	Y
4	IC 280-677241/15	1.0	129436.0			129436.0	Y
5	IC 280-677241/14	2.5	322929.0			129171.6	Y
6	IC 280-677241/13	4.0	510674.0			127668.5	Y
7	IC 280-677241/12	7.0	887274.0			126753.428571	Y
8	IC 280-677241/11	10.0	1259485.0			125948.5	Y
9	IC 280-677241/10	25.0	3157777.0			126311.08	Y



Calibration / o-Nitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

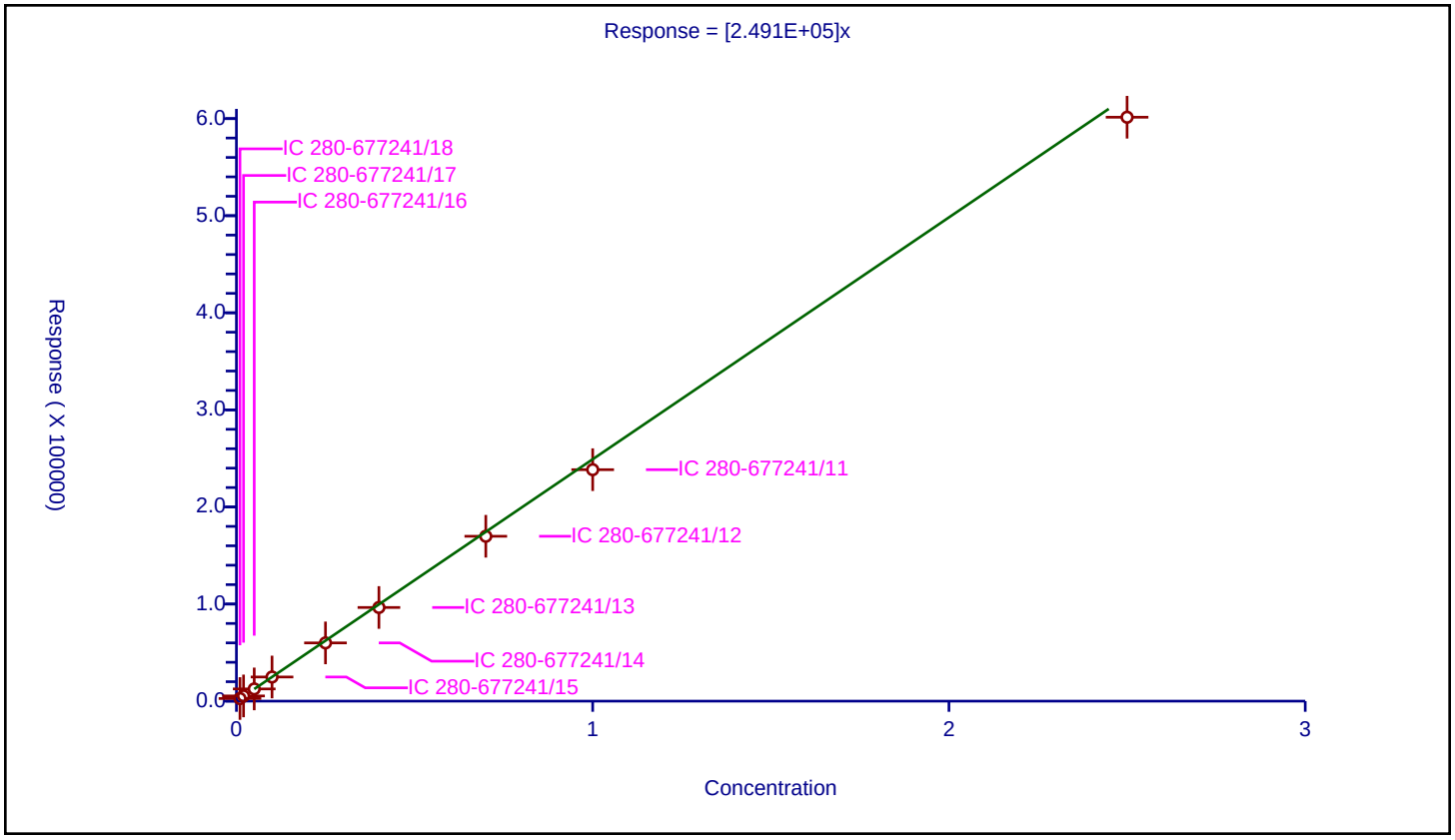
Curve Coefficients

Intercept:	0
Slope:	2.491E+05

Error Coefficients

Relative Standard Deviation:	4.9

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-677241/18	0.01	2706.0			270600.0	Y
2	IC 280-677241/17	0.02	5366.0			268300.0	Y
3	IC 280-677241/16	0.05	12591.0			251820.0	Y
4	IC 280-677241/15	0.1	24873.0			248730.0	Y
5	IC 280-677241/14	0.25	59985.0			239940.0	Y
6	IC 280-677241/13	0.4	96472.0			241180.0	Y
7	IC 280-677241/12	0.7	169808.0			242582.857143	Y
8	IC 280-677241/11	1.0	238401.0			238401.0	Y
9	IC 280-677241/10	2.5	601400.0			240560.0	Y



Calibration / p-Nitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

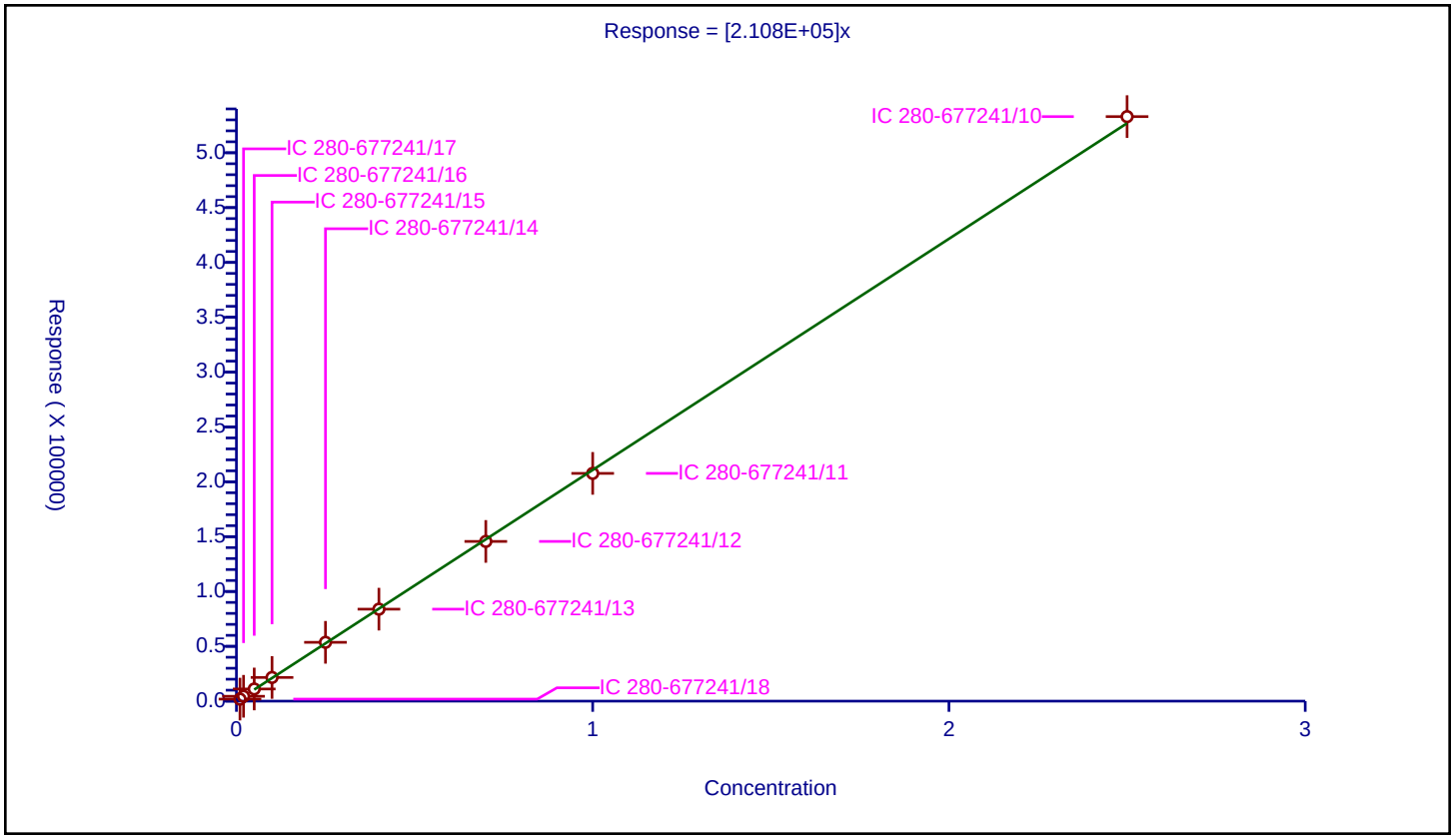
Curve Coefficients

Intercept:	0
Slope:	2.108E+05

Error Coefficients

Relative Standard Deviation:	5.2

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-677241/18	0.01	1848.0			184800.0	Y
2	IC 280-677241/17	0.02	4431.0			221550.0	Y
3	IC 280-677241/16	0.05	11083.0			221660.0	Y
4	IC 280-677241/15	0.1	21595.0			215950.0	Y
5	IC 280-677241/14	0.25	53630.0			214520.0	Y
6	IC 280-677241/13	0.4	83856.0			209640.0	Y
7	IC 280-677241/12	0.7	145612.0			208017.142857	Y
8	IC 280-677241/11	1.0	207659.0			207659.0	Y
9	IC 280-677241/10	2.5	532946.0			213178.4	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

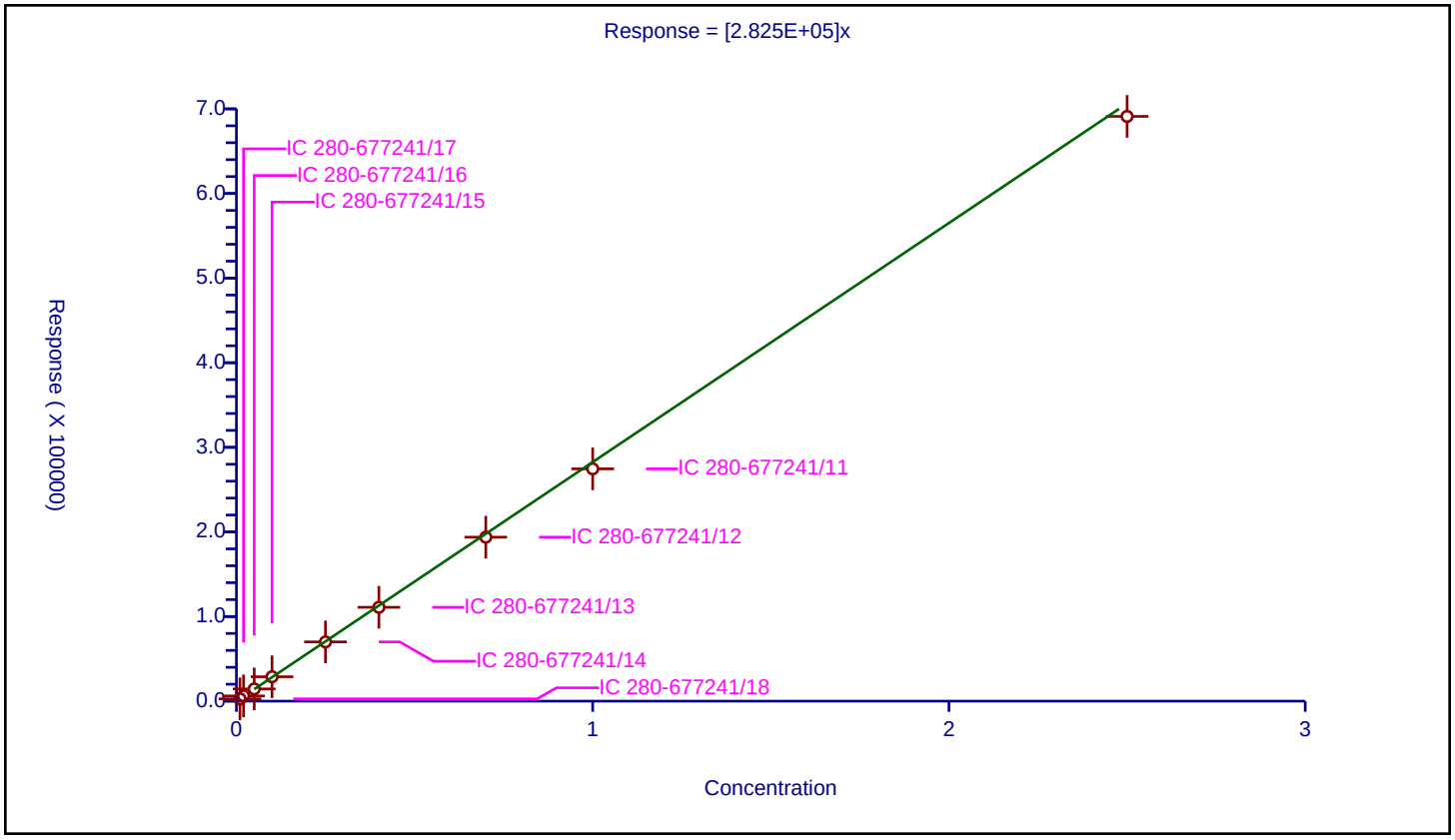
Curve Coefficients

Intercept:	0
Slope:	2.825E+05

Error Coefficients

Relative Standard Deviation:	3.8

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-677241/18	0.01	2733.0			273300.0	Y
2	IC 280-677241/17	0.02	6151.0			307550.0	Y
3	IC 280-677241/16	0.05	14433.0			288660.0	Y
4	IC 280-677241/15	0.1	28817.0			288170.0	Y
5	IC 280-677241/14	0.25	70015.0			280060.0	Y
6	IC 280-677241/13	0.4	110926.0			277315.0	Y
7	IC 280-677241/12	0.7	193817.0			276881.428571	Y
8	IC 280-677241/11	1.0	274551.0			274551.0	Y
9	IC 280-677241/10	2.5	691108.0			276443.2	Y



Calibration / m-Nitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

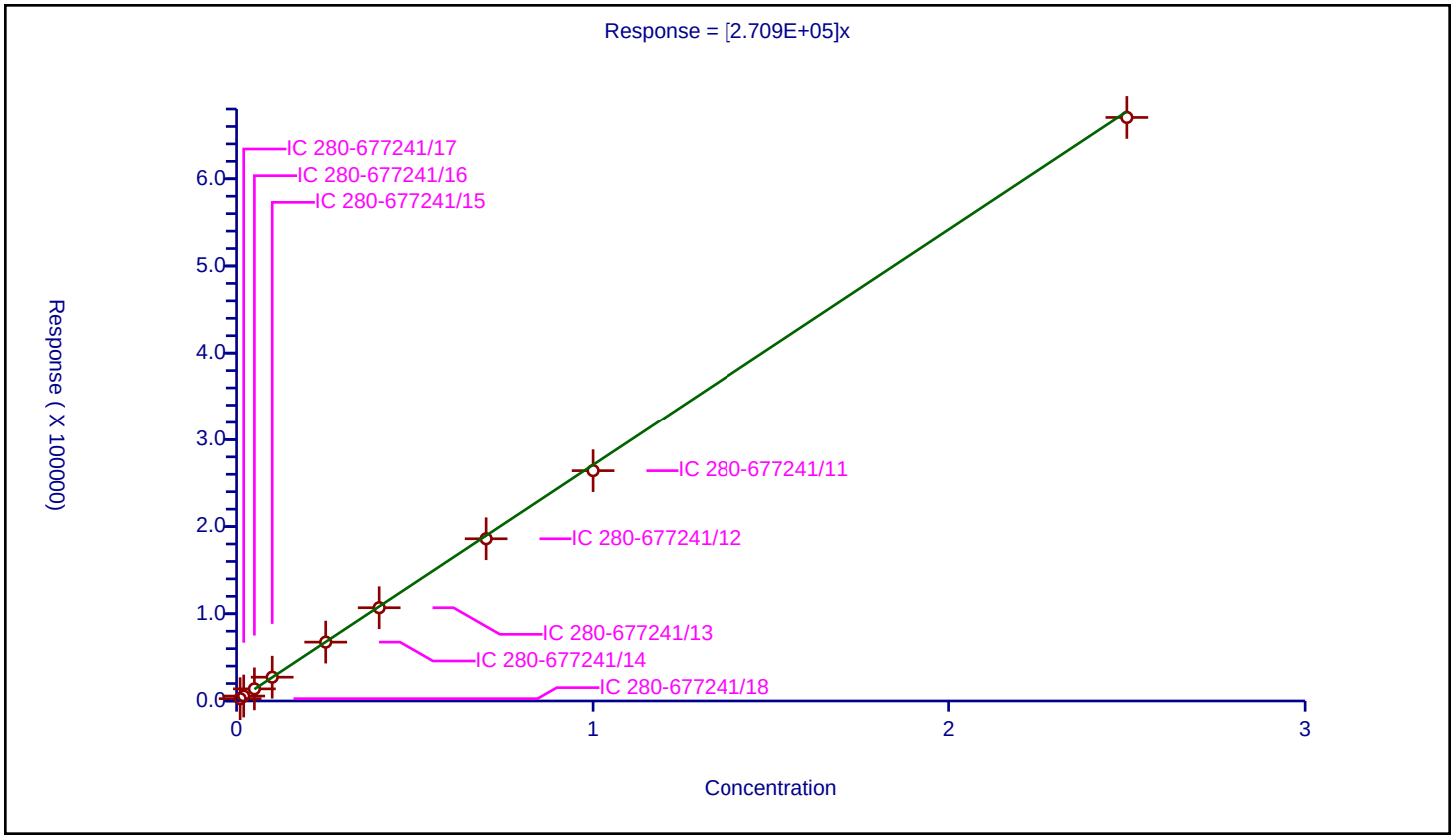
Curve Coefficients

Intercept:	0
Slope:	2.709E+05

Error Coefficients

Relative Standard Deviation:	2.4

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-677241/18	0.01	2679.0			267900.0	Y
2	IC 280-677241/17	0.02	5681.0			284050.0	Y
3	IC 280-677241/16	0.05	13893.0			277860.0	Y
4	IC 280-677241/15	0.1	27278.0			272780.0	Y
5	IC 280-677241/14	0.25	67516.0			270064.0	Y
6	IC 280-677241/13	0.4	106948.0			267370.0	Y
7	IC 280-677241/12	0.7	186045.0			265778.571429	Y
8	IC 280-677241/11	1.0	264182.0			264182.0	Y
9	IC 280-677241/10	2.5	670330.0			268132.0	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

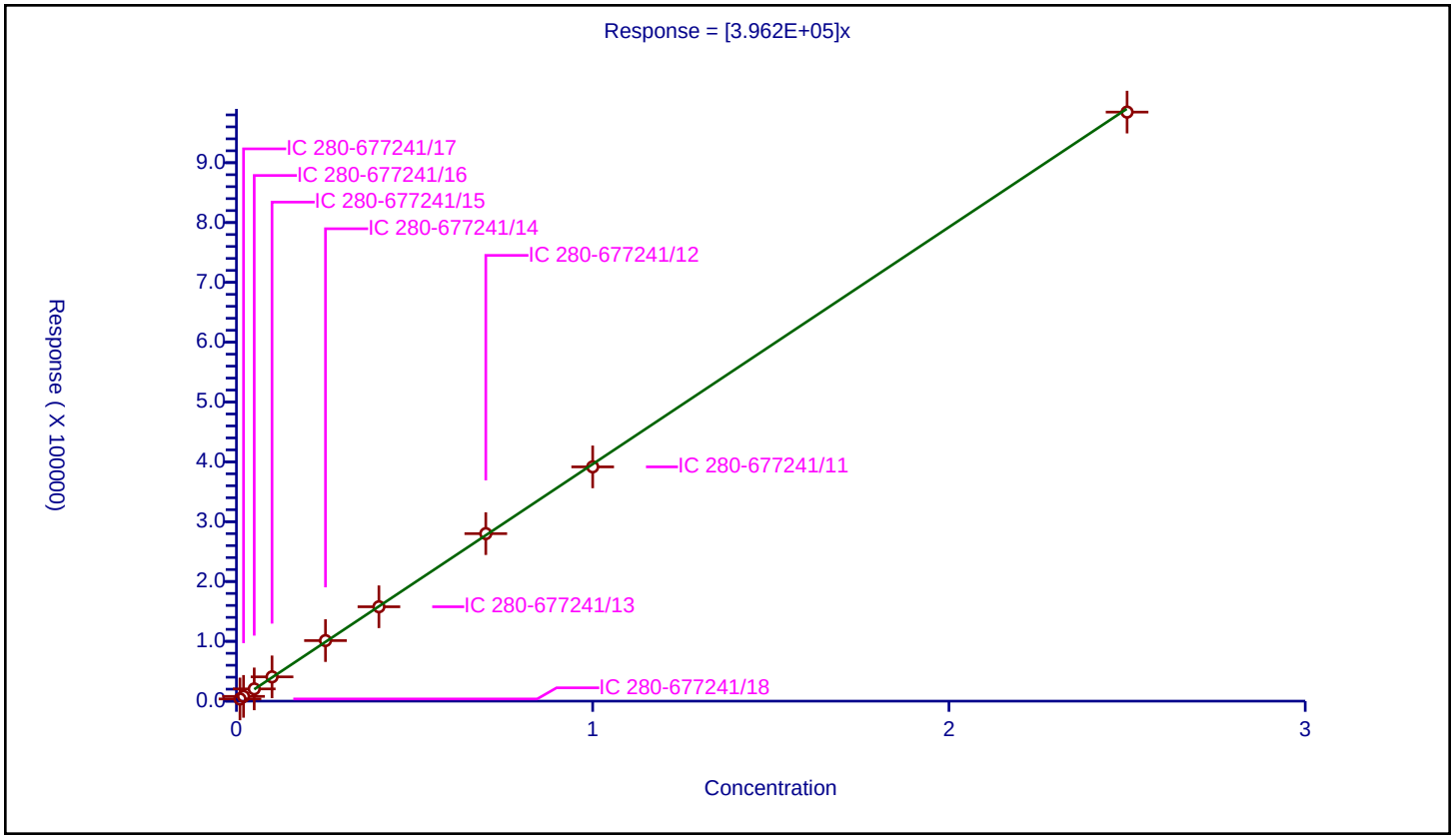
Curve Coefficients

Intercept:	0
Slope:	3.962E+05

Error Coefficients

Relative Standard Deviation:	3.0

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-677241/18	0.01	3681.0			368100.0	Y
2	IC 280-677241/17	0.02	7961.0			398050.0	Y
3	IC 280-677241/16	0.05	20438.0			408760.0	Y
4	IC 280-677241/15	0.1	40572.0			405720.0	Y
5	IC 280-677241/14	0.25	101224.0			404896.0	Y
6	IC 280-677241/13	0.4	157751.0			394377.5	Y
7	IC 280-677241/12	0.7	280026.0			400037.142857	Y
8	IC 280-677241/11	1.0	391601.0			391601.0	Y
9	IC 280-677241/10	2.5	984639.0			393855.6	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

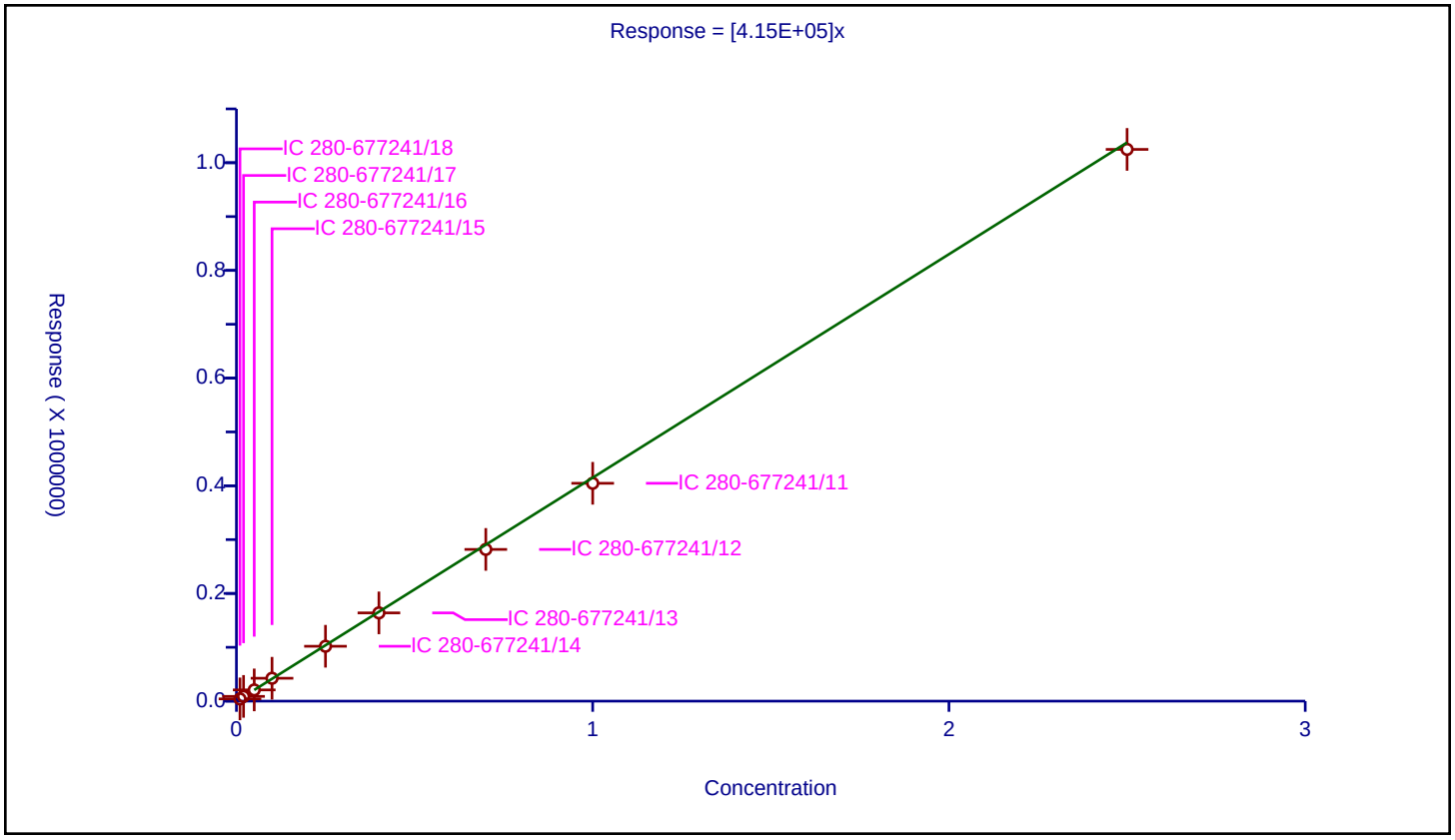
Curve Coefficients

Intercept:	0
Slope:	4.15E+05

Error Coefficients

Relative Standard Deviation:	2.9

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-677241/18	0.01	4184.0			418400.0	Y
2	IC 280-677241/17	0.02	8805.0			440250.0	Y
3	IC 280-677241/16	0.05	20832.0			416640.0	Y
4	IC 280-677241/15	0.1	42524.0			425240.0	Y
5	IC 280-677241/14	0.25	101952.0			407808.0	Y
6	IC 280-677241/13	0.4	163936.0			409840.0	Y
7	IC 280-677241/12	0.7	281812.0			402588.571429	Y
8	IC 280-677241/11	1.0	404635.0			404635.0	Y
9	IC 280-677241/10	2.5	1024778.0			409911.2	Y



Calibration / 2,6-Dinitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

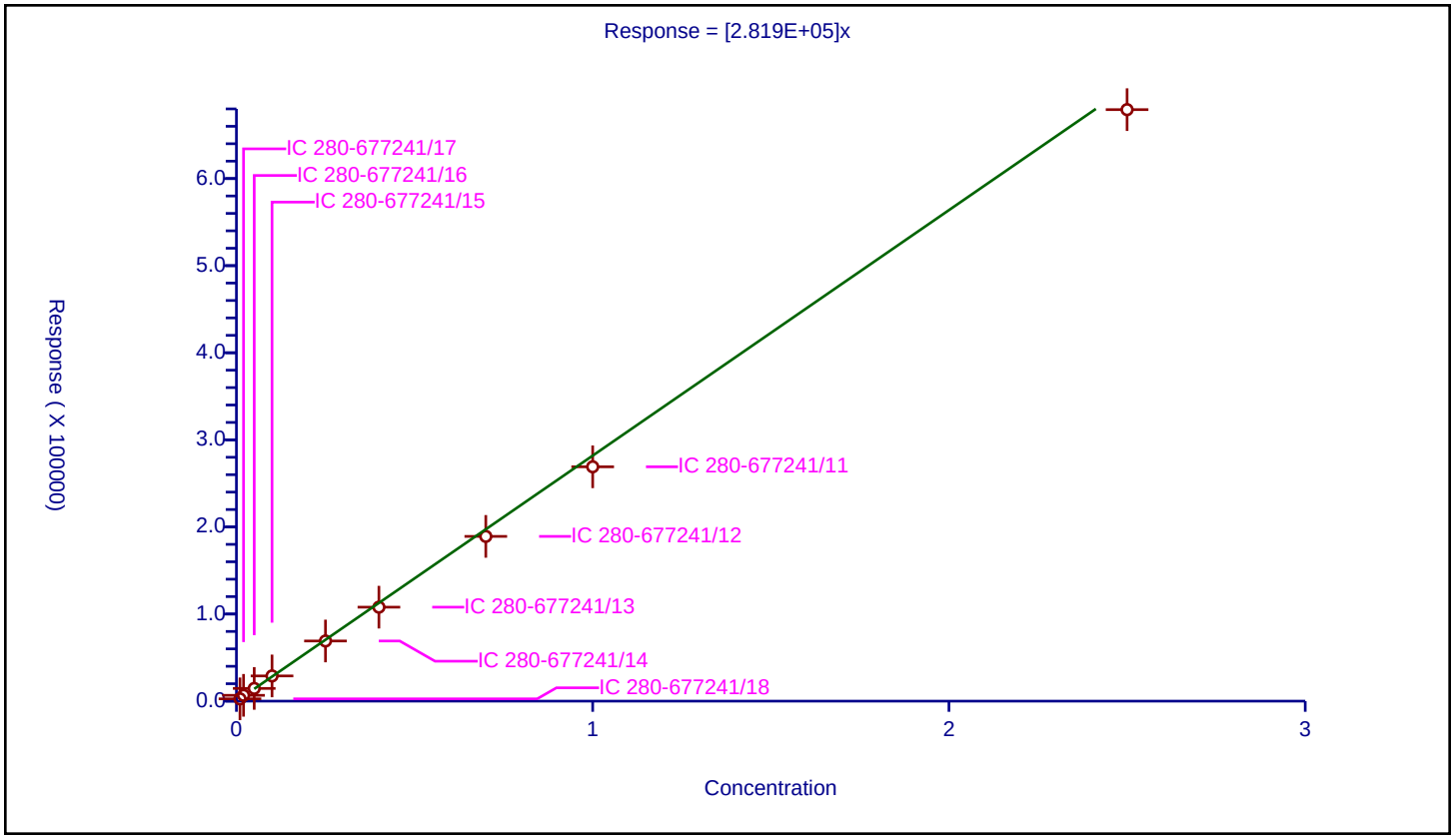
Curve Coefficients

Intercept:	0
Slope:	2.819E+05

Error Coefficients

Relative Standard Deviation:	7.7

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-677241/18	0.01	2642.0			264200.0	Y
2	IC 280-677241/17	0.02	6677.0			333850.0	Y
3	IC 280-677241/16	0.05	14616.0			292320.0	Y
4	IC 280-677241/15	0.1	28953.0			289530.0	Y
5	IC 280-677241/14	0.25	69076.0			276304.0	Y
6	IC 280-677241/13	0.4	107905.0			269762.5	Y
7	IC 280-677241/12	0.7	189159.0			270227.142857	Y
8	IC 280-677241/11	1.0	269065.0			269065.0	Y
9	IC 280-677241/10	2.5	679138.0			271655.2	Y



Calibration / 2,4-Dinitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

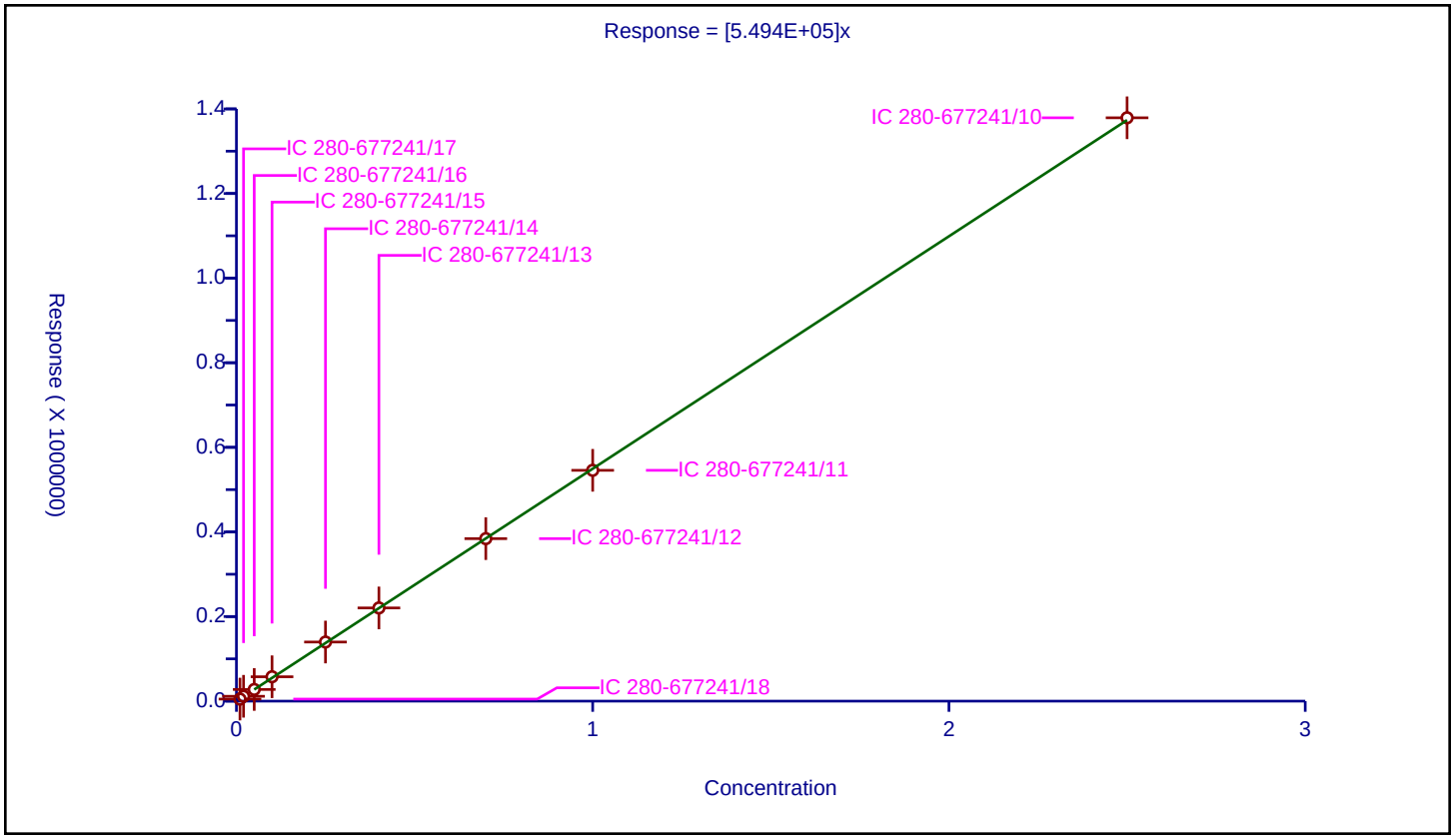
Curve Coefficients

Intercept:	0
Slope:	5.494E+05

Error Coefficients

Relative Standard Deviation:	4.8

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-677241/18	0.01	4848.0			484800.0	Y
2	IC 280-677241/17	0.02	11492.0			574600.0	Y
3	IC 280-677241/16	0.05	27636.0			552720.0	Y
4	IC 280-677241/15	0.1	57668.0			576680.0	Y
5	IC 280-677241/14	0.25	139756.0			559024.0	Y
6	IC 280-677241/13	0.4	220348.0			550870.0	Y
7	IC 280-677241/12	0.7	384128.0			548754.285714	Y
8	IC 280-677241/11	1.0	545655.0			545655.0	Y
9	IC 280-677241/10	2.5	1379002.0			551600.8	Y



Calibration / Tetryl

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

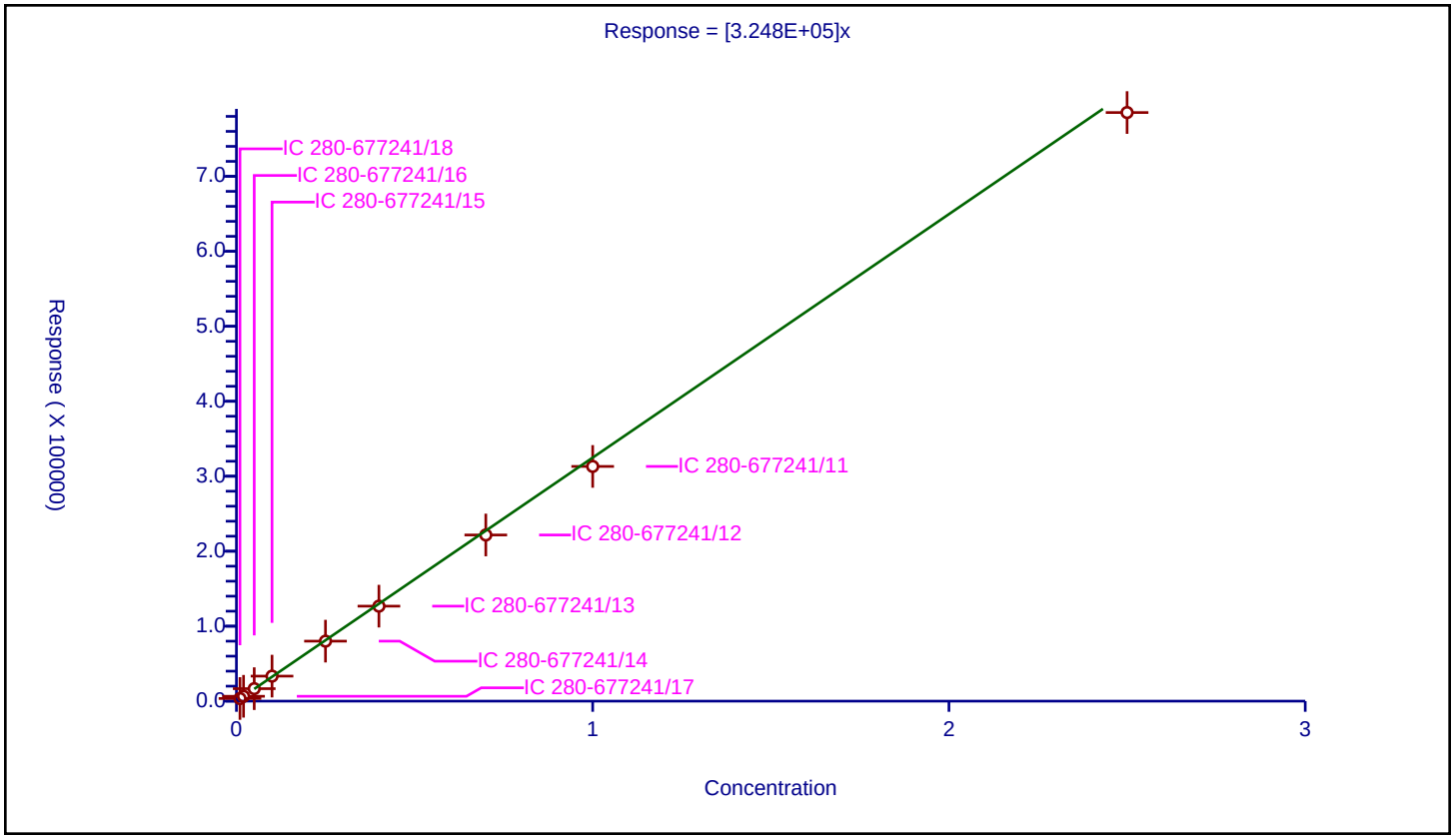
Curve Coefficients

Intercept:	0
Slope:	3.248E+05

Error Coefficients

Relative Standard Deviation:	3.9

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-677241/18	0.01	3521.0			352100.0	Y
2	IC 280-677241/17	0.02	6472.0			323600.0	Y
3	IC 280-677241/16	0.05	16645.0			332900.0	Y
4	IC 280-677241/15	0.1	33395.0			333950.0	Y
5	IC 280-677241/14	0.25	80008.0			320032.0	Y
6	IC 280-677241/13	0.4	126701.0			316752.5	Y
7	IC 280-677241/12	0.7	221644.0			316634.285714	Y
8	IC 280-677241/11	1.0	313080.0			313080.0	Y
9	IC 280-677241/10	2.5	785148.0			314059.2	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

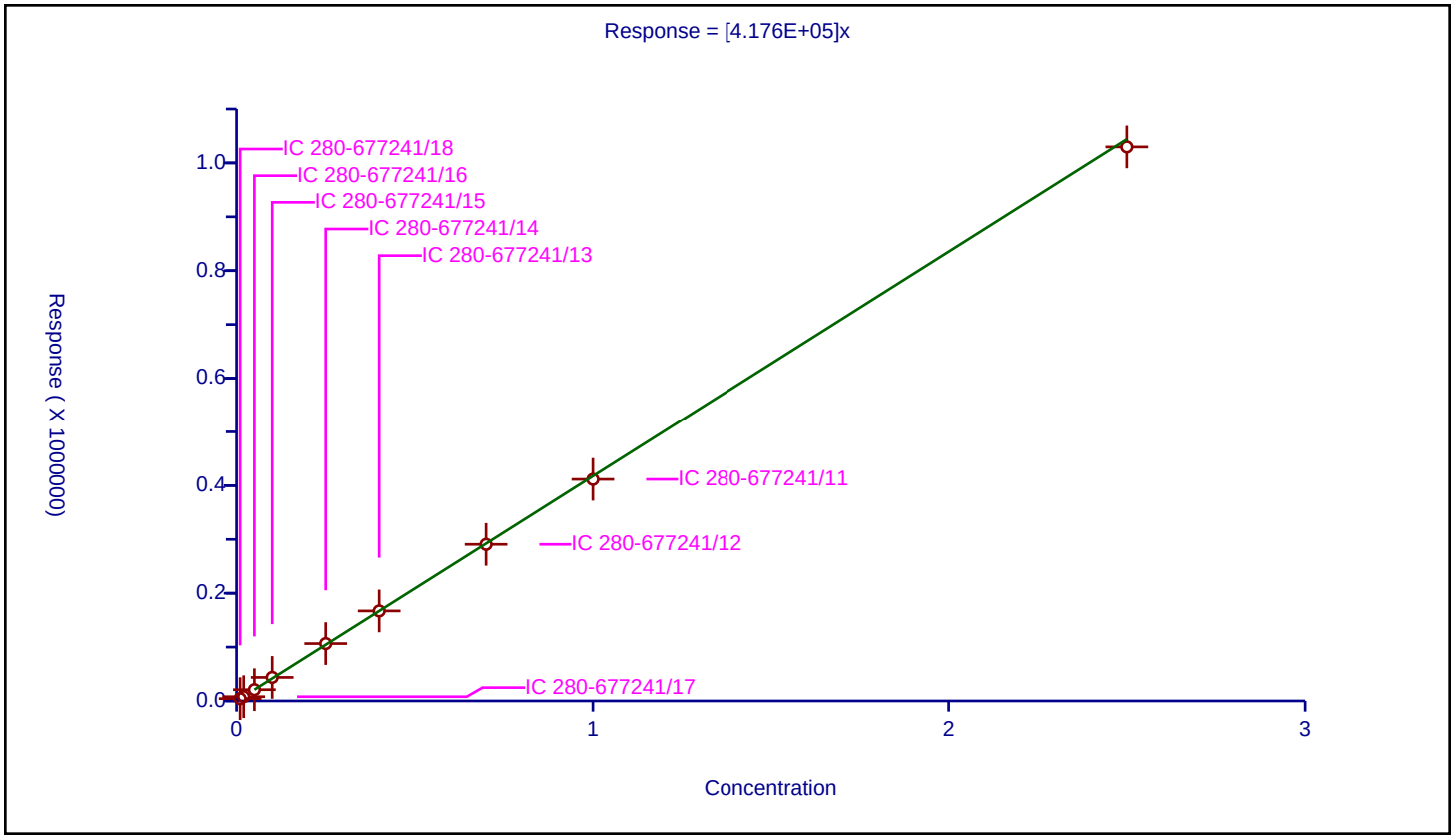
Curve Coefficients

Intercept:	0
Slope:	4.176E+05

Error Coefficients

Relative Standard Deviation:	2.9

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-677241/18	0.01	4271.0			427100.0	Y
2	IC 280-677241/17	0.02	7873.0			393650.0	Y
3	IC 280-677241/16	0.05	20885.0			417700.0	Y
4	IC 280-677241/15	0.1	43721.0			437210.0	Y
5	IC 280-677241/14	0.25	106542.0			426168.0	Y
6	IC 280-677241/13	0.4	167106.0			417765.0	Y
7	IC 280-677241/12	0.7	290822.0			415460.0	Y
8	IC 280-677241/11	1.0	411674.0			411674.0	Y
9	IC 280-677241/10	2.5	1029776.0			411910.4	Y



Calibration / PETN

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	AREA
RF Rounding:	0

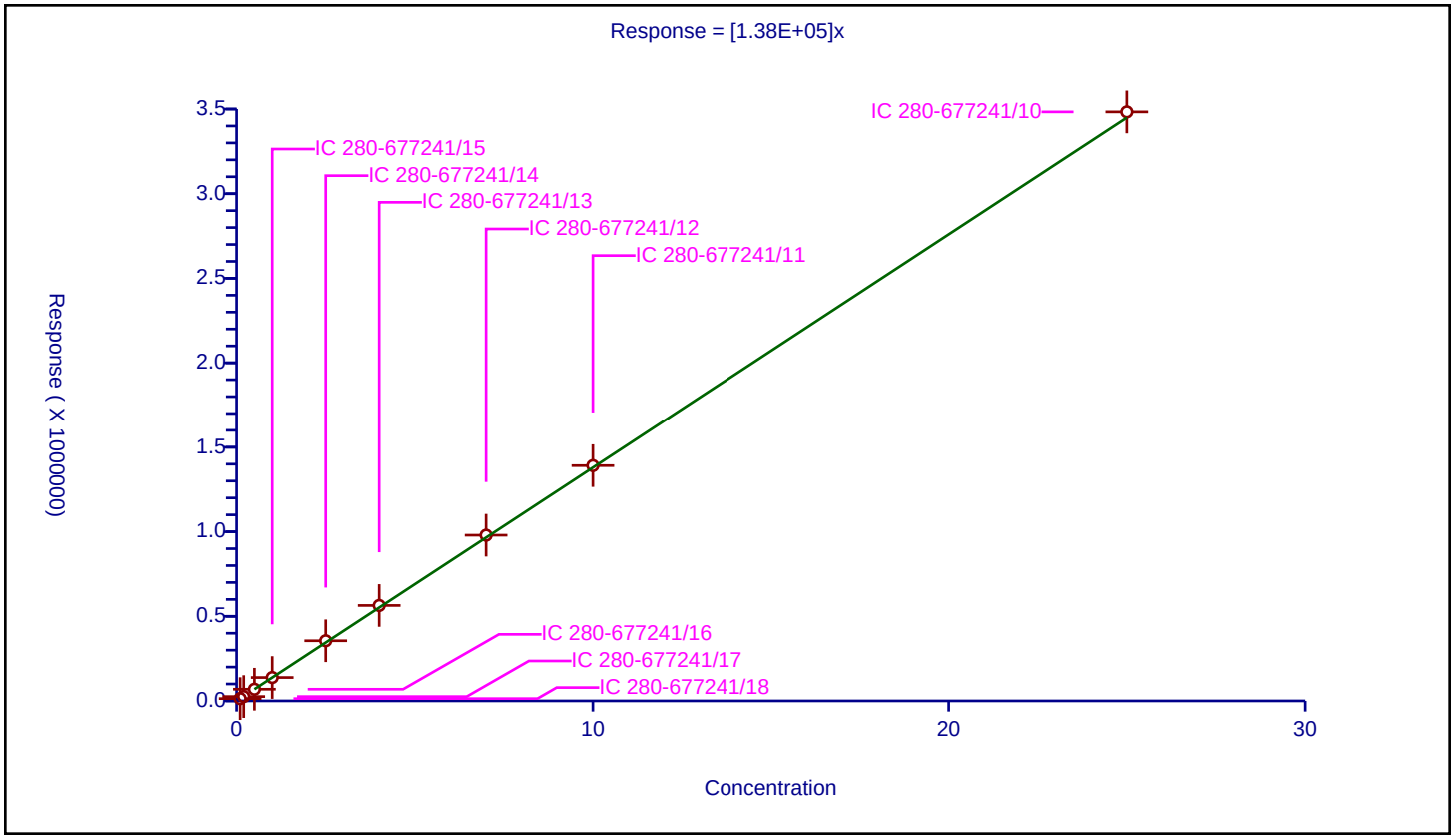
Curve Coefficients

Intercept:	0
Slope:	1.38E+05

Error Coefficients

Relative Standard Deviation:	3.0

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-677241/18	0.1	13637.0			136370.0	Y
2	IC 280-677241/17	0.2	25558.0			127790.0	Y
3	IC 280-677241/16	0.5	68955.0			137910.0	Y
4	IC 280-677241/15	1.0	138072.0			138072.0	Y
5	IC 280-677241/14	2.5	355528.0			142211.2	Y
6	IC 280-677241/13	4.0	564133.0			141033.25	Y
7	IC 280-677241/12	7.0	979682.0			139954.571429	Y
8	IC 280-677241/11	10.0	1391387.0			139138.7	Y
9	IC 280-677241/10	25.0	3483200.0			139328.0	Y



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-200917-1

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
2,4,6-Trinitrophenol	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		5420	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
o-Nitrotoluene	Ave	125468	130908		522	500	4.3	20.0
p-Nitrotoluene	Lin2		114438		529	500	5.8	20.0
m-Nitrotoluene	Lin2		143934		531	500	6.2	20.0
PETN	Ave	72212	79177		5480	5000	9.6	20.0
1,2-Dinitrobenzene (Surr)	Ave	130410	128386		492	500	-1.6	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200917-1

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
2,4,6-Trinitrophenol	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
o-Nitrotoluene	11.83	11.70	12.00
p-Nitrotoluene	12.19	12.07	12.37
m-Nitrotoluene	12.70	12.57	12.87
PETN	13.77	13.65	13.95
1,2-Dinitrobenzene (Surr)	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

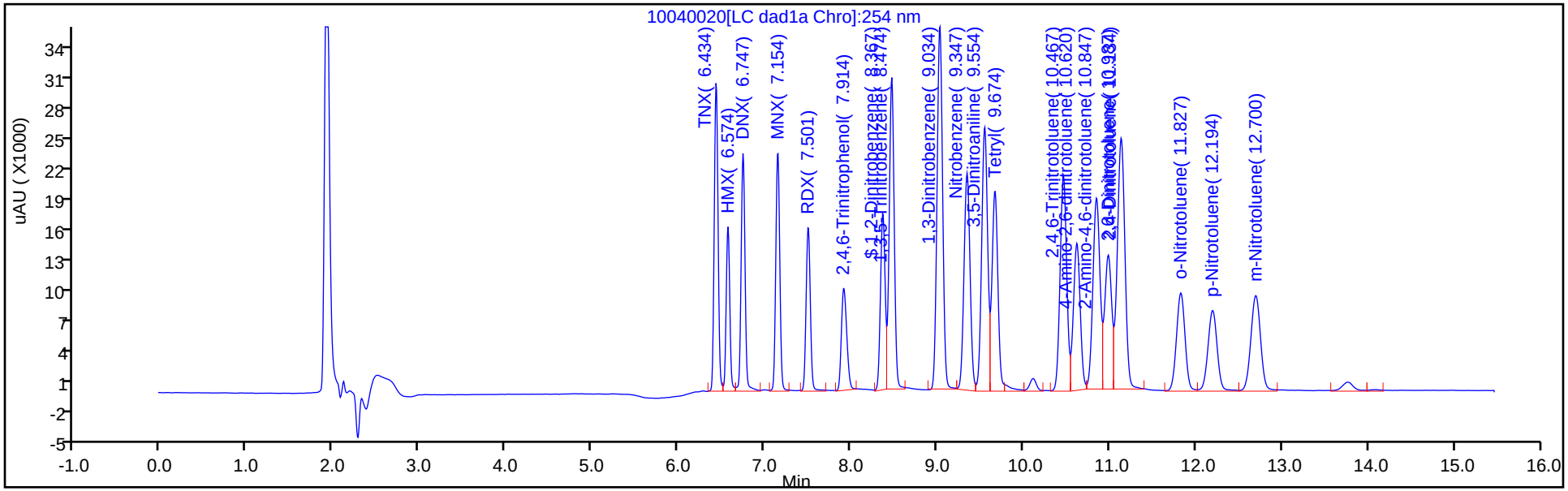
Report Date: 08-Oct-2024 13:50:49 Chrom Revision: 2.3 24-Sep-2024 15:19:46

Eurofins Denver

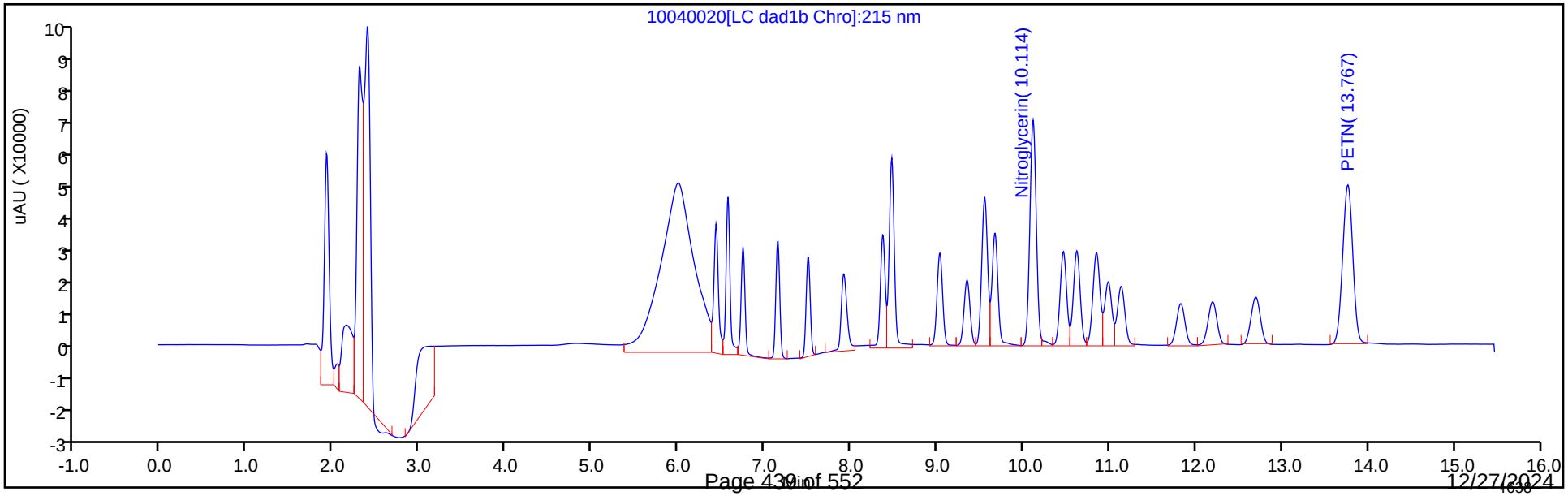
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Injection Date:	04-Oct-2024 20:16:59	Instrument ID:	CHHPLC_X3	Operator ID:	JZ
Lims ID:	ICV INT/DMT			Worklist Smp#:	20
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	8330_X3	Limit Group:	GCSV - 8330		

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



Manual Integration/User Assign Peak Report

Eurofins Denver

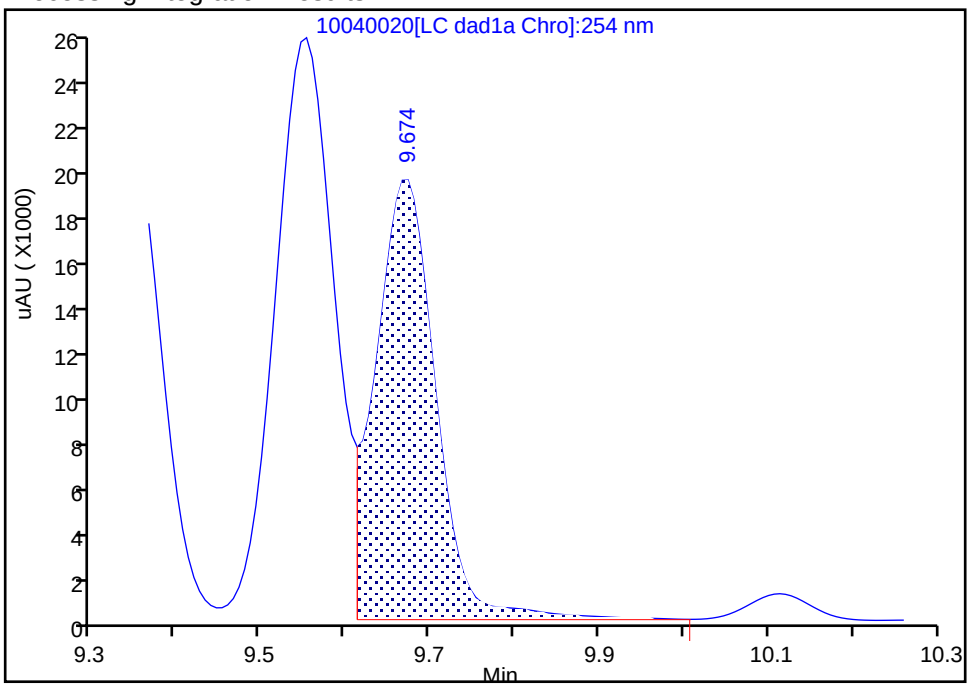
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Injection Date:	04-Oct-2024 20:16:59	Instrument ID:	CHHPLC_X3		
Lims ID:	ICV INT/DMT				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	20	Worklist Smp#:	20
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

15 Tetryl, CAS: 479-45-8

Signal: 1

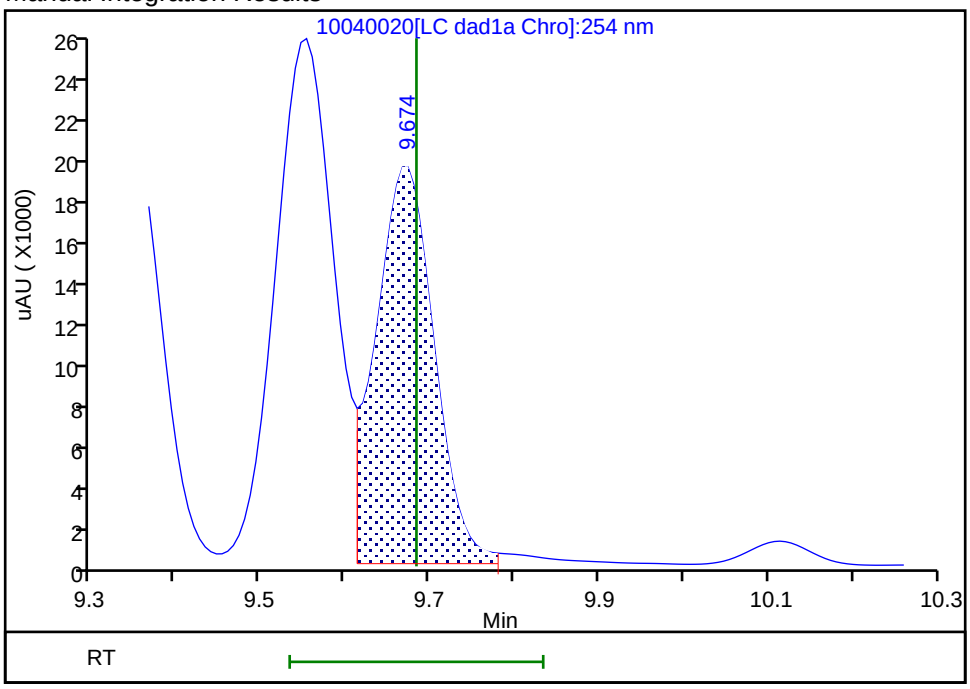
Processing Integration Results

RT: 9.67
Area: 95739
Amount: 0.567120
Amount Units: ug/mL



Manual Integration Results

RT: 9.67
Area: 92852
Amount: 0.542780
Amount Units: ug/mL



Reviewer: LV5D, 08-Oct-2024 13:11:49 -06:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

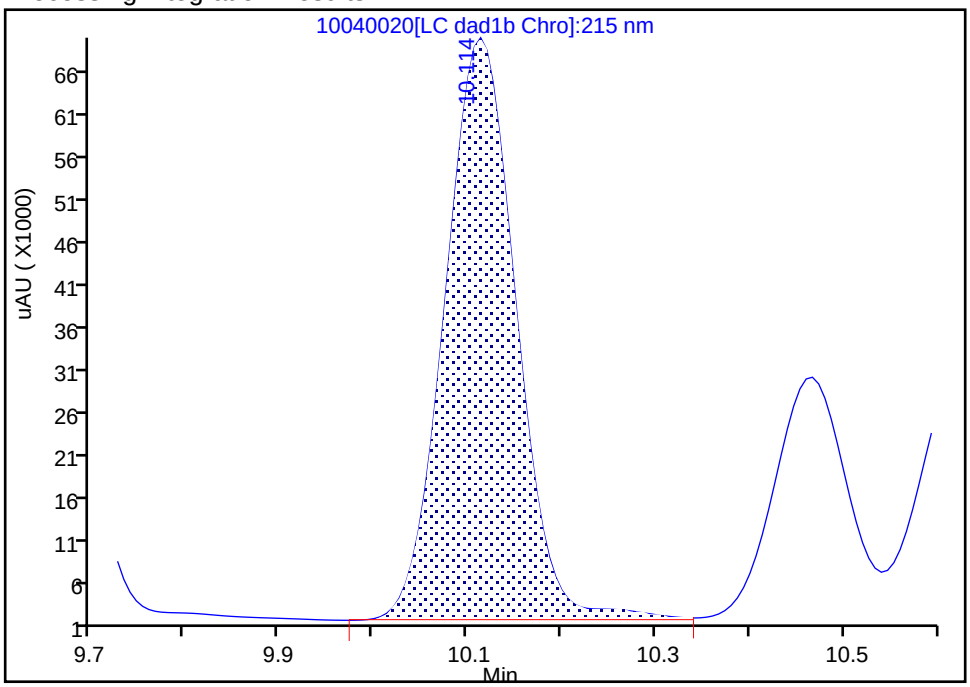
Data File: \\chromfs\denver\chromdata\chhplc_x\20241004-138284.b\10040020.d
Injection Date: 04-Oct-2024 20:16:59 Instrument ID: CHHPLC_X3
Lims ID: ICV INT/DMT
Client ID:
Operator ID: JZ ALS Bottle#: 20 Worklist Smp#: 20
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1C, 215 nm

16 Nitroglycerin, CAS: 55-63-0

Signal: 1

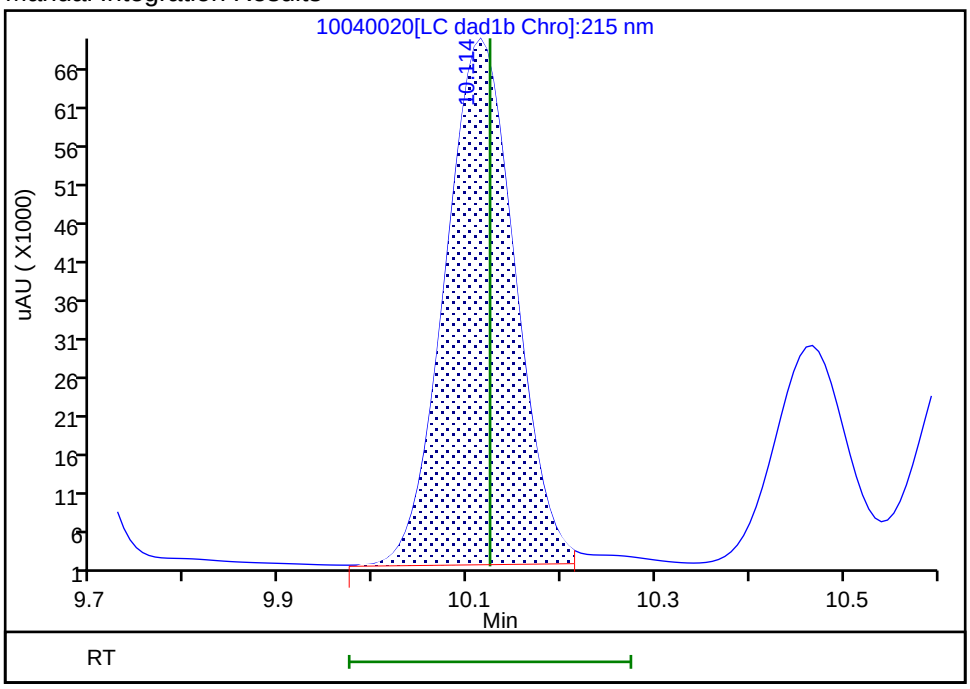
Processing Integration Results

RT: 10.11
Area: 355382
Amount: 5.587098
Amount Units: ug/mL



Manual Integration Results

RT: 10.11
Area: 348863
Amount: 5.418687
Amount Units: ug/mL



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.: 280-200917-1

SDG No.:

Lab Sample ID: CCV 280-679403/7 | Calibration Date: 12/21/2024 14:25

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: 12210007.D | Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	96653	82608		214	250	-14.5	20.0
RDX	Lin2		97528		231	250	-7.6	20.0
2,4,6-Trinitrophenol	Ave	75427	70452		234	250	-6.6	20.0
1,3,5-Trinitrobenzene	Ave	217350	203300		234	250	-6.5	20.0
1,3-Dinitrobenzene	Ave	298232	265180		222	250	-11.1	20.0
Nitrobenzene	Ave	195178	162612		208	250	-16.7	20.0
3,5-Dinitroaniline	Lin2		205132		220	250	-11.9	20.0
Tetryl	Lin2		148824		218	250	-12.8	20.0
Nitroglycerin	Lin2		63915		2490	2500	-0.6	20.0
2,4,6-Trinitrotoluene	Ave	217298	190436		219	250	-12.4	20.0
4-Amino-2,6-dinitrotoluene	Lin2		134236		229	250	-8.3	20.0
2-Amino-4,6-dinitrotoluene	Ave	204531	180984		221	250	-11.5	20.0
2,6-Dinitrotoluene	Lin2		127912		227	250	-9.4	20.0
2,4-Dinitrotoluene	Ave	291812	257156		220	250	-11.9	20.0
o-Nitrotoluene	Ave	125468	105252		210	250	-16.1	20.0
p-Nitrotoluene	Lin2		91412		210	250	-15.9	20.0
m-Nitrotoluene	Lin2		117464		215	250	-13.8	20.0
PETN	Ave	72212	66816		2310	2500	-7.5	20.0
1,2-Dinitrobenzene (Surr)	Ave	130410	118272		227	250	-9.3	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200917-1

SDG No.:

Lab Sample ID: CCV 280-679403/7 Calibration Date: 12/21/2024 14:25

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: 12210007.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.58	6.43	6.73
RDX	7.48	7.33	7.63
2,4,6-Trinitrophenol	7.84	7.69	7.99
1,3,5-Trinitrobenzene	8.40	8.25	8.55
1,3-Dinitrobenzene	8.93	8.78	9.08
Nitrobenzene	9.23	9.08	9.38
3,5-Dinitroaniline	9.41	9.26	9.56
Tetryl	9.50	9.35	9.65
Nitroglycerin	9.92	9.77	10.07
2,4,6-Trinitrotoluene	10.27	10.17	10.37
4-Amino-2,6-dinitrotoluene	10.38	10.28	10.48
2-Amino-4,6-dinitrotoluene	10.60	10.50	10.70
2,6-Dinitrotoluene	10.74	10.64	10.84
2,4-Dinitrotoluene	10.90	10.80	11.00
o-Nitrotoluene	11.53	11.38	11.68
p-Nitrotoluene	11.88	11.73	12.03
m-Nitrotoluene	12.34	12.19	12.49
PETN	13.24	13.09	13.39
1,2-Dinitrobenzene (Surr)	8.30	8.15	8.45

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20241221-141039.b\12210007.D
Lims ID: CCV INT
Client ID:
Sample Type: CCV
Inject. Date: 21-Dec-2024 14:25:57 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\20241221-141039.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 26-Dec-2024 12:57:58 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: CTX1722

First Level Reviewer: LV5D Date: 21-Dec-2024 15:09:29

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
4 HMX	1	6.575	6.575	0.000	20652	0.2500	0.2137	M
8 RDX	1	7.475	7.475	0.000	24382	0.2500	0.2309	
9 2,4,6-Trinitrophenol	1	7.842	7.842	0.000	17613	0.2500	0.2335	
$ 10 1,2-Dinitrobenzene	1	8.295	8.295	0.000	29568	0.2500	0.2267	
11 1,3,5-Trinitrobenzene	1	8.402	8.402	0.000	50825	0.2500	0.2338	
12 1,3-Dinitrobenzene	1	8.929	8.929	0.000	66295	0.2500	0.2223	
13 Nitrobenzene	1	9.229	9.229	0.000	40653	0.2500	0.2083	
14 3,5-Dinitroaniline	1	9.408	9.408	0.000	51283	0.2500	0.2202	
15 Tetryl	1	9.495	9.495	0.000	37206	0.2500	0.2179	
16 Nitroglycerin	2	9.922	9.922	0.000	159787	2.50	2.49	
17 2,4,6-Trinitrotoluene	1	10.268	10.268	0.000	47609	0.2500	0.2191	
18 4-Amino-2,6-dinitrotoluene	1	10.382	10.382	0.000	33559	0.2500	0.2292	
19 2-Amino-4,6-dinitrotoluene	1	10.602	10.602	0.000	45246	0.2500	0.2212	
20 2,6-Dinitrotoluene	1	10.742	10.742	0.000	31978	0.2500	0.2266	
21 2,4-Dinitrotoluene	1	10.895	10.895	0.000	64289	0.2500	0.2203	
22 o-Nitrotoluene	1	11.528	11.528	0.000	26313	0.2500	0.2097	
23 p-Nitrotoluene	1	11.875	11.875	0.000	22853	0.2500	0.2103	
24 m-Nitrotoluene	1	12.335	12.335	0.000	29366	0.2500	0.2155	
25 PETN	2	13.242	13.242	0.000	167040	2.50	2.31	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00083 Amount Added: 25.00 Units: uL

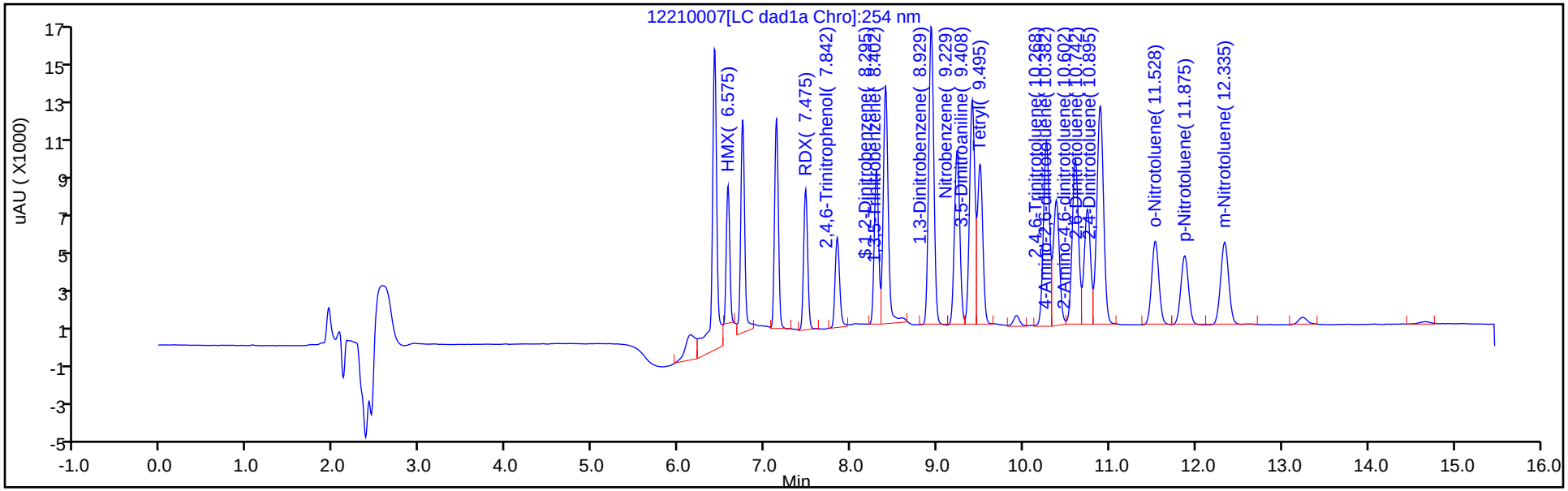
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Eurofins Denver

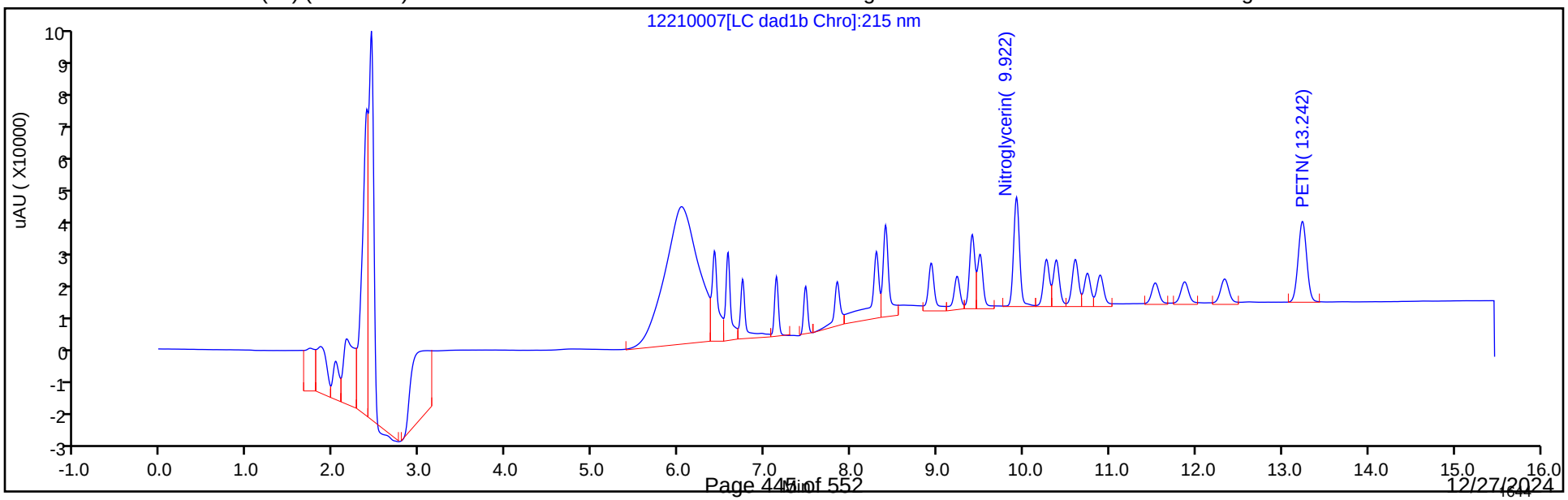
Data File: \\chromfs\denver\chromdata\chhplc_x\20241221-141039.b\12210007.d

Injection Date:	21-Dec-2024 14:25:57	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



12/27/2024
5:54:56 AM

Manual Integration/User Assign Peak Report

Eurofins Denver

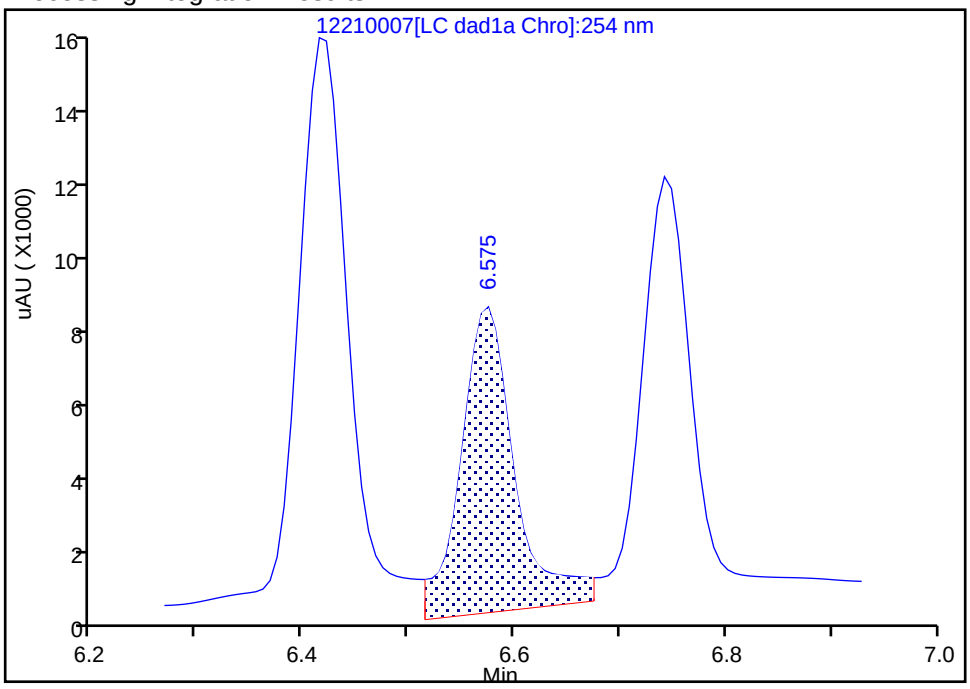
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Injection Date:	21-Dec-2024 14:25:57	Instrument ID:	CHHPLC_X3		
Lims ID:	CCV INT				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	7	Worklist Smp#:	7
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

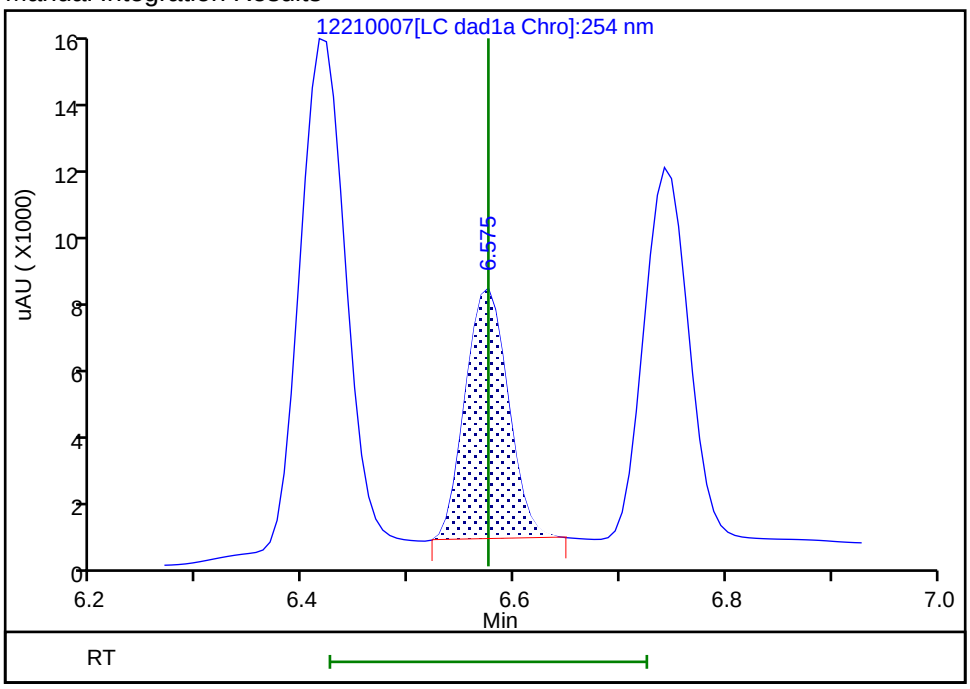
Processing Integration Results

RT: 6.58
Area: 29383
Amount: 0.304005
Amount Units: ug/mL



Manual Integration Results

RT: 6.58
Area: 20652
Amount: 0.213672
Amount Units: ug/mL



Reviewer: LV5D, 21-Dec-2024 15:09:25 -07:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-200917-1

SDG No.:

Lab Sample ID: CCV 280-679403/18 | Calibration Date: 12/21/2024 17:21

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: 12210018.D | Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	96653	84596		219	250	-12.5	20.0
RDX	Lin2		96076		227	250	-9.0	20.0
2,4,6-Trinitrophenol	Ave	75427	70980		235	250	-5.9	20.0
1,3,5-Trinitrobenzene	Ave	217350	205540		236	250	-5.4	20.0
1,3-Dinitrobenzene	Ave	298232	265372		222	250	-11.0	20.0
Nitrobenzene	Ave	195178	170328		218	250	-12.7	20.0
3,5-Dinitroaniline	Lin2		210616		226	250	-9.5	20.0
Tetryl	Lin2		145880		214	250	-14.6	20.0
Nitroglycerin	Lin2		63457		2470	2500	-1.3	20.0
2,4,6-Trinitrotoluene	Ave	217298	193412		223	250	-11.0	20.0
4-Amino-2,6-dinitrotoluene	Lin2		132492		226	250	-9.6	20.0
2-Amino-4,6-dinitrotoluene	Ave	204531	181056		221	250	-11.5	20.0
2,6-Dinitrotoluene	Lin2		128060		227	250	-9.2	20.0
2,4-Dinitrotoluene	Ave	291812	257820		221	250	-11.6	20.0
o-Nitrotoluene	Ave	125468	111108		221	250	-11.4	20.0
p-Nitrotoluene	Lin2		95208		219	250	-12.4	20.0
m-Nitrotoluene	Lin2		121132		222	250	-11.1	20.0
PETN	Ave	72212	66945		2320	2500	-7.3	20.0
1,2-Dinitrobenzene (Surr)	Ave	130410	116380		223	250	-10.8	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200917-1

SDG No.:

Lab Sample ID: CCV 280-679403/18 Calibration Date: 12/21/2024 17:21

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: 12210018.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.58	6.43	6.73
RDX	7.49	7.33	7.63
2,4,6-Trinitrophenol	7.86	7.69	7.99
1,3,5-Trinitrobenzene	8.42	8.25	8.55
1,3-Dinitrobenzene	8.95	8.78	9.08
Nitrobenzene	9.25	9.08	9.38
3,5-Dinitroaniline	9.43	9.26	9.56
Tetryl	9.53	9.35	9.65
Nitroglycerin	9.95	9.77	10.07
2,4,6-Trinitrotoluene	10.30	10.17	10.37
4-Amino-2,6-dinitrotoluene	10.42	10.28	10.48
2-Amino-4,6-dinitrotoluene	10.64	10.50	10.70
2,6-Dinitrotoluene	10.78	10.64	10.84
2,4-Dinitrotoluene	10.93	10.80	11.00
o-Nitrotoluene	11.58	11.38	11.68
p-Nitrotoluene	11.92	11.73	12.03
m-Nitrotoluene	12.39	12.19	12.49
PETN	13.31	13.09	13.39
1,2-Dinitrobenzene (Surr)	8.31	8.15	8.45

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20241221-141039.b\12210018.D
Lims ID: CCV INT
Client ID:
Sample Type: CCV
Inject. Date: 21-Dec-2024 17:21:21 ALS Bottle#: 7 Worklist Smp#: 18
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\20241221-141039.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 26-Dec-2024 12:58:06 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: CTX1722

First Level Reviewer: LV5D Date: 26-Dec-2024 12:28:07

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
4	HMX	1	6.581	6.575	0.006	21149	0.2500	0.2188	M
8	RDX	1	7.488	7.475	0.013	24019	0.2500	0.2275	
9	2,4,6-Trinitrophenol	1	7.861	7.842	0.019	17745	0.2500	0.2353	
$ 10	1,2-Dinitrobenzene	1	8.314	8.295	0.019	29095	0.2500	0.2231	
11	1,3,5-Trinitrobenzene	1	8.421	8.402	0.019	51385	0.2500	0.2364	
12	1,3-Dinitrobenzene	1	8.954	8.929	0.025	66343	0.2500	0.2225	
13	Nitrobenzene	1	9.254	9.229	0.026	42582	0.2500	0.2182	
14	3,5-Dinitroaniline	1	9.434	9.408	0.026	52654	0.2500	0.2261	
15	Tetryl	1	9.528	9.495	0.033	36470	0.2500	0.2136	
16	Nitroglycerin	2	9.954	9.922	0.032	158642	2.50	2.47	
17	2,4,6-Trinitrotoluene	1	10.301	10.268	0.033	48353	0.2500	0.2225	
18	4-Amino-2,6-dinitrotoluene	1	10.421	10.382	0.039	33123	0.2500	0.2261	
19	2-Amino-4,6-dinitrotoluene	1	10.641	10.602	0.039	45264	0.2500	0.2213	
20	2,6-Dinitrotoluene	1	10.781	10.742	0.039	32015	0.2500	0.2269	
21	2,4-Dinitrotoluene	1	10.934	10.895	0.039	64455	0.2500	0.2209	
22	o-Nitrotoluene	1	11.581	11.528	0.053	27777	0.2500	0.2214	
23	p-Nitrotoluene	1	11.921	11.875	0.046	23802	0.2500	0.2191	
24	m-Nitrotoluene	1	12.394	12.335	0.059	30283	0.2500	0.2223	
25	PETN	2	13.308	13.242	0.066	167362	2.50	2.32	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00083 Amount Added: 25.00 Units: uL

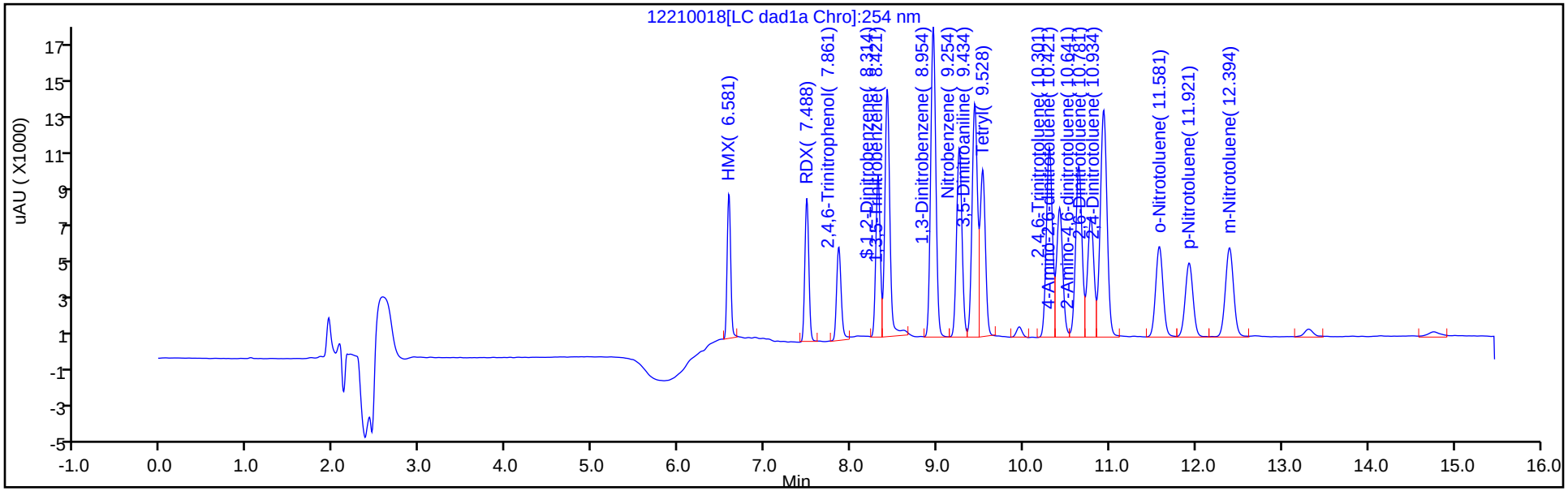
Report Date: 26-Dec-2024 12:58:06 Chrom Revision: 2.3 17-Dec-2024 12:44:46

Eurofins Denver

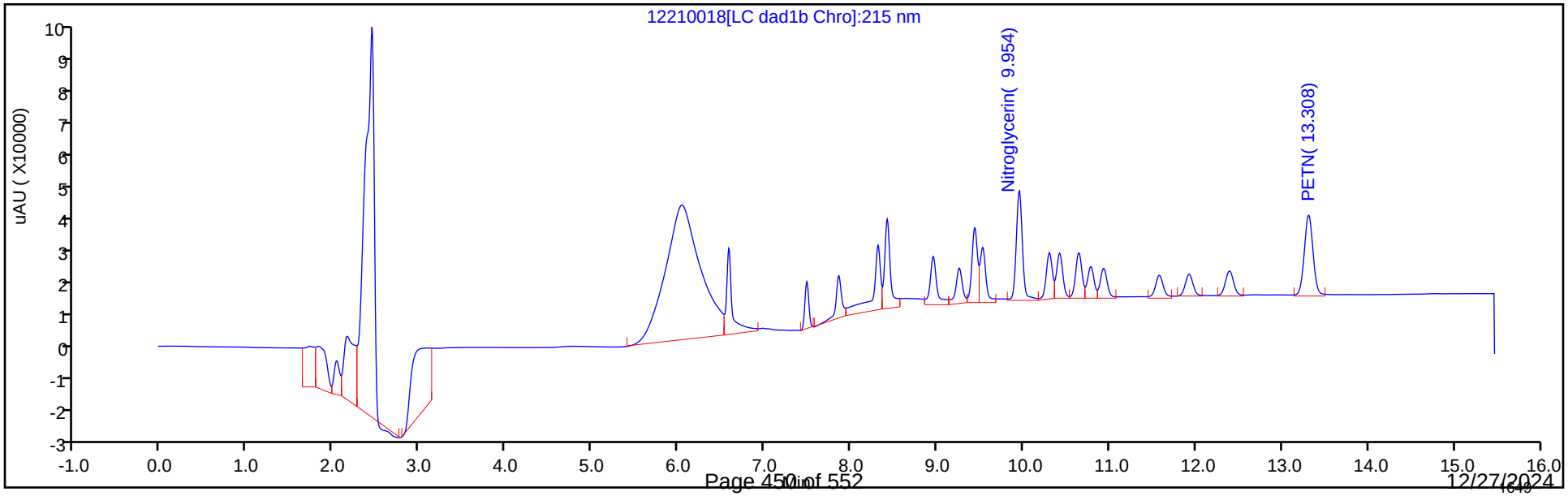
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Injection Date:	21-Dec-2024 17:21:21	Instrument ID:	CHHPLC_X3	Operator ID:	JZ
Lims ID:	CCV INT			Worklist Smp#:	18
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8330_X3	Limit Group:	GCSV - 8330		

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



12/27/2024
5:54:56 AM

Manual Integration/User Assign Peak Report

Eurofins Denver

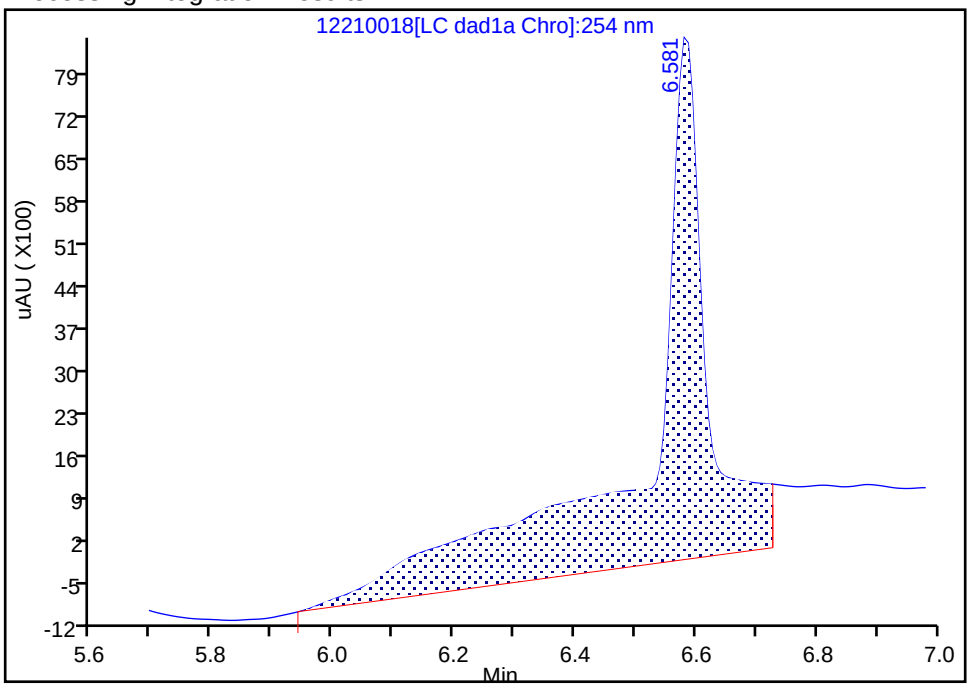
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Lims ID:	CCV INT				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	7	Worklist Smp#:	18
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

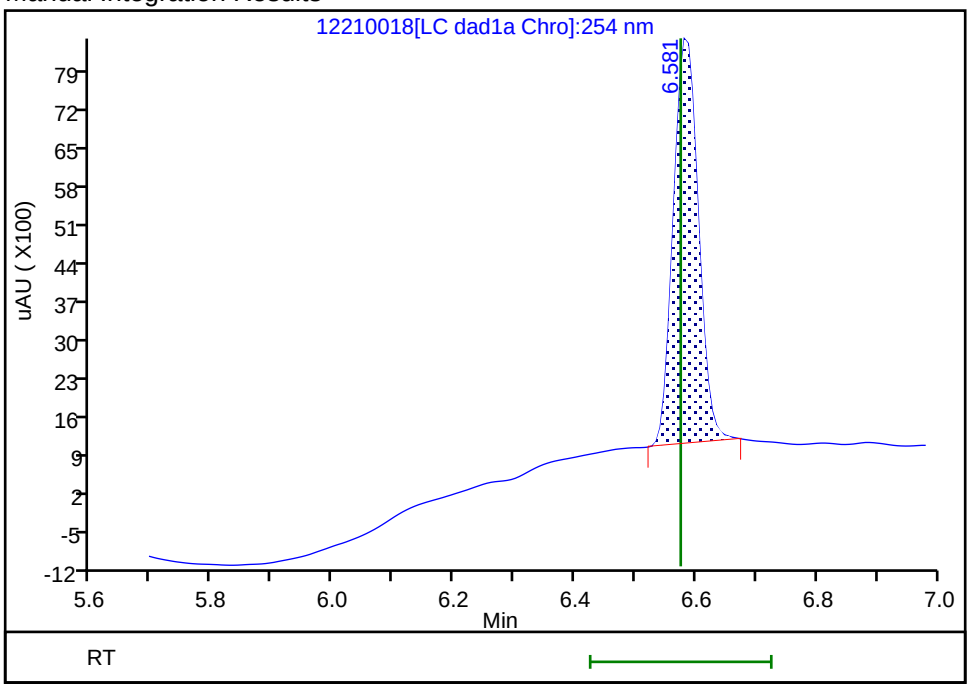
Processing Integration Results

RT: 6.58
Area: 63685
Amount: 0.658904
Amount Units: ug/mL



Manual Integration Results

RT: 6.58
Area: 21149
Amount: 0.218814
Amount Units: ug/mL



Reviewer: LV5D, 26-Dec-2024 12:28:06 -07:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-200917-1

SDG No.:

Lab Sample ID: ICV 280-677241/19 | Calibration Date: 12/04/2024 01:44

Instrument ID: CHHPLC_X5 | Calib Start Date: 12/03/2024 20:29

GC Column: Luna-phenylhex ID: 4.60(mm) | Calib End Date: 12/04/2024 01:09

Lab File ID: 12030021.D | Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	177115	167904		474	500	-5.2	20.0
2,4,6-Trinitrophenol	Lin2		167654		561	500	12.3	20.0
RDX	Ave	208336	204660		491	500	-1.8	20.0
Nitrobenzene	Ave	383192	393984		514	500	2.8	20.0
3,5-Dinitroaniline	Lin2		454816		507	500	1.4	20.0
1,3-Dinitrobenzene	Ave	592735	603320		509	500	1.8	20.0
Nitroglycerin	Ave	129139	131602		5100	5000	1.9	20.0
o-Nitrotoluene	Ave	249124	248730		499	500	-0.2	20.0
p-Nitrotoluene	Ave	210775	216984		515	500	2.9	20.0
4-Amino-2,6-dinitrotoluene	Ave	282548	289582		512	500	2.5	20.0
m-Nitrotoluene	Ave	270902	273978		506	500	1.1	20.0
2-Amino-4,6-dinitrotoluene	Ave	396155	408796		516	500	3.2	20.0
1,3,5-Trinitrobenzene	Ave	415035	425994		513	500	2.6	20.0
2,6-Dinitrotoluene	Ave	281879	277880		493	500	-1.4	20.0
2,4-Dinitrotoluene	Ave	549412	560956		511	500	2.1	20.0
Tetryl	Ave	324790	319718		492	500	-1.6	20.0
2,4,6-Trinitrotoluene	Ave	417626	419254		502	500	0.4	20.0
PETN	Ave	137979	147867		5360	5000	7.2	20.0
1,2-Dinitrobenzene (Surr)	Ave	268018	253108		472	500	-5.6	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200917-1

SDG No.:

Lab Sample ID: ICV 280-677241/19 Calibration Date: 12/04/2024 01:44

Instrument ID: CHHPLC_X5 Calib Start Date: 12/03/2024 20:29

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 12/04/2024 01:09

Lab File ID: 12030021.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.37	6.21	6.51
2,4,6-Trinitrophenol	7.81	7.71	8.01
RDX	8.48	8.33	8.63
Nitrobenzene	11.01	10.86	11.16
3,5-Dinitroaniline	13.58	13.43	13.73
1,3-Dinitrobenzene	13.91	13.77	14.07
Nitroglycerin	14.42	14.27	14.57
o-Nitrotoluene	15.01	14.87	15.17
p-Nitrotoluene	15.23	15.09	15.39
4-Amino-2,6-dinitrotoluene	15.65	15.50	15.80
m-Nitrotoluene	16.06	15.92	16.22
2-Amino-4,6-dinitrotoluene	16.41	16.27	16.57
1,3,5-Trinitrobenzene	16.65	16.51	16.81
2,6-Dinitrotoluene	17.74	17.59	17.89
2,4-Dinitrotoluene	18.18	18.03	18.33
Tetryl	21.21	21.05	21.35
2,4,6-Trinitrotoluene	22.11	21.95	22.25
PETN	23.35	23.20	23.50
1,2-Dinitrobenzene (Surr)	11.83	11.69	11.99

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030021.D
Lims ID: ICV INT
Client ID:
Sample Type: ICV
Inject. Date: 04-Dec-2024 01:44:02 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\20241203-140414.b\8330_X5_Luna.m
Limit Group: GCSV - 8330
Last Update: 04-Dec-2024 17:59:24 Calib Date: 04-Dec-2024 01:09:06
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030020.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC mwd1A, 254 nm
Process Host: CTX1637

First Level Reviewer: LV5D Date: 04-Dec-2024 11:36:09

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
5 HMX	1	6.367	6.364	0.003	83952	0.5000	0.4740	
7 2,4,6-Trinitrophenol	1	7.807	7.858	-0.051	83827	0.5000	0.5613	
8 RDX	1	8.481	8.484	-0.003	102330	0.5000	0.4912	
9 Nitrobenzene	1	11.007	11.011	-0.004	196992	0.5000	0.5141	
$ 10 1,2-Dinitrobenzene	1	11.834	11.838	-0.004	126554	0.5000	0.4722	
11 3,5-Dinitroaniline	1	13.580	13.584	-0.004	227408	0.5000	0.5068	
12 1,3-Dinitrobenzene	1	13.914	13.918	-0.004	301660	0.5000	0.5089	
13 Nitroglycerin	2	14.420	14.424	-0.004	658011	5.00	5.10	
14 o-Nitrotoluene	1	15.014	15.018	-0.004	124365	0.5000	0.4992	
16 p-Nitrotoluene	1	15.234	15.238	-0.004	108492	0.5000	0.5147	
17 4-Amino-2,6-dinitrotoluene	1	15.647	15.651	-0.004	144791	0.5000	0.5124	
18 m-Nitrotoluene	1	16.060	16.071	-0.011	136989	0.5000	0.5057	
19 2-Amino-4,6-dinitrotoluene	1	16.407	16.418	-0.011	204398	0.5000	0.5160	
20 1,3,5-Trinitrobenzene	1	16.654	16.658	-0.004	212997	0.5000	0.5132	
21 2,6-Dinitrotoluene	1	17.740	17.744	-0.004	138940	0.5000	0.4929	
22 2,4-Dinitrotoluene	1	18.180	18.184	-0.004	280478	0.5000	0.5105	
23 Tetryl	1	21.214	21.204	0.010	159859	0.5000	0.4922	
24 2,4,6-Trinitrotoluene	1	22.107	22.104	0.003	209627	0.5000	0.5019	
25 PETN	2	23.347	23.351	-0.004	739333	5.00	5.36	
26 Ammonium Picrate	1		0.000			ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

8330Surrogate_00160 Amount Added: 50.00 Units: uL
8330 LCS_00138 Amount Added: 50.00 Units: uL

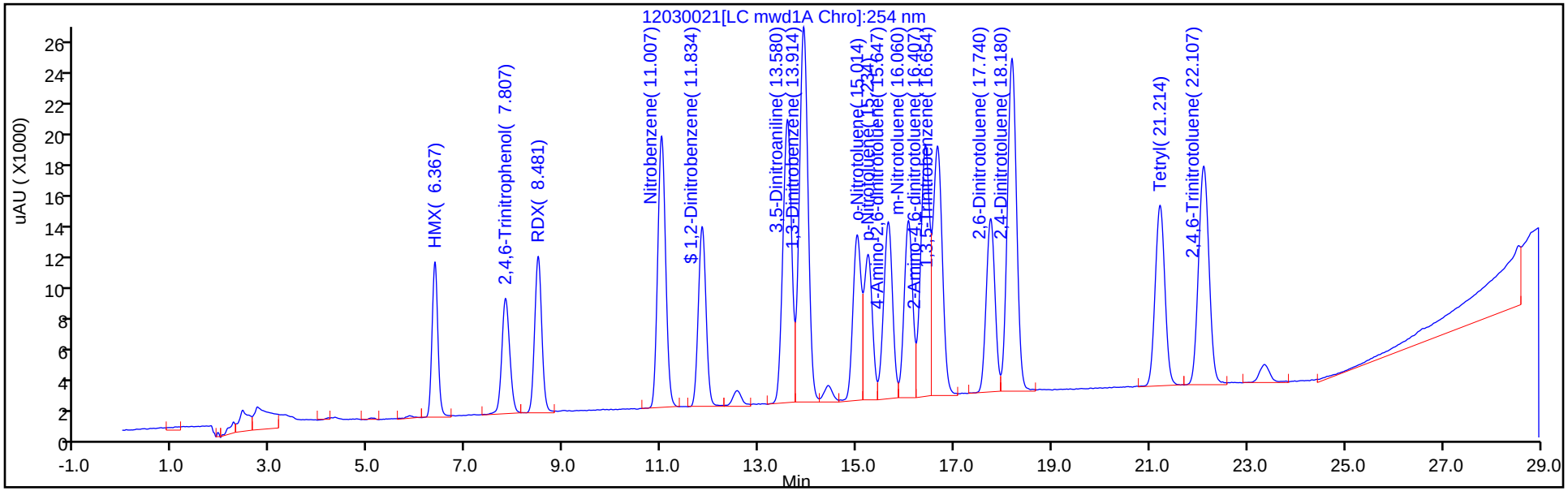
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Eurofins Denver

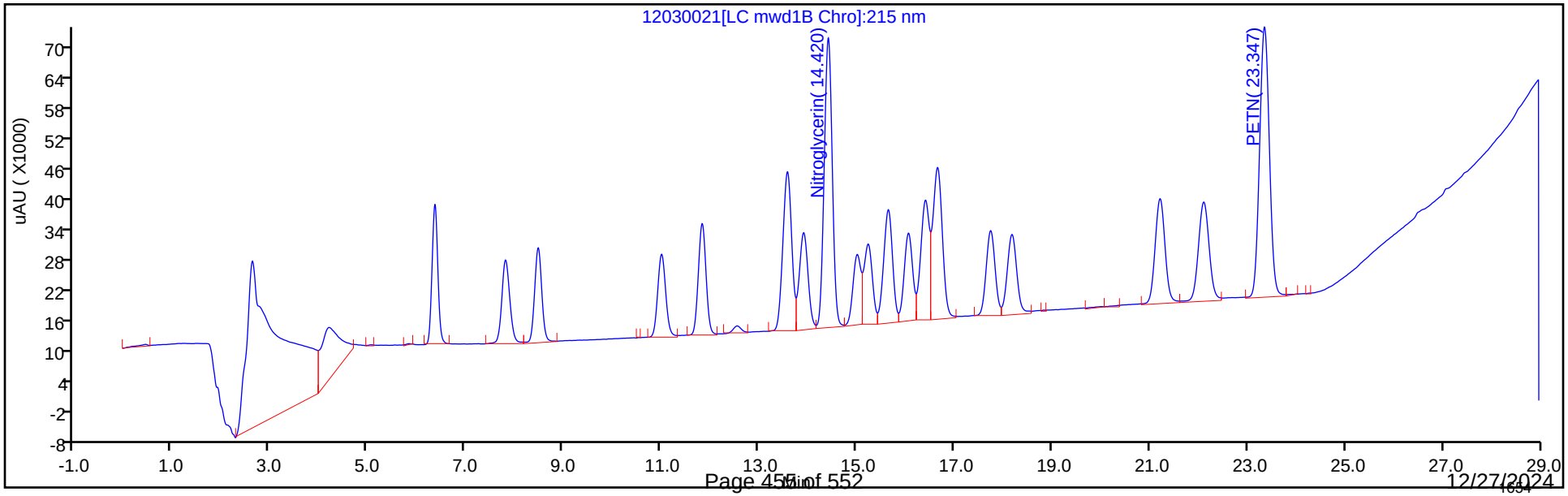
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Injection Date:	04-Dec-2024 01:44:02	Instrument ID:	CHHPLC_X5	Operator ID:	JZ
Lims ID:	ICV INT			Worklist Smp#:	19
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		

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



12/27/2024 5:54:56 AM

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Denver | Job No.: 280-200917-1

SDG No.:

Lab Sample ID: CCV 280-679155/7 | Calibration Date: 12/19/2024 18:01

Instrument ID: CHHPLC_X5 | Calib Start Date: 12/03/2024 20:29

GC Column: Luna-phenylhex ID: 4.60(mm) | Calib End Date: 12/04/2024 01:09

Lab File ID: 12190007.D | Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	177115	186028		263	250	5.0	20.0
2,4,6-Trinitrophenol	Lin2		152804		257	250	2.9	20.0
RDX	Ave	208336	217844		261	250	4.6	20.0
Nitrobenzene	Ave	383192	385612		252	250	0.6	20.0
3,5-Dinitroaniline	Lin2		465088		259	250	3.4	20.0
1,3-Dinitrobenzene	Ave	592735	593292		250	250	0.0	20.0
Nitroglycerin	Ave	129139	129890		2510	2500	0.6	20.0
o-Nitrotoluene	Ave	249124	258252		259	250	3.7	20.0
p-Nitrotoluene	Ave	210775	206720		245	250	-1.9	20.0
4-Amino-2,6-dinitrotoluene	Ave	282548	287436		254	250	1.7	20.0
m-Nitrotoluene	Ave	270902	273096		252	250	0.8	20.0
2-Amino-4,6-dinitrotoluene	Ave	396155	423280		267	250	6.8	20.0
1,3,5-Trinitrobenzene	Ave	415035	414084		249	250	-0.2	20.0
2,6-Dinitrotoluene	Ave	281879	280448		249	250	-0.5	20.0
2,4-Dinitrotoluene	Ave	549412	572684		261	250	4.2	20.0
Tetryl	Ave	324790	326296		251	250	0.5	20.0
2,4,6-Trinitrotoluene	Ave	417626	433660		260	250	3.8	20.0
PETN	Ave	137979	144856		2620	2500	5.0	20.0
1,2-Dinitrobenzene (Surr)	Ave	268018	271956		254	250	1.5	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200917-1

SDG No.:

Lab Sample ID: CCV 280-679155/7 Calibration Date: 12/19/2024 18:01

Instrument ID: CHHPLC_X5 Calib Start Date: 12/03/2024 20:29

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 12/04/2024 01:09

Lab File ID: 12190007.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.30	6.15	6.45
2,4,6-Trinitrophenol	7.81	7.66	7.96
RDX	8.40	8.25	8.55
Nitrobenzene	10.92	10.77	11.07
3,5-Dinitroaniline	13.47	13.32	13.62
1,3-Dinitrobenzene	13.81	13.66	13.96
Nitroglycerin	14.30	14.15	14.45
o-Nitrotoluene	14.90	14.75	15.05
p-Nitrotoluene	15.12	14.97	15.27
4-Amino-2,6-dinitrotoluene	15.52	15.37	15.67
m-Nitrotoluene	15.94	15.79	16.09
2-Amino-4,6-dinitrotoluene	16.28	16.13	16.43
1,3,5-Trinitrobenzene	16.53	16.38	16.68
2,6-Dinitrotoluene	17.61	17.46	17.76
2,4-Dinitrotoluene	18.04	17.89	18.19
Tetryl	21.04	20.89	21.19
2,4,6-Trinitrotoluene	21.94	21.79	22.09
PETN	23.18	23.03	23.33
1,2-Dinitrobenzene (Surr)	11.74	11.59	11.89

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241219-140971.b\12190007.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 19-Dec-2024 18:01:53 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\20241219-140971.b\8330_X5_Luna.m
Limit Group: GCSV - 8330
Last Update: 26-Dec-2024 13:36:28 Calib Date: 04-Dec-2024 01:09:06
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030020.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC mwd1A, 254 nm
Process Host: CTX1722

First Level Reviewer: LV5D Date: 19-Dec-2024 19:21:55

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
5 HMX	1	6.303	6.303	0.000	46507	0.2500	0.2626	
7 2,4,6-Trinitrophenol	1	7.809	7.809	0.000	38201	0.2500	0.2573	
8 RDX	1	8.403	8.403	0.000	54461	0.2500	0.2614	
9 Nitrobenzene	1	10.916	10.916	0.000	96403	0.2500	0.2516	
$ 10 1,2-Dinitrobenzene	1	11.736	11.736	0.000	67989	0.2500	0.2537	
11 3,5-Dinitroaniline	1	13.469	13.469	0.000	116272	0.2500	0.2585	
12 1,3-Dinitrobenzene	1	13.809	13.809	0.000	148323	0.2500	0.2502	
13 Nitroglycerin	2	14.303	14.303	0.000	324726	2.50	2.51	
14 o-Nitrotoluene	1	14.896	14.896	0.000	64563	0.2500	0.2592	
16 p-Nitrotoluene	1	15.116	15.116	0.000	51680	0.2500	0.2452	
17 4-Amino-2,6-dinitrotoluene	1	15.523	15.523	0.000	71859	0.2500	0.2543	
18 m-Nitrotoluene	1	15.943	15.943	0.000	68274	0.2500	0.2520	
19 2-Amino-4,6-dinitrotoluene	1	16.283	16.283	0.000	105820	0.2500	0.2671	
20 1,3,5-Trinitrobenzene	1	16.529	16.529	0.000	103521	0.2500	0.2494	
21 2,6-Dinitrotoluene	1	17.609	17.609	0.000	70112	0.2500	0.2487	
22 2,4-Dinitrotoluene	1	18.043	18.043	0.000	143171	0.2500	0.2606	
23 Tetryl	1	21.043	21.043	0.000	81574	0.2500	0.2512	
24 2,4,6-Trinitrotoluene	1	21.936	21.936	0.000	108415	0.2500	0.2596	
25 PETN	2	23.183	23.183	0.000	362139	2.50	2.62	

Reagents:

8330IntermStk_00082 Amount Added: 25.00 Units: uL

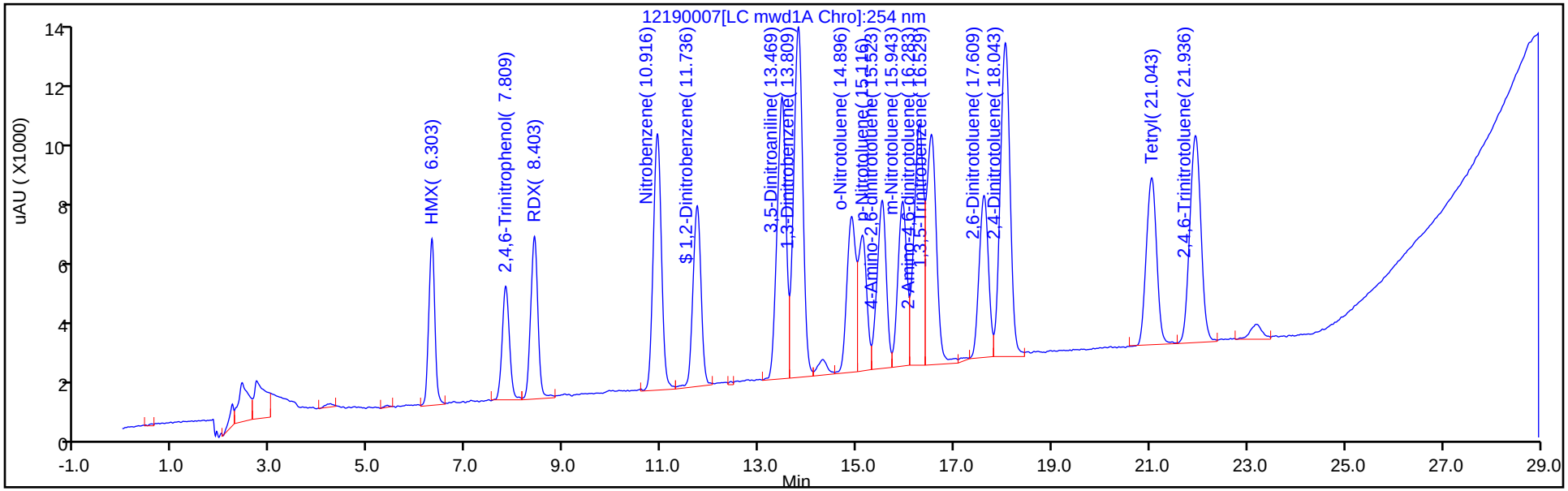
Report Date: 26-Dec-2024 13:36:29 Chrom Revision: 2.3 17-Dec-2024 12:44:46

Eurofins Denver

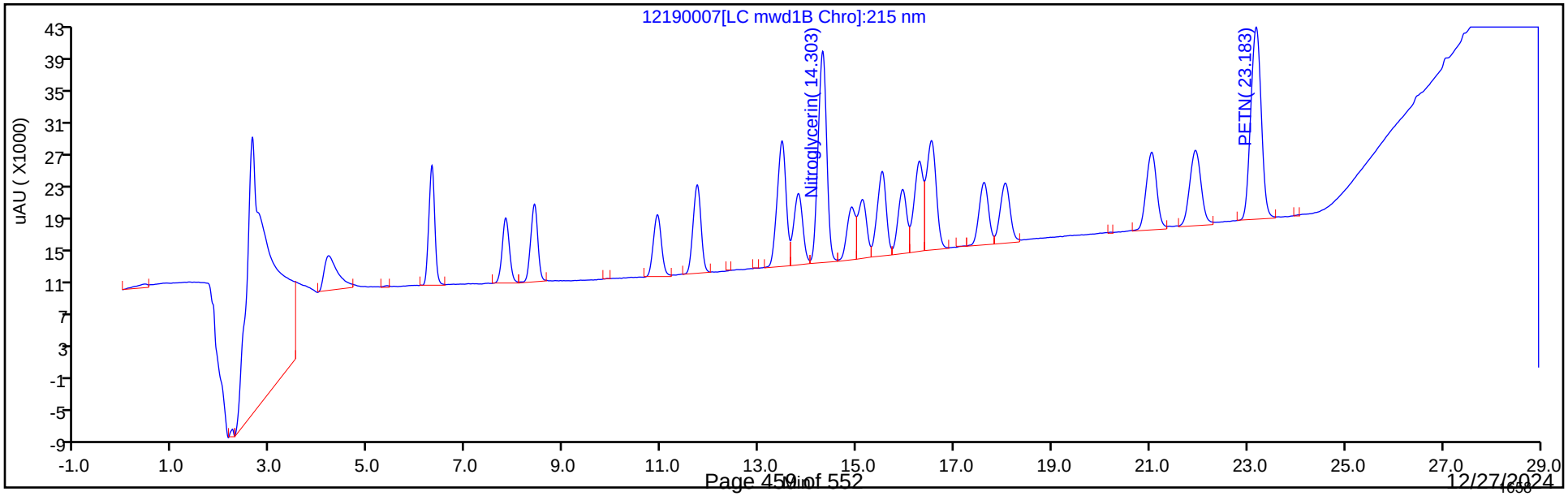
Data File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241219-140971.b\12190007.D

Injection Date:	19-Dec-2024 18:01:53	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.: 280-200917-1

SDG No.:

Lab Sample ID: CCV 280-679155/17 | Calibration Date: 12/19/2024 22:41

Instrument ID: CHHPLC_X5 | Calib Start Date: 12/03/2024 20:29

GC Column: Luna-phenylhex ID: 4.60(mm) | Calib End Date: 12/04/2024 01:09

Lab File ID: 12190017.D | Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	177115	184480		260	250	4.2	20.0
2,4,6-Trinitrophenol	Lin2		153724		259	250	3.6	20.0
RDX	Ave	208336	217844		261	250	4.6	20.0
Nitrobenzene	Ave	383192	381960		249	250	-0.3	20.0
3,5-Dinitroaniline	Lin2		465236		259	250	3.4	20.0
1,3-Dinitrobenzene	Ave	592735	597856		252	250	0.9	20.0
Nitroglycerin	Ave	129139	131507		2550	2500	1.8	20.0
o-Nitrotoluene	Ave	249124	252960		254	250	1.5	20.0
p-Nitrotoluene	Ave	210775	206012		244	250	-2.3	20.0
4-Amino-2,6-dinitrotoluene	Ave	282548	288468		255	250	2.1	20.0
m-Nitrotoluene	Ave	270902	273156		252	250	0.8	20.0
2-Amino-4,6-dinitrotoluene	Ave	396155	424636		268	250	7.2	20.0
1,3,5-Trinitrobenzene	Ave	415035	411896		248	250	-0.8	20.0
2,6-Dinitrotoluene	Ave	281879	277756		246	250	-1.5	20.0
2,4-Dinitrotoluene	Ave	549412	576032		262	250	4.8	20.0
Tetryl	Ave	324790	330796		255	250	1.8	20.0
2,4,6-Trinitrotoluene	Ave	417626	438364		262	250	5.0	20.0
PETN	Ave	137979	146025		2650	2500	5.8	20.0
1,2-Dinitrobenzene (Surr)	Ave	268018	270288		252	250	0.8	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Denver Job No.: 280-200917-1

SDG No.:

Lab Sample ID: CCV 280-679155/17 Calibration Date: 12/19/2024 22:41

Instrument ID: CHHPLC_X5 Calib Start Date: 12/03/2024 20:29

GC Column: Luna-phenylhex ID: 4.60(mm) Calib End Date: 12/04/2024 01:09

Lab File ID: 12190017.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.29	6.15	6.45
2,4,6-Trinitrophenol	7.74	7.66	7.96
RDX	8.39	8.25	8.55
Nitrobenzene	10.90	10.77	11.07
3,5-Dinitroaniline	13.45	13.32	13.62
1,3-Dinitrobenzene	13.79	13.66	13.96
Nitroglycerin	14.28	14.15	14.45
o-Nitrotoluene	14.88	14.75	15.05
p-Nitrotoluene	15.09	14.97	15.27
4-Amino-2,6-dinitrotoluene	15.51	15.37	15.67
m-Nitrotoluene	15.92	15.79	16.09
2-Amino-4,6-dinitrotoluene	16.27	16.13	16.43
1,3,5-Trinitrobenzene	16.51	16.38	16.68
2,6-Dinitrotoluene	17.59	17.46	17.76
2,4-Dinitrotoluene	18.03	17.89	18.19
Tetryl	21.05	20.89	21.19
2,4,6-Trinitrotoluene	21.95	21.79	22.09
PETN	23.18	23.03	23.33
1,2-Dinitrobenzene (Surr)	11.71	11.59	11.89

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241219-140971.b\12190017.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 19-Dec-2024 22:41:30 ALS Bottle#: 7 Worklist Smp#: 17
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\20241219-140971.b\8330_X5_Luna.m
Limit Group: GCSV - 8330
Last Update: 26-Dec-2024 13:36:36 Calib Date: 04-Dec-2024 01:09:06
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030020.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC mwd1A, 254 nm
Process Host: CTX1722

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
5 HMX	1	6.291	6.303	-0.012	46120	0.2500	0.2604	
7 2,4,6-Trinitrophenol	1	7.738	7.809	-0.071	38431	0.2500	0.2589	
8 RDX	1	8.385	8.403	-0.018	54461	0.2500	0.2614	
9 Nitrobenzene	1	10.898	10.916	-0.018	95490	0.2500	0.2492	
$ 10 1,2-Dinitrobenzene	1	11.711	11.736	-0.025	67572	0.2500	0.2521	
11 3,5-Dinitroaniline	1	13.451	13.469	-0.018	116309	0.2500	0.2586	
12 1,3-Dinitrobenzene	1	13.785	13.809	-0.024	149464	0.2500	0.2522	
13 Nitroglycerin	2	14.278	14.303	-0.025	328768	2.50	2.55	
14 o-Nitrotoluene	1	14.878	14.896	-0.018	63240	0.2500	0.2538	
16 p-Nitrotoluene	1	15.091	15.116	-0.025	51503	0.2500	0.2444	
17 4-Amino-2,6-dinitrotoluene	1	15.505	15.523	-0.018	72117	0.2500	0.2552	
18 m-Nitrotoluene	1	15.918	15.943	-0.025	68289	0.2500	0.2521	
19 2-Amino-4,6-dinitrotoluene	1	16.265	16.283	-0.018	106159	0.2500	0.2680	
20 1,3,5-Trinitrobenzene	1	16.511	16.529	-0.018	102974	0.2500	0.2481	
21 2,6-Dinitrotoluene	1	17.591	17.609	-0.018	69439	0.2500	0.2463	
22 2,4-Dinitrotoluene	1	18.025	18.043	-0.018	144008	0.2500	0.2621	
23 Tetryl	1	21.045	21.043	0.002	82699	0.2500	0.2546	
24 2,4,6-Trinitrotoluene	1	21.945	21.936	0.009	109591	0.2500	0.2624	
25 PETN	2	23.178	23.183	-0.005	365063	2.50	2.65	

Reagents:

8330IntermStk_00082 Amount Added: 25.00 Units: uL

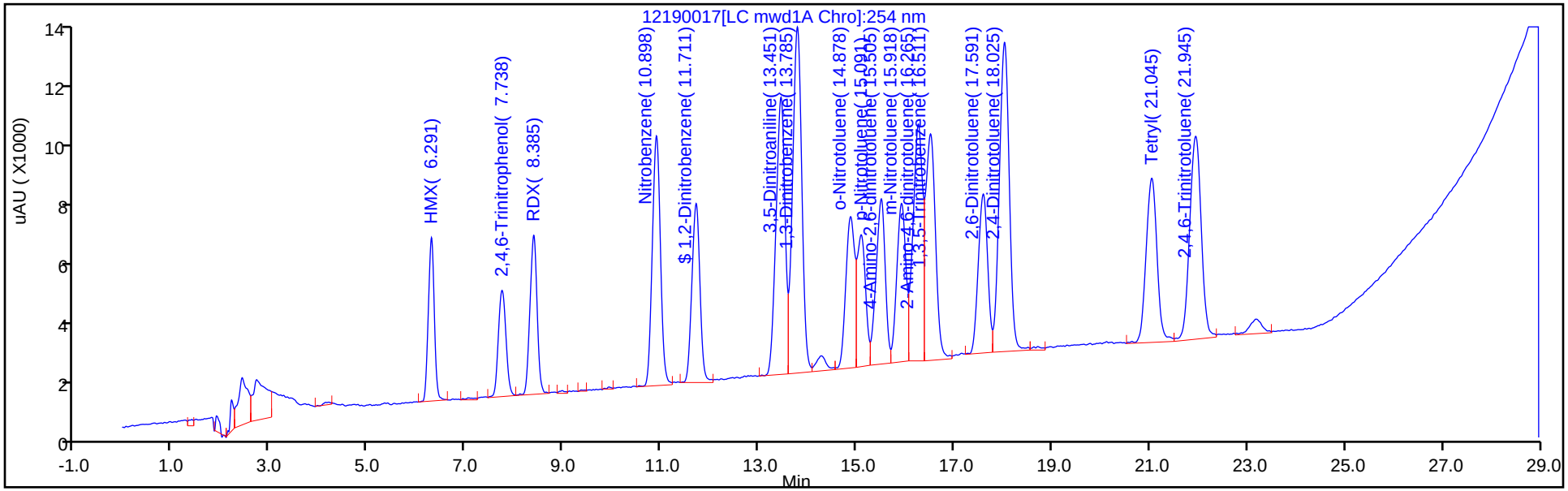
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Eurofins Denver

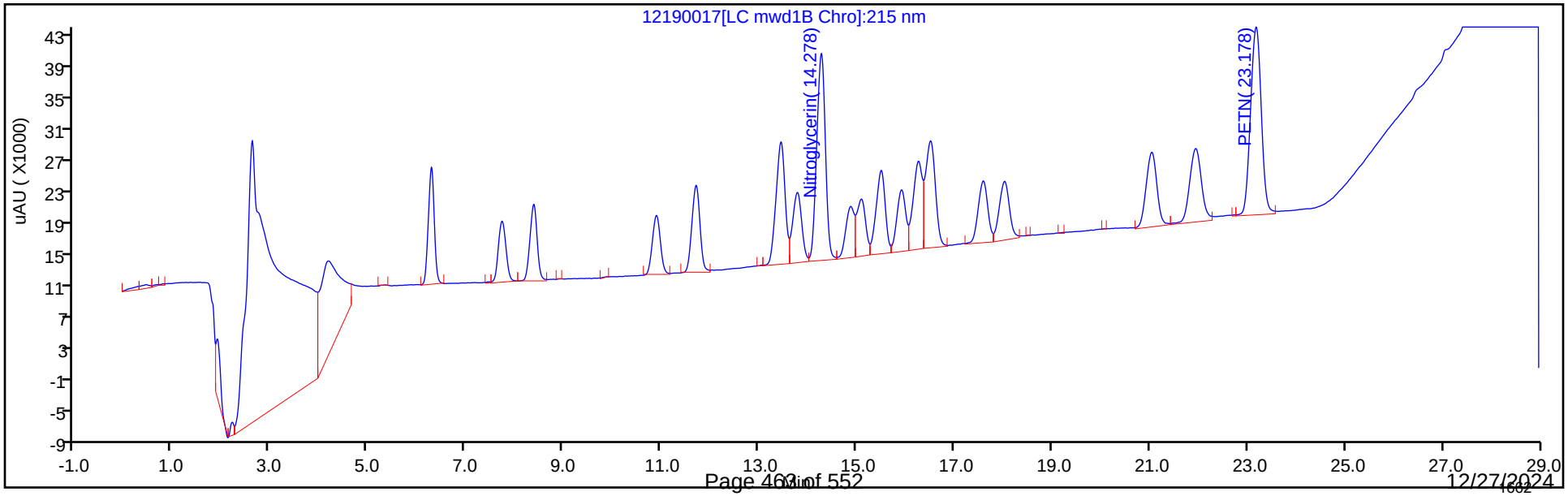
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Injection Date:	19-Dec-2024 22:41:30	Instrument ID:	CHHPLC_X5	Operator ID:	JZ
Lims ID:	CCV			Worklist Smp#:	17
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		

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



12/27/2024
1682
5:54:56 AM

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-200917-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-678945/1-A

Matrix: Solid | Lab File ID: 12210011.D

Analysis Method: 8330B MOD | Date Collected:

Extraction Method: 8330B | Date Extracted: 12/18/2024 12:11

Sample wt/vol: 10(g) | Date Analyzed: 12/21/2024 14:47

Con. Extract Vol.: 40(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.: 679403 | Units: mg/Kg

Preparation Batch No.: 678945 | Instrument ID: CHHPLC_X3

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	0.0452	J	0.10	0.040	0.014
99-65-0	1,3-Dinitrobenzene	0.040	U	0.10	0.040	0.017
118-96-7	2,4,6-Trinitrotoluene	0.070	U	0.10	0.070	0.031
121-14-2	2,4-Dinitrotoluene	0.040	U	0.10	0.040	0.015
606-20-2	2,6-Dinitrotoluene	0.040	U	0.10	0.040	0.019
35572-78-2	2-Amino-4,6-dinitrotoluene	0.070	U	0.10	0.070	0.033
88-72-2	o-Nitrotoluene	0.10	U	0.20	0.10	0.047
99-08-1	m-Nitrotoluene	0.15	U	0.20	0.15	0.064
19406-51-0	4-Amino-2,6-dinitrotoluene	0.070	U	0.10	0.070	0.030
99-99-0	p-Nitrotoluene	0.10	U	0.20	0.10	0.037
98-95-3	Nitrobenzene	0.20	U	0.30	0.20	0.085
55-63-0	Nitroglycerin	0.70	U	2.0	0.70	0.22
2691-41-0	HMX	0.070	U M	0.10	0.070	0.023
78-11-5	PETN	1.0	U	2.0	1.0	0.49
121-82-4	RDX	0.10	U	0.20	0.10	0.043
479-45-8	Tetryl	0.10	U	0.20	0.10	0.044

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene (Surr)	91		78-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20241221-141039.b\12210011.D
Lims ID: MB 280-678945/1-A
Client ID:
Sample Type: MB
Inject. Date: 21-Dec-2024 14:47:51 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: MB 280-678945/1-A
Operator ID: JZ Instrument ID: CHHPLC_X3

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20241221-141039.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 26-Dec-2024 12:57:58 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: CTX1722

First Level Reviewer: LV5D Date: 21-Dec-2024 15:37:13

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
	1 Triamine Trinitrobenzene	1		2.444				ND	
	3 TNX	1		6.428				ND	
	2 2,6-diamino-4-nitrotoluene	1		6.501				ND	
	4 HMX	1	6.564	6.575	-0.011	106		0.001097	7M
	5 2,4-diamino-6-nitrotoluene	1		6.681				ND	
	6 DNX	1		6.755				ND	
	7 MNX	1		7.148				ND	
	8 RDX	1		7.475				ND	
	9 2,4,6-Trinitrophenol	1		7.842				ND	
$	10 1,2-Dinitrobenzene	1	8.277	8.295	-0.018	29566	0.2500	0.2267	
	11 1,3,5-Trinitrobenzene	1	8.431	8.402	0.029	2456		0.0113	
	12 1,3-Dinitrobenzene	1		8.929				ND	
	13 Nitrobenzene	1		9.229				ND	
	14 3,5-Dinitroaniline	1		9.408				ND	
	15 Tetryl	1		9.495				ND	
	16 Nitroglycerin	2		9.922				ND	
	17 2,4,6-Trinitrotoluene	1		10.268				ND	
	18 4-Amino-2,6-dinitrotoluene	1		10.382				ND	
	19 2-Amino-4,6-dinitrotoluene	1		10.602				ND	
	20 2,6-Dinitrotoluene	1		10.742				ND	
	21 2,4-Dinitrotoluene	1		10.895				ND	
	22 o-Nitrotoluene	1		11.528				ND	
	23 p-Nitrotoluene	1		11.875				ND	
	24 m-Nitrotoluene	1		12.335				ND	
	25 PETN	2		13.242				ND	
	26 Ammonium Picrate	1		0.000				ND	

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection

Review Flags
M - Manually Integrated

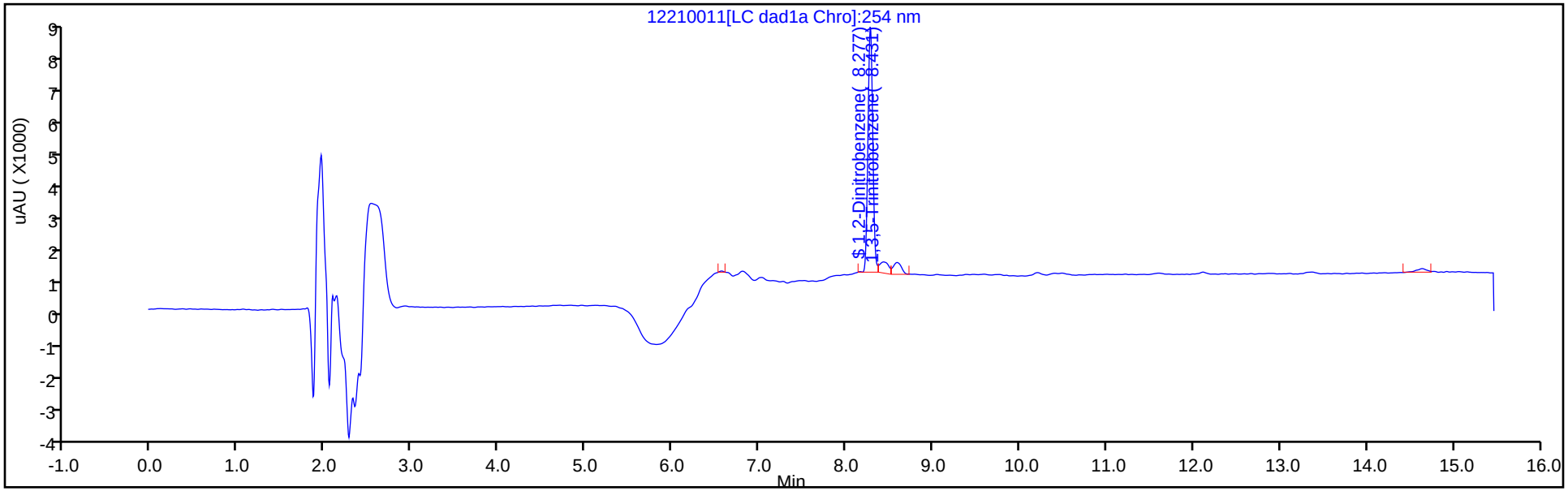
Report Date: 26-Dec-2024 12:57:59 Chrom Revision: 2.3 17-Dec-2024 12:44:46

Eurofins Denver

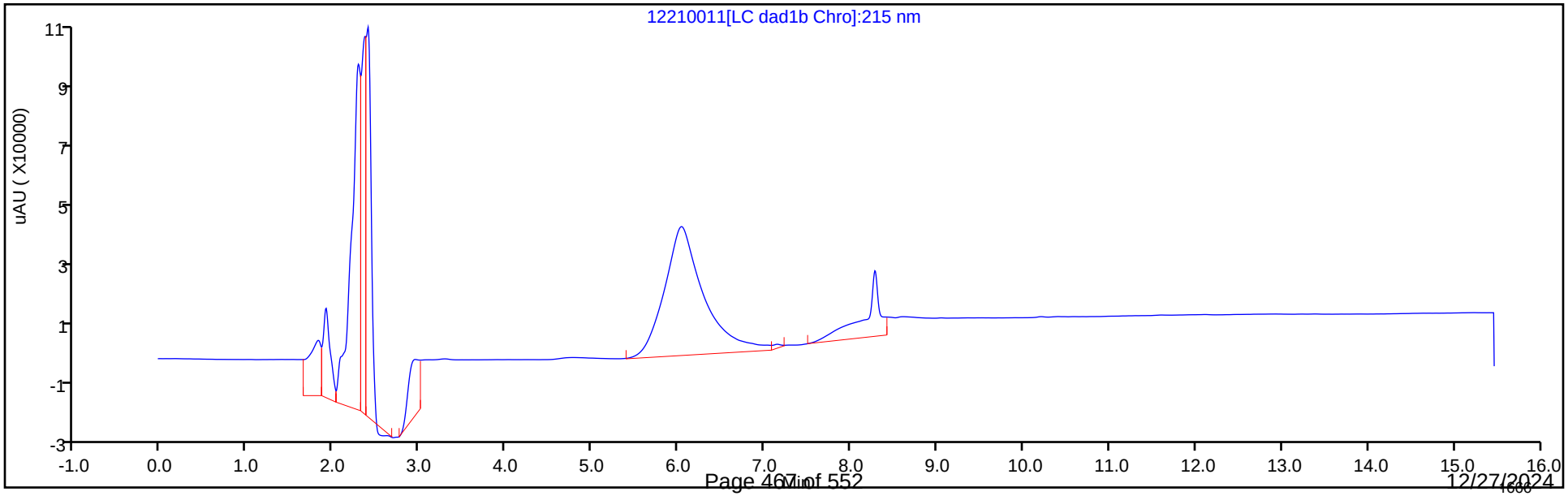
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Injection Date:	21-Dec-2024 14:47:51	Instrument ID:	CHHPLC_X3	Operator ID:	JZ
Lims ID:	MB 280-678945/1-A			Worklist Smp#:	11
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\CHHPLC_X\20241221-141039.b\12210011.D				
Lims ID:	MB 280-678945/1-A				
Client ID:					
Sample Type:	MB				
Inject. Date:	21-Dec-2024 14:47:51	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	MB 280-678945/1-A				
Operator ID:	JZ	Instrument ID:	CHHPLC_X3		
Method:	\\chromfs\Denver\ChromData\CHHPLC_X\20241221-141039.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	26-Dec-2024 12:57:58	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:	CTX1722				

First Level Reviewer: LV5D Date: 21-Dec-2024 15:37:13

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2500	0.2267	90.69

Manual Integration/User Assign Peak Report

Eurofins Denver

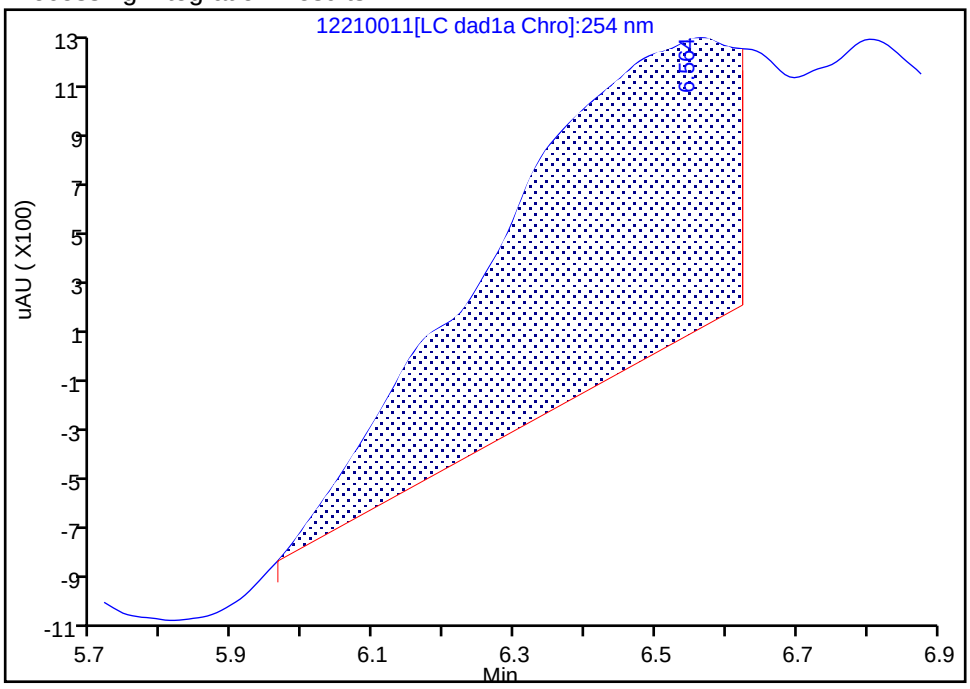
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Injection Date:	21-Dec-2024 14:47:51	Instrument ID:	CHHPLC_X3		
Lims ID:	MB 280-678945/1-A				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

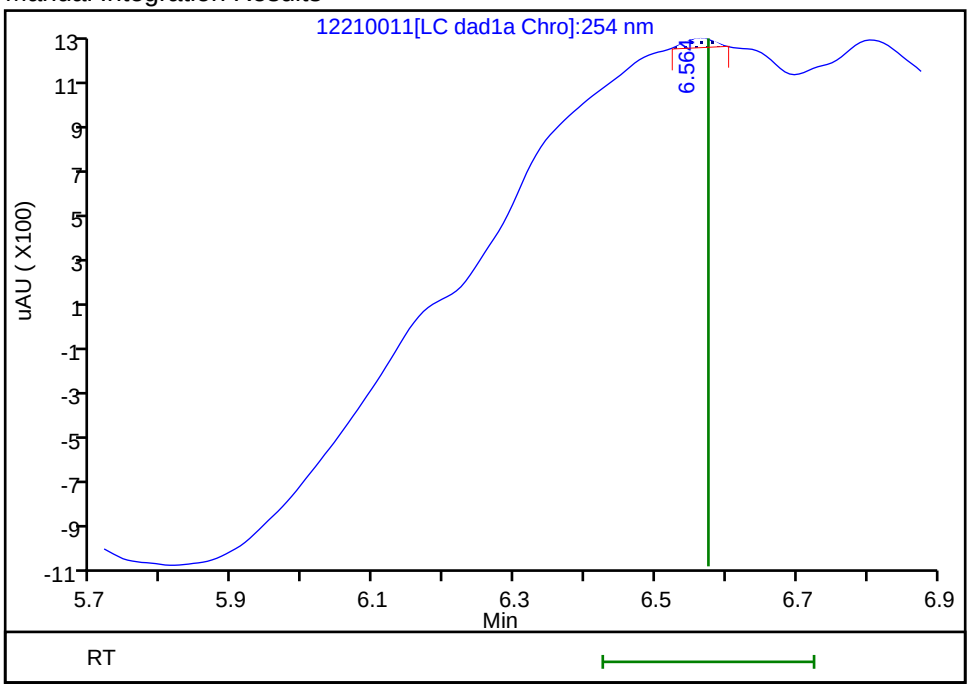
Processing Integration Results

RT: 6.56
Area: 29161
Amount: 0.301708
Amount Units: ug/mL



Manual Integration Results

RT: 6.56
Area: 106
Amount: 0.001097
Amount Units: ug/mL



Reviewer: LV5D, 21-Dec-2024 15:37:11 -07:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-200917-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-678945/2-A

Matrix: Solid | Lab File ID: 12210012.D

Analysis Method: 8330B MOD | Date Collected:

Extraction Method: 8330B | Date Extracted: 12/18/2024 12:11

Sample wt/vol: 10(g) | Date Analyzed: 12/21/2024 15:09

Con. Extract Vol.: 40(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.: 679403 | Units: mg/Kg

Preparation Batch No.: 678945 | Instrument ID: CHHPLC_X3

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	0.989		0.10	0.040	0.014
99-65-0	1,3-Dinitrobenzene	0.895		0.10	0.040	0.017
118-96-7	2,4,6-Trinitrotoluene	0.867		0.10	0.070	0.031
121-14-2	2,4-Dinitrotoluene	0.860		0.10	0.040	0.015
606-20-2	2,6-Dinitrotoluene	0.893		0.10	0.040	0.019
35572-78-2	2-Amino-4,6-dinitrotoluene	0.895		0.10	0.070	0.033
88-72-2	o-Nitrotoluene	0.899		0.20	0.10	0.047
99-08-1	m-Nitrotoluene	0.934		0.20	0.15	0.064
19406-51-0	4-Amino-2,6-dinitrotoluene	0.882		0.10	0.070	0.030
99-99-0	p-Nitrotoluene	0.909		0.20	0.10	0.037
98-95-3	Nitrobenzene	0.906		0.30	0.20	0.085
55-63-0	Nitroglycerin	9.98		2.0	0.70	0.22
2691-41-0	HMX	0.804	M	0.10	0.070	0.023
78-11-5	PETN	9.33		2.0	1.0	0.49
121-82-4	RDX	0.859		0.20	0.10	0.043
479-45-8	Tetryl	0.894		0.20	0.10	0.044

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene (Surr)	87		78-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20241221-141039.b\12210012.D
Lims ID: LCS 280-678945/2-A
Client ID:
Sample Type: LCS
Inject. Date: 21-Dec-2024 15:09:49 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: LCS 280-678945/2-A
Operator ID: JZ Instrument ID: CHHPLC_X3

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20241221-141039.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 26-Dec-2024 12:57:58 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: CTX1722

First Level Reviewer: LV5D Date: 21-Dec-2024 15:36:59

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
4 HMX	1	6.565	6.575	-0.010	19416	0.2500	0.2009	M
8 RDX	1	7.458	7.475	-0.017	22696	0.2500	0.2148	
9 2,4,6-Trinitrophenol	1	7.825	7.842	-0.017	18937	0.2500	0.2511	
$ 10 1,2-Dinitrobenzene	1	8.278	8.295	-0.017	28522	0.2500	0.2187	
11 1,3,5-Trinitrobenzene	1	8.385	8.402	-0.017	53723	0.2500	0.2472	
12 1,3-Dinitrobenzene	1	8.912	8.929	-0.017	66710	0.2500	0.2237	
13 Nitrobenzene	1	9.212	9.229	-0.017	44187	0.2500	0.2264	
14 3,5-Dinitroaniline	1	9.385	9.408	-0.023	51393	0.2500	0.2207	
15 Tetryl	1	9.478	9.495	-0.017	38153	0.2500	0.2234	
16 Nitroglycerin	2	9.898	9.922	-0.024	160445	2.50	2.50	
17 2,4,6-Trinitrotoluene	1	10.245	10.268	-0.023	47105	0.2500	0.2168	
18 4-Amino-2,6-dinitrotoluene	1	10.351	10.382	-0.031	32313	0.2500	0.2205	
19 2-Amino-4,6-dinitrotoluene	1	10.578	10.602	-0.024	45770	0.2500	0.2238	
20 2,6-Dinitrotoluene	1	10.718	10.742	-0.024	31506	0.2500	0.2233	
21 2,4-Dinitrotoluene	1	10.865	10.895	-0.030	62762	0.2500	0.2151	
22 o-Nitrotoluene	1	11.498	11.528	-0.030	28198	0.2500	0.2247	
23 p-Nitrotoluene	1	11.845	11.875	-0.030	24687	0.2500	0.2273	
24 m-Nitrotoluene	1	12.305	12.335	-0.030	31801	0.2500	0.2335	
25 PETN	2	13.211	13.242	-0.031	168516	2.50	2.33	
26 Ammonium Picrate	1		0.000			ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND
Review Flags
M - Manually Integrated

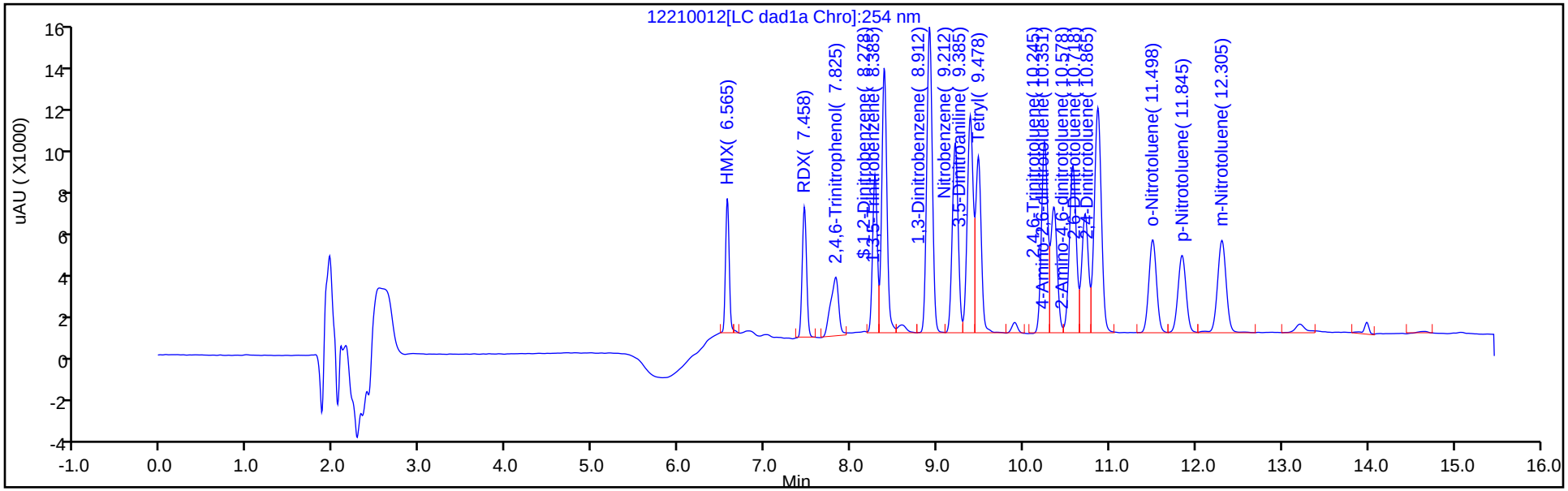
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Eurofins Denver

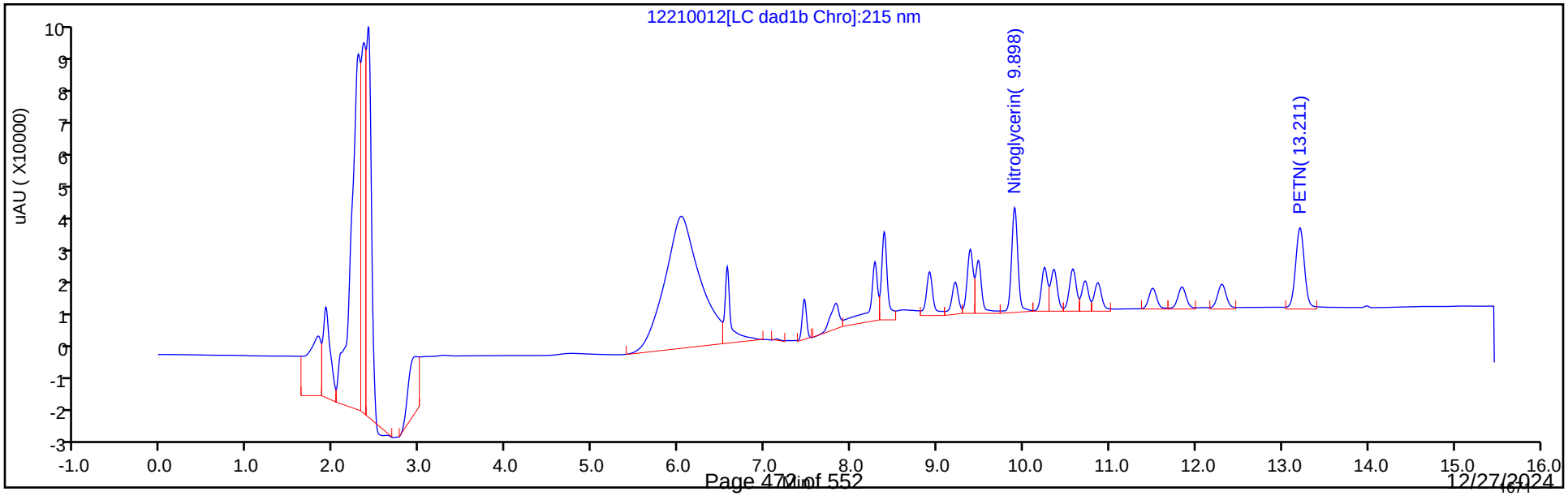
Data File: \\chromfs\denver\chromdata\chhplc_x\20241221-141039.b\12210012.d

Injection Date:	21-Dec-2024 15:09:49	Instrument ID:	CHHPLC_X3	Operator ID:	JZ
Lims ID:	LCS 280-678945/2-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\20241221-141039.b\12210012.D
Lims ID: LCS 280-678945/2-A
Client ID:
Sample Type: LCS
Inject. Date: 21-Dec-2024 15:09:49 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: LCS 280-678945/2-A
Operator ID: JZ Instrument ID: CHHPLC_X3

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20241221-141039.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 26-Dec-2024 12:57:58 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: CTX1722

First Level Reviewer: LV5D Date: 21-Dec-2024 15:36:59

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2500	0.2187	87.48

Manual Integration/User Assign Peak Report

Eurofins Denver

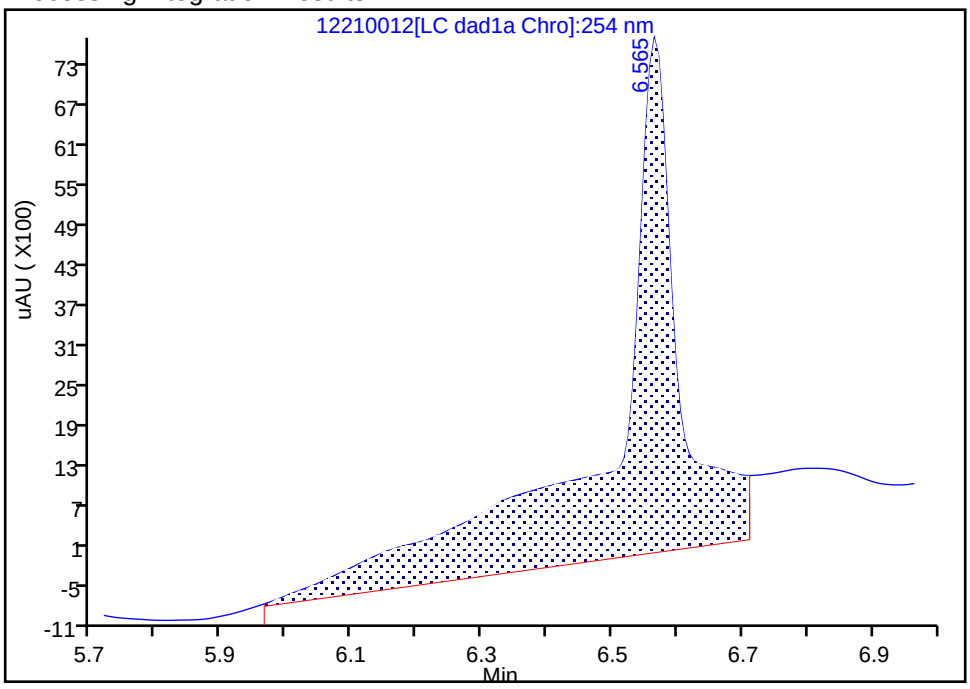
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241221-141039.b\12210012.d				
Injection Date:	21-Dec-2024 15:09:49	Instrument ID:	CHHPLC_X3		
Lims ID:	LCS 280-678945/2-A				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

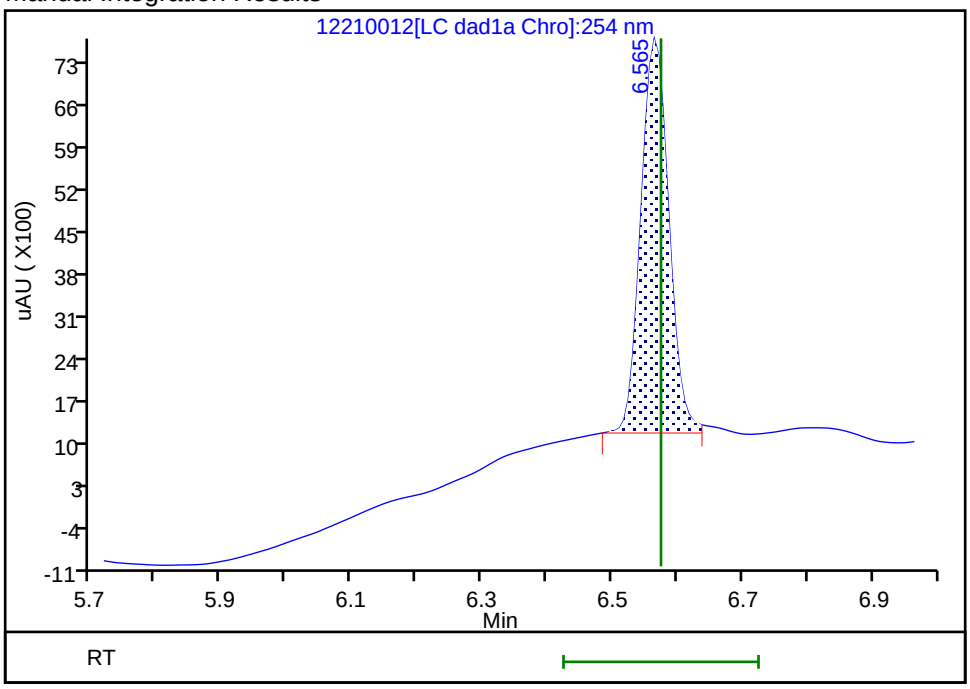
Processing Integration Results

RT: 6.56
Area: 57436
Amount: 0.594250
Amount Units: ug/mL



Manual Integration Results

RT: 6.56
Area: 19416
Amount: 0.200884
Amount Units: ug/mL



Reviewer: LV5D, 21-Dec-2024 15:36:56 -07:00:00 (UTC)

Audit Action: Split an Integrated Peak Audit Reason: Baseline

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-200917-1

SDG No.:

Client Sample ID: P2-ARROYO-005-003 MS | Lab Sample ID: 280-200917-1 MS

Matrix: Solid | Lab File ID: 12190013.D

Analysis Method: 8330B MOD | Date Collected: 12/16/2024 11:14

Extraction Method: 8330B | Date Extracted: 12/18/2024 12:11

Sample wt/vol: +10.92(g) | Date Analyzed: 12/19/2024 20:21

Con. Extract Vol.: 40(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: Luna-phenylhex ID: 4.6(mm)

% Moisture: 2.0 % Solids: 98.0 | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 679155 | Units: mg/Kg

Preparation Batch No.: 678945 | Instrument ID: CHHPLC_X5

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	1.02		0.093	0.037	0.013

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene (Surr)	100		78-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241219-140971.b\12190013.D
Lims ID: 280-200917-A-1-B MS
Client ID:
Sample Type: MS
Inject. Date: 19-Dec-2024 20:21:41 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-200917-A-1-B MS
Operator ID: JZ Instrument ID: CHHPLC_X5

Method: \\chromfs\Denver\ChromData\CHHPLC_X5\20241219-140971.b\8330_X5_Luna.m
Limit Group: GCSV - 8330
Last Update: 26-Dec-2024 13:36:28 Calib Date: 04-Dec-2024 01:09:06
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030020.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC mwd1A, 254 nm
Process Host: CTX1722

First Level Reviewer: LV5D Date: 20-Dec-2024 20:29:27

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
5 HMX	1	6.221	6.303	-0.082	40768	0.2500	0.2302	
7 2,4,6-Trinitrophenol	1	7.715	7.809	-0.094	25880	0.2500	0.1753	
8 RDX	1	8.295	8.403	-0.108	47060	0.2500	0.2259	
9 Nitrobenzene	1	10.801	10.916	-0.115	97817	0.2500	0.2553	
$ 10 1,2-Dinitrobenzene	1	11.615	11.736	-0.121	66855	0.2500	0.2494	
11 3,5-Dinitroaniline	1	13.348	13.469	-0.121	105034	0.2500	0.2334	
12 1,3-Dinitrobenzene	1	13.695	13.809	-0.114	150251	0.2500	0.2535	
13 Nitroglycerin	2	14.221	14.303	-0.082	321201	2.50	2.49	
14 o-Nitrotoluene	1	14.821	14.896	-0.075	62308	0.2500	0.2501	M
16 p-Nitrotoluene	1	14.908	15.116	-0.208	53970	0.2500	0.2561	Ma
17 4-Amino-2,6-dinitrotoluene	1	15.401	15.523	-0.122	70139	0.2500	0.2482	
18 m-Nitrotoluene	1	15.848	15.943	-0.095	67511	0.2500	0.2492	
19 2-Amino-4,6-dinitrotoluene	1	16.168	16.283	-0.115	94483	0.2500	0.2385	
20 1,3,5-Trinitrobenzene	1	16.435	16.529	-0.094	113398	0.2500	0.2732	
21 2,6-Dinitrotoluene	1	17.508	17.609	-0.101	65567	0.2500	0.2326	
22 2,4-Dinitrotoluene	1	17.948	18.043	-0.095	135415	0.2500	0.2465	
23 Tetryl	1	20.961	21.043	-0.082	80709	0.2500	0.2485	
24 2,4,6-Trinitrotoluene	1	21.861	21.936	-0.075	108341	0.2500	0.2594	
25 PETN	2	23.128	23.183	-0.055	351728	2.50	2.55	
26 Ammonium Picrate	1		0.000			ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND
Review Flags
M - Manually Integrated
a - User Assigned ID

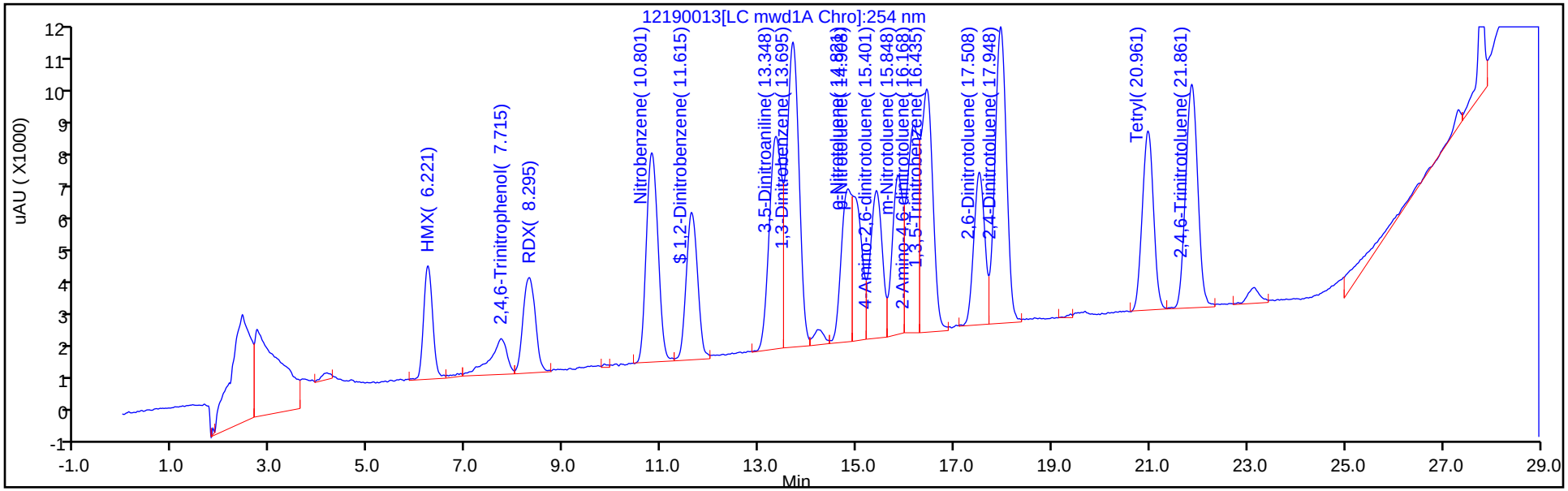
Report Date: 26-Dec-2024 13:36:32 Chrom Revision: 2.3 17-Dec-2024 12:44:46

Eurofins Denver

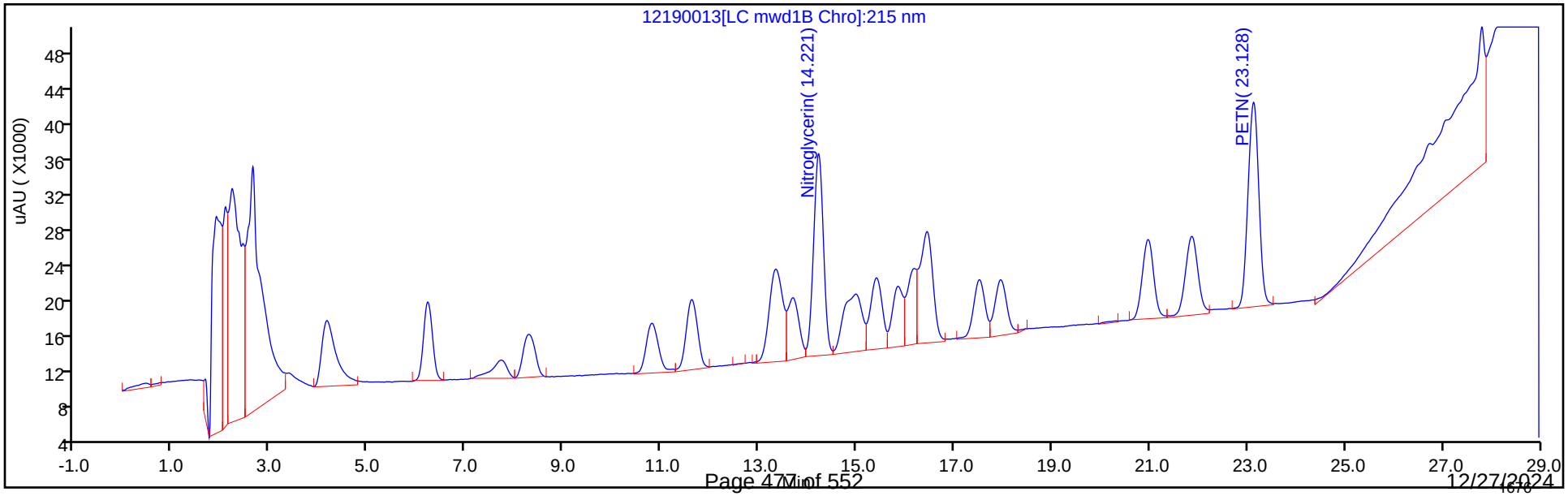
Data File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241219-140971.b\12190013.D

Injection Date:	19-Dec-2024 20:21:41	Instrument ID:	CHHPLC_X5	Operator ID:	JZ
Lims ID:	280-200917-A-1-B MS			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
Recovery Report

Data File:	\\chromfs\Denver\ChromData\CHHPLC_X5\20241219-140971.b\12190013.D				
Lims ID:	280-200917-A-1-B MS				
Client ID:					
Sample Type:	MS				
Inject. Date:	19-Dec-2024 20:21:41	ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-200917-A-1-B MS				
Operator ID:	JZ	Instrument ID:	CHHPLC_X5		
Method:	\\chromfs\Denver\ChromData\CHHPLC_X5\20241219-140971.b\8330_X5_Luna.m				
Limit Group:	GCSV - 8330				
Last Update:	26-Dec-2024 13:36:28	Calib Date:	04-Dec-2024 01:09:06		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030020.D				
Column 1 :	Luna-Phenyl hexyl (4.60 mm)		Det: LC mwd1A, 254 nm		
Process Host:	CTX1722				

First Level Reviewer: LV5D Date: 20-Dec-2024 20:29:27

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2500	0.2494	99.78

Manual Integration/User Assign Peak Report

Eurofins Denver

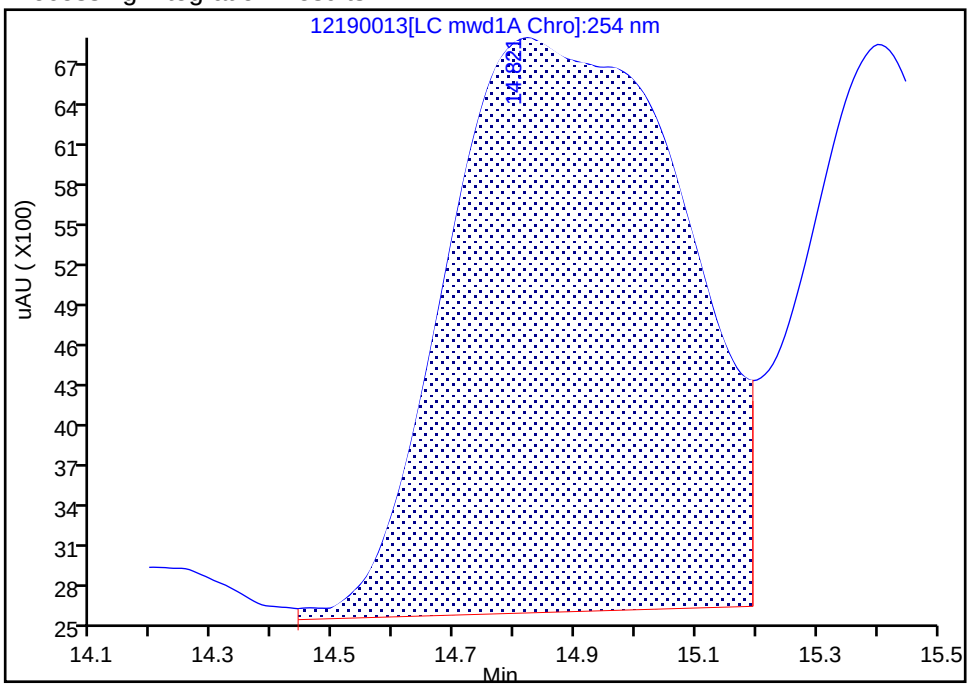
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Injection Date: 19-Dec-2024 20:21:41 Instrument ID: CHHPLC_X5
Lims ID: 280-200917-A-1-B MS
Client ID:
Operator ID: JZ ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X5_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC mwd1A, 254 nm

14 o-Nitrotoluene, CAS: 88-72-2

Signal: 1

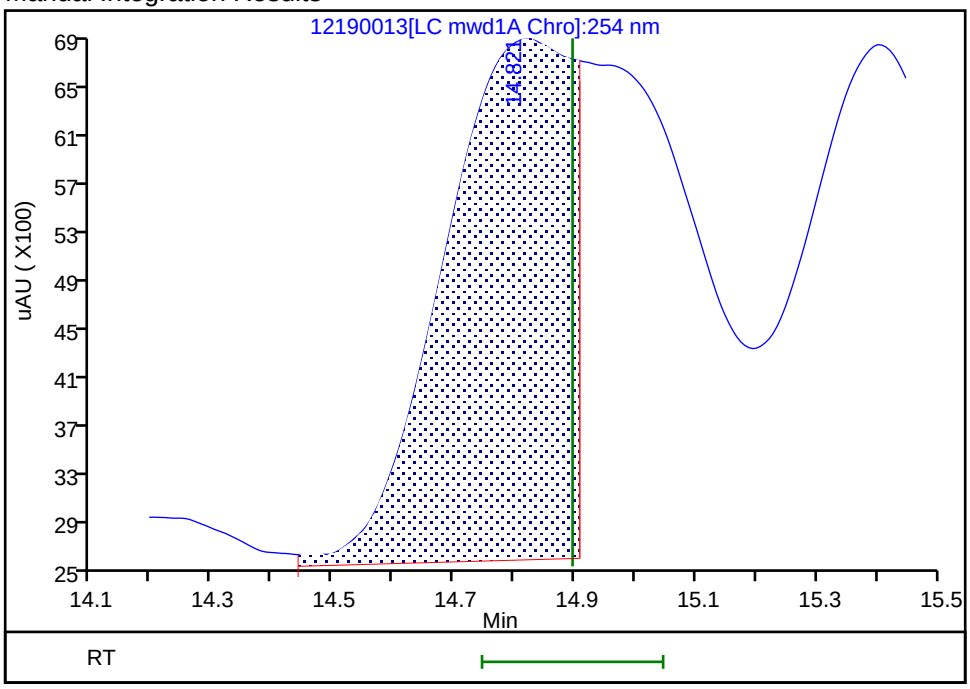
Processing Integration Results

RT: 14.82
Area: 116253
Amount: 0.466648
Amount Units: ug/ml



Manual Integration Results

RT: 14.82
Area: 62308
Amount: 0.250109
Amount Units: ug/ml



Reviewer: LV5D, 20-Dec-2024 20:29:24 -07:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

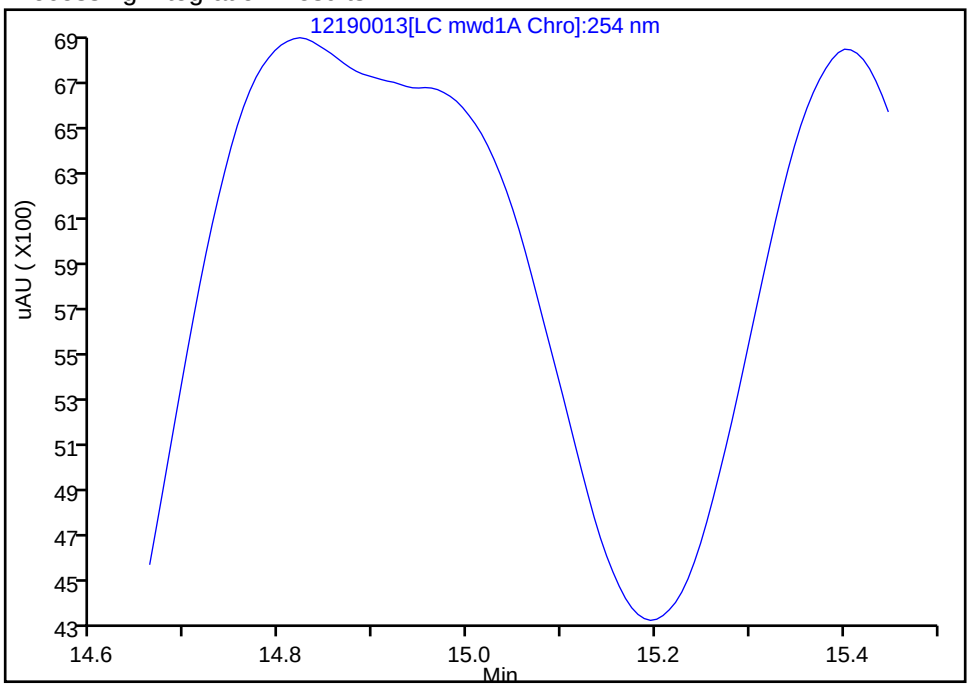
Data File:	\\chromfs\Denver\ChromData\CHHPLC_X5\20241219-140971.b\12190013.D				
Injection Date:	19-Dec-2024 20:21:41	Instrument ID:	CHHPLC_X5		
Lims ID:	280-200917-A-1-B MS				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1A, 254 nm		

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

Signal: 1

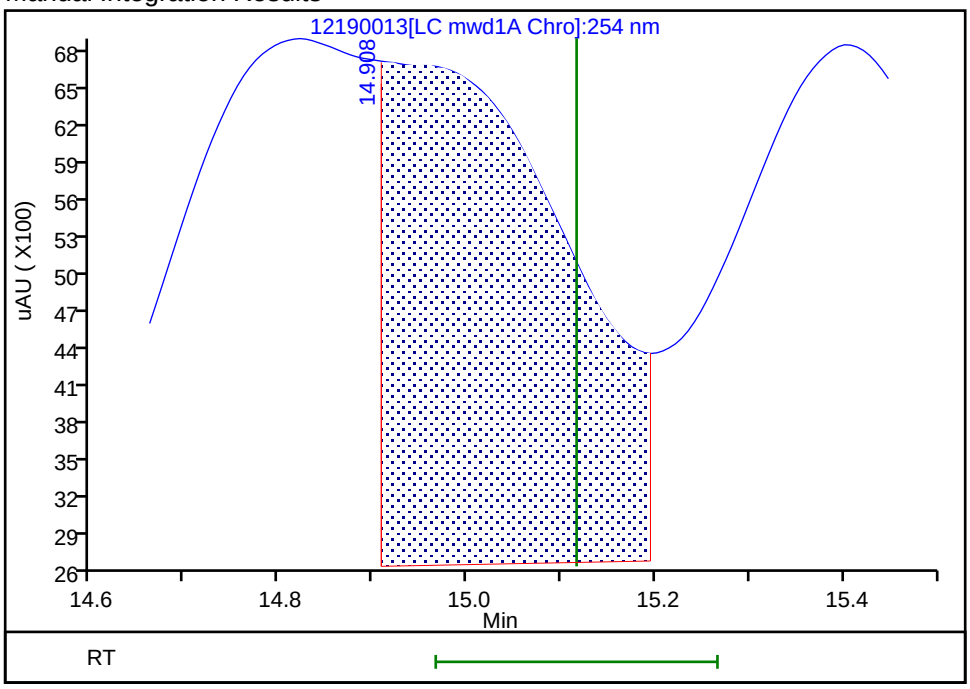
Not Detected
Expected RT: 15.12

Processing Integration Results



Manual Integration Results

RT: 14.91
Area: 53970
Amount: 0.256055
Amount Units: ug/ml



Reviewer: LV5D, 20-Dec-2024 20:29:26 -07:00:00 (UTC)
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-200917-1

SDG No.:

Client Sample ID: P2-ARROYO-005-003 MS | Lab Sample ID: 280-200917-1 MS

Matrix: Solid | Lab File ID: 12210014.D

Analysis Method: 8330B MOD | Date Collected: 12/16/2024 11:14

Extraction Method: 8330B | Date Extracted: 12/18/2024 12:11

Sample wt/vol: +10.92(g) | Date Analyzed: 12/21/2024 15:53

Con. Extract Vol.: 40(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: 2.0 % Solids: 98.0 | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 679403 | Units: mg/Kg

Preparation Batch No.: 678945 | Instrument ID: CHHPLC_X3

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-65-0	1,3-Dinitrobenzene	0.820		0.093	0.037	0.016
118-96-7	2,4,6-Trinitrotoluene	0.854	M	0.093	0.065	0.029
121-14-2	2,4-Dinitrotoluene	0.789	M	0.093	0.037	0.014
606-20-2	2,6-Dinitrotoluene	0.810	M	0.093	0.037	0.018
35572-78-2	2-Amino-4,6-dinitrotoluene	0.832	M	0.093	0.065	0.031
88-72-2	o-Nitrotoluene	0.815		0.19	0.093	0.044
99-08-1	m-Nitrotoluene	0.842		0.19	0.14	0.060
19406-51-0	4-Amino-2,6-dinitrotoluene	0.798	M	0.093	0.065	0.028
99-99-0	p-Nitrotoluene	0.823		0.19	0.093	0.034
98-95-3	Nitrobenzene	0.820		0.28	0.19	0.079
55-63-0	Nitroglycerin	9.30		1.9	0.65	0.20
2691-41-0	HMX	0.706	M	0.093	0.065	0.021
78-11-5	PETN	8.56	M	1.9	0.93	0.46
121-82-4	RDX	0.741		0.19	0.093	0.040
479-45-8	Tetryl	0.809	M	0.19	0.093	0.041

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene (Surr)	87		78-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20241221-141039.b\12210014.D
Lims ID: 280-200917-A-1-B MS
Client ID:
Sample Type: MS
Inject. Date: 21-Dec-2024 15:53:39 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-200917-A-1-B MS
Operator ID: JZ Instrument ID: CHHPLC_X3

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20241221-141039.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 26-Dec-2024 12:57:58 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: CTX1722

First Level Reviewer: LV5D Date: 26-Dec-2024 11:48:23

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
4	HMX	1	6.590	6.575	0.015	18248	0.2500	0.1888	M
8	RDX	1	7.497	7.475	0.022	20950	0.2500	0.1982	
9	2,4,6-Trinitrophenol	1	7.863	7.842	0.021	16988	0.2500	0.2252	
$ 10	1,2-Dinitrobenzene	1	8.330	8.295	0.035	28376	0.2500	0.2176	
11	1,3,5-Trinitrobenzene	1	8.437	8.402	0.035	52499	0.2500	0.2415	
12	1,3-Dinitrobenzene	1	8.970	8.929	0.041	65372	0.2500	0.2192	
13	Nitrobenzene	1	9.277	9.229	0.049	42803	0.2500	0.2193	
14	3,5-Dinitroaniline	1	9.457	9.408	0.049	49981	0.2500	0.2147	a
15	Tetryl	1	9.563	9.495	0.068	36952	0.2500	0.2164	a
16	Nitroglycerin	2	9.997	9.922	0.075	159922	2.50	2.49	
17	2,4,6-Trinitrotoluene	1	10.343	10.268	0.075	49638	0.2500	0.2284	a
18	4-Amino-2,6-dinitrotoluene	1	10.463	10.382	0.081	31316	0.2500	0.2135	a
19	2-Amino-4,6-dinitrotoluene	1	10.683	10.602	0.081	45507	0.2500	0.2225	a
20	2,6-Dinitrotoluene	1	10.830	10.742	0.088	30582	0.2500	0.2167	a
21	2,4-Dinitrotoluene	1	10.977	10.895	0.082	61608	0.2500	0.2111	a
22	o-Nitrotoluene	1	11.630	11.528	0.102	27345	0.2500	0.2179	
23	p-Nitrotoluene	1	11.983	11.875	0.108	23916	0.2500	0.2202	
24	m-Nitrotoluene	1	12.457	12.335	0.122	30666	0.2500	0.2251	
25	PETN	2	13.403	13.242	0.161	165325	2.50	2.29	a
26	Ammonium Picrate	1		0.000			ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND
Review Flags
M - Manually Integrated
a - User Assigned ID

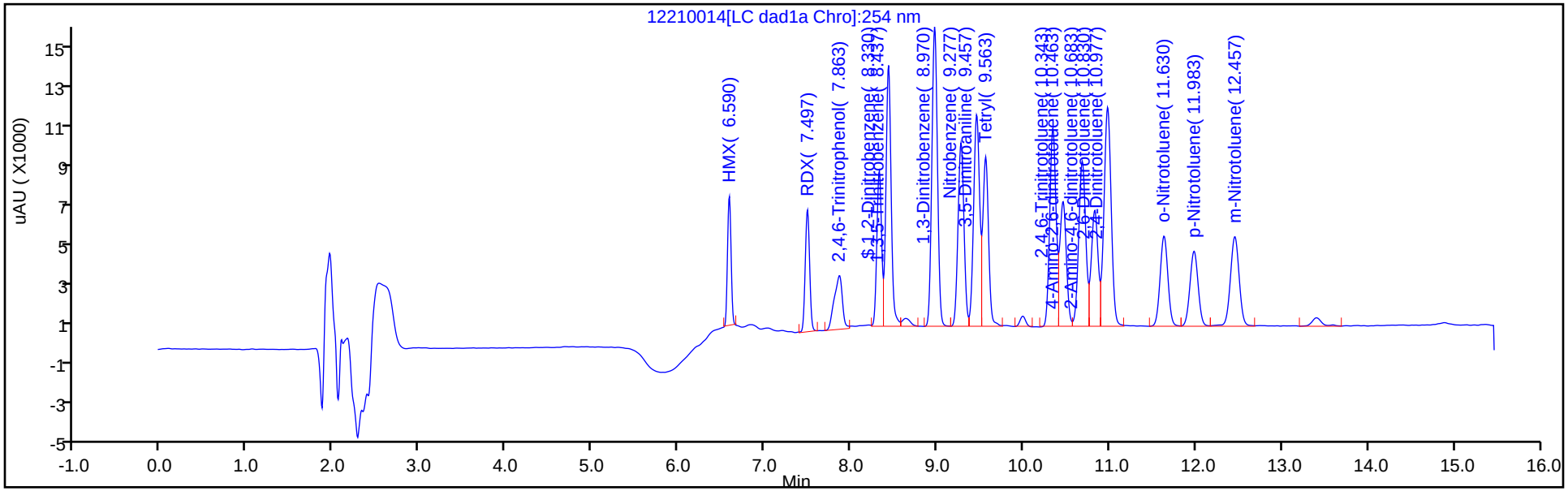
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Eurofins Denver

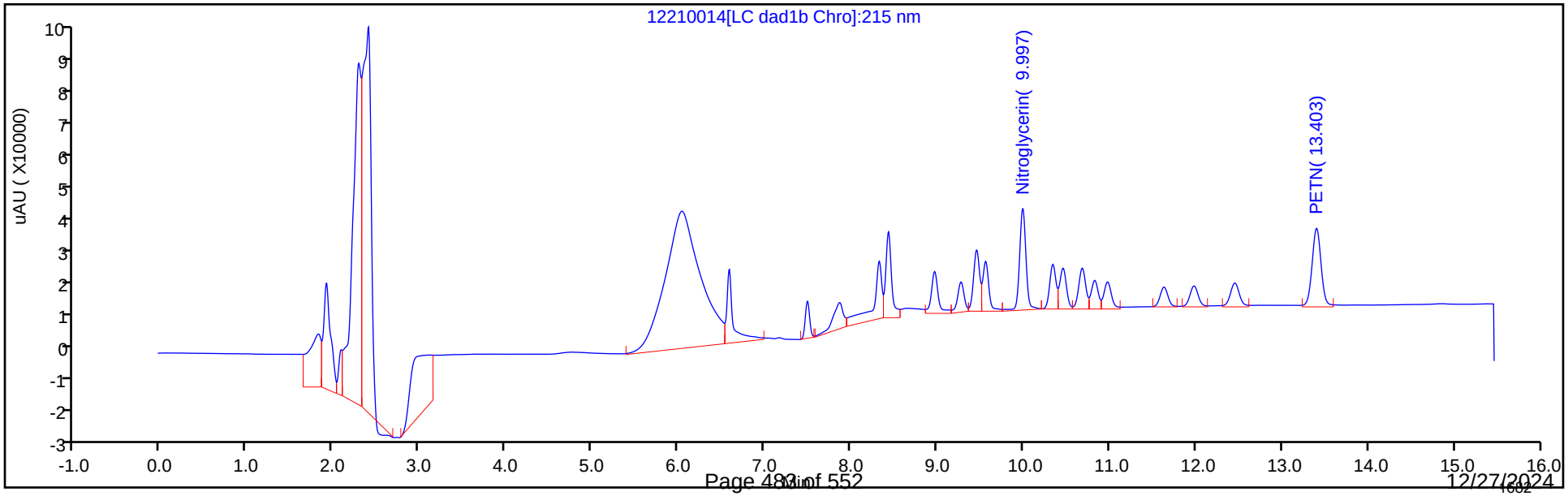
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Injection Date:	21-Dec-2024 15:53:39	Instrument ID:	CHHPLC_X3	Operator ID:	JZ
Lims ID:	280-200917-A-1-B MS			Worklist Smp#:	14
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	8330_X3	Limit Group:	GCSV - 8330		

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



12/27/2024
5:54:56 AM

Eurofins Denver
Recovery Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20241221-141039.b\12210014.D
Lims ID: 280-200917-A-1-B MS
Client ID:
Sample Type: MS
Inject. Date: 21-Dec-2024 15:53:39 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-200917-A-1-B MS
Operator ID: JZ Instrument ID: CHHPLC_X3

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20241221-141039.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 26-Dec-2024 12:57:58 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: CTX1722

First Level Reviewer: LV5D Date: 26-Dec-2024 11:48:23

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2500	0.2176	87.04

Manual Integration/User Assign Peak Report

Eurofins Denver

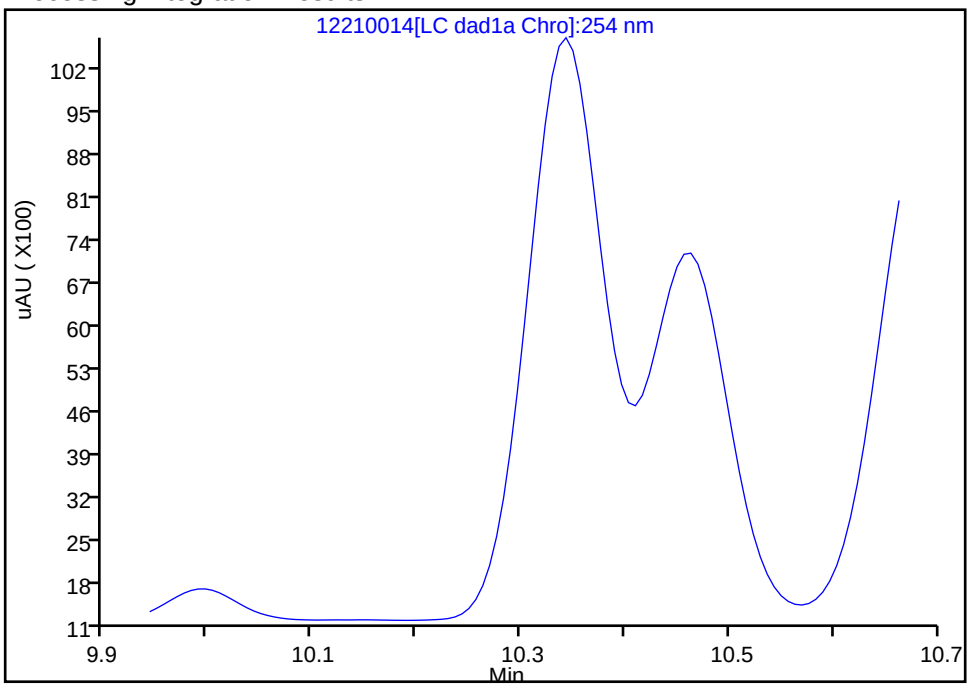
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241221-141039.b\12210014.d				
Injection Date:	21-Dec-2024 15:53:39	Instrument ID:	CHHPLC_X3		
Lims ID:	280-200917-A-1-B MS				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

17 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

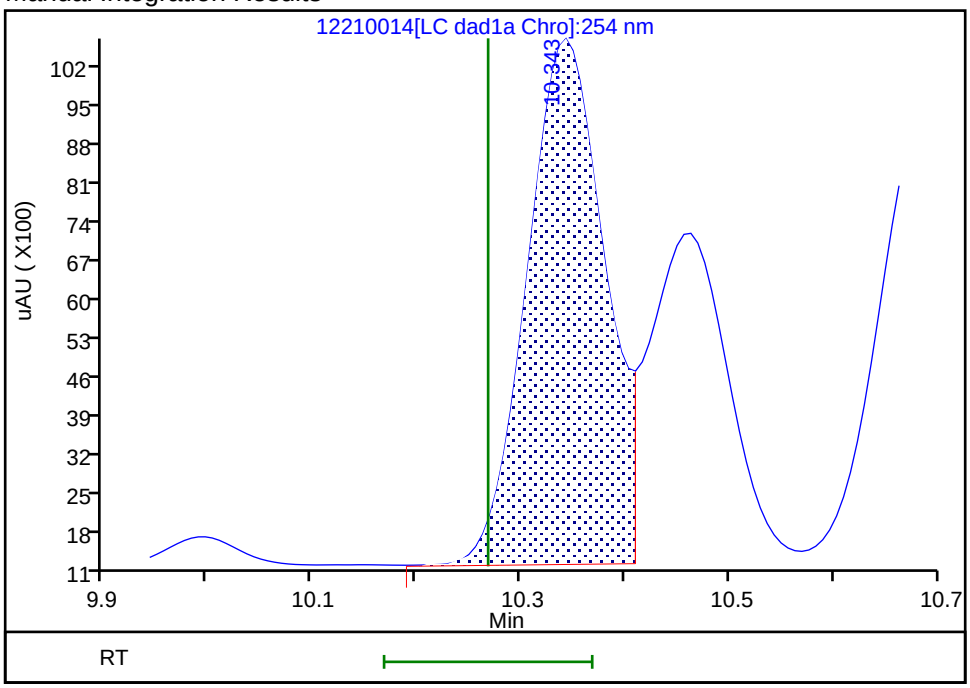
Not Detected
Expected RT: 10.27

Processing Integration Results



Manual Integration Results

RT: 10.34
Area: 49638
Amount: 0.228432
Amount Units: ug/mL



Reviewer: LV5D, 26-Dec-2024 11:48:16 -07:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Denver

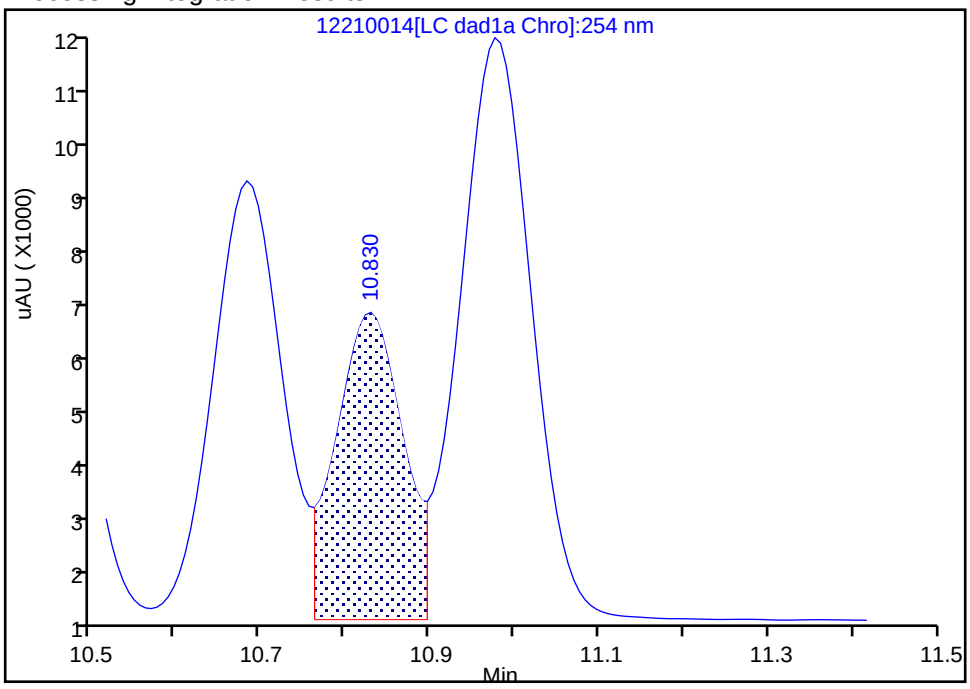
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241221-141039.b\12210014.d				
Injection Date:	21-Dec-2024 15:53:39	Instrument ID:	CHHPLC_X3		
Lims ID:	280-200917-A-1-B MS				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

21 2,4-Dinitrotoluene, CAS: 121-14-2

Signal: 1

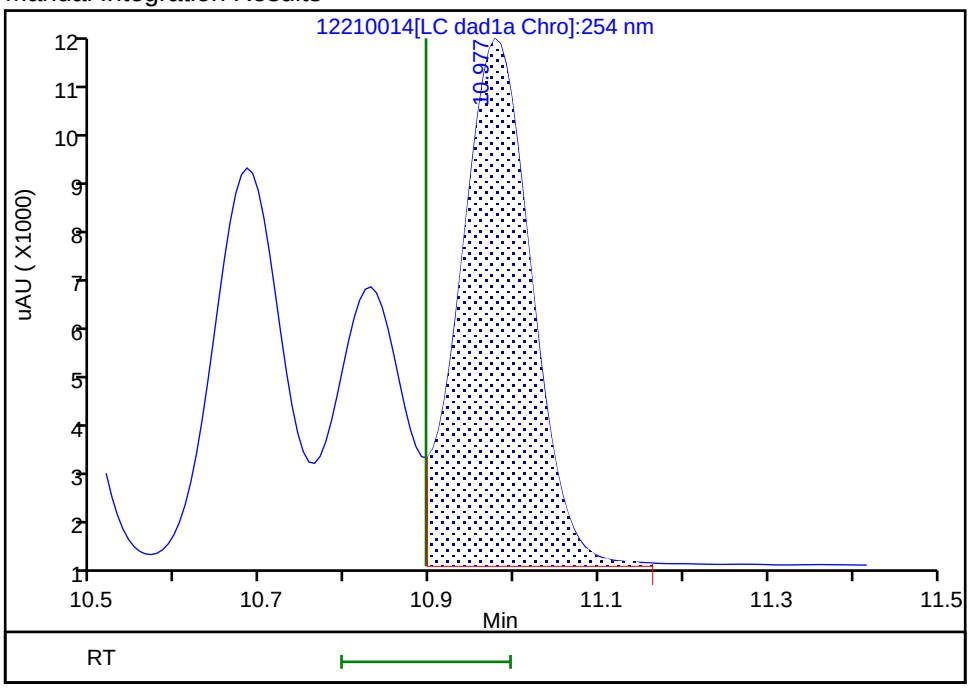
Processing Integration Results

RT: 10.83
Area: 30582
Amount: 0.104800
Amount Units: ug/mL



Manual Integration Results

RT: 10.98
Area: 61608
Amount: 0.211122
Amount Units: ug/mL



Reviewer: LV5D, 26-Dec-2024 11:48:09 -07:00:00 (UTC)

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Denver

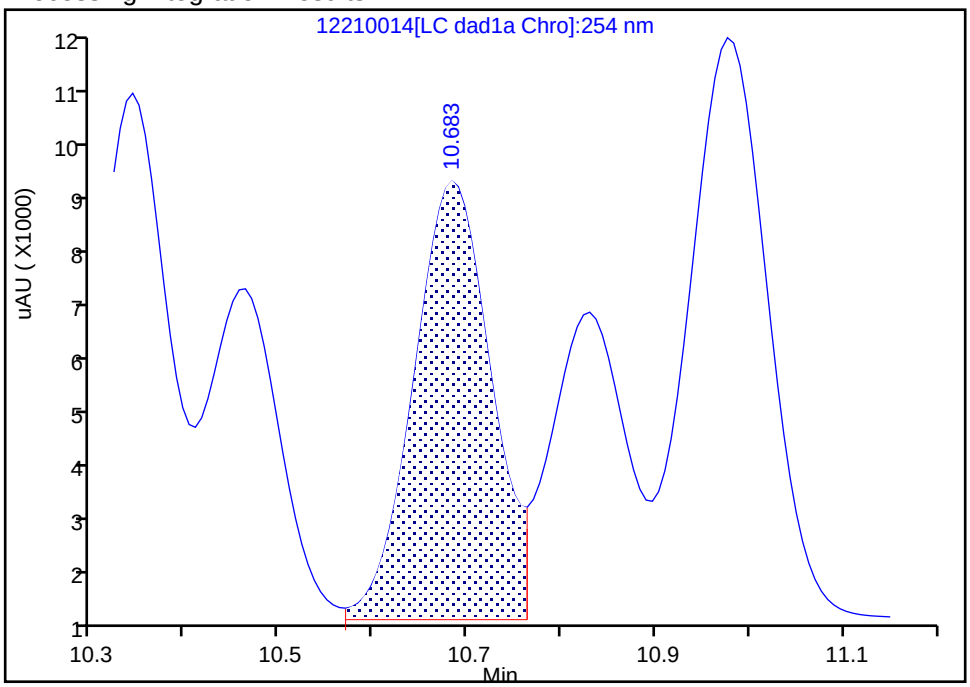
Data File: \\chromfs\denver\chromdata\chhplc_x\20241221-141039.b\12210014.d
Injection Date: 21-Dec-2024 15:53:39 Instrument ID: CHHPLC_X3
Lims ID: 280-200917-A-1-B MS
Client ID:
Operator ID: JZ ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

20 2,6-Dinitrotoluene, CAS: 606-20-2

Signal: 1

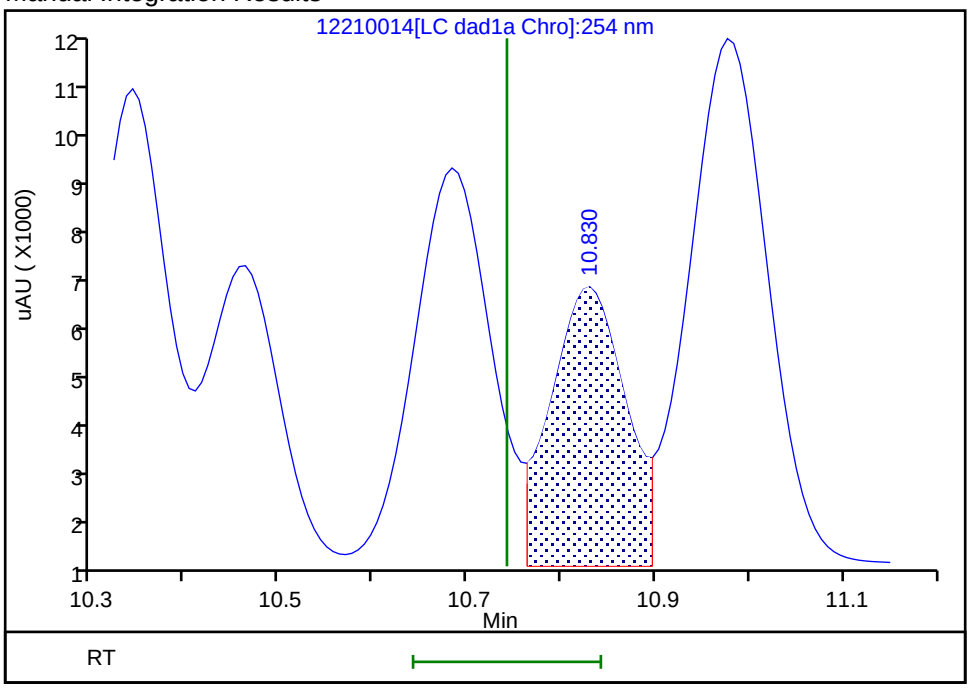
Processing Integration Results

RT: 10.68
Area: 45507
Amount: 0.323058
Amount Units: ug/mL



Manual Integration Results

RT: 10.83
Area: 30582
Amount: 0.216664
Amount Units: ug/mL



Reviewer: LV5D, 26-Dec-2024 11:48:10 -07:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Denver

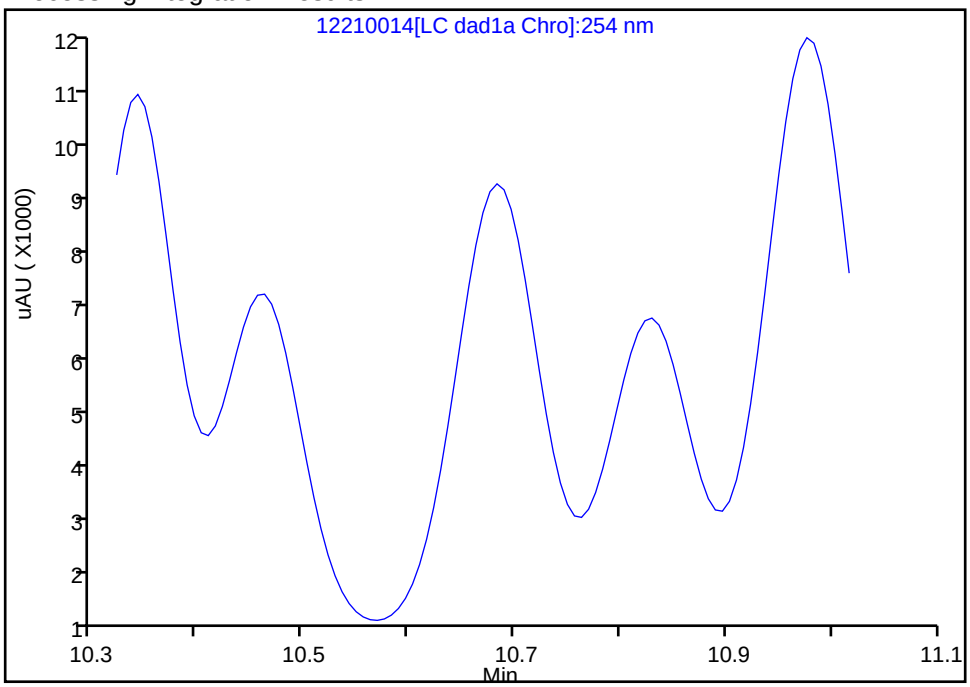
Data File: \\chromfs\denver\chromdata\chhplc_x\20241221-141039.b\12210014.d
Injection Date: 21-Dec-2024 15:53:39 Instrument ID: CHHPLC_X3
Lims ID: 280-200917-A-1-B MS
Client ID:
Operator ID: JZ ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

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

Signal: 1

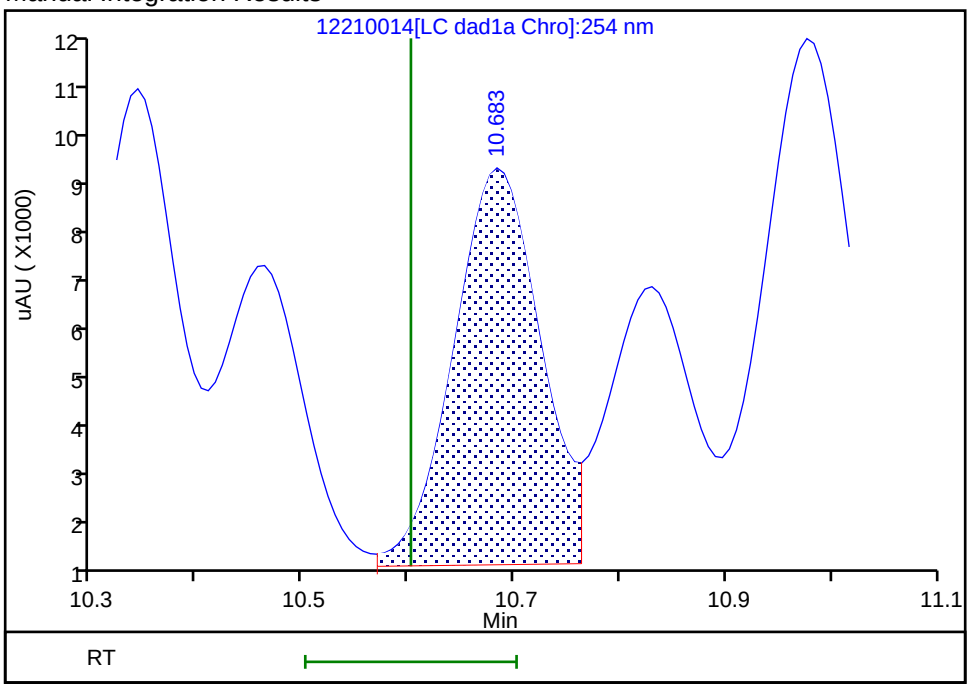
Not Detected
Expected RT: 10.60

Processing Integration Results



Manual Integration Results

RT: 10.68
Area: 45507
Amount: 0.222494
Amount Units: ug/mL



Reviewer: LV5D, 26-Dec-2024 11:48:10 -07:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Denver

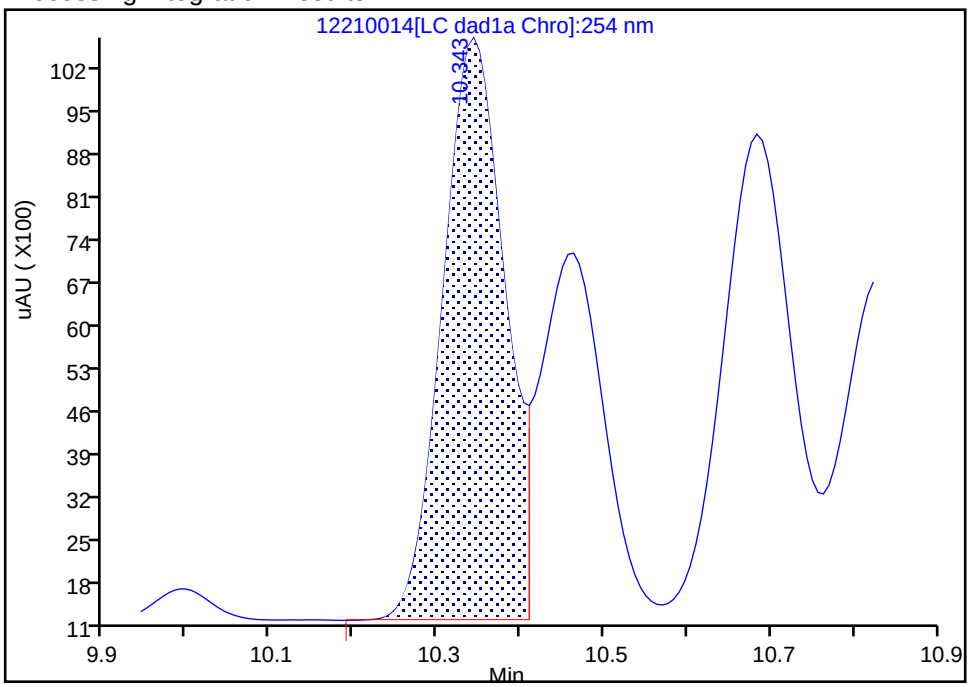
Data File: \\chromfs\denver\chromdata\chhplc_x\20241221-141039.b\12210014.d
Injection Date: 21-Dec-2024 15:53:39 Instrument ID: CHHPLC_X3
Lims ID: 280-200917-A-1-B MS
Client ID:
Operator ID: JZ ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

18 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

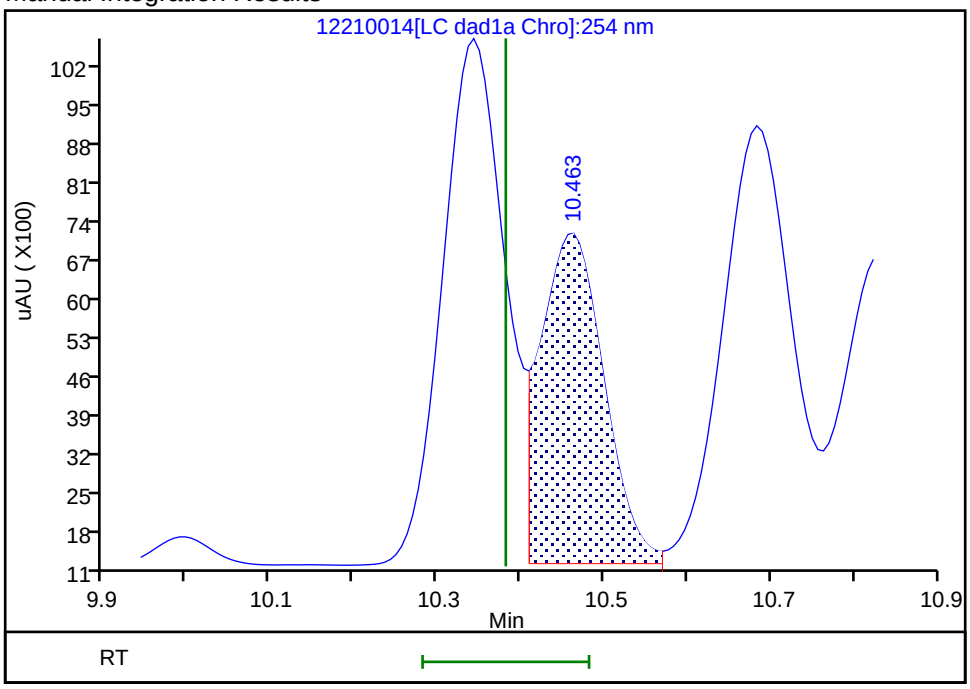
Processing Integration Results

RT: 10.34
Area: 49638
Amount: 0.341031
Amount Units: ug/mL



Manual Integration Results

RT: 10.46
Area: 31316
Amount: 0.213546
Amount Units: ug/mL



Reviewer: LV5D, 26-Dec-2024 11:48:15 -07:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Denver

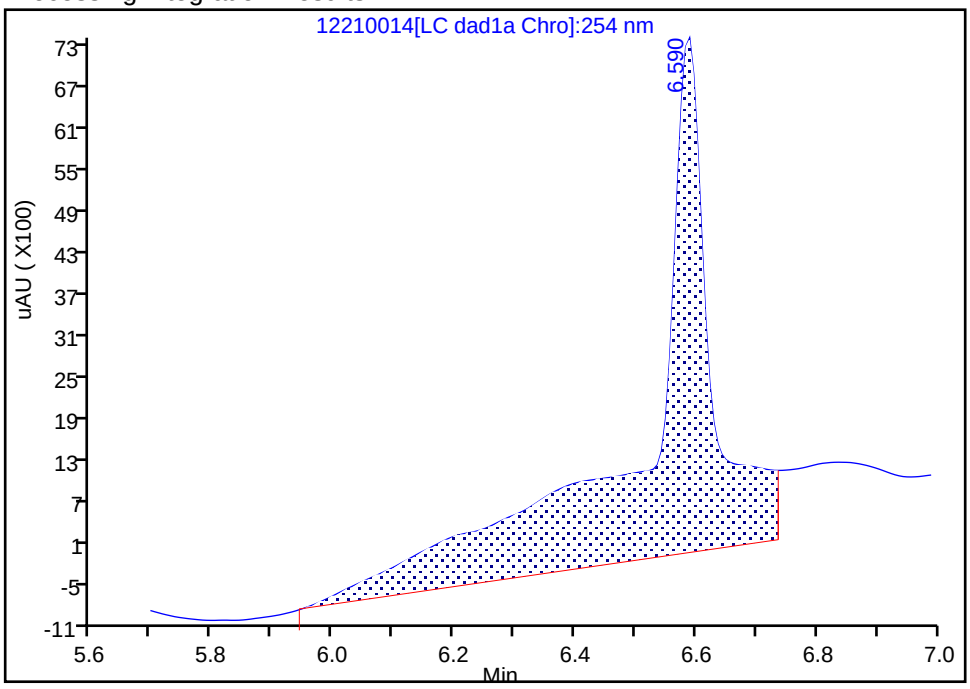
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241221-141039.b\12210014.d				
Injection Date:	21-Dec-2024 15:53:39	Instrument ID:	CHHPLC_X3		
Lims ID:	280-200917-A-1-B MS				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

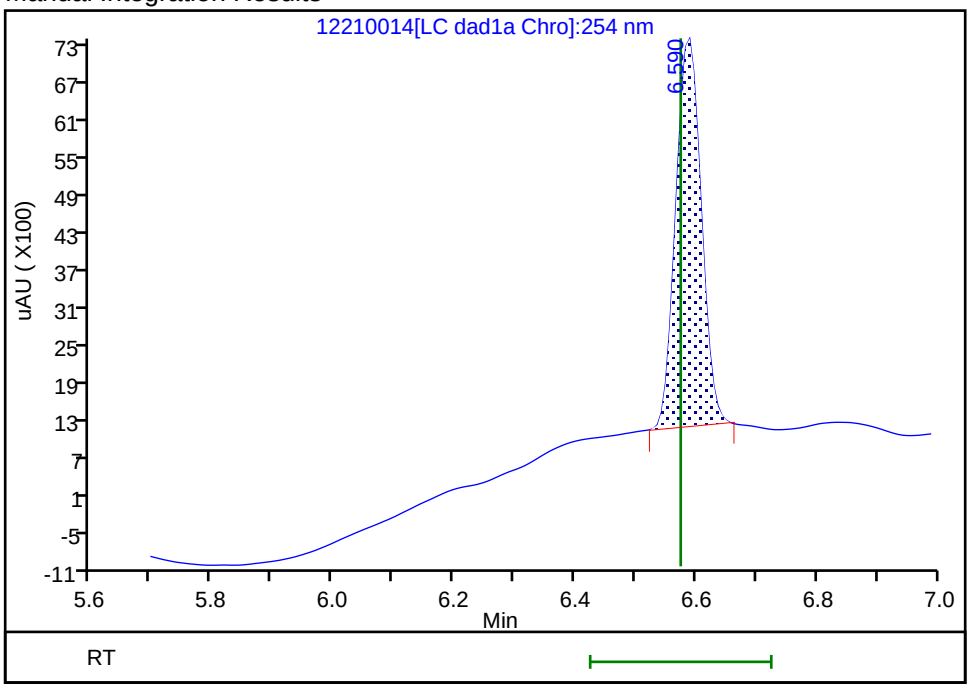
Processing Integration Results

RT: 6.59
Area: 59793
Amount: 0.618636
Amount Units: ug/mL



Manual Integration Results

RT: 6.59
Area: 18248
Amount: 0.188799
Amount Units: ug/mL



Reviewer: LV5D, 26-Dec-2024 12:27:31 -07:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Denver

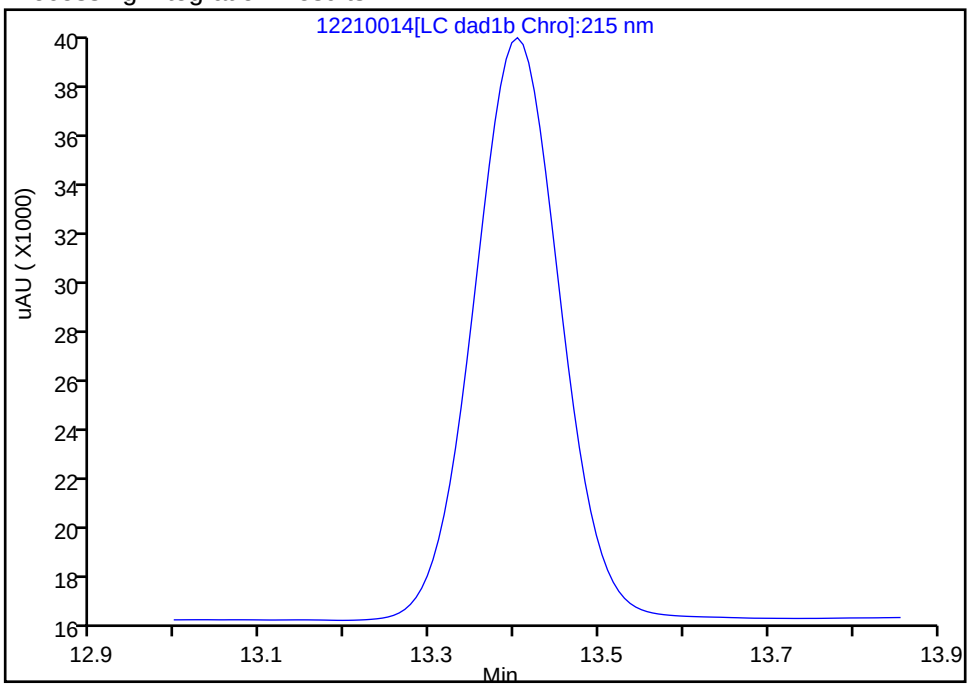
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241221-141039.b\12210014.d				
Injection Date:	21-Dec-2024 15:53:39	Instrument ID:	CHHPLC_X3		
Lims ID:	280-200917-A-1-B MS				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1C, 215 nm		

25 PETN, CAS: 78-11-5

Signal: 1

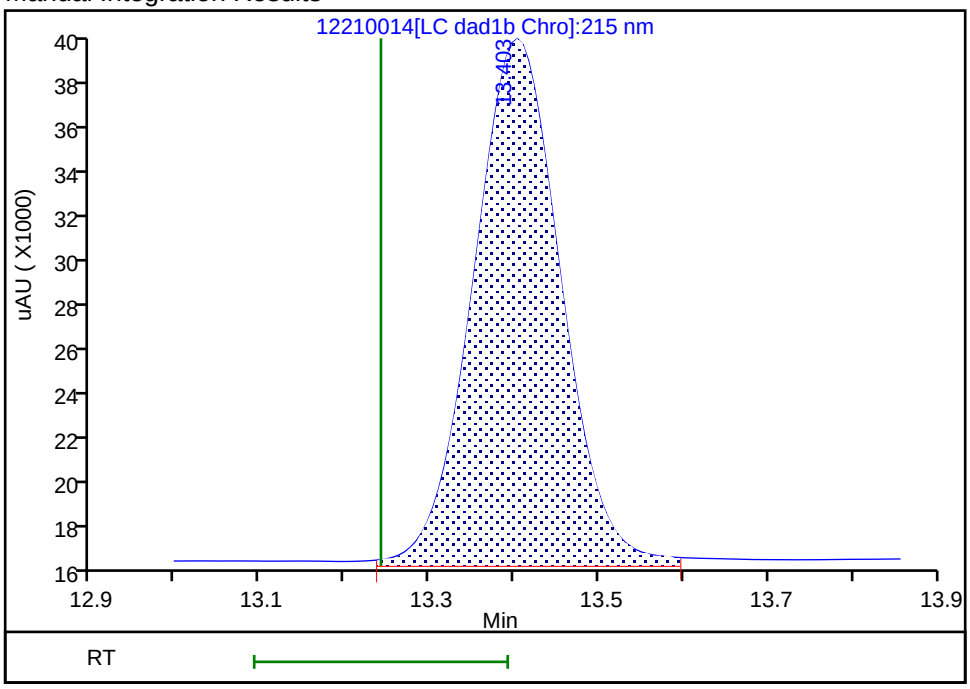
Not Detected
Expected RT: 13.24

Processing Integration Results



Manual Integration Results

RT: 13.40
Area: 165325
Amount: 2.289429
Amount Units: ug/mL



Reviewer: LV5D, 26-Dec-2024 11:48:05 -07:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Denver

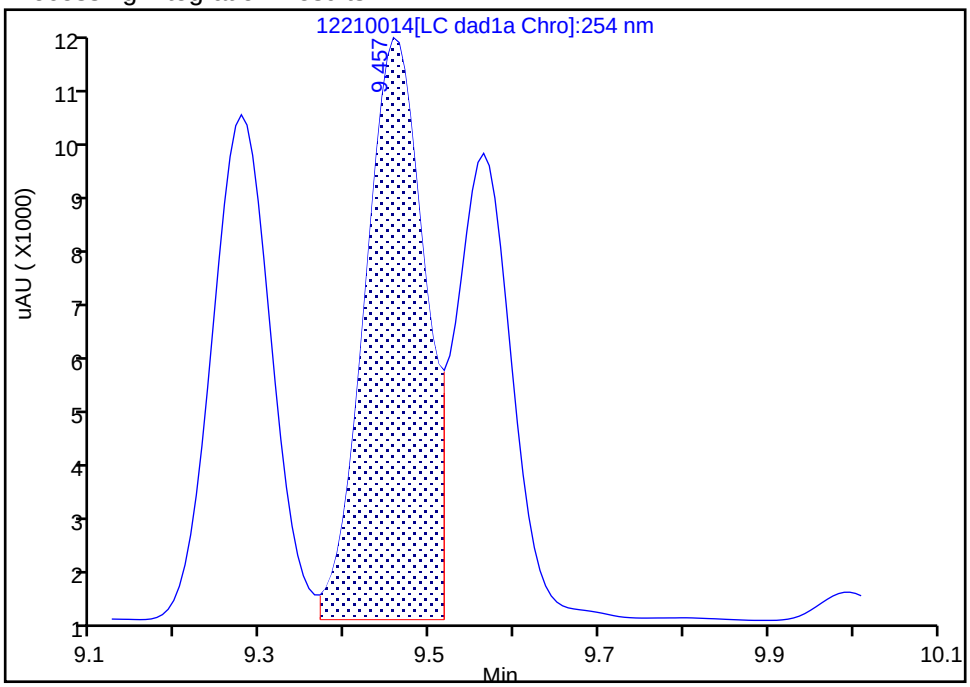
Data File: \\chromfs\denver\chromdata\chhplc_x\20241221-141039.b\12210014.d
Injection Date: 21-Dec-2024 15:53:39 Instrument ID: CHHPLC_X3
Lims ID: 280-200917-A-1-B MS
Client ID:
Operator ID: JZ ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

15 Tetryl, CAS: 479-45-8

Signal: 1

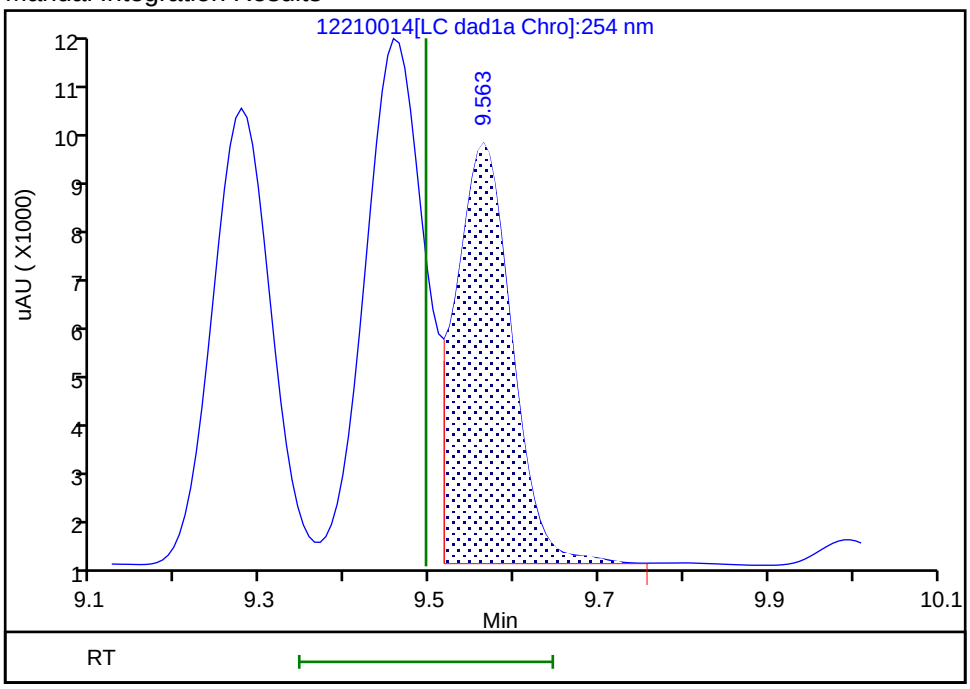
Processing Integration Results

RT: 9.46
Area: 49981
Amount: 0.292487
Amount Units: ug/mL



Manual Integration Results

RT: 9.56
Area: 36952
Amount: 0.216420
Amount Units: ug/mL



Reviewer: LV5D, 26-Dec-2024 11:48:20 -07:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-200917-1

SDG No.:

Client Sample ID: P2-ARROYO-005-003 MSD | Lab Sample ID: 280-200917-1 MSD

Matrix: Solid | Lab File ID: 12190014.D

Analysis Method: 8330B MOD | Date Collected: 12/16/2024 11:14

Extraction Method: 8330B | Date Extracted: 12/18/2024 12:11

Sample wt/vol: +10.41(g) | Date Analyzed: 12/19/2024 20:56

Con. Extract Vol.: 40(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: Luna-phenylhex ID: 4.6(mm)

% Moisture: 2.0 % Solids: 98.0 | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 679155 | Units: mg/Kg

Preparation Batch No.: 678945 | Instrument ID: CHHPLC_X5

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	1.11		0.098	0.039	0.014

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene (Surr)	102		78-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241219-140971.b\12190014.D
Lims ID: 280-200917-A-1-C MSD
Client ID:
Sample Type: MSD
Inject. Date: 19-Dec-2024 20:56:39 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-200917-A-1-C MSD
Operator ID: JZ Instrument ID: CHHPLC_X5

Method: \\chromfs\Denver\ChromData\CHHPLC_X5\20241219-140971.b\8330_X5_Luna.m
Limit Group: GCSV - 8330
Last Update: 26-Dec-2024 13:36:28 Calib Date: 04-Dec-2024 01:09:06
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030020.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC mwd1A, 254 nm
Process Host: CTX1722

First Level Reviewer: LV5D Date: 20-Dec-2024 20:29:32

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
5 HMX	1	6.233	6.303	-0.070	40457	0.2500	0.2284	
7 2,4,6-Trinitrophenol	1	7.746	7.809	-0.063	22459	0.2500	0.1525	
8 RDX	1	8.306	8.403	-0.097	46400	0.2500	0.2227	
9 Nitrobenzene	1	10.826	10.916	-0.090	97839	0.2500	0.2553	
$ 10 1,2-Dinitrobenzene	1	11.653	11.736	-0.083	68068	0.2500	0.2540	
11 3,5-Dinitroaniline	1	13.386	13.469	-0.083	105915	0.2500	0.2354	
12 1,3-Dinitrobenzene	1	13.733	13.809	-0.076	150265	0.2500	0.2535	
13 Nitroglycerin	2	14.259	14.303	-0.044	318979	2.50	2.47	
14 o-Nitrotoluene	1	14.859	14.896	-0.037	65200	0.2500	0.2617	M
16 p-Nitrotoluene	1	14.959	15.116	-0.157	53379	0.2500	0.2533	Ma
17 4-Amino-2,6-dinitrotoluene	1	15.453	15.523	-0.070	70559	0.2500	0.2497	
18 m-Nitrotoluene	1	15.886	15.943	-0.057	68243	0.2500	0.2519	
19 2-Amino-4,6-dinitrotoluene	1	16.219	16.283	-0.064	92401	0.2500	0.2332	
20 1,3,5-Trinitrobenzene	1	16.473	16.529	-0.056	117824	0.2500	0.2839	
21 2,6-Dinitrotoluene	1	17.553	17.609	-0.056	65972	0.2500	0.2340	
22 2,4-Dinitrotoluene	1	17.986	18.043	-0.057	136994	0.2500	0.2493	
23 Tetryl	1	21.019	21.043	-0.024	81423	0.2500	0.2507	
24 2,4,6-Trinitrotoluene	1	21.913	21.936	-0.023	107876	0.2500	0.2583	
25 PETN	2	23.179	23.183	-0.004	354837	2.50	2.57	
26 Ammonium Picrate	1		0.000			ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND
Review Flags
M - Manually Integrated
a - User Assigned ID

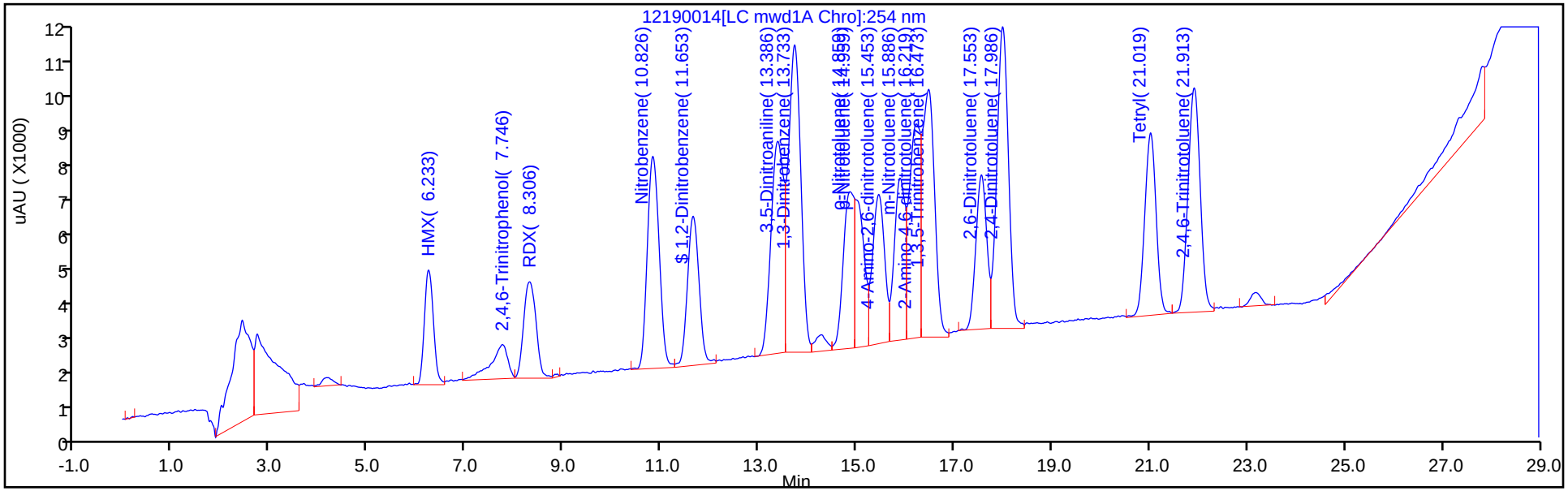
Report Date: 26-Dec-2024 13:36:33 Chrom Revision: 2.3 17-Dec-2024 12:44:46

Eurofins Denver

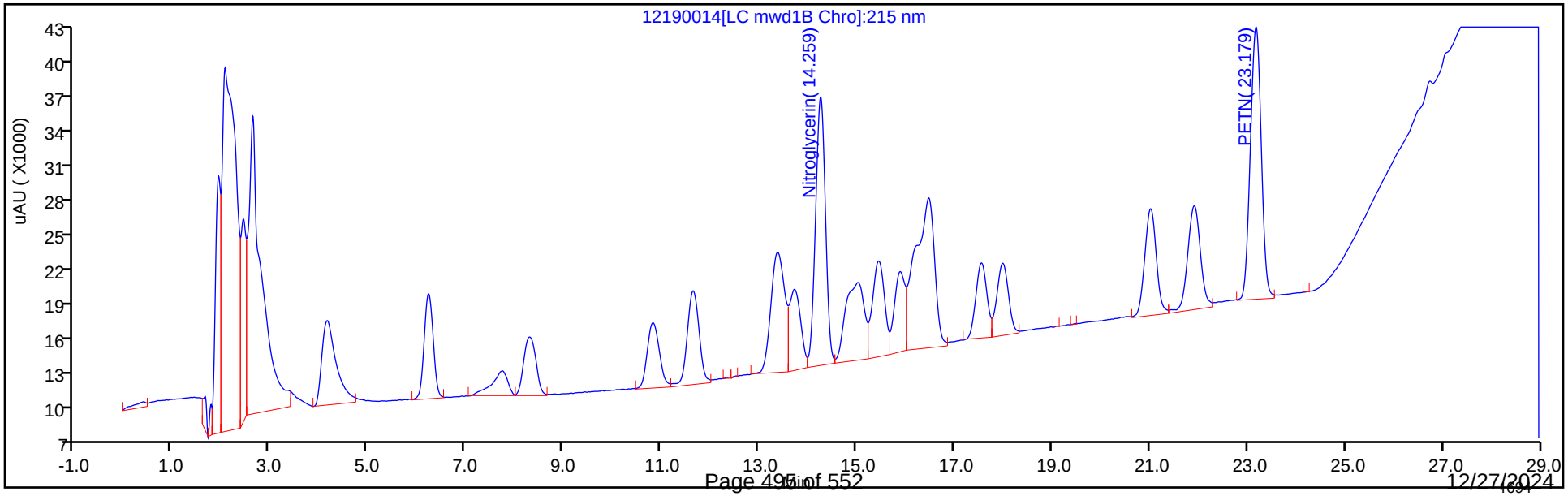
Data File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241219-140971.b\12190014.D

Injection Date:	19-Dec-2024 20:56:39	Instrument ID:	CHHPLC_X5	Operator ID:	JZ
Lims ID:	280-200917-A-1-C MSD			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
Recovery Report

Data File:	\\chromfs\Denver\ChromData\CHHPLC_X5\20241219-140971.b\12190014.D				
Lims ID:	280-200917-A-1-C MSD				
Client ID:					
Sample Type:	MSD				
Inject. Date:	19-Dec-2024 20:56:39	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-200917-A-1-C MSD				
Operator ID:	JZ	Instrument ID:	CHHPLC_X5		
Method:	\\chromfs\Denver\ChromData\CHHPLC_X5\20241219-140971.b\8330_X5_Luna.m				
Limit Group:	GCSV - 8330				
Last Update:	26-Dec-2024 13:36:28	Calib Date:	04-Dec-2024 01:09:06		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030020.D				
Column 1 :	Luna-Phenyl hexyl (4.60 mm)		Det: LC mwd1A, 254 nm		
Process Host:	CTX1722				

First Level Reviewer: LV5D Date: 20-Dec-2024 20:29:32

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2500	0.2540	101.59

Manual Integration/User Assign Peak Report

Eurofins Denver

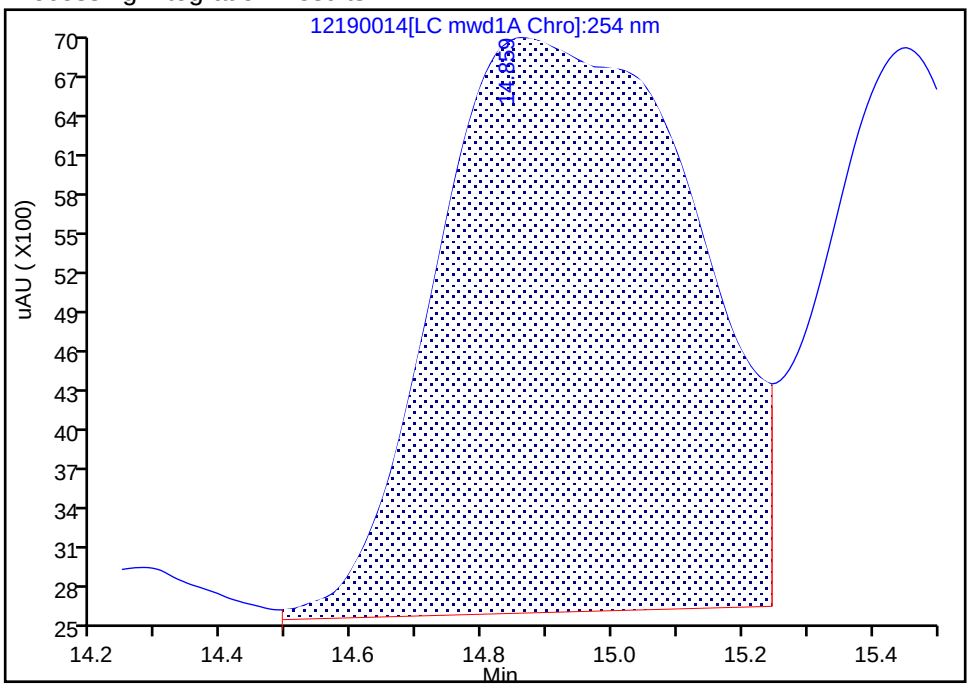
Data File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241219-140971.b\12190014.D
Injection Date: 19-Dec-2024 20:56:39 Instrument ID: CHHPLC_X5
Lims ID: 280-200917-A-1-C MSD
Client ID:
Operator ID: JZ ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X5_Luna Limit Group: GCSV - 8330
Column: Luna-Phenyl hexyl (4.60 mm) Detector LC mwd1A, 254 nm

14 o-Nitrotoluene, CAS: 88-72-2

Signal: 1

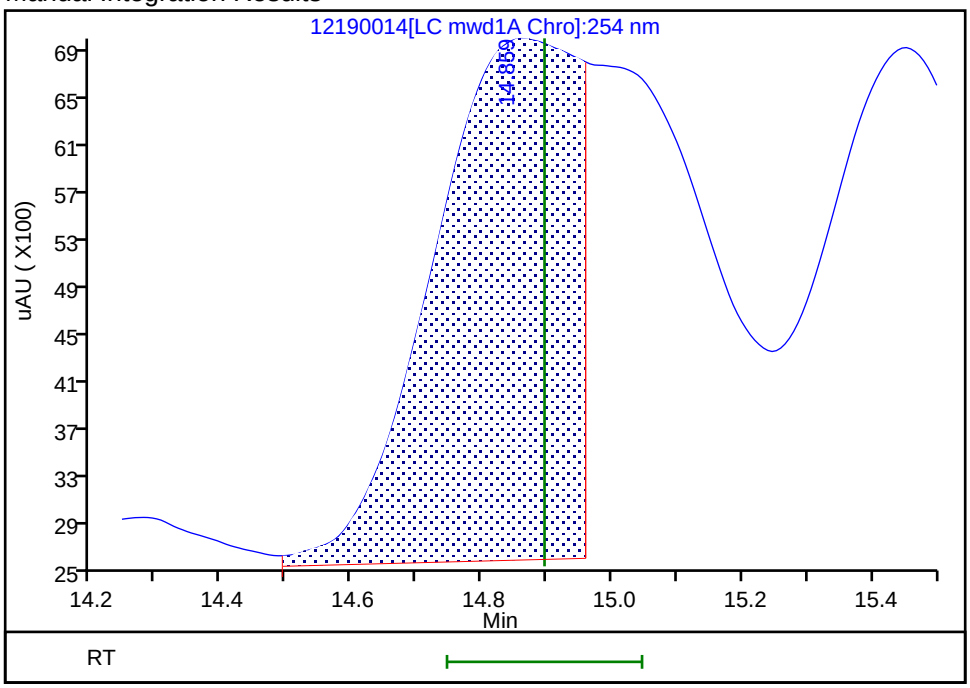
Processing Integration Results

RT: 14.86
Area: 118564
Amount: 0.475924
Amount Units: ug/ml



Manual Integration Results

RT: 14.86
Area: 65200
Amount: 0.261717
Amount Units: ug/ml



Reviewer: LV5D, 20-Dec-2024 20:29:29 -07:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Denver

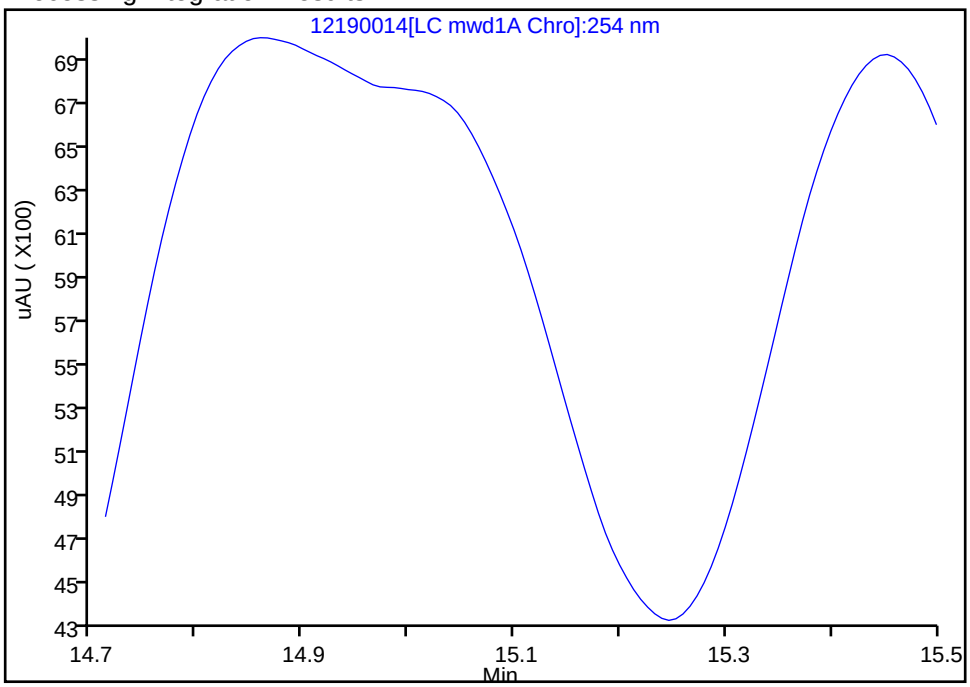
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Injection Date:	19-Dec-2024 20:56:39	Instrument ID:	CHHPLC_X5		
Lims ID:	280-200917-A-1-C MSD				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1A, 254 nm		

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

Signal: 1

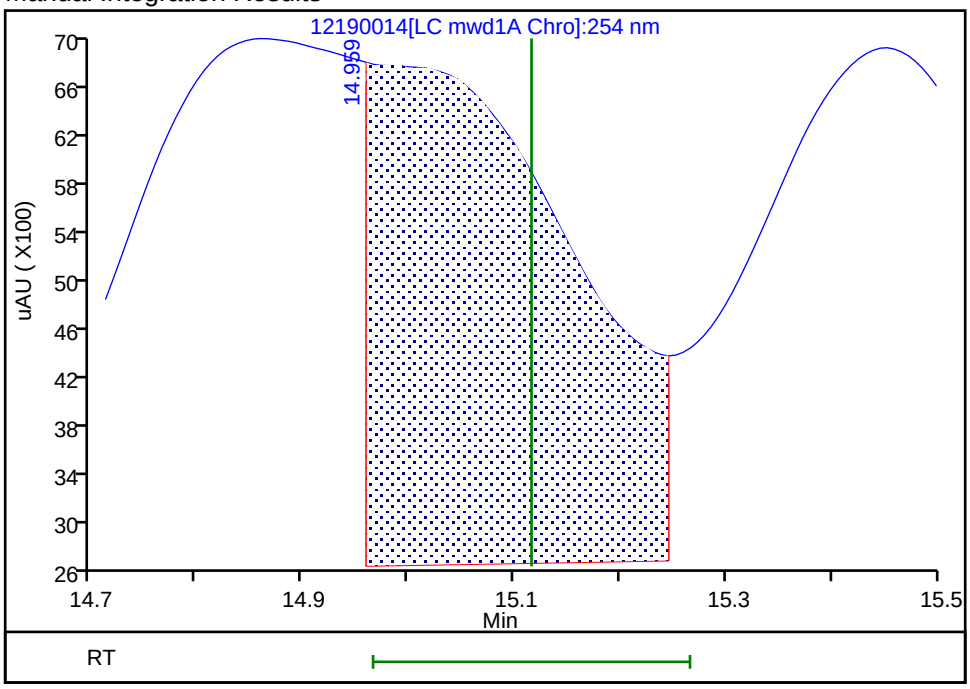
Not Detected
Expected RT: 15.12

Processing Integration Results



Manual Integration Results

RT: 14.96
Area: 53379
Amount: 0.253251
Amount Units: ug/ml



Reviewer: LV5D, 20-Dec-2024 20:29:31 -07:00:00 (UTC)
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-200917-1

SDG No.:

Client Sample ID: P2-ARROYO-005-003 MSD | Lab Sample ID: 280-200917-1 MSD

Matrix: Solid | Lab File ID: 12210015.D

Analysis Method: 8330B MOD | Date Collected: 12/16/2024 11:14

Extraction Method: 8330B | Date Extracted: 12/18/2024 12:11

Sample wt/vol: +10.41(g) | Date Analyzed: 12/21/2024 16:15

Con. Extract Vol.: 40(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: 2.0 % Solids: 98.0 | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 679403 | Units: mg/Kg

Preparation Batch No.: 678945 | Instrument ID: CHHPLC_X3

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-65-0	1,3-Dinitrobenzene	0.865		0.098	0.039	0.016
118-96-7	2,4,6-Trinitrotoluene	0.890		0.098	0.069	0.030
121-14-2	2,4-Dinitrotoluene	0.841		0.098	0.039	0.014
606-20-2	2,6-Dinitrotoluene	0.860		0.098	0.039	0.019
35572-78-2	2-Amino-4,6-dinitrotoluene	0.869		0.098	0.069	0.032
88-72-2	o-Nitrotoluene	0.859		0.20	0.098	0.046
99-08-1	m-Nitrotoluene	0.884		0.20	0.15	0.063
19406-51-0	4-Amino-2,6-dinitrotoluene	0.852		0.098	0.069	0.029
99-99-0	p-Nitrotoluene	0.871		0.20	0.098	0.036
98-95-3	Nitrobenzene	0.865		0.29	0.20	0.083
55-63-0	Nitroglycerin	9.67		2.0	0.69	0.21
2691-41-0	HMX	0.744	M	0.098	0.069	0.022
78-11-5	PETN	9.05		2.0	0.98	0.48
121-82-4	RDX	0.779		0.20	0.098	0.042
479-45-8	Tetryl	0.883		0.20	0.098	0.043

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene (Surr)	87		78-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20241221-141039.b\12210015.D
Lims ID: 280-200917-A-1-C MSD
Client ID:
Sample Type: MSD
Inject. Date: 21-Dec-2024 16:15:36 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-200917-A-1-C MSD
Operator ID: JZ Instrument ID: CHHPLC_X3

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20241221-141039.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 26-Dec-2024 12:57:58 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: CTX1722

First Level Reviewer: LV5D Date: 26-Dec-2024 12:27:36

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
4	HMX	1	6.585	6.575	0.010	18335	0.2500	0.1897	M
8	RDX	1	7.492	7.475	0.017	20983	0.2500	0.1985	
9	2,4,6-Trinitrophenol	1	7.858	7.842	0.016	16790	0.2500	0.2226	
$ 10	1,2-Dinitrobenzene	1	8.318	8.295	0.023	28304	0.2500	0.2170	
11	1,3,5-Trinitrobenzene	1	8.425	8.402	0.023	52499	0.2500	0.2415	
12	1,3-Dinitrobenzene	1	8.958	8.929	0.029	65757	0.2500	0.2205	
13	Nitrobenzene	1	9.258	9.229	0.030	43044	0.2500	0.2205	
14	3,5-Dinitroaniline	1	9.438	9.408	0.030	48967	0.2500	0.2103	
15	Tetryl	1	9.538	9.495	0.043	38434	0.2500	0.2251	
16	Nitroglycerin	2	9.965	9.922	0.043	158588	2.50	2.47	
17	2,4,6-Trinitrotoluene	1	10.311	10.268	0.043	49286	0.2500	0.2268	
18	4-Amino-2,6-dinitrotoluene	1	10.431	10.382	0.049	31841	0.2500	0.2172	
19	2-Amino-4,6-dinitrotoluene	1	10.651	10.602	0.049	45309	0.2500	0.2215	
20	2,6-Dinitrotoluene	1	10.791	10.742	0.049	30958	0.2500	0.2193	
21	2,4-Dinitrotoluene	1	10.945	10.895	0.050	62570	0.2500	0.2144	
22	o-Nitrotoluene	1	11.591	11.528	0.063	27490	0.2500	0.2191	
23	p-Nitrotoluene	1	11.938	11.875	0.063	24120	0.2500	0.2221	
24	m-Nitrotoluene	1	12.411	12.335	0.076	30707	0.2500	0.2254	
25	PETN	2	13.351	13.242	0.109	166662	2.50	2.31	
26	Ammonium Picrate	1		0.000			ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND
Review Flags
M - Manually Integrated

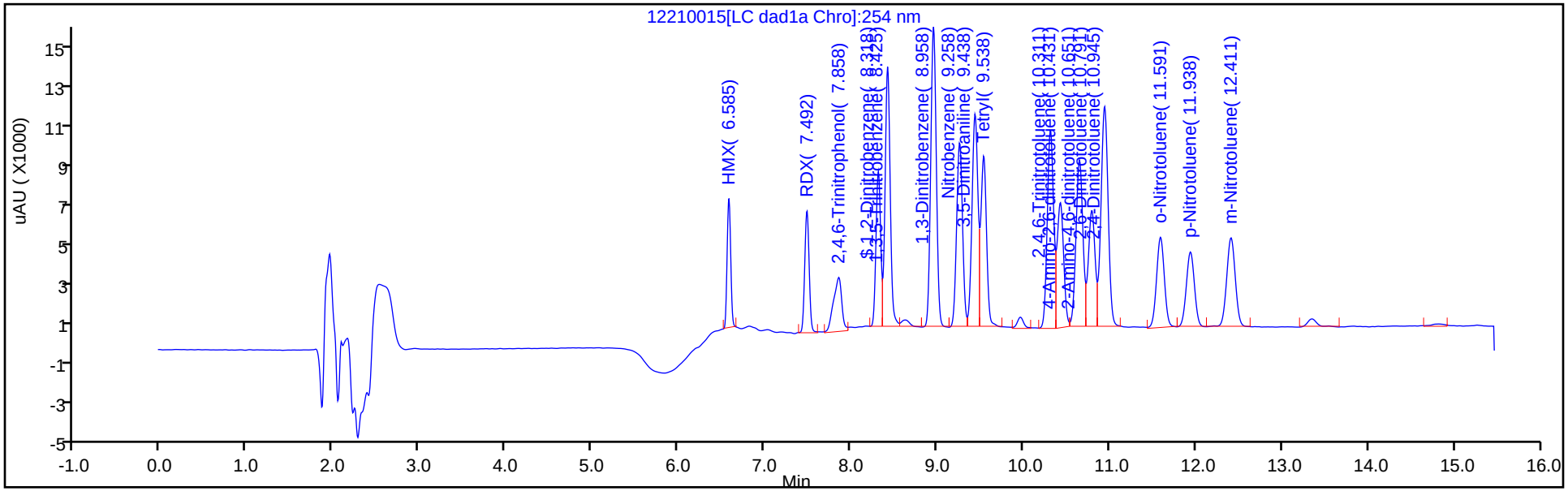
Report Date: 26-Dec-2024 12:58:04 Chrom Revision: 2.3 17-Dec-2024 12:44:46

Eurofins Denver

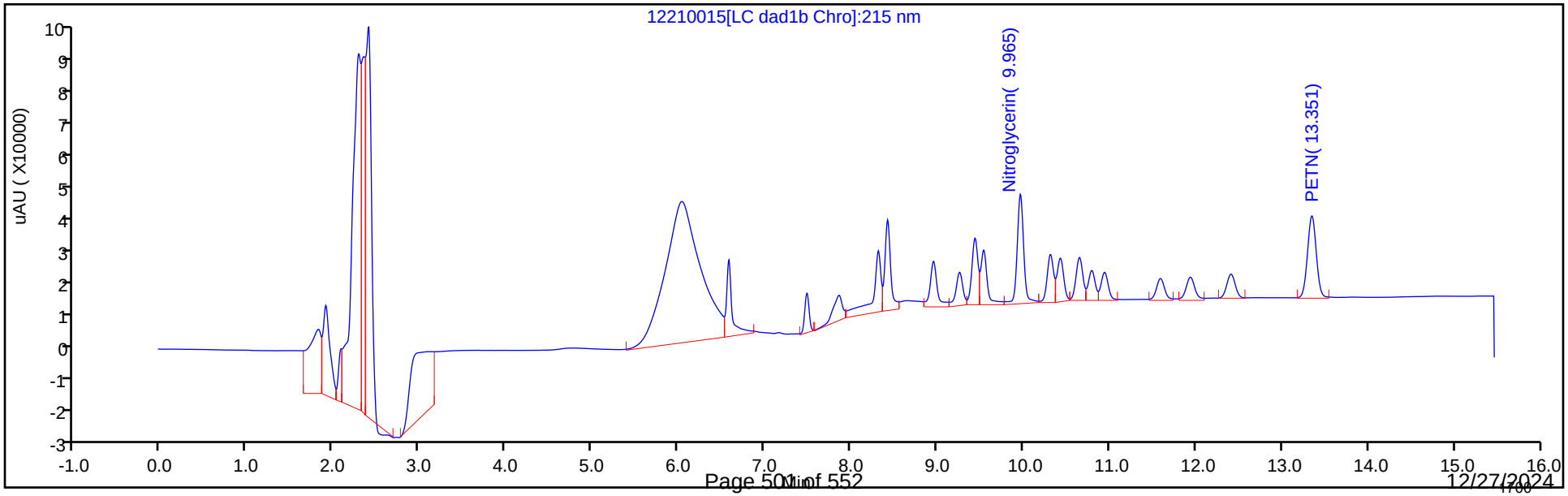
Data File: \\chromfs\denver\chromdata\chhplc_x\20241221-141039.b\12210015.d

Injection Date:	21-Dec-2024 16:15:36	Instrument ID:	CHHPLC_X3	Operator ID:	JZ
Lims ID:	280-200917-A-1-C MSD			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



12/27/2024
5:54:56 AM

Eurofins Denver
Recovery Report

Data File:	\\chromfs\Denver\ChromData\CHHPLC_X\20241221-141039.b\12210015.D				
Lims ID:	280-200917-A-1-C MSD				
Client ID:					
Sample Type:	MSD				
Inject. Date:	21-Dec-2024 16:15:36	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-200917-A-1-C MSD				
Operator ID:	JZ	Instrument ID:	CHHPLC_X3		
Method:	\\chromfs\Denver\ChromData\CHHPLC_X\20241221-141039.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	26-Dec-2024 12:57:58	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:	CTX1722				

First Level Reviewer: LV5D Date: 26-Dec-2024 12:27:36

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2500	0.2170	86.82

Manual Integration/User Assign Peak Report

Eurofins Denver

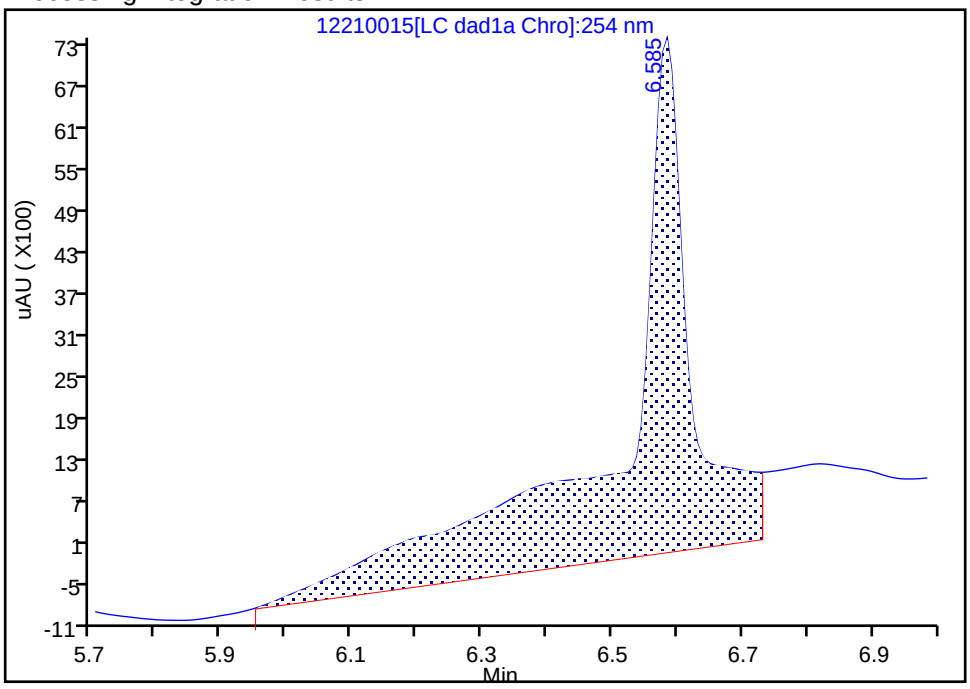
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241221-141039.b\12210015.d				
Injection Date:	21-Dec-2024 16:15:36	Instrument ID:	CHHPLC_X3		
Lims ID:	280-200917-A-1-C MSD				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

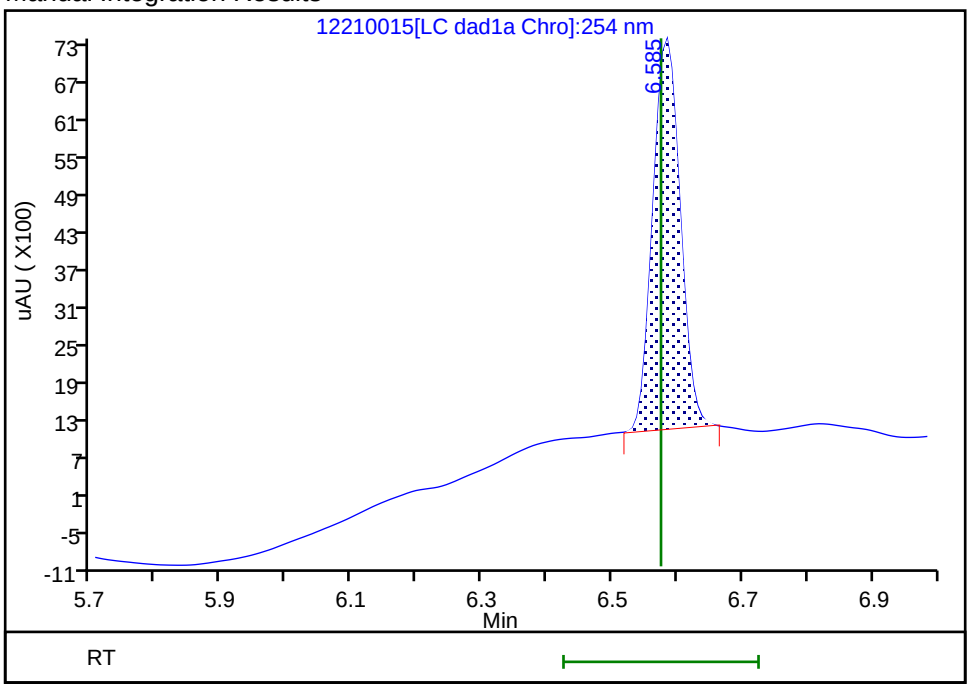
Processing Integration Results

RT: 6.58
Area: 58381
Amount: 0.604027
Amount Units: ug/mL



Manual Integration Results

RT: 6.58
Area: 18335
Amount: 0.189699
Amount Units: ug/mL



Reviewer: LV5D, 26-Dec-2024 12:27:35 -07:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-200917-1

SDG No.:

Client Sample ID: P2-ARROYO-005-003 DU | Lab Sample ID: 280-200917-1 DU

Matrix: Solid | Lab File ID: 12190015.D

Analysis Method: 8330B MOD | Date Collected: 12/16/2024 11:14

Extraction Method: 8330B | Date Extracted: 12/18/2024 12:11

Sample wt/vol: +10.35(g) | Date Analyzed: 12/19/2024 21:31

Con. Extract Vol.: 40(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: Luna-phenylhex ID: 4.6(mm)

% Moisture: 2.0 % Solids: 98.0 | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 679155 | Units: mg/Kg

Preparation Batch No.: 678945 | Instrument ID: CHHPLC_X5

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	0.039	U	0.099	0.039	0.014

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene (Surr)	98		78-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241219-140971.b\12190015.D
Lims ID: 280-200917-A-1-D DU
Client ID:
Sample Type: DU
Inject. Date: 19-Dec-2024 21:31:38 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-200917-A-1-D DU
Operator ID: JZ Instrument ID: CHHPLC_X5

Method: \\chromfs\Denver\ChromData\CHHPLC_X5\20241219-140971.b\8330_X5_Luna.m
Limit Group: GCSV - 8330
Last Update: 26-Dec-2024 13:36:28 Calib Date: 04-Dec-2024 01:09:06
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030020.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC mwd1A, 254 nm
Process Host: CTX1722

First Level Reviewer: LV5D Date: 20-Dec-2024 20:29:43

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 2,6-diamino-4-nitrotoluene	1		4.072				ND	7
	2 2,4-diamino-6-nitrotoluene	1		4.546				ND	
	3 TNX	1		5.010				ND	
	4 DNX	1		5.770				ND	
	5 HMX	1		6.303				ND	U
	6 MNX	1		7.137				ND	
	7 2,4,6-Trinitrophenol	1		7.809				ND	
	8 RDX	1		8.403				ND	
	9 Nitrobenzene	1		10.916				ND	
$	10 1,2-Dinitrobenzene	1	11.648	11.736	-0.088	65596	0.2500	0.2447	
	11 3,5-Dinitroaniline	1		13.469				ND	
	12 1,3-Dinitrobenzene	1		13.809				ND	
	13 Nitroglycerin	2		14.303				ND	7
	14 o-Nitrotoluene	1		14.896				ND	7
	16 p-Nitrotoluene	1		15.116				ND	
	17 4-Amino-2,6-dinitrotoluene	1		15.523				ND	
	18 m-Nitrotoluene	1		15.943				ND	
	19 2-Amino-4,6-dinitrotoluene	1		16.283				ND	7
	20 1,3,5-Trinitrobenzene	1		16.529				ND	7
	15 Triamine Trinitrobenzene	1		16.865				ND	
	21 2,6-Dinitrotoluene	1		17.609				ND	
	22 2,4-Dinitrotoluene	1		18.043				ND	
	23 Tetryl	1		21.043				ND	
	24 2,4,6-Trinitrotoluene	1	21.861	21.936	-0.075	7077		0.0169	M
	25 PETN	2		23.183				ND	
	26 Ammonium Picrate	1		0.000				ND	

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection

Review Flags
M - Manually Integrated
U - Marked Undetected

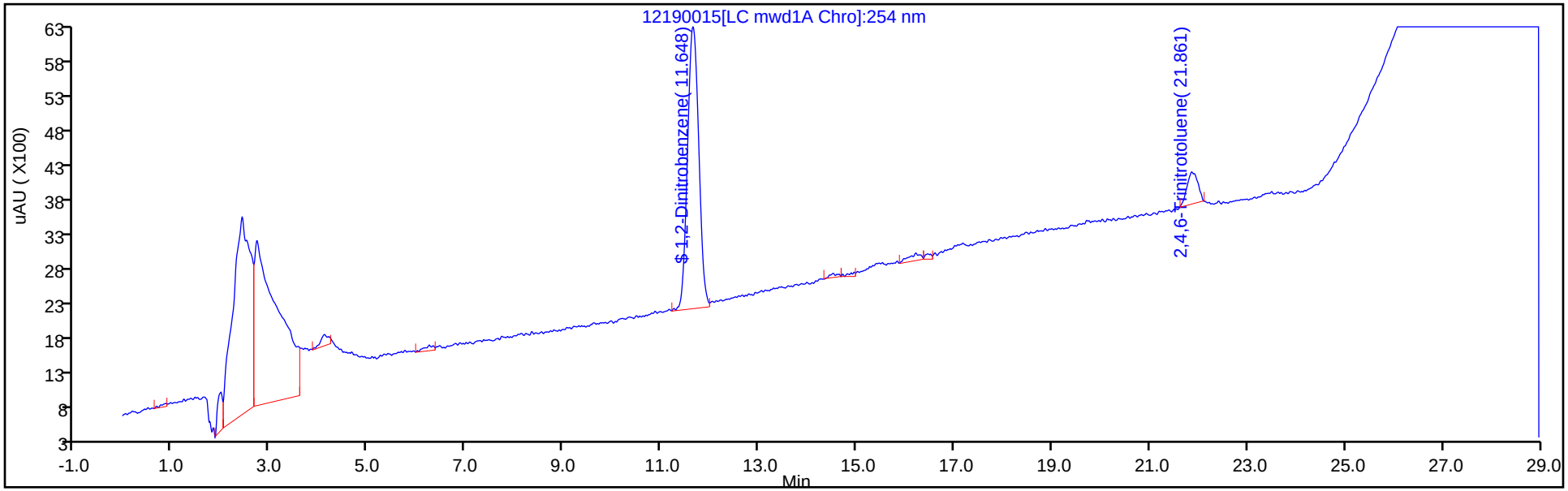
Report Date: 26-Dec-2024 13:36:35 Chrom Revision: 2.3 17-Dec-2024 12:44:46

Eurofins Denver

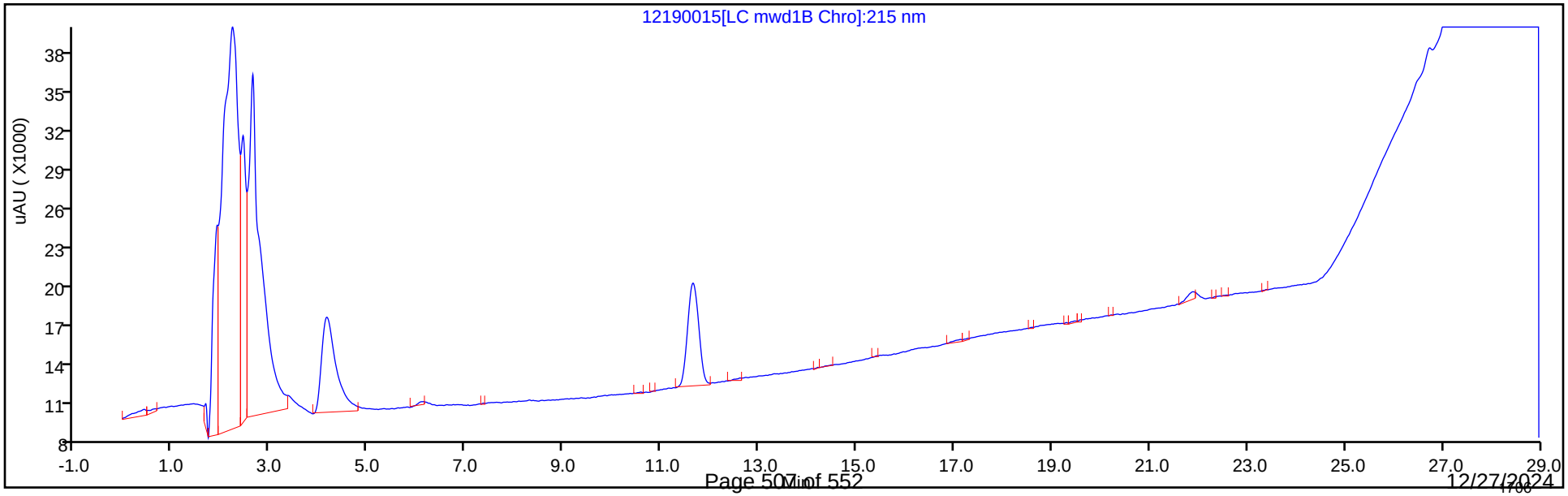
Data File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241219-140971.b\12190015.D

Injection Date:	19-Dec-2024 21:31:38	Instrument ID:	CHHPLC_X5	Operator ID:	JZ
Lims ID:	280-200917-A-1-D DU			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
Recovery Report

Data File:	\\chromfs\Denver\ChromData\CHHPLC_X5\20241219-140971.b\12190015.D				
Lims ID:	280-200917-A-1-D DU				
Client ID:					
Sample Type:	DU				
Inject. Date:	19-Dec-2024 21:31:38	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-200917-A-1-D DU				
Operator ID:	JZ	Instrument ID:	CHHPLC_X5		
Method:	\\chromfs\Denver\ChromData\CHHPLC_X5\20241219-140971.b\8330_X5_Luna.m				
Limit Group:	GCSV - 8330				
Last Update:	26-Dec-2024 13:36:28	Calib Date:	04-Dec-2024 01:09:06		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030020.D				
Column 1 :	Luna-Phenyl hexyl (4.60 mm)		Det: LC mwd1A, 254 nm		
Process Host:	CTX1722				

First Level Reviewer: LV5D Date: 20-Dec-2024 20:29:43

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2500	0.2447	97.90

Manual Integration/User Assign Peak Report

Eurofins Denver

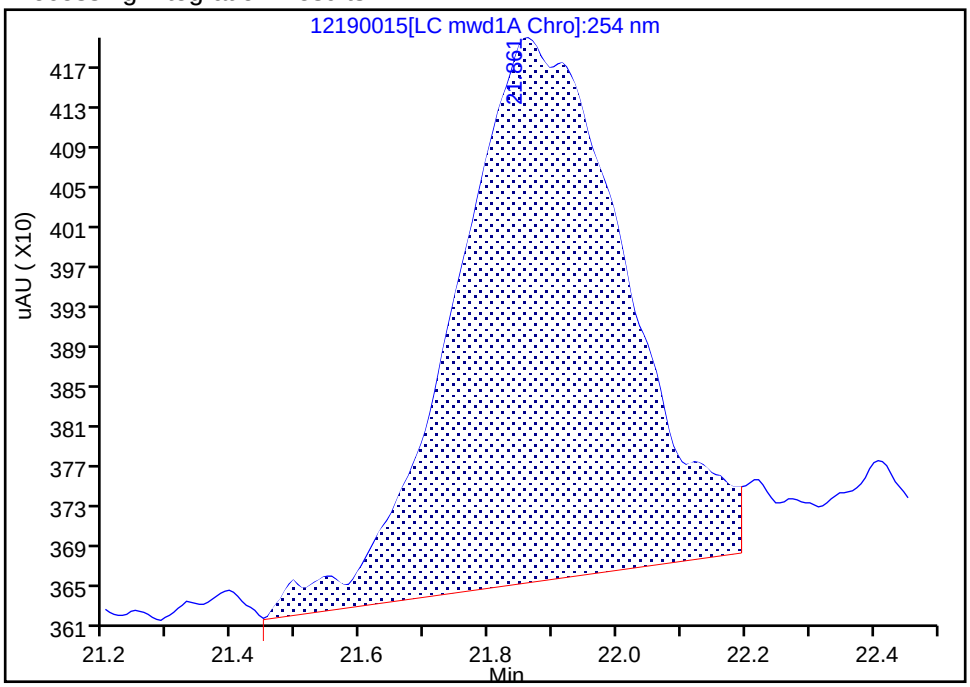
Data File:	\\chromfs\Denver\ChromData\CHHPLC_X5\20241219-140971.b\12190015.D				
Injection Date:	19-Dec-2024 21:31:38	Instrument ID:	CHHPLC_X5		
Lims ID:	280-200917-A-1-D DU				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	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

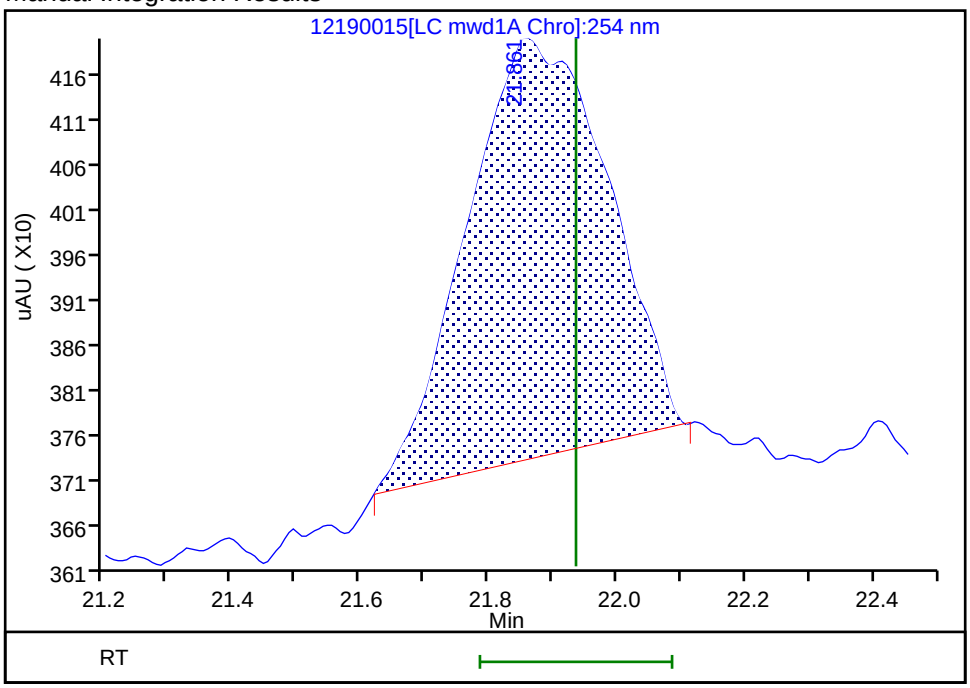
Processing Integration Results

RT: 21.86
Area: 10093
Amount: 0.024168
Amount Units: ug/ml



Manual Integration Results

RT: 21.86
Area: 7077
Amount: 0.016946
Amount Units: ug/ml



Reviewer: LV5D, 20-Dec-2024 20:29:41 -07:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

User Disabled Compound Report

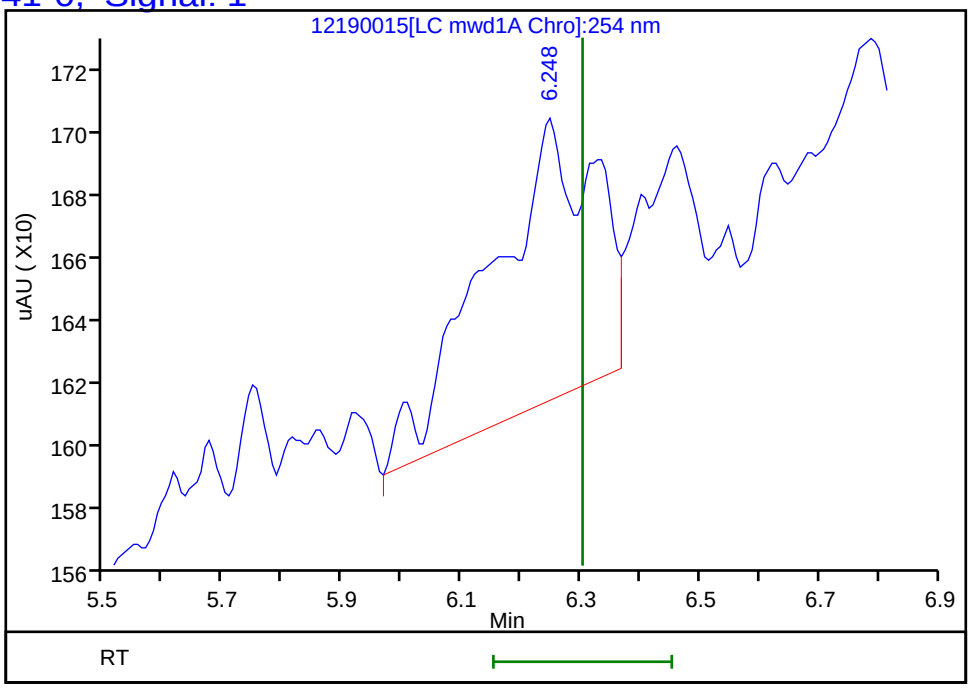
Eurofins Denver

Data File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241219-140971.b\12190015.D
Injection Date: 19-Dec-2024 21:31:38 Instrument ID: CHHPLC_X5
Lims ID: 280-200917-A-1-D DU
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

5 HMX, CAS: 2691-41-0, Signal: 1

RT: 6.25
Response: 1009
Amount: 0.005697



Reviewer: LV5D, 20-Dec-2024 20:29:43
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-200917-1

SDG No.:

Client Sample ID: P2-ARROYO-005-003 DU | Lab Sample ID: 280-200917-1 DU

Matrix: Solid | Lab File ID: 12210016.D

Analysis Method: 8330B MOD | Date Collected: 12/16/2024 11:14

Extraction Method: 8330B | Date Extracted: 12/18/2024 12:11

Sample wt/vol: +10.35(g) | Date Analyzed: 12/21/2024 16:37

Con. Extract Vol.: 40(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: 2.0 % Solids: 98.0 | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 679403 | Units: mg/Kg

Preparation Batch No.: 678945 | Instrument ID: CHHPLC_X3

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-65-0	1,3-Dinitrobenzene	0.039	U	0.099	0.039	0.016
118-96-7	2,4,6-Trinitrotoluene	0.0756	J	0.099	0.069	0.030
121-14-2	2,4-Dinitrotoluene	0.039	U	0.099	0.039	0.014
606-20-2	2,6-Dinitrotoluene	0.039	U	0.099	0.039	0.019
35572-78-2	2-Amino-4,6-dinitrotoluene	0.069	U	0.099	0.069	0.032
88-72-2	o-Nitrotoluene	0.099	U	0.20	0.099	0.047
99-08-1	m-Nitrotoluene	0.15	U	0.20	0.15	0.063
19406-51-0	4-Amino-2,6-dinitrotoluene	0.069	U	0.099	0.069	0.029
99-99-0	p-Nitrotoluene	0.099	U	0.20	0.099	0.036
98-95-3	Nitrobenzene	0.20	U	0.30	0.20	0.084
55-63-0	Nitroglycerin	0.69	U	2.0	0.69	0.21
2691-41-0	HMX	0.069	U	0.099	0.069	0.022
78-11-5	PETN	0.99	U	2.0	0.99	0.49
121-82-4	RDX	0.099	U	0.20	0.099	0.042
479-45-8	Tetryl	0.099	U	0.20	0.099	0.043

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene (Surr)	89		78-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20241221-141039.b\12210016.D
Lims ID: 280-200917-A-1-D DU
Client ID:
Sample Type: DU
Inject. Date: 21-Dec-2024 16:37:27 ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-200917-A-1-D DU
Operator ID: JZ Instrument ID: CHHPLC_X3

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20241221-141039.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 26-Dec-2024 12:57:58 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: CTX1722

First Level Reviewer: LV5D Date: 26-Dec-2024 12:27:46

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
	1 Triamine Trinitrobenzene	1		2.444				ND	
	3 TNX	1		6.428				ND	U
	2 2,6-diamino-4-nitrotoluene	1		6.501				ND	
	4 HMX	1		6.575				ND	
	5 2,4-diamino-6-nitrotoluene	1		6.681				ND	
	6 DNX	1		6.755				ND	
	7 MNX	1		7.148				ND	
	8 RDX	1		7.475				ND	
	9 2,4,6-Trinitrophenol	1		7.842				ND	
$	10 1,2-Dinitrobenzene	1	8.312	8.295	0.017	29156	0.2500	0.2236	
	11 1,3,5-Trinitrobenzene	1	8.486	8.402	0.084	2281		0.0105	
	12 1,3-Dinitrobenzene	1		8.929				ND	
	13 Nitrobenzene	1		9.229				ND	
	14 3,5-Dinitroaniline	1		9.408				ND	
	15 Tetryl	1		9.495				ND	
	16 Nitroglycerin	2		9.922				ND	
	17 2,4,6-Trinitrotoluene	1	10.306	10.268	0.038	4162		0.0192	
	18 4-Amino-2,6-dinitrotoluene	1		10.382				ND	
	19 2-Amino-4,6-dinitrotoluene	1		10.602				ND	
	20 2,6-Dinitrotoluene	1		10.742				ND	
	21 2,4-Dinitrotoluene	1		10.895				ND	
	22 o-Nitrotoluene	1		11.528				ND	
	23 p-Nitrotoluene	1		11.875				ND	
	24 m-Nitrotoluene	1		12.335				ND	7
	25 PETN	2		13.242				ND	
	26 Ammonium Picrate	1		0.000				ND	

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection

Review Flags
U - Marked Undetected

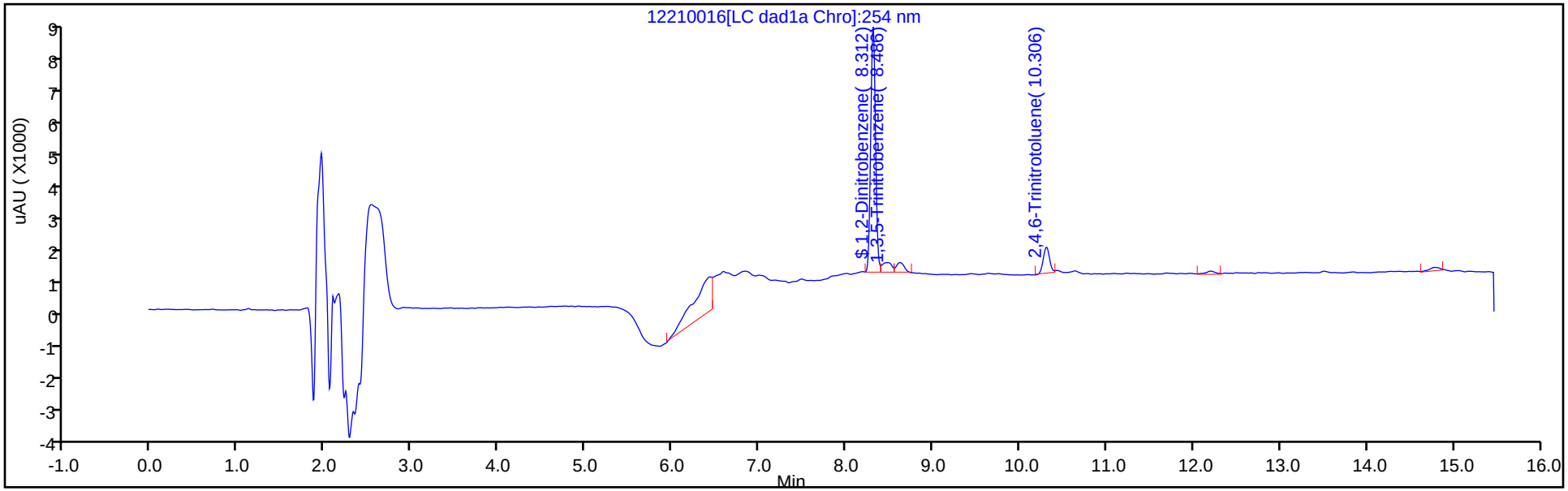
Report Date: 26-Dec-2024 12:58:05 Chrom Revision: 2.3 17-Dec-2024 12:44:46

Eurofins Denver

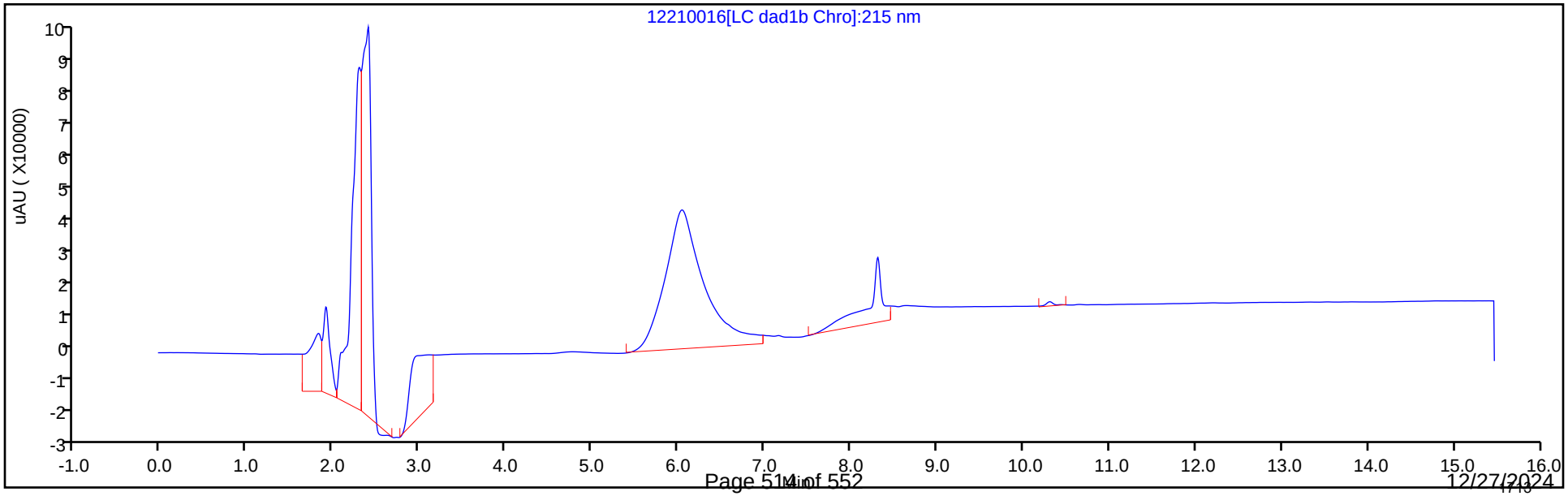
Data File: \\chromfs\denver\chromdata\chhplc_x\20241221-141039.b\12210016.d

Injection Date:	21-Dec-2024 16:37:27	Instrument ID:	CHHPLC_X3	Operator ID:	JZ
Lims ID:	280-200917-A-1-D DU			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
Recovery Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20241221-141039.b\12210016.D
Lims ID: 280-200917-A-1-D DU
Client ID:
Sample Type: DU
Inject. Date: 21-Dec-2024 16:37:27 ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-200917-A-1-D DU
Operator ID: JZ Instrument ID: CHHPLC_X3

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20241221-141039.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 26-Dec-2024 12:57:58 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: CTX1722

First Level Reviewer: LV5D Date: 26-Dec-2024 12:27:46

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2500	0.2236	89.43

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-200917-1

SDG No.:

Client Sample ID: P2-ARROYO-005-003 TRL | Lab Sample ID: 280-200917-1 TRL

Matrix: Solid | Lab File ID: 12190016.D

Analysis Method: 8330B MOD | Date Collected: 12/16/2024 11:14

Extraction Method: 8330B | Date Extracted: 12/18/2024 12:11

Sample wt/vol: +10.61(g) | Date Analyzed: 12/19/2024 22:06

Con. Extract Vol.: 40(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: Luna-phenylhex ID: 4.6(mm)

% Moisture: 2.0 % Solids: 98.0 | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 679155 | Units: mg/Kg

Preparation Batch No.: 678945 | Instrument ID: CHHPLC_X5

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	0.038	U	0.096	0.038	0.013

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene (Surr)	100		78-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241219-140971.b\12190016.D
Lims ID: 280-200917-A-1-E TRL
Client ID:
Sample Type: TRL
Inject. Date: 19-Dec-2024 22:06:33 ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-200917-A-1-E TRL
Operator ID: JZ Instrument ID: CHHPLC_X5

Method: \\chromfs\Denver\ChromData\CHHPLC_X5\20241219-140971.b\8330_X5_Luna.m
Limit Group: GCSV - 8330
Last Update: 26-Dec-2024 13:36:28 Calib Date: 04-Dec-2024 01:09:06
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030020.D

Column 1 : Luna-Phenyl hexyl (4.60 mm) Det: LC mwd1A, 254 nm
Process Host: CTX1722

First Level Reviewer: LV5D Date: 20-Dec-2024 20:29:53

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 2,6-diamino-4-nitrotoluene	1		4.072				ND	7
	2 2,4-diamino-6-nitrotoluene	1		4.546				ND	
	3 TNX	1		5.010				ND	
	4 DNX	1		5.770				ND	
	5 HMX	1		6.303				ND	
	6 MNX	1		7.137				ND	
	7 2,4,6-Trinitrophenol	1		7.809				ND	
	8 RDX	1		8.403				ND	
	9 Nitrobenzene	1		10.916				ND	
$	10 1,2-Dinitrobenzene	1	11.640	11.736	-0.096	66920	0.2500	0.2497	
	11 3,5-Dinitroaniline	1		13.469				ND	
	12 1,3-Dinitrobenzene	1		13.809				ND	
	13 Nitroglycerin	2		14.303				ND	
	14 o-Nitrotoluene	1		14.896				ND	
	16 p-Nitrotoluene	1		15.116				ND	
	17 4-Amino-2,6-dinitrotoluene	1		15.523				ND	U
	18 m-Nitrotoluene	1		15.943				ND	
	19 2-Amino-4,6-dinitrotoluene	1		16.283				ND	U
	20 1,3,5-Trinitrobenzene	1		16.529				ND	
	15 Triamine Trinitrobenzene	1		16.865				ND	U
	21 2,6-Dinitrotoluene	1		17.609				ND	
	22 2,4-Dinitrotoluene	1		18.043				ND	
	23 Tetryl	1		21.043				ND	
	24 2,4,6-Trinitrotoluene	1	21.894	21.936	-0.042	5925		0.0142	M
	25 PETN	2		23.183				ND	
	26 Ammonium Picrate	1		0.000				ND	

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection

Review Flags
M - Manually Integrated
U - Marked Undetected

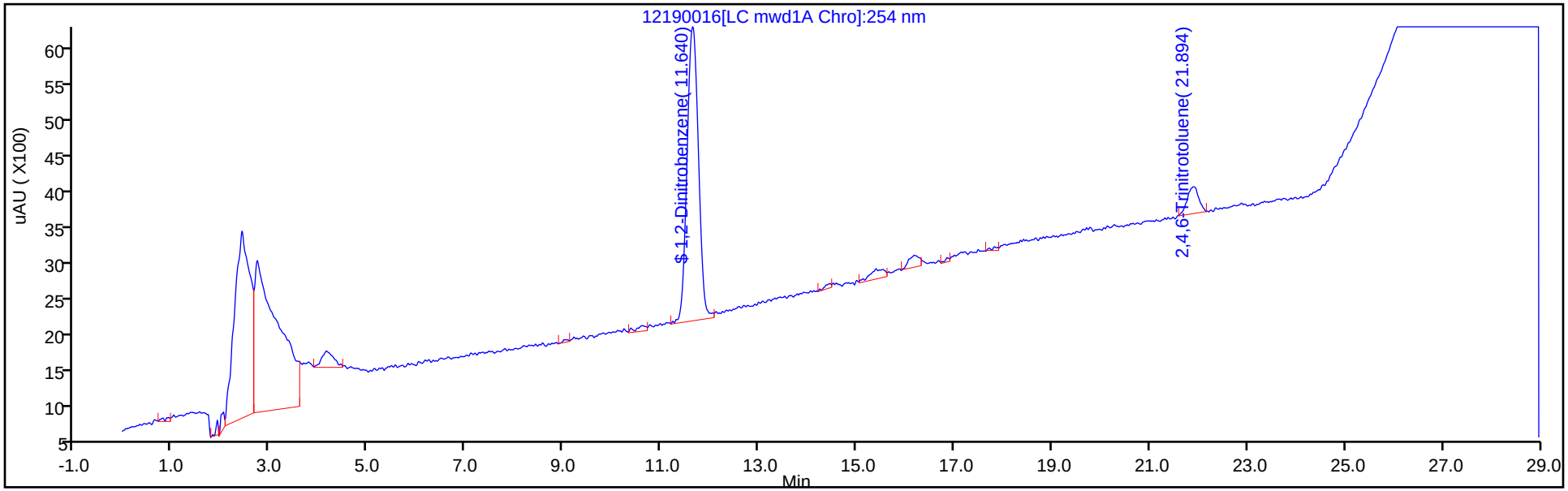
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Eurofins Denver

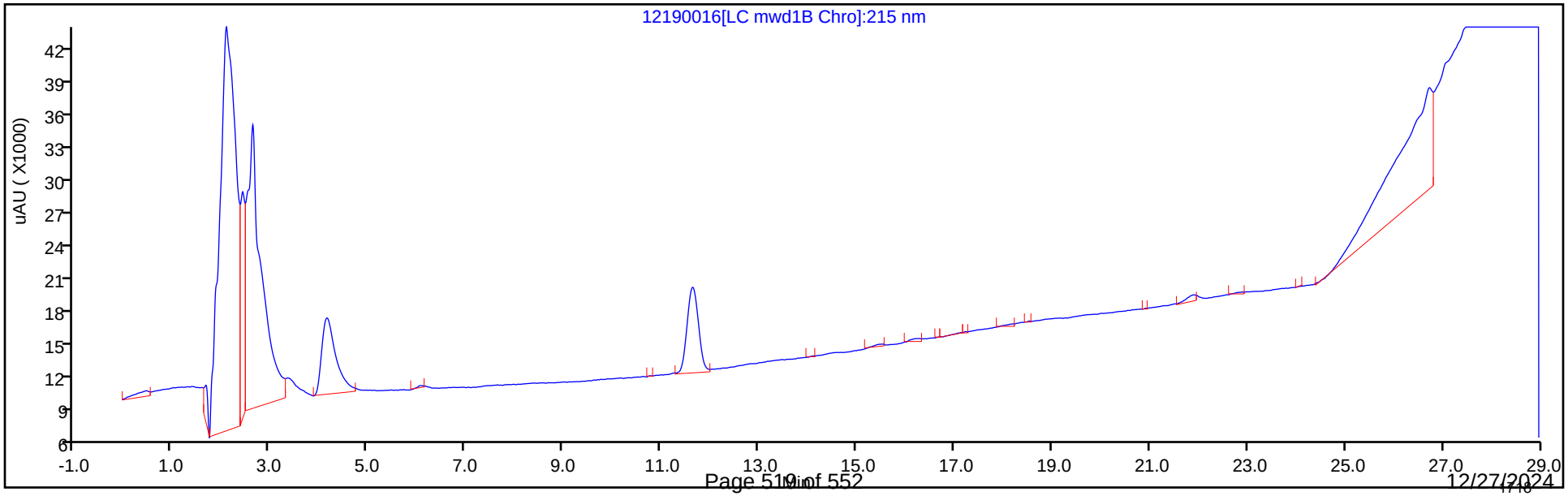
Data File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241219-140971.b\12190016.D

Injection Date:	19-Dec-2024 22:06:33	Instrument ID:	CHHPLC_X5	Operator ID:	JZ
Lims ID:	280-200917-A-1-E TRL			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
Recovery Report

Data File:	\\chromfs\Denver\ChromData\CHHPLC_X5\20241219-140971.b\12190016.D				
Lims ID:	280-200917-A-1-E TRL				
Client ID:					
Sample Type:	TRL				
Inject. Date:	19-Dec-2024 22:06:33	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-200917-A-1-E TRL				
Operator ID:	JZ	Instrument ID:	CHHPLC_X5		
Method:	\\chromfs\Denver\ChromData\CHHPLC_X5\20241219-140971.b\8330_X5_Luna.m				
Limit Group:	GCSV - 8330				
Last Update:	26-Dec-2024 13:36:28	Calib Date:	04-Dec-2024 01:09:06		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Denver\ChromData\CHHPLC_X5\20241203-140414.b\12030020.D				
Column 1 :	Luna-Phenyl hexyl (4.60 mm)		Det: LC mwd1A, 254 nm		
Process Host:	CTX1722				

First Level Reviewer: LV5D Date: 20-Dec-2024 20:29:53

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2500	0.2497	99.87

Manual Integration/User Assign Peak Report

Eurofins Denver

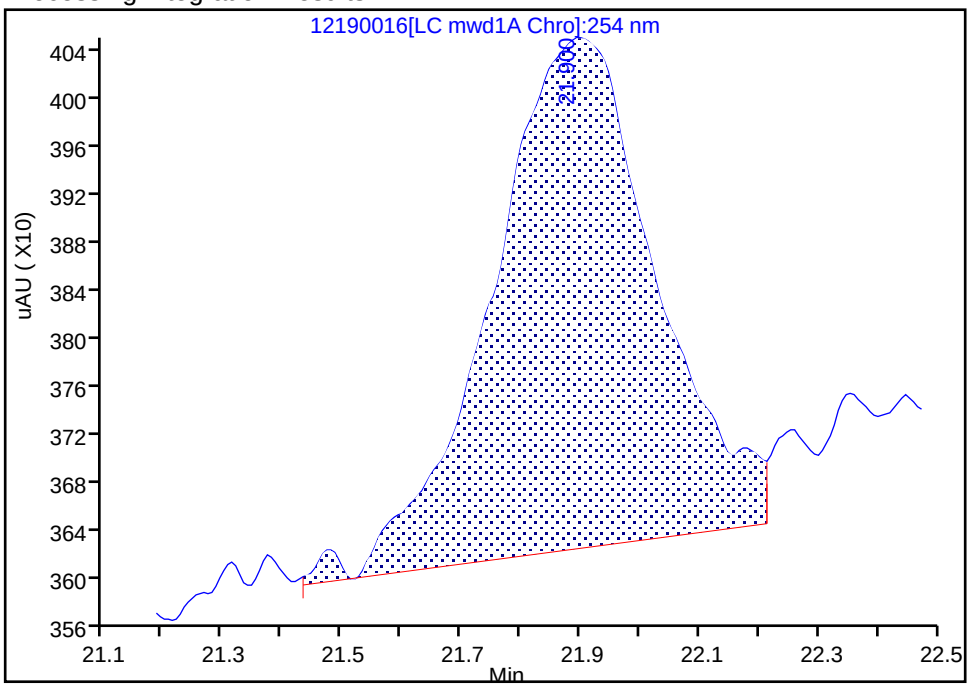
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Injection Date:	19-Dec-2024 22:06:33	Instrument ID:	CHHPLC_X5		
Lims ID:	280-200917-A-1-E TRL				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X5_Luna	Limit Group:	GCSV - 8330		
Column:	Luna-Phenyl hexyl (4.60 mm)	Detector	LC mwd1A, 254 nm		

24 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

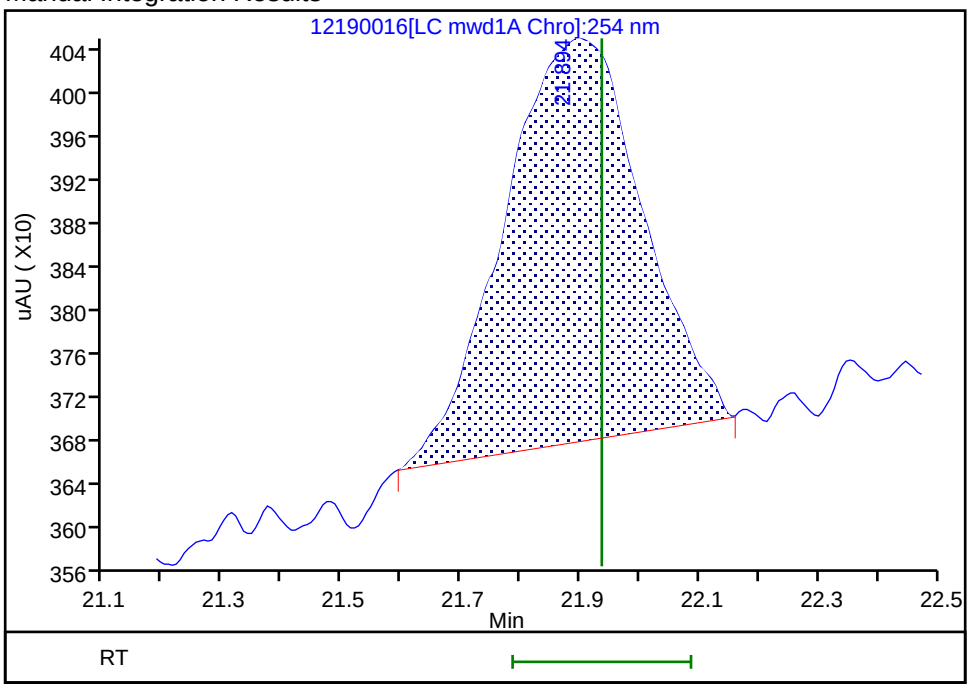
Processing Integration Results

RT: 21.90
Area: 8118
Amount: 0.019438
Amount Units: ug/ml



Manual Integration Results

RT: 21.89
Area: 5925
Amount: 0.014187
Amount Units: ug/ml



Reviewer: LV5D, 20-Dec-2024 20:29:46 -07:00:00 (UTC)

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

User Disabled Compound Report

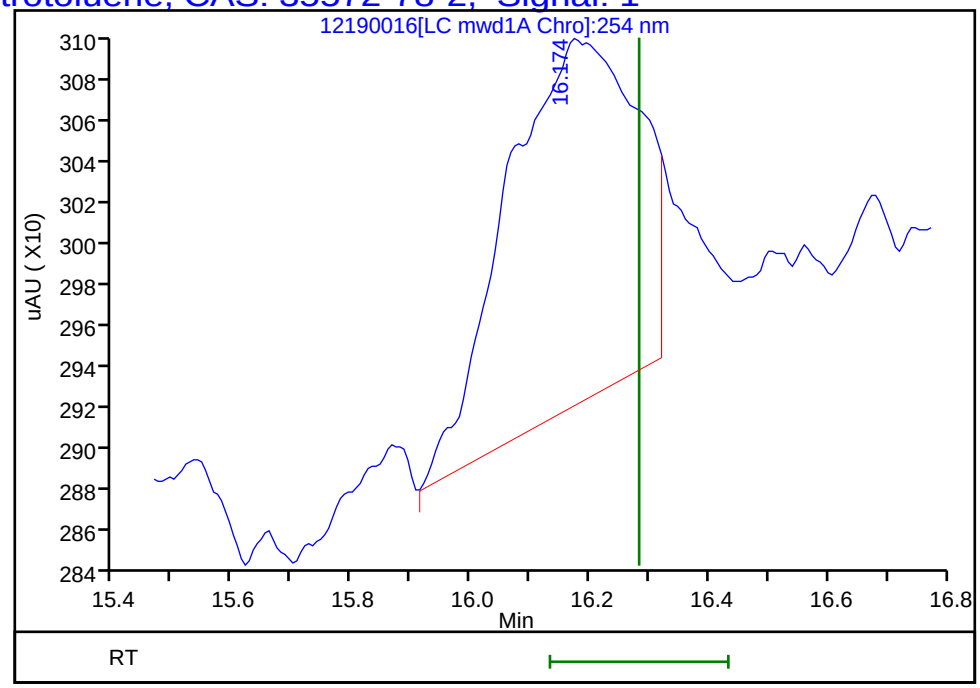
Eurofins Denver

Data File: \\chromfs\Denver\ChromData\CHHPLC_X5\20241219-140971.b\12190016.D
Injection Date: 19-Dec-2024 22:06:33 Instrument ID: CHHPLC_X5
Lims ID: 280-200917-A-1-E TRL
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

19 2-Amino-4,6-dinitrotoluene, CAS: 35572-78-2, Signal: 1

RT: 16.17
Response: 2622
Amount: 0.006619



Reviewer: LV5D, 20-Dec-2024 20:29:53
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

User Disabled Compound Report

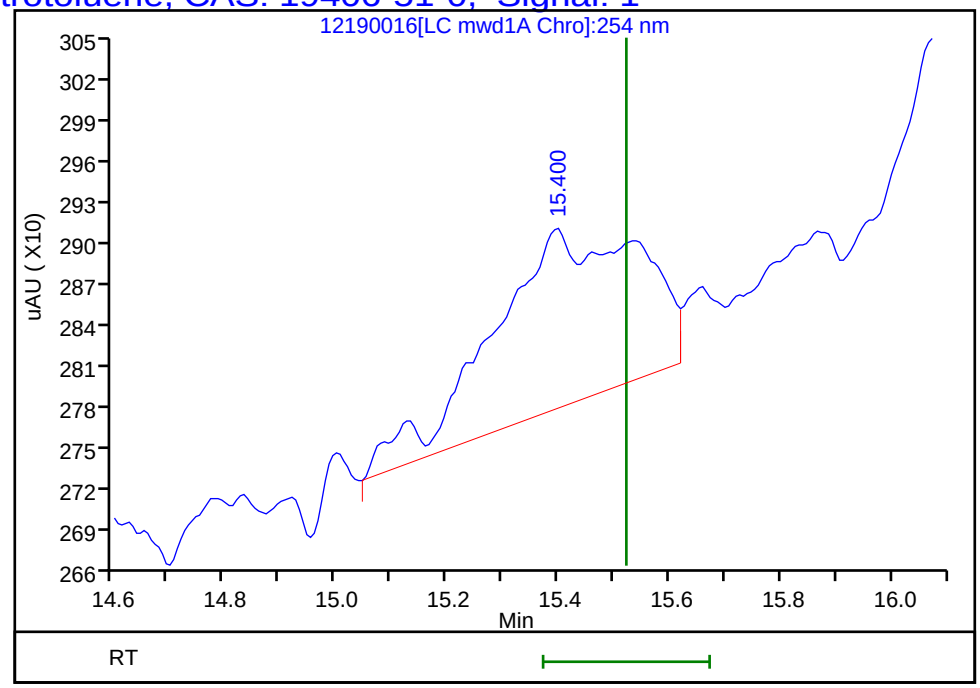
Eurofins Denver

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Injection Date: 19-Dec-2024 22:06:33 Instrument ID: CHHPLC_X5
Lims ID: 280-200917-A-1-E TRL
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

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

RT: 15.40
Response: 2352
Amount: 0.008324



Reviewer: LV5D, 20-Dec-2024 20:29:53
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Denver | Job No.: 280-200917-1

SDG No.:

Client Sample ID: P2-ARROYO-005-003 TRL | Lab Sample ID: 280-200917-1 TRL

Matrix: Solid | Lab File ID: 12210017.D

Analysis Method: 8330B MOD | Date Collected: 12/16/2024 11:14

Extraction Method: 8330B | Date Extracted: 12/18/2024 12:11

Sample wt/vol: +10.61(g) | Date Analyzed: 12/21/2024 16:59

Con. Extract Vol.: 40(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: 2.0 % Solids: 98.0 | GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 679403 | Units: mg/Kg

Preparation Batch No.: 678945 | Instrument ID: CHHPLC_X3

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-65-0	1,3-Dinitrobenzene	0.038	U	0.096	0.038	0.016
118-96-7	2,4,6-Trinitrotoluene	0.0584	J M	0.096	0.067	0.030
121-14-2	2,4-Dinitrotoluene	0.038	U	0.096	0.038	0.014
606-20-2	2,6-Dinitrotoluene	0.038	U	0.096	0.038	0.018
35572-78-2	2-Amino-4,6-dinitrotoluene	0.067	U	0.096	0.067	0.032
88-72-2	o-Nitrotoluene	0.096	U	0.19	0.096	0.045
99-08-1	m-Nitrotoluene	0.14	U	0.19	0.14	0.062
19406-51-0	4-Amino-2,6-dinitrotoluene	0.067	U	0.096	0.067	0.029
99-99-0	p-Nitrotoluene	0.096	U	0.19	0.096	0.035
98-95-3	Nitrobenzene	0.19	U	0.29	0.19	0.082
55-63-0	Nitroglycerin	0.67	U	1.9	0.67	0.21
2691-41-0	HMX	0.067	U M	0.096	0.067	0.022
78-11-5	PETN	0.96	U	1.9	0.96	0.47
121-82-4	RDX	0.096	U	0.19	0.096	0.041
479-45-8	Tetryl	0.096	U	0.19	0.096	0.042

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene (Surr)	88		78-119

Eurofins Denver
Target Compound Quantitation Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20241221-141039.b\12210017.D
Lims ID: 280-200917-A-1-E TRL
Client ID:
Sample Type: TRL
Inject. Date: 21-Dec-2024 16:59:23 ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-200917-A-1-E TRL
Operator ID: JZ Instrument ID: CHHPLC_X3

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20241221-141039.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 26-Dec-2024 12:57:58 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: CTX1722

First Level Reviewer: LV5D Date: 26-Dec-2024 12:28:03

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
1	Triamine Trinitrobenzene	1		2.444				ND	
3	TNX	1		6.428				ND	
2	2,6-diamino-4-nitrotoluene	1		6.501				ND	
4	HMX	1	6.606	6.575	0.031	117		0.001211	7M
5	2,4-diamino-6-nitrotoluene	1		6.681				ND	
6	DNX	1		6.755				ND	
7	MNX	1		7.148				ND	
8	RDX	1		7.475				ND	
9	2,4,6-Trinitrophenol	1		7.842				ND	
$ 10	1,2-Dinitrobenzene	1	8.312	8.295	0.017	28623	0.2500	0.2195	
11	1,3,5-Trinitrobenzene	1		8.402				ND	U
12	1,3-Dinitrobenzene	1		8.929				ND	
13	Nitrobenzene	1		9.229				ND	
14	3,5-Dinitroaniline	1		9.408				ND	
15	Tetryl	1		9.495				ND	
16	Nitroglycerin	2		9.922				ND	
17	2,4,6-Trinitrotoluene	1	10.299	10.268	0.031	3295		0.0152	M
18	4-Amino-2,6-dinitrotoluene	1		10.382				ND	
19	2-Amino-4,6-dinitrotoluene	1	10.632	10.602	0.030	1450		0.007089	
20	2,6-Dinitrotoluene	1		10.742				ND	
21	2,4-Dinitrotoluene	1		10.895				ND	
22	o-Nitrotoluene	1		11.528				ND	
23	p-Nitrotoluene	1		11.875				ND	
24	m-Nitrotoluene	1		12.335				ND	
25	PETN	2		13.242				ND	
26	Ammonium Picrate	1		0.000				ND	

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection

Review Flags
M - Manually Integrated
U - Marked Undetected

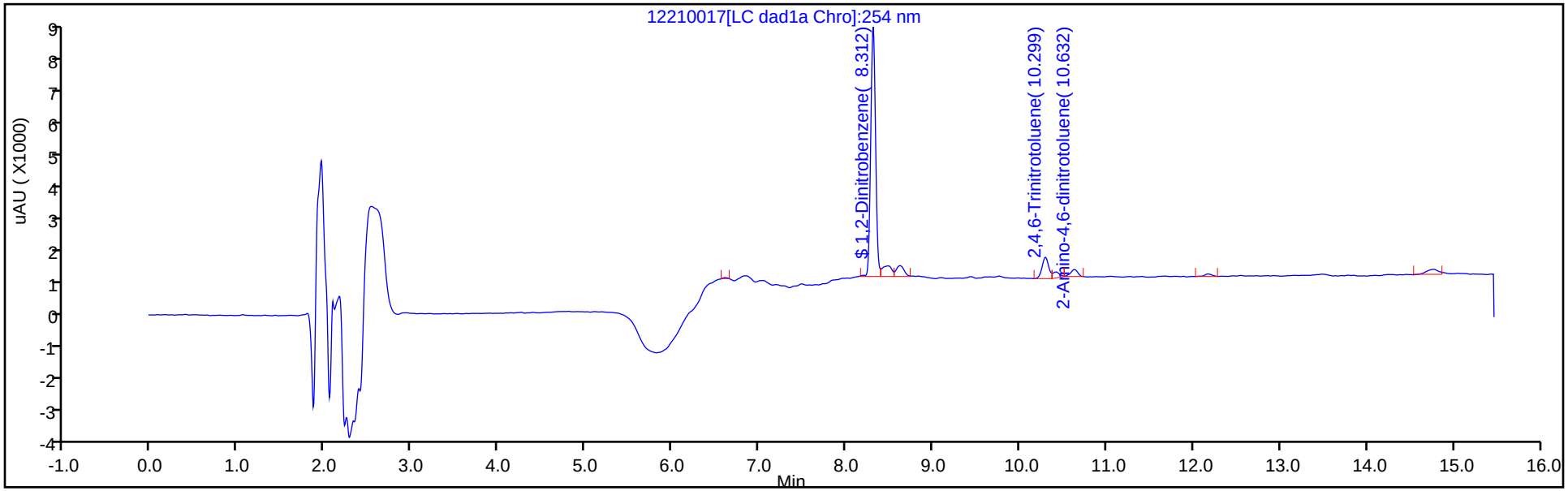
Report Date: 26-Dec-2024 12:58:06 Chrom Revision: 2.3 17-Dec-2024 12:44:46

Eurofins Denver

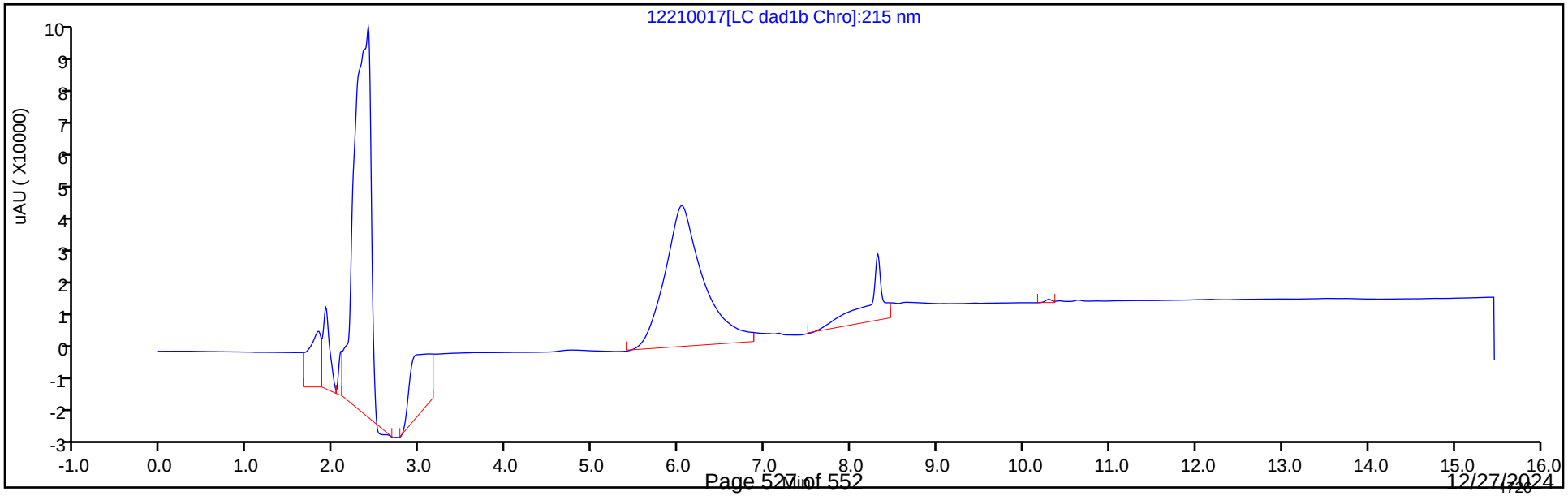
Data File: \\chromfs\denver\chromdata\chhplc_x\20241221-141039.b\12210017.d

Injection Date:	21-Dec-2024 16:59:23	Instrument ID:	CHHPLC_X3	Operator ID:	JZ
Lims ID:	280-200917-A-1-E TRL			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
Recovery Report

Data File: \\chromfs\Denver\ChromData\CHHPLC_X\20241221-141039.b\12210017.D
Lims ID: 280-200917-A-1-E TRL
Client ID:
Sample Type: TRL
Inject. Date: 21-Dec-2024 16:59:23 ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-200917-A-1-E TRL
Operator ID: JZ Instrument ID: CHHPLC_X3

Method: \\chromfs\Denver\ChromData\CHHPLC_X\20241221-141039.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 26-Dec-2024 12:57:58 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: CTX1722

First Level Reviewer: LV5D Date: 26-Dec-2024 12:28:03

Compound	Amount Added	Amount Recovered	% Rec.
$ 10 1,2-Dinitrobenzene	0.2500	0.2195	87.79

User Disabled Compound Report

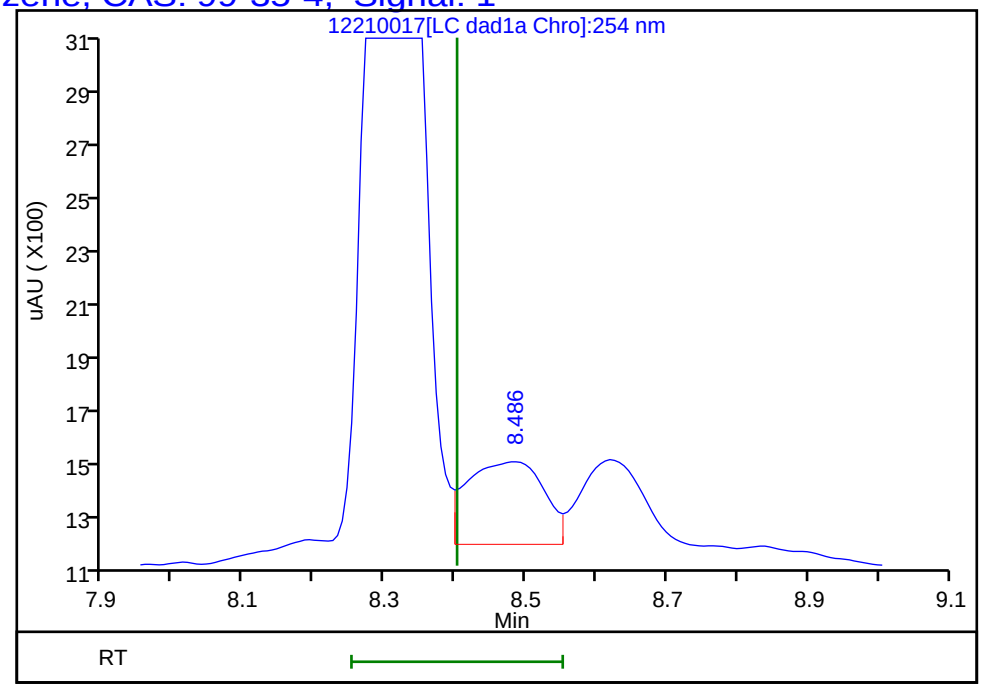
Eurofins Denver

Data File: \\chromfs\denver\chromdata\chhplc_x\20241221-141039.b\12210017.d
Injection Date: 21-Dec-2024 16:59:23 Instrument ID: CHHPLC_X3
Lims ID: 280-200917-A-1-E TRL
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: 8.49
Response: 2218
Amount: 0.010205



Reviewer: LV5D, 26-Dec-2024 12:28:03
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Eurofins Denver

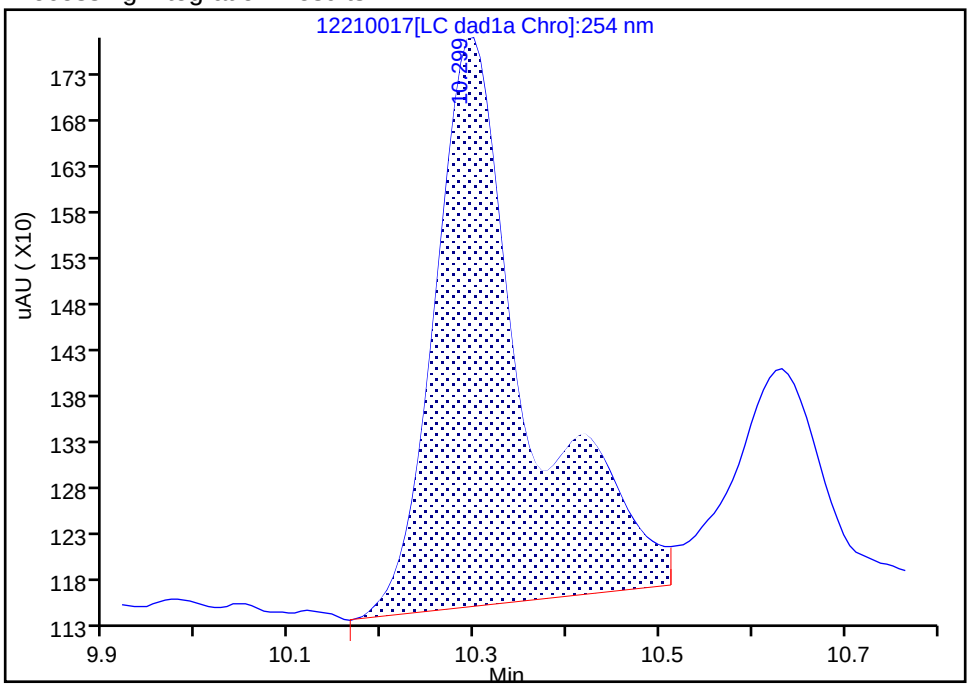
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241221-141039.b\12210017.d				
Injection Date:	21-Dec-2024 16:59:23	Instrument ID:	CHHPLC_X3		
Lims ID:	280-200917-A-1-E TRL				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

17 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

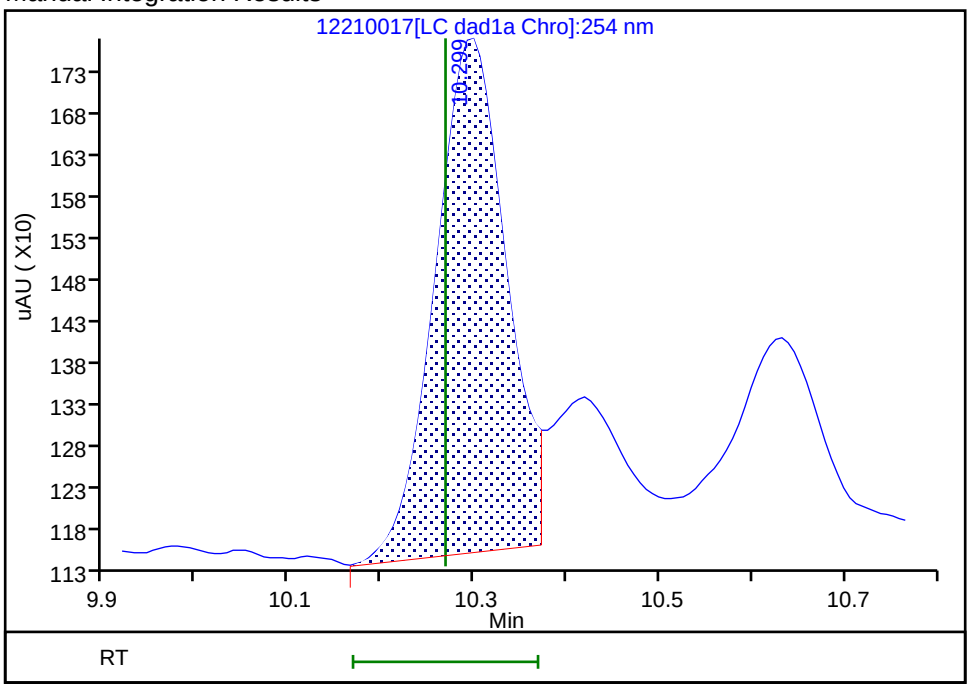
Processing Integration Results

RT: 10.30
Area: 4265
Amount: 0.019627
Amount Units: ug/mL



Manual Integration Results

RT: 10.30
Area: 3295
Amount: 0.015163
Amount Units: ug/mL



Reviewer: LV5D, 26-Dec-2024 12:27:51 -07:00:00 (UTC)
Audit Action: Split an Integrated Peak Audit Reason: Baseline

Eurofins Denver

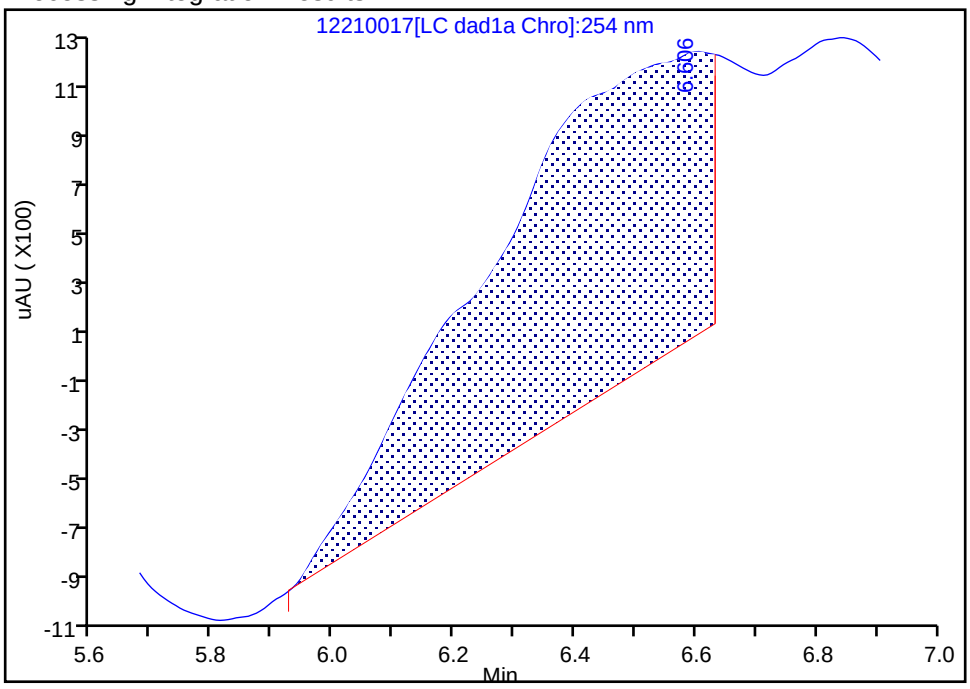
Data File:	\\chromfs\denver\chromdata\chhplc_x\20241221-141039.b\12210017.d				
Injection Date:	21-Dec-2024 16:59:23	Instrument ID:	CHHPLC_X3		
Lims ID:	280-200917-A-1-E TRL				
Client ID:					
Operator ID:	JZ	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

4 HMX, CAS: 2691-41-0

Signal: 1

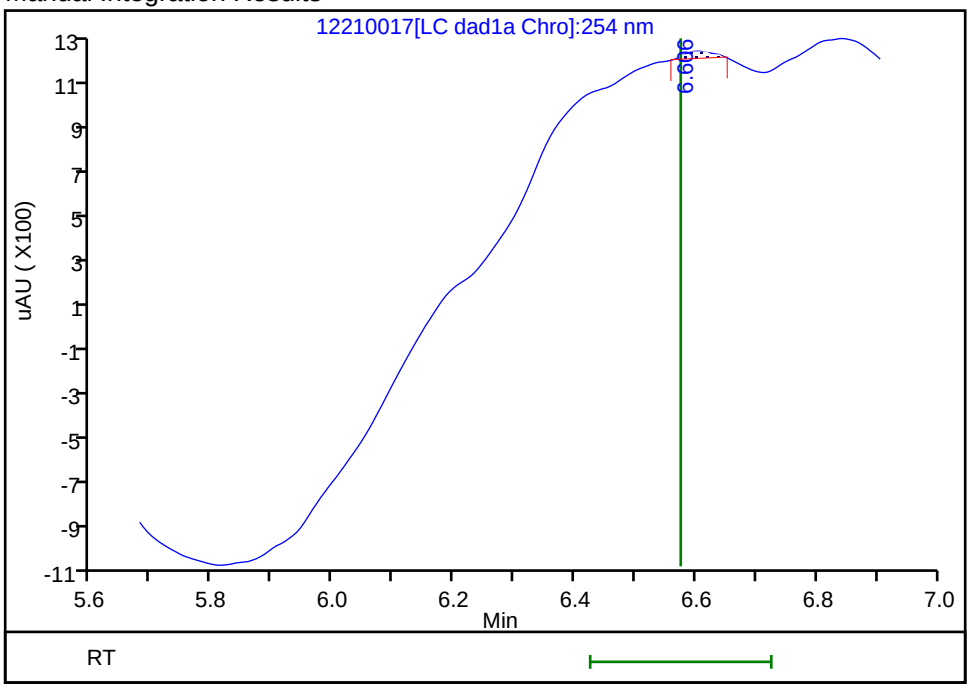
Processing Integration Results

RT: 6.61
Area: 31884
Amount: 0.329881
Amount Units: ug/mL



Manual Integration Results

RT: 6.61
Area: 117
Amount: 0.001211
Amount Units: ug/mL



Reviewer: LV5D, 26-Dec-2024 12:28:02 -07:00:00 (UTC)
Audit Action: Manually Integrated Audit Reason: Baseline

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-200917-1

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.: 280-200917-1

SDG No.:

Instrument ID: CHHPLC_X5 Start Date: 12/03/2024 20:29

Analysis Batch Number: 677241 End Date: 12/04/2024 01:44

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 280-677241/10		12/03/2024 20:29	1	12030012.D	Luna-phenylhex 4.6(mm)
IC 280-677241/11		12/03/2024 21:04	1	12030013.D	Luna-phenylhex 4.6(mm)
IC 280-677241/12		12/03/2024 21:39	1	12030014.D	Luna-phenylhex 4.6(mm)
IC 280-677241/13		12/03/2024 22:14	1	12030015.D	Luna-phenylhex 4.6(mm)
IC 280-677241/14		12/03/2024 22:49	1	12030016.D	Luna-phenylhex 4.6(mm)
IC 280-677241/15		12/03/2024 23:24	1	12030017.D	Luna-phenylhex 4.6(mm)
IC 280-677241/16		12/03/2024 23:59	1	12030018.D	Luna-phenylhex 4.6(mm)
IC 280-677241/17		12/04/2024 00:34	1	12030019.D	Luna-phenylhex 4.6(mm)
IC 280-677241/18		12/04/2024 01:09	1	12030020.D	Luna-phenylhex 4.6(mm)
ICV 280-677241/19		12/04/2024 01:44	1	12030021.D	Luna-phenylhex 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-200917-1

SDG No.:

Instrument ID: CHHPLC_X5 Start Date: 12/19/2024 18:01

Analysis Batch Number: 679155 End Date: 12/19/2024 22:41

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 280-679155/7		12/19/2024 18:01	1	12190007.D	Luna-phenylhex 4.6(mm)
ZZZZZ (QC)		12/19/2024 18:36	1		Luna-phenylhex 4.6(mm)
ZZZZZ (QC)		12/19/2024 19:11	1		Luna-phenylhex 4.6(mm)
280-200917-1	P2-ARROYO-005-003	12/19/2024 19:46	1	12190012.D	Luna-phenylhex 4.6(mm)
280-200917-1 MS	P2-ARROYO-005-003 MS	12/19/2024 20:21	1	12190013.D	Luna-phenylhex 4.6(mm)
280-200917-1 MSD	P2-ARROYO-005-003 MSD	12/19/2024 20:56	1	12190014.D	Luna-phenylhex 4.6(mm)
280-200917-1 DU	P2-ARROYO-005-003 DU	12/19/2024 21:31	1	12190015.D	Luna-phenylhex 4.6(mm)
280-200917-1 TRL	P2-ARROYO-005-003 TRL	12/19/2024 22:06	1	12190016.D	Luna-phenylhex 4.6(mm)
CCV 280-679155/17		12/19/2024 22:41	1	12190017.D	Luna-phenylhex 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Denver Job No.: 280-200917-1

SDG No.:

Instrument ID: CHHPLC_X3 Start Date: 12/21/2024 14:25

Analysis Batch Number: 679403 End Date: 12/21/2024 17:21

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 280-679403/7		12/21/2024 14:25	1	12210007.D	UltraCarb5uODS 4.6(mm)
MB 280-678945/1-A		12/21/2024 14:47	1	12210011.D	UltraCarb5uODS 4.6(mm)
LCS 280-678945/2-A		12/21/2024 15:09	1	12210012.D	UltraCarb5uODS 4.6(mm)
280-200917-1	P2-ARROYO-005-003	12/21/2024 15:31	1	12210013.D	UltraCarb5uODS 4.6(mm)
280-200917-1 MS	P2-ARROYO-005-003 MS	12/21/2024 15:53	1	12210014.D	UltraCarb5uODS 4.6(mm)
280-200917-1 MSD	P2-ARROYO-005-003 MSD	12/21/2024 16:15	1	12210015.D	UltraCarb5uODS 4.6(mm)
280-200917-1 DU	P2-ARROYO-005-003 DU	12/21/2024 16:37	1	12210016.D	UltraCarb5uODS 4.6(mm)
280-200917-1 TRL	P2-ARROYO-005-003 TRL	12/21/2024 16:59	1	12210017.D	UltraCarb5uODS 4.6(mm)
CCV 280-679403/18		12/21/2024 17:21	1	12210018.D	UltraCarb5uODS 4.6(mm)

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-200917-1

SDG No.:

Batch Number: 669870 Batch Start Date: 10/04/24 16:59 Batch Analyst: Zhang, Jian

Batch Method: 8330B MOD 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 MOD			1 mL	125 uL			250 uL	
IC 280-669870/12		8330B MOD			1 mL	50 uL			100 uL	
IC 280-669870/13		8330B MOD			1 mL	35 uL			70 uL	
IC 280-669870/14		8330B MOD			1 mL	20 uL			40 uL	
IC 280-669870/15		8330B MOD			1 mL	12.5 uL			25 uL	
IC 280-669870/16		8330B MOD			1 mL	5 uL			10 uL	
IC 280-669870/17		8330B MOD			1 mL	2.5 uL			5 uL	
IC 280-669870/18		8330B MOD			1 mL	1 uL			2 uL	
IC 280-669870/19		8330B MOD			1 mL	0.5 uL			1 uL	
ICV 280-669870/20		8330B MOD			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.: 280-200917-1

SDG No.:

Batch Number: 677241 Batch Start Date: 12/03/24 20:29 Batch Analyst: Zhang, Jian

Batch Method: 8330B MOD Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	FinalAmount	8330 LCS 00138	8330IntermStk 00082	8330Surrogate 00160		
IC 280-677241/10		8330B MOD			1 mL		250 uL			
IC 280-677241/11		8330B MOD			1 mL		100 uL			
IC 280-677241/12		8330B MOD			1 mL		70 uL			
IC 280-677241/13		8330B MOD			1 mL		40 uL			
IC 280-677241/14		8330B MOD			1 mL		25 uL			
IC 280-677241/15		8330B MOD			1 mL		10 uL			
IC 280-677241/16		8330B MOD			1 mL		5 uL			
IC 280-677241/17		8330B MOD			1 mL		2 uL			
IC 280-677241/18		8330B MOD			1 mL		1 uL			
ICV 280-677241/19		8330B MOD			1 mL	50 uL		50 uL		

Batch Notes	
Reagent Water ID	N.ELGA 12/3/24
Methanol ID	64285
Vial Lot Number	23126137
Diluting Solvent ID	8330ACIDH2O00008
Batch Comment	8330BUFFERSTK00018,ACETICACID00172

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.: 280-200917-1

SDG No.:

Batch Number: 678945 Batch Start Date: 12/18/24 12:11 Batch Analyst: Workman, Clayton

Batch Method: 8330B Batch End Date: 12/19/24 12:08

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	InitialAmount	FinalAmount	8330 LCS 00139	8330Surrogate 00160		
MB 280-678945/1		8330B, 8330B MOD			10 g	40 mL		1 mL		
LCS 280-678945/2		8330B, 8330B MOD			10 g	40 mL	1 mL	1 mL		
280-200917-A-1	P2-ARROYO-005-003	8330B, 8330B MOD	Solid	T	+10.31 g	40 mL		1 mL		
280-200917-A-1 MS	P2-ARROYO-005-003	8330B, 8330B MOD		T	+10.92 g	40 mL	1 mL	1 mL		
280-200917-A-1 MSD	P2-ARROYO-005-003	8330B, 8330B MOD		T	+10.41 g	40 mL	1 mL	1 mL		
280-200917-A-1 DU	P2-ARROYO-005-003	8330B, 8330B MOD		T	+10.35 g	40 mL		1 mL		
280-200917-A-1 TRL	P2-ARROYO-005-003	8330B, 8330B MOD		T	+10.61 g	40 mL		1 mL		

Batch Notes	
Solvent Name	0.1%AAinACN
Solvent Lot #	0.1%AAinACN_000249
Prep Solvent Volume Used	20 mL
Analyst ID - Reagent Drop Witness	Reviewer: EB
Analyst ID - Concentration	Spike Analyst: CW Filtration Analyst: EB
Balance ID	38602403
Balance is Level? (Y/N)	yes
Blank Sand Lot #	Ottawa_sand_0012
Pipette ID for Solvent	Firine
Pipette ID	JR
Sonication Start Time	12/18/24 12:19
Sonication Stop Time	12/19/24 6:19
Filter Type	0.22µm PTFE, Greenwood CWPTFE25220
Filter ID	12/17/24
SOP Number	DV-OP-0018
Batch Comment	Shaker Table: Innova

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.: 280-200917-1

SDG No.:

Batch Number: 678945 Batch Start Date: 12/18/24 12:11 Batch Analyst: Workman, Clayton

Batch Method: 8330B Batch End Date: 12/19/24 12:08

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job Number: 280-200917-1

SDG No.:

Project: Fort Wingate Depot Activity (FWDA)

Client Sample ID	Lab Sample ID
P2-ARROYO-005-003	280-200917-1

Comments:

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job Number: 280-200917-1

SDG Number:

Matrix: Solid Instrument ID: % M 2

Method: Moisture LOQ Date: 11/01/2009 00:00

Analyte	Wavelength/ Mass	LOQ (%)	
Percent Moisture		0.1	

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-200917-1

SDG No.:

Instrument ID: % M 2 Analysis Method: Moisture

Start Date: 12/19/2024 16:17 End Date: 12/19/2024 17:47

Lab Sample Id	D/F	Type	Time	Analytes																								
				Moist																								
ZZZZZZ (Client)			16:17																									
ZZZZZZ (QC)			16:17																									
ZZZZZZ (Client)			16:17																									
ZZZZZZ (Client)			16:17																									
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ZZZZZZ (Client)			16:35																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-200917-1

SDG No.:

Instrument ID: % M 2 Analysis Method: Moisture

Start Date: 12/19/2024 16:17 End Date: 12/19/2024 17:47

Lab Sample Id	D/F	Type	Time	Analytes
				Moist
ZZZZZZ (Client)			16:35	
ZZZZZZ (Client)			16:35	
ZZZZZZ (Client)			16:35	
ZZZZZZ (Client)			17:09	
ZZZZZZ (QC)			17:09	
ZZZZZZ (Client)			17:09	
ZZZZZZ (Client)			17:09	
ZZZZZZ (Client)			17:09	
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ZZZZZZ (Client)			17:09	
ZZZZZZ (Client)			17:23	
ZZZZZZ (Client)			17:47	
ZZZZZZ (QC)			17:47	
ZZZZZZ (Client)			17:47	
ZZZZZZ (Client)			17:47	
ZZZZZZ (Client)			17:47	
ZZZZZZ (Client)			17:47	
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ZZZZZZ (Client)			17:47	
ZZZZZZ (Client)			17:47	
ZZZZZZ (Client)			17:47	
ZZZZZZ (Client)			17:47	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins Denver Job No.: 280-200917-1

SDG No.:

Instrument ID: % M 2 Analysis Method: Moisture

Start Date: 12/19/2024 16:17 End Date: 12/19/2024 17:47

Lab Sample Id	D/F	Type	Time	Analytes																								
				Moist																								
ZZZZZZ (Client)			17:47																									
ZZZZZZ (Client)			17:47																									
ZZZZZZ (Client)			17:47																									
ZZZZZZ (Client)			17:47																									
ZZZZZZ (Client)			17:47																									
ZZZZZZ (Client)			17:47																									
280-200917-1	1	T	17:47	X																								
280-200917-1 DU	1	T	17:47	X																								
ZZZZZZ (Client)			17:47																									
ZZZZZZ (Client)			17:47																									
ZZZZZZ (Client)			17:47																									
ZZZZZZ (Client)			17:47																									
ZZZZZZ (Client)			17:47																									

Prep Types:
T = Total/NA

FORM XIII-IN

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-200917-1

SDG No.:

Batch Number: 679188 Batch Start Date: 12/19/24 16:17 Batch Analyst: Rutherford, Lindsay B

Batch Method: Moisture Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	DISH#	DishWeight	SampleMassWet	SampleMassDry	%_Moisture	%_Solid
280-200917-A-1	P2-ARROYO-005-003	Moisture	Solid	T	85	0.99 g	15.28 g	14.99 g	2.029391182645 2 %	97.97060881735 48 %
280-200917-A-1 DU	P2-ARROYO-005-003	Moisture		T	86	0.99 g	14.88 g	14.6 g	2.015838732901 4 %	97.98416126709 86 %

Lab Sample ID	Client Sample ID	Method Chain	Matrix	Basis	Quarantine_Hazard				
280-200917-A-1	P2-ARROYO-005-003	Moisture	Solid	T	n				
280-200917-A-1 DU	P2-ARROYO-005-003	Moisture		T	n				

Batch Notes	
Balance ID	24750836
Balance is Level? (Y/N)	yes
Oven ID	E
Thermometer ID	1354
Date samples were placed in the oven	12/19/2024
Time samples were place in the oven	18:52
Temperature - Start - Uncorrected	103 Degrees C
Oven Temp In	102 Degrees C
Date samples were removed from oven	12/20/2024
Time Samples were removed from oven	15:15
Analyst ID - Weighing	WC Dpt (Wet) IRC (Dry)
Temperature - End - Uncorrected	103 Degrees C
Oven Temp Out	104 Degrees C
Date and Time Samples in Desiccator	12/20/2024 15:16
Date and Time Samples out of Desiccator	12/20/2024 18:05
Batch Comment	WC Dpt/IRC

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins Denver Job No.: 280-200917-1

SDG No.:

Batch Number: 679188 Batch Start Date: 12/19/24 16:17 Batch Analyst: Rutherford, Lindsay B

Batch Method: Moisture Batch End Date:

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

General Chemistry Raw Data Report

Job ID: 280-200917-1

Batch: 679188 **Analyst Initials: LBR**

Method: Moisture **Instrument: Moisture Analyzer**

Lab Sample ID: 280-200917-A-1 **Analysis Date: Dec 19, 2024 17:47**

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	2.0293911826452	%

Lab Sample ID: 280-200917-A-1 DU **Analysis Date: Dec 19, 2024 17:47**

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	2.0158387329014	%

Shipping and Receiving Documents

Project Name: Parcel 3 Closure and Corrective Action				Project #: 60517380 Task 3	AECOM 12120 Shamrock Plaza #100 Omaha NE 68154														AECOM
Sampler: Jeff Hayes				Project Mgr John C. Carson PE				Analytical Parameters											402.334.8181
Date	Time	Comp	Grab	ID	Matrix	# Containers	Cont Type	VOC's 8260B	SVOC's 8270E	PCB's 8082A	Explosives 8330B	Perchlorates 6865	Metals 6010A.6020B.7471B+Hg	Nitrate 9056A	Cyanide 9014				Page 1 of 1
12/16/2024	11:14	X		P2-ARROYO-005-003	soil	1	4oz Jar				X								4C
Relenquished By: Jeffrey Hayes JBHayes																			AECOM Chemist:
Received By: EETDEN				12/16/2024				FEDEX 7708-1713-9830 Overnight											Wanda Davis
Relenquished By: 12-17-24 1010				Ship Time: 1600				To: EUROFINS DENVER											302-465-1997
Rcv'd for Lab by: 0.6°C PABU CF 0.2				5 day TAT REQUESTED				ATTN: /Shelby McCabe 4955 YARROW STREET ARVADA, CO 80002											Brian Rothmeyer 303-619-6342

280-200917 Chain of Custody

NO. 141906

12/27/2024
5:54:56 AM

ORIGIN ID:OMAA (402) 334-8181
JEFF HAYES
AECOM
12120 SHAMROCK PLAZA
STE 100
OMAHA, NE 68154
UNITED STATES US

SHIP DATE: 16DEC24
ACTWGT: 10.00 LB
CAD: 253913236/INET4535
DIMS: 13x12x12 IN

BILL SENDER

TO **SAMPLES RECEIVING**
EUROFINS TESTAMERICA, DENVER
4955 YARROW STREET
ARVADA CO 80002
13037360100
INV:
PO: FT WINGATE NM

REF: 60517380
DEPT: TASK 3

580J5/49B9/C6C4

FedEx Express

TUE - 17 DEC 12:00P
PRIORITY OVERNIGHT

TRK# 7708 1713 9830
0201

XS LAAA

80002
CO-US DEN

280-200917 Waybill

After printing this label:
CONSIGNEE COPY - PLEASE PLACE IN FRONT OF POUCH
1. Fold the printed page along the horizontal line.
2. Place label in shipping pouch and affix it to your shipment.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

Login Sample Receipt Checklist

Client: AECOM Technical Services Inc

Job Number: 280-200917-1

Login Number: 200917
List Number: 1
Creator: McCabe, Shelby R

List Source: Eurofins Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Attachment A

A.2 Data Validation Reports

Fort Wingate Depot Data Verification

Laboratory: Agriculture & Priority Pollutants Laboratories (APPL)
Sample Delivery Group (SDG): 24I0021
Technical Quality Review Chemist: Tegan Moore
AECOM Chemist: Hunter Dougla
Date Verified: 9/18/2024
Date Reviewed: 9/23/2024

Table 1 – Sample Summary and Laboratory Association

Field Sample Identification	Collection Date	Laboratory Identification	Sample Type	Matrix
P3HWMU-ARYO-0001	9/2/2024	24I0021-01	N	Soil
P3HWMU-ARYO-0002	9/2/2024	24I0021-02	N	Soil

Definitions: N (Normal)

Parameter (Method): Explosives (8330B)

Validation: Stage 2a Validation Electronic and Manual (S2aVEM), Stage 2b Validation Manual (S2bVM)

Automated Data Review (ADR) Software Identification: ADR.NET/1.11.0.1

Guidance Documents: Hazardous Waste Management Unit (HWMU) Work Plan, HWMU Parcel 3, Revision 1.0, Fort Wingate Depot Activity (FWDA), New Mexico (AECOM February 2017); Department of Defense (DoD) Quality Systems Manual version 5.0 (DoD, 2013); and method requirements.

The checklist below documents the data review. Boxes checked "No" resulted in sample qualification and/or require detailed explanation which is provided after the section showing the outlier unless otherwise specified. No qualification is required for not detected results associated with percent recoveries or RPDs that exceed control limits. Where multiple runs were reported for a method/sample, data quality for only the selected result is discussed below. Qualified data is presented in Table 2 Summary of Qualified Data at the end of this checklist.

ADR qualifiers were used to highlight initial data quality outliers for items in Section 1.0, 2.0, and 4.0 below. The final qualifiers were applied by the AECOM chemist and detailed explanations for the final qualifiers are presented below:

1.0 Qualified by ADR and Reviewed by AECOM Chemist

Verification Criteria	Yes	No	NA
Was a method blank analyzed for each preparation batch?	X		
Were method blank concentrations reported as not detected?	X		
Was an LCS analyzed with each preparation batch?	X		
Were LCS/LCSD recoveries and/or RPDs within project specific limits? (No qualification is required for not detected results associated with high recoveries or high RPDs).	X		
Were surrogate recoveries within project specified limits (two of three surrogates within criteria for 8270D)?	X		

2.0 Sample Documentation and Holding Times

Verification Criteria	Yes	No	NA
Were samples extracted and analyzed within QAPP specified holding times?	X		
Were all samples documented correctly on the chain-of-custody (COC) and samples labels?	X		
Were all sample identifications (IDs) documented correctly on sample labels?	X		
Did samples listed on COCs match the sample labels?	X		
Were samples relinquished properly on the COC?	X		

3.0 Instrument Quality Control and Performance Checks

A. Explosives (Method 8330B)

Explosives			
Initial Calibration (ICAL) Criteria	**Yes**	**No**	**NA**
Was the ICAL analyzed prior to sample analysis?	X		

Fort Wingate Depot Data Verification

Laboratory: Agriculture & Priority Pollutants Laboratories (APPL) **AECOM Chemist**: Hunter Dougla
Sample Delivery Group (SDG): 24I0021 **Date Verified:** 9/18/2024
Technical Quality Review Chemist: Tegan Moore **Date Reviewed:** 9/23/2024

Was the RSD for each analyte ≤ 15%, or alternative regression with $r^2 \geq 0.99$?	X		
If non-linear regression was used were 6 points used for second order and 7 points for third order?	X		
Initial Calibration Verification (ICV) Criteria	**Yes**	**No**	**NA**
Was the ICV analyzed after each calibration?	X		
Were all reported analytes within ± 20% of the true value?	X		
Continuing Calibration Verification (CCV) Criteria	**Yes**	**No**	**NA**
Was the CCV analyzed daily before sample analysis?	X		
Was the CCV analyzed every 10 field samples and at the end of the analysis sequence?	X		
Were all reported analytes within ± 20% of the true value?	X		
Matrix Spike/Matrix Spike Duplicates (MS/MSD) Criteria	**Yes**	**No**	**NA**
For concentrations <4x the spike concentration, were MS/MSD recoveries and RPDs within criteria? (No qualification is required for not detected results associated with high recoveries or high RPDs).			X
Column Agreement	**Yes**	**No**	**NA**
Did results between the two columns meet laboratory limits?	X		
Comparison of Triplicate Results	**Yes**	**No**	**NA**
Was the relative standard deviation (RSD) for triplicate results within ± 20% for results reported above the LOQ?			X

4.0 Field Duplicate Samples

Field Duplicate Criteria	**Yes**	**No**	**NA**
Were field duplicate samples collected for this SDG? (if yes, list below)?		X	
Were parent sample / field duplicate ≤ 50% for soil analytes that had concentrations > 5x the LOQ?			X
Were the differences between the parent sample / field duplicate < 2x the LOQ for analytes that had concentrations < 5x the LOQ?			X

5.0 Sensitivity and Additional Qualification

Sensitivity Criteria	**Yes**	**No**	**NA**
Was the laboratory sensitivity consistent with project (QAPP) requirements?	X		
Did all analytes meet sensitivity requirements?	X		
Completeness Criteria	**Yes**	**No**	**NA**
Were the reported results usable if qualified?	X		
Were the analyses requested performed, the correct analyte lists used, and correct sample preparation and analyses methods and units utilized?	X		
Additional Qualification Criteria	**Yes**	**No**	**NA**
Were common laboratory contaminants undetected?	X		
Was professional judgment used to qualify data (if yes, list below)?		X	
Trace level detections, results reported between the detection limit (DL) and the limit of quantitation (LOQ) were qualified as estimated by the laboratory and retained during validation? (Not shown on Table 2)	X		
Re-analyses	**Yes**	**No**	**NA**
Were multiple results reported? If so, summarize how the results were selected.		X	

Data Qualifier Summary

Lab Reporting Batch ID: 24I0021 **Laboratory: APPL**

EDD Filename: 24I0021 FINAL **eQAPP Name: Fort Wingate Parcel 3 rev 10**

Method Category: **SVOA**

Method: **8330B** ***Matrix:*** **Soil**

Sample ID: **P3HWMU-ARYO-0002** ***Collected:*** **9/2/2024 9:26:00 AM** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
2-AMINO-4,6-DINITROTOLUENE	0.22	D,J	0.074	LOD	0.50	LOQ	mg/kg	J	RI
4-AMINO-2,6-DINITROTOLUENE	0.35	D,J	0.074	LOD	0.50	LOQ	mg/kg	J	RI

* denotes a non-reportable result

Project Name and Number: Wingate 60517380 Task 3 - Wingate

Data Qualifier Summary

Lab Reporting Batch ID: 24I0021 **Laboratory: APPL**

EDD Filename: 24I0021 FINAL **eQAPP Name: Fort Wingate Parcel 3 rev 10**

Reason Code Legend

Reason Code	*Description*
RI	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: Wingate 60517380 Task 3 - Wingate

Fort Wingate Depot Data Verification

Laboratory: Agriculture & Priority Pollutants Laboratories (APPL)
Sample Delivery Group (SDG): 24I0132
Technical Quality Review Chemist: Brian Rothmeyer

AECOM Chemist: Greg Salata
Date Verified: 10/7/2024
Date Reviewed: 10/25/2024

Table 1 – Sample Summary and Laboratory Association

Field Sample Identification	Collection Date	Laboratory Identification	Sample Type	Matrix
P2-ARROYO-0003	9/14/2024	24I0132-01	N	Soil
P2-ARROYO-0004	9/14/2024	24I0132-02	N,MS/MSD	Soil

Definitions: N (Normal)
MS/MSD (matrix spike/matrix spike duplicate) for one or more analytical methods

Parameter (Method): Explosives (8330B)

Validation: Stage 2a Validation Electronic and Manual (S2aVEM), Stage 2b Validation Manual (S2bVM)

Automated Data Review (ADR) Software Identification: ADR.NET/1.11.0.1

Guidance Documents: Hazardous Waste Management Unit (HWMU) Work Plan, HWMU Parcel 3, Revision 1.0, Fort Wingate Depot Activity (FWDA), New Mexico (AECOM February 2017); Department of Defense (DoD) Quality Systems Manual version 5.0 (DoD, 2013); and method requirements.

The checklist below documents the data review. Boxes checked "No" resulted in sample qualification and/or require detailed explanation which is provided after the section showing the outlier unless otherwise specified. No qualification is required for not detected results associated with percent recoveries or RPDs that exceed control limits. Where multiple runs were reported for a method/sample, data quality for only the selected result is discussed below. Qualified data is presented in Table 2 Summary of Qualified Data at the end of this checklist.

ADR qualifiers were used to highlight initial data quality outliers for items in Section 1.0, 2.0, and 4.0 below. The final qualifiers were applied by the AECOM chemist and detailed explanations for the final qualifiers are presented below:

1.0 Qualified by ADR and Reviewed by AECOM Chemist

Verification Criteria	Yes	No	NA
Was a method blank analyzed for each preparation batch?	X		
Were method blank concentrations reported as not detected?	X		
Was an LCS analyzed with each preparation batch?	X		
Were LCS/LCSD recoveries and/or RPDs within project specific limits? (No qualification is required for not detected results associated with high recoveries or high RPDs).	X		
Were surrogate recoveries within project specified limits (two of three surrogates within criteria for 8270D)?	X		

2.0 Sample Documentation and Holding Times

Verification Criteria	Yes	No	NA
Were samples extracted and analyzed within QAPP specified holding times?	X		
Were all samples documented correctly on the chain-of-custody (COC) and samples labels?	X		
Were all sample identifications (IDs) documented correctly on sample labels?	X		
Did samples listed on COCs match the sample labels?	X		
Were samples relinquished properly on the COC?	X		

Fort Wingate Depot Data Verification

Laboratory: Agriculture & Priority Pollutants Laboratories (APPL)
Sample Delivery Group (SDG): 24I0132
Technical Quality Review Chemist: Brian Rothmeyer

AECOM Chemist: Greg Salata
Date Verified: 10/7/2024
Date Reviewed: 10/25/2024

3.0 Instrument Quality Control and Performance Checks

A. Explosives (Method 8330B)

Explosives			
Initial Calibration (ICAL) Criteria	**Yes**	**No**	**NA**
Was the ICAL analyzed prior to sample analysis?	X		
Was the RSD for each analyte ≤ 15%, or alternative regression with $r^2 \geq 0.99$?	X		
If non-linear regression was used were 6 points used for second order and 7 points for third order?	X		
Initial Calibration Verification (ICV) Criteria	**Yes**	**No**	**NA**
Was the ICV analyzed after each calibration?	X		
Were all reported analytes within ± 20% of the true value?	X		
Continuing Calibration Verification (CCV) Criteria	**Yes**	**No**	**NA**
Was the CCV analyzed daily before sample analysis?	X		
Was the CCV analyzed every 10 field samples and at the end of the analysis sequence?	X		
Were all reported analytes within ± 20% of the true value?	X		
Matrix Spike/Matrix Spike Duplicates (MS/MSD) Criteria	**Yes**	**No**	**NA**
For concentrations <4x the spike concentration, were MS/MSD recoveries and RPDs within criteria? (No qualification is required for not detected results associated with high recoveries or high RPDs).		X[1]	
Column Agreement	**Yes**	**No**	**NA**
Did results between the two columns meet laboratory limits?	X		
Comparison of Triplicate Results	**Yes**	**No**	**NA**
Was the relative standard deviation (RSD) for triplicate results within ± 20% for results reported above the LOQ?			X

1. The following MS/MSD recovery and RPD was outside control limits:

MS/MSD Sample ID	Parameter	Analyte	MS/MSD Recovery	MS/MSD RPD	MS/MSD/RPD Criteria
P2-ARROYO-0004	Explosives	Methyl-2,4,6-Trinitrophenylnitramine	**53.7/59.6**	10.4	68-135/20

Qualified data is presented in Table 2 – Summary of Qualified Data.

4.0 Field Duplicate Samples

Field Duplicate Criteria	Yes	No	NA
Were field duplicate samples collected for this SDG? (if yes, list below)?		X	
Were parent sample / field duplicate ≤ 50% for soil analytes that had concentrations > 5x the LOQ?			X
Were the differences between the parent sample / field duplicate < 2x the LOQ for analytes that had concentrations < 5x the LOQ?			X

5.0 Sensitivity and Additional Qualification

Sensitivity Criteria	Yes	No	NA
Was the laboratory sensitivity consistent with project (QAPP) requirements?	X		
Did all analytes meet sensitivity requirements?	X		
Completeness Criteria	**Yes**	**No**	**NA**
Were the reported results usable if qualified?	X		

Fort Wingate Depot Data Verification

Laboratory: Agriculture & Priority Pollutants Laboratories (APPL)
Sample Delivery Group (SDG): 24I0132
Technical Quality Review Chemist: Brian Rothmeyer

AECOM Chemist: Greg Salata
Date Verified: 10/7/2024
Date Reviewed: 10/25/2024

Were the analyses requested performed, the correct analyte lists used, and correct sample preparation and analyses methods and units utilized?	X		
Additional Qualification Criteria	**Yes**	**No**	**NA**
Were common laboratory contaminants undetected?	X		
Was professional judgment used to qualify data (if yes, list below)?		X	
Trace level detections, results reported between the detection limit (DL) and the limit of quantitation (LOQ) were qualified as estimated by the laboratory and retained during validation? (Not shown on Table 2)	X		
Re-analyses	**Yes**	**No**	**NA**
Were multiple results reported? If so, summarize how the results were selected.		X	

Fort Wingate Depot Data Verification

Laboratory: Agriculture & Priority Pollutants Laboratories (APPL)
Sample Delivery Group (SDG): 24I0132
Technical Quality Review Chemist: Brian Rothmeyer

AECOM Chemist: Greg Salata
Date Verified: 10/7/2024
Date Reviewed: 10/25/2024

Table 2 – Summary of Qualified Data

SDG	Field Identification	Analysis	Analyte	Value for Reporting Limit*	AECOM Qualifier	Reason Codes
24I0132	P2-ARROYO-0004	Explosives	Methyl-2,4,6-Trinitrophenylnitramine	N/A	UJ	MS/MSD low

* – The analyte was detected in an associated blank and the result was qualified as not detected at the concentration shown in the column "Value for Reporting Limit".
N/A – Not Applicable
J – The reported result was an estimated value with an unknown bias.

Data Qualifier Summary

Lab Reporting Batch ID: 24I0132 **Laboratory: APPL**

EDD Filename: 24I0132 FINAL **eQAPP Name: Fort Wingate Parcel 3 rev 10**

Method Category: **SVOA**

Sample ID: **P2-ARROYO-0003** ***Collected:*** **9/14/2024 8:36:00 AM** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX)	0.052	D,J	0.074	LOD	0.50	LOQ	mg/kg	J	RI
2-AMINO-4,6-DINITROTOLUENE	0.096	D,J	0.074	LOD	0.50	LOQ	mg/kg	J	RI

Sample ID: **P2-ARROYO-0004** ***Collected:*** **9/14/2024 8:40:00 AM** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
Methyl-2,4,6-TrinitrophenylNitramine (Tetryl)	0.074	U	0.074	LOD	0.50	LOQ	mg/kg	UJ	Ms

* denotes a non-reportable result

Project Name and Number: Wingate 60517380 Task 3 - Wingate

Data Qualifier Summary

Lab Reporting Batch ID: 24I0132 **Laboratory: APPL**

EDD Filename: 24I0132 FINAL **eQAPP Name: Fort Wingate Parcel 3 rev 10**

Reason Code Legend

Reason Code	*Description*
Ms	Matrix Spike Lower Estimation
RI	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: Wingate 60517380 Task 3 - Wingate

Fort Wingate Depot Data Verification

Laboratory: Agriculture & Priority Pollutants Laboratories (APPL)
Sample Delivery Group (SDG): 24I0203
Technical Quality Review Chemist: Brian Rothmeyer

AECOM Chemist: Greg Salata
Date Verified: 10/8/2024
Date Reviewed: 10/25/2024

Table 1 – Sample Summary and Laboratory Association

Field Sample Identification	Collection Date	Laboratory Identification	Sample Type	Matrix
P2-ARROYO-0005	9/21/2024	24I0203-01	N	Soil
P2-ARROYO-0006	9/21/2024	24I0203-02	N	Soil
P2-ARROYO-0007	9/21/2024	24I0203-03	N,MS/MSD	Soil

Definitions: N (Normal)
MS/MSD (matrix spike/matrix spike duplicate) for one or more analytical methods

Parameter (Method): Explosives (8330B)

Validation: Stage 2a Validation Electronic and Manual (S2aVEM), Stage 2b Validation Manual (S2bVM)

Automated Data Review (ADR) Software Identification: ADR.NET/1.11.0.1

Guidance Documents: Hazardous Waste Management Unit (HWMU) Work Plan, HWMU Parcel 3, Revision 1.0, Fort Wingate Depot Activity (FWDA), New Mexico (AECOM February 2017); Department of Defense (DoD) Quality Systems Manual version 5.0 (DoD, 2013); and method requirements.

The checklist below documents the data review. Boxes checked "No" resulted in sample qualification and/or require detailed explanation which is provided after the section showing the outlier unless otherwise specified. No qualification is required for not detected results associated with percent recoveries or RPDs that exceed control limits. Where multiple runs were reported for a method/sample, data quality for only the selected result is discussed below. Qualified data is presented in Table 2 Summary of Qualified Data at the end of this checklist.

ADR qualifiers were used to highlight initial data quality outliers for items in Section 1.0, 2.0, and 4.0 below. The final qualifiers were applied by the AECOM chemist and detailed explanations for the final qualifiers are presented below:

1.0 Qualified by ADR and Reviewed by AECOM Chemist

Verification Criteria	Yes	No	NA
Was a method blank analyzed for each preparation batch?	X		
Were method blank concentrations reported as not detected?	X		
Was an LCS analyzed with each preparation batch?	X		
Were LCS/LCSD recoveries and/or RPDs within project specific limits? (No qualification is required for not detected results associated with high recoveries or high RPDs).	X		
Were surrogate recoveries within project specified limits (two of three surrogates within criteria for 8270D)?	X		

2.0 Sample Documentation and Holding Times

Verification Criteria	Yes	No	NA
Were samples extracted and analyzed within QAPP specified holding times?	X		
Were all samples documented correctly on the chain-of-custody (COC) and samples labels?	X		
Were all sample identifications (IDs) documented correctly on sample labels?	X		
Did samples listed on COCs match the sample labels?	X		
Were samples relinquished properly on the COC?	X		

Fort Wingate Depot Data Verification

Laboratory: Agriculture & Priority Pollutants Laboratories (APPL)
Sample Delivery Group (SDG): 24I0203
Technical Quality Review Chemist: Brian Rothmeyer

AECOM Chemist: Greg Salata
Date Verified: 10/8/2024
Date Reviewed: 10/25/2024

3.0 Instrument Quality Control and Performance Checks

A. Explosives (Method 8330B)

Explosives			
Initial Calibration (ICAL) Criteria	**Yes**	**No**	**NA**
Was the ICAL analyzed prior to sample analysis?	X		
Was the RSD for each analyte ≤ 15%, or alternative regression with $r^2 \geq 0.99$?	X		
If non-linear regression was used were 6 points used for second order and 7 points for third order?	X		
Initial Calibration Verification (ICV) Criteria	**Yes**	**No**	**NA**
Was the ICV analyzed after each calibration?	X		
Were all reported analytes within ± 20% of the true value?	X		
Continuing Calibration Verification (CCV) Criteria	**Yes**	**No**	**NA**
Was the CCV analyzed daily before sample analysis?	X		
Was the CCV analyzed every 10 field samples and at the end of the analysis sequence?	X		
Were all reported analytes within ± 20% of the true value?	X		
Matrix Spike/Matrix Spike Duplicates (MS/MSD) Criteria	**Yes**	**No**	**NA**
For concentrations <4x the spike concentration, were MS/MSD recoveries and RPDs within criteria? (No qualification is required for not detected results associated with high recoveries or high RPDs).		X[1]	
Column Agreement	**Yes**	**No**	**NA**
Did results between the two columns meet laboratory limits?	X		
Comparison of Triplicate Results	**Yes**	**No**	**NA**
Was the relative standard deviation (RSD) for triplicate results within ± 20% for results reported above the LOQ?			X

1. The following MS recovery and RPDs were outside control limits:

MS/MSD Sample ID	Parameter	Analyte	MS/MSD Recovery	MS/MSD RPD	MS/MSD/RPD Criteria
P2-ARROYO-0007	Explosives	Methyl-2,4,6-Trinitrophenylnitramine	85.4/68.0	**23.1**	68-135/20
P2-ARROYO-0007	Explosives	2,4,6-Trinitrotoluene	**147**/110	**22.5**	71-120/20

Qualified data is presented in Table 2 – Summary of Qualified Data. No qualification is required for sample results reported as not detected associated with a high RPD.

4.0 Field Duplicate Samples

Field Duplicate Criteria	Yes	No	NA
Were field duplicate samples collected for this SDG? (if yes, list below)?		X	
Were parent sample / field duplicate ≤ 50% for soil analytes that had concentrations > 5x the LOQ?			X
Were the differences between the parent sample / field duplicate < 2x the LOQ for analytes that had concentrations < 5x the LOQ?			X

5.0 Sensitivity and Additional Qualification

Sensitivity Criteria	Yes	No	NA
Was the laboratory sensitivity consistent with project (QAPP) requirements?	X		
Did all analytes meet sensitivity requirements?	X		

Fort Wingate Depot Data Verification

Laboratory: Agriculture & Priority Pollutants Laboratories (APPL)
Sample Delivery Group (SDG): 24I0203
Technical Quality Review Chemist: Brian Rothmeyer

AECOM Chemist: Greg Salata
Date Verified: 10/8/2024
Date Reviewed: 10/25/2024

Completeness Criteria	**Yes**	**No**	**NA**
Were the reported results usable if qualified?	X		
Were the analyses requested performed, the correct analyte lists used, and correct sample preparation and analyses methods and units utilized?	X		
Additional Qualification Criteria	**Yes**	**No**	**NA**
Were common laboratory contaminants undetected?	X		
Was professional judgment used to qualify data (if yes, list below)?		X	
Trace level detections, results reported between the detection limit (DL) and the limit of quantitation (LOQ) were qualified as estimated by the laboratory and retained during validation? (Not shown on Table 2)	X		
Re-analyses	**Yes**	**No**	**NA**
Were multiple results reported? If so, summarize how the results were selected.		X	

Fort Wingate Depot Data Verification

Laboratory: Agriculture & Priority Pollutants Laboratories (APPL)
Sample Delivery Group (SDG): 24I0203
Technical Quality Review Chemist: Brian Rothmeyer

AECOM Chemist: Greg Salata
Date Verified: 10/8/2024
Date Reviewed: 10/25/2024

Table 2 – Summary of Qualified Data

SDG	Field Identification	Analysis	Analyte	Value for Reporting Limit*	AECOM Qualifier	Reason Codes
24I0203	P2-ARROYO-0007	Explosives	2,4,6-Trinitrotoluene	N/A	J	High MS, High %RPD

* – The analyte was detected in an associated blank and the result was qualified as not detected at the concentration shown in the column "Value for Reporting Limit".
N/A – Not Applicable
J – The reported result was an estimated value with an unknown bias.

Data Qualifier Summary

Lab Reporting Batch ID: 24I0203 **Laboratory: APPL**

EDD Filename: 24I0203 FINAL **eQAPP Name: Fort Wingate Parcel 3 rev 10**

Method Category: **SVOA**

Sample ID: **P2-ARROYO-0005** ***Collected:*** **9/21/2024 9:15:00 AM** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
4-AMINO-2,6-DINITROTOLUENE	0.11	D,J	0.075	LOD	0.50	LOQ	mg/kg	J	RI

Sample ID: **P2-ARROYO-0007** ***Collected:*** **9/21/2024 9:19:00 AM** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
2,4,6-TRINITROTOLUENE	0.74	D	0.075	LOD	0.50	LOQ	mg/kg	J	Ms, Ms

* denotes a non-reportable result

Project Name and Number: Wingate 60517380 Task 3 - Wingate

Data Qualifier Summary

Lab Reporting Batch ID: 24I0203 **Laboratory: APPL**

EDD Filename: 24I0203 FINAL **eQAPP Name: Fort Wingate Parcel 3 rev 10**

Reason Code Legend

Reason Code	*Description*
Ms	Matrix Spike Precision
Ms	Matrix Spike Upper Estimation
RI	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: Wingate 60517380 Task 3 - Wingate

Fort Wingate Depot Data Verification

Laboratory: Agriculture & Priority Pollutants Laboratories (APPL)
Sample Delivery Group (SDG): 24J0093
Technical Quality Review Chemist: Brian Rothmeyer

AECOM Chemist: Greg Salata
Date Verified: 10/30/2024
Date Reviewed: 11/1/2024

Table 1 – Sample Summary and Laboratory Association

Field Sample Identification	Collection Date	Laboratory Identification	Sample Type	Matrix
P2ARROYO-0008	10/5/2024	24J0093-01	N	Soil

Definitions: N (Normal)

Parameter (Method): Explosives (8330B)

Validation: Stage 2a Validation Electronic and Manual (S2aVEM), Stage 2b Validation Manual (S2bVM)

Automated Data Review (ADR) Software Identification: ADR.NET/1.11.0.1

Guidance Documents: Hazardous Waste Management Unit (HWMU) Work Plan, HWMU Parcel 3, Revision 1.0, Fort Wingate Depot Activity (FWDA), New Mexico (AECOM February 2017); Department of Defense (DoD) Quality Systems Manual version 5.0 (DoD, 2013); and method requirements.

The checklist below documents the data review. Boxes checked "No" resulted in sample qualification and/or require detailed explanation which is provided after the section showing the outlier unless otherwise specified. No qualification is required for not detected results associated with percent recoveries or RPDs that exceed control limits. Where multiple runs were reported for a method/sample, data quality for only the selected result is discussed below. Qualified data is presented in Table 2 Summary of Qualified Data at the end of this checklist.

ADR qualifiers were used to highlight initial data quality outliers for items in Section 1.0, 2.0, and 4.0 below. The final qualifiers were applied by the AECOM chemist and detailed explanations for the final qualifiers are presented below:

1.0 Qualified by ADR and Reviewed by AECOM Chemist

Verification Criteria	Yes	No	NA
Was a method blank analyzed for each preparation batch?	X		
Were method blank concentrations reported as not detected?	X		
Was an LCS analyzed with each preparation batch?	X		
Were LCS/LCSD recoveries and/or RPDs within project specific limits? (No qualification is required for not detected results associated with high recoveries or high RPDs).		X[1]	
Were surrogate recoveries within project specified limits (two of three surrogates within criteria for 8270D)?	X		

1. The following LCS/LCSD recoveries and RPD were outside control limits:

LCS/LCSD Sample ID	Parameter	Analyte	LCS/LCSD Recovery	LCS/LCSD RPD	LCS/LCSD/RPD Criteria
BDJ0318-BS1 BDJ0318-BSD1	Explosives	Methyl-2,4,6-Trinitrophenylnitramine	**50.6/64.2**	**21.9**	68-135

Qualified data are presented in Table 2 – Summary of Qualified Data. No qualification is required for not detected results associated with a high RPD.

2.0 Sample Documentation and Holding Times

Verification Criteria	Yes	No	NA
Were samples extracted and analyzed within QAPP specified holding times?	X		
Were all samples documented correctly on the chain-of-custody (COC) and samples labels?	X		
Were all sample identifications (IDs) documented correctly on sample labels?	X		
Did samples listed on COCs match the sample labels?	X		

Fort Wingate Depot Data Verification

Laboratory: Agriculture & Priority Pollutants Laboratories (APPL)
Sample Delivery Group (SDG): 24J0093
Technical Quality Review Chemist: Brian Rothmeyer

AECOM Chemist: Greg Salata
Date Verified: 10/30/2024
Date Reviewed: 11/1/2024

Were samples relinquished properly on the COC?	X		

3.0 Instrument Quality Control and Performance Checks

A. Explosives (Method 8330B)

Explosives			
Initial Calibration (ICAL) Criteria	**Yes**	**No**	**NA**
Was the ICAL analyzed prior to sample analysis?	X		
Was the RSD for each analyte ≤ 15%, or alternative regression with $r^2 \geq 0.99$?	X		
If non-linear regression was used were 6 points used for second order and 7 points for third order?	X		
Initial Calibration Verification (ICV) Criteria	**Yes**	**No**	**NA**
Was the ICV analyzed after each calibration?	X		
Were all reported analytes within ± 20% of the true value?	X		
Continuing Calibration Verification (CCV) Criteria	**Yes**	**No**	**NA**
Was the CCV analyzed daily before sample analysis?	X		
Was the CCV analyzed every 10 field samples and at the end of the analysis sequence?	X		
Were all reported analytes within ± 20% of the true value?	X		
Matrix Spike/Matrix Spike Duplicates (MS/MSD) Criteria	**Yes**	**No**	**NA**
For concentrations <4x the spike concentration, were MS/MSD recoveries and RPDs within criteria? (No qualification is required for not detected results associated with high recoveries or high RPDs).			X
Column Agreement	**Yes**	**No**	**NA**
Did results between the two columns meet laboratory limits?	X		
Comparison of Triplicate Results	**Yes**	**No**	**NA**
Was the relative standard deviation (RSD) for triplicate results within ± 20% for results reported above the LOQ?			X

4.0 Field Duplicate Samples

Field Duplicate Criteria	**Yes**	**No**	**NA**
Were field duplicate samples collected for this SDG? (if yes, list below)?		X	
Were parent sample / field duplicate ≤ 50% for soil analytes that had concentrations > 5x the LOQ?			X
Were the differences between the parent sample / field duplicate < 2x the LOQ for analytes that had concentrations < 5x the LOQ?			X

5.0 Sensitivity and Additional Qualification

Sensitivity Criteria	**Yes**	**No**	**NA**
Was the laboratory sensitivity consistent with project (QAPP) requirements?	X		
Did all analytes meet sensitivity requirements?	X		
Completeness Criteria	**Yes**	**No**	**NA**
Were the reported results usable if qualified?	X		
Were the analyses requested performed, the correct analyte lists used, and correct sample preparation and analyses methods and units utilized?	X		
Additional Qualification Criteria	**Yes**	**No**	**NA**
Were common laboratory contaminants undetected?	X		
Was professional judgment used to qualify data (if yes, list below)?		X	

Fort Wingate Depot Data Verification

Laboratory: Agriculture & Priority Pollutants Laboratories (APPL)
Sample Delivery Group (SDG): 24J0093
Technical Quality Review Chemist: Brian Rothmeyer

AECOM Chemist: Greg Salata
Date Verified: 10/30/2024
Date Reviewed: 11/1/2024

Trace level detections, results reported between the detection limit (DL) and the limit of quantitation (LOQ) were qualified as estimated by the laboratory and retained during validation? (Not shown on Table 2)	X		
Re-analyses	**Yes**	**No**	**NA**
Were multiple results reported? If so, summarize how the results were selected.		X	

Fort Wingate Depot Data Verification

Laboratory: Agriculture & Priority Pollutants Laboratories (APPL)
Sample Delivery Group (SDG): 24J0093
Technical Quality Review Chemist: Brian Rothmeyer

AECOM Chemist: Greg Salata
Date Verified: 10/30/2024
Date Reviewed: 11/1/2024

Table 2 – Summary of Qualified Data

SDG	Field Identification	Analysis	Analyte	Value for Reporting Limit*	AECOM Qualifier	Reason Codes
24J0093	P2ARROYO-0008	Explosives	Methyl-2,4,6-Trinitrophenylnitramine	N/A	UJ	Low LCS/LCSD

* – The analyte was detected in an associated blank and the result was qualified as not detected at the concentration shown in the column "Value for Reporting Limit".
N/A – Not Applicable
UJ – The analyte was not detected and was reported as less than the LOD. However, the associated numerical value is approximate.

Data Qualifier Summary

Lab Reporting Batch ID: 24J0093 **Laboratory: APPL**

EDD Filename: 24J0093 FINAL **eQAPP Name: Fort Wingate Parcel 3 rev 10**

Method Category: **SVOA**

Sample ID: **P2ARROYO-008** ***Collected:*** **10/5/2024 11:30:00 AM** ***Analysis Type:*** **Initial/TOT** ***Dilution:*** **1**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	0.073	U	0.073	LOD	0.49	LOQ	mg/kg	UJ	Lcs
2,6-DINITROTOLUENE	0.10	D,J,MI5	0.073	LOD	0.49	LOQ	mg/kg	J	RI

* denotes a non-reportable result

Project Name and Number: Wingate 60517380 Task 3 - Wingate

Data Qualifier Summary

Lab Reporting Batch ID: 24J0093 **Laboratory: APPL**

EDD Filename: 24J0093 FINAL **eQAPP Name: Fort Wingate Parcel 3 rev 10**

Reason Code Legend

Reason Code	*Description*
Lcs	Laboratory Control Precision
Lcs	Laboratory Control Spike Lower Estimation
RI	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: Wingate 60517380 Task 3 - Wingate

Fort Wingate Depot Data Verification

Laboratory: Eurofins Environmental Testing
Sample Delivery Group (SDG): 280-200203-1
Technical Quality Review Chemist: Brian Rothmeyer

AECOM Chemist: Greg Salata
Date Verified: 12/9/2024
Date Reviewed: 12/9/2024

Table 1 – Sample Summary and Laboratory Association

Field Sample Identification	Collection Date	Laboratory Identification	Sample Type	Matrix
P3HWMU-CONTAM-001-002	12/2/2024	280-200203-1	N	Soil
P3HWMU-CONTAM-003-002	12/2/2024	280-200203-2	N,MS/MSD	Soil
P2-ARROYO-005-002	12/2/2024	280-200203-3	N	Soil

Definitions: N (Normal)
MS/MSD (matrix spike/matrix spike duplicate) for one or more analytical methods

Parameter (Method): Explosives (8330B)

Validation: Stage 2a Validation Electronic and Manual (S2aVEM), Stage 2b Validation Manual (S2bVM)

Automated Data Review (ADR) Software Identification: None

Guidance Documents: Hazardous Waste Management Unit (HWMU) Work Plan, HWMU Parcel 3, Revision 1.0, Fort Wingate Depot Activity (FWDA), New Mexico (AECOM February 2017); Department of Defense (DoD) Quality Systems Manual version 5.0 (DoD, 2013); and method requirements.

The checklist below documents the data review. Boxes checked "No" resulted in sample qualification and require detailed explanation which is provided after the section showing the outlier. No qualification is required for not detected results associated with percent recoveries or RPDs that exceed control limits. Where multiple runs were reported for a method/sample, data quality for only the selected result is discussed below. Qualified data are presented in Table 2 Summary of Qualified Data at the end of this checklist.

The final qualifiers were applied by the AECOM chemist and detailed explanations for the final qualifiers are presented below.

1.0 Reviewed by AECOM Chemist

Verification Criteria	Yes	No	NA
Was a method blank analyzed for each preparation batch?	X		
Were method blank concentrations reported as not detected?	X		
Was an LCS analyzed with each preparation batch?	X		
Were LCS/LCSD recoveries and/or RPDs within project specific limits? (No qualification is required for not detected results associated with high recoveries or high RPDs).	X		
Were surrogate recoveries within project specified limits (two of three surrogates within criteria for 8270D)?		X[1]	

1. During review of the explosives results, it was determined that sample P2-ARROYO-005-002 (200x) was diluted beyond the laboratory's ability to quantitate surrogate recoveries. As such, no further action was required, and data qualification was not considered necessary.

2.0 Sample Documentation and Holding Times

Verification Criteria	Yes	No	NA
Were samples extracted and analyzed within QAPP specified holding times?	X		
Were all samples documented correctly on the chain-of-custody (COC) and samples labels?	X		
Were all sample identifications (IDs) documented correctly on sample labels?	X		
Did samples listed on COCs match the sample labels?	X		
Were samples relinquished properly on the COC?	X		

Fort Wingate Depot Data Verification

Laboratory: Eurofins Environmental Testing
Sample Delivery Group (SDG): 280-200203-1
Technical Quality Review Chemist: Brian Rothmeyer

AECOM Chemist: Greg Salata
Date Verified: 12/9/2024
Date Reviewed: 12/9/2024

3.0 Instrument Quality Control and Performance Checks

A. Explosives (Method 8330B)

Explosives			
Initial Calibration (ICAL) Criteria	**Yes**	**No**	**NA**
Was the ICAL analyzed prior to sample analysis?	X		
Was the RSD for each analyte ≤ 15%, or alternative regression with $r^2 \geq 0.99$?	X		
If non-linear regression was used were 6 points used for second order and 7 points for third order?	X		
Initial Calibration Verification (ICV) Criteria	**Yes**	**No**	**NA**
Was the ICV analyzed after each calibration?	X		
Were all reported analytes within ± 20% of the true value?	X		
Continuing Calibration Verification (CCV) Criteria	**Yes**	**No**	**NA**
Was the CCV analyzed daily before sample analysis?	X		
Was the CCV analyzed every 10 field samples and at the end of the analysis sequence?	X		
Were all reported analytes within ± 20% of the true value?	X		
Matrix Spike/Matrix Spike Duplicates (MS/MSD) Criteria	**Yes**	**No**	**NA**
For concentrations <4x the spike concentration, were MS/MSD recoveries and RPDs within criteria? (No qualification is required for not detected results associated with high recoveries or high RPDs).	X		
Column Agreement	**Yes**	**No**	**NA**
Did results between the two columns meet laboratory limits?	X		
Comparison of Triplicate Results	**Yes**	**No**	**NA**
Was the relative standard deviation (RSD) for triplicate results within ± 20% for results reported above the LOQ?		X[1]	

1. Analytical data that required qualification based on parent sample/field duplicate/field triplicate precision are included in the table below.

Parent Sample ID	Parameter	Analyte	Triplicate RSD	RSD Criteria
P3HWMU-CONTAM-003-002	Explosives	2,4,6-Trinitrotoluene	**+121**	±20

Qualified data are presented in Table 2 – Summary of Qualified Data.

4.0 Field Duplicate Samples

Field Duplicate Criteria	Yes	No	NA
Were field duplicate samples collected for this SDG? (if yes, list below)?		X	
Were parent sample / field duplicate and parent / triplicates RPDs ≤ 50% for soil analytes that had concentrations > 5x the LOQ?			X
Were the differences between the parent sample / field duplicate RPDs < 2x the LOQ for analytes that had concentrations < 5x the LOQ?			X

5.0 Sensitivity and Additional Qualification

Sensitivity Criteria	Yes	No	NA
Was the laboratory sensitivity consistent with project (QAPP) requirements?	X		
Did all analytes meet sensitivity requirements?	X		
Completeness Criteria	**Yes**	**No**	**NA**

Fort Wingate Depot Data Verification

Laboratory: Eurofins Environmental Testing
Sample Delivery Group (SDG): 280-200203-1
Technical Quality Review Chemist: Brian Rothmeyer

AECOM Chemist: Greg Salata
Date Verified: 12/9/2024
Date Reviewed: 12/9/2024

Were the reported results usable if qualified?	X		
Were the analyses requested performed, the correct analyte lists used, and correct sample preparation and analyses methods and units utilized?	X		
Additional Qualification Criteria	**Yes**	**No**	**NA**
Were common laboratory contaminants undetected?	X		
Was professional judgment used to qualify data (if yes, list below)?		X	
Trace level detections, results reported between the detection limit (DL) and the limit of quantitation (LOQ) were qualified as estimated by the laboratory and retained during validation? (Not shown on Table 2)	X		
Re-analyses	**Yes**	**No**	**NA**
Were multiple results reported? If so, summarize how the results were selected.		X	
Other	**Yes**	**No**	**NA**
No additional qualification was applied.	X		

Fort Wingate Depot Data Verification

Laboratory: Eurofins Environmental Testing
Sample Delivery Group (SDG): 280-200203-1
Technical Quality Review Chemist: Brian Rothmeyer

AECOM Chemist: Greg Salata
Date Verified: 12/9/2024
Date Reviewed: 12/9/2024

Table 2 – Summary of Qualified Data

SDG	Field Identification	Analysis	Analyte	Value for Reporting Limit*	AECOM Qualifier	Reason Codes
280-200203-2	P3HWMU-CONTAM-003-002	Explosives	2,4,6-Trinitrotoluene	N/A	J	High replicate RSD

* – The analyte was detected in an associated blank and the result was qualified as not detected at the concentration shown in the column "Value for Reporting Limit".
N/A – Not Applicable
J – The reported result was an estimated value with an unknown bias.
Reason Codes: See Attachment "Reason Code Definitions"

Fort Wingate Depot Data Verification

Laboratory: Eurofins Environmental Testing
Sample Delivery Group (SDG): J200917-1 (280-200917-1)
Technical Quality Review Chemist: Brian Rothmeyer

AECOM Chemist: Hunter Douglas
Date Verified: 12/27/2024
Date Reviewed: 12/30/2024

Table 1 – Sample Summary and Laboratory Association

Field Sample Identification	Collection Date	Laboratory Identification	Sample Type	Matrix
P2-ARROYO-005-003	12/16/2024	280-200917-1	N, MS/MSD	Soil

Definitions: N (Normal)
MS/MSD (matrix spike/matrix spike duplicate) for one or more analytical methods

Parameter (Method): Explosives (8330B)

Validation: Stage 2a Validation Electronic and Manual (S2aVEM), Stage 2b Validation Manual (S2bVM)

Automated Data Review (ADR) Software Identification: None

Guidance Documents: Hazardous Waste Management Unit (HWMU) Work Plan, HWMU Parcel 3, Revision 1.0, Fort Wingate Depot Activity (FWDA), New Mexico (AECOM February 2017); Department of Defense (DoD) Quality Systems Manual version 5.0 (DoD, 2013); and method requirements.

The checklist below documents the data review. Boxes checked "No" resulted in sample qualification and require detailed explanation which is provided after the section showing the outlier. No qualification is required for not detected results associated with percent recoveries or RPDs that exceed control limits. Where multiple runs were reported for a method/sample, data quality for only the selected result is discussed below.

The final qualifiers were applied by the AECOM chemist and detailed explanations for the final qualifiers are presented below.

1.0 Reviewed by AECOM Chemist

Verification Criteria	Yes	No	NA
Was a method blank analyzed for each preparation batch?	X		
Were method blank concentrations reported as not detected?		X[1]	
Was an LCS analyzed with each preparation batch?	X		
Were LCS/LCSD recoveries and/or RPDs within project specific limits? (No qualification is required for not detected results associated with high recoveries or high RPDs).	X		
Were surrogate recoveries within project specified limits (two of three surrogates within criteria for 8270D)?	X		

1. The following method blank concentration was reported as detected:

Method Blank ID	Parameter	Analyte	Concentration	LOQ	Units
MB 280-678945/1-A	Explosives	1,3,5-Trinitrobenzene	0.0452	0.10	mg/Kg

Qualification was not considered necessary for sample results reported as non-detect.

2.0 Sample Documentation and Holding Times

Verification Criteria	Yes	No	NA
Were samples extracted and analyzed within QAPP specified holding times?	X		
Were all samples documented correctly on the chain-of-custody (COC) and samples labels?	X		
Were all sample identifications (IDs) documented correctly on sample labels?	X		
Did samples listed on COCs match the sample labels?	X		
Were samples relinquished properly on the COC?	X		

Fort Wingate Depot Data Verification

Laboratory: Eurofins Environmental Testing
Sample Delivery Group (SDG): J200917-1 (280-200917-1)
Technical Quality Review Chemist: Brian Rothmeyer

AECOM Chemist: Hunter Douglas
Date Verified: 12/27/2024
Date Reviewed: 12/30/2024

3.0 Instrument Quality Control and Performance Checks

A. Explosives (Method 8330B)

Explosives			
Initial Calibration (ICAL) Criteria	**Yes**	**No**	**NA**
Was the ICAL analyzed prior to sample analysis?	X		
Was the RSD for each analyte ≤ 15%, or alternative regression with $r^2 \geq 0.99$?	X		
If non-linear regression was used were 6 points used for second order and 7 points for third order?	X		
Initial Calibration Verification (ICV) Criteria	**Yes**	**No**	**NA**
Was the ICV analyzed after each calibration?	X		
Were all reported analytes within ± 20% of the true value?	X		
Continuing Calibration Verification (CCV) Criteria	**Yes**	**No**	**NA**
Was the CCV analyzed daily before sample analysis?	X		
Was the CCV analyzed every 10 field samples and at the end of the analysis sequence?	X		
Were all reported analytes within ± 20% of the true value?	X		
Matrix Spike/Matrix Spike Duplicates (MS/MSD) Criteria	**Yes**	**No**	**NA**
For concentrations <4x the spike concentration, were MS/MSD recoveries and RPDs within criteria? (No qualification is required for not detected results associated with high recoveries or high RPDs).	X		
Column Agreement	**Yes**	**No**	**NA**
Did results between the two columns meet laboratory limits?	X		
Comparison of Triplicate Results	**Yes**	**No**	**NA**
Was the relative standard deviation (RSD) for triplicate results within ± 20% for results reported above the LOQ?	X		

4.0 Field Duplicate Samples

Field Duplicate Criteria	Yes	No	NA
Were field duplicate samples collected for this SDG? (if yes, list below)?		X	
Were parent sample / field duplicate and parent / triplicates RPDs ≤ 50% for soil analytes that had concentrations > 5x the LOQ?			X
Were the differences between the parent sample / field duplicate RPDs < 2x the LOQ for analytes that had concentrations < 5x the LOQ?			X

5.0 Sensitivity and Additional Qualification

Sensitivity Criteria	Yes	No	NA
Was the laboratory sensitivity consistent with project (QAPP) requirements?	X		
Did all analytes meet sensitivity requirements?	X		
Completeness Criteria	**Yes**	**No**	**NA**
Were the reported results usable if qualified?	X		
Were the analyses requested performed, the correct analyte lists used, and correct sample preparation and analyses methods and units utilized?	X		
Additional Qualification Criteria	**Yes**	**No**	**NA**
Were common laboratory contaminants undetected?	X		
Was professional judgment used to qualify data (if yes, list below)?			X
Trace level detections, results reported between the detection limit (DL) and the limit of quantitation (LOQ) were qualified as estimated by the laboratory and retained during validation?	X		

Fort Wingate Depot Data Verification

Laboratory: Eurofins Environmental Testing
Sample Delivery Group (SDG): J200917-1 (280-200917-1)
Technical Quality Review Chemist: Brian Rothmeyer

AECOM Chemist: Hunter Douglas
Date Verified: 12/27/2024
Date Reviewed: 12/30/2024

Re-analyses	Yes	No	NA
Were multiple results reported? If so, summarize how the results were selected.		X	
Other	**Yes**	**No**	**NA**
No additional qualification was applied.	X		

Attachment B

Waste Disposal Documentation

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

SPECIAL WASTE MANIFEST

1. Generator's US EPA ID No.: N M 6 2 1 3 8 2 0 9 7 4

Manifest Document No.: FW.012425-001

2. Page: 1/1

3. Generator's Name and Mailing Address
Ft Wingate Army Depot
PO Box 268
Ft Wingate NM 87316

AECOM PROJECT 60517380 TASK 3

4. Generator's Phone: (202) 815-5059 (Rick Albrecht)

5. Transporter 1 Company Name: **AECOM Inc**

6. US EPA ID Number:

A. State Transporter's ID:

B. Transporter 1 Phone: 402.334.8181

7. Transporter 2 Company Name:

8. US EPA ID Number:

C. State Transporter's ID:

D. Transporter 2 Phone:

9. Designated Facility Name and Site Address
RED ROCKS REGIONAL LANDFILL
101 RED MESA BLUFFS DRIVE
THOREAU NM 87323

10. US EPA ID Number

Facility ID
SWM-051740 (SP)

E. State Facility's ID:

F. Facility's Phone: 505.320.6195

GENERATOR

11. WASTE DESCRIPTION	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt./Vol.
a. Above RSSL Soil P2-ARROYO-005-002	3	buckets	1 6 0	lbs
b.				
c.				
d.				

G. Additional Descriptions for Materials Listed Above

160 lbs ABOVE RSSL SOIL FROM P2-ARROYO-005-002

H. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed/Typed Name: ADAM BRYANT (USACE)

Signature:

Date: Month 0 1 Day 2 4 Year 2 5

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: AECOM - Jeff Hayes

Signature:

Date: Month 0 1 Day 2 4 Year 2 5

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name:

Signature:

Date: Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

Printed/Typed Name: 1730

Signature:

Date: Month 0 1 Day 2 4 Year 2 5

NON-HAZARDOUS WASTE

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101 Red Mesa Bluffs Drive
PO Box1330 Thoreau NM 87323
(505)905-8402

008089 AECOM
12120 SHAMROCK PLAZA #300
OMAHA NE 68154

SITE	TICKET	GRID	WEIGHMASTER
02	00260106		Bren

DATE IN	DATE OUT	TIME IN	TIME OUT	VEHICLE	ROLL OFF
01/24/25	01/24/25	11:29	11:29		

REFERENCE	ORIGIN
FTWINGATE	MCKINLEY COUNTY, NM

Manual Gross Wt.	5440	LB	Inbound - Charge ticket
Manual Tare Wt.	5280	LB	
Net Weight	160	LB	

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	FEE	TOTAL
0.08	TON	ADC	8.000	7.62	0.38	8.00

Operating hours 8AM to 4:30PM Monday thru Friday. This is to certify that this load does not contain any hazardous materials, medical waste or liquids of any type.
Driver was ON/OFF vehicle during weighing.
PO/ Job# FW.012425-001
GPS N35.25.525 W108.06.810 EL7019

NET AMOUNT
8.00
TENDERED
CHANGE
CHECK NO.

WW6T1 TO REORDER FORMS PLEASE VISIT WWW.WASTEWORKS.COM

SIGNATURE 

Personal AR

NORTHWEST NEW MEXICO REGIONAL
101 RED MESA BLUFFS DR
THOREAU NM 87323
505-905-8402

Terminal ID: *****696 ***5

1/24/25 11:31 AM

AMERICAN EXPRESS - TAP
AID: A000000025010801
ACCT #: **********5007

CREDIT SALE
UID: 502430110239 REF #: 5735
BATCH #: 834 AUTH #: 828262

AMOUNT $8.00

APPROVED

ARQC - 6F90E9771E2E0D37

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