DEPARTMENT OF THE ARMY
INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, PICATINNY
PICATINNY ARSENAL, NEW JERSEY 07806-5000

November 3, 2014

REPLY TO ATTENTION OF
Environmental Affairs Division

SUBJECT: Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)/Interagency Agreement (IAG) Administrative Docket No. II-CERCLA-FFA-001-04: Submittal of **2014 Monitoring Report Group 1 Sites (PICA 079):** Reviews are ER,A-eligible

Mr. William Roach
U.S. Environmental Protection Agency
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New York, NY 10007-1866

Ms. Anne Pavelka, Case Manager
New Jersey Department of Environmental Protection
Division of Responsible Party Site Remediation
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Trenton, New Jersey 08625-0028

Mr. Roach and Ms. Pavelka:

Enclosed for your review are copies of **2014 Monitoring Report Group 1 Sites (PICA 079). T**he document was developed by ARCADIS and will be co-reviewed by the Army. The report summarizes the results of the quarterly and semi-annual sampling in 2014 conducted at the Group 1 sites as required by the Remedial Design Workplan and as agreed with the NJDEP regarding Group 40 groundwater monitoring.

Important to note is that exceedances of TNT and RDX that were reported in 2013 monitoring of Lake Picatinny sediment were not duplicated with the 2014 sediment data. As you know the 2013 sediment data was used in the Lakes FS to define the 5th hotspot.

Neither, the next two quarterly sampling events for Group 40 Groundwater nor the next semi-annual sampling will occur until after the new contract is awarded which is now scheduled for award in late spring.

Sincerely,

Ted Gabel, Project Manager for
Environmental Restoration

Enclosures
CC
Mr. Jim Kealy, NJDEP (FTP site only)
Mr. Joe Marchesani, NJDEP
Ms. Barbara Dolce, TAPP Contractor (FTP site only)

2014 Annual Monitoring Report

Group 1 Sites (PICA-079)

U.S. Army Garrison Picatinny Arsenal, New Jersey

November 2014

2014 Annual Monitoring Report

Group 1 Sites (PICA-079)

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GP06PICA.LM14

Date:
November 2014

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List of Acronyms and Abbreviations

µg/L	micrograms per liter
ARCADIS	ARCADIS U.S., Inc.
COC	Constituent of Concern
DNT	Dinitrotoluene
LTM	Long Term Monitoring
LUC	Land Use Control
mg/kg	milligrams per kilogram
MNA	Monitored Natural Attenuation
NJDEP	New Jersey Department of Environmental Protection
PICA	Picatinny Arsenal Sites
Picatinny	Picatinny Arsenal
RAWP	Remedial Action Work Plan
RDX	Cyclotrimethylenetrinitramine
ROD	Record of Decision
SCL	Site Cleanup Levels
SD	sediment
SW	surface water
TNT	2,4,6-Trinitrotoluene
U.S.	United States
USEPA	United States Environmental Protection Agency

1. Introduction

ARCADIS U.S., Inc. (ARCADIS) has been retained by the United States Army Environmental Command to perform Installation Restoration Program activities at Picatinny Arsenal (Picatinny), located in Morris County, New Jersey. Picatinny is a National Priorities List site registered under the Comprehensive Environmental and Remedial, Compensation and Liability Act of 1980 (number NJ3210020704). This work is being performed under a Performance Based Contract that encompasses 47 Picatinny (PICA) Sites. The full scope of services for this contract is defined in the Contract W91ZLK-05-D-0015-00001.

1.1 Site Background

The Group 1 Sites (PICA-079) are located in Area I in the central portion of Picatinny, west of Picatinny Lake in Rockaway Township, Morris County, New Jersey, displayed in **Figure 1**. The Group 1 Sites consists of the followings four sites: Site 40, Site 93, Site 156, and Site 157. However, this report only discusses the groundwater, surface water, and sediment sampling conducted to address the comingled groundwater plume located beneath Sites 40 and 157. Land use controls (LUCs) are in place to controls impacted media within Site 156 and are discussed in the 2013 Annual Land Use Certification Report (ARCADIS, 2014a).

Each of these four sites contains buildings that had been used in the manufacturing, testing, and cleaning up of explosives. These sites are described below:

- Site 40 contained buildings that were used for a large caliber projectile washout facility and as a melt-pour facility. Explosives-contaminated wastewater was generated as part of the operations.

- Site 93 was used for sampling of propellants, loading submissiles (cluster bombs) into warheads, and as a cleaning, inspection, and receiving facility of explosives.

- Site 156 consisted of buildings used as large caliber projectile loading plants and as an inert storage facility.

- Site 157 consisted of buildings that were used as large caliber projectile loading plants. There was also a packing and shipping facility for the completed rounds loading production line and a melt-load facility for the loading of melted 2,4,6-trinitrotoluene (TNT) and cyclotrimethylenetrinitramine (RDX) explosives into shells.

The Record of Decision (ROD) (U.S. Army, 2010) for the Group 1 Sites (PICA-079) was developed jointly with the United States (U.S.) Army and the United States Environmental Protection Agency (USEPA), with input from the community, and was approved and signed by the U.S. Army and the USEPA on July 28, 2010 and September 16, 2010, respectively. The New Jersey Department of the Environmental Protection (NJDEP) also concurred on the selected response.

As stated in the ROD, the selected response action for the site included the following:

- Excavation and off-site disposal of explosive-impacted soils;
- Implementation of LUCs; and
- Monitored Natural Attenuation (MNA) of explosives in groundwater at the site.

LUCs for soil and groundwater were implemented to control current and future activities that could result in unacceptable risk to human health, as detailed in the Final Remediation Work Plan (RAWP) (ARCADIS, 2010) and the 2013 Annual Land Use Certification Report (ARCADIS, 2014).

In accordance with the ROD (U.S. Army, 2010), soils impacted with explosives at concentrations exceeding Site Cleanup Levels (SCLs) were excavated and disposed of at a permitted landfill. Excavation and off-site disposal of 600 cubic yards of impacted soil was conducted in September 2010. Further discussion of the 2010 soil remedial action is included within the Final Interim Remedial Action Report (ARCADIS, 2011). Following completion of removal activities, Long Term Monitoring (LTM) of groundwater, surface water, and sediment was initiated.

1.2 Scope of Work

The MNA program, which began in September of 2010, has been designed to: 1) evaluate long-term effectiveness of MNA; 2) verify that exposure to contaminants and their breakdown products do not pose additional risks; and 3) assess when it is necessary to implement any contingency actions.

The LTM program at PICA-079 consists of groundwater, surface water, and sediment sampling. The LTM sampling is implemented according to the following schedule:

- Quarterly for the first two years;
- Semi-annually for the next three years; and

- Annually for the remainder of remedy, with adjustment (greater or lesser) in frequency to be considered during each five-year review.

Two years of consecutive site wide (e.g., Sites 40, 93, and 157) quarterly sampling was concluded following the 2012 second quarter. In accordance with NJDEPs request, sampling will continue on a quarterly basis at 40MW-1, 40MW-2, 40MW-3, 40MW-5, 40 MW-6, 79SW/SD-1, and 79SW/SD-2 through the third quarter of 2015. Site-wide sampling will continue on a semi-annual basis for the next three years (i.e., through 2015).

This Annual Monitoring Report discusses the long term monitoring activities conducted during 2014 to evaluate MNA of explosives in groundwater at the Group 1 Sites (PICA-079). Furthermore, this report presents data collected during the site-wide semi-annual events, as well as data collected during quarterly events for the year 2014. Lastly, the results of MNA long term monitoring for explosives in groundwater, surface water, and sediment are discussed and interpreted in this report. A summary of the LTM program is presented in **Table 1**.

2. Sampling Activities and Analyses

This section summarizes the technical rational for MNA of explosives within groundwater and also presents a summary of the LTM plan for Group 1 Sites (PICA-079).

The scope of the response action for groundwater set forth in the Group 1 Sites (PICA-079) ROD was a combination of MNA and LUCs. No active treatment was to be implemented to remove contaminants from groundwater at the sites. Rather, monitoring of groundwater and surface water for constituents of concern (COCs) and field parameters would verify that contaminants are continuing to be attenuated under existing conditions.

The MNA program, which began in September 2010, was designed to:

- Evaluate long-term effectiveness of MNA at the Group 1 Sites (PICA-079);
- Verify that exposure to contaminants and their breakdown products do not pose additional risks; and
- Assess whether it is necessary to implement any contingency actions.

Sections 2.1 and 2.2 summarize the MNA of explosives and the activities that were conducted during 2014 to assess the status of the MNA program.

2.1 Monitored Natural Attenuation of Explosives in Groundwater

Natural attenuation includes a variety of processes, such as dispersion, volatilization, immobilization, and biological transformation that occur in groundwater reducing COC concentrations. These natural processes can be an effective, non-intrusive, and safe means for attenuating constituents at locations with no direct human contact or other immediate receptor concerns (ARCADIS, 2009).

The 2005 Feasibility Study evaluated the fate and transport of TNT and RDX to assess the potential reduction of these compounds through biological processes, physical processes, and chemical reactions. Overall, this evaluation yielded qualitative confirmation that groundwater conditions are favorable for the natural degradation of TNT and RDX (Shaw, 2005).

2.2 2014 Sampling Activities and Analyses

Semi-annual site wide monitoring events were conducted in April and August of 2014. Typically, the semi-annual sampling is conducted during the second and fourth quarters of each year. However, the second semi-annual sampling event was accelerated to August 2014 to expedite sample collection and reporting prior o the end of the calendar year and to facilitate the transition to the next contractor. The NJDEP requested that quarterly groundwater sampling be extended through September 2015 for monitoring locations within Site 40; groundwater monitoring continued on a quarterly basis at groundwater monitoring wells located in Site 40 (40MW-1, 40MW-2, 40MW-3, 40MW-5, 40 MW-6) and at surface water/sediment location 79SW/SD-1 in 2014. Furthermore, an additional surface water/sediment location (79SW/SD-2) was added downgradient of 157MW-3 in the second quarter of 2012 per NJDEP request. Monitoring at 79SW/SD-2 will be quarterly through the third quarter of 2015.

Samples were collected on the dates indicated in the following table:

Sample Collection Summary				
Media	**1st Quarter Quarterly Event (Site 40 Only)**	**2nd Quarter Site Wide Semi-AnnualEvent**	**3rd Quarter Quarterly Event (Site 40 Only)**	**4th Quarter Site Wide Semi-Annual Event**
Groundwater	01/28/2014	04/14/2014	7/8/2014	8/27/2014
Surface Water	01/272014	04/14/2014	7/7/2014	8/26/2014
Sediment	01/272014	04/14/2014	7/7/2014	8/26/2014

The monitoring program summary is provided in **Table 1**. A site location map is included as **Figure 1**. **Figure 2** provides the groundwater monitoring well network and surface water/sediment sampling locations.

2.3 2014 Site Wide Quarterly and Semi-Annual Sampling Activities

The Site 40 quarterly and site wide semi-annual monitoring events consisted of groundwater elevation measurements; groundwater monitoring and surface water/sediment monitoring in accordance with the monitoring program established RAWP (ARCADIS, 2010).

Quarterly sampling occurred at the Site 40 locations (40MW-1, 40MW-2, 40MW-3, 40MW-5, 40MW-6, and SW/SD-1) during each of the four quarters. Semi-annual groundwater monitoring was conducted at all ten monitoring wells (157MW-1, 157MW-2, 157MW-3, 157MW-4, 40MW-1, 40MW-2, 40MW-3, 40MW-5, 40MW-6, and 93MW-

2). Prior to collection of groundwater samples, depth to groundwater measurements were collected. Depth to groundwater measurements and corresponding groundwater elevations for the monitoring wells in the monitoring program are provided in **Table 2**. Groundwater samples were collected using HydraSleeves™ and analyzed for the following four COCs:

- 2-amino-4,6-dinitrotoluene (DNT);
- 4-amino-2,6-DNT;
- RDX; and
- TNT.

Field parameters; including pH, temperature, dissolved oxygen, and oxidation reduction potential, were also measured via a down-well probe following retrieval of each HydraSleeve™. Groundwater analytical results and field parameters are provided in **Table 3**.

To evaluate the potential for surface water and/or sediment impairment due to impacted groundwater discharging to Picatinny Lake, two surface water (SW) and sediment (SD) monitoring locations (79SW/SD-1 and 79SW/SD-2) were sampled and are depicted on **Figure 2**. Sample location 79SW/SD-2 was added to the LTM program in the second quarter of 2012 pursuant to the NJDEP's request. Grab samples were collected and analyzed for the same COCs as detailed above. Surface water and sediment will be monitored for the duration of the groundwater response action; however, SCLs were not established for these media. Rather, surface water data will be screened against the New Jersey Surface Water Quality Standards (NJDEP, 2011) (refer to **Table 4**). The sediment will be compared against the surface soil SCL to evaluate sediment data.

2.4 Data Validation and Usability

All data collected were validated in accordance with the Final Quality Assurance Project Plan (ARCADIS, 2007). The validation criteria for long-term monitoring data include a review of the laboratory report narrative for noted deficiencies and the potential impact to data usability. Therefore, a review of chain-of-custodies, sample preservation, and sample receipt logs and electronic data validation of select quality control parameters were performed for all data packages using the Data Qualification Module. No major deficiencies were identified during the data validation; therefore, no

additional review was performed. A copy of the Data Qualification Module is included within **Appendix A**.

3. 2014 Semi-Annual Monitoring Results

This section presents the results of the monitoring conducted in 2014. Groundwater and surface water/sediment analytical results provided in **Tables 3** and **4**, respectively.

Laboratory analytical reports are included in **Appendix A**. Sampling logs, water level logs, and chain of custody documents are provided in **Appendix B**. **Appendix C** presents graphs of concentration trends that include the historical data in addition to the LTM data.

3.1 Groundwater Elevation Measurements

Typical groundwater elevations measured since 2010 indicate an easterly flow direction towards Picatinny Lake. Depth to groundwater measurements and corresponding groundwater elevations for the monitoring wells in the monitoring program are provided in **Table 2**. Groundwater potentiometric maps coinciding to the two site wide semiannual sampling events are presented on **Figures 2** and **3**, respectively.

3.2 Groundwater Monitoring

Table 3 presents the 2014 analytical results for groundwater. A summary of COC analytical results is provided on **Figure 3**. A summary of the COCs results for samples collected in 2014 is discussed below:

- 2-amino-4,6-DNT and 4-amino-2,6-DNT were not detected at concentrations exceeding the SCL;

- RDX was detected in all monitoring locations except the upgradient monitoring well 93MW-2. The highest concentration detected during this event was 211 micrograms per liter (µg/L) at 40MW-2 during August 2014; and

- TNT exceeded the SCL at five locations: 157MW-3, 40MW-1, 40MW-2, 40MW-3, and 40MW-6. The highest concentration of TNT occurred at location 157MW-3 with a reported concentration of 159 µg/L during August 2014.

3.3 Surface Water and Sediment Monitoring

Table 4 presents the 2014 analytical results for surface water and sediment. A summary of COC analytical results is provided on **Figure 4**. A summary of the COCs results for samples collected in 2014 is discussed below.

3.3.1 Surface Water

An SCL for surface water is not established. However, COCs within surface water were evaluated against the New Jersey Surface Water Quality Standards. RDX was detected above the New Jersey Surface Water Quality Standard of 2 µg/L in 79SW-1 at a concentration of 3.99 µg/L in April 2014. Concentrations of RDX were below detection in July and August 2014. All other COCs were detected below their New Jersey Surface Water Quality Standard during 2014.

3.3.2 Sediment

An SCL for sediment is not established. Therefore the sediment data are compared to the surface soil SCLs as established in the RAWP (ARCADIS, 2010). There were no SCL exceedances within sediment during 2014.

4. Data Trends

Tables 3 and **4** present the groundwater and surface water/sediment analytical results for 2014. **Appendix C** presents graphs of concentration trends that include the historical data in addition to the long term monitoring data.

4.1 Data Trend Evaluation for Groundwater

This section summarizes the results of the trend evaluation for groundwater samples collected at the Group 1 Sites (PICA-079).

4.1.1 Site 40

There are five monitoring wells at Site 40: 40MW-1, 40MW-2, 40MW-3, 40MW-5, and 40MW-6. Monitoring well 40MW-5 is the most upgradient well; 40MW-1, 40MW-3, and 40MW-6 are generally mid-gradient or cross gradient wells; whereas 40MW-2 is the most downgradient of these wells and is nearest Picatinny Lake.

The concentration of RDX and TNT within the upgradient and cross gradient monitoring wells (i.e., 40MW-3, 40MW-5, and 40MW-6) are generally at low levels (i.e., less than 20 µg/L) or are non-detect. The concentration of RDX at 40MW-1 has generally fluctuated, but is substantially below the Site 40 historical RDX maximum of 490 µg/L, which occurred in 1999. Moreover, the concentration of RDX within this location has dropped below the SCL for the first time and has remained below the SCL for two consecutive sampling events as observed during the July 8 and August 27, 2014 sampling events. The concentration of TNT at 40MW-1 has declined significantly since its historical maximum of 400 µg/L during 1999. There has been an overall decline of RDX and TNT concentrations at 40MW-2 since the peak concentrations were observed during January 1999 and March 2011; respectively. Although there continues to be fluctuation of RDX at 40MW-2, it is anticipated that the overall decline of RDX and TNT will continue at 40MW-2. The current remedy is still protective of human health and the environment.

4.1.2 Site 157

There are four monitoring wells at Site 157 that are included per the long term monitoring sampling regimen: 157MW-1, 157MW-2, 157MW-3, and 157MW-4. Monitoring well 157MW-6S (not currently sampled within the LTM regimen) is upgradient of wells 157MW-1 and 157MW-3 and also has had the historical maximum

concentrations at Site 157. Review of average water-level data in the direct vicinity of these wells indicates that monitoring wells 157MW-1 and 157MW-3 are hydraulically downgradient of 157MW-6S. Therefore, the concentrations of RDX and TNT within 157MW-1 and 157MW-3 are likely attributable to 157MW-6S.

The maximum concentrations observed within 157MW-6S were 890 µg/L (TNT) and 260 µg/L (RDX) in April 2006. As noted within the 2011 Annual Monitoring Report (ARCADIS, 2012a), there was a rebound of RDX and TNT concentrations observed within 157MW-6S. Furthermore, the 2012 and 2013 Annual Monitoring Reports (ARCADIS, 2013; ARCADIS, 2014b) reported variable groundwater flow conditions which were observed to be transient and likely the result of variation in Picatinny Lake stage during 2012 and 2013. Please refer to **Table 2** for a summary of groundwater elevations measured since 2007. Hydraulic gradients were observed to be lower than historical norms during 2012 and groundwater flow direction observed during the third quarter of 2013 suggested a westward flow. Whereas groundwater flow conditions observed during the two 2014 site wide sampling events suggest a consistent eastward flow towards Picatinny Lake (**Figures 2** and **3**). Therefore, it is likely that the fluctuations of RDX and TNT observed at 157MW-3 from 2011 through 2014 are the result of the concentrations within upgradient monitoring well 157MW-6S in conjunction with variable groundwater flow conditions observed at PICA-079 during 2011 to 2014.

RDX concentrations at 157MW-3 fluctuate but do exhibit an overall decreasing trend since the peak concentration was observed during June 2011. TNT concentrations at 157MW-3 also fluctuate and have increased since September 2010. As depicted on the groundwater trend plot for 157MW-6S (refer to **Appendix C**), it appears that the rebound is past peak, with the remnants of the rebound now flushing through downgradient wells. The current remedy is still protective of human health and the environment.

4.1.3 Site 93

There is one monitoring well included within the long term monitoring sampling regimen for this site, 93MW-2, that is located upgradient to the explosive plumes. COCs have not been detected in 93MW-2 since March 2012.

4.2 Surface Water and Sediment

There was one exceedance in the surface water location 79SW-1 in April 2014 for RDX (3.99 µg/L; SCL 2 µg/L). Third and fourth quarter concentrations in 79SW-1 were

non-detect for all COCs. No other COCs in surface water exceeded the New Jersey Surface Water Quality Standards in samples collected from Picatinny Lake in 2014.

Sediment sampling during 2013 noted SCL exceedances for TNT and RDX during the first and third quarter of 2013. However, there have been no SCL exceedances in sediment samples during 2014.

5. Remedy Performance and Future Actions

Current concentrations of RDX and TNT in groundwater are generally lower when compared to historic data (i.e., the data as observed during 2010 to 2014 compared to the late 1990s and early 2000s). Although concentrations in two monitoring wells (157MW-3 and 40MW-2) fluctuate, the concentrations in eight of the ten monitoring wells exhibit an overall declining trend for RDX and/or TNT indicating that natural attenuation continues to reduce explosives concentrations. The concentration of constituents at 157MW-3 and 40MW-2 are expected to decrease with time as the constituent concentrations in surrounding wells have been declining.

The ROD (U.S. Army, 2010) states that the time frame to achieve the SCLs for TNT and RDX at Site 40 is approximately 11 years and 9 years, respectively. Similarly, the remedial timeframe to achieve SCLs at Site 157 for TNT and RDX is eight years. However, a reevaluation of the pore flushing model presented within the RAWP (ARCADIS, 2010) using the peak concentrations for RDX and TNT observed since 2010 and current groundwater gradients indicate the remedial time frame may be closer to 30 to 40 years.

In accordance with the LTM program established in the RAWP (ARCADIS, 2010) and as amended within the First Quarter 2012 Monitoring Report (ARCADIS, 2012b), the following sampling activities are planned:

- Site 40 Groundwater - monitoring wells within the LTM regimen at site 40 will be sampled quarterly through September 2015; and

- Site 157 Groundwater - monitoring wells will be sampled semi-annually in accordance with the original monitoring program established in the RAWP (ARCADIS, 2010).

Furthermore, surface water and sediment samples will be collected on a quarterly frequency at both 79SW/SD-1 and 79SW/SD-2 to establish concentration trends for

RDX and TNT, given the recent detections at SD-2. The surface water and sediment sample frequency will be reevaluated during the next five year review scheduled for 2016. The MNA program is presented in **Table 1** of this report.

6. References

ARCADIS U.S., Inc. (ARCADIS). 2007. Final Quality Assurance Project Plan. August.

ARCADIS. 2009. Final Pre-Design Technical Memorandum, Group 1 Sites (PICA-079). April.

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The Shaw Group Inc. (Shaw). 2005. Group 1 Sites Feasibility Study, Picatinny, New Jersey, prepared for Army Total Environmental Program Support, Deliver Order No. 0017, Final, May.

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Tables

Table 1
Monitored Natural Attenuation Program Summary
2014 Annual Monitoring Report
Group 1 Sites (PICA-079)
Picatinny Arsenal, New Jersey

				Calendar Yr	2010		2011				2012				2013	
				Operation Yr	1st Year				2nd year				3rd Year			
					Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun
Category	Media	Schedule	Sample Locations	COCs	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd
Groundwater Monitoring	Groundwater	Yr: 1-2 quarterly Yr 3-5: semi-annually Yr 6-7: annually	40MW-1, 40MW-2, 40MW-3 40MW-5, 40MW-6, 93MW-2 157MW-1, 157MW-2 157MW-3, 157MW-4 157MW-6S[1]	2,4,6-Trinitrotoluene 2-amino-4,6-Dinitrotoluene 4-amino-2,6-Dinitrotoluene Amino-Dinitrotoluene RDX	Completed	Completed	Completed	Completed	Completed	Completed	Completed	Completed	Site 40 Added[3]	Completed	Site 40 Added[3]	Completed
Surface Water and Sediment Sampling	Surface Water	Yr: 1-2 quarterly Yr 3-5: semi-annually Yr 6-7: annually	79SW/SD-1 79SW/SD-2[2]	2,4,6-Trinitrotoluene 2-amino-4,6-Dinitrotoluene 4-amino-2,6-Dinitrotoluene Amino-Dinitrotoluene RDX	Completed	Completed	Completed	Completed	Completed	Completed	Completed	Completed	Added[2]	Completed	Added[2]	Completed

Notes:

[1]157MW-6S sampled only for 1Q2012 and 2Q2012 to establish a trend

[2]79SW/SD2 added per NJDEP request in response to 2011 Annual Report. In addition, quarterly sampling of surface water and sediment extended at SW/SD-1 and SW/SD-2 through 2016 effective first quarter 2014; the sample frequency will be re-evaluated during the five year review

[3]Quarterly sampling extended at Site 40 to Sept 2015 based upon NJDEP request to monitor plume conditions; in response to the 2011 Annual Report

[4]The samples scheduled to be collected during the 4th quarter 2014 were collected the last week of August to expedite sample collection and reporting prior to the end of the calendar year (current contractors end of contract) to facilitate transition to the next contractor

COC - constituent of concern

RDX - Cyclotrimethylenetrinitramine

NJDEP - New Jersey Department of Environmental Protection

Table 1
Monitored Natural Attenuation Program Summary
2014 Annual Monitoring Report
Group 1 Sites (PICA-079)
Picatinny Arsenal, New Jersey

				Calendar Yr	2013		2014				2015				2016			
				Operation Yr	4th year				5th Year				6th Year				7th Year	
					Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
Category	Media	Schedule	Sample Locations	COCs	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th
Groundwater Monitoring	Groundwater	Yr: 1-2 quarterly Yr 3-5: semi-annually Yr 6-7: annually	40MW-1, 40MW-2, 40MW-3 40MW-5, 40MW-6, 93MW-2 157MW-1, 157MW-2 157MW-3, 157MW-4 157MW-6S[1]	2,4,6-Trinitrotoluene 2-amino-4,6-Dinitrotoluene 4-amino-2,6-Dinitrotoluene Amino-Dinitrotoluene RDX	Site 40 Added[3]	Completed	Site 40 Added[3]	Completed	Site 40 Added[3]	Site 40 Added[3,4]	Planned	Site 40 Added[3]	Site 40 Added[3]		Planned			
Surface Water and Sediment Sampling	Surface Water	Yr: 1-2 quarterly Yr 3-5: semi-annually Yr 6-7: annually	79SW/SD-1 79SW/SD-2[2]	2,4,6-Trinitrotoluene 2-amino-4,6-Dinitrotoluene 4-amino-2,6-Dinitrotoluene Amino-Dinitrotoluene RDX	Added[2]	Completed	Added[2]	Completed	Added[2]	Added[2,4]	Planned	Added[2]	Added[2]	Added[2]	Planned	Added[2]	Added[2]	Added[2]

Notes:

[1]157MW-6S sampled only for 1Q2012 and 2Q2012 to establish a trend

[2]79SW/SD2 added per NJDEP request in response to 2011 Annual Report. In addition, quarterly sampling of surface water and sediment extended at SW/SD-1 and SW/SD-2 through 2016 effective first quarter 2014; the sample frequency will be re-evaluated during the five year review

[3]Quarterly sampling extended at Site 40 to Sept 2015 based upon NJDEP request to monitor plume conditions; in response to the 2011 Annual Report

[4]The samples scheduled to be collected during the 4th quarter 2014 were collected the last week o (current contractors end of contract) to facilitate transition to the next contractor

COC - constituent of concern

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NJDEP - New Jersey Department of Environmental Protection

Table 2
Depth to Groundwater
2014 Annual Monitoring Report
Group 1 Sites (PICA-079)
Picatanny Arsenal, New Jersey

Well ID	Screened Interval (ft bgs)	Total Depth (ft amsl)	Land Elevation (ft amsl)	TIC Elevation (ft amsl)	12/6/2007		1/30/2008		12/21/2010		3/1/2011		6/6/2011		8/17/2011		12/20/2011		3/22/2012	
					Water Level Depth (ft bgs)	Water Level Elevation (ft amsl)	Water Level Depth (ft bgs)	Water Level Elevation (ft amsl)	Water Level Depth (ft bgs)	Water Level Elevation (ft amsl)	Water Level Depth (ft bgs)	Water Level Elevation (ft amsl)	Water Level Depth (ft bgs)	Water Level Elevation (ft amsl)	Water Level Depth (ft bgs)	Water Level Elevation (ft amsl)	Water Level Depth (ft bgs)	Water Level Elevation (ft amsl)	Water Level Depth (ft bgs)	Water Level Elevation (ft amsl)
40MW-1	24-34	688.88	722.7	722.44	9.85	712.59	9.91	712.53	11.71	710.73	11.2	711.24	12.1	710.34	10.31	712.13	12.45	709.99	9.87	712.57
40MW-2	24.8-34.8	688.7	722.35	723.02	10.45	712.57	10.5	712.52	12.4	710.62	11.95	711.07	12.71	710.31	11.11	711.91	13.18	709.84	10.42	712.60
40MW-3	26.5-36.5	681.29	714.29	717.28	4.41	712.87	4.75	712.53	6.58	710.7	6.11	711.17	6.94	710.34	5.23	712.05	7.38	709.9	4.70	712.58
40MW-5	24.5-34.5	682.78	716.83	718.82	6.23	712.59	6.3	712.52	8.04	710.78	7.38	711.44	8.58	710.24	6.55	712.27	8.85	709.97	6.28	712.54
40MW-6	24-34	690.75	724.75	724.42	11.65	712.77	11.69	712.73	12.53	711.89	13.05	711.37	12.87	711.55	12.21	712.21	14.27	710.15	11.64	712.78
93MW-2	27-37	682.52	719.52	722.81	NM	NM	NM	NM	7.75	715.06	11.16	711.65	12.36	710.45	10.65	712.16	12.43	710.38	10.30	712.51
157MW-6S	14-19	699.69	718.96	718.69	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	8.91	709.78	6.67	712.02
157MW-1	24.1-34.1	685	718.61	720.96	8.43	712.53	NM	NM	10.35	710.61	9.88	711.08	10.66	710.3	9.15	711.81	11.07	709.89	8.42	712.54
157MW-2	25.8-35.8	684.66	716.99	719.9	7.3	712.6	NM	NM	9.12	710.78	8.63	711.27	9.58	710.32	8.01	711.89	9.81	710.09	7.35	712.55
157MW-3	36.6-36.6	684.62	717.86	720.57	8	712.57	NM	NM	9.87	710.7	9.41	711.16	10.25	710.32	8.76	711.81	10.51	710.06	8.02	712.55
157MW-4	24-34	683.3	717.29	719.63	6.77	712.86	NM	NM	8.58	711.05	8.11	711.52	8.95	710.68	7.56	712.07	9.16	710.47	6.83	712.80

Well ID	Screened Interval (ft bgs)	Total Depth (ft amsl)	Land Elevation (ft amsl)	TIC Elevation (ft amsl)	6/26/2012		9/10/2012		12/17/2012		3/19/2013		5/9/2013		1/28/2014		4/14/2014		7/7/2014	
					Water Level Depth (ft bgs)	Water Level Elevation (ft amsl)	Water Level Depth (ft bgs)	Water Level Elevation (ft amsl)	Water Level Depth (ft bgs)	Water Level Elevation (ft amsl)	Water Level Depth (ft bgs)	Water Level Elevation (ft amsl)	Water Level Depth (ft bgs)	Water Level Elevation (ft amsl)	Water Level Depth (ft bgs)	Water Level Elevation (ft amsl)	Water Level Depth (ft bgs)	Water Level Elevation (ft amsl)	Water Level Depth (ft bgs)	Water Level Elevation (ft amsl)
40MW-1	24-34	688.88	722.7	722.44	9.88	712.56	12.82	709.62	9.45	712.99	9.45	712.99	9.55	712.89	10.39	712.05	9.93	712.51	10.98	711.46
40MW-2	24.8-34.8	688.7	722.35	723.02	10.45	712.57	13.40	709.62	10.27	712.75	10.13	712.89	10.18	712.84	10.02	713.00	15.69	707.33	11.56	711.46
40MW-3	26.5-36.5	681.29	714.29	717.28	4.70	712.58	7.67	709.61	4.50	712.78	4.36	712.92	4.43	712.85	5.31	711.97	4.91	712.37	5.81	711.47
40MW-5	24.5-34.5	682.78	716.83	718.82	6.30	712.52	9.27	709.55	6.06	712.76	5.82	713.00	5.99	712.83	6.82	712.00	6.29	712.53	7.36	711.46
40MW-6	24-34	690.75	724.75	724.42	11.65	712.77	10.35	714.07	11.44	712.98	11.25	713.17	11.36	713.06	12.22	712.20	11.71	712.71	12.73	711.69
93MW-2	27-37	682.52	719.52	722.81	10.22	712.59	10.22	712.59	10.05	712.76	NM	NM	9.99	712.82	NM	NM	10.05	712.76	NM	NM
157MW-6S	14-19	699.69	718.96	718.69	6.63	712.06	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
157MW-1	24.1-34.1	685	718.61	720.96	8.43	712.53	8.43	712.53	8.23	712.73	NM	NM	8.14	712.82	NM	NM	8.52	712.44	NM	NM
157MW-2	25.8-35.8	684.66	716.99	719.9	7.35	712.55	7.35	712.55	7.14	712.76	NM	NM	7.06	712.84	NM	NM	7.45	712.45	NM	NM
157MW-3	36.6-36.6	684.62	717.86	720.57	8.04	712.53	8.04	712.53	7.82	712.75	NM	NM	7.74	712.83	NM	NM	8.06	712.51	NM	NM
157MW-4	24-34	683.3	717.29	719.63	6.82	712.81	6.82	712.81	6.60	713.03	NM	NM	6.51	713.12	NM	NM	6.75	712.88	NM	NM

Well ID	Screened Interval (ft bgs)	Total Depth (ft amsl)	Land Elevation (ft amsl)	TIC Elevation (ft amsl)	8/26/2014	
					Water Level Depth (ft bgs)	Water Level Elevation (ft amsl)
40MW-1	24-34	688.88	722.7	722.44	12.53	709.91
40MW-2	24.8-34.8	688.7	722.35	723.02	13.17	709.27
40MW-3	26.5-36.5	681.29	714.29	717.28	7.43	715.59
40MW-5	24.5-34.5	682.78	716.83	718.82	8.98	708.30
40MW-6	24-34	690.75	724.75	724.42	14.34	704.48
93MW-2	27-37	682.52	719.52	722.81	12.96	711.46
157MW-6S	14-19	699.69	718.96	718.69	NM	NM
157MW-1	24.1-34.1	685	718.61	720.96	11.14	707.55
157MW-2	25.8-35.8	684.66	716.99	719.9	10.06	710.90
157MW-3	36.6-36.6	684.62	717.86	720.57	10.73	709.17
157MW-4	24-34	683.3	717.29	719.63	9.52	711.05

Notes:
ft bgs - feet below ground surface
ft amsl - feet above mean sea level
NM - Not Measured
TIC - top of inside casing

Table 3
Summary of Groundwater Results
2014 Annual Monitoring Report
Group 1 Sites (PICA-079)
Picatinny Arsenal, New Jersey

Groundwater Results		Location ID	40MW-1	40MW-1	40MW-1	40MW-1	40MW-2	40MW-2	40MW-2	40MW-2	40MW-3	40MW-3	40MW-3	40MW-3	40MW-5	40MW-5	40MW-5	40MW-5	40MW-6	40MW-6	40MW-6	40MW-6	93MW-2	93MW-2	157MW-1	157MW-1	157MW-2	157MW-2	157MW-3	157MW-3	157MW-4	157MW-4
		Sample Date	1/28/2014	4/14/2014	7/8/2014	8/27/2014	1/28/2014	4/14/2014	7/8/2014	8/27/2014	1/28/2014	4/14/2014	7/8/2014	8/27/2014	1/28/2014	4/14/2014	7/8/2014	8/27/2014	1/28/2014	4/14/2014	7/8/2014	8/27/2014	4/14/2014	8/27/2014	4/14/2014	8/27/2014	4/14/2014	8/27/2014	4/14/2014	8/27/2014	4/14/2014	8/27/2014
	Unit	Groundwater SCL																														
COCs																																
2,4,6-Trinitrotoluene	µg/L	2	**12.5**	**11.5**	**5.43**	**7.65**	**89.3**	**96.1**	**97.5**	**94.1**	**2.31**	**2.66**	**3.09**	1.77	< 1.14 U	< 1.06 U	< 0.275 U	< 0.266 U	**2.61**	**3.76**	**4.23**	**3**	< 1.02 U	< 0.281 U	< 0.243 U	< 0.281 U	< 1.08 U	< 0.266 U	**153**	**159**	< 1.06 U	< 0.275 U
2-amino-4,6-Dinitrotoluene	µg/L	73	5.20	5.66	3.32	4.73	6.17	6.7	6.48	5.11	3.28	3.79	3.48	2.4	< 1.14 U	< 1.06 U	< 0.275 U	< 0.266 U	3.19	3.85	3.87	3.04	< 1.02 U	< 0.281 U	< 0.243 U	< 0.281 U	0.744 J	0.61 J	16.3	15.7	< 1.06 U	< 0.275 U
4-amino-2,6-Dinitrotoluene	µg/L	73	11.1	17.5	7.14	9.76	49.6	57.2	56.9	45.5	13.8	13.3	9.48	5.79	1.09 J	0.725 J	0.728 J	< 0.266 U	6.87	9.51	7.91	5.99	< 1.02 U	< 0.281 U	< 0.243 U	2.38	1.83	1.86	52.6	51.1	< 1.06 U	< 0.275 U
RDX	µg/L	2	**9.63**	**25.8**	1.74	1.72	**74.4**	**57.9**	**85.5**	**211**	**6.02**	**5.64**	**2.42**	1.47	**2.09**	**1.76**	1.52	< 0.266 U	**2.92**	**21.6**	**22.3**	**9.29**	< 1.02 U	< 0.281 U	< 0.243 U	**3.2**	0.949 J	0.872 J	**59.3**	**70.1**	**1.29**	< 0.275 U
Water Quality Parameters																																
Oxidation Reduction Potential	mV	---	73.7	211.8	550.5	219.4	32.8	178.6	206.8	214.1	21.0	165.3	210.8	248.1	88.2	216.4	210.9	227.2	68.6	226.2	217.6	219.7	232.6	255.5	NM	162.8	229.3	248.1	105.9	115.9	63.2	9
pH	S.U.	---	6.04	6.37	6.12	6.19	6.13	6.76	6.5	6.4	5.18	6.78	6.33	5.88	5.89	6.25	6.18	6	5.24	6.37	6.23	6.2	5.83	5.87	5.76	5.67	6.03	5.78	6.05	5.85	6.22	6.15
Dissolved Oxygen	mg/L	---	4.47	6.62	0.26	0.35	6.16	5.95	0.32	0.64	6.77	6.16	0.39	0.52	5.27	7.71	0.69	6.32	5.15	6.51	0.21	0.30	5.65	2.36	6.67	1.92	7.12	3.02	6.76	1.89	5.32	2.02

Notes:
1. Values exceeding the applicable screening criterion are boldfaced and shaded.
ug/L - micrograms per liter
COC - constituent of concern
RDX - Cyclotrimethylenetrinitramine
SCL - Site Cleanup Level
U - Indicates that the analyte was analyzed but not detected.
J - Indicates an estimated result. Result is less than laboratory reporting limits.
mg/L - milligram per liter
mV - milliVolt
S.U. - standard unit

Table 4
Summary of Surface Water and Sediment Results
2014 Annual Monitoring Report
Group 1 Sites (PICA-079)
Picatinny Arsenal, New Jersey

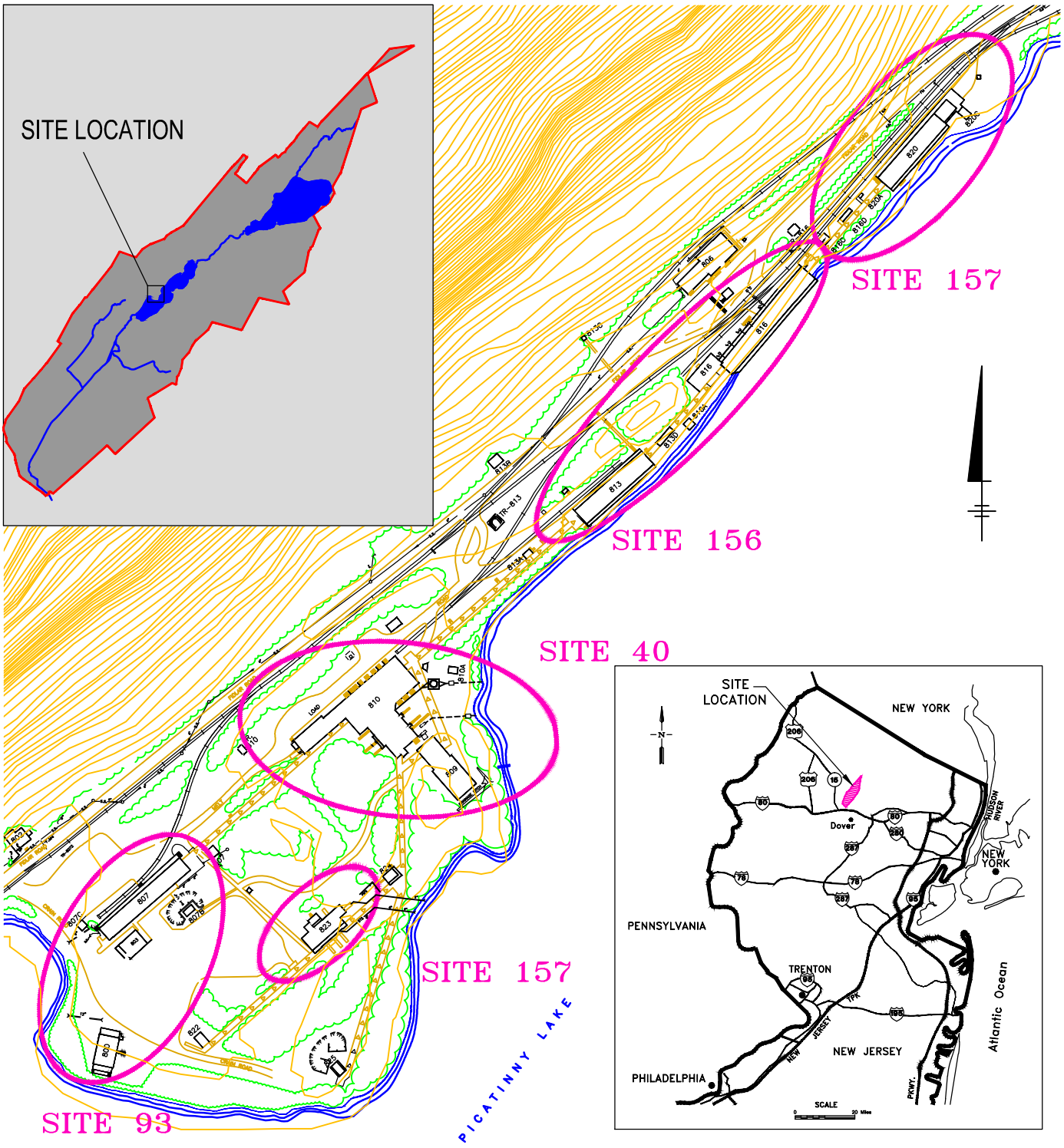
Surface Water		Location ID	79SW-1	79SW-1	79SW-1	79SW-1	79SW-2	79SW-2	79SW-2	79SW-2
		Sample Date	1/27/2014	4/14/2014	7/7/2014	8/26/2014	1/27/2014	4/14/2014	7/7/2014	8/26/2014
	Unit	Surface Water SCL								
COCs										
2,4,6-Trinitrotoluene	µg/L	2.2	< 1.79 U	< 1.08 U	< 0.272 U	< 0.266 U	< 2.22 U	< 1.09 U	< 0.301 U	< 0.532 U
2-amino-4,6-Dinitrotoluene	µg/L	73	< 1.79 U	< 1.08 U	< 0.272 U	< 0.266 U	< 2.22 U	< 0.243 U	< 0.301 U	< 0.532 U
4-amino-2,6-Dinitrotoluene	µg/L	73	< 1.79 U	0.738 J	< 0.272 U	< 0.266 U	< 2.22 U	< 0.243 U	< 0.301 U	< 0.532 U
RDX	µg/L	2	< 1.79 U	**3.99**	< 0.272 U	< 0.266 U	< 2.22 U	0.642 J	< 0.301 U	< 0.532 U

Sediment		Location ID	79SD-1	79SD-1	79SD-1	79SD-1	79SD-2	79SD-2	79SD-2	79SD-2
		Sample Date	1/27/2014	4/14/2014	7/7/2014	8/26/2014	1/27/2014	4/14/2014	7/7/2014	8/26/2014
	Unit	Sediment SCL								
COCs										
2,4,6-Trinitrotoluene	mg/kg	95	0.869	< 0.240 U	0.307	< 0.106 U	0.165 J	< 0.243 U	72.6	< 0.0919 U
2-amino-4,6-Dinitrotoluene	mg/kg	2000	< 0.243 U	< 0.240 U	< 0.0958 U	< 0.106 U	< 0.245 U	< 0.243 U	3.06	< 0.0919 U
4-amino-2,6-Dinitrotoluene	mg/kg	1900	< 0.243 U	< 0.240 U	< 0.0958 U	< 0.106 U	< 0.245 U	< 0.243 U	1.63	< 0.0919 U
RDX	mg/kg	26	< 0.243 U	< 0.240 U	< 0.0958 U	< 0.106 U	0.309	< 0.243 U	< 0.0976 U	< 0.0919 U

Notes:

1. Values exceeding the applicable screening criterion are boldfaced and shaded.
µg/L - micrograms per liter
COC - constituent of concern
mg/kg - milligram per kilogram
RDX - Cyclotrimethylenetrinitramine
SCL - Site Cleanup Level
U - Indicates that the analyte was analyzed but not detected.
J - Indicates an estimated result. Result is less than laboratory reporting limits.

Figures



LEGEND:

- EARTH MOUND
- BUILDING
- FORMER BUILDING
- COVERED WALKWAY
- SWAMP
- WATER
- RAILROAD
- TREE LINE
- FENCE
- TRANSFORMER
- BLAST WALL
- STORM SEWER
- SANITARY SEWER
- SITE BOUNDARY

GROUP 1 SITES (PICA 079)
PICATINNY ARSENAL, DOVER, NEW JERSEY
2014 ANNUAL MONITORING REPORT
(THIRD AND FOURTH QUARTER)

SITE LOCATION MAP

ARCADIS

FIGURE
1

CITY:MILLERSVILL-MD, CRANBURY-NJ DIV/GROUP:ENVCAD DB:GOFORTH, MEYER LD:GOFORTH PIC:TALELE PM:LLEWELLYN TM:LLEWELLYN LYR:(OpnON=*;OFF=*REF*
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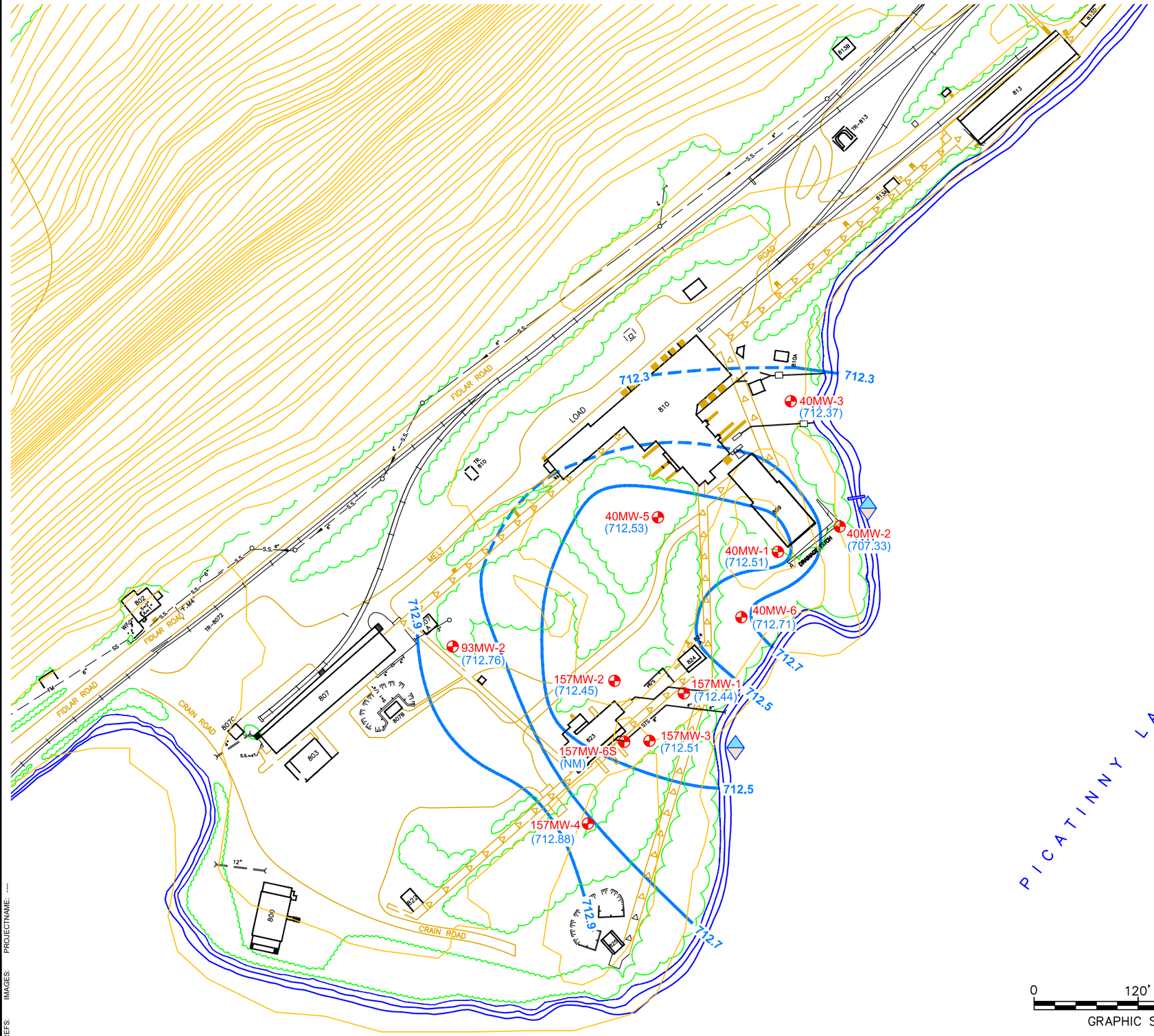
XREFS: IMAGES: PROJECTNAME: ----



LEGEND:

- RAILROAD
- TREE LINE
- FENCE
- TR-732 — TRANSFORMER
- BLAST WALL
- STS OR STS — STORM SEWER
- SS OR SS — SANITARY SEWER
- EARTH MOUND
- BLDG. NO. — BUILDING
- BLDG. NO. — FORMER BUILDING
- COVERED WALKWAY
- UNDERGROUND PIPELINE
- WATER
- SHALLOW MONITORING WELL
- SURFACE WATER/SEDIMENT SAMPLING LOCATION
- GROUNDWATER CONTOUR LINE (DASHED WHERE INFERRED)
- (712.05) — GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
- (NM) — NOT MEASURED

NOTES:

1. GROUNDWATER ELEVATIONS DEPICTED HEREON WERE COLLECTED ON 4/14/2014.

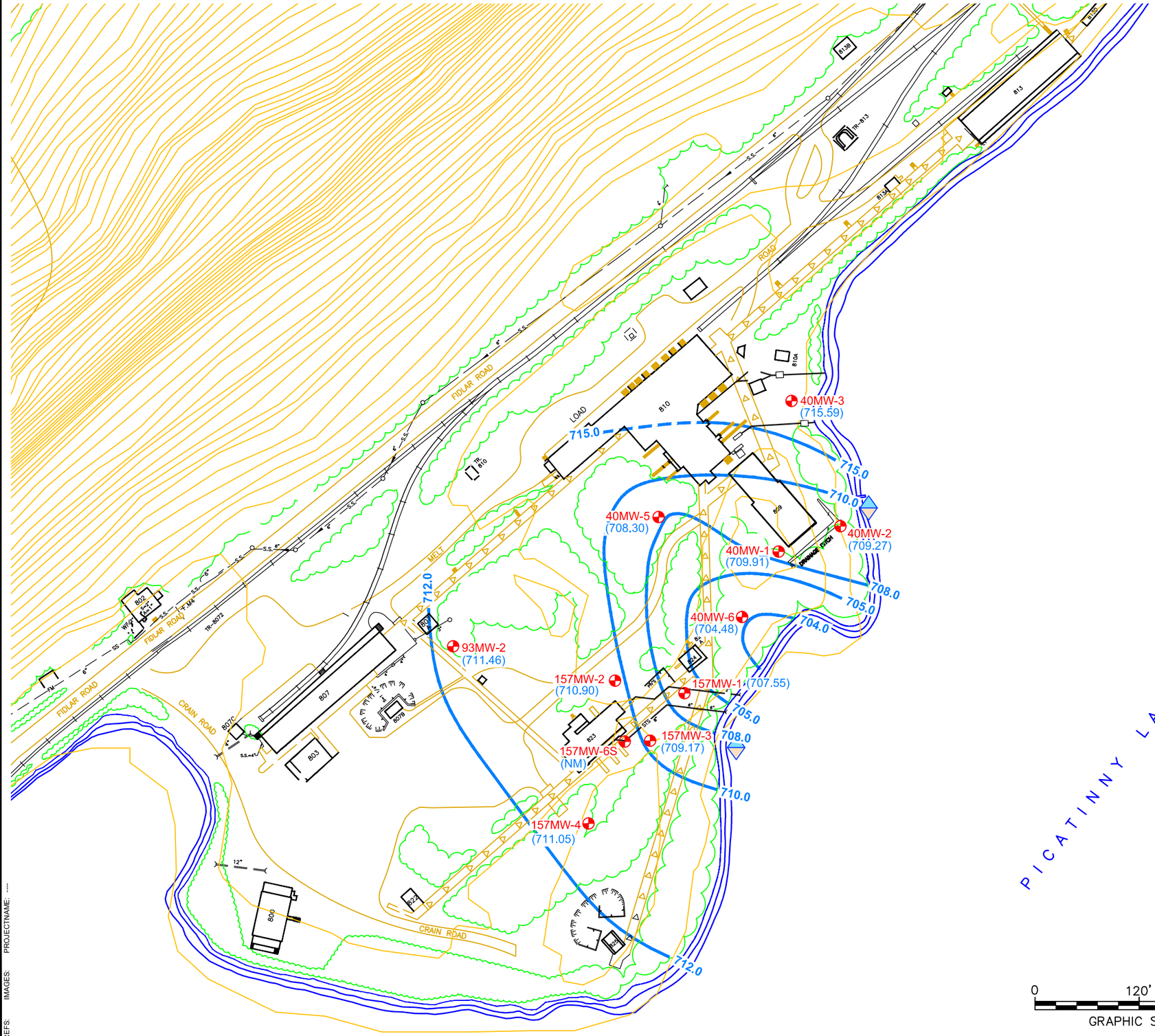
GROUP 1 SITES (PICA-079)
PICATINNY ARSENAL, DOVER, NEW JERSEY
2014 ANNUAL MONITORING REPORT

POTENTIOMETRIC MAP
APRIL 2014

ARCADIS

FIGURE
2

CITY:MILLERSVILLE-MD, CRANBURY-NJ DIV/GROUP:ENVCAD DB:GOFORTH, MEYER LD:GOGORTH PIC:(Opt) PM:(Reqd) TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
G:\ENVCAD\CRANBURY\ACT\GP06\PICA\LM143\MD14\PICA 079\GP06PICAW01.dwg LAYOUT: 2 SAVED: 7/28/2014 9:41 AM ACADVER: 18.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 7/28/2014 9:41 AM BY: MEYER, JULIE
XREFS: IMAGES: PROJECTNAME: ----



LEGEND:

- RAILROAD
- TREE LINE
- FENCE
- TR-732 — TRANSFORMER
- BLAST WALL
- STS OR STS — STORM SEWER
- SS OR SS — SANITARY SEWER
- EARTH MOUND
- BLDG. NO. — BUILDING
- BLDG. NO. — FORMER BUILDING
- COVERED WALKWAY
- UNDERGROUND PIPELINE
- WATER
- SHALLOW MONITORING WELL
- SURFACE WATER/SEDIMENT SAMPLING LOCATION
- GROUNDWATER CONTOUR LINE (DASHED WHERE INFERRED)
- (712.05) — GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
- (NM) — NOT MEASURED

NOTES:

1. GROUNDWATER ELEVATIONS DEPICTED HEREON WERE COLLECTED ON 8/26/2014.

0 120' 240'
GRAPHIC SCALE

GROUP 1 SITES (PICA 079)
PICATINNY ARSENAL, DOVER, NEW JERSEY
2014 ANNUAL MONITORING REPORT

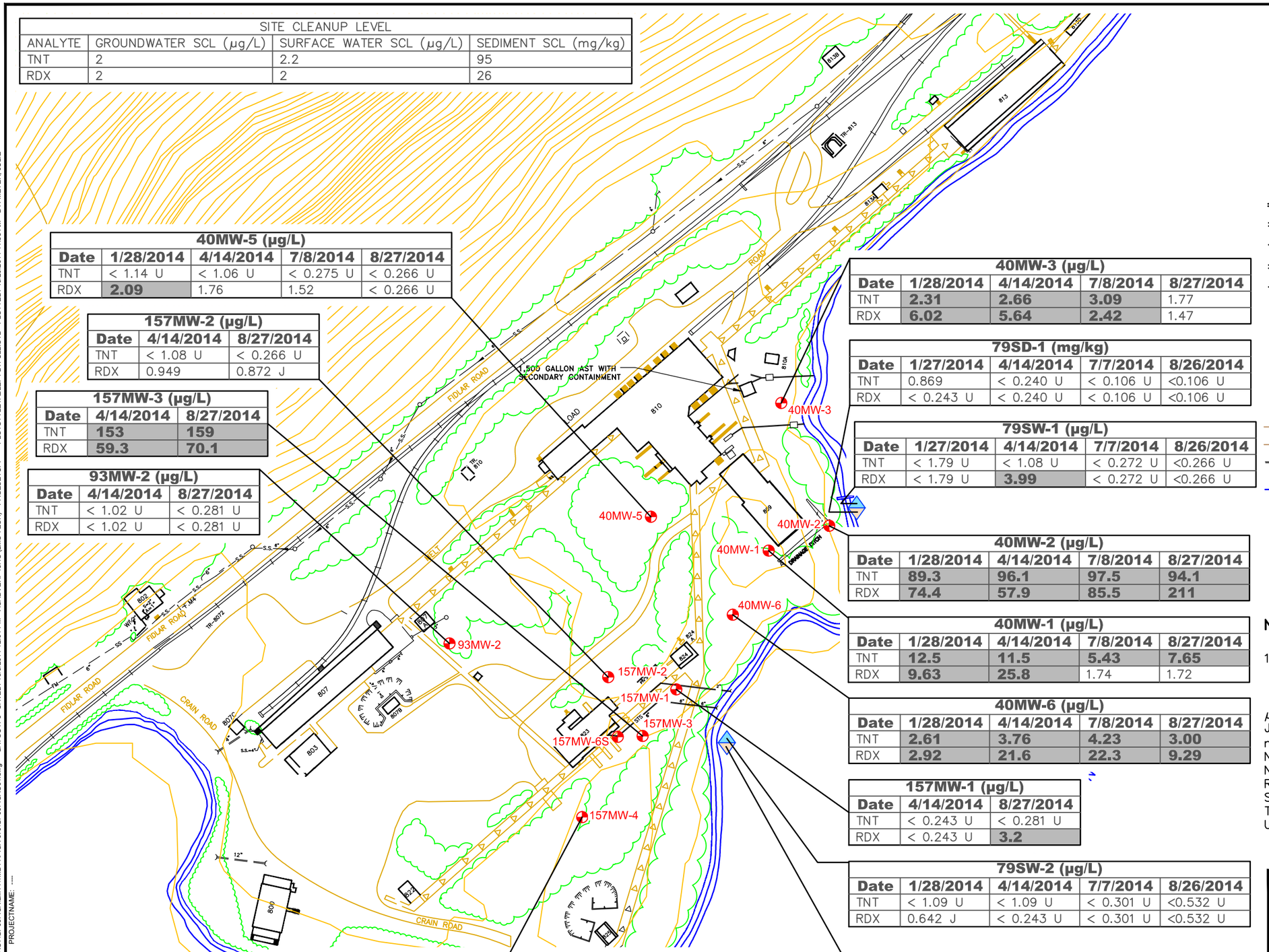
POTENTIOMETRIC MAP
AUGUST 2014

ARCADIS

FIGURE
3

CITY:MILLERSVILLE-MD, CRANBURY-NJ DIV/GROUP:ENV/CAD DB:GOFORTH, MEYER LD:GOGORTH PIC:(Opt) PM:(Reqd) TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
G:\ENVCAD\CRANBURY\ACT\GP06PICA\M1444\MD14\PICA 079\GP06PICAW01.dwg LAYOUT: 2 SAVED: 10/9/2014 1:06 PM ACADVER: 18.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 10/9/2014 1:08 PM BY: MEYER, JULIE
XREFS: IMAGES: PROJECTNAME: ----

SITE CLEANUP LEVEL			
ANALYTE	GROUNDWATER SCL (µg/L)	SURFACE WATER SCL (µg/L)	SEDIMENT SCL (mg/kg)
TNT	2	2.2	95
RDX	2	2	26



40MW-5 (µg/L)				
Date	1/28/2014	4/14/2014	7/8/2014	8/27/2014
TNT	< 1.14 U	< 1.06 U	< 0.275 U	< 0.266 U
RDX	**2.09**	1.76	1.52	< 0.266 U

157MW-2 (µg/L)		
Date	4/14/2014	8/27/2014
TNT	< 1.08 U	< 0.266 U
RDX	0.949	0.872 J

157MW-3 (µg/L)		
Date	4/14/2014	8/27/2014
TNT	**153**	**159**
RDX	**59.3**	**70.1**

93MW-2 (µg/L)		
Date	4/14/2014	8/27/2014
TNT	< 1.02 U	< 0.281 U
RDX	< 1.02 U	< 0.281 U

40MW-3 (µg/L)				
Date	1/28/2014	4/14/2014	7/8/2014	8/27/2014
TNT	**2.31**	**2.66**	**3.09**	1.77
RDX	**6.02**	**5.64**	**2.42**	1.47

79SD-1 (mg/kg)				
Date	1/27/2014	4/14/2014	7/7/2014	8/26/2014
TNT	0.869	< 0.240 U	< 0.106 U	<0.106 U
RDX	< 0.243 U	< 0.240 U	< 0.106 U	<0.106 U

79SW-1 (µg/L)				
Date	1/27/2014	4/14/2014	7/7/2014	8/26/2014
TNT	< 1.79 U	< 1.08 U	< 0.272 U	<0.266 U
RDX	< 1.79 U	**3.99**	< 0.272 U	<0.266 U

40MW-2 (µg/L)				
Date	1/28/2014	4/14/2014	7/8/2014	8/27/2014
TNT	**89.3**	**96.1**	**97.5**	**94.1**
RDX	**74.4**	**57.9**	**85.5**	**211**

40MW-1 (µg/L)				
Date	1/28/2014	4/14/2014	7/8/2014	8/27/2014
TNT	**12.5**	**11.5**	**5.43**	**7.65**
RDX	**9.63**	**25.8**	1.74	1.72

40MW-6 (µg/L)				
Date	1/28/2014	4/14/2014	7/8/2014	8/27/2014
TNT	**2.61**	**3.76**	**4.23**	**3.00**
RDX	**2.92**	**21.6**	**22.3**	**9.29**

157MW-1 (µg/L)		
Date	4/14/2014	8/27/2014
TNT	< 0.243 U	< 0.281 U
RDX	< 0.243 U	**3.2**

79SW-2 (µg/L)				
Date	1/28/2014	4/14/2014	7/7/2014	8/26/2014
TNT	< 1.09 U	< 1.09 U	< 0.301 U	<0.532 U
RDX	0.642 J	< 0.243 U	< 0.301 U	<0.532 U

157MW-4 (µg/L)		
Date	4/14/2014	8/27/2014
TNT	< 1.06 U	< 0.275 U
RDX	1.29	< 0.275 U

79SD-2 (mg/kg)				
Date	1/27/2014	4/14/2014	7/7/2014	8/26/2014
TNT	1.65 J	< 0.243 U	72.6	<0.0919 U
RDX	0.309	< 0.243 U	< 0.0976 U	<0.0919 U

LEGEND:

- RAILROAD
- TREE LINE
- FENCE
- TR-732 — TRANSFORMER
- BLAST WALL
- STS OR STS — STORM SEWER
- SS OR SS — SANITARY SEWER
- EARTH MOUND
- BLDG. NO. — BUILDING
- BLDG. NO. — FORMER BUILDING
- COVERED WALKWAY
- UNDERGROUND PIPELINE
- WATER
- SHALLOW MONITORING WELL
- SURFACE WATER/SEDIMENT SAMPLING LOCATION

NOTES:

1. BOLDED AND SHADED VALUES INDICATE CONCENTRATIONS ABOVE THE APPLICABLE SCREENING CRITERIA.

µg/L – MICROGRAM PER LITER
J – ESTIMATED VALUE
mg/kg – MICROGRAMS PER KILOGRAM
ND – NON DETECT
NS – NOT SAMPLED
RDX – CYCLOTRIMETHYLENETRINITRAMINE
SCL– SITE CLEAN UP LEVEL
TNT – 2,4,6–TRINITROTOLUENE
U – INDICATED THAT THE ANALYTE WAS ANALYZED BUT NOT DETECTED.

0 120' 240'
GRAPHIC SCALE

GROUP 1 SITES (PICA-079)
PICATINNY ARSENAL, DOVER, NEW JERSEY
2014 ANNUAL MONITORING REPORT

GROUNDWATER , SURFACE WATER AND SEDIMENT MONITORING CONCENTRATION MAP

ARCADIS

FIGURE
4

CITY:MILLERSVILLE-MD, CRANBURY-NJ DIV/GROUP:ENVCAD DB:GOFORTH, MEYER LD:GOGORTH PIC:(Opt) PM:(Reqd) TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
G:\ENVCAD\CRANBURY\ACT\GP06\PICA\LM1414\MD14\PICA 079\GP06PICAC01.dwg LAYOUT: 3 SAVED: 10/9/2014 12:04 PM ACADVER: 18.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 10/20/2014 11:55 AM BY: MEYER, JULIE
XREFS: IMAGES: PROJECTNAME: ----

Appendix A

Lab Reports (Provided on CD)

Microbac

Laboratory Report Number: L14070459

Jace'que Powell
Arcadis U.S., Inc.
2929 Briarpark Dr
Houston, TX 77042

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac's Ohio Valley Division (OVD). If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed below.

Laboratory Contact:
Stephanie Mossburg – Team Chemist/Data Specialist
(740) 373-4071
Stephanie.Mossburg@microbac.com

I certify that all test results meet all of the requirements of the accrediting authority listed below. All results for soil samples are reported on a 'dry-weight' basis unless specified otherwise. Analytical results for water and wastes are reported on a 'as received' basis unless specified otherwise. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

This report was certified on July 18 2014

David E. Vandenberg

David Vandenberg – Managing Director

State of Origin: NJ
Accrediting Authority: Department of Environmental Protection ID:OH004
QAPP: Microbac OVD

Microbac

Lab Report #: L14070459
Lab Project #: 2273.003
Project Name: ARDEC (PICATINNY ARSENAL)
Lab Contact: Stephanie Mossburg

Record of Sample Receipt and Inspection

Comments/Discrepancies

This is the record of the shipment conditions and the inspection records for the samples received and reported as a sample delivery group (SDG). All of the samples were inspected and observed to conform to our receipt policies, except as noted below.

There were no discrepancies.

Discrepancy	Resolution

Coolers

Cooler #	Temperature Gun	Temperature	COC #	Airbill #	Temp Required?
0018110	I	0.0		1002826421210004575000770534061205	X
0019596	I	1.0		1001892121210004575000770534061672	X

Inspection Checklist

#	Question	Result
1	Were shipping coolers sealed?	Yes
2	Were custody seals intact?	Yes
3	Were cooler temperatures in range of 0-6?	Yes
4	Was ice present?	Yes
5	Were COC's received/information complete/signed and dated?	Yes
6	Were sample containers intact and match COC?	Yes
7	Were sample labels intact and match COC?	Yes
8	Were the correct containers and volumes received?	Yes
9	Were samples received within EPA hold times?	Yes
10	Were correct preservatives used? (water only)	Yes
11	Were pH ranges acceptable? (voa's excluded)	NA
12	Were VOA samples free of headspace (less than 6mm)?	NA

Microbac

Lab Report #: L14070459
Lab Project #: 2273.003
Project Name: ARDEC (PICATINNY ARSENAL)
Lab Contact: Stephanie Mossburg

Samples Received

Client ID	Laboratory ID	Date Collected	Date Received
1-79SW001(070714)	L14070459-01	07/07/2014 13:00	07/09/2014 10:55
1-79SD001(070714)	L14070459-02	07/07/2014 13:00	07/09/2014 10:55
1-79SD002(070714)	L14070459-03	07/07/2014 12:45	07/09/2014 10:55
1-79SW002(070714)	L14070459-04	07/07/2014 12:45	07/09/2014 10:55

Microbac REPORT L14070459
PREPARED FOR Arcadis U.S., Inc.
WORK ID:

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1.0 Summary Data

1.1 Narratives

Login Number: L14070459
Department: General Chromatography
Analyst: Eric Lawson

METHOD

Analysis SW-846 8330

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration and Tune: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: The client did not specify an MS/MSD for this sample delivery group. The laboratory selected sample 02 for MS/MSD analysis and recoveries and/or RPDs out of range were observed for 3 analytes. Please see the applicable QC report for a detailed presentation of the failures.

SAMPLES

Samples: Sample 03 was analyzed at a dilution to be within calibration range. All sample results were confirmed by diode array detection.

Surrogates: All acceptance criteria were met.

Manual Integration Reason Codes

Reason #1: Data System Fails to Select Correct Peak In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peakcompletely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low areacounts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds. This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene andbenzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

Reason #4: System Establishes Incorrect Baseline There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 86295
Approved By: Mike Cochran

1.2 Certificate of Analysis

Certificate of Analysis

Sample #:	L14070459-01	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	1-79SW001(070714)	**Prep Method:**	METHOD	**Prep Date:**	07/14/2014 08:08
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG484128	**Analyst:**	ECL	**Run Date:**	07/15/2014 18:57
Collect Date:	07/07/2014 13:00	**Dilution:**	1	**File ID:**	5L013068.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trinitrobenzene	99-35-4		U	1.09	0.272
1,3-Dinitrobenzene	99-65-0		U	1.09	0.272
2,4,6-Trinitrotoluene	118-96-7		U	1.09	0.272
2,4-Dinitrotoluene	121-14-2		U	1.09	0.272
2,6-Dinitrotoluene	606-20-2		U	1.09	0.272
2-Amino-4,6-dinitrotoluene	35572-78-2		U	1.09	0.272
2-Nitrotoluene	88-72-2		U	1.09	0.272
3-Nitrotoluene	99-08-1		U	1.09	0.272
4-Nitrotoluene	99-99-0		U	1.09	0.272
4-Amino-2,6-dinitrotoluene	19406-51-0		U	1.09	0.272
HMX	2691-41-0		U	1.09	0.272
Nitrobenzene	98-95-3		U	1.09	0.272
RDX	121-82-4		U	1.09	0.272
Tetryl	479-45-8		U	1.09	0.272

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	64.3	50	150	

U	Not detected at or above adjusted sample detection limit

Sample #:	L14070459-02	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	1-79SD001(070714)	**Prep Method:**	METHOD	**Prep Date:**	07/15/2014 11:14
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG484386	**Analyst:**	ECL	**Run Date:**	07/16/2014 16:23
Collect Date:	07/07/2014 13:00	**Dilution:**	1	**File ID:**	5L013084.F
Sample Tag:	01	**Units:**	mg/kg		

Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trinitrobenzene	99-35-4		U	0.239	0.0958
1,3-Dinitrobenzene	99-65-0		U	0.239	0.0958
2,4,6-Trinitrotoluene	118-96-7	0.307		0.239	0.0958
2,4-Dinitrotoluene	121-14-2		U	0.239	0.0958
2,6-Dinitrotoluene	606-20-2		U	0.239	0.0958
2-Amino-4,6-dinitrotoluene	35572-78-2		U	0.239	0.0958
2-Nitrotoluene	88-72-2		U	0.239	0.0958

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
3-Nitrotoluene	99-08-1		U	0.239	0.0958
4-Nitrotoluene	99-99-0		U	0.239	0.0958
4-Amino-2,6-dinitrotoluene	19406-51-0		U	0.239	0.0958
HMX	2691-41-0		U	0.239	0.0958
Nitrobenzene	98-95-3		U	0.239	0.0958
RDX	121-82-4		U	0.239	0.0958
Tetryl	479-45-8		U	0.239	0.0958

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	84.0	50	150	

U	Not detected at or above adjusted sample detection limit

Sample #:	L14070459-03	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	1-79SD002(070714)	**Prep Method:**	METHOD	**Prep Date:**	07/15/2014 11:14
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG484386	**Analyst:**	ECL	**Run Date:**	07/16/2014 18:21
Collect Date:	07/07/2014 12:45	**Dilution:**	1	**File ID:**	5L013087.F
Sample Tag:	01	**Units:**	mg/kg		

Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trinitrobenzene	99-35-4		U	0.244	0.0976
1,3-Dinitrobenzene	99-65-0		U	0.244	0.0976
2,4-Dinitrotoluene	121-14-2		U	0.244	0.0976
2,6-Dinitrotoluene	606-20-2		U	0.244	0.0976
2-Amino-4,6-dinitrotoluene	35572-78-2	3.06		0.244	0.0976
2-Nitrotoluene	88-72-2		U	0.244	0.0976
3-Nitrotoluene	99-08-1		U	0.244	0.0976
4-Nitrotoluene	99-99-0		U	0.244	0.0976
4-Amino-2,6-dinitrotoluene	19406-51-0	1.63		0.244	0.0976
HMX	2691-41-0		U	0.244	0.0976
Nitrobenzene	98-95-3		U	0.244	0.0976
RDX	121-82-4		U	0.244	0.0976
Tetryl	479-45-8		U	0.244	0.0976

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	91.6	50	150	

U	Not detected at or above adjusted sample detection limit

Certificate of Analysis

Sample #:	L14070459-03	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	1-79SD002(070714)	**Prep Method:**	METHOD	**Prep Date:**	07/15/2014 11:14
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG484386	**Analyst:**	ECL	**Run Date:**	07/17/2014 14:08
Collect Date:	07/07/2014 12:45	**Dilution:**	20	**File ID:**	5L013100.F
Sample Tag:	DL01	**Units:**	mg/kg		

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7	72.6		4.88	1.95

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	DL	50	150	*

DL	Surrogate or spike compound was diluted out

Sample #:	L14070459-04	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	1-79SW002(070714)	**Prep Method:**	METHOD	**Prep Date:**	07/14/2014 08:08
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG484128	**Analyst:**	ECL	**Run Date:**	07/15/2014 19:36
Collect Date:	07/07/2014 12:45	**Dilution:**	1	**File ID:**	5L013069.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trinitrobenzene	99-35-4		U	1.20	0.301
1,3-Dinitrobenzene	99-65-0		U	1.20	0.301
2,4,6-Trinitrotoluene	118-96-7		U	1.20	0.301
2,4-Dinitrotoluene	121-14-2		U	1.20	0.301
2,6-Dinitrotoluene	606-20-2		U	1.20	0.301
2-Amino-4,6-dinitrotoluene	35572-78-2		U	1.20	0.301
2-Nitrotoluene	88-72-2		U	1.20	0.301
3-Nitrotoluene	99-08-1		U	1.20	0.301
4-Nitrotoluene	99-99-0		U	1.20	0.301
4-Amino-2,6-dinitrotoluene	19406-51-0		U	1.20	0.301
HMX	2691-41-0		U	1.20	0.301
Nitrobenzene	98-95-3		U	1.20	0.301
RDX	121-82-4		U	1.20	0.301
Tetryl	479-45-8		U	1.20	0.301

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	68.1	50	150	

U	Not detected at or above adjusted sample detection limit

2.0 Full Sample Data Package

2.1 Semivolatiles Data

2.1.1 Explosives (8330B)

2.1.1.1 Summary Data

Login Number: L14070459
Department: General Chromatography
Analyst: Eric Lawson

METHOD

Analysis SW-846 8330

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration and Tune: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: The client did not specify an MS/MSD for this sample delivery group. The laboratory selected sample 02 for MS/MSD analysis and recoveries and/or RPDs out of range were observed for 3 analytes. Please see the applicable QC report for a detailed presentation of the failures.

SAMPLES

Samples: Sample 03 was analyzed at a dilution to be within calibration range. All sample results were confirmed by diode array detection.

Surrogates: All acceptance criteria were met.

Manual Integration Reason Codes

Reason #1: Data System Fails to Select Correct Peak In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peakcompletely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low areacounts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds. This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene andbenzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

Reason #4: System Establishes Incorrect Baseline There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 86295
Approved By: Mike Cochran

Certificate of Analysis

Sample #:	L14070459-01	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	1-79SW001(070714)	**Prep Method:**	METHOD	**Prep Date:**	07/14/2014 08:08
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG484128	**Analyst:**	ECL	**Run Date:**	07/15/2014 18:57
Collect Date:	07/07/2014 13:00	**Dilution:**	1	**File ID:**	5L013068.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trinitrobenzene	99-35-4		U	1.09	0.272
1,3-Dinitrobenzene	99-65-0		U	1.09	0.272
2,4,6-Trinitrotoluene	118-96-7		U	1.09	0.272
2,4-Dinitrotoluene	121-14-2		U	1.09	0.272
2,6-Dinitrotoluene	606-20-2		U	1.09	0.272
2-Amino-4,6-dinitrotoluene	35572-78-2		U	1.09	0.272
2-Nitrotoluene	88-72-2		U	1.09	0.272
3-Nitrotoluene	99-08-1		U	1.09	0.272
4-Nitrotoluene	99-99-0		U	1.09	0.272
4-Amino-2,6-dinitrotoluene	19406-51-0		U	1.09	0.272
HMX	2691-41-0		U	1.09	0.272
Nitrobenzene	98-95-3		U	1.09	0.272
RDX	121-82-4		U	1.09	0.272
Tetryl	479-45-8		U	1.09	0.272

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	64.3	50	150	

U	Not detected at or above adjusted sample detection limit

Sample #:	L14070459-02	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	1-79SD001(070714)	**Prep Method:**	METHOD	**Prep Date:**	07/15/2014 11:14
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG484386	**Analyst:**	ECL	**Run Date:**	07/16/2014 16:23
Collect Date:	07/07/2014 13:00	**Dilution:**	1	**File ID:**	5L013084.F
Sample Tag:	01	**Units:**	mg/kg		

Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trinitrobenzene	99-35-4		U	0.239	0.0958
1,3-Dinitrobenzene	99-65-0		U	0.239	0.0958
2,4,6-Trinitrotoluene	118-96-7	0.307		0.239	0.0958
2,4-Dinitrotoluene	121-14-2		U	0.239	0.0958
2,6-Dinitrotoluene	606-20-2		U	0.239	0.0958
2-Amino-4,6-dinitrotoluene	35572-78-2		U	0.239	0.0958
2-Nitrotoluene	88-72-2		U	0.239	0.0958

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
3-Nitrotoluene	99-08-1		U	0.239	0.0958
4-Nitrotoluene	99-99-0		U	0.239	0.0958
4-Amino-2,6-dinitrotoluene	19406-51-0		U	0.239	0.0958
HMX	2691-41-0		U	0.239	0.0958
Nitrobenzene	98-95-3		U	0.239	0.0958
RDX	121-82-4		U	0.239	0.0958
Tetryl	479-45-8		U	0.239	0.0958

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	84.0	50	150	

U	Not detected at or above adjusted sample detection limit

Sample #:	L14070459-03	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	1-79SD002(070714)	**Prep Method:**	METHOD	**Prep Date:**	07/15/2014 11:14
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG484386	**Analyst:**	ECL	**Run Date:**	07/16/2014 18:21
Collect Date:	07/07/2014 12:45	**Dilution:**	1	**File ID:**	5L013087.F
Sample Tag:	01	**Units:**	mg/kg		

Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trinitrobenzene	99-35-4		U	0.244	0.0976
1,3-Dinitrobenzene	99-65-0		U	0.244	0.0976
2,4-Dinitrotoluene	121-14-2		U	0.244	0.0976
2,6-Dinitrotoluene	606-20-2		U	0.244	0.0976
2-Amino-4,6-dinitrotoluene	35572-78-2	3.06		0.244	0.0976
2-Nitrotoluene	88-72-2		U	0.244	0.0976
3-Nitrotoluene	99-08-1		U	0.244	0.0976
4-Nitrotoluene	99-99-0		U	0.244	0.0976
4-Amino-2,6-dinitrotoluene	19406-51-0	1.63		0.244	0.0976
HMX	2691-41-0		U	0.244	0.0976
Nitrobenzene	98-95-3		U	0.244	0.0976
RDX	121-82-4		U	0.244	0.0976
Tetryl	479-45-8		U	0.244	0.0976

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	91.6	50	150	

U	Not detected at or above adjusted sample detection limit

Certificate of Analysis

Sample #:	L14070459-03	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	1-79SD002(070714)	**Prep Method:**	METHOD	**Prep Date:**	07/15/2014 11:14
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG484386	**Analyst:**	ECL	**Run Date:**	07/17/2014 14:08
Collect Date:	07/07/2014 12:45	**Dilution:**	20	**File ID:**	5L013100.F
Sample Tag:	DL01	**Units:**	mg/kg		

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7	72.6		4.88	1.95

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	DL	50	150	*

DL	Surrogate or spike compound was diluted out

Sample #:	L14070459-04	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	1-79SW002(070714)	**Prep Method:**	METHOD	**Prep Date:**	07/14/2014 08:08
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG484128	**Analyst:**	ECL	**Run Date:**	07/15/2014 19:36
Collect Date:	07/07/2014 12:45	**Dilution:**	1	**File ID:**	5L013069.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
1,3,5-Trinitrobenzene	99-35-4		U	1.20	0.301
1,3-Dinitrobenzene	99-65-0		U	1.20	0.301
2,4,6-Trinitrotoluene	118-96-7		U	1.20	0.301
2,4-Dinitrotoluene	121-14-2		U	1.20	0.301
2,6-Dinitrotoluene	606-20-2		U	1.20	0.301
2-Amino-4,6-dinitrotoluene	35572-78-2		U	1.20	0.301
2-Nitrotoluene	88-72-2		U	1.20	0.301
3-Nitrotoluene	99-08-1		U	1.20	0.301
4-Nitrotoluene	99-99-0		U	1.20	0.301
4-Amino-2,6-dinitrotoluene	19406-51-0		U	1.20	0.301
HMX	2691-41-0		U	1.20	0.301
Nitrobenzene	98-95-3		U	1.20	0.301
RDX	121-82-4		U	1.20	0.301
Tetryl	479-45-8		U	1.20	0.301

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	68.1	50	150	

U	Not detected at or above adjusted sample detection limit

2.1.1.2 QC Summary Data

Example 8330 Calculations

Sample Concentration from Linear Regression

Step 1: Retrieve Curve Data From Plot (y = mx + b)

y = response of analyte as area (from quantitation report)
x = concentration analyte
m = slope from curve
b = intercept from curve

Step 2: Retrieve y from quantitation report

Step 3: Retreive extraction data from logsheet

Vf = Final extract volume (mL)
Vi = Initial vome of sample (mL) or initial weight (g)

Step 4: Solve for concentration in extract (x):

x = (y - b)/m = [(7.774 -(- 0.04773)]/ 0.1711 = 45.2

Step 5: Solve for analyte concentration in sample (Cx):

Cx = (x) (Vf /Vi)

Example CCV Calculation: **(Vf/Vi) = 1**
HMX

Slope from curve, m:	0.171145
Intercept from curve, b:	0.0436711
Area of analyte, y:	7.774
Concentration (ug/L):	45.16830115

Example Water Calculation:

Slope from curve, m:	0.171145
Intercept from curve, b:	0.0436711
Area of analyte, y:	7.774
Volume of extract (mL):	10.00
Volume of sample extracted (mL):	1000.00
Concentration (ug/L):	0.451683011

Example Soil Calculation:
1,3,5-Trinitrobenzene

Slope from curve, m:	0.411263
Intercept from curve, b:	-0.0850241
Area of analyte, y:	20.26089
Volume of extract (mL):	20.00
Weight of sample extracted (g):	2.00
Concentration (ug/kg):	494.7178351
Concentration (mg/kg):	0.494717835

Microbac Laboratories Inc.
Sample Extract Log

Workgroup: WG483912
Analyst: RAH
Spike Analyst: RAH
Method: METHOD
Run Date: 07/14/2014 08:08
SOP: EXTNT01 Revision 1
Spike Witness: CSH
Surr Solution: STD65238

Acetonitrile Lot #: COA17000
WATER Lot #: COA17319
Methanol Lot #: COA17513
SDB-RPS (SPE DISK) Lot #: COA17386

	SAMPLE #	Type	Reference	pH	Prod	Init Amnt	Surr Amnt	Spike Amnt	Spike Sol	Final Vol	Color
1	L14070452-01	SAMP			8330	880 mL	.5 mL			10 mL	Transparent
2	L14070452-02	SAMP			8330	880 mL	.5 mL			10 mL	Transparent
3	L14070452-03	SAMP			8330	900 mL	.5 mL			10 mL	Transparent
4	L14070452-04	SAMP			8330	900 mL	.5 mL			10 mL	Transparent
5	L14070452-05	SAMP			8330	840 mL	.5 mL			10 mL	Transparent
6	L14070459-01	SAMP			8330	920 mL	.5 mL			10 mL	Transparent
7	L14070459-04	SAMP			8330	830 mL	.5 mL			10 mL	Transparent
8	L14070524-01	SAMP			8330-SPE1	930 mL	.5 mL			10 mL	Transparent
9	L14070524-02	SAMP			8330-SPE1	910 mL	.5 mL			10 mL	Transparent
10	L14070524-03	SAMP			8330-SPE1	1000 mL	.5 mL			10 mL	Transparent
11	L14070524-04	SAMP			8330-SPE1	910 mL	.5 mL			10 mL	Transparent
12	L14070524-05	SAMP			8330-SPE1	920 mL	.5 mL			10 mL	Transparent
13	L14070524-06	SAMP			8330-SPE1	1000 mL	.5 mL			10 mL	Transparent
14	L14070647-01	SAMP			8330	1000 mL	.5 mL			10 mL	Transparent
15	WG483912-01	BLANK			8330	1000 mL	.5 mL			10 mL	Transparent
16	WG483912-02	LCS			8330	1000 mL	.5 mL	.5 mL	STD65237	10 mL	Transparent
17	WG483912-03	LCS2			8330	1000 mL	.5 mL	.5 mL	STD65237	10 mL	Transparent

Due to insufficient sample volume, this preparation batch failed to include the method prescribed MS and MSD.

L14070459-04	VERY SLOW TO FILTER THROUGH SPE DISK

Analyst: [signature]

Reviewer: Cheryl A. Flowers

EXTRACT - Modified 10/22/2008
PDF ID: 3653474
Report generated: 07/14/2014 16:02

Microbac Laboratories Inc.
Continuous Sample Extract Log

Workgroup: WG484160
Analyst: RAH
Spike Analyst: RAH
Method: METHOD
Run Date: 07/15/2014 11:14
SOP: EXTNT02 Revison 11
Spike Witness: JDH
Surr Solution: STD65238

TIME ON: 14:00 OFF: 08:00 ON: _____ OFF: _____
Acetonitrile, OPTIMA Lot #: COA17588
WATER Lot #: COA17319

	SAMPLE #	Type	Reference	Prod	pH	Init Amnt	Surr Amnt	Spike Amnt	Spike Sol	Final Vol	Color
1	L14070003-01	ML01		8330-SPE		10 g	1 mL	.125 mL	STD65313	40 mL	Transparent
2	L14070005-01	ML01		8330-SPE		10 g	1 mL	.25 mL	STD65313	40 mL	Transparent
3	L14070459-02	SAMP		8330		10.44 g	1 mL			40 mL	Transparent
4	L14070459-03	SAMP		8330		10.25 g	1 mL			40 mL	Transparent
5	WG484160-01	BLANK		8330		10 g	1 mL			40 mL	Transparent
6	WG484160-02	LCS		8330		10 g	1 mL	1 mL	STD65237	40 mL	Transparent
7	WG484160-03	LCS		8330		10 g	1 mL	1 mL	STD64760	40 mL	Transparent
8	WG484160-04	REF	L14070459-02	8330		10.44 g	1 mL			40 mL	Transparent
9	WG484160-05	MS	L14070459-02	8330		10.15 g	1 mL	1 mL	STD65237	40 mL	Transparent
10	WG484160-06	MSD	L14070459-02	8330		10.34 g	1 mL	1 mL	STD65237	40 mL	Transparent

CTRL TEMP ON@ 3.1C, OFF@ 3.2C

BATH TEMP ON@ 12C, OFF@ 13C

L14070003-01	LOD (8330 + PETN)
L14070005-01	LOQ (8330 + PETN)

Analyst: _____

Reviewer: Chris Hill

EXTRACT - Modified 01/23/2009
PDF ID: 3657261
Report generated: 07/16/2014 08:08

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPLC5 Dataset: 070914
Analyst1: ECL Analyst2: NA
Method: 8330-PLUS SOP: HPLC02 Rev: 18

Maintenance Log ID: Syringe Filter Lot#: 00174785
Eluent ID#:
Column 1 ID: ULTRACARB5 ODS Column 2 ID: NA
Workgroups:
Internal STD: NA Surrogate STD: STD65238 Calibration STD
CCV STD: STD65351 LCS STD: STD65237 MS/MSD STD:

Comments: Pressure = 177 bar

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	5L012964.F	WG483233-01 8330 ICAL 2500 PPB	1	1	STD65351	07/09/14 13:26
2	5L012965.F	WG483233-02 8330 ICAL 1000 PPB	1	1	STD65351	07/09/14 14:05
3	5L012966.F	WG483233-03 8330 ICAL 500 PPB	1	1	STD65351	07/09/14 14:44
4	5L012967.F	WG483233-04 8330 ICAL 100 PPB	1	1	STD65351	07/09/14 15:23
5	5L012968.F	WG483233-05 8330 ICAL 50 PPB	1	1	STD65351	07/09/14 16:02
6	5L012969.F	WG483233-06 8330 ICAL 25 PPB	1	1	STD65351	07/09/14 16:41
7	5L012970.F	WG483233-07 8330 ALT 500 PPB	1	1	STD65377	07/09/14 17:20
8	5L012971.F	WG482432-01 BLANK	1	1		07/09/14 18:00
9	5L012972.F	WG482432-02 LCS	1	1		07/09/14 18:39
10	5L012973.F	WG482432-03 LCS DUP	1	1		07/09/14 19:18
11	5L012974.F	L14061431-02	1	1		07/09/14 19:57
12	5L012975.F	L14061431-04	1	1		07/09/14 20:36
13	5L012976.F	L14061689-10	1	1		07/09/14 21:15
14	5L012977.F	L14061689-12	1	1		07/09/14 21:54
15	5L012978.F	L14061689-14	1	1		07/09/14 22:33
16	5L012979.F	L14061689-16	1	1		07/09/14 23:12
17	5L012980.F	L14061689-18	1	1		07/09/14 23:51
18	5L012981.F	WG483357-01 8330 CCV 500 PPB	1	1	STD65351	07/10/14 00:30
19	5L012982.F	WG482631-01 BLANK	1	1		07/10/14 01:09
20	5L012983.F	WG482631-02 LCS	1	1		07/10/14 01:48
21	5L012984.F	WG482631-03 LCS DUP	1	1		07/10/14 02:28
22	5L012985.F	L14061689-29	1	1		07/10/14 03:07
23	5L012986.F	L14061689-31	1	1		07/10/14 03:46
24	5L012987.F	L14061689-33	1	1		07/10/14 04:25
25	5L012988.F	L14061689-35	1	1		07/10/14 05:04
26	5L012989.F	L14061689-37	1	1		07/10/14 05:43
27	5L012990.F	WG483357-02 8330 CCV 500 PPB	1	1	STD65351	07/10/14 06:22
28	5L012991.F	AcCN Rinse	1	1		07/10/14 07:01

Comments

Seq.	Rerun	Dil.	Reason	Analytes
7				
	WG483233-07 8330 ALT 500 PPB: Tetryl failed marginally low.			

Page: 1 Approved: 10-JUL-14

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPLC5 Dataset: 070914
Analyst1: ECL Analyst2: NA
Method: 8330-PLUS SOP: HPLC02 Rev: 18

Maintenance Log ID: Syringe Filter Lot#: 00174785
Eluent ID#:
Column 1 ID: ULTRACARB5 ODS Column 2 ID: NA
Workgroups:
Internal STD: NA Surrogate STD: STD65238
CCV STD: STD65351 LCS STD: STD65237

Comments

Seq.	Rerun	Dil.	Reason	Analytes
11	X		Required second column confirmation	RDX
	L14061431-02			
12	X		Required second column confirmation	RDX
	L14061431-04			
18				
	WG483357-01 8330 CCV 500 PPB: Tetryl failed low.			
20				
	WG482631-02 LCS: 6 analytes failed high. There were no hits in samples associated with this LCS.			
21				
	WG482631-03 LCS DUP: 6 analytes failed high. There were no hits in samples associated with this LCS.			
23				
	L14061689-31: 1,2-DNB surrogate failed marginally low. Sample took several hours to filter and not all the sample would filter.			
27				
	WG483357-02 8330 CCV 500 PPB: Tetryl failed low.			

Page: 2 Approved: 10-JUL-14

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPLC5 Dataset: 071514
Analyst1: ECL Analyst2: NA
Method: 8330-PLUS SOP: HPLC02 Rev: 18

Maintenance Log ID: Syringe Filter Lot#: 00174785
Eluent ID#:

Workgroups: Column 1 ID: ULTRACARB5 ODS Column 2 ID: NA

Internal STD: NA Surrogate STD: STD65238 Calibration STD
CCV STD: STD65351 LCS STD: STD65237 MS/MSD STD:

Comments: Pressure = 172 bar

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	5L013055.F	WG484130-01 8330 CCV 500 PPB	1	1	STD65351	07/15/14 09:51
2	5L013056.F	WG483912-01 BLANK	1	1		07/15/14 11:08
3	5L013057.F	WG483912-02 LCS	1	1		07/15/14 11:47
4	5L013058.F	WG483912-03 LCS DUP	1	1		07/15/14 12:26
5	5L013059.F	L14070273-37 5x	1	5		07/15/14 13:05
6	5L013060.F	L14070273-39 5x	1	5		07/15/14 13:44
7	5L013061.F	L14070273-38 10x	1	10		07/15/14 14:23
8	5L013062.F	L14070452-01	1	1		07/15/14 15:02
9	5L013063.F	L14070452-02	1	1		07/15/14 15:42
10	5L013064.F	L14070452-03	1	1		07/15/14 16:21
11	5L013065.F	L14070452-04	1	1		07/15/14 17:00
12	5L013066.F	WG484130-02 8330 CCV 500 PPB	1	1	STD65351	07/15/14 17:39
13	5L013067.F	L14070452-05	1	1		07/15/14 18:18
14	5L013068.F	L14070459-01	1	1		07/15/14 18:57
15	5L013069.F	L14070459-04	1	1		07/15/14 19:36
16	5L013070.F	L14070524-01	1	1		07/15/14 20:15
17	5L013071.F	L14070524-02	1	1		07/15/14 20:54
18	5L013072.F	L14070524-03	1	1		07/15/14 21:33
19	5L013073.F	L14070524-04	1	1		07/15/14 22:12
20	5L013074.F	L14070524-05	1	1		07/15/14 22:51
21	5L013075.F	L14070524-06	1	1		07/15/14 23:30
22	5L013076.F	L14070647-01	1	1		07/16/14 00:09
23	5L013077.F	WG484130-03 8330 CCV 500 PPB	1	1	STD65351	07/16/14 00:48
24	5L013078.F	AcCN Rinse	1	1		07/16/14 01:28

Comments

Seq.	Rerun	Dil.	Reason	Analytes
17	X	10	Over Calibration Range	3 analytes
	L14070524-02			

Page: 1 Approved: 16-JUL-14

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPLC5 Dataset: 071614
Analyst1: ECL Analyst2: NA
Method: 8330-PLUS SOP: HPLC02 Rev: 18

Maintenance Log ID: Syringe Filter Lot#: 00174785
Eluent ID#:
Column 1 ID: ULTRACARB5 ODS Column 2 ID: NA
Workgroups:
Internal STD: NA Surrogate STD: STD65238 Calibration STD
CCV STD: STD65351 LCS STD: STD65237 MS/MSD STD: STD65237

Comments: Pressure = 173 bar
Files 5L013094 to 5L013097 need rerun due to the wrong method used to acquire the data.

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	5L013079.F	WG484423-01 8330 CCV 500 PPB	1	1	STD65351	07/16/14 13:08
2	5L013080.F	WG484160-01 BLANK	7	1		07/16/14 13:47
3	5L013081.F	WG484160-02 LCS	7	1		07/16/14 14:26
4	5L013082.F	L14070003-01	7	1		07/16/14 15:05
5	5L013083.F	L14070005-01	7	1		07/16/14 15:44
6	5L013084.F	L14070459-02	7	1		07/16/14 16:23
7	5L013085.F	WG484160-05 L14070459-02 MS	7	1		07/16/14 17:02
8	5L013086.F	WG484160-06 L14070459-02 MSD	7	1		07/16/14 17:42
9	5L013087.F	L14070459-03	7	1		07/16/14 18:21
10	5L013088.F	L14070524-02 10x	1	1		07/16/14 19:00
11	5L013089.F	WG484423-02 8330 CCV 500 PPB	1	1	STD65351	07/16/14 19:39
12	5L013090.F	Solvent Rinse	1	1	STD65351	07/16/14 20:18
13	5L013091.F	Solvent Rinse	1	1	STD65351	07/16/14 20:38
14	5L013092.F	WG484425-01 PETN CCV 500 PPB	1	1	STD63527	07/16/14 20:57
15	5L013093.R	WG484160-01 BLANK	7	1		07/16/14 21:16
16	5L013094.R	WG484160-03 PETN LCS	7	1		07/16/14 21:55
17	5L013095.R	L14070003-01	7	1		07/16/14 22:34
18	5L013096.R	L14070005-01	7	1		07/16/14 23:14
19	5L013097.F	WG484425-02 PETN CCV 500 PPB	1	1	STD63527	07/16/14 23:53
20	5L013098.R	AcCN Rinse	1	1		07/17/14 00:13

Comments

Seq.	Rerun	Dil.	Reason	Analytes
8				
	L14070459-02 MSD: 1,3,5-TNB and 4-amino-2,6-DNT failed low.			
9	X	20	Over Calibration Range	2,4,6-TNT
	L14070459-03			

Page: 1 Approved: 17-JUL-14

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPLC5 Dataset: 071714
Analyst1: ECL Analyst2: NA
Method: 8330-PLUS SOP: HPLC02 Rev: 18

Maintenance Log ID: Syringe Filter Lot#: 00174785
Eluent ID#:
Column 1 ID: ULTRACARB5 ODS Column 2 ID: NA
Workgroups:
Internal STD: NA Surrogate STD: NA Calibration STD
CCV STD: STD65351 LCS STD: MS/MSD STD:

Comments: Pressure = 173 bar

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	5L013099.F	WG484423-03 8330 CCV 500 PPB	1	1	STD65351	07/17/14 13:29
2	5L013100.F	L14070459-03 20x	7	20		07/17/14 14:08
3	5L013101.F	WG484423-04 8330 CCV 500 PPB	1	1	STD65351	07/17/14 14:47
4	5L013102.F	Solvent Rinse	1	1	STD65351	07/17/14 15:26
5	5L013103.F	Solvent Rinse	1	1	STD65351	07/17/14 15:46
6	5L013104.F	WG484425-01 PETN CCV 500 PPB	1	1	STD63527	07/17/14 16:05
7	5L013105.F	WG484160-01 BLANK	7	1		07/17/14 16:24
8	5L013106.F	WG484160-03 PETN LCS	7	1		07/17/14 16:43
9	5L013107.F	L14070003-01	7	1		07/17/14 17:02
10	5L013108.F	L14070005-01	7	1		07/17/14 17:22
11	5L013109.F	WG484425-02 PETN CCV 500 PPB	1	1	STD63527	07/17/14 17:41
12	5L013110.R	AcCN Rinse	1	1		07/17/14 18:00

Comments

Seq.	Rerun	Dil.	Reason	Analytes
10				
	L14070005-01: Needs re-extracted. LOQ not spiked with PETN.			

Page: 1 Approved: 18-JUL-14

Microbac Laboratories Inc.

Data Checklist

Date: 09-JUL-2014
Analyst: ECL
Analyst: NA
Method: 8330
Instrument: HPLC5
Curve Workgroup: NA
Runlog ID: 62106
Analytical Workgroups: L14061431, L14061689

ANALYTICAL	
System Performance Check	NA
DFTPP (MS)	NA
Endrin/DDT breakdown (8081/MS)	NA
Pentachlorophenol/benzidine tailing (MS)	NA
Eluent check (IC)/system pressure (HPLC)	X
Window standard (FID)	NA
Initial Calibration	X
Average RF	NA
Linear regression or higher order curve	X
Alternate source standard (ICV) % Difference	X
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (MS)	NA
Continuing calibration blank (CCB) (IC)	NA
Special standards	NA
Blanks	X
TCL hits	X
Surrogate recoveries	X
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	X
MS/MSD/Sample duplicates	NA
Recoveries	NA
%RPD	NA
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	X
Surrogate recoveries	X
Internal standard areas (MS)	NA
Library searches (MS)	NA
Calculations & correct factors	X
Compounds above calibration range	NA
Reruns	NA
Manual integrations	NA
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	
Check for completeness	X
Primary Reviewer	ECL
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	MDC

Primary Reviewer:
10-JUL-2014

Secondary Reviewer:
10-JUL-2014

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-10-2014 19:08:43

Microbac Laboratories Inc.

Data Checklist

Date: 15-JUL-2014
Analyst: ECL
Analyst: NA
Method: 8330
Instrument: HPLC5
Curve Workgroup: NA
Runlog ID: 62219
Analytical Workgroups: L14070273, L14070452, L14070459, L14070524, L14070647

ANALYTICAL	
System Performance Check	NA
DFTPP (MS)	NA
Endrin/DDT breakdown (8081/MS)	NA
Pentachlorophenol/benzidine tailing (MS)	NA
Eluent check (IC)/system pressure (HPLC)	X
Window standard (FID)	NA
Initial Calibration	NA
Average RF	NA
Linear regression or higher order curve	NA
Alternate source standard (ICV) % Difference	NA
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (MS)	NA
Continuing calibration blank (CCB) (IC)	NA
Special standards	NA
Blanks	X
TCL hits	X
Surrogate recoveries	X
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	X
MS/MSD/Sample duplicates	NA
Recoveries	NA
%RPD	NA
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	X
Surrogate recoveries	X
Internal standard areas (MS)	NA
Library searches (MS)	NA
Calculations & correct factors	X
Compounds above calibration range	X
Reruns	X
Manual integrations	NA
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	
Check for completeness	X
Primary Reviewer	ECL
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	MDC

Primary Reviewer:
16-JUL-2014

Secondary Reviewer:
16-JUL-2014

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-16-2014 13:49:48

Microbac Laboratories Inc.

Data Checklist

Date: 16-JUL-2014
Analyst: ECL
Analyst: NA
Method: 8330
Instrument: HPLC5
Curve Workgroup: NA
Runlog ID: 62254
Analytical Workgroups: L14070459, L14070524, L14070003, L14070005

ANALYTICAL	
System Performance Check	NA
DFTPP (MS)	NA
Endrin/DDT breakdown (8081/MS)	NA
Pentachlorophenol/benzidine tailing (MS)	NA
Eluent check (IC)/system pressure (HPLC)	X
Window standard (FID)	NA
Initial Calibration	NA
Average RF	NA
Linear regression or higher order curve	NA
Alternate source standard (ICV) % Difference	NA
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (MS)	NA
Continuing calibration blank (CCB) (IC)	NA
Special standards	X
Blanks	X
TCL hits	X
Surrogate recoveries	X
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	X
MS/MSD/Sample duplicates	X
Recoveries	X
%RPD	X
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	X
Surrogate recoveries	X
Internal standard areas (MS)	NA
Library searches (MS)	NA
Calculations & correct factors	X
Compounds above calibration range	X
Reruns	X
Manual integrations	NA
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	
Check for completeness	X
Primary Reviewer	ECL
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	MDC

Primary Reviewer:
17-JUL-2014

Secondary Reviewer:
17-JUL-2014

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-17-2014 14:10:15

Microbac Laboratories Inc.

Data Checklist

Date: 17-JUL-2014
Analyst: ECL
Analyst: NA
Method: 8330
Instrument: HPLC5
Curve Workgroup: NA
Runlog ID: 62275
Analytical Workgroups: L14070459, L14070003

ANALYTICAL	
System Performance Check	NA
DFTPP (MS)	NA
Endrin/DDT breakdown (8081/MS)	NA
Pentachlorophenol/benzidine tailing (MS)	NA
Eluent check (IC)/system pressure (HPLC)	NA
Window standard (FID)	NA
Initial Calibration	NA
Average RF	NA
Linear regression or higher order curve	NA
Alternate source standard (ICV) % Difference	NA
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (MS)	NA
Continuing calibration blank (CCB) (IC)	NA
Special standards	NA
Blanks	X
TCL hits	NA
Surrogate recoveries	NA
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	NA
MS/MSD/Sample duplicates	NA
Recoveries	NA
%RPD	NA
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	X
Surrogate recoveries	X
Internal standard areas (MS)	NA
Library searches (MS)	NA
Calculations & correct factors	X
Compounds above calibration range	NA
Reruns	X
Manual integrations	NA
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	
Check for completeness	X
Primary Reviewer	ECL
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	MDC

Primary Reviewer:
18-JUL-2014

Secondary Reviewer:
18-JUL-2014

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-18-2014 12:44:58

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8330B

AAB#: WG484128

Login Number: L14070459

Client ID	ID	Date Collected	TCLP Date	Time Held	Max Hold	Q	Extract Date	Time Held	Max Hold	Q	Run Date	Time Held	Max Hold	Q
1-79SW001(070714)	01	07/07/14					07/14/2014	6.8	7		07/15/14	1.5	40	
1-79SW002(070714)	04	07/07/14					07/14/2014	6.8	7		07/15/14	1.5	40	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 3658779
Report generated 07/18/2014 13:33

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8330B

AAB#: WG484386

Login Number: L14070459

Client ID	ID	Date Collected	TCLP Date	Time Held	Max Hold	Q	Extract Date	Time Held	Max Hold	Q	Run Date	Time Held	Max Hold	Q
1-79SD001(070714)	02	07/07/14					07/15/2014	7.9	14		07/16/14	1.2	40	
1-79SD002(070714)	03	07/07/14					07/15/2014	7.9	14		07/17/14	2.1	40	
1-79SD002(070714)	03	07/07/14					07/15/2014	7.9	14		07/16/14	1.3	40	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 3658779
Report generated 07/18/2014 13:33

Microbac Laboratories Inc.
SURROGATE STANDARDS

Login Number: L14070459
Instrument Id: HPLC5
Workgroup (AAB#): WG484386

Method: 8330
CAL ID: HPLC5-09-JUL-14
Matrix: Soil

Sample Number	Dilution	Tag	1
L14070459-02	1.00	01	84.0
L14070459-03	1.00	01	91.6
L14070459-03	20.0	DL01	DL
WG484160-01	1.00	01	88.2
WG484160-02	1.00	01	99.2

Surrogates	Surrogate Limits		
1 - 1,2-Dinitrobenzene	50	-	150

Underline = Result out of surrogate limits

DL = surrogate diluted out
ND = surrogate not detected

SURROGATES - Modified 03/06/2008
PDF File ID: 3658787
Report generated: 07/18/2014 13:33

Microbac Laboratories Inc.
SURROGATE STANDARDS

Login Number: L14070459
Instrument Id: HPLC5
Workgroup (AAB#): WG484128

Method: 8330
CAL ID: HPLC5-09-JUL-14
Matrix: Water

Sample Number	Dilution	Tag	1
L14070459-01	1.00	01	64.3
L14070459-04	1.00	01	68.1
WG483912-01	1.00	01	87.3
WG483912-02	1.00	01	108
WG483912-03	1.00	01	110

Surrogates	Surrogate Limits		
1 - 1,2-Dinitrobenzene	50	-	150

Underline = Result out of surrogate limits

DL = surrogate diluted out
ND = surrogate not detected

SURROGATES - Modified 03/06/2008
PDF File ID: 3658787
Report generated: 07/18/2014 13:33

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L14070459
Blank File ID: 5L013056.F
Prep Date: 07/14/14 08:08
Analyzed Date: 07/15/14 11:08
Analyst: ECL

Work Group: WG484128
Blank Sample ID: WG483912-01
Instrument ID: HPLC5
Method: 8330B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG483912-02	5L013057.F	07/15/14 11:47	01
LCS2	WG483912-03	5L013058.F	07/15/14 12:26	01
1-79SW001(070714)	L14070459-01	5L013068.F	07/15/14 18:57	01
1-79SW002(070714)	L14070459-04	5L013069.F	07/15/14 19:36	01

Report Name: BLANK_SUMMARY
PDF File ID: 3658780
Report generated 07/18/2014 13:33

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L14070459
Blank File ID: 5L013080.F
Prep Date: 07/15/14 11:14
Analyzed Date: 07/16/14 13:47
Analyst: ECL

Work Group: WG484386
Blank Sample ID: WG484160-01
Instrument ID: HPLC5
Method: 8330B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG484160-02	5L013081.F	07/16/14 14:26	01
1-79SD001(070714)	L14070459-02	5L013084.F	07/16/14 16:23	01
1-79SD002(070714)	L14070459-03	5L013087.F	07/16/14 18:21	01
1-79SD002(070714)	L14070459-03	5L013100.F	07/17/14 14:08	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 3658780
Report generated 07/18/2014 13:33

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L14070459 Prep Date: 07/14/14 08:08 Sample ID: WG483912-01
Instrument ID: HPLC5 Run Date: 07/15/14 11:08 Prep Method: METHOD
File ID: 5L013056.F Analyst: ECL Method: 8330B
Workgroup (AAB#): WG484128 Matrix: Water Units: ug/L
Contract #: Cal ID: HPLC5-09-JUL-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
1,3,5-Trinitrobenzene	0.250	1.00	1.00	1	U
1,3-Dinitrobenzene	0.250	1.00	1.00	1	U
2,4,6-Trinitrotoluene	0.250	1.00	1.00	1	U
2,4-Dinitrotoluene	0.250	1.00	1.00	1	U
2,6-Dinitrotoluene	0.250	1.00	1.00	1	U
2-Amino-4,6-dinitrotoluene	0.250	1.00	1.00	1	U
2-Nitrotoluene	0.250	1.00	1.00	1	U
3-Nitrotoluene	0.250	1.00	1.00	1	U
4-Nitrotoluene	0.250	1.00	1.00	1	U
4-Amino-2,6-dinitrotoluene	0.250	1.00	1.00	1	U
HMX	0.250	1.00	1.00	1	U
Nitrobenzene	0.250	1.00	1.00	1	U
RDX	0.250	1.00	1.00	1	U
Tetryl	0.250	1.00	1.00	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
1,2-Dinitrobenzene	87.3	50 - 150	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 3658781
18-JUL-2014 13:33

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L14070459 Prep Date: 07/15/14 11:14 Sample ID: WG484160-01
Instrument ID: HPLC5 Run Date: 07/16/14 13:47 Prep Method: METHOD
File ID: 5L013080.F Analyst: ECL Method: 8330B
Workgroup (AAB#): WG484386 Matrix: Soil Units: mg/kg
Contract #: Cal ID: HPLC5-09-JUL-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
1,3,5-Trinitrobenzene	0.100	0.250	0.250	1	U
1,3-Dinitrobenzene	0.100	0.250	0.250	1	U
2,4,6-Trinitrotoluene	0.100	0.250	0.250	1	U
2,4-Dinitrotoluene	0.100	0.250	0.250	1	U
2,6-Dinitrotoluene	0.100	0.250	0.250	1	U
2-Amino-4,6-dinitrotoluene	0.100	0.250	0.250	1	U
2-Nitrotoluene	0.100	0.250	0.250	1	U
3-Nitrotoluene	0.100	0.250	0.250	1	U
4-Nitrotoluene	0.100	0.250	0.250	1	U
4-Amino-2,6-dinitrotoluene	0.100	0.250	0.250	1	U
HMX	0.100	0.250	0.250	1	U
Nitrobenzene	0.100	0.250	0.250	1	U
RDX	0.100	0.250	0.250	1	U
Tetryl	0.100	0.250	0.250	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
1,2-Dinitrobenzene	88.2	50 - 150	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3658781
18-JUL-2014 13:33

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14070459 Run Date: 07/16/2014 Sample ID: WG484160-02
Instrument ID: HPLC5 Run Time: 14:26 Prep Method: METHOD
File ID: 5L013081.F Analyst: ECL Method: 8330B
Workgroup (AAB#): WG484386 Matrix: Soil Units: mg/kg
QC Key: STD Lot#: STD65237 Cal ID: HPLC5-09-JUL-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
1,3,5-Trinitrobenzene	1.00	0.885	88.5	75 - 125	
1,3-Dinitrobenzene	1.00	0.923	92.3	80 - 125	
2,4,6-Trinitrotoluene	1.00	0.900	90.0	40 - 130	
2,4-Dinitrotoluene	1.00	0.941	94.1	80 - 125	
2,6-Dinitrotoluene	1.00	0.976	97.6	80 - 120	
2-Amino-4,6-dinitrotoluene	1.00	0.970	97.0	80 - 125	
2-Nitrotoluene	1.00	0.958	95.8	80 - 125	
3-Nitrotoluene	1.00	0.962	96.2	75 - 120	
4-Nitrotoluene	1.00	0.956	95.6	75 - 125	
4-Amino-2,6-dinitrotoluene	1.00	0.937	93.7	80 - 125	
HMX	1.00	0.874	87.4	75 - 125	
Nitrobenzene	1.00	0.903	90.3	75 - 125	
RDX	1.00	0.779	77.9	70 - 135	
Tetryl	1.00	0.971	97.1	10 - 150	

Surrogates	% Recovery	Surrogate Limits	Qualifier
1,2-Dinitrobenzene	99.2	50 - 150	PASS

* EXCEEDS %REC LIMIT

LCS - Modified 03/06/2008
PDF File ID: 3661063
Report generated: 07/18/2014 13:33

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14070459 Analyst: ECL Prep Method: METHOD
Instrument ID: HPLC5 Matrix: Water Method: 8330B
Workgroup (AAB#): WG484128 Units: ug/L
QC Key: STD Lot #: STD65237

Sample ID: WG483912-02 LCS File ID: 5L013057.F Run Date: 07/15/2014 11:47
Sample ID: WG483912-03 LCS2 File ID: 5L013058.F Run Date: 07/15/2014 12:26

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
1,3-Dinitrobenzene	5.00	4.72	94.4	5.00	4.94	98.8	4.50	45 - 160	20	
2,4,6-Trinitrotoluene	5.00	4.73	94.6	5.00	4.87	97.4	2.87	40 - 145	20	
2,4-Dinitrotoluene	5.00	4.84	96.8	5.00	5.05	101	4.23	60 - 135	20	
2,6-Dinitrotoluene	5.00	5.02	100	5.00	5.27	105	4.76	60 - 135	20	
2-Amino-4,6-dinitrotoluene	5.00	5.01	100	5.00	5.19	104	3.59	50 - 155	20	
2-Nitrotoluene	5.00	4.95	99.0	5.00	5.18	104	4.55	45 - 135	20	
3-Nitrotoluene	5.00	4.92	98.3	5.00	5.11	102	3.96	50 - 130	20	
4-Amino-2,6-dinitrotoluene	5.00	4.75	95.0	5.00	4.95	98.9	4.05	55 - 155	20	
4-Nitrotoluene	5.00	4.85	97.1	5.00	5.08	102	4.59	50 - 130	20	
HMX	5.00	4.28	85.5	5.00	4.39	87.9	2.70	80 - 115	20	
Nitrobenzene	5.00	4.71	94.3	5.00	4.92	98.4	4.31	50 - 140	20	
RDX	5.00	4.55	91.1	5.00	4.70	94.0	3.17	50 - 160	20	
1,3,5-Trinitrobenzene	5.00	4.39	87.9	5.00	4.53	90.6	3.09	65 - 140	20	
Tetryl	5.00	4.91	98.2	5.00	4.99	99.8	1.62	20 - 175	20	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
1,2-Dinitrobenzene	108	110	50 - 150	PASS

* EXCEEDS %REC LIMIT

\# EXCEEDS RPD LIMIT

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 3658782
Report generated: 07/18/2014 13:33

Microbac Laboratories Inc.
MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum: L14070459 Cal ID: HPLC5 - Worknum: WG484386
Instrument ID: HPLC5 Contract #: Method: 8330B
Parent ID: WG484160-04 File ID: 5L013084.F Dil: 1 Matrix: SOLID
Sample ID: WG484160-05 MS File ID: 5L013085.F Dil: 1 Units: mg/kg
Sample ID: WG484160-06 MSD File ID: 5L013086.F Dil: 1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
1,3,5-Trinitrobenzene	ND	0.985	0.824	83.6	0.967	0.653	67.5	23.1	75 - 125	20	*#
1,3-Dinitrobenzene	ND	0.985	0.868	88.1	0.967	0.819	84.7	5.76	80 - 125	20	
2,4,6-Trinitrotoluene	0.307	0.985	0.984	68.7	0.967	1.07	79.2	8.68	40 - 130	20	
2,4-Dinitrotoluene	ND	0.985	0.902	91.6	0.967	0.865	89.4	4.21	80 - 125	20	
2,6-Dinitrotoluene	ND	0.985	0.977	99.2	0.967	0.933	96.5	4.57	80 - 120	20	
2-Amino-4,6-dinitrotoluene	ND	0.985	0.890	90.4	0.967	0.844	87.2	5.35	80 - 125	20	
2-Nitrotoluene	ND	0.985	0.946	96.0	0.967	0.942	97.4	0.393	80 - 125	20	
3-Nitrotoluene	ND	0.985	0.929	94.3	0.967	0.912	94.3	1.78	75 - 120	20	
4-Amino-2,6-dinitrotoluene	ND	0.985	0.794	80.6	0.967	0.736	76.1	7.67	80 - 125	20	*
4-Nitrotoluene	ND	0.985	0.904	91.7	0.967	0.897	92.7	0.781	75 - 125	20	
HMX	ND	0.985	0.834	84.7	0.967	0.746	77.1	11.2	75 - 125	20	
Nitrobenzene	ND	0.985	0.876	88.9	0.967	0.856	88.5	2.35	75 - 125	20	
RDX	ND	0.985	0.848	86.0	0.967	0.819	84.7	3.47	70 - 135	20	
Tetryl	ND	0.985	0.691	70.2	0.967	0.430	44.5	46.6	10 - 150	20	#

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 3661065
Report generated 07/18/2014 13:33

Microbac Laboratories Inc.

INITIAL CALIBRATION SUMMARY

Login Number: L14070459
Analytical Method: 8330B
ICAL Workgroup: WG483233

Instrument ID: HPLC5
Initial Calibration Date: 09-JUL-14 16:41
Column ID: F

Analyte		AVG RF	% RSD	LINEAR (R)	QUAD (R^2)
1,3,5-Trinitrobenzene		2.550	2.33	1.00000	
1,3-Dinitrobenzene		1.664	3.67	1.00000	
2,4,6-Trinitrotoluene		2.544	2.55	1.00000	
2,4-Dinitrotoluene		1.780	3.81	1.00000	
2,6-Dinitrotoluene		4.224	7.45	1.00000	
2-Amino-4,6-Dinitrotoluene		2.763	5.50	1.00000	
2-Nitrotoluene		4.544	16.2	1.00000	
3-Nitrotoluene		4.038	9.75	1.00000	
4-Amino-2,6-Dinitrotoluene		4.276	3.89	1.00000	
4-Nitrotoluene		5.486	11.9	1.00000	
HMX		5.860	3.94	1.00000	
Nitrobenzene		2.367	3.48	1.00000	
RDX		4.468	19.1	1.00000	
Tetryl		4.637	8.15	1.00000	

R = Correlation coefficient; 0.995 minimum
R^2 = Coefficient of determination; 0.99 minimum

This method always uses linear calibration model (R)

INT_CAL - Modified 03/06/2008
PDF File ID: 3658783
Report generated 07/18/2014 13:33

Microbac Laboratories Inc.

INITIAL CALIBRATION DATA

Login Number: L14070459

Analytical Method: 8330B

Instrument ID: HPLC5

Initial Calibration Date: 09-JUL-14 16:41

Column ID: F

Analyte	WG483233-01			WG483233-02			WG483233-03		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
1,3,5-Trinitrobenzene	2500	983.380676	2.542	1000	389.593018	2.567	500	191.390671	2.612
1,3-Dinitrobenzene	2500	1476.04382	1.694	1000	585.618530	1.708	500	288.898346	1.731
2,4,6-Trinitrotoluene	2500	967.202881	2.585	1000	385.309113	2.595	500	190.716125	2.622
2,4-Dinitrotoluene	2500	1377.43542	1.815	1000	549.588623	1.820	500	269.683533	1.854
2,6-Dinitrotoluene	2500	566.146790	4.416	1000	226.939255	4.406	500	111.609299	4.480
2-Amino-4,6-Dinitrotoluene	2500	877.059021	2.850	1000	349.451172	2.862	500	172.491531	2.899
2-Nitrotoluene	2500	510.656860	4.896	1000	203.632919	4.911	500	100.318611	4.984
3-Nitrotoluene	2500	588.019409	4.252	1000	232.781448	4.296	500	114.895737	4.352
4-Amino-2,6-Dinitrotoluene	2500	570.305420	4.384	1000	228.319305	4.380	500	112.675064	4.438
4-Nitrotoluene	2500	425.738861	5.872	1000	168.683578	5.928	500	83.4175415	5.994
HMX	2500	414.851227	6.026	1000	168.394058	5.938	500	84.8615189	5.892
Nitrobenzene	2500	1046.62891	2.389	1000	413.062103	2.421	500	203.071854	2.462
RDX	2500	484.308258	5.162	1000	195.345810	5.119	500	98.4699020	5.078
Tetryl	2500	561.568787	4.452	1000	229.507370	4.357	500	111.646652	4.478

INT_CAL - Modified 03/06/2008
PDF File ID: 3658783
Report generated 07/18/2014 13:33

Microbac Laboratories Inc.

INITIAL CALIBRATION DATA

Login Number: L14070459

Analytical Method: 8330B

Instrument ID: HPLC5

Initial Calibration Date: 09-JUL-14 16:41

Column ID: F

Analyte	WG483233-04			WG483233-05			WG483233-06		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
1,3,5-Trinitrobenzene	100	39.6013336	2.525	50.0	20.3841457	2.453	25.0	9.60364914	2.603
1,3-Dinitrobenzene	100	60.0506744	1.665	50.0	31.7738209	1.574	25.0	15.5059214	1.612
2,4,6-Trinitrotoluene	100	39.8029480	2.512	50.0	20.2711296	2.467	25.0	10.0692062	2.483
2,4-Dinitrotoluene	100	55.6826248	1.796	50.0	29.6646767	1.686	25.0	14.6111479	1.711
2,6-Dinitrotoluene	100	23.3991280	4.274	50.0	12.2992725	4.065	25.0	6.74628210	3.706
2-Amino-4,6-Dinitrotoluene	100	35.7217560	2.799	50.0	18.9889889	2.633	25.0	9.87414837	2.532
2-Nitrotoluene	100	21.1870880	4.720	50.0	11.4625940	4.362	25.0	7.37310982	3.391
3-Nitrotoluene	100	24.1719761	4.137	50.0	13.3029776	3.759	25.0	7.28425598	3.432
4-Amino-2,6-Dinitrotoluene	100	23.2509079	4.301	50.0	12.1103840	4.129	25.0	6.20706463	4.028
4-Nitrotoluene	100	17.8079243	5.615	50.0	10.0566874	4.972	25.0	5.51677179	4.532
HMX	100	17.3945694	5.749	50.0	9.14081383	5.470	25.0	4.10940647	6.084
Nitrobenzene	100	41.7326241	2.396	50.0	21.9563217	2.277	25.0	11.0660400	2.259
RDX	100	22.6424503	4.416	50.0	13.9189634	3.592	25.0	7.26337814	3.442
Tetryl	100	21.5942669	4.631	50.0	11.3265085	4.414	25.0	4.55197477	5.492

INT_CAL - Modified 03/06/2008
PDF File ID: 3658783
Report generated 07/18/2014 13:33

Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L14070459 Run Date: 07/09/2014 Sample ID: WG483233-07
Instrument ID: HPLC5 Run Time: 17:20 Method: 8330B
File ID: 5L012970.F Analyst: ECL QC Key: STD
ICal Workgroup: WG483233 Cal ID: HPLC5 - 09-JUL-14

Analyte		Expected	Found	Units	RF	%D	UCL	Q
Sym-Trinitrobenzene		500	450	ug/L	2.84	9.90	30	
1,3-Dinitrobenzene		500	489	ug/L	1.74	2.10	30	
2,4,6-Trinitrotoluene		500	500	ug/L	2.59	0	30	
2,4-Dinitrotoluene		500	502	ug/L	1.81	0.500	30	
2,6-Dinitrotoluene		500	529	ug/L	4.16	5.80	30	
2-Amino-4,6-Dinitrotoluene		500	501	ug/L	2.85	0.100	30	
2-Nitrotoluene		500	522	ug/L	4.67	4.40	30	
3-Nitrotoluene		500	524	ug/L	4.06	4.90	30	
4-Nitrotoluene		500	514	ug/L	5.70	2.80	30	
4-Amino-2,6-Dinitrotoluene		500	522	ug/L	4.20	4.40	30	
HMX		500	485	ug/L	6.14	3.10	30	
Nitrobenzene		500	489	ug/L	2.46	2.20	30	
RDX		500	511	ug/L	4.93	2.20	30	
Tetryl		500	353	ug/L	6.28	29.3	30	

* Exceeds %D Limit

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 3658784
Report generated 07/18/2014 13:33

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14070459 Run Date: 07/15/2014 Sample ID: WG484130-01
Instrument ID: HPLC5 Run Time: 09:51 Method: 8330B
File ID: 5L013055.F Analyst: ECL QC Key: STD
Workgroup (AAB#): WG484128 Cal ID: HPLC5 - 09-JUL-14
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Sym-Trinitrobenzene		500	465	ug/L	2.75	6.97	20	
1,3-Dinitrobenzene		500	498	ug/L	1.71	0.308	20	
2,4,6-Trinitrotoluene		500	485	ug/L	2.67	3.02	20	
2,4-Dinitrotoluene		500	498	ug/L	1.82	0.336	20	
2,6-Dinitrotoluene		500	496	ug/L	4.43	0.700	20	
2-Amino-4,6-Dinitrotoluene		500	497	ug/L	2.87	0.651	20	
2-Nitrotoluene		500	499	ug/L	4.89	0.225	20	
3-Nitrotoluene		500	495	ug/L	4.30	0.952	20	
4-Nitrotoluene		500	494	ug/L	5.94	1.29	20	
4-Amino-2,6-Dinitrotoluene		500	501	ug/L	4.37	0.226	20	
HMX		500	481	ug/L	6.19	3.86	20	
Nitrobenzene		500	460	ug/L	2.62	7.93	20	
RDX		500	484	ug/L	5.20	3.27	20	
Tetryl		500	534	ug/L	4.15	6.88	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3658785
Report generated 07/18/2014 13:33

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14070459 Run Date: 07/15/2014 Sample ID: WG484130-02
Instrument ID: HPLC5 Run Time: 17:39 Method: 8330B
File ID: 5L013066.F Analyst: ECL QC Key: STD
Workgroup (AAB#): WG484128 Cal ID: HPLC5 - 09-JUL-14
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Sym-Trinitrobenzene		500	503	ug/L	2.54	0.590	20	
1,3-Dinitrobenzene		500	501	ug/L	1.70	0.140	20	
2,4,6-Trinitrotoluene		500	492	ug/L	2.63	1.60	20	
2,4-Dinitrotoluene		500	498	ug/L	1.83	0.353	20	
2,6-Dinitrotoluene		500	505	ug/L	4.36	0.962	20	
2-Amino-4,6-Dinitrotoluene		500	499	ug/L	2.86	0.253	20	
2-Nitrotoluene		500	498	ug/L	4.90	0.469	20	
3-Nitrotoluene		500	495	ug/L	4.30	1.08	20	
4-Nitrotoluene		500	491	ug/L	5.97	1.74	20	
4-Amino-2,6-Dinitrotoluene		500	502	ug/L	4.37	0.322	20	
HMX		500	477	ug/L	6.23	4.54	20	
Nitrobenzene		500	490	ug/L	2.46	2.06	20	
RDX		500	486	ug/L	5.17	2.72	20	
Tetryl		500	485	ug/L	4.57	2.91	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3658785
Report generated 07/18/2014 13:33

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14070459 Run Date: 07/16/2014 Sample ID: WG484130-03
Instrument ID: HPLC5 Run Time: 00:48 Method: 8330B
File ID: 5L013077.F Analyst: ECL QC Key: STD
Workgroup (AAB#): WG484128 Cal ID: HPLC5 - 09-JUL-14
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Sym-Trinitrobenzene		500	504	ug/L	2.54	0.899	20	
1,3-Dinitrobenzene		500	504	ug/L	1.69	0.839	20	
2,4,6-Trinitrotoluene		500	499	ug/L	2.59	0.158	20	
2,4-Dinitrotoluene		500	500	ug/L	1.82	0.0903	20	
2,6-Dinitrotoluene		500	511	ug/L	4.31	2.17	20	
2-Amino-4,6-Dinitrotoluene		500	506	ug/L	2.82	1.14	20	
2-Nitrotoluene		500	496	ug/L	4.91	0.723	20	
3-Nitrotoluene		500	487	ug/L	4.37	2.55	20	
4-Nitrotoluene		500	488	ug/L	6.01	2.41	20	
4-Amino-2,6-Dinitrotoluene		500	511	ug/L	4.29	2.10	20	
HMX		500	490	ug/L	6.08	2.04	20	
Nitrobenzene		500	493	ug/L	2.44	1.48	20	
RDX		500	477	ug/L	5.27	4.55	20	
Tetryl		500	488	ug/L	4.55	2.46	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3658785
Report generated 07/18/2014 13:33

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14070459 Run Date: 07/16/2014 Sample ID: WG484423-01
Instrument ID: HPLC5 Run Time: 13:08 Method: 8330B
File ID: 5L013079.F Analyst: ECL QC Key: STD
Workgroup (AAB#): WG484386 Cal ID: HPLC5 - 09-JUL-14
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Sym-Trinitrobenzene		0.500	0.481	mg/kg	2.66	3.73	20	
1,3-Dinitrobenzene		0.500	0.492	mg/kg	1.73	1.61	20	
2,4,6-Trinitrotoluene		0.500	0.477	mg/kg	2.71	4.52	20	
2,4-Dinitrotoluene		0.500	0.495	mg/kg	1.84	1.00	20	
2,6-Dinitrotoluene		0.500	0.489	mg/kg	4.50	2.21	20	
2-Amino-4,6-Dinitrotoluene		0.500	0.492	mg/kg	2.90	1.66	20	
2-Nitrotoluene		0.500	0.495	mg/kg	4.92	0.942	20	
3-Nitrotoluene		0.500	0.490	mg/kg	4.34	2.00	20	
4-Nitrotoluene		0.500	0.493	mg/kg	5.94	1.35	20	
4-Amino-2,6-Dinitrotoluene		0.500	0.494	mg/kg	4.44	1.26	20	
HMX		0.500	0.483	mg/kg	6.16	3.36	20	
Nitrobenzene		0.500	0.456	mg/kg	2.64	8.87	20	
RDX		0.500	0.454	mg/kg	5.53	9.21	20	
Tetryl		0.500	0.525	mg/kg	4.23	5.05	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3658785
Report generated 07/18/2014 13:33

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14070459 Run Date: 07/16/2014 Sample ID: WG484423-02
Instrument ID: HPLC5 Run Time: 19:39 Method: 8330B
File ID: 5L013089.F Analyst: ECL QC Key: STD
Workgroup (AAB#): WG484386 Cal ID: HPLC5 - 09-JUL-14
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Sym-Trinitrobenzene		0.500	0.499	mg/kg	2.57	0.268	20	
1,3-Dinitrobenzene		0.500	0.500	mg/kg	1.70	0.0401	20	
2,4,6-Trinitrotoluene		0.500	0.483	mg/kg	2.68	3.30	20	
2,4-Dinitrotoluene		0.500	0.494	mg/kg	1.84	1.20	20	
2,6-Dinitrotoluene		0.500	0.495	mg/kg	4.44	0.945	20	
2-Amino-4,6-Dinitrotoluene		0.500	0.492	mg/kg	2.90	1.67	20	
2-Nitrotoluene		0.500	0.497	mg/kg	4.90	0.553	20	
3-Nitrotoluene		0.500	0.496	mg/kg	4.29	0.882	20	
4-Nitrotoluene		0.500	0.495	mg/kg	5.92	0.907	20	
4-Amino-2,6-Dinitrotoluene		0.500	0.489	mg/kg	4.48	2.29	20	
HMX		0.500	0.482	mg/kg	6.17	3.50	20	
Nitrobenzene		0.500	0.481	mg/kg	2.50	3.78	20	
RDX		0.500	0.492	mg/kg	5.11	1.57	20	
Tetryl		0.500	0.464	mg/kg	4.79	7.25	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3658785
Report generated 07/18/2014 13:33

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14070459 Run Date: 07/17/2014 Sample ID: WG484423-03
Instrument ID: HPLC5 Run Time: 13:29 Method: 8330B
File ID: 5L013099.F Analyst: ECL QC Key: STD
Workgroup (AAB#): WG484386 Cal ID: HPLC5 - 09-JUL-14
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Sym-Trinitrobenzene		0.500	0.467	mg/kg	2.74	6.53	20	
1,3-Dinitrobenzene		0.500	0.484	mg/kg	1.76	3.18	20	
2,4,6-Trinitrotoluene		0.500	0.472	mg/kg	2.74	5.67	20	
2,4-Dinitrotoluene		0.500	0.485	mg/kg	1.88	3.09	20	
2,6-Dinitrotoluene		0.500	0.479	mg/kg	4.59	4.14	20	
2-Amino-4,6-Dinitrotoluene		0.500	0.484	mg/kg	2.95	3.21	20	
2-Nitrotoluene		0.500	0.486	mg/kg	5.02	2.82	20	
3-Nitrotoluene		0.500	0.480	mg/kg	4.43	3.93	20	
4-Nitrotoluene		0.500	0.479	mg/kg	6.12	4.23	20	
4-Amino-2,6-Dinitrotoluene		0.500	0.485	mg/kg	4.52	3.02	20	
HMX		0.500	0.471	mg/kg	6.31	5.73	20	
Nitrobenzene		0.500	0.444	mg/kg	2.71	11.2	20	
RDX		0.500	0.458	mg/kg	5.48	8.41	20	
Tetryl		0.500	0.516	mg/kg	4.30	3.17	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3658785
Report generated 07/18/2014 13:33

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14070459 Run Date: 07/17/2014 Sample ID: WG484423-04
Instrument ID: HPLC5 Run Time: 14:47 Method: 8330B
File ID: 5L013101.F Analyst: ECL QC Key: STD
Workgroup (AAB#): WG484386 Cal ID: HPLC5 - 09-JUL-14
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Sym-Trinitrobenzene		0.500	0.465	mg/kg	2.75	6.98	20	
1,3-Dinitrobenzene		0.500	0.483	mg/kg	1.76	3.42	20	
2,4,6-Trinitrotoluene		0.500	0.471	mg/kg	2.75	5.72	20	
2,4-Dinitrotoluene		0.500	0.484	mg/kg	1.88	3.24	20	
2,6-Dinitrotoluene		0.500	0.480	mg/kg	4.59	4.05	20	
2-Amino-4,6-Dinitrotoluene		0.500	0.480	mg/kg	2.97	3.96	20	
2-Nitrotoluene		0.500	0.489	mg/kg	4.98	2.17	20	
3-Nitrotoluene		0.500	0.486	mg/kg	4.38	2.84	20	
4-Nitrotoluene		0.500	0.484	mg/kg	6.05	3.15	20	
4-Amino-2,6-Dinitrotoluene		0.500	0.483	mg/kg	4.54	3.46	20	
HMX		0.500	0.472	mg/kg	6.30	5.56	20	
Nitrobenzene		0.500	0.460	mg/kg	2.62	8.05	20	
RDX		0.500	0.474	mg/kg	5.30	5.23	20	
Tetryl		0.500	0.481	mg/kg	4.62	3.84	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3658785
Report generated 07/18/2014 13:33

2.1.1.3 Sample Data

Data File C:\CHEM32\1\DATA\071514\071514\5L013068.D
Sample Name: L14070459-01

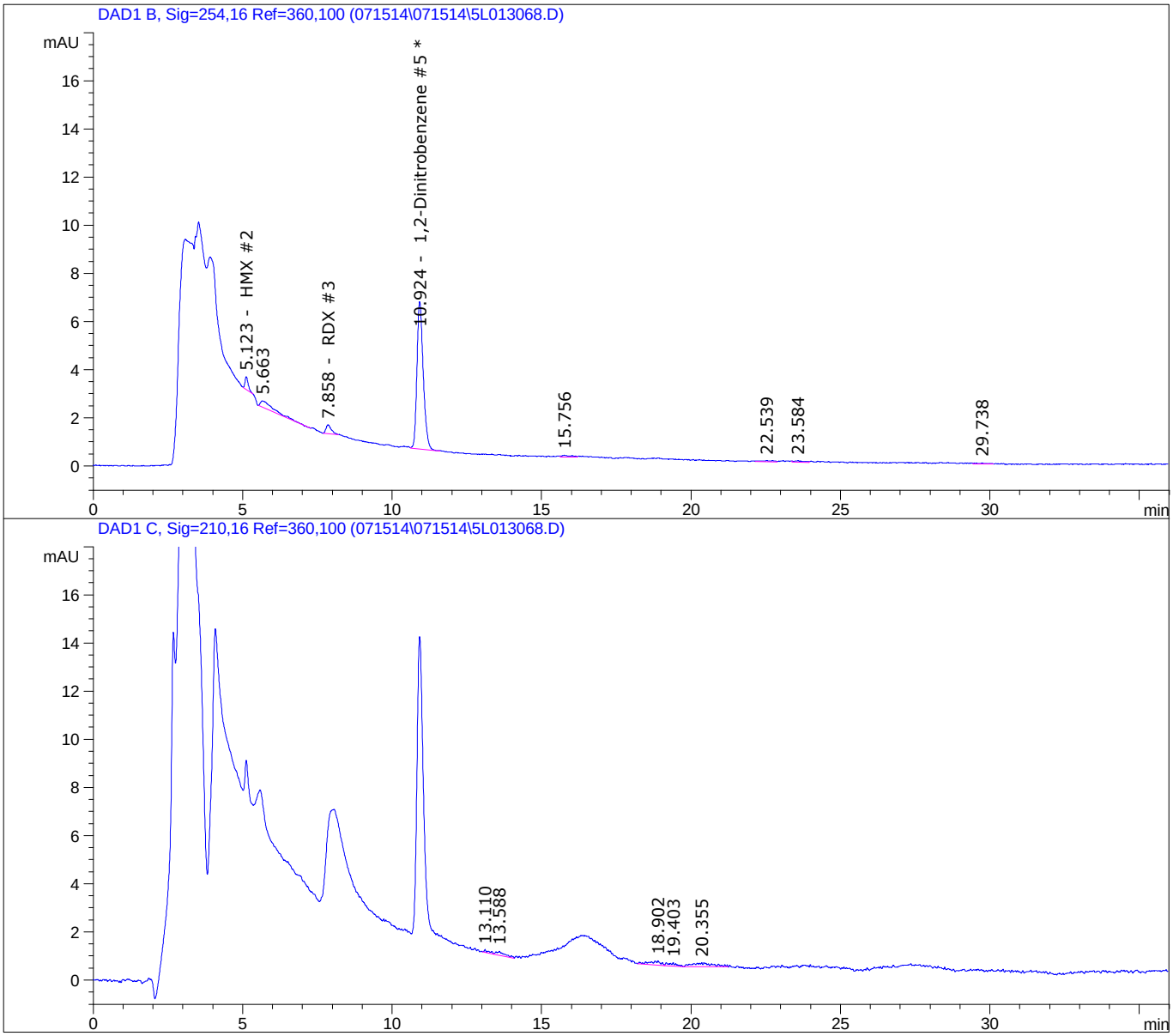
==========

Acq. Operator	: ECL	Seq. Line :	14
Acq. Instrument	: HPLC5	Location :	Vial 14
Injection Date	: 7/15/2014 6:57:26 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/16/2014 11:48:03 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========



HPLC5 7/16/2014 11:50:26 AM ECL Page 1 of 3

Data File C:\CHEM32\1\DATA\071514\071514\5L013068.D
Sample Name: L14070459-01

==========

Acq. Operator : ECL Seq. Line : 14
Acq. Instrument : HPLC5 Location : Vial 14
Injection Date : 7/15/2014 6:57:26 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/16/2014 11:48:03 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 7/16/2014 11:47:45 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.123	BBA	3.87669	4.34275	16.83548		HMX #2
7.858	BBA	4.56011	1.64424	7.49791		RDX #3
10.615		-	-	-		1,3,5-Trinitrobenzene #4
10.924	VB	88.70647	3.62427	321.49612		1,2-Dinitrobenzene #5 *
12.969		-	-	-		1,3-Dinitrobenzene #6
14.220		-	-	-		Tetryl #7
14.765		-	-	-		Nitrobenzene #8
17.017		-	-	-		2,4,6-Trinitrotoluene #10
17.858		-	-	-		4-Amino-2,6-Dinitrotoluene #11
18.750		-	-	-		2-Amino-4,6-Dinitrotoluene #12
19.881		-	-	-		2,6-Dinitrotoluene #13
20.483		-	-	-		2,4-Dinitrotoluene #14
24.110		-	-	-		2-Nitrotoluene #15
25.785		-	-	-		4-Nitrotoluene #16
27.707		-	-	-		3-Nitrotoluene #17

Totals : 345.82951

Data File C:\CHEM32\1\DATA\071514\071514\5L013068.D
Sample Name: L14070459-01

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :  14
Acq. Instrument : HPLC5                          Location : Vial 14
Injection Date  : 7/15/2014 6:57:26 PM                Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed    : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/16/2014 11:48:03 AM by ECL
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  WATER


==================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 15.971            -          -          -         Nitroglycerin #9

Totals :                                 0.00000


2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==================================================================
                           *** End of Report ***
```

Data File C:\CHEM32\1\DATA\071614\071614\5L013084.D
Sample Name: L14070459-02

==========

Acq. Operator	: ECL	Seq. Line :	6
Acq. Instrument	: HPLC5	Location :	Vial 7
Injection Date	: 7/16/2014 4:23:52 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\071614\071614\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/17/2014 11:49:59 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 7,1 SOIL

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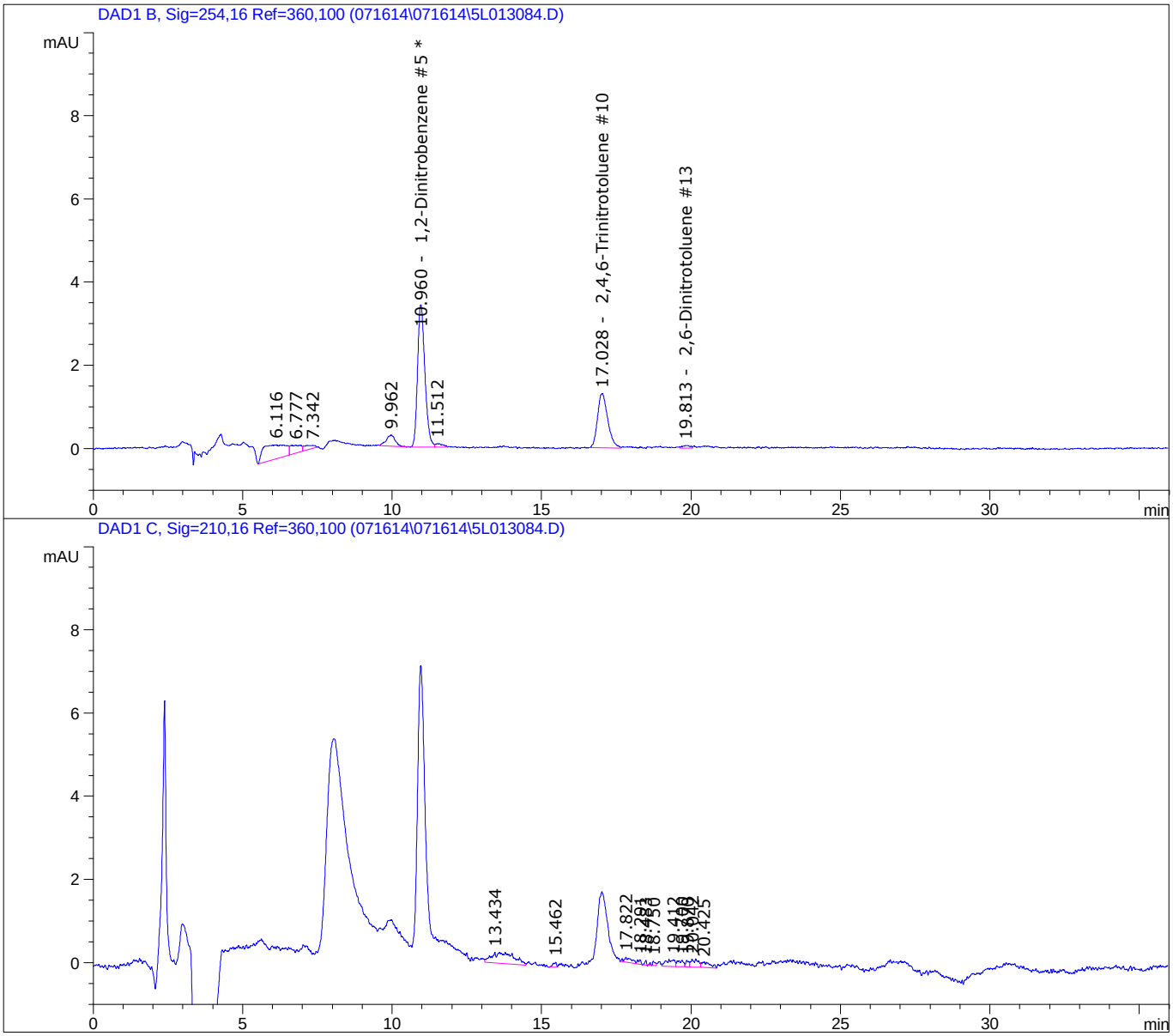


Data File C:\CHEM32\1\DATA\071614\071614\5L013084.D
Sample Name: L14070459-02

==========

Acq. Operator : ECL Seq. Line : 6
Acq. Instrument : HPLC5 Location : Vial 7
Injection Date : 7/16/2014 4:23:52 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071614\071614\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/17/2014 11:49:59 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 7,1 SOIL

==========

==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 7/17/2014 11:47:26 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.091		-	-	-		HMX #2
7.793		-	-	-		RDX #3
10.615		-	-	-		1,3,5-Trinitrobenzene #4
10.960	BV	58.30887	3.59961	209.88905		1,2-Dinitrobenzene #5 *
12.969		-	-	-		1,3-Dinitrobenzene #6
14.220		-	-	-		Tetryl #7
14.765		-	-	-		Nitrobenzene #8
17.028	BV	30.90491	2.59419	80.17328		2,4,6-Trinitrotoluene #10
17.958		-	-	-		4-Amino-2,6-Dinitrotoluene #11
18.850		-	-	-		2-Amino-4,6-Dinitrotoluene #12
19.813	BV	1.24661	2.71177	3.38052		2,6-Dinitrotoluene #13
20.483		-	-	-		2,4-Dinitrotoluene #14
24.159		-	-	-		2-Nitrotoluene #15
25.832		-	-	-		4-Nitrotoluene #16
27.845		-	-	-		3-Nitrotoluene #17

Totals : 293.44284

Data File C:\CHEM32\1\DATA\071614\071614\5L013084.D
Sample Name: L14070459-02

==========

Acq. Operator : ECL Seq. Line : 6
Acq. Instrument : HPLC5 Location : Vial 7
Injection Date : 7/16/2014 4:23:52 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071614\071614\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/17/2014 11:49:59 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 7,1 SOIL

==========

Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
15.895		-	-	-		Nitroglycerin #9

Totals : 0.00000

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File C:\CHEM32\1\DATA\071614\071614\5L013084.D
Sample Name: L14070459-02

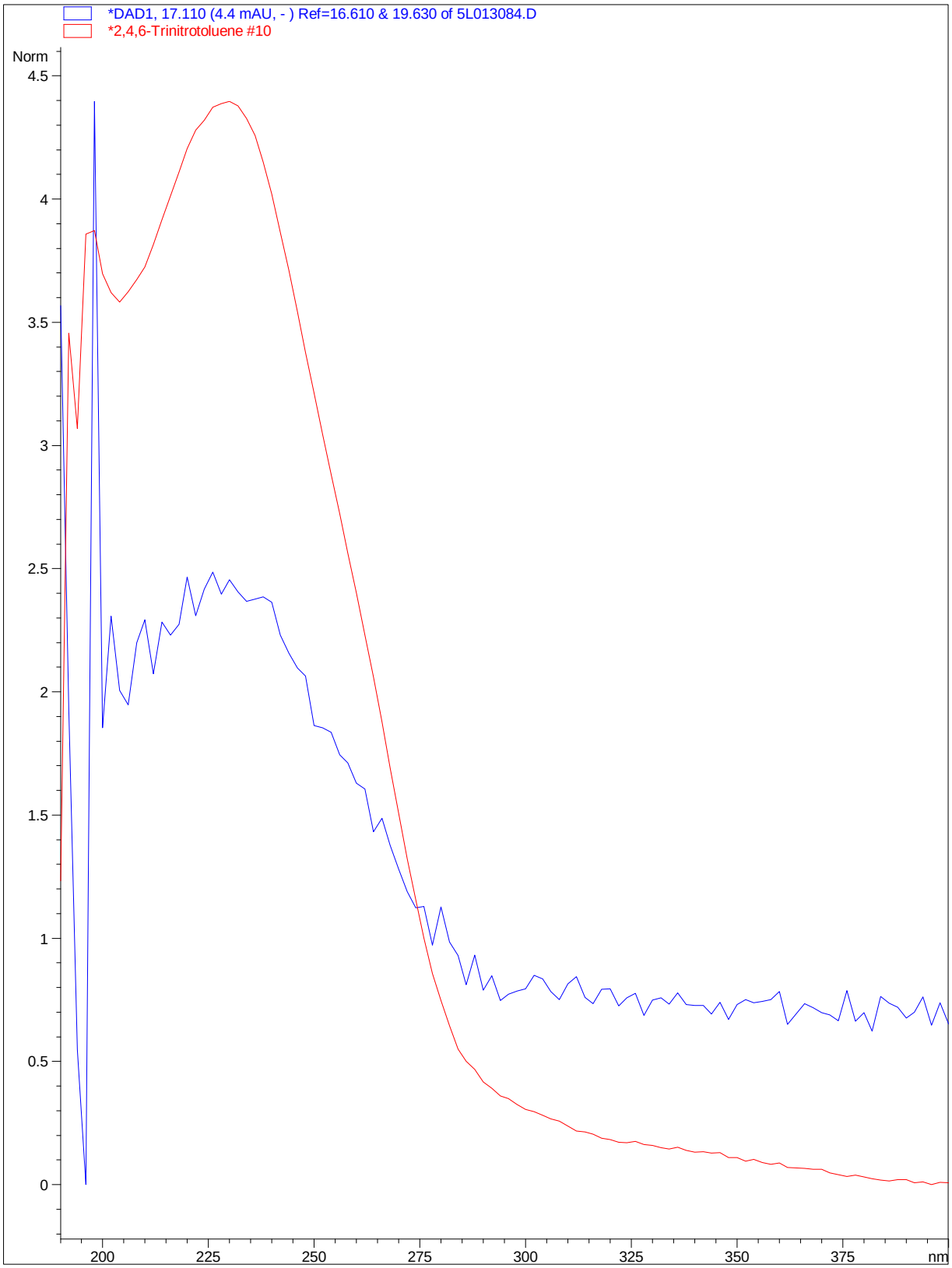
Search result of : DAD1, 17.110 (4.4 mAU, -) Ref=16.610 & 19.630
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 16.255 | 16.255 min

Library search results

#	Match	Entry	Time [min]	Name
1	712.3153	8	16.983	2,4,6-Trinitrotoluene #10
2	703.4859	9	17.893	4-Amino-2,6-Dinitrotoluene #11

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\071614\071614\5L013087.D
Sample Name: L14070459-03

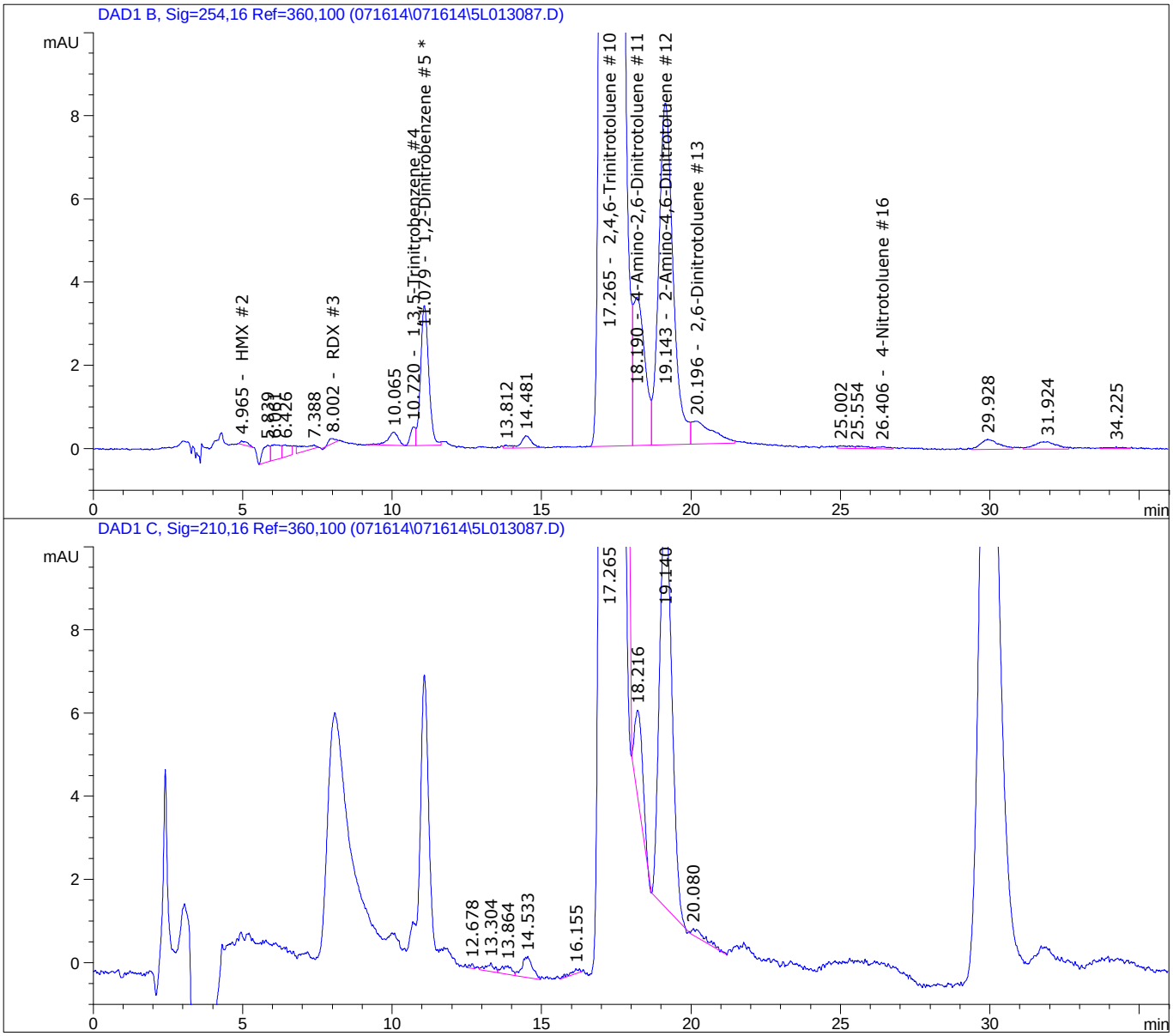
==========

Acq. Operator	: ECL	Seq. Line :	9
Acq. Instrument	: HPLC5	Location :	Vial 10
Injection Date	: 7/16/2014 6:21:09 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\071614\071614\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/17/2014 11:59:27 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 7,1 SOIL

==========



Data File C:\CHEM32\1\DATA\071614\071614\5L013087.D
Sample Name: L14070459-03

==========

Acq. Operator : ECL Seq. Line : 9
Acq. Instrument : HPLC5 Location : Vial 10
Injection Date : 7/16/2014 6:21:09 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071614\071614\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/17/2014 11:59:27 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 7,1 SOIL

==========

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 7/17/2014 11:57:56 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
4.965	BBA	1.52352	1.73492	2.64317		HMX #2
8.002	BBA	1.94649	0.00000	0.00000		RDX #3
10.720	VV	5.52794	3.13888	17.35156		1,3,5-Trinitrobenzene #4
11.079	VB	63.50875	3.60550	228.98082		1,2-Dinitrobenzene #5 *
12.969		-	-	-		1,3-Dinitrobenzene #6
14.220		-	-	-		Tetryl #7
14.765		-	-	-		Nitrobenzene #8
17.265	BV	7080.37451	2.58694	1.83165e4		2,4,6-Trinitrotoluene #10
18.190	VV	95.33586	4.37810	417.38963		4-Amino-2,6-Dinitrotoluene #11
19.143	VV	274.60568	2.85272	783.37222		2-Amino-4,6-Dinitrotoluene #12
20.196	VB	27.39002	4.34369	118.97384		2,6-Dinitrotoluene #13
20.783		-	-	-		2,4-Dinitrotoluene #14
24.459		-	-	-		2-Nitrotoluene #15
26.406	VV	1.39999	4.16365	5.82906		4-Nitrotoluene #16
28.245		-	-	-		3-Nitrotoluene #17

Totals : 1.98911e4

Data File C:\CHEM32\1\DATA\071614\071614\5L013087.D
Sample Name: L14070459-03

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :   9
Acq. Instrument : HPLC5                          Location : Vial 10
Injection Date  : 7/16/2014 6:21:09 PM                Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\071614\071614\8330PLUS.M
Last changed    : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/17/2014 11:59:27 AM by ECL
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 7,1 SOIL


==================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 15.895            -          -          -         Nitroglycerin #9

Totals :                                 0.00000


3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Negative results set to zero (cal. curve intercept), (RDX #3)

==================================================================
                          *** End of Report ***
```

Data File C:\CHEM32\1\DATA\071614\071614\5L013087.D
Sample Name: L14070459-03

Search result of : DAD1, 17.266 (439 mAU,Apx) Ref=16.660 & 21.473
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 16.403 | 16.403 min

Library search results

#	Match	Entry	Time [min]	Name
1	984.0773	8	16.983	2,4,6-Trinitrotoluene #10
2	904.4173	9	17.893	4-Amino-2,6-Dinitrotoluene #11

*** End of Report ***

Data File C:\CHEM32\1\DATA\071614\071614\5L013087.D
Sample Name: L14070459-03

Search result of : DAD1, 18.193 (14.0 mAU, -) Ref=16.660 & 21.473
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 17.283 | 17.283 min

Library search results

#	Match	Entry	Time [min]	Name
1	900.7973	9	17.893	4-Amino-2,6-Dinitrotoluene #11
2	852.0745	10	18.802	2-Amino-4,6-Dinitrotoluene #12

*** End of Report ***

Data File C:\CHEM32\1\DATA\071614\071614\5L013087.D
Sample Name: L14070459-03

Search result of : DAD1, 19.140 (16.4 mAU, -) Ref=16.660 & 21.473
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 18.183 | 18.183 min

Library search results

#	Match	Entry	Time [min]	Name
1	981.9317	10	18.802	2-Amino-4,6-Dinitrotoluene #12
2	746.9074	11	19.860	2,6-Dinitrotoluene #13

*** End of Report ***

Data File C:\CHEM32\1\DATA\071614\071614\5L013087.D
Sample Name: L14070459-03

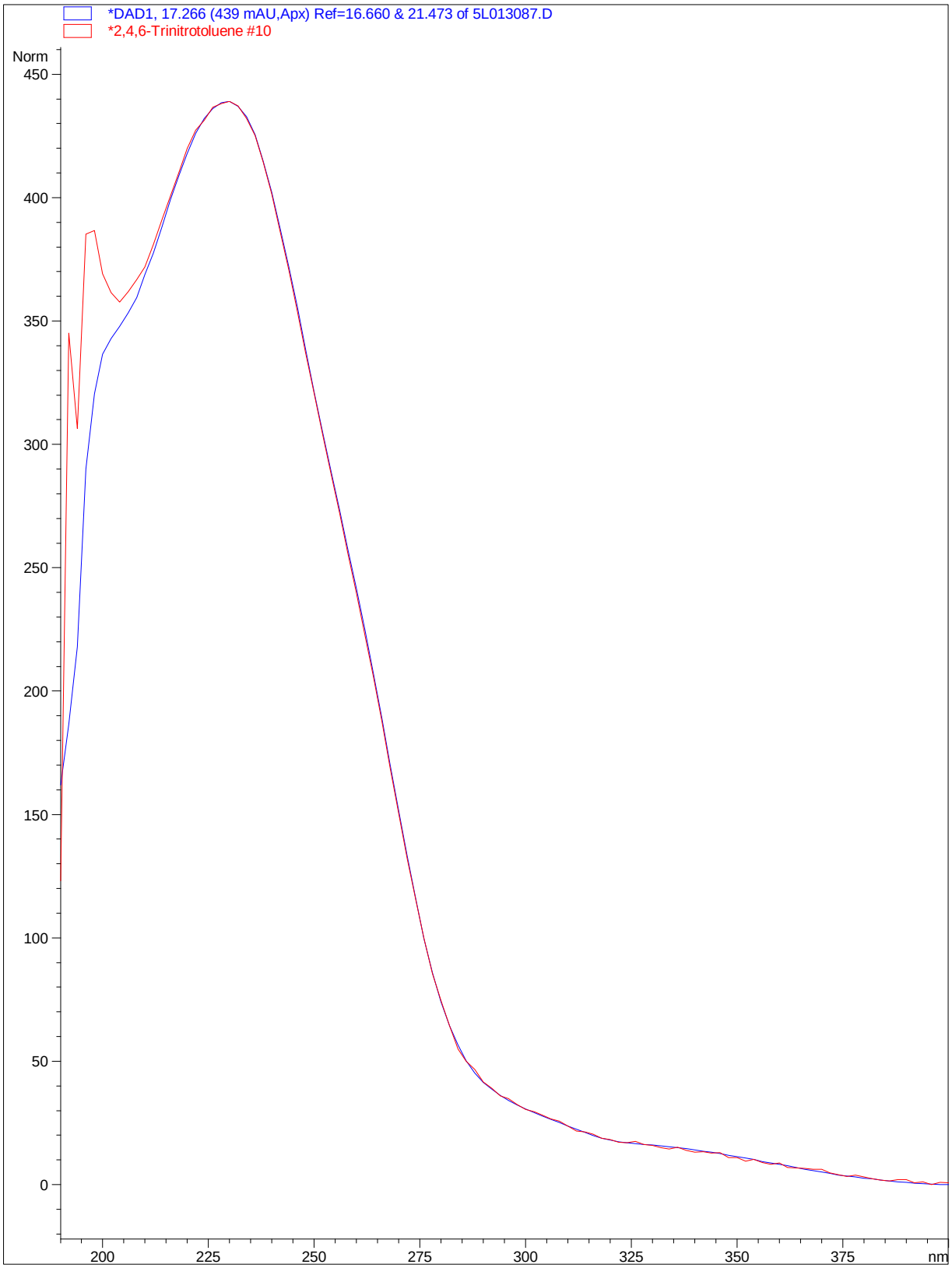
Search result of : DAD1, 20.193 (5.6 mAU, -) Ref=16.660 & 21.473
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 19.183 | 19.183 min

Library search results

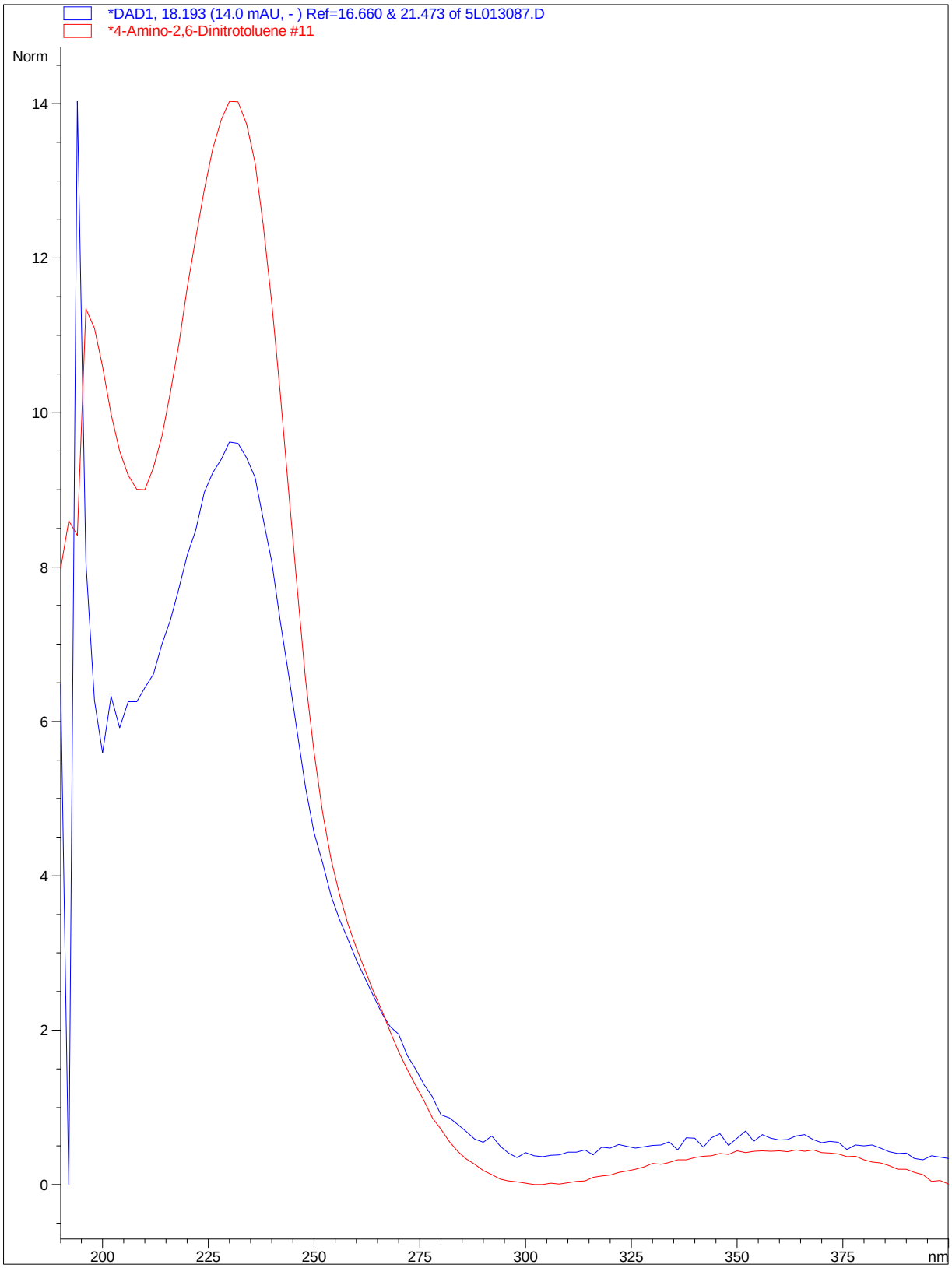
#	Match	Entry	Time [min]	Name
1	155.9171	12	20.502	2,4-Dinitrotoluene #14
2	147.2969	11	19.860	2,6-Dinitrotoluene #13

*** End of Report ***

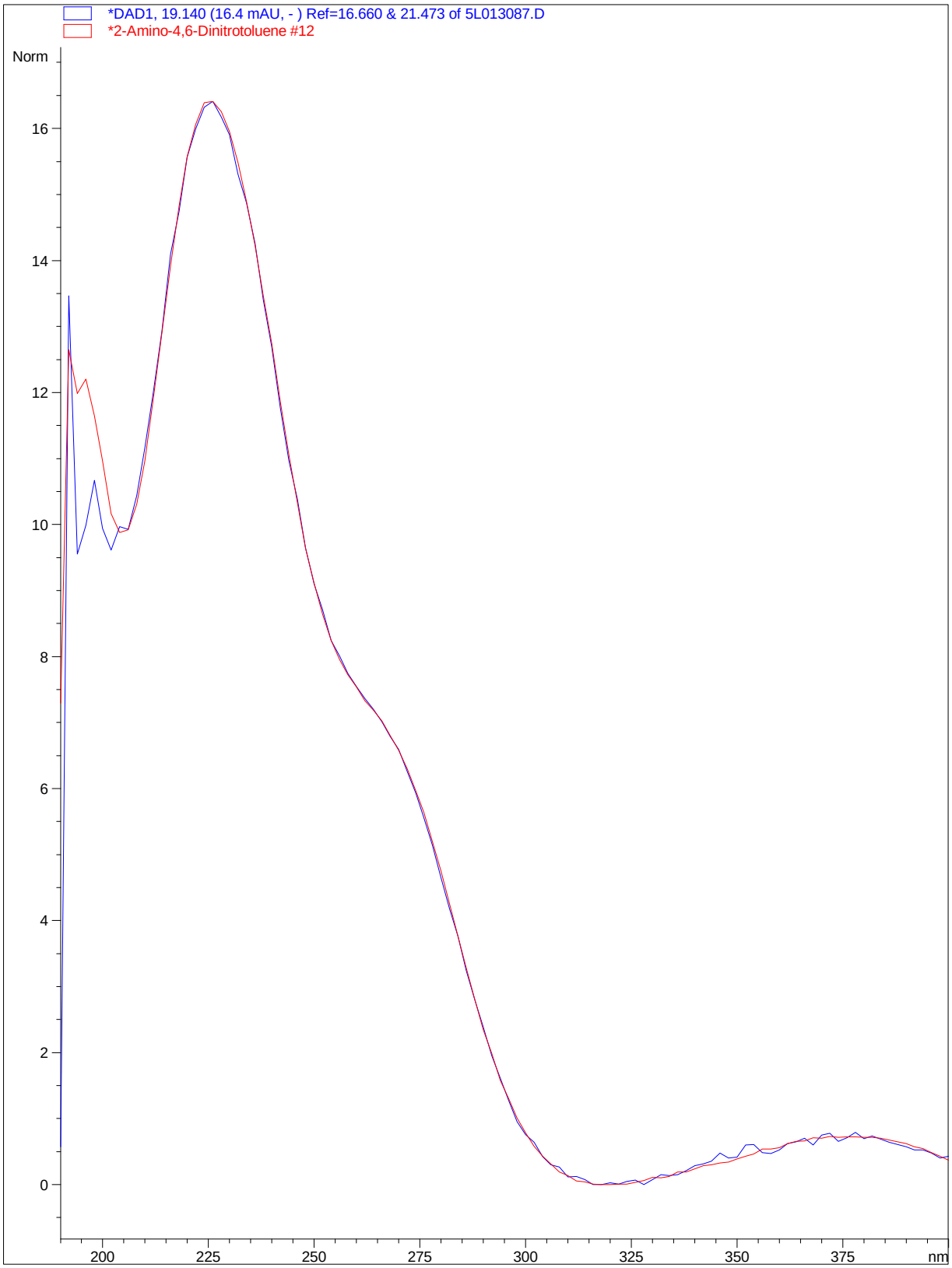
Target + Library Spectrum



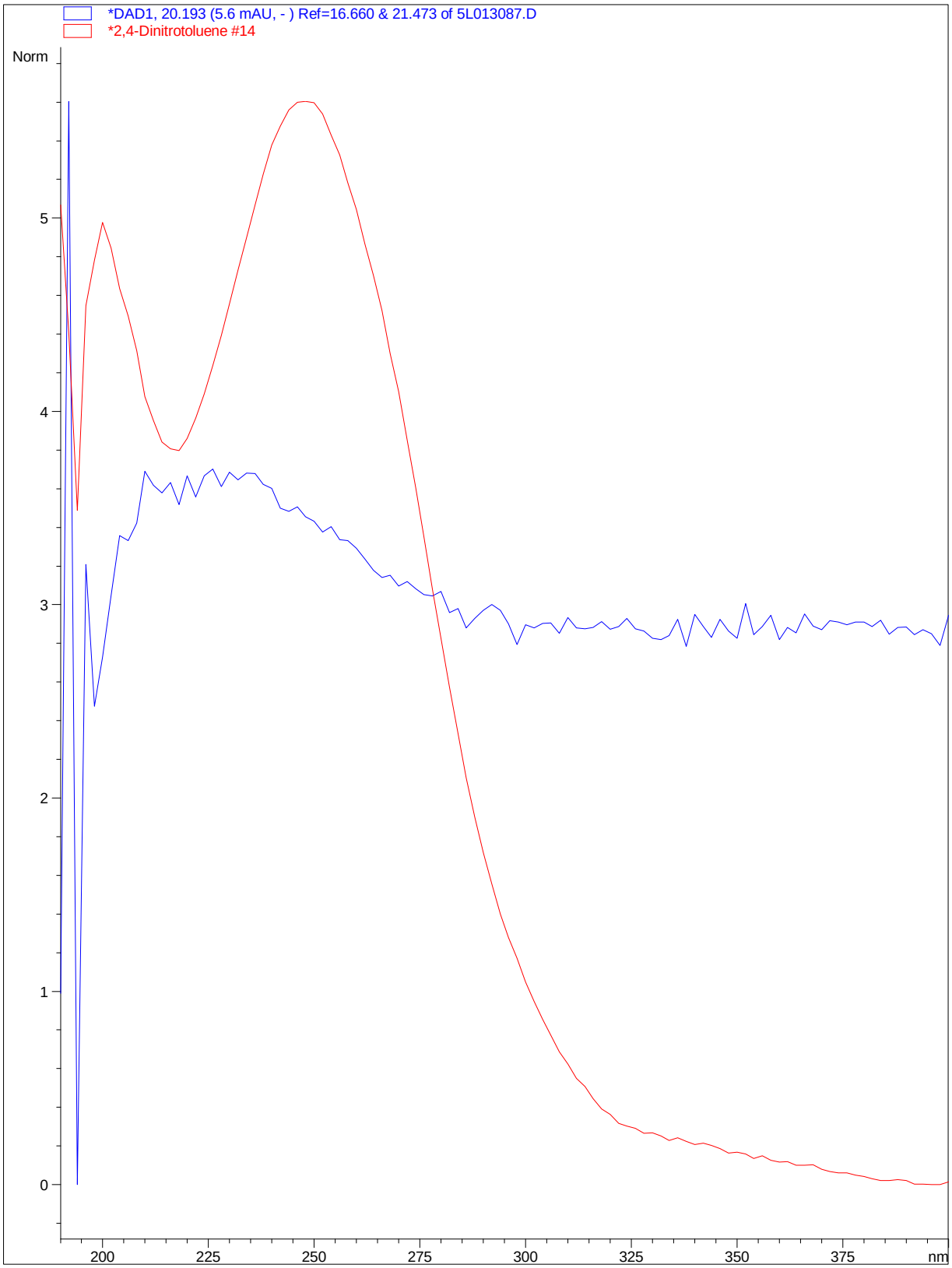
Target + Library Spectrum



Target + Library Spectrum



Target + Library Spectrum



Data File C:\CHEM32\1\DATA\071714\071714\5L013100.D
Sample Name: L14070459-03 20x

==========

Acq. Operator	: ECL	Seq. Line :	2
Acq. Instrument	: HPLC5	Location :	Vial 4
Injection Date	: 7/17/2014 2:08:08 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\071714\071714\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/17/2014 2:35:53 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 7,20 SOIL

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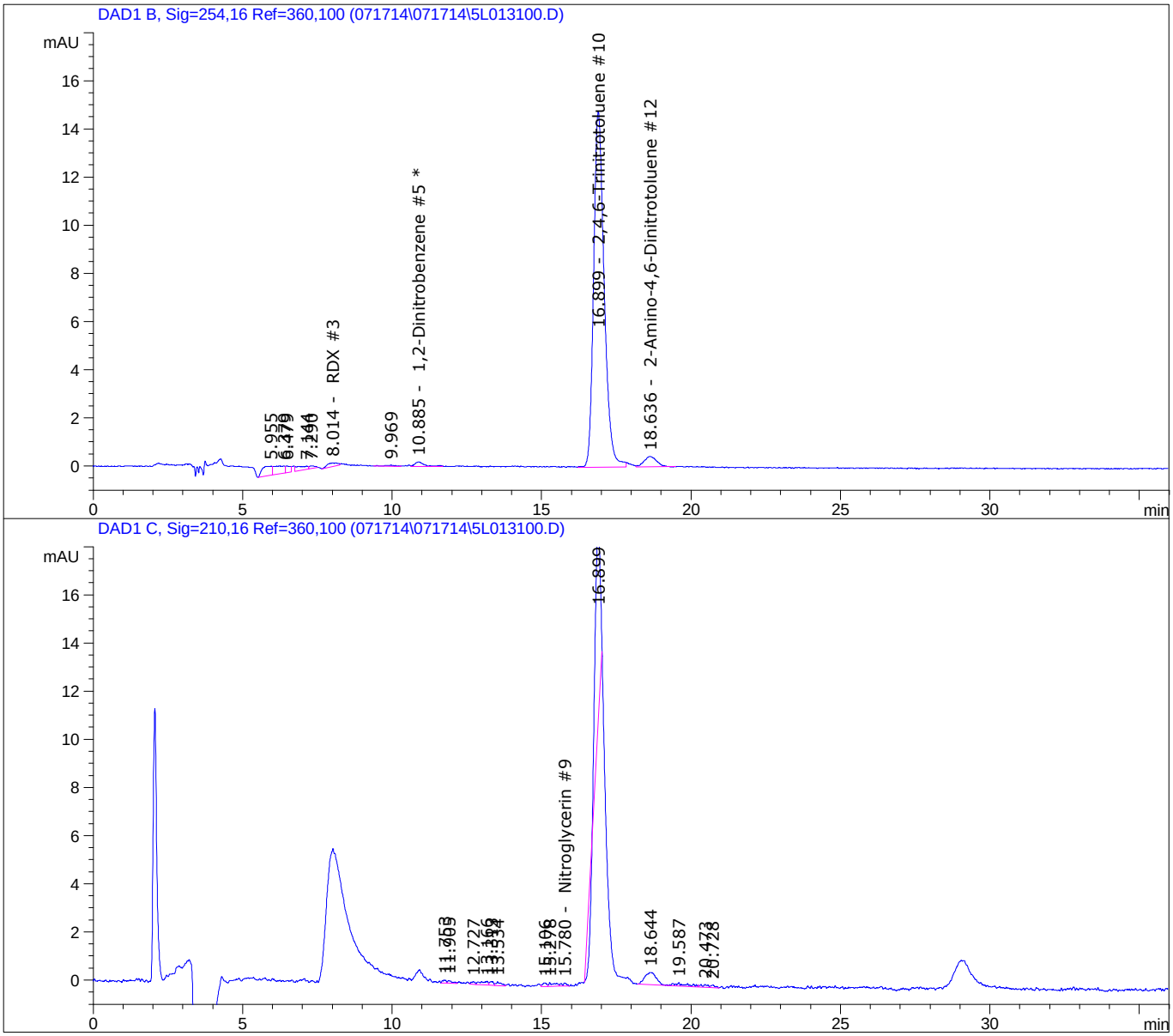

Data File C:\CHEM32\1\DATA\071714\071714\5L013100.D
Sample Name: L14070459-03 20x

==========

Acq. Operator : ECL Seq. Line : 2
Acq. Instrument : HPLC5 Location : Vial 4
Injection Date : 7/17/2014 2:08:08 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071714\071714\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/17/2014 2:35:53 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 7,20 SOIL

==========

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 7/17/2014 2:35:30 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.091		-	-	-		HMX #2
8.014	BV	3.76392	8.92573e-1	3.35958		RDX #3
10.615		-	-	-		1,3,5-Trinitrobenzene #4
10.885	VB	4.17770	2.66712	11.14244		1,2-Dinitrobenzene #5 *
12.869		-	-	-		1,3-Dinitrobenzene #6
14.054		-	-	-		Tetryl #7
14.637		-	-	-		Nitrobenzene #8
16.899	BB	359.59787	2.58754	930.47308		2,4,6-Trinitrotoluene #10
17.703		-	-	-		4-Amino-2,6-Dinitrotoluene #11
18.636	BB	12.76629	2.83065	36.13688		2-Amino-4,6-Dinitrotoluene #12
19.810		-	-	-		2,6-Dinitrotoluene #13
20.383		-	-	-		2,4-Dinitrotoluene #14
24.059		-	-	-		2-Nitrotoluene #15
25.717		-	-	-		4-Nitrotoluene #16
27.676		-	-	-		3-Nitrotoluene #17

Totals : 981.11197

Data File C:\CHEM32\1\DATA\071714\071714\5L013100.D
Sample Name: L14070459-03 20x

==========

Acq. Operator : ECL Seq. Line : 2
Acq. Instrument : HPLC5 Location : Vial 4
Injection Date : 7/17/2014 2:08:08 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071714\071714\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/17/2014 2:35:53 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 7,20 SOIL

==========

Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
15.780	VV	1.60774	4.80231	7.72086		Nitroglycerin #9
Totals :				7.72086		

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File C:\CHEM32\1\DATA\071714\071714\5L013100.D
Sample Name: L14070459-03 20x

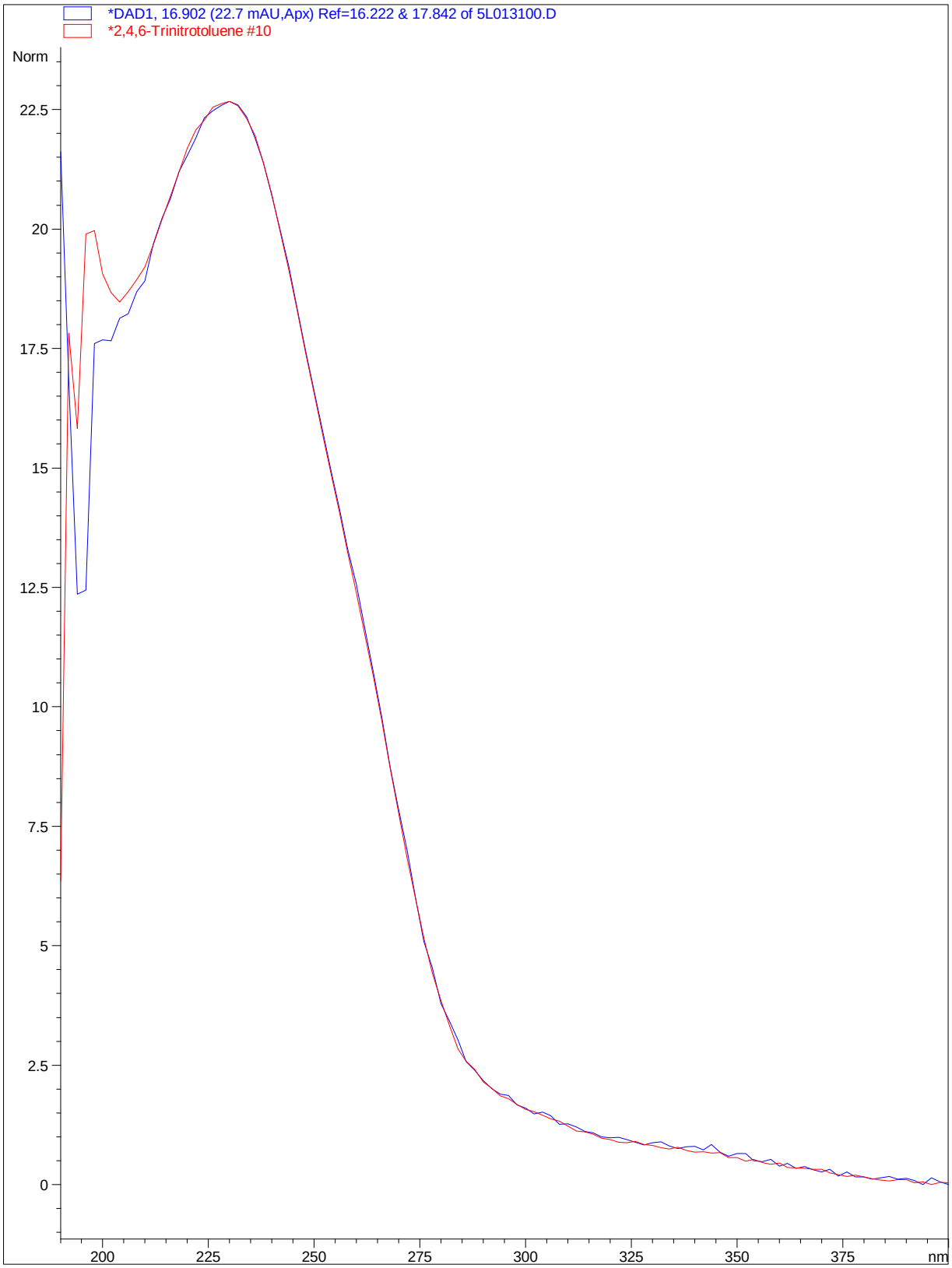
Search result of : DAD1, 16.902 (22.7 mAU,Apx) Ref=16.222 & 17.842
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 16.057 | 16.057 min

Library search results

#	Match	Entry	Time [min]	Name
1	960.3846	8	16.983	2,4,6-Trinitrotoluene #10

*** End of Report ***

Target + Library Spectrum



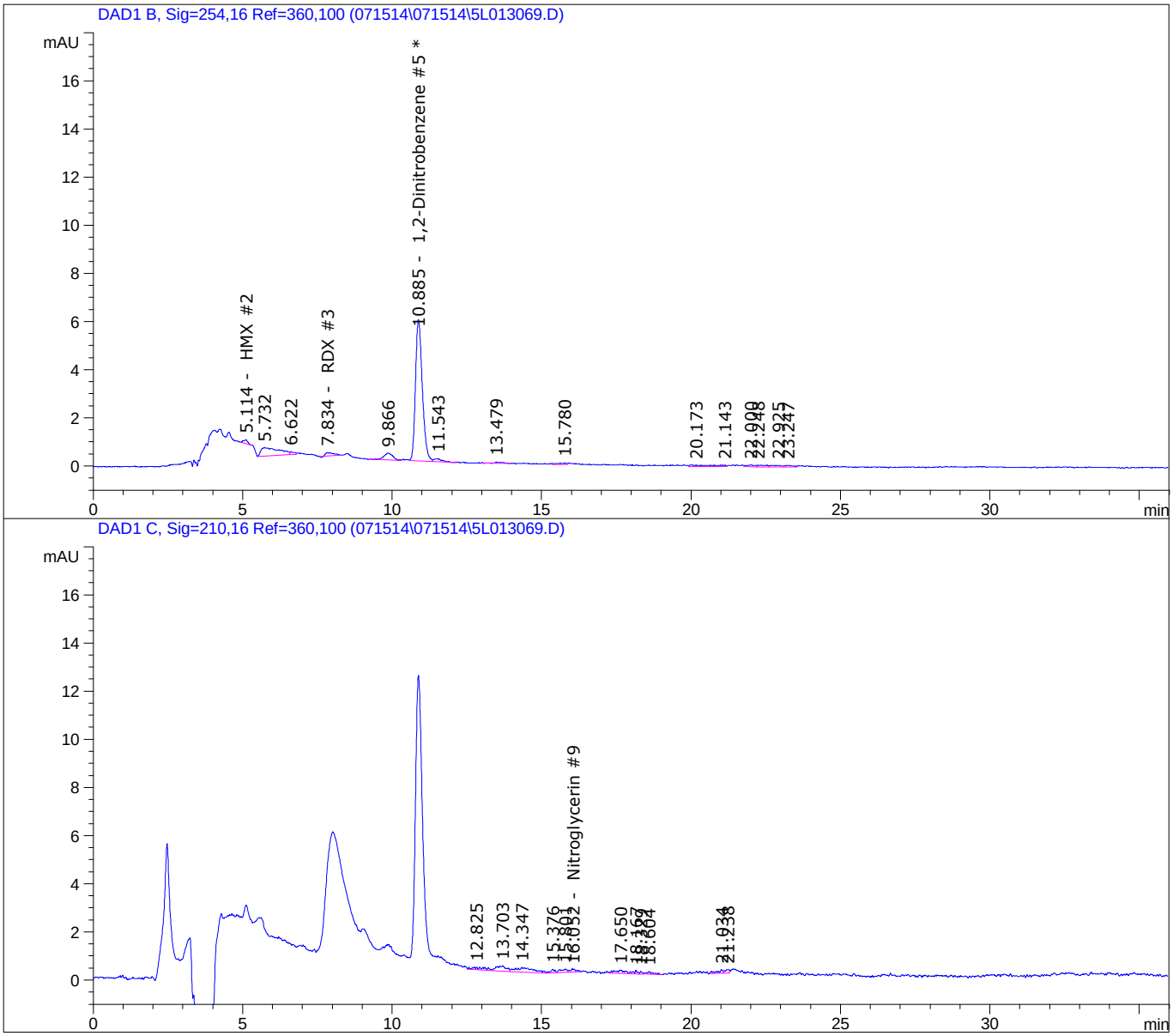
Data File C:\CHEM32\1\DATA\071514\071514\5L013069.D
Sample Name: L14070459-04

==========

Acq. Operator	: ECL	Seq. Line :	15
Acq. Instrument	: HPLC5	Location :	Vial 15
Injection Date	: 7/15/2014 7:36:27 PM	Inj :	1
		Inj Volume :	100 µl
Acq. Method	: C:\Chem32\1\DATA\071514\071514\8330PLUS.M		
Last changed	: 7/10/2014 3:15:03 PM by ECL		
Analysis Method	: C:\CHEM32\1\METHODS\8330PLDA.M		
Last changed	: 7/16/2014 11:48:03 AM by ECL		
Method Info	: OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013		

Sample Info : 1,1 WATER

==========



Data File C:\CHEM32\1\DATA\071514\071514\5L013069.D
Sample Name: L14070459-04

==========

Acq. Operator : ECL Seq. Line : 15
Acq. Instrument : HPLC5 Location : Vial 15
Injection Date : 7/15/2014 7:36:27 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/16/2014 11:48:03 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 7/16/2014 11:47:45 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.114	BBA	1.83773	2.46948	4.53824		HMX #2
7.834	BBA	2.64569	0.00000	0.00000		RDX #3
10.615		-	-	-		1,3,5-Trinitrobenzene #4
10.885	VV	93.86238	3.62687	340.42641		1,2-Dinitrobenzene #5 *
12.969		-	-	-		1,3-Dinitrobenzene #6
14.220		-	-	-		Tetryl #7
14.765		-	-	-		Nitrobenzene #8
17.017		-	-	-		2,4,6-Trinitrotoluene #10
17.858		-	-	-		4-Amino-2,6-Dinitrotoluene #11
18.750		-	-	-		2-Amino-4,6-Dinitrotoluene #12
19.881		-	-	-		2,6-Dinitrotoluene #13
20.483		-	-	-		2,4-Dinitrotoluene #14
24.110		-	-	-		2-Nitrotoluene #15
25.785		-	-	-		4-Nitrotoluene #16
27.707		-	-	-		3-Nitrotoluene #17

Totals : 344.96466

Data File C:\CHEM32\1\DATA\071514\071514\5L013069.D
Sample Name: L14070459-04

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :  15
Acq. Instrument : HPLC5                          Location : Vial 15
Injection Date  : 7/15/2014 7:36:27 PM                Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed    : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/16/2014 11:48:03 AM by ECL
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  WATER


==================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 16.052 VV        1.65430    4.80367    7.94670    Nitroglycerin #9

Totals :                                7.94670


3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Negative results set to zero (cal. curve intercept), (RDX #3)

==================================================================
                          *** End of Report ***
```

2.1.1.4 Standards Data

Data File C:\CHEM32\1\DATA\070914\070914\5L012964.D
Sample Name: WG483233-01 8330 ICAL 2500 PPB

==========

Acq. Operator	: ECL	Seq. Line :	1
Acq. Instrument	: HPLC5	Location :	Vial 2
Injection Date	: 7/9/2014 1:26:31 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/10/2014 1:37:00 PM by ECL
(modified after loading)
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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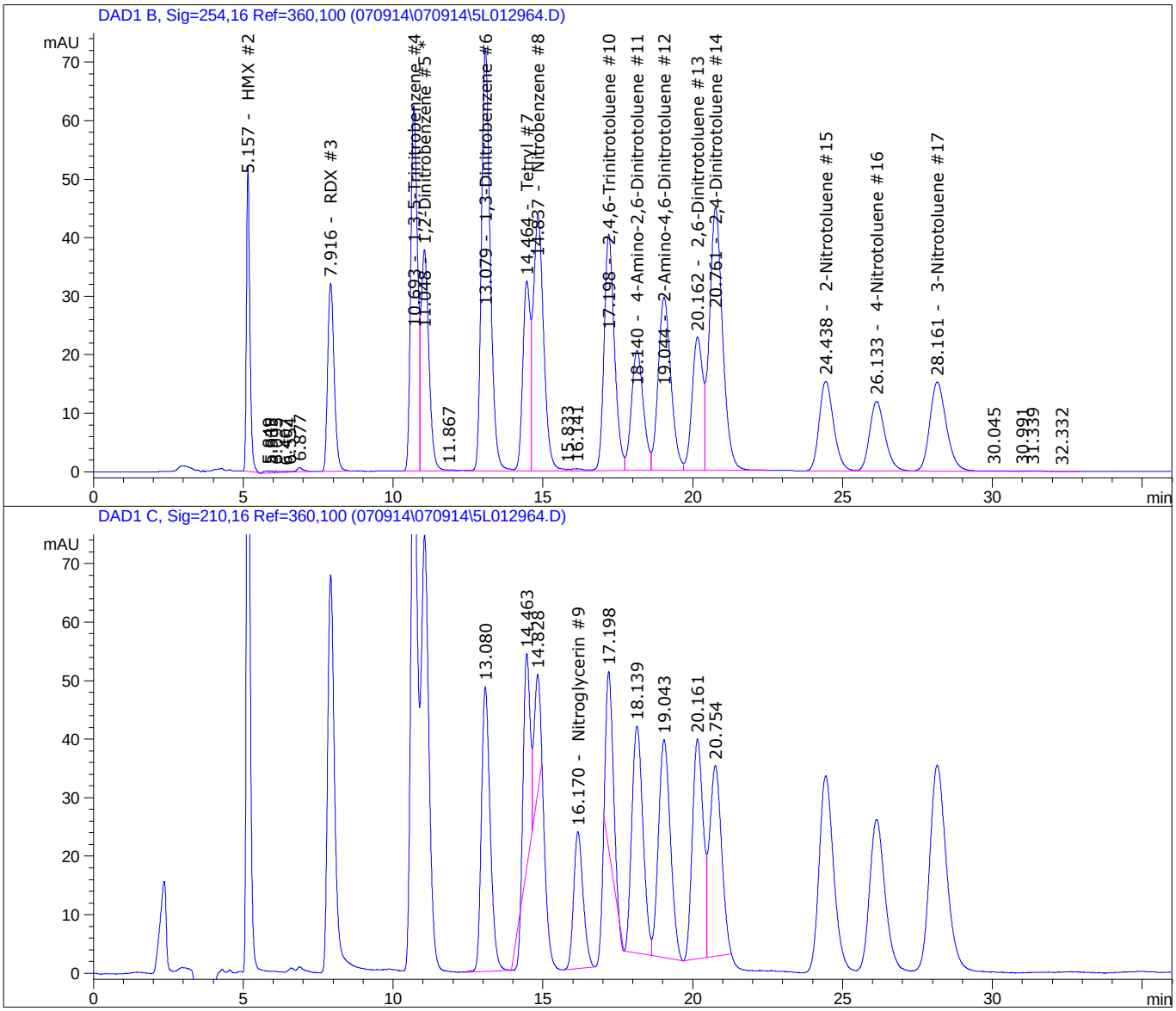

HPLC5 7/10/2014 1:37:05 PM ECL Page 1 of 3

Data File C:\CHEM32\1\DATA\070914\070914\5L012964.D
Sample Name: WG483233-01 8330 ICAL 2500 PPB

==========

Acq. Operator : ECL Seq. Line : 1
Acq. Instrument : HPLC5 Location : Vial 2
Injection Date : 7/9/2014 1:26:31 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/10/2014 1:37:00 PM by ECL
(modified after loading)
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : Thursday, July 10, 2014 1:36:25 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.157	BBA	414.85123	6.01934	2497.13265		HMX #2
7.916	BBA	484.30826	5.15431	2496.27363		RDX #3
10.693	BV	983.38068	2.54320	2500.93433		1,3,5-Trinitrobenzene #4
11.048	VV	681.76361	3.67110	2502.82341		1,2-Dinitrobenzene #5 *
13.079	VV	1476.04382	1.69639	2503.95045		1,3-Dinitrobenzene #6
14.464	VV	561.56879	4.42428	2484.53489		Tetryl #7
14.837	VV	1046.62891	2.39604	2507.76710		Nitrobenzene #8
17.198	VV	967.20288	2.58632	2501.50061		2,4,6-Trinitrotoluene #10
18.140	VV	570.30542	4.38038	2498.15394		4-Amino-2,6-Dinitrotoluene #11
19.044	VV	877.05902	2.85036	2499.93268		2-Amino-4,6-Dinitrotoluene #12
20.162	VV	566.14679	4.40596	2494.42225		2,6-Dinitrotoluene #13
20.761	VV	1377.43542	1.81685	2502.59254		2,4-Dinitrotoluene #14
24.438	BV	510.65686	4.89374	2499.02167		2-Nitrotoluene #15
26.133	VV	425.73886	5.87562	2501.48152		4-Nitrotoluene #16
28.161	VV	588.01941	4.25470	2501.84577		3-Nitrotoluene #17

Totals : 3.74924e4

Data File C:\CHEM32\1\DATA\070914\070914\5L012964.D
Sample Name: WG483233-01 8330 ICAL 2500 PPB

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :   1
Acq. Instrument : HPLC5                          Location : Vial 2
Injection Date  : 7/9/2014 1:26:31 PM                 Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed    : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/10/2014 1:37:00 PM by ECL
                  (modified after loading)
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65351


==================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 16.170 BV      515.99780    4.84900 2502.07589    Nitroglycerin #9

Totals :                              2502.07589


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                           *** End of Report ***
```

Data File C:\CHEM32\1\DATA\070914\070914\5L012965.D
Sample Name: WG483233-02 8330 ICAL 1000 PPB

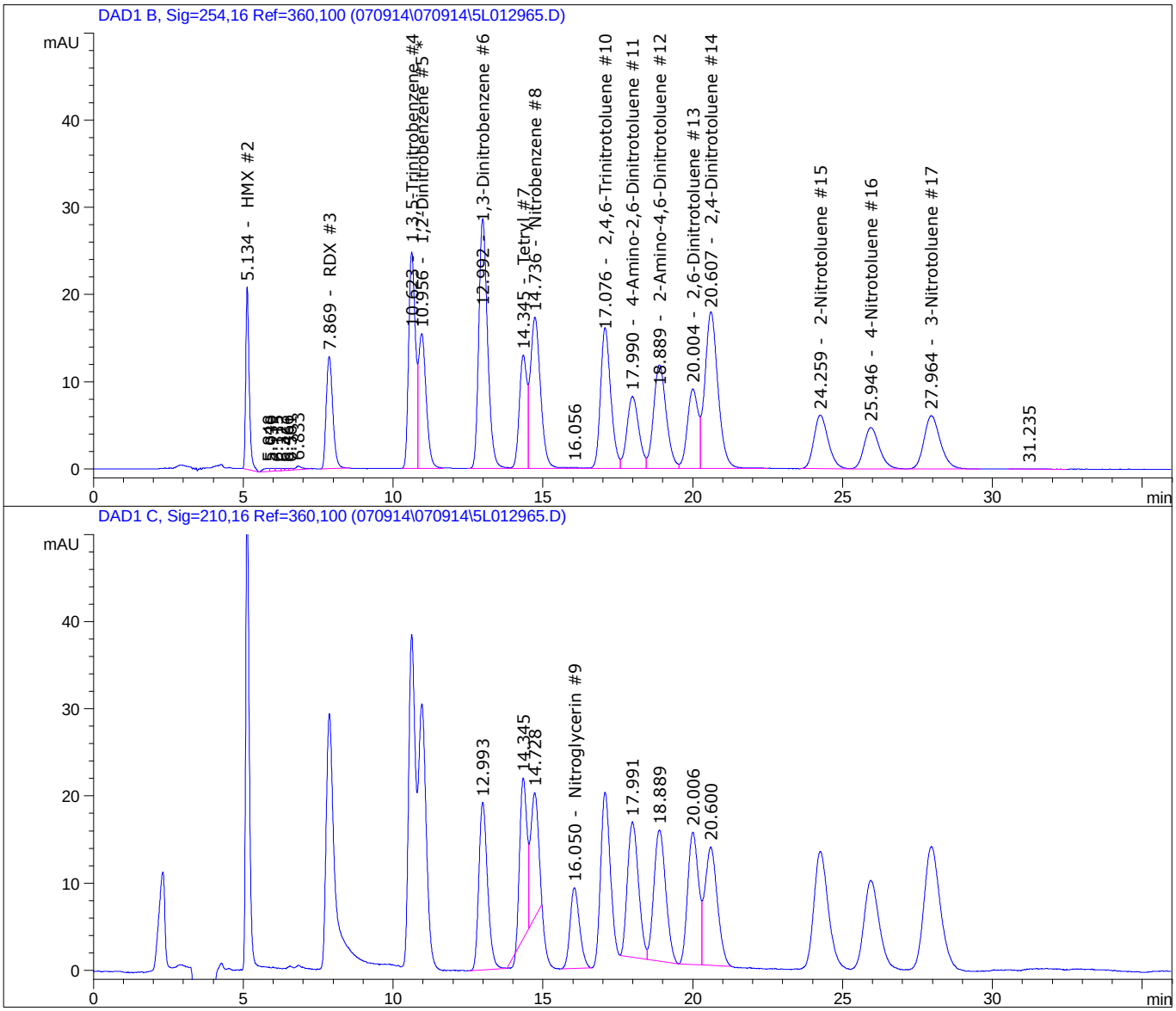
==========

Acq. Operator	: ECL	Seq. Line :	2
Acq. Instrument	: HPLC5	Location :	Vial 3
Injection Date	: 7/9/2014 2:05:37 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/10/2014 1:37:16 PM by ECL
(modified after loading)
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

==========



```
==================================================================
Acq. Operator   : ECL                           Seq. Line :   2
Acq. Instrument : HPLC5                          Location : Vial 3
Injection Date  : 7/9/2014 2:05:37 PM                 Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed    : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/10/2014 1:37:16 PM by ECL
                  (modified after loading)
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65351


==================================================================

==================================================================
                       External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, July 10, 2014 1:36:25 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
  5.134 BBA     168.39406    6.01547 1012.96869    HMX #2
  7.869 BBA     195.34581    5.15246 1006.51092    RDX #3
 10.623 BV      389.59302    2.53047  985.85277    1,3,5-Trinitrobenzene #4
 10.956 VV      274.80081    3.70400 1017.86208    1,2-Dinitrobenzene #5 *
 12.992 VV      585.61853    1.70393  997.85422    1,3-Dinitrobenzene #6
 14.345 VV      229.50737    4.31070  989.33824    Tetryl #7
 14.736 VV      413.06210    2.42380 1001.18024    Nitrobenzene #8
 17.076 VV      385.30911    2.58811  997.22381    2,4,6-Trinitrotoluene #10
 17.990 VV      228.31931    4.35863  995.16019    4-Amino-2,6-Dinitrotoluene #11
 18.889 VV      349.45117    2.84012  992.48363    2-Amino-4,6-Dinitrotoluene #12
 20.004 VV      226.93925    4.34049  985.02864    2,6-Dinitrotoluene #13
 20.607 VV      549.58862    1.82568 1003.37500    2,4-Dinitrotoluene #14
 24.259 BV      203.63292    4.86976  991.64432    2-Nitrotoluene #15
 25.946 VV      168.68358    5.85976  988.44451    4-Nitrotoluene #16
 27.964 VV      232.78145    4.24442  988.02338    3-Nitrotoluene #17

Totals :                               1.49530e4
```

Data File C:\CHEM32\1\DATA\070914\070914\5L012965.D
Sample Name: WG483233-02 8330 ICAL 1000 PPB

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :   2
Acq. Instrument : HPLC5                          Location : Vial 3
Injection Date  : 7/9/2014 2:05:37 PM                 Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed    : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/10/2014 1:37:16 PM by ECL
                  (modified after loading)
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65351


==================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 16.050 BV      205.25853    4.85696  996.93331    Nitroglycerin #9

Totals :                               996.93331


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                           *** End of Report ***
```

Data File C:\CHEM32\1\DATA\070914\070914\5L012966.D
Sample Name: WG483233-03 8330 ICAL 500 PPB

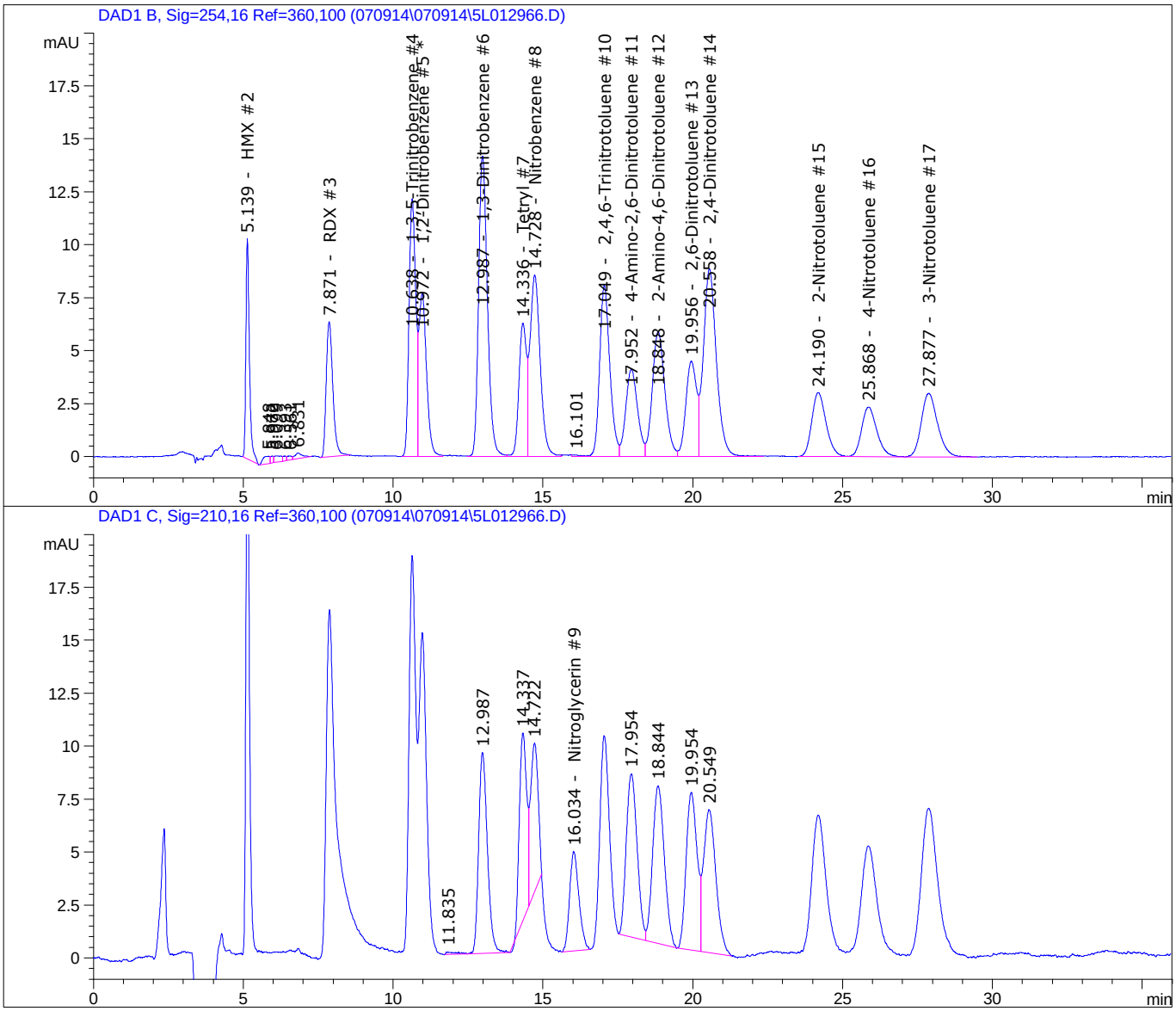
==========

Acq. Operator	: ECL	Seq. Line :	3
Acq. Instrument	: HPLC5	Location :	Vial 4
Injection Date	: 7/9/2014 2:44:44 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/10/2014 1:37:52 PM by ECL
(modified after loading)
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

==========



```
    ==================================================================
    Acq. Operator   : ECL                           Seq. Line :   3
    Acq. Instrument : HPLC5                          Location : Vial 4
    Injection Date  : 7/9/2014 2:44:44 PM                 Inj :   1
                                                   Inj Volume : 100 µl
    Acq. Method     : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
    Last changed    : 5/30/2014 10:00:02 AM by ECL
    Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
    Last changed    : 7/10/2014 1:37:52 PM by ECL
                      (modified after loading)
    Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

    Sample Info     : 1,1  STD65351


    ==================================================================

    ==================================================================
                          External Standard Report
    ==================================================================

    Sorted By             :      Signal
    Calib. Data Modified  :      Thursday, July 10, 2014 1:37:49 PM
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Use Multiplier & Dilution Factor with ISTDs

    Signal 1: DAD1 B, Sig=254,16 Ref=360,100

    RetTime  Type     Area     Amt/Area    Amount   Grp   Name
     [min]          [mAU*s]                [ug/L]
    -------|------|----------|----------|----------|--|------------------
      5.139 BBA      84.86152    5.96457  506.16231    HMX #2
      7.871 VBA      98.46990    5.14900  507.02150    RDX #3
     10.638 BV      191.39067    2.54928  487.90879    1,3,5-Trinitrobenzene #4
     10.972 VV      136.07069    3.67779  500.43986    1,2-Dinitrobenzene #5 *
     12.987 VV      288.89835    1.70895  493.71254    1,3-Dinitrobenzene #6
     14.336 VV      111.64665    4.34012  484.55975    Tetryl #7
     14.728 VV      203.07185    2.43113  493.69426    Nitrobenzene #8
     17.049 VV      190.71613    2.59432  494.77946    2,4,6-Trinitrotoluene #10
     17.952 VV      112.67506    4.37305  492.73364    4-Amino-2,6-Dinitrotoluene #11
     18.848 VV      172.49153    2.85240  492.01463    2-Amino-4,6-Dinitrotoluene #12
     19.956 VV      111.60930    4.36884  487.60324    2,6-Dinitrotoluene #13
     20.558 VB      269.68353    1.82948  493.38132    2,4-Dinitrotoluene #14
     24.190 BV      100.31861    4.89573  491.13258    2-Nitrotoluene #15
     25.868 VV       83.41754    5.89519  491.76208    4-Nitrotoluene #16
     27.877 VB      114.89574    4.27171  490.80180    3-Nitrotoluene #17

    Totals :                               7407.70778
```

Data File C:\CHEM32\1\DATA\070914\070914\5L012966.D
Sample Name: WG483233-03 8330 ICAL 500 PPB

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :   3
Acq. Instrument : HPLC5                          Location : Vial 4
Injection Date  : 7/9/2014 2:44:44 PM                 Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed    : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/10/2014 1:37:52 PM by ECL
                  (modified after loading)
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65351


==================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 16.034 BV      101.56783    4.86975  494.60998    Nitroglycerin #9

Totals :                               494.60998


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                           *** End of Report ***
```

Data File C:\CHEM32\1\DATA\070914\070914\5L012967.D
Sample Name: WG483233-04 8330 ICAL 100 PPB

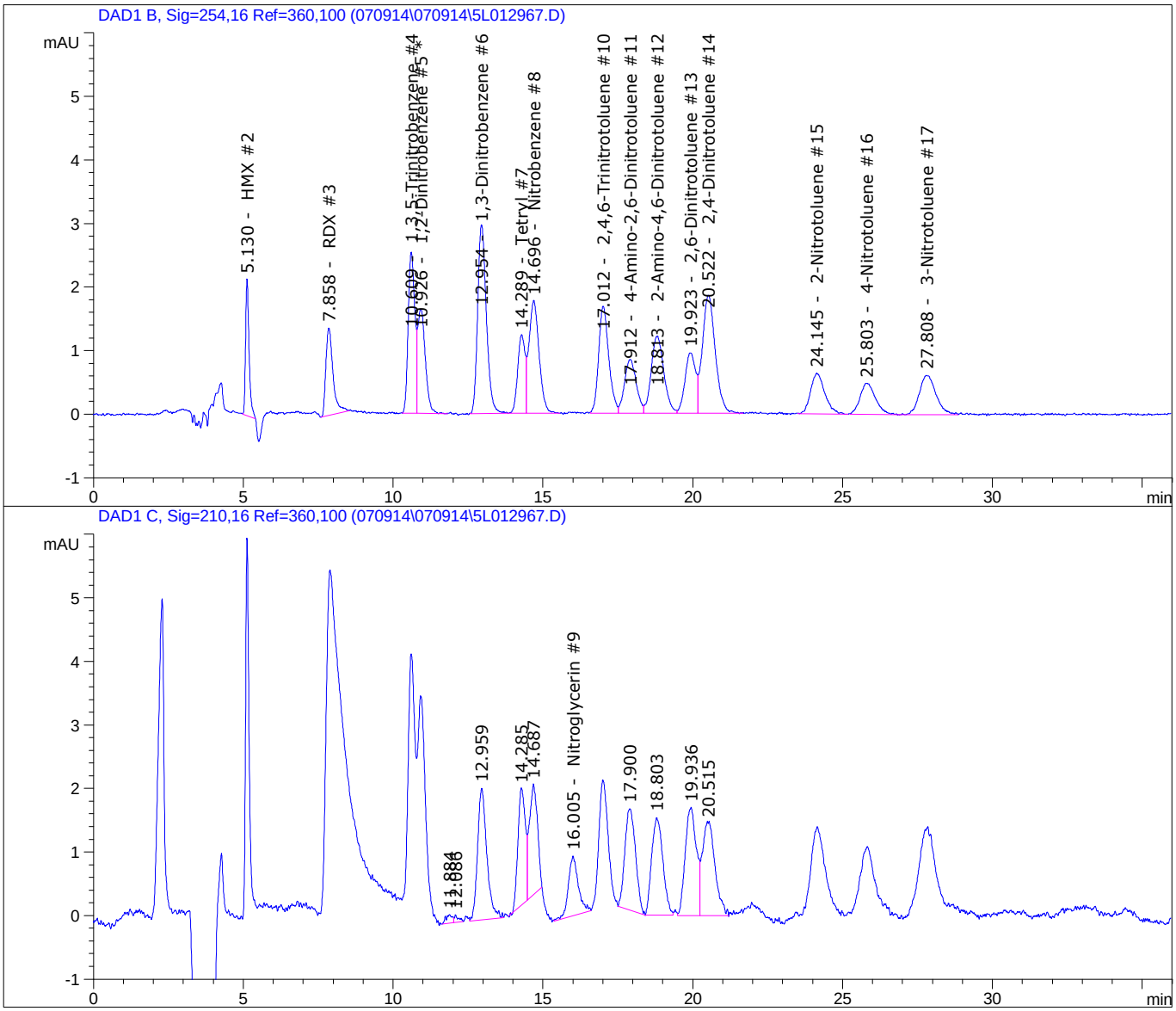
==========

Acq. Operator	: ECL	Seq. Line :	4
Acq. Instrument	: HPLC5	Location :	Vial 5
Injection Date	: 7/9/2014 3:23:45 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/10/2014 1:43:50 PM by ECL
(modified after loading)
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

==========



```
==================================================================
Acq. Operator   : ECL                           Seq. Line :   4
Acq. Instrument : HPLC5                          Location : Vial 5
Injection Date  : 7/9/2014 3:23:45 PM                 Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed    : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/10/2014 1:43:50 PM by ECL
                  (modified after loading)
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65351


==================================================================

==================================================================
                       External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, July 10, 2014 1:43:48 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
  5.130 BBA      17.39457    5.67223   98.66602    HMX #2
  7.858 BBA      22.64245    4.91813  111.35854    RDX #3
 10.609 BV       39.60133    2.60088  102.99843    1,3,5-Trinitrobenzene #4
 10.926 VB       28.70009    3.57993  102.74441    1,2-Dinitrobenzene #5 *
 12.954 BV       60.05067    1.74720  104.92068    1,3-Dinitrobenzene #6
 14.289 VV       21.59427    4.15052   89.62750    Tetryl #7
 14.696 VB       41.73262    2.55164  106.48649    Nitrobenzene #8
 17.012 BV       39.80295    2.61292  104.00185    2,4,6-Trinitrotoluene #10
 17.912 VV       23.25091    4.35559  101.27152    4-Amino-2,6-Dinitrotoluene #11
 18.813 VV       35.72176    2.86469  102.33161    2-Amino-4,6-Dinitrotoluene #12
 19.923 VV       23.39913    4.27063   99.92904    2,6-Dinitrotoluene #13
 20.522 VB       55.68262    1.86825  104.02887    2,4-Dinitrotoluene #14
 24.145 BB       21.18709    4.90195  103.85799    2-Nitrotoluene #15
 25.803 BV       17.80792    5.94300  105.83256    4-Nitrotoluene #16
 27.808 VV       24.17198    4.34376  104.99734    3-Nitrotoluene #17

Totals :                               1543.05284
```

Data File C:\CHEM32\1\DATA\070914\070914\5L012967.D
Sample Name: WG483233-04 8330 ICAL 100 PPB

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :   4
Acq. Instrument : HPLC5                          Location : Vial 5
Injection Date  : 7/9/2014 3:23:45 PM                 Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed    : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/10/2014 1:43:50 PM by ECL
                  (modified after loading)
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65351


==================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 16.005 BV       21.88299    4.93730  108.04290    Nitroglycerin #9

Totals :                               108.04290


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                           *** End of Report ***
```

Data File C:\CHEM32\1\DATA\070914\070914\5L012968.D
Sample Name: WG483233-05 8330 ICAL 50 PPB

==========

Acq. Operator	: ECL	Seq. Line :	5
Acq. Instrument	: HPLC5	Location :	Vial 6
Injection Date	: 7/9/2014 4:02:48 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/10/2014 1:44:37 PM by ECL
(modified after loading)
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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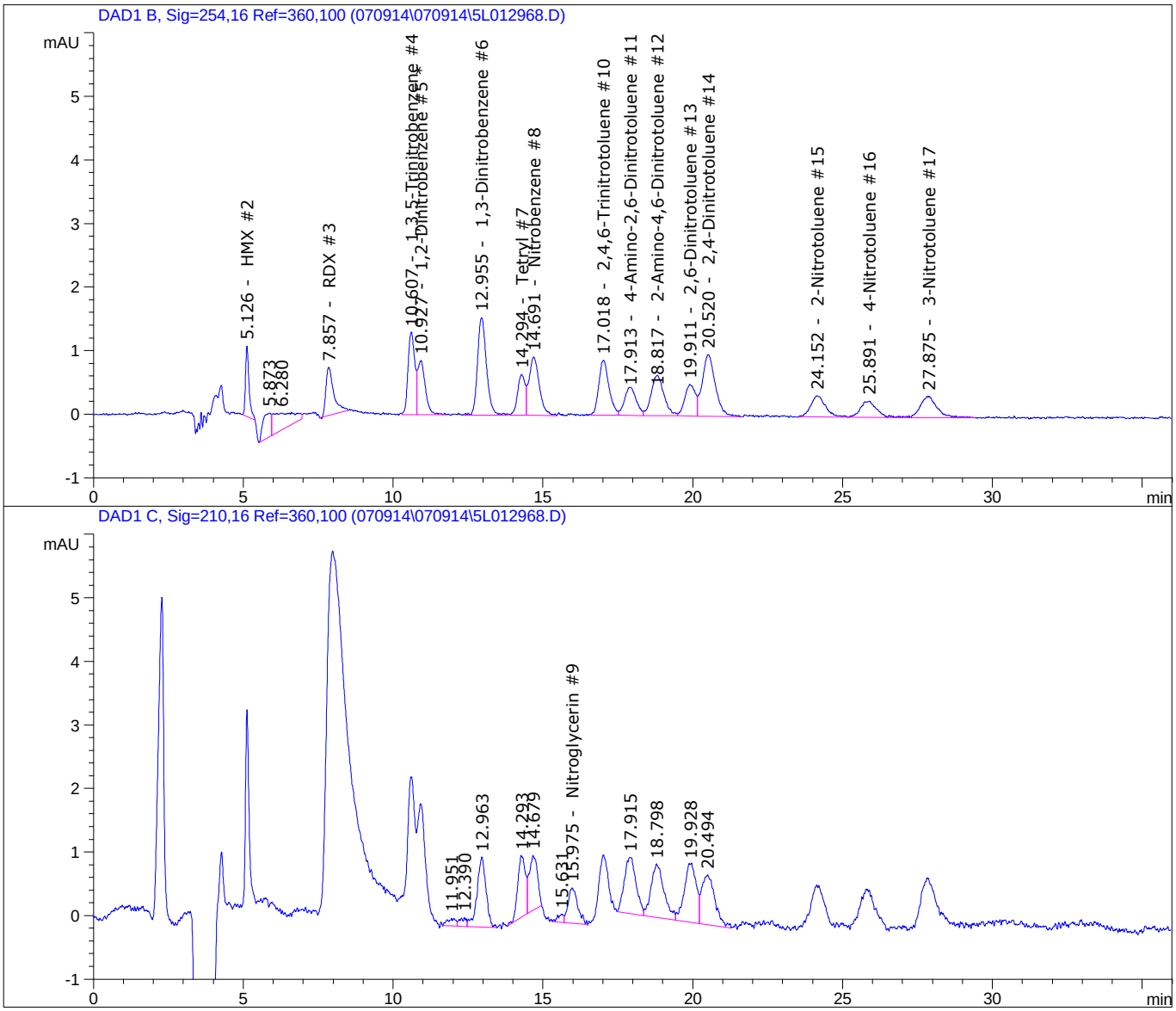

Data File C:\CHEM32\1\DATA\070914\070914\5L012968.D
Sample Name: WG483233-05 8330 ICAL 50 PPB

==========

Acq. Operator : ECL Seq. Line : 5
Acq. Instrument : HPLC5 Location : Vial 6
Injection Date : 7/9/2014 4:02:48 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/10/2014 1:44:37 PM by ECL
(modified after loading)
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Thursday, July 10, 2014 1:44:34 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.126	BBA	9.14081	5.20970	47.62092		HMX #2
7.857	BBA	13.91896	4.28502	59.64300		RDX #3
10.607	BV	20.38415	2.67574	54.54273		1,3,5-Trinitrobenzene #4
10.927	VB	15.42879	3.47784	53.65894		1,2-Dinitrobenzene #5 *
12.955	BB	31.77382	1.75262	55.68738		1,3-Dinitrobenzene #6
14.294	BV	11.32651	4.17745	47.31595		Tetryl #7
14.691	VV	21.95632	2.60068	57.10142		Nitrobenzene #8
17.018	BV	20.27113	2.61027	52.91311		2,4,6-Trinitrotoluene #10
17.913	VV	12.11038	4.33988	52.55759		4-Amino-2,6-Dinitrotoluene #11
18.817	VV	18.98899	2.86242	54.35451		2-Amino-4,6-Dinitrotoluene #12
19.911	VV	12.29927	4.23992	52.14796		2,6-Dinitrotoluene #13
20.520	VB	29.66468	1.86209	55.23841		2,4-Dinitrotoluene #14
24.152	BV	11.46259	4.83950	55.47323		2-Nitrotoluene #15
25.891	VV	10.05669	5.81711	58.50082		4-Nitrotoluene #16
27.875	VB	13.30298	4.33866	57.71705		3-Nitrotoluene #17

Totals : 814.47301

Data File C:\CHEM32\1\DATA\070914\070914\5L012968.D
Sample Name: WG483233-05 8330 ICAL 50 PPB

==========

Acq. Operator : ECL Seq. Line : 5
Acq. Instrument : HPLC5 Location : Vial 6
Injection Date : 7/9/2014 4:02:48 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/10/2014 1:44:37 PM by ECL
(modified after loading)
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

==========

Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
15.975	VV	12.55221	4.81277	60.41091		Nitroglycerin #9
Totals :				60.41091		

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========

*** End of Report ***

Data File C:\CHEM32\1\DATA\070914\070914\5L012969.D
Sample Name: WG483233-06 8330 ICAL 25 PPB

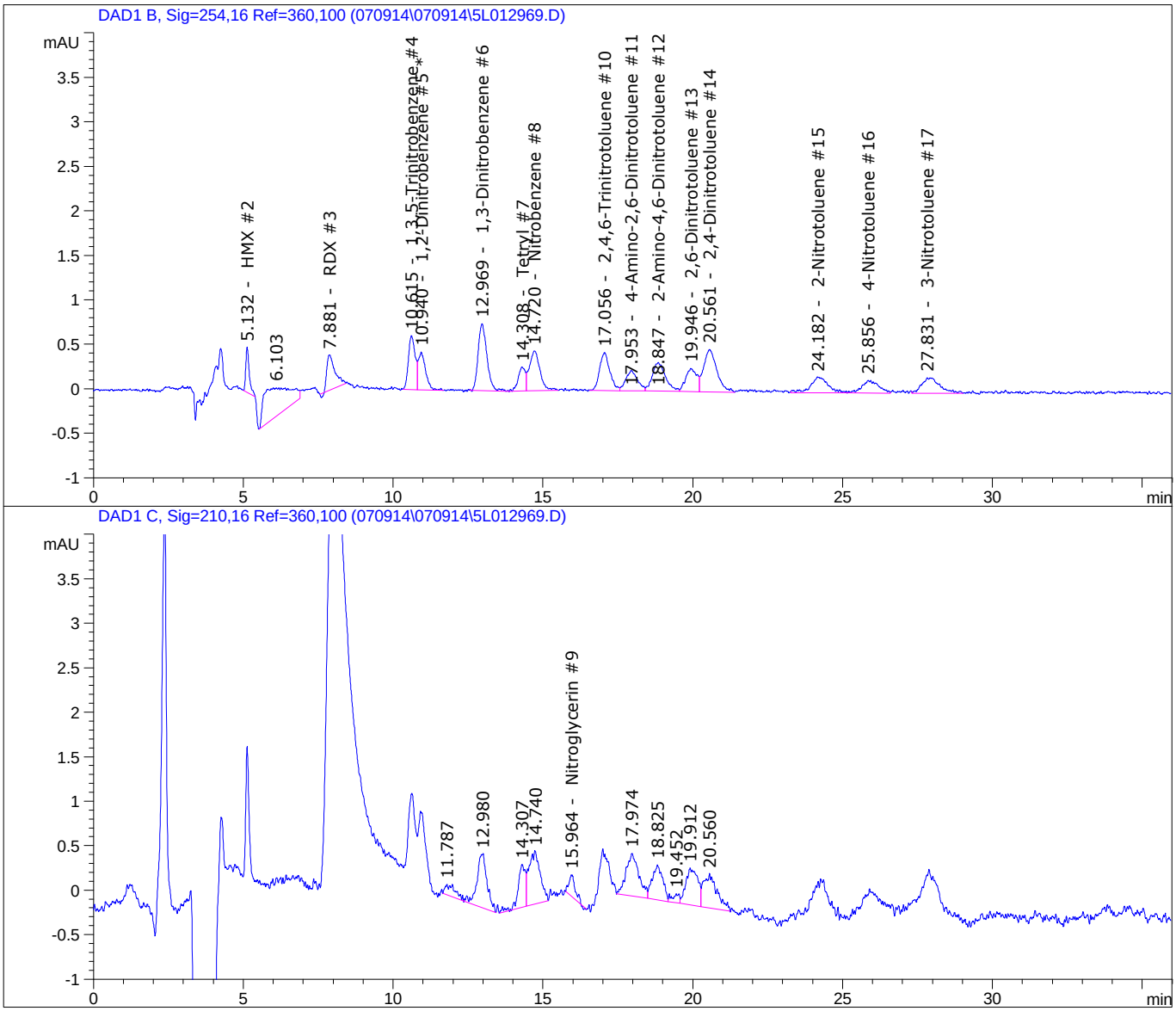
==========

Acq. Operator	: ECL	Seq. Line :	6
Acq. Instrument	: HPLC5	Location :	Vial 7
Injection Date	: 7/9/2014 4:41:52 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/10/2014 1:45:56 PM by ECL
(modified after loading)
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

==========



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==================================================================
Acq. Operator   : ECL                           Seq. Line :   6
Acq. Instrument : HPLC5                          Location : Vial 7
Injection Date  : 7/9/2014 4:41:52 PM                 Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed    : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/10/2014 1:45:56 PM by ECL
                  (modified after loading)
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65351


==================================================================

==================================================================
                       External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, July 10, 2014 1:45:54 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100
```

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.132	BBA	4.10941	4.43837	18.23905		HMX #2
7.881	BBA	7.26338	2.96675	21.54861		RDX #3
10.615	BV	9.60365	2.88602	27.71632		1,3,5-Trinitrobenzene #4
10.940	VB	7.20785	3.08939	22.26787		1,2-Dinitrobenzene #5 *
12.969	BV	15.50592	1.77897	27.58458		1,3-Dinitrobenzene #6
14.308	VV	4.55197	4.46380	20.31909		Tetryl #7
14.720	VB	11.06604	2.71552	30.05007		Nitrobenzene #8
17.056	BV	10.06921	2.60926	26.27316		2,4,6-Trinitrotoluene #10
17.953	VV	6.20706	4.25552	26.41432		4-Amino-2,6-Dinitrotoluene #11
18.847	VV	9.87415	2.82387	27.88330		2-Amino-4,6-Dinitrotoluene #12
19.946	VV	6.74628	4.10557	27.69737		2,6-Dinitrotoluene #13
20.561	VV	14.61115	1.86241	27.21198		2,4-Dinitrotoluene #14
24.182	BV	7.37311	4.44260	32.75578		2-Nitrotoluene #15
25.856	VV	5.51677	5.45234	30.07931		4-Nitrotoluene #16
27.831	BB	7.28426	4.18751	30.50287		3-Nitrotoluene #17

Totals : 396.54368

Data File C:\CHEM32\1\DATA\070914\070914\5L012969.D
Sample Name: WG483233-06 8330 ICAL 25 PPB

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :   6
Acq. Instrument : HPLC5                          Location : Vial 7
Injection Date  : 7/9/2014 4:41:52 PM                 Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed    : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/10/2014 1:45:56 PM by ECL
                  (modified after loading)
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65351


==================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 15.964 BV        3.53736    4.82871   17.08088    Nitroglycerin #9

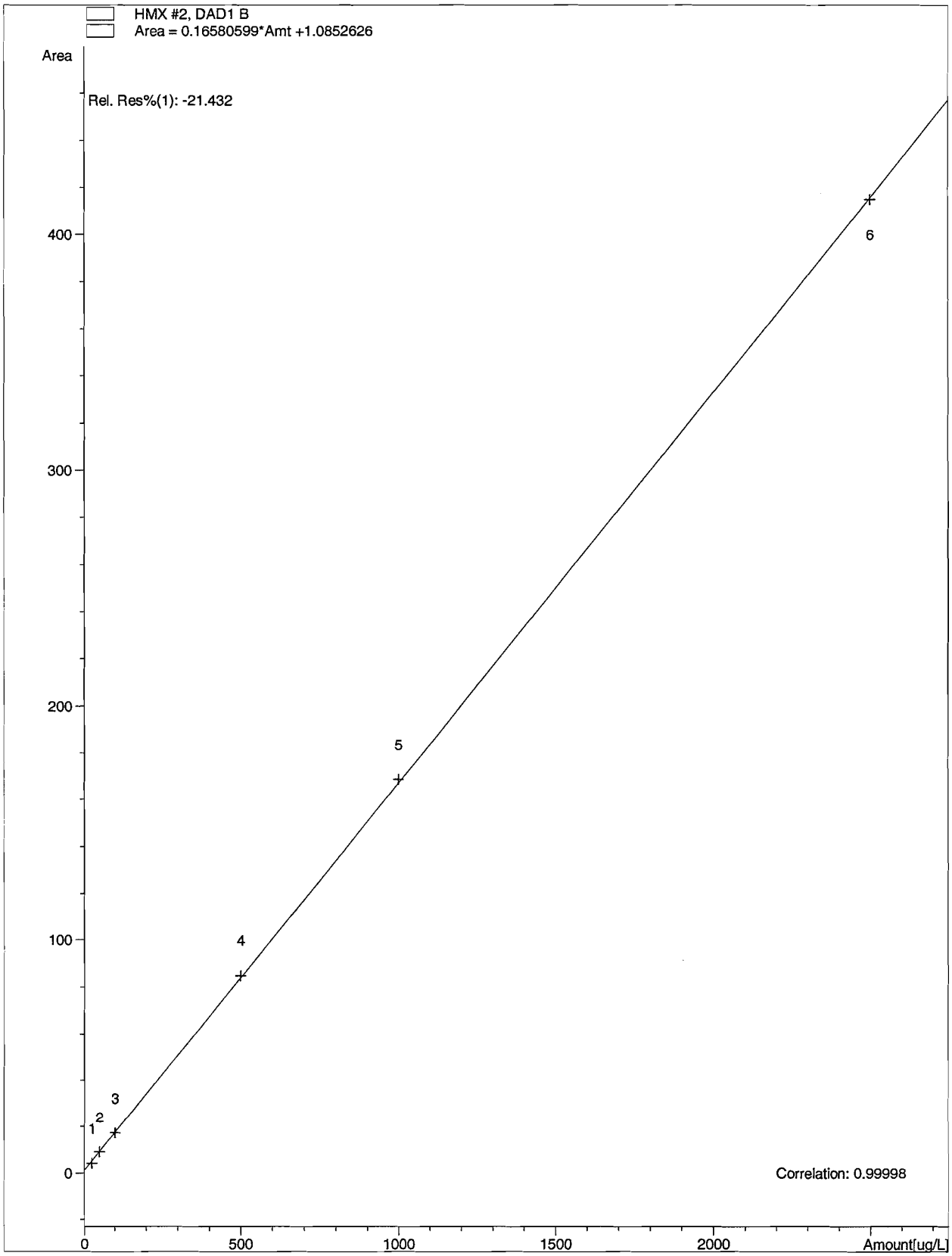
Totals :                               17.08088


1 Warnings or Errors :

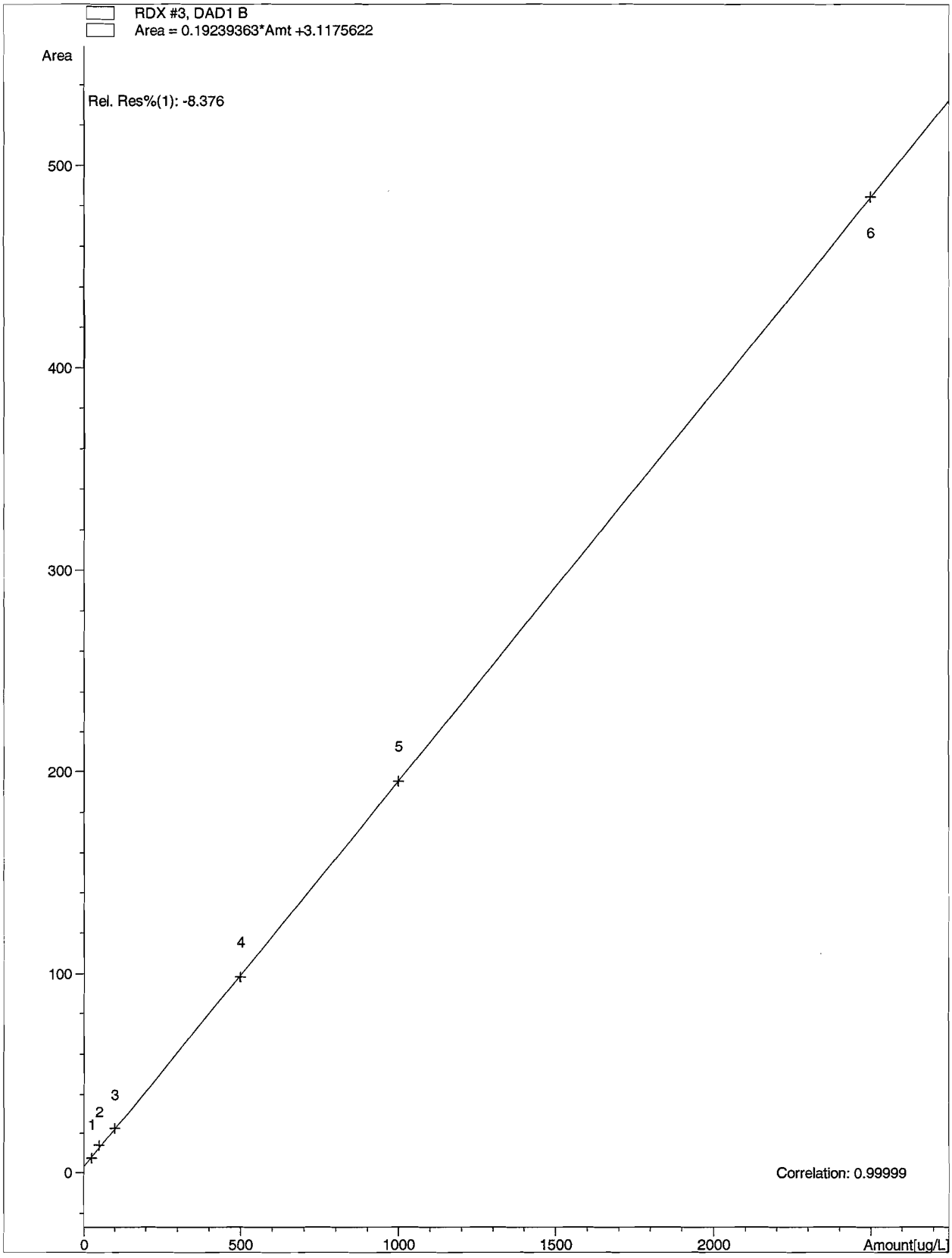
Warning : Calibration warnings (see calibration table listing)

==================================================================
                           *** End of Report ***
```

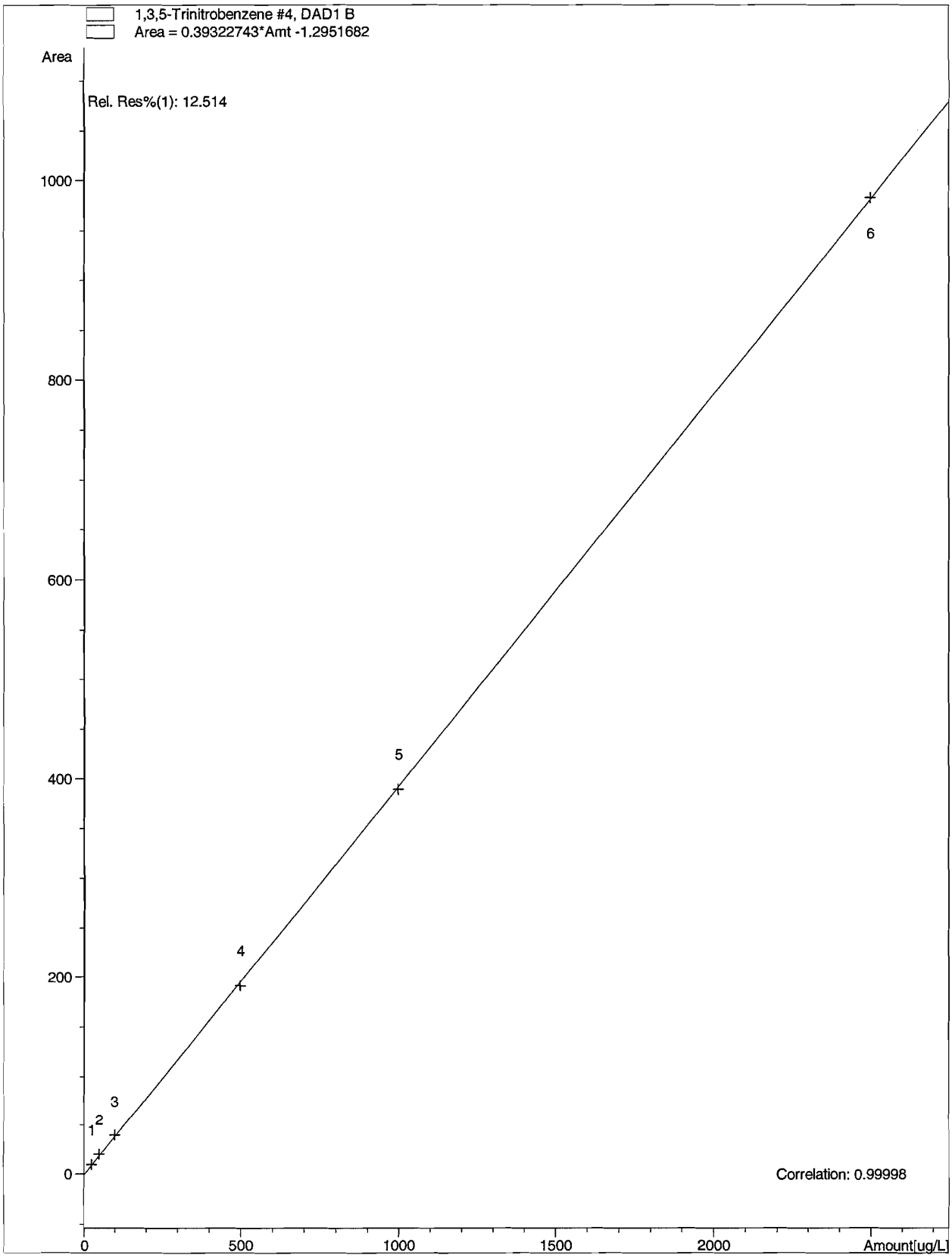
Calibration Curve



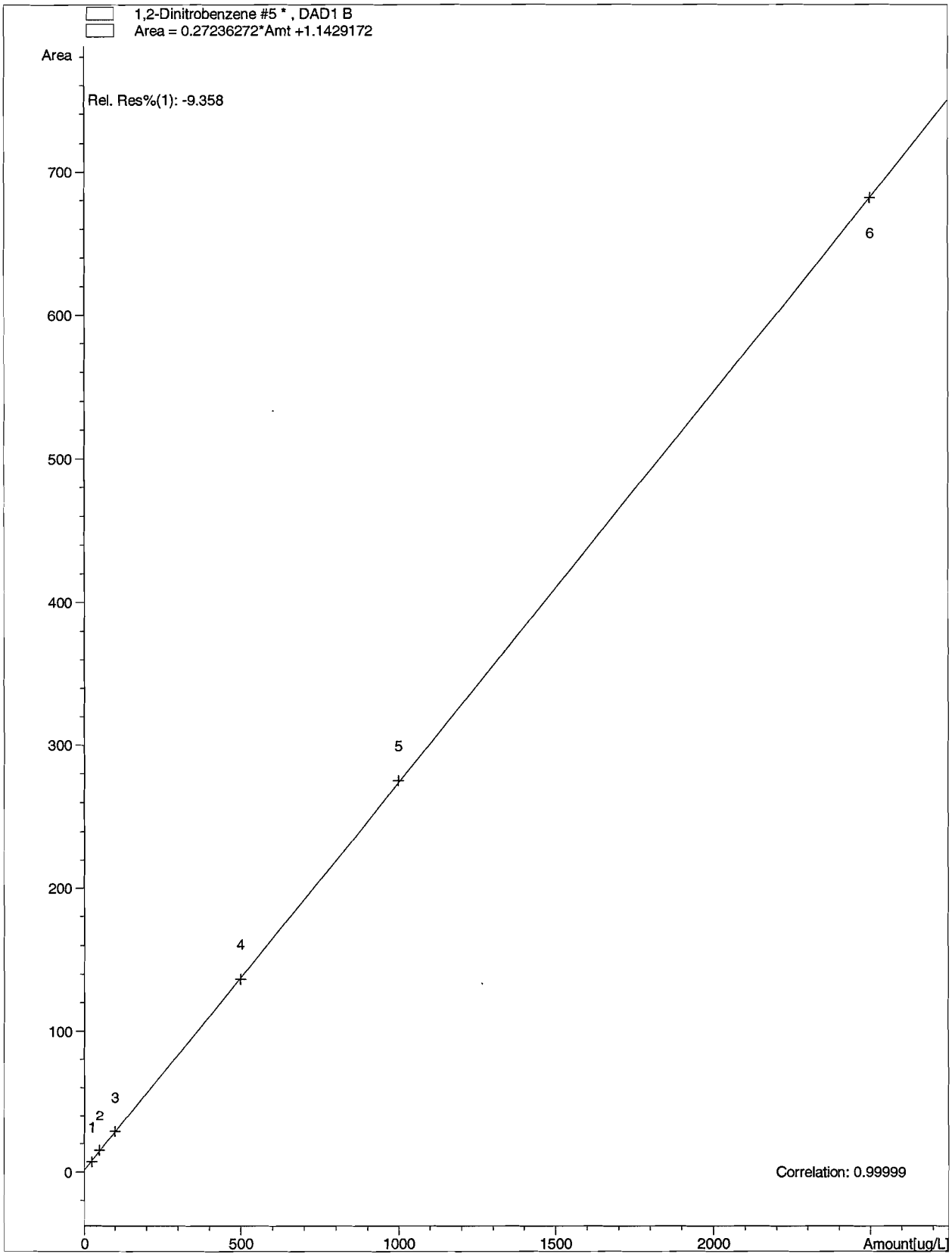
Calibration Curve



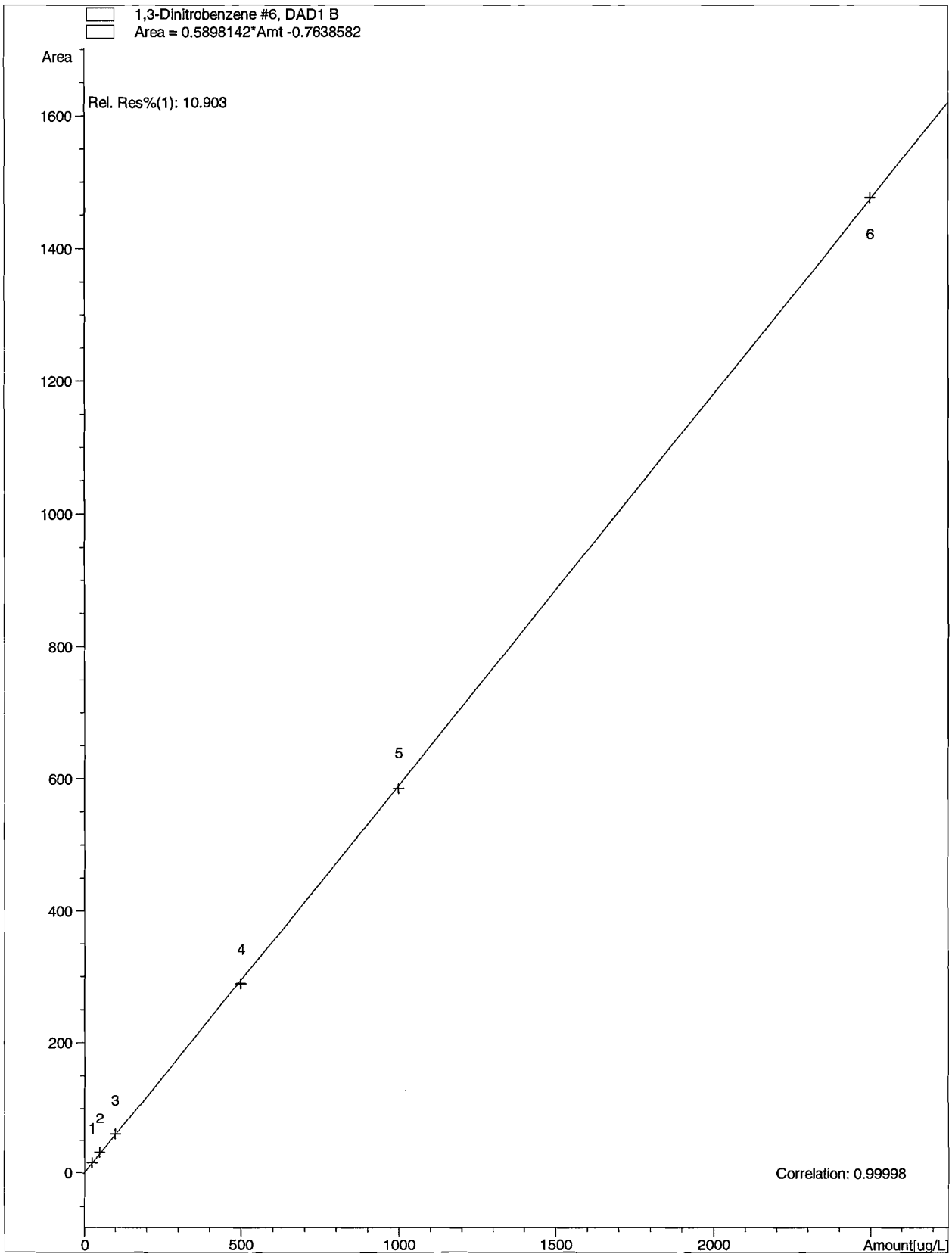
Calibration Curve



Calibration Curve



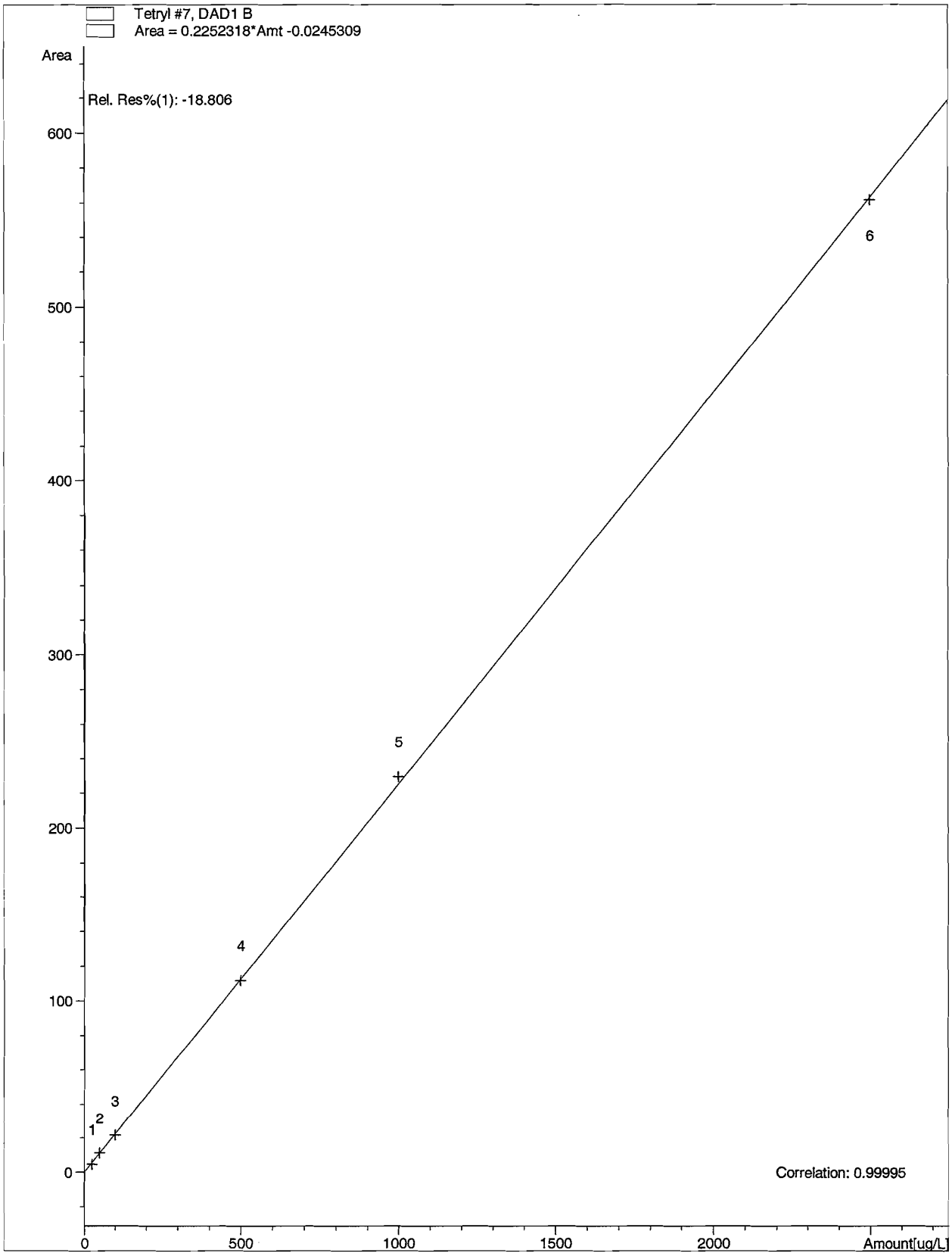
Calibration Curve



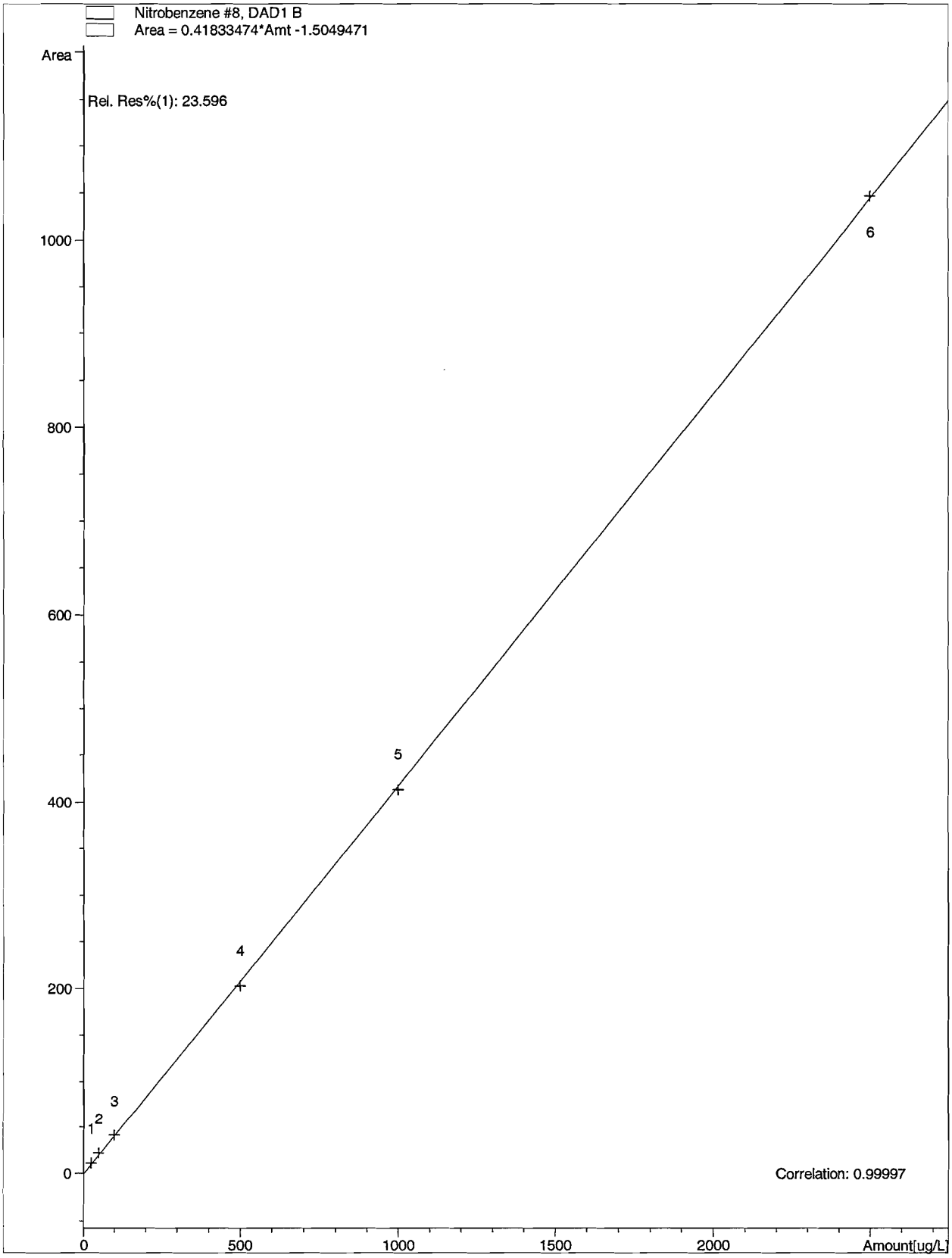
HPLC5 7/10/2014 1:47:17 PM ECL

Page 1 of 1

Calibration Curve



Calibration Curve



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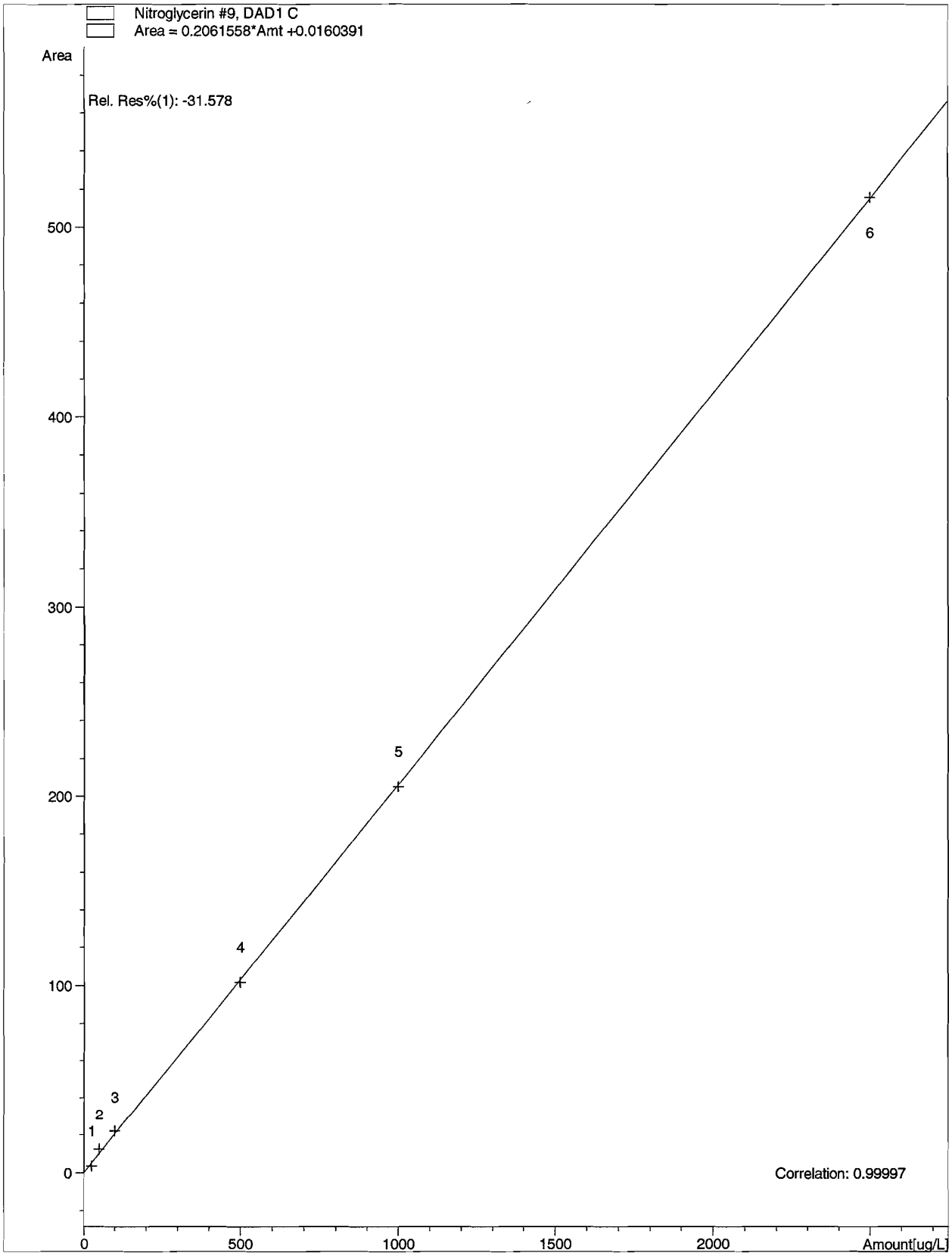

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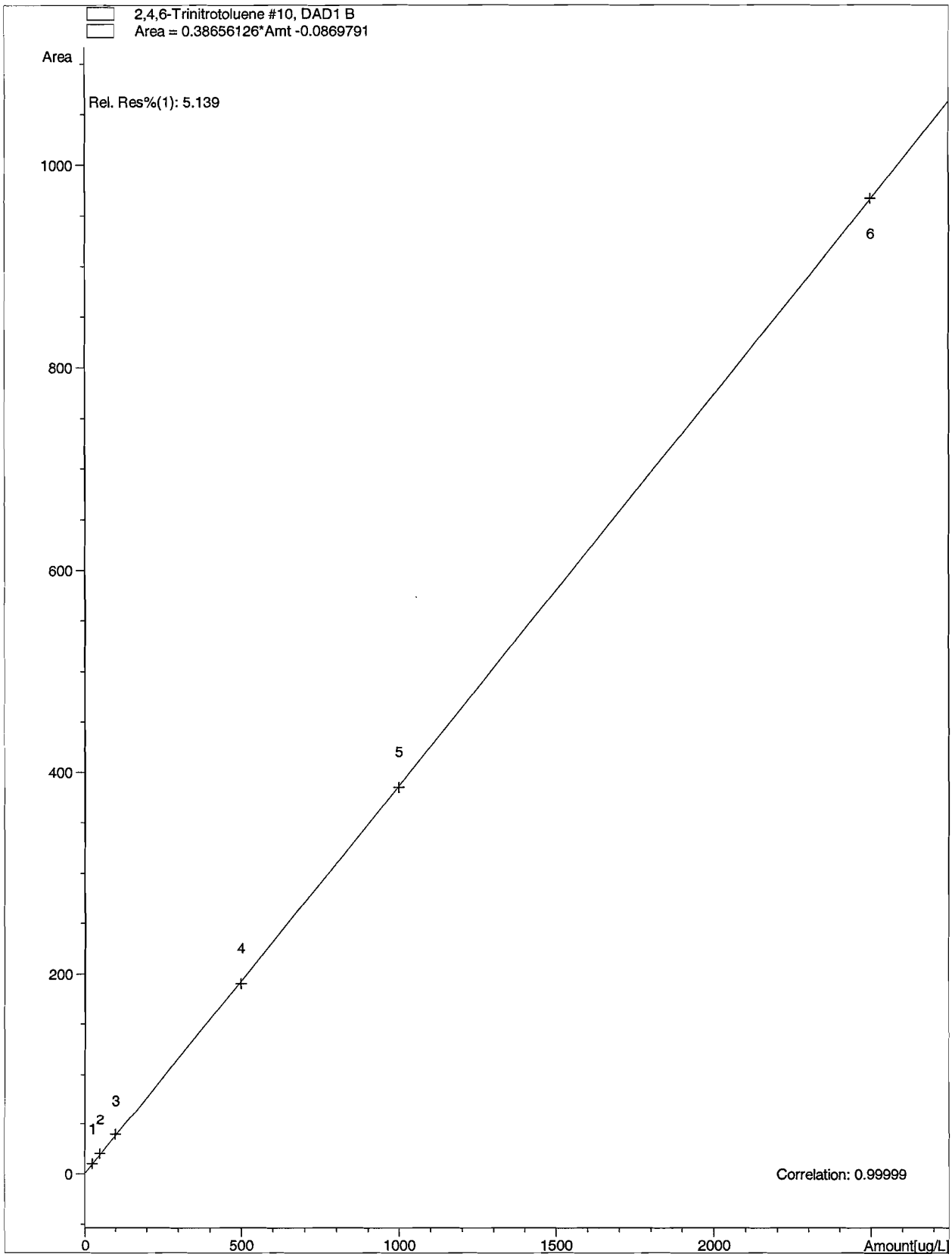
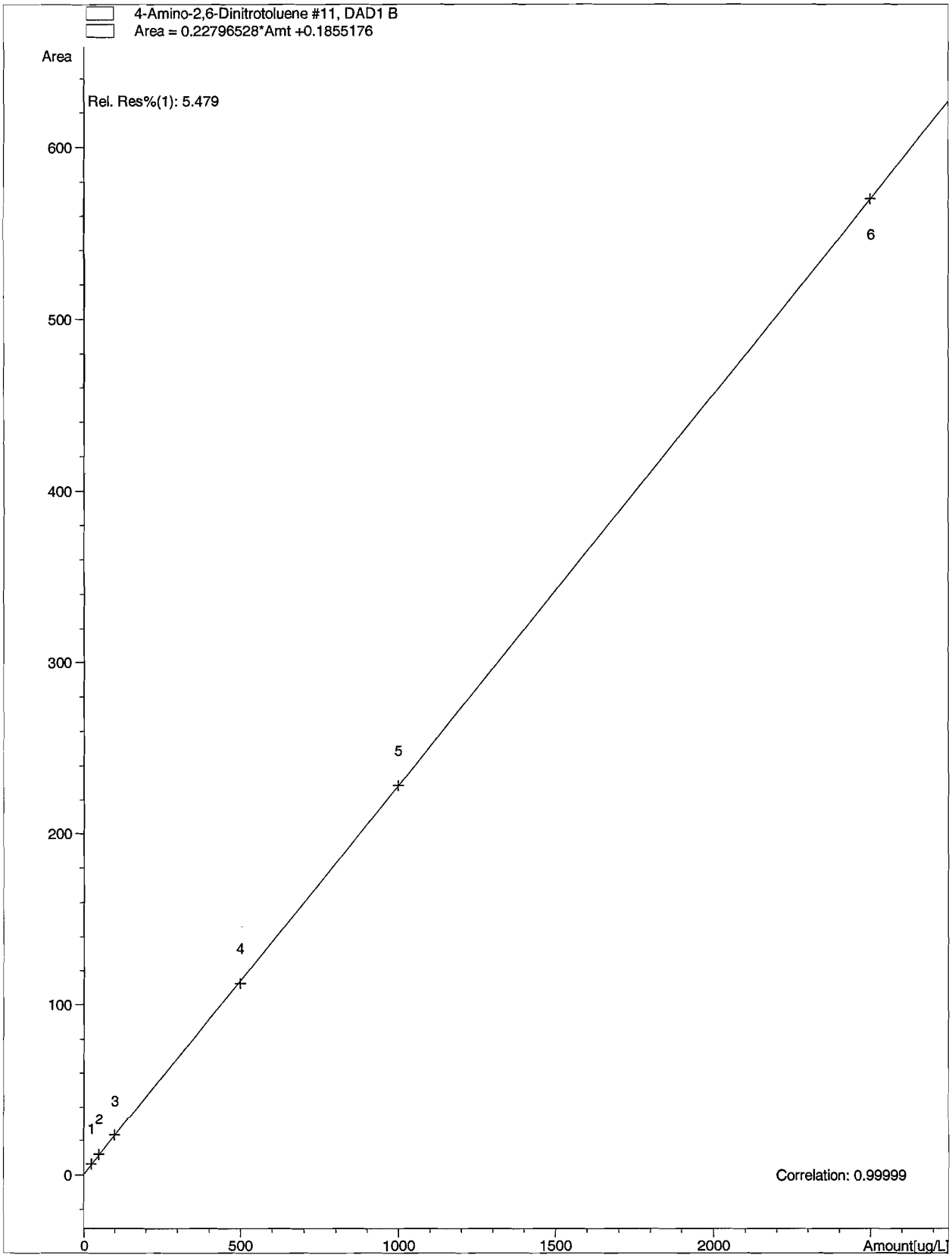


Calibration Curve



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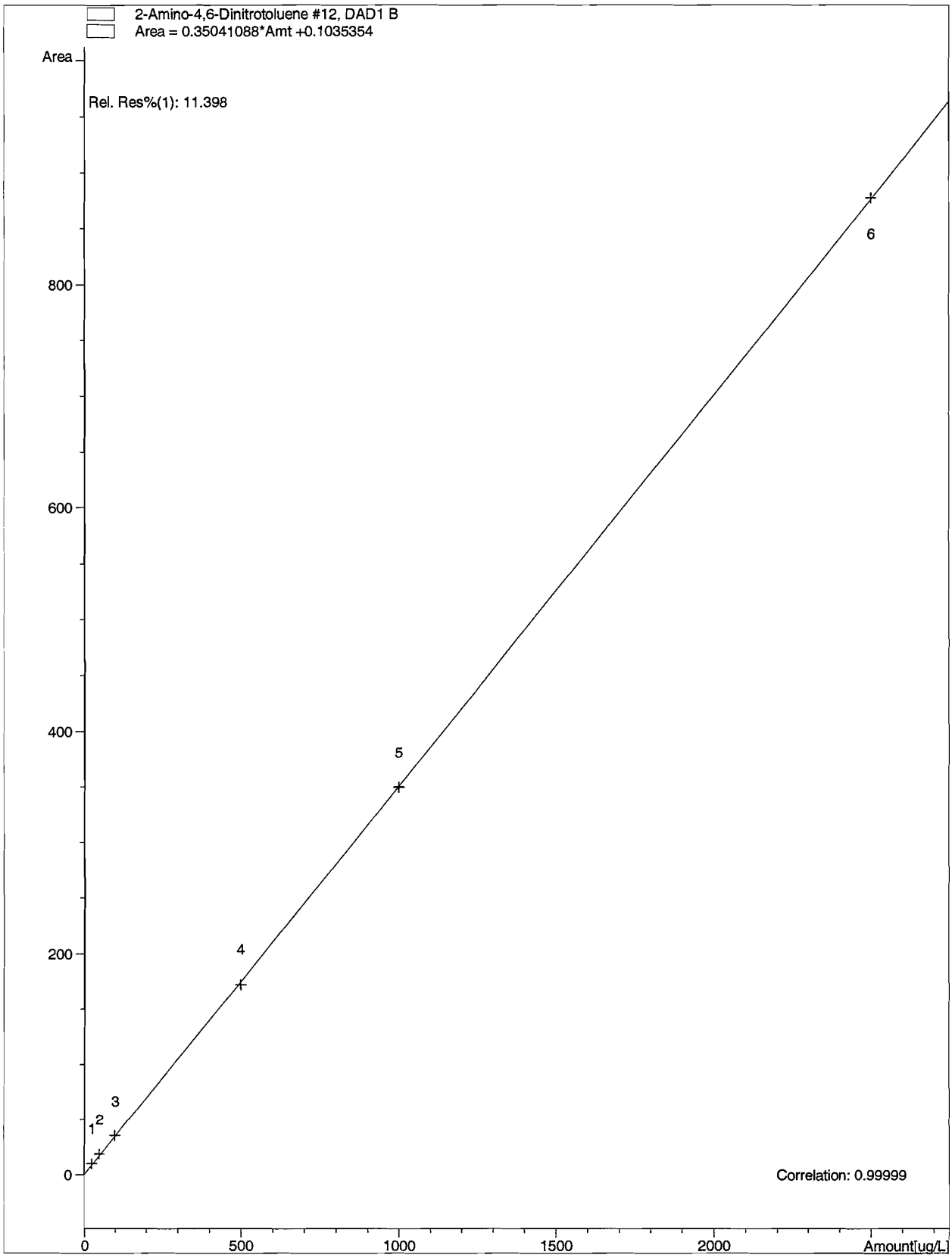

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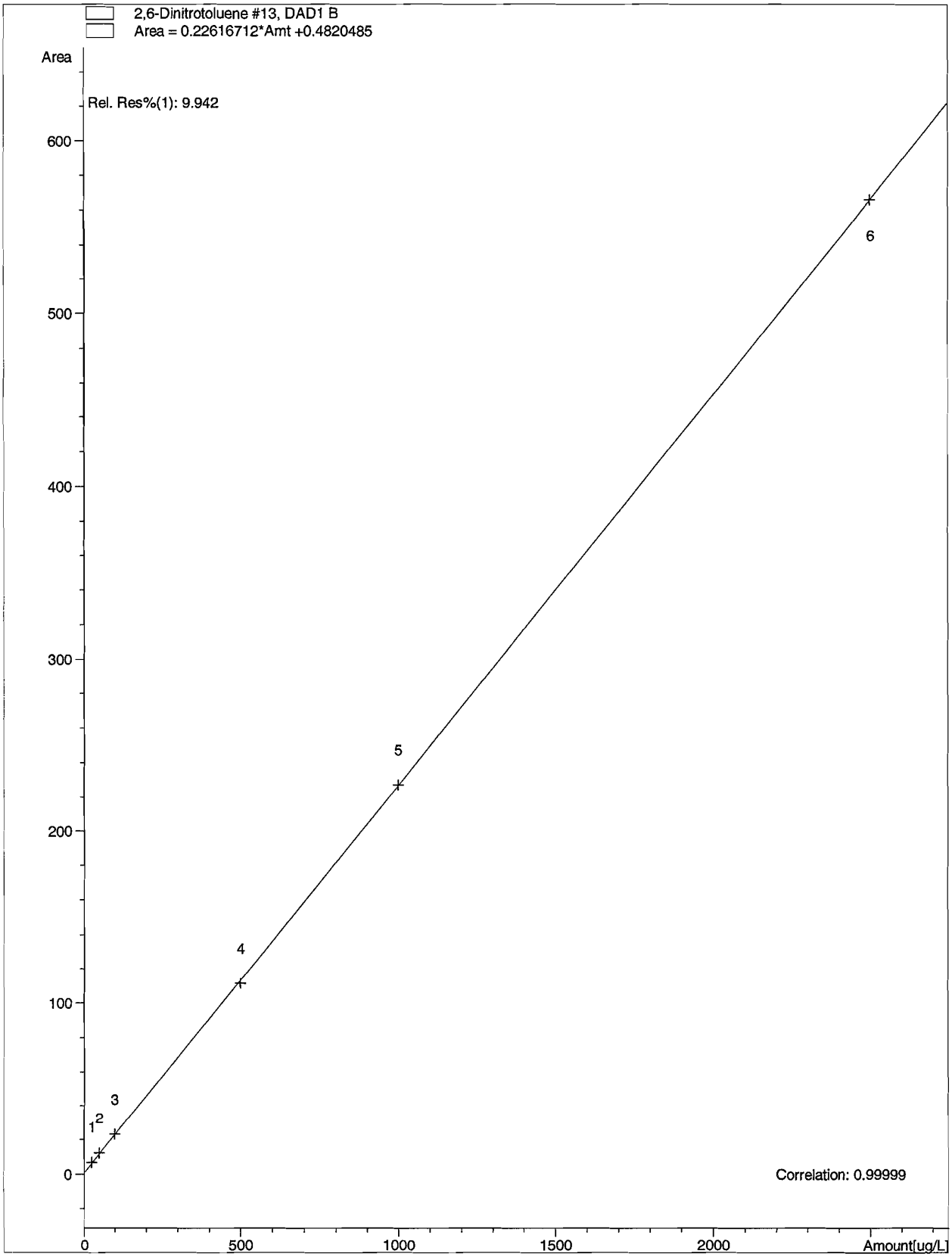
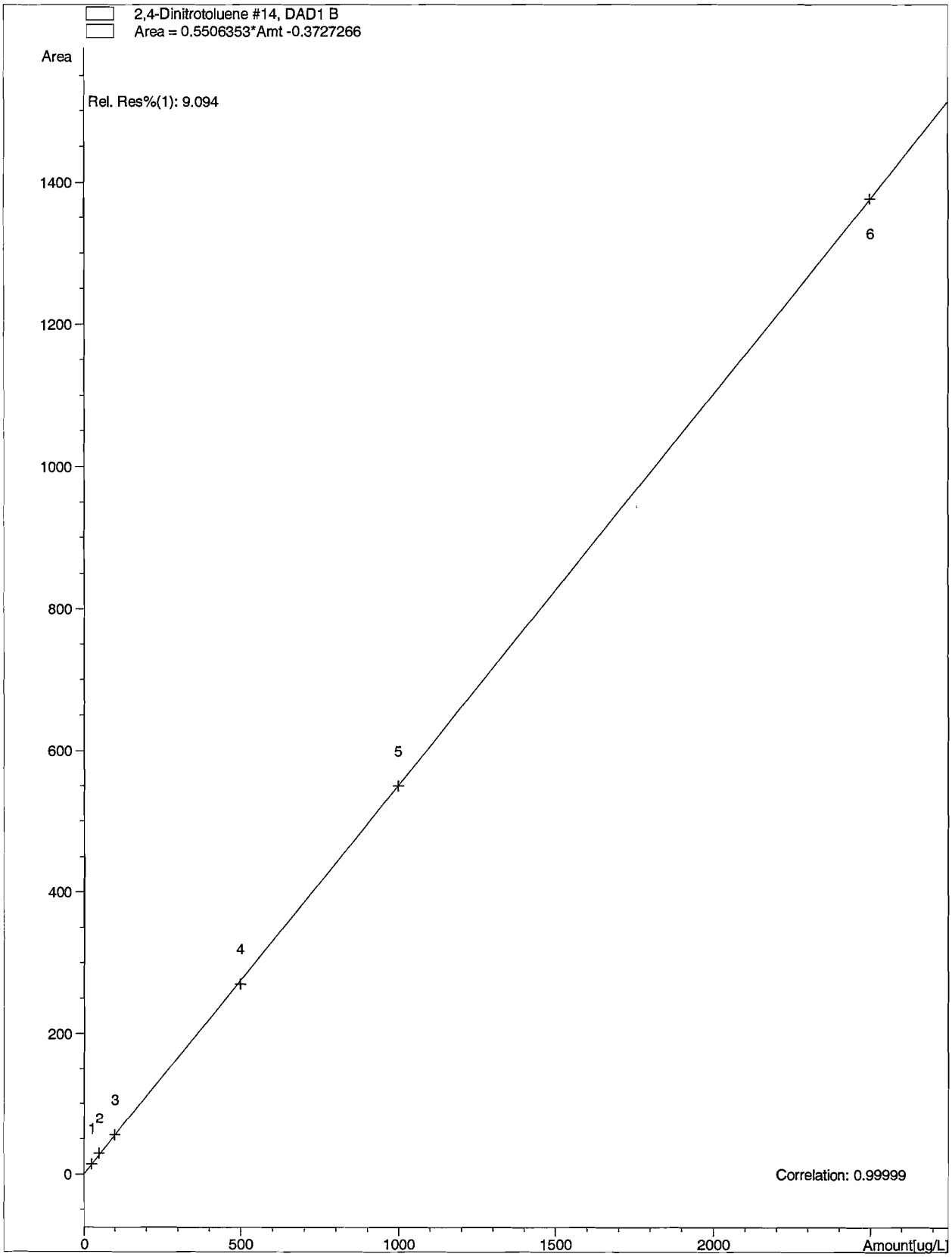


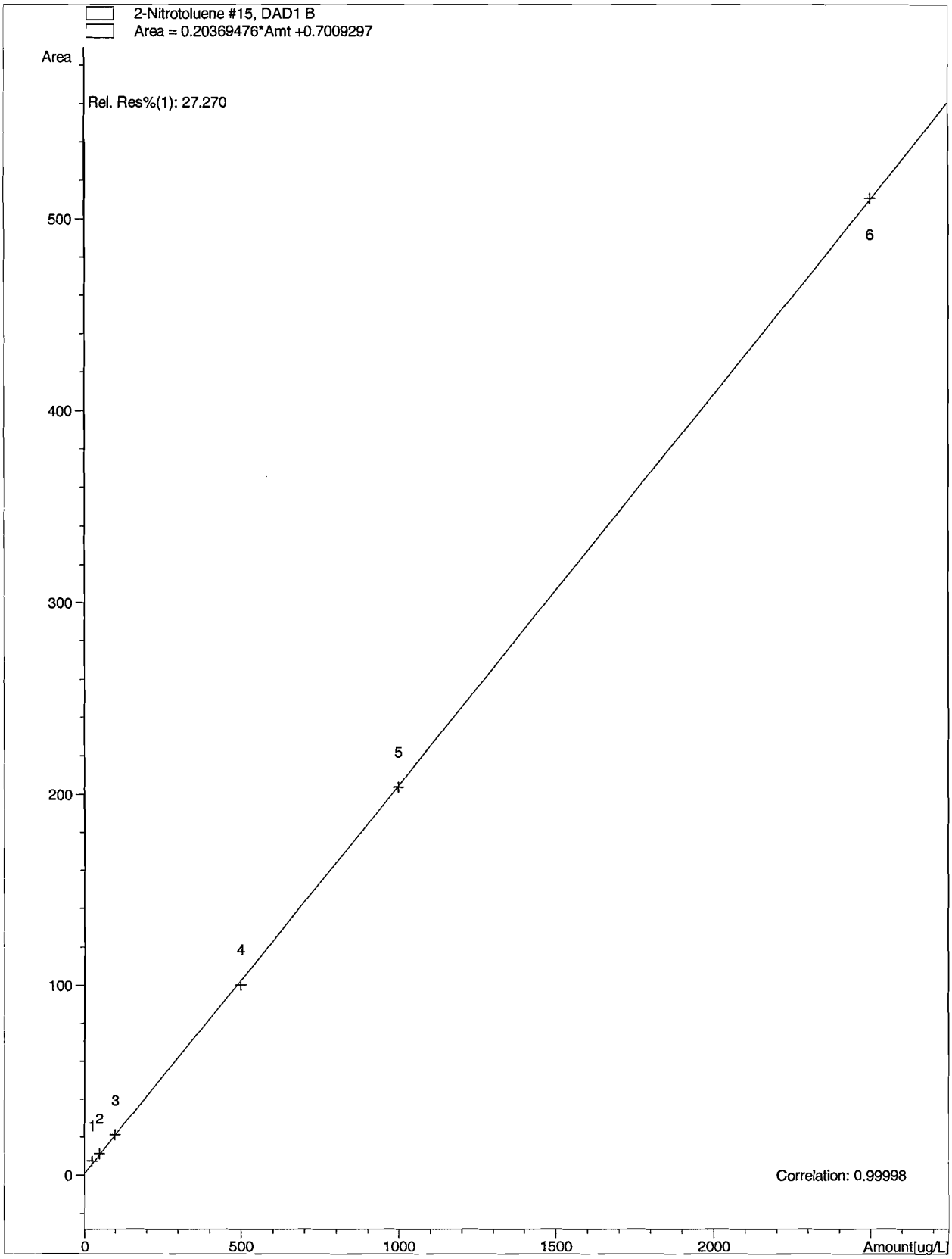
Calibration Curve



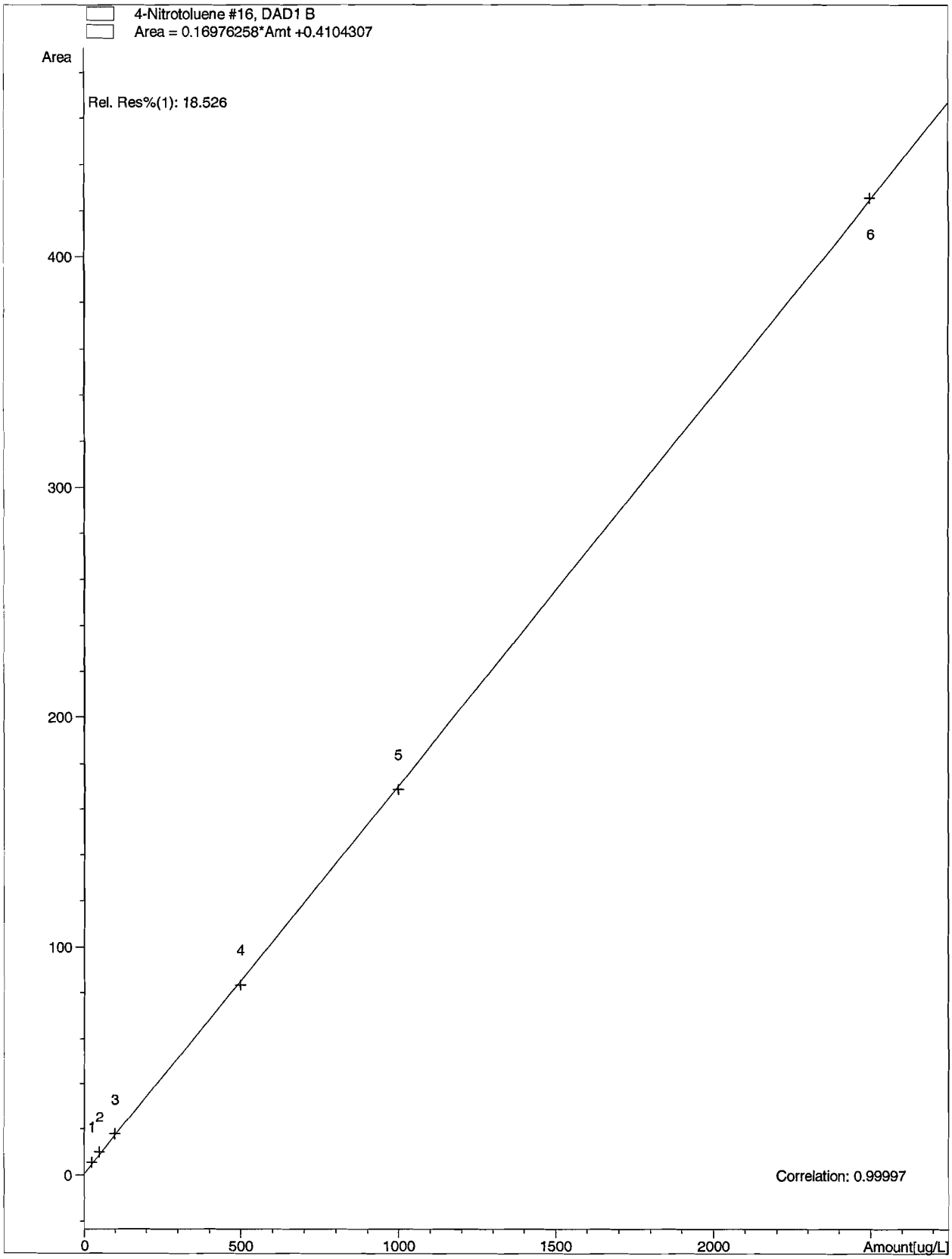
HPLC5 7/10/2014 1:48:32 PM ECL

Page 1 of 1

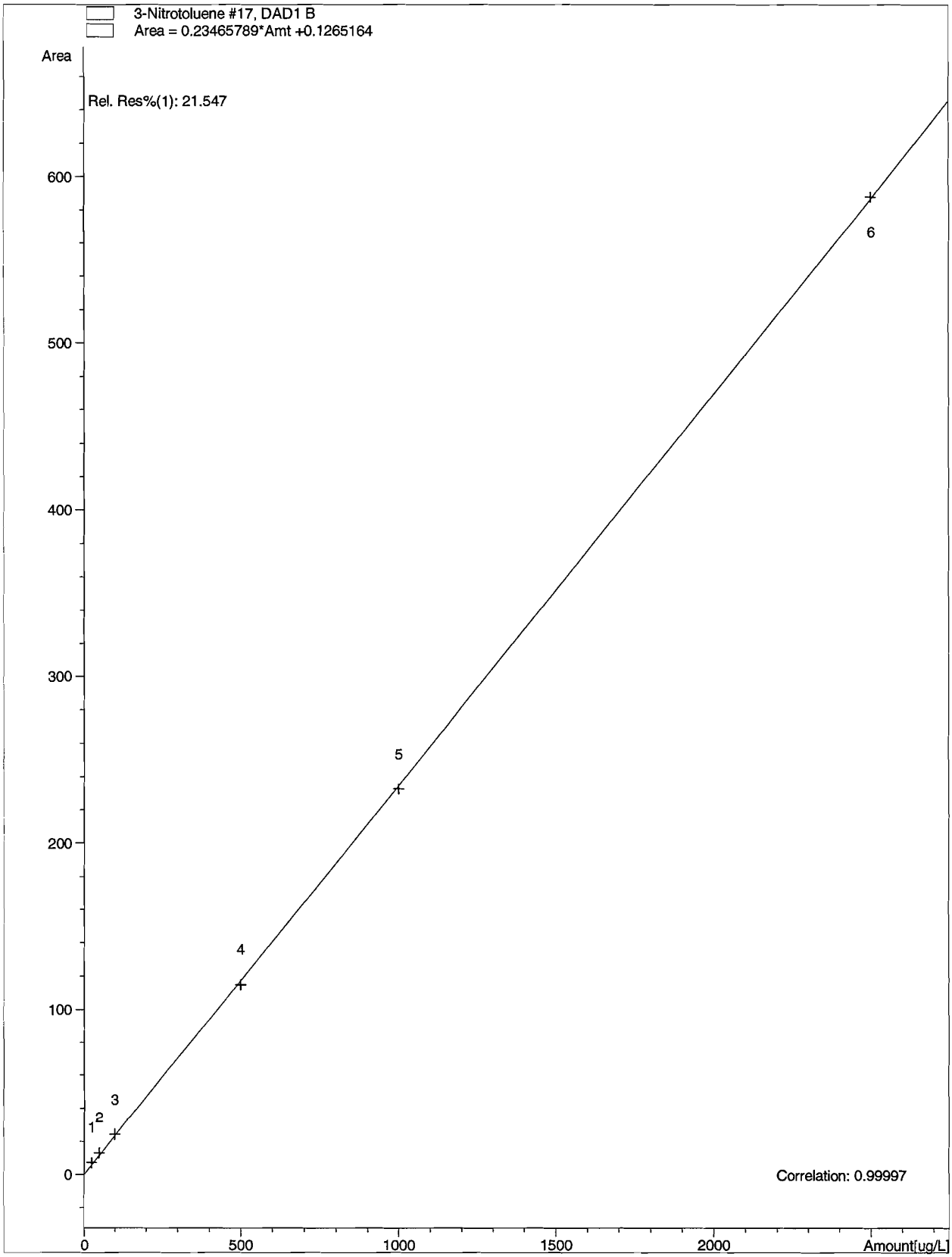
Calibration Curve



Calibration Curve



Calibration Curve



Data File C:\CHEM32\1\DATA\070914\070914\5L012970.D
Sample Name: WG483233-07 8330 ALT 500 PPB

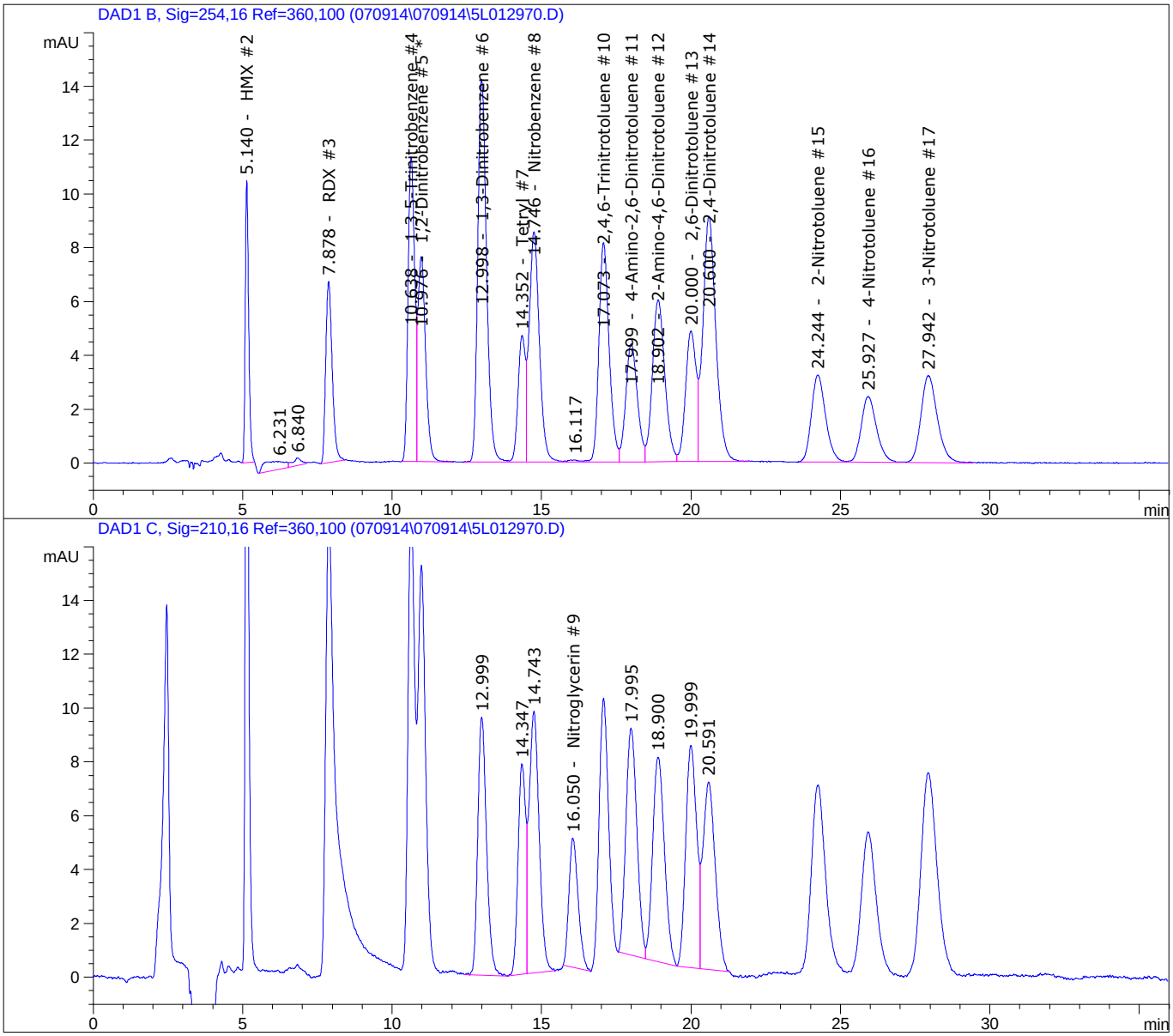
==========

Acq. Operator	: ECL	Seq. Line :	7
Acq. Instrument	: HPLC5	Location :	Vial 8
Injection Date	: 7/9/2014 5:20:54 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/10/2014 1:59:18 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65377

==========



Data File C:\CHEM32\1\DATA\070914\070914\5L012970.D
Sample Name: WG483233-07 8330 ALT 500 PPB

==========

Acq. Operator : ECL Seq. Line : 7
Acq. Instrument : HPLC5 Location : Vial 8
Injection Date : 7/9/2014 5:20:54 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/10/2014 1:59:18 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65377

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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Thursday, July 10, 2014 1:45:54 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.140	BBA	81.42204	5.95076	484.52278		HMX #2
7.878	BBA	101.44180	5.03794	511.05768		RDX #3
10.638	BV	175.82787	2.56179	450.43408		1,3,5-Trinitrobenzene #4
10.976	VB	135.31775	3.64056	492.63288		1,2-Dinitrobenzene #5 *
12.998	BV	287.83264	1.69995	489.30070		1,3-Dinitrobenzene #6
14.352	VV	79.57870	4.44124	353.42802		Tetryl #7
14.746	VV	203.11357	2.40814	489.12629		Nitrobenzene #8
17.073	VV	193.14346	2.58808	499.87016		2,4,6-Trinitrotoluene #10
17.999	VV	119.16287	4.37980	521.90998		4-Amino-2,6-Dinitrotoluene #11
18.902	VV	175.50751	2.85211	500.56658		2-Amino-4,6-Dinitrotoluene #12
20.000	VV	120.07474	4.40376	528.78017		2,6-Dinitrotoluene #13
20.600	VB	276.27838	1.81853	502.42167		2,4-Dinitrotoluene #14
24.244	BV	107.03011	4.87716	522.00252		2-Nitrotoluene #15
25.927	VB	87.69344	5.86301	514.14753		4-Nitrotoluene #16
27.942	BB	123.18578	4.25715	524.41986		3-Nitrotoluene #17

Totals : 7384.62091

Data File C:\CHEM32\1\DATA\070914\070914\5L012970.D
Sample Name: WG483233-07 8330 ALT 500 PPB

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :   7
Acq. Instrument : HPLC5                          Location : Vial 8
Injection Date  : 7/9/2014 5:20:54 PM                 Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed    : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/10/2014 1:59:18 PM by ECL
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65377


==================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 16.050 BV      103.53637    4.84995  502.14609    Nitroglycerin #9

Totals :                               502.14609


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                          *** End of Report ***
```

Data File C:\CHEM32\1\DATA\071514\071514\5L013055.D
Sample Name: WG484130-01 8330 CCV 500 PPB

==========

Acq. Operator	: ECL	Seq. Line :	1
Acq. Instrument	: HPLC5	Location :	Vial 2
Injection Date	: 7/15/2014 9:51:40 AM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/15/2014 11:03:39 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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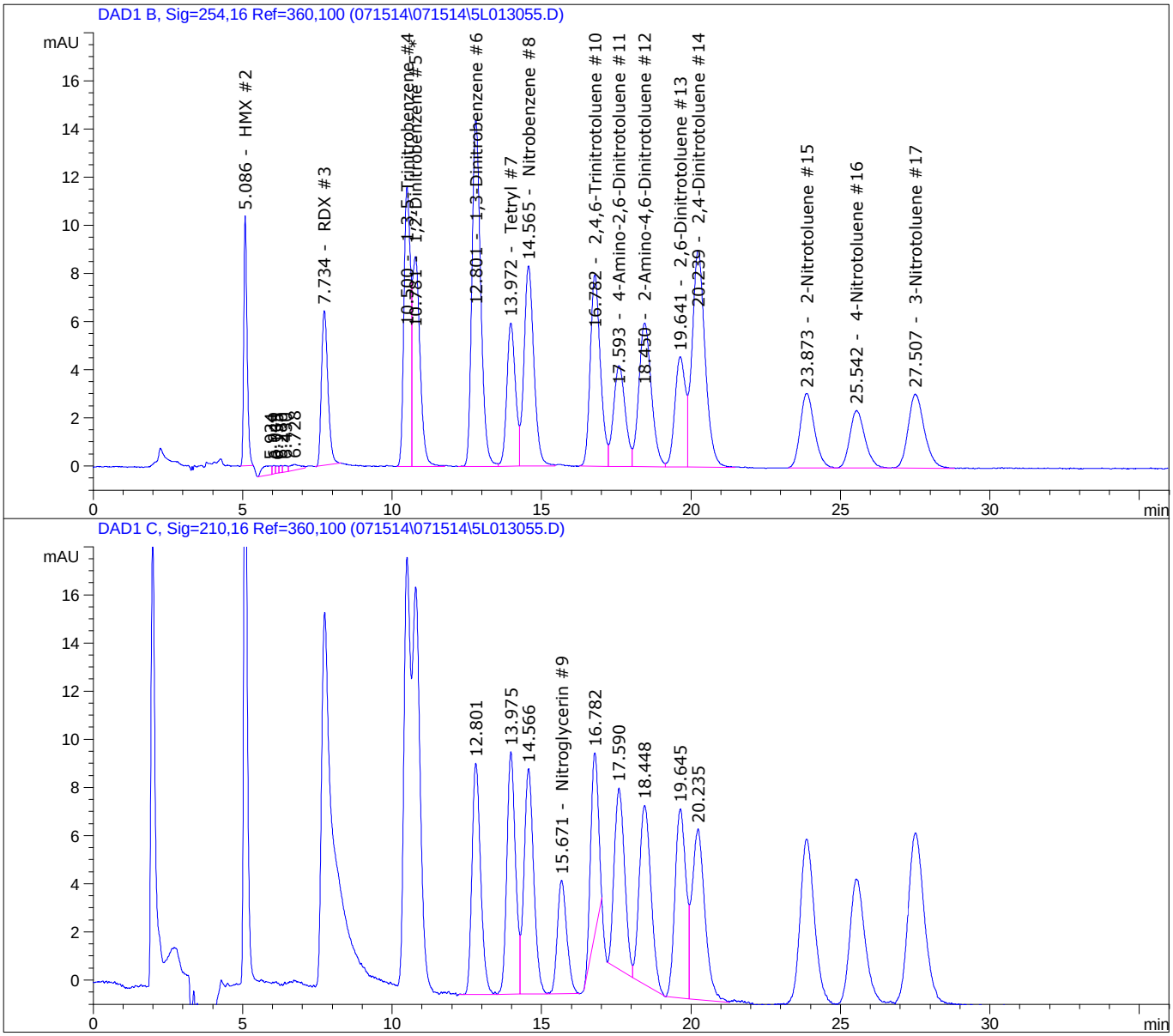

Data File C:\CHEM32\1\DATA\071514\071514\5L013055.D
Sample Name: WG484130-01 8330 CCV 500 PPB

==========

Acq. Operator : ECL Seq. Line : 1
Acq. Instrument : HPLC5 Location : Vial 2
Injection Date : 7/15/2014 9:51:40 AM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/15/2014 11:03:39 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 7/15/2014 11:03:22 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.086	BBA	80.79105	5.95013	480.71715		HMX #2
7.734	BBA	96.17024	5.02918	483.65781		RDX #3
10.500	BV	181.61237	2.56119	465.14440		1,3,5-Trinitrobenzene #4
10.781	VB	151.92268	3.64395	553.59914		1,2-Dinitrobenzene #5 *
12.801	VV	293.23438	1.69987	498.45907		1,3-Dinitrobenzene #6
13.972	VV	120.34174	4.44078	534.41064		Tetryl #7
14.565	VB	191.07359	2.40926	460.34556		Nitrobenzene #8
16.782	BV	187.35155	2.58811	484.88699		2,4,6-Trinitrotoluene #10
17.593	VV	114.42587	4.37952	501.13050		4-Amino-2,6-Dinitrotoluene #11
18.450	VV	174.16806	2.85210	496.74407		2-Amino-4,6-Dinitrotoluene #12
19.641	VV	112.77374	4.40261	496.49872		2,6-Dinitrotoluene #13
20.239	VB	274.01880	1.81855	498.31808		2,4-Dinitrotoluene #14
23.873	BV	102.31928	4.87568	498.87565		2-Nitrotoluene #15
25.542	VB	84.19858	5.86187	493.56075		4-Nitrotoluene #16
27.507	BB	116.33798	4.25689	495.23783		3-Nitrotoluene #17

Totals : 7441.58634

Data File C:\CHEM32\1\DATA\071514\071514\5L013055.D
Sample Name: WG484130-01 8330 CCV 500 PPB

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :   1
Acq. Instrument : HPLC5                          Location : Vial 2
Injection Date  : 7/15/2014 9:51:40 AM                Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed    : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/15/2014 11:03:39 AM by ECL
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65351


==================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 15.671 VV      103.71152    4.84995  502.99571    Nitroglycerin #9

Totals :                               502.99571


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                           *** End of Report ***
```

Data File C:\CHEM32\1\DATA\071514\071514\5L013066.D
Sample Name: WG484130-02 8330 CCV 500 PPB

==========

Acq. Operator	: ECL	Seq. Line	: 12
Acq. Instrument	: HPLC5	Location	: Vial 2
Injection Date	: 7/15/2014 5:39:16 PM	Inj	: 1
		Inj Volume	: 100 µl

Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/16/2014 11:48:03 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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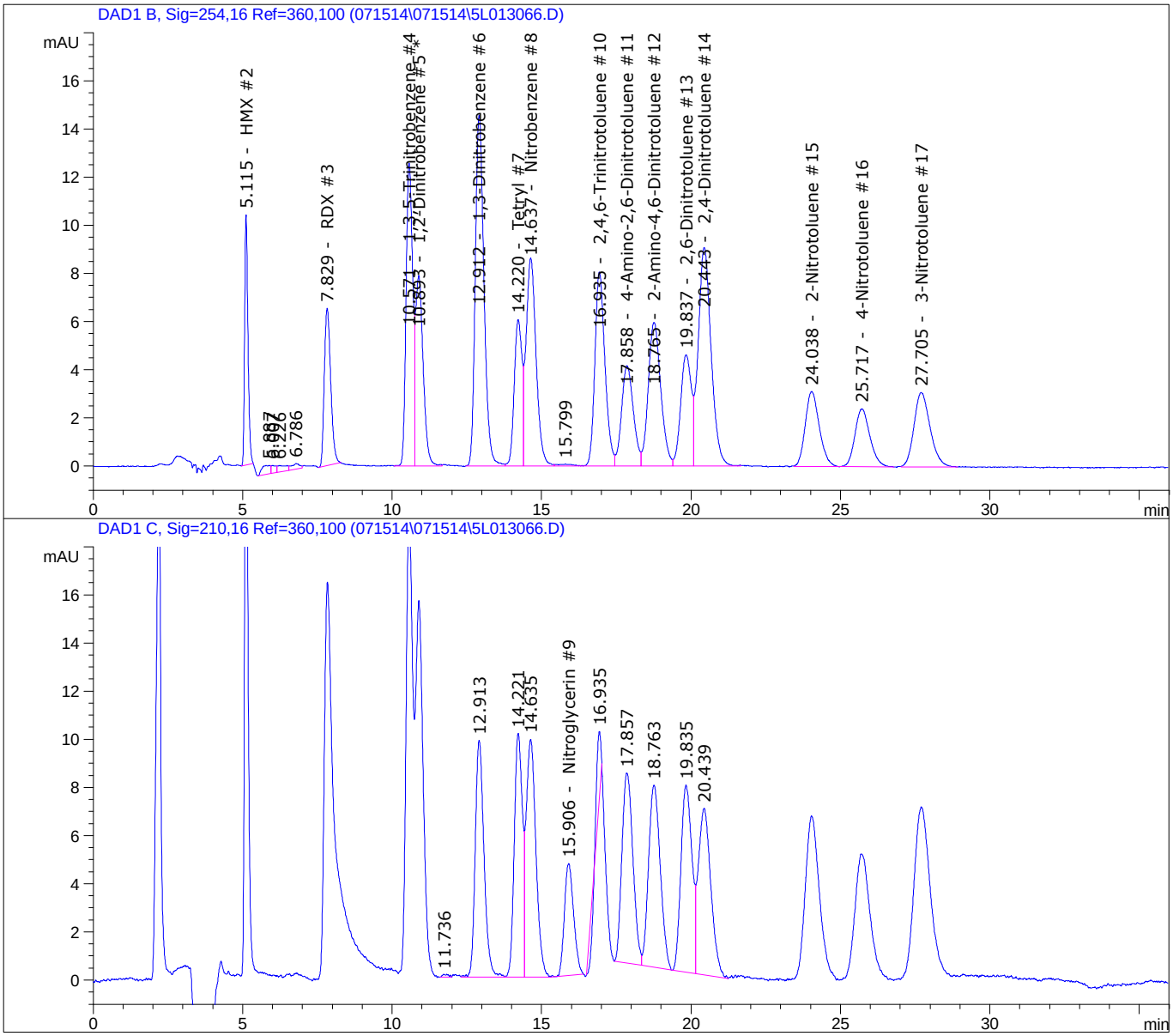

Data File C:\CHEM32\1\DATA\071514\071514\5L013066.D
Sample Name: WG484130-02 8330 CCV 500 PPB

==========

Acq. Operator : ECL Seq. Line : 12
Acq. Instrument : HPLC5 Location : Vial 2
Injection Date : 7/15/2014 5:39:16 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/16/2014 11:48:03 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 7/16/2014 11:47:45 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.115	BBA	80.22762	5.94956	477.31901		HMX #2
7.829	BBA	96.69693	5.03010	486.39536		RDX #3
10.571	VV	196.47856	2.55982	502.94999		1,3,5-Trinitrobenzene #4
10.893	VV	138.00121	3.64117	502.48539		1,2-Dinitrobenzene #5 *
12.912	BV	294.55692	1.69985	500.70137		1,3-Dinitrobenzene #6
14.220	VV	109.31130	4.44087	485.43694		Tetryl #7
14.637	VV	203.36327	2.40812	489.72317		Nitrobenzene #8
16.935	VV	190.09331	2.58810	491.97968		2,4,6-Trinitrotoluene #10
17.858	VV	114.53542	4.37953	501.61103		4-Amino-2,6-Dinitrotoluene #11
18.765	VV	174.86572	2.85210	498.73505		2-Amino-4,6-Dinitrotoluene #12
19.837	VV	114.65386	4.40292	504.81172		2,6-Dinitrotoluene #13
20.443	VB	273.97244	1.81855	498.23389		2,4-Dinitrotoluene #14
24.038	BV	102.07102	4.87559	497.65686		2-Nitrotoluene #15
25.717	VB	83.81696	5.86173	491.31282		4-Nitrotoluene #16
27.705	BB	116.18784	4.25688	494.59801		3-Nitrotoluene #17

Totals : 7423.95029

Data File C:\CHEM32\1\DATA\071514\071514\5L013066.D
Sample Name: WG484130-02 8330 CCV 500 PPB

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :  12
Acq. Instrument : HPLC5                          Location : Vial 2
Injection Date  : 7/15/2014 5:39:16 PM                Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed    : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/16/2014 11:48:03 AM by ECL
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65351


==================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 15.906 VBA      99.36372    4.84992  481.90580    Nitroglycerin #9

Totals :                              481.90580


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                           *** End of Report ***
```

Data File C:\CHEM32\1\DATA\071514\071514\5L013077.D
Sample Name: WG484130-03 8330 CCV 500 PPB

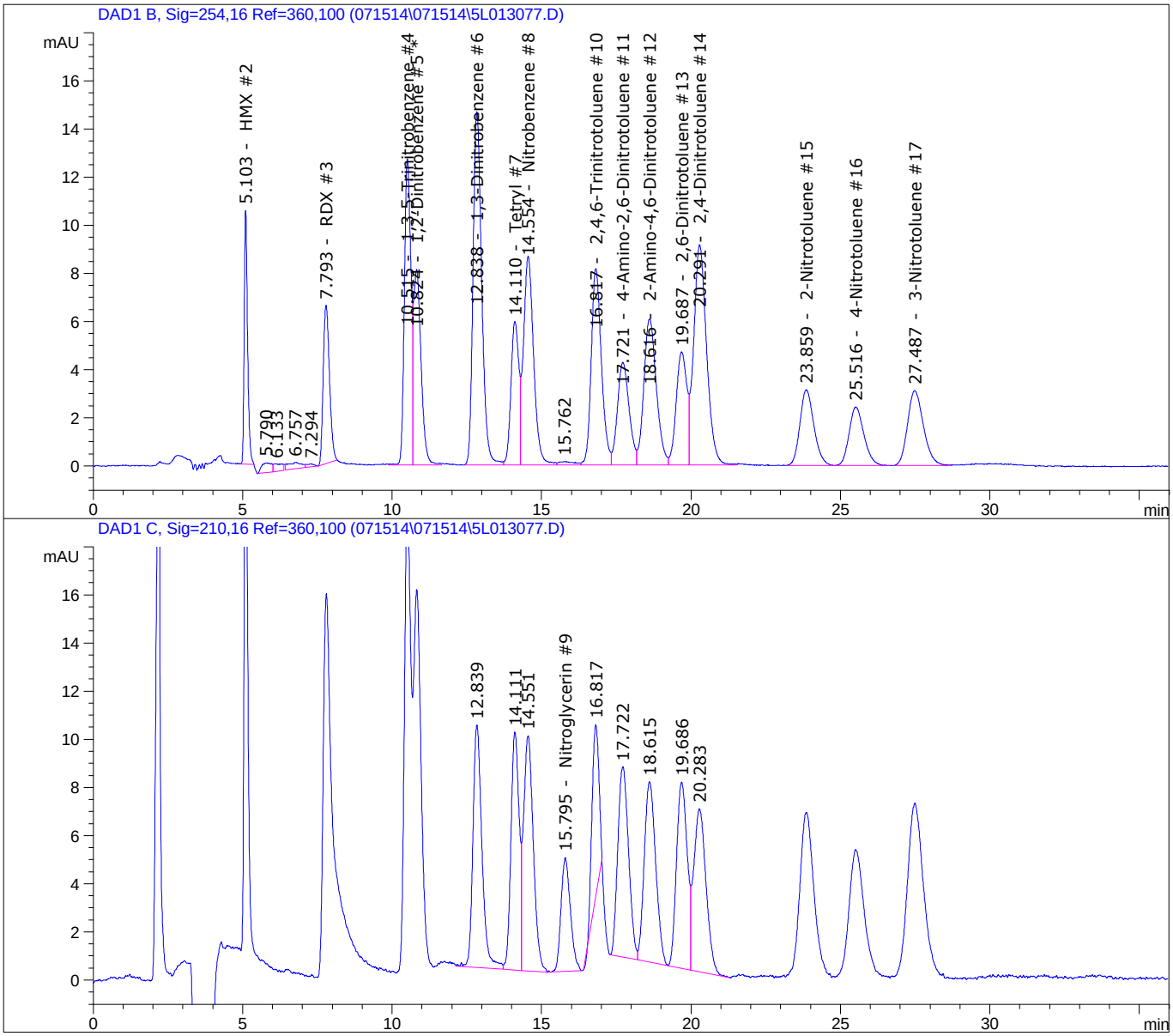
==========

Acq. Operator	: ECL	Seq. Line	: 23
Acq. Instrument	: HPLC5	Location	: Vial 2
Injection Date	: 7/16/2014 12:48:54 AM	Inj	: 1
		Inj Volume	: 100 µl

Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/16/2014 12:18:17 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

==========



HPLC5 7/16/2014 12:18:20 PM ECL

Data File C:\CHEM32\1\DATA\071514\071514\5L013077.D
Sample Name: WG484130-03 8330 CCV 500 PPB

==========

Acq. Operator : ECL Seq. Line : 23
Acq. Instrument : HPLC5 Location : Vial 2
Injection Date : 7/16/2014 12:48:54 AM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/16/2014 12:18:17 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 7/16/2014 12:18:01 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.103	BBA	82.30057	5.95161	489.82129		HMX #2
7.793	BBA	94.93999	5.02700	477.26338		RDX #3
10.515	VV	197.08702	2.55977	504.49734		1,3,5-Trinitrobenzene #4
10.824	VB	140.00073	3.64160	509.82681		1,2-Dinitrobenzene #5 *
12.838	BB	296.61606	1.69982	504.19254		1,3-Dinitrobenzene #6
14.110	BV	109.81809	4.44086	487.68702		Tetryl #7
14.554	VV	204.57274	2.40802	492.61433		Nitrobenzene #8
16.817	BV	192.88742	2.58808	499.20780		2,4,6-Trinitrotoluene #10
17.721	VV	116.56636	4.37965	510.52004		4-Amino-2,6-Dinitrotoluene #11
18.616	VV	177.30592	2.85213	505.69888		2-Amino-4,6-Dinitrotoluene #12
19.687	VV	116.01836	4.40314	510.84488		2,6-Dinitrotoluene #13
20.291	VB	274.69626	1.81855	499.54840		2,4-Dinitrotoluene #14
23.859	BV	101.81216	4.87551	496.38601		2-Nitrotoluene #15
25.516	VB	83.24487	5.86154	487.94287		4-Nitrotoluene #16
27.487	BB	114.46313	4.25681	487.24809		3-Nitrotoluene #17

Totals : 7463.29968

Data File C:\CHEM32\1\DATA\071514\071514\5L013077.D
Sample Name: WG484130-03 8330 CCV 500 PPB

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :  23
Acq. Instrument : HPLC5                          Location : Vial 2
Injection Date  : 7/16/2014 12:48:54 AM               Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed    : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/16/2014 12:18:17 PM by ECL
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65351


==================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 15.795 VV      103.13168    4.84995  500.18304    Nitroglycerin #9

Totals :                               500.18304


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                           *** End of Report ***
```

Data File C:\CHEM32\1\DATA\071614\071614\5L013079.D
Sample Name: WG484423-01 8330 CCV 500 PPB

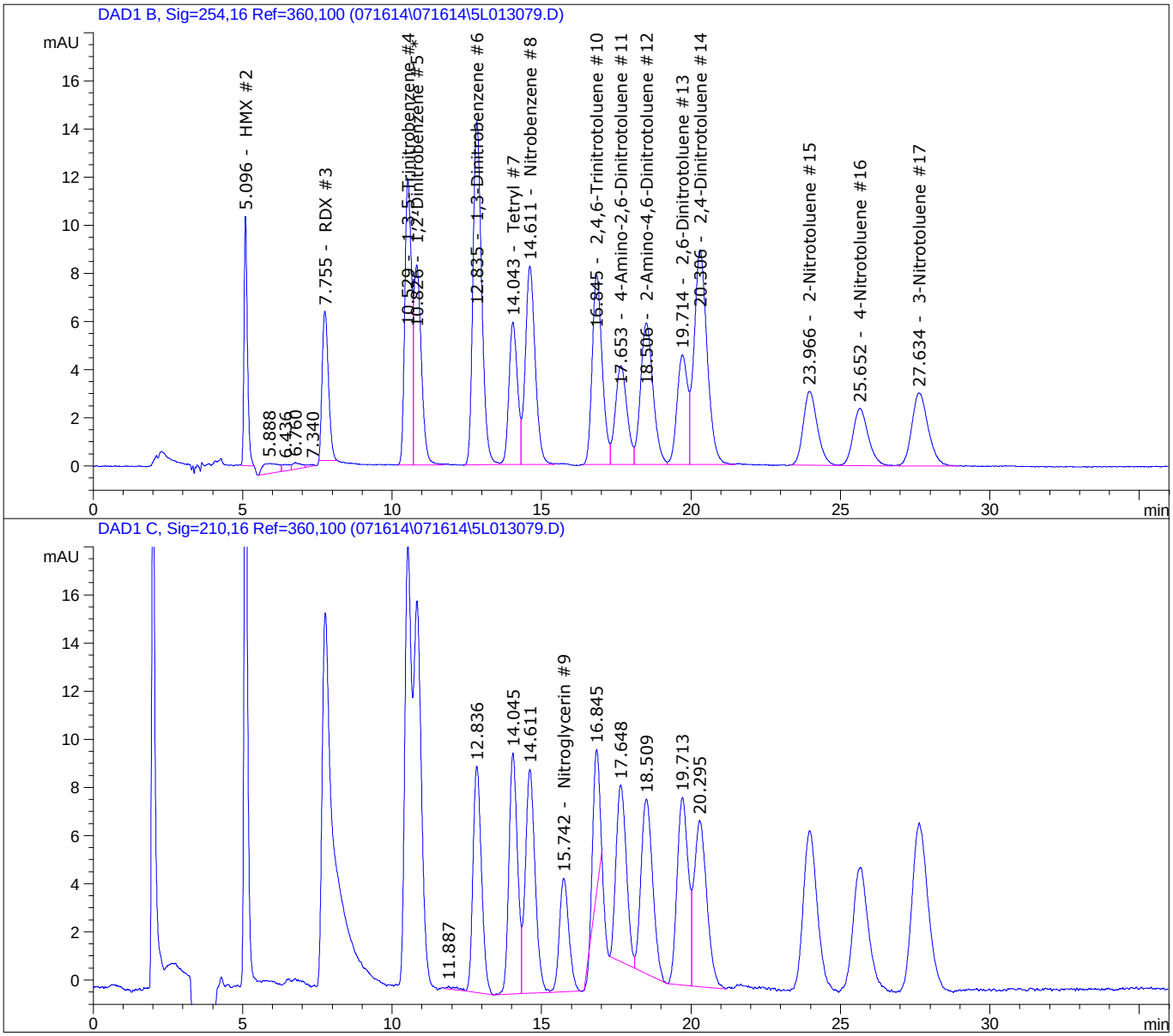
==========

Acq. Operator	: ECL	Seq. Line :	1
Acq. Instrument	: HPLC5	Location :	Vial 2
Injection Date	: 7/16/2014 1:08:44 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\071614\071614\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/16/2014 12:18:17 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

==========



Data File C:\CHEM32\1\DATA\071614\071614\5L013079.D
Sample Name: WG484423-01 8330 CCV 500 PPB

==========

Acq. Operator : ECL Seq. Line : 1
Acq. Instrument : HPLC5 Location : Vial 2
Injection Date : 7/16/2014 1:08:44 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071614\071614\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/16/2014 12:18:17 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 7/16/2014 12:18:01 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.096	BBA	81.20397	5.95054	483.20756		HMX #2
7.755	BBA	90.45601	5.01854	453.95707		RDX #3
10.529	BV	187.98370	2.56058	481.34708		1,3,5-Trinitrobenzene #4
10.826	VB	143.21323	3.64227	521.62172		1,2-Dinitrobenzene #5 *
12.835	BV	289.40741	1.69992	491.97064		1,3-Dinitrobenzene #6
14.043	VV	118.27640	4.44079	525.24080		Tetryl #7
14.611	VB	189.11279	2.40945	455.65841		Nitrobenzene #8
16.845	BV	184.46106	2.58813	477.40955		2,4,6-Trinitrotoluene #10
17.653	VV	112.73207	4.37941	493.70042		4-Amino-2,6-Dinitrotoluene #11
18.506	VV	172.39206	2.85208	491.67573		2-Amino-4,6-Dinitrotoluene #12
19.714	VV	111.06363	4.40232	488.93747		2,6-Dinitrotoluene #13
20.306	VB	272.18851	1.81857	494.99411		2,4-Dinitrotoluene #14
23.966	BV	101.58867	4.87543	495.28884		2-Nitrotoluene #15
25.652	VB	84.14170	5.86185	493.22571		4-Nitrotoluene #16
27.634	BB	115.11205	4.25684	490.01350		3-Nitrotoluene #17

Totals : 7338.24861

Data File C:\CHEM32\1\DATA\071614\071614\5L013079.D
Sample Name: WG484423-01 8330 CCV 500 PPB

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==================================================================
Acq. Operator   : ECL                           Seq. Line :   1
Acq. Instrument : HPLC5                          Location : Vial 2
Injection Date  : 7/16/2014 1:08:44 PM                Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\071614\071614\8330PLUS.M
Last changed    : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/16/2014 12:18:17 PM by ECL
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65351


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Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 15.742 VV      104.10603    4.84995  504.90932    Nitroglycerin #9

Totals :                               504.90932


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                          *** End of Report ***
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Data File C:\CHEM32\1\DATA\071614\071614\5L013089.D
Sample Name: WG484423-02 8330 CCV 500 PPB

==========

Acq. Operator	: ECL	Seq. Line	: 11
Acq. Instrument	: HPLC5	Location	: Vial 2
Injection Date	: 7/16/2014 7:39:14 PM	Inj	: 1
		Inj Volume	: 100 µl

Acq. Method : C:\Chem32\1\DATA\071614\071614\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/17/2014 12:08:02 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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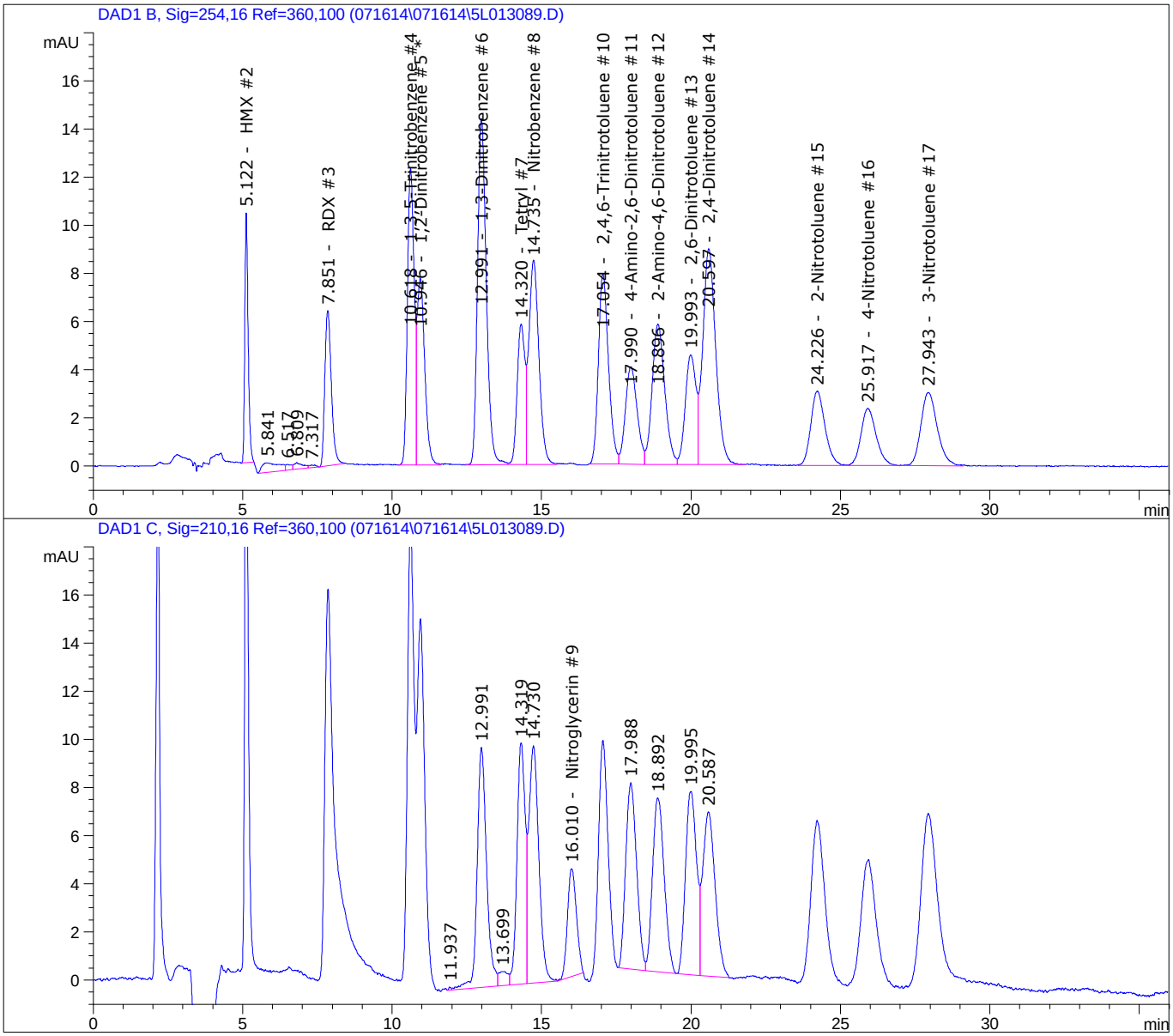

Data File C:\CHEM32\1\DATA\071614\071614\5L013089.D
Sample Name: WG484423-02 8330 CCV 500 PPB

==========

Acq. Operator : ECL Seq. Line : 11
Acq. Instrument : HPLC5 Location : Vial 2
Injection Date : 7/16/2014 7:39:14 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071614\071614\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/17/2014 12:08:02 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 7/17/2014 12:07:42 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.122	BBA	81.08292	5.95042	482.47746		HMX #2
7.851	BBA	97.80183	5.03199	492.13826		RDX #3
10.618	VV	194.79105	2.55997	498.65854		1,3,5-Trinitrobenzene #4
10.946	VV	136.68178	3.64087	497.64102		1,2-Dinitrobenzene #5 *
12.991	BV	294.26151	1.69985	500.20051		1,3-Dinitrobenzene #6
14.320	VV	104.42396	4.44091	463.73776		Tetryl #7
14.735	VV	199.75462	2.40844	481.09696		Nitrobenzene #8
17.054	BV	186.81215	2.58812	483.49161		2,4,6-Trinitrotoluene #10
17.990	VV	111.56063	4.37934	488.56174		4-Amino-2,6-Dinitrotoluene #11
18.896	VV	172.38951	2.85208	491.66846		2-Amino-4,6-Dinitrotoluene #12
19.993	VV	112.49751	4.40256	495.27740		2,6-Dinitrotoluene #13
20.597	VB	271.63977	1.81858	493.99756		2,4-Dinitrotoluene #14
24.226	BV	101.98489	4.87557	497.23403		2-Nitrotoluene #15
25.917	VV	84.52222	5.86198	495.46717		4-Nitrotoluene #16
27.943	VB	116.42082	4.25689	495.59085		3-Nitrotoluene #17

Totals : 7357.23934

Data File C:\CHEM32\1\DATA\071614\071614\5L013089.D
Sample Name: WG484423-02 8330 CCV 500 PPB

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==================================================================
Acq. Operator   : ECL                           Seq. Line :  11
Acq. Instrument : HPLC5                          Location : Vial 2
Injection Date  : 7/16/2014 7:39:14 PM                Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\071614\071614\8330PLUS.M
Last changed    : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/17/2014 12:08:02 PM by ECL
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65351


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Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 16.010 VBA      92.57795    4.84986  448.99008    Nitroglycerin #9

Totals :                               448.99008


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                           *** End of Report ***
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Data File C:\CHEM32\1\DATA\071714\071714\5L013099.D
Sample Name: WG484423-03 8330 CCV 500 PPB

==========

Acq. Operator	: ECL	Seq. Line :	1
Acq. Instrument	: HPLC5	Location :	Vial 2
Injection Date	: 7/17/2014 1:29:02 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\071714\071714\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/17/2014 2:35:53 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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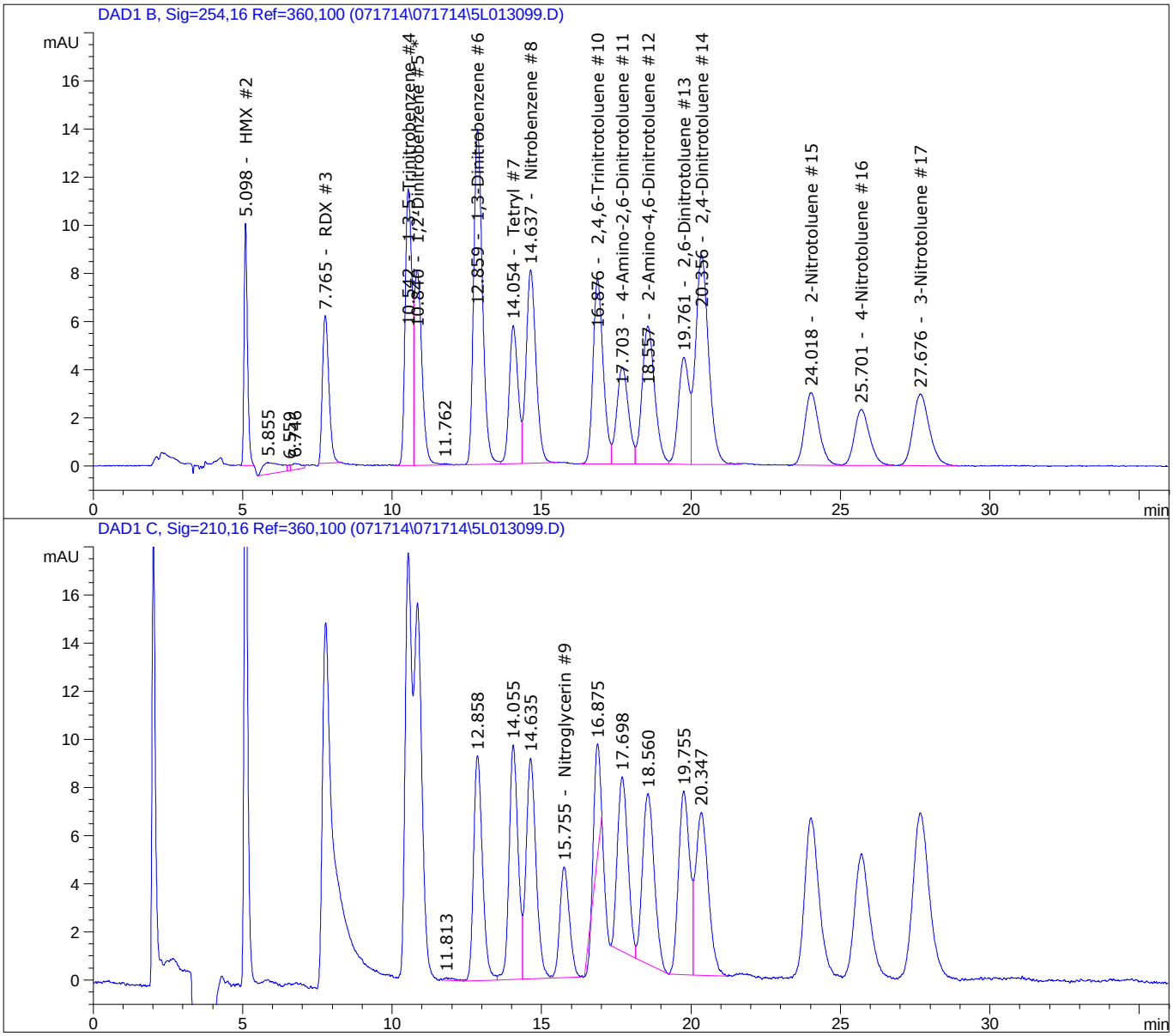

Data File C:\CHEM32\1\DATA\071714\071714\5L013099.D
Sample Name: WG484423-03 8330 CCV 500 PPB

==========

Acq. Operator : ECL Seq. Line : 1
Acq. Instrument : HPLC5 Location : Vial 2
Injection Date : 7/17/2014 1:29:02 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071714\071714\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/17/2014 2:35:53 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 7/17/2014 2:35:30 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.098	BBA	79.23472	5.94854	471.33071		HMX #2
7.765	BBA	91.22517	5.02005	457.95494		RDX #3
10.542	VV	182.47102	2.56111	467.32801		1,3,5-Trinitrobenzene #4
10.840	VB	142.63707	3.64215	519.50632		1,2-Dinitrobenzene #5 *
12.859	VV	284.77609	1.70000	484.11848		1,3-Dinitrobenzene #6
14.054	VV	116.15588	4.44081	515.82599		Tetryl #7
14.637	VV	184.19974	2.40996	443.91409		Nitrobenzene #8
16.876	BV	182.23593	2.58815	471.65334		2,4,6-Trinitrotoluene #10
17.703	VV	110.73115	4.37928	484.92310		4-Amino-2,6-Dinitrotoluene #11
18.557	VV	169.68619	2.85205	483.95374		2-Amino-4,6-Dinitrotoluene #12
19.761	VV	108.88957	4.40194	479.32486		2,6-Dinitrotoluene #13
20.356	VB	266.43161	1.81862	484.53910		2,4-Dinitrotoluene #14
24.018	BV	99.67791	4.87478	485.90834		2-Nitrotoluene #15
25.701	VB	81.70161	5.86099	478.85214		4-Nitrotoluene #16
27.676	BB	112.84483	4.25675	480.35166		3-Nitrotoluene #17

Totals : 7209.48482

Data File C:\CHEM32\1\DATA\071714\071714\5L013099.D
Sample Name: WG484423-03 8330 CCV 500 PPB

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :   1
Acq. Instrument : HPLC5                          Location : Vial 2
Injection Date  : 7/17/2014 1:29:02 PM                Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\071714\071714\8330PLUS.M
Last changed    : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/17/2014 2:35:53 PM by ECL
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65351


==================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 15.755 VBA     101.86444    4.84994  494.03606    Nitroglycerin #9

Totals :                               494.03606


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                          *** End of Report ***
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Data File C:\CHEM32\1\DATA\071714\071714\5L013101.D
Sample Name: WG484423-04 8330 CCV 500 PPB

==========

Acq. Operator	: ECL	Seq. Line :	3
Acq. Instrument	: HPLC5	Location :	Vial 2
Injection Date	: 7/17/2014 2:47:12 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\071714\071714\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/17/2014 2:35:53 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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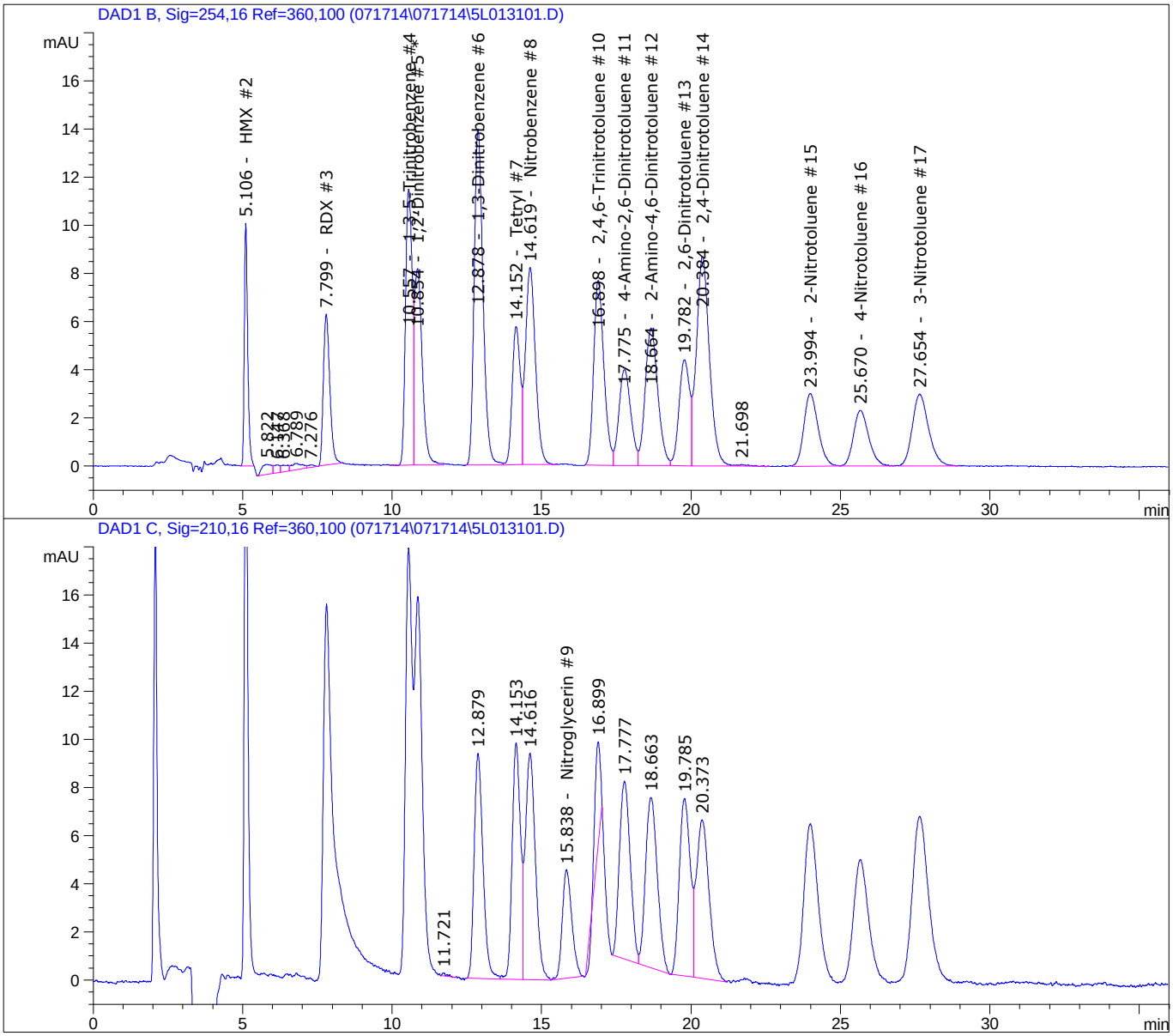

Data File C:\CHEM32\1\DATA\071714\071714\5L013101.D
Sample Name: WG484423-04 8330 CCV 500 PPB

==========

Acq. Operator : ECL Seq. Line : 3
Acq. Instrument : HPLC5 Location : Vial 2
Injection Date : 7/17/2014 2:47:12 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071714\071714\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/17/2014 2:35:53 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

==========

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 7/17/2014 2:35:30 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.106	BBA	79.38032	5.94869	472.20884		HMX #2
7.799	BBA	94.28188	5.02581	473.84269		RDX #3
10.557	VV	181.59663	2.56119	465.10439		1,3,5-Trinitrobenzene #4
10.854	VB	144.79199	3.64259	527.41827		1,2-Dinitrobenzene #5 *
12.878	BV	284.04999	1.70001	482.88740		1,3-Dinitrobenzene #6
14.152	VV	108.26648	4.44088	480.79806		Tetryl #7
14.619	VB	190.81409	2.40928	459.72523		Nitrobenzene #8
16.898	BV	182.14426	2.58815	471.41618		2,4,6-Trinitrotoluene #10
17.775	VV	110.22829	4.37925	482.71727		4-Amino-2,6-Dinitrotoluene #11
18.664	VV	168.36441	2.85204	480.18166		2-Amino-4,6-Dinitrotoluene #12
19.782	VV	108.99103	4.40195	479.77345		2,6-Dinitrotoluene #13
20.384	VB	266.03510	1.81863	483.81900		2,4-Dinitrotoluene #14
23.994	BV	100.33652	4.87501	489.14168		2-Nitrotoluene #15
25.670	VB	82.61767	5.86132	484.24827		4-Nitrotoluene #16
27.654	BB	114.11965	4.25680	485.78436		3-Nitrotoluene #17

Totals : 7219.06676

Data File C:\CHEM32\1\DATA\071714\071714\5L013101.D
Sample Name: WG484423-04 8330 CCV 500 PPB

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :   3
Acq. Instrument : HPLC5                          Location : Vial 2
Injection Date  : 7/17/2014 2:47:12 PM                Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\071714\071714\8330PLUS.M
Last changed    : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/17/2014 2:35:53 PM by ECL
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65351


==================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 15.838 VBA     100.03073    4.84992  485.14129    Nitroglycerin #9

Totals :                               485.14129


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                          *** End of Report ***
```

RETENTION TIME WINDOWS

Lab Name: Microbac Laboratories, Inc.

Instrument ID: HPLC5

Column: Ultracarb 5 ODS

	STANDARD #1	STANDARD #2	STANDARD #3
Date Run	12/13/11	12/14/11	12/15/11
File #	5L005951	5L005994	5L006024

COMPOUND	STD #1 RT	STD #2 RT	STD #3 RT	RT WIN
HMX	5.719	5.716	5.719	0.005
RDX	8.757	8.748	8.752	0.014
1,3,5-Trinitrobenzene	11.812	11.800	11.809	0.019
1,2-Dinitrobenzene (Surr.)	12.113	12.093	12.099	0.031
1,3-Dinitrobenzene	14.419	14.394	14.412	0.039
Tetryl	15.864	15.829	15.856	0.055
Nitrobenzene	16.264	16.233	16.258	0.049
Nitroglycerin	17.745	17.709	17.731	0.054
2,4,6-Trinitrotoluene	18.831	18.795	18.827	0.059
4-Amino-2,6-Dinitrotoluene	19.804	19.762	19.798	0.068
2-Amino-4,6-Dinitrotoluene	20.906	20.858	20.893	0.074
2,6-Dinitrotoluene	21.945	21.898	21.940	0.077
2,4-Dinitrotoluene	22.706	22.651	22.693	0.086
2-Nitrotoluene	26.468	26.403	26.465	0.110
4-Nitrotoluene	28.336	28.254	28.330	0.137
3-Nitrotoluene	30.532	30.451	30.533	0.141

2.1.1.5 Raw QC Data

Data File C:\CHEM32\1\DATA\071514\071514\5L013056.D
Sample Name: WG483912-01 BLANK

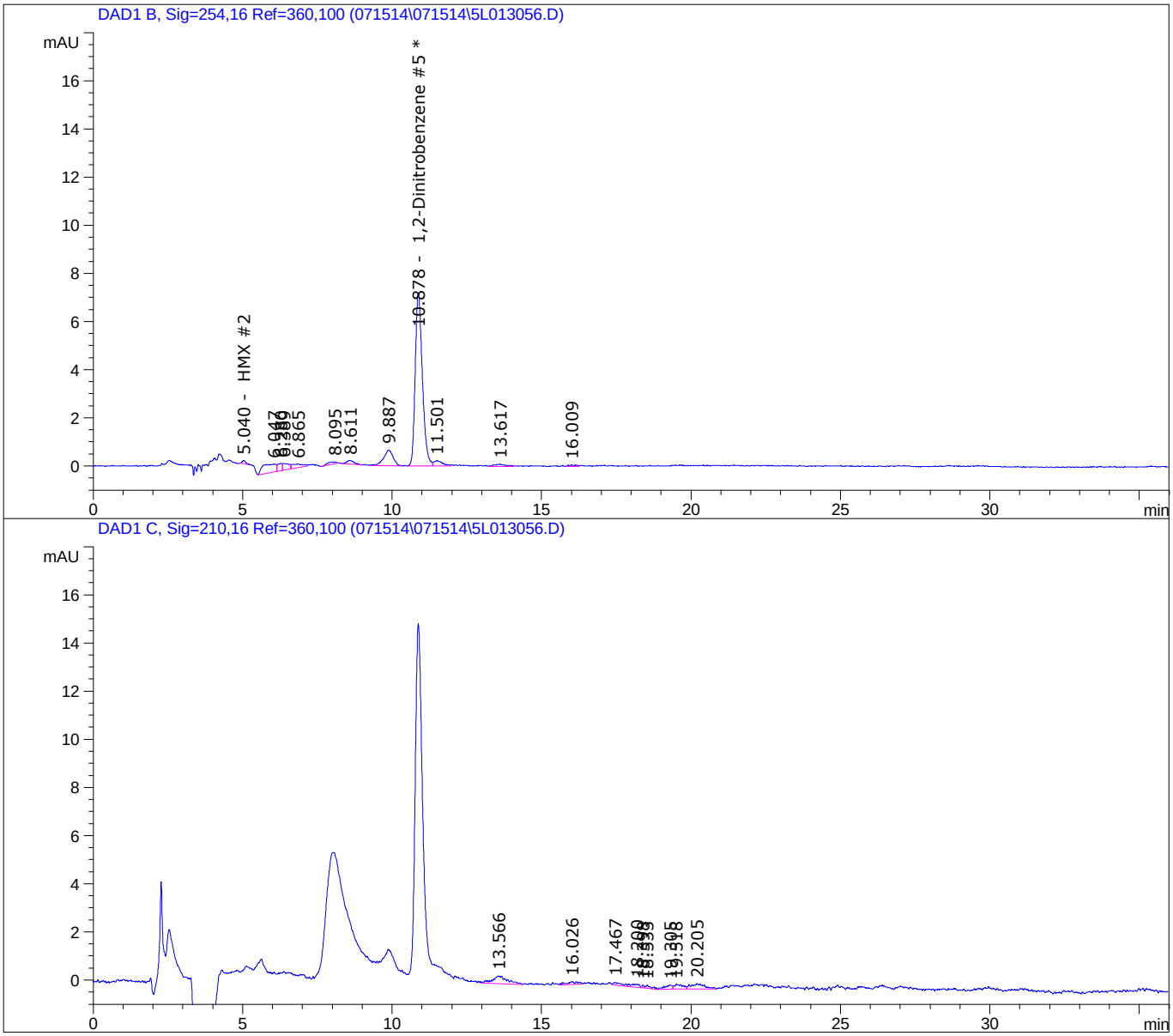
==========

Acq. Operator	: ECL	Seq. Line :	2
Acq. Instrument	: HPLC5	Location :	Vial 3
Injection Date	: 7/15/2014 11:08:34 AM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/15/2014 11:03:39 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========



Data File C:\CHEM32\1\DATA\071514\071514\5L013056.D
Sample Name: WG483912-01 BLANK

==========

Acq. Operator : ECL Seq. Line : 2
Acq. Instrument : HPLC5 Location : Vial 3
Injection Date : 7/15/2014 11:08:34 AM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/15/2014 11:03:39 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========

==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 7/15/2014 11:03:22 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.040	BBA	1.01064	0.00000	0.00000		HMX #2
7.734		-	-	-		RDX #3
10.515		-	-	-		1,3,5-Trinitrobenzene #4
10.878	VV	120.09334	3.63663	436.73533		1,2-Dinitrobenzene #5 *
12.869		-	-	-		1,3-Dinitrobenzene #6
13.972		-	-	-		Tetryl #7
14.565		-	-	-		Nitrobenzene #8
16.817		-	-	-		2,4,6-Trinitrotoluene #10
17.593		-	-	-		4-Amino-2,6-Dinitrotoluene #11
18.450		-	-	-		2-Amino-4,6-Dinitrotoluene #12
19.681		-	-	-		2,6-Dinitrotoluene #13
20.283		-	-	-		2,4-Dinitrotoluene #14
23.910		-	-	-		2-Nitrotoluene #15
25.585		-	-	-		4-Nitrotoluene #16
27.507		-	-	-		3-Nitrotoluene #17

Totals : 436.73533

Data File C:\CHEM32\1\DATA\071514\071514\5L013056.D
Sample Name: WG483912-01 BLANK

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :   2
Acq. Instrument : HPLC5                          Location : Vial 3
Injection Date  : 7/15/2014 11:08:34 AM               Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed    : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/15/2014 11:03:39 AM by ECL
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  WATER


==================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 15.671            -          -          -         Nitroglycerin #9

Totals :                                 0.00000


3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Negative results set to zero (cal. curve intercept), (HMX #2)

==================================================================
                          *** End of Report ***
```

Data File C:\CHEM32\1\DATA\071614\071614\5L013080.D
Sample Name: WG484160-01 BLANK

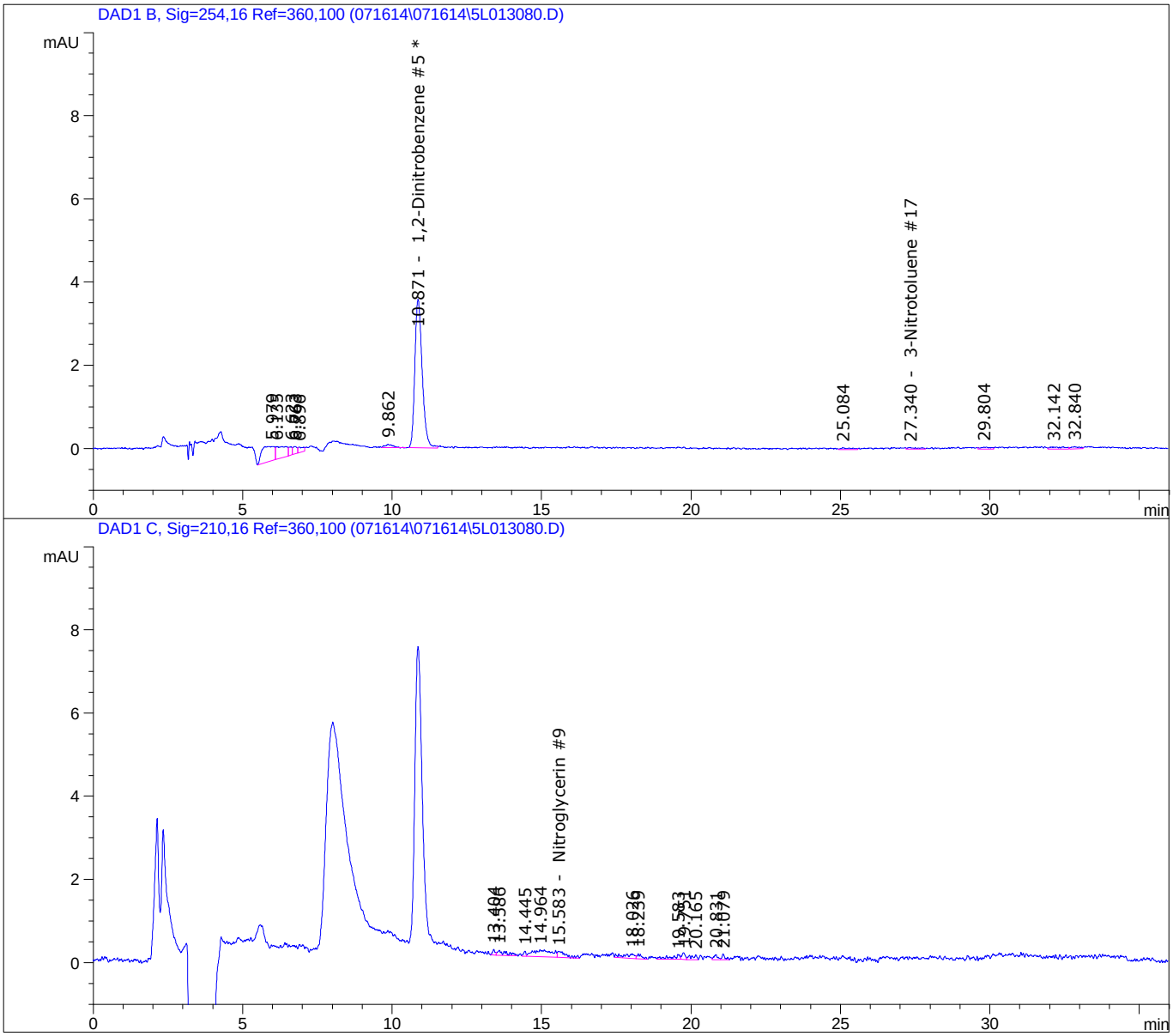
==========

Acq. Operator	: ECL	Seq. Line :	2
Acq. Instrument	: HPLC5	Location :	Vial 3
Injection Date	: 7/16/2014 1:47:46 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\071614\071614\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/17/2014 11:44:32 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 7,1 SOIL

==========



Data File C:\CHEM32\1\DATA\071614\071614\5L013080.D
Sample Name: WG484160-01 BLANK

==========

Acq. Operator : ECL Seq. Line : 2
Acq. Instrument : HPLC5 Location : Vial 3
Injection Date : 7/16/2014 1:47:46 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071614\071614\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/17/2014 11:44:32 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 7,1 SOIL

==========

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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 7/16/2014 12:18:01 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.091		-	-	-		HMX #2
7.793		-	-	-		RDX #3
10.615		-	-	-		1,3,5-Trinitrobenzene #4
10.871	BB	61.20401	3.60301	220.51877		1,2-Dinitrobenzene #5 *
12.869		-	-	-		1,3-Dinitrobenzene #6
14.120		-	-	-		Tetryl #7
14.665		-	-	-		Nitrobenzene #8
16.817		-	-	-		2,4,6-Trinitrotoluene #10
17.758		-	-	-		4-Amino-2,6-Dinitrotoluene #11
18.650		-	-	-		2-Amino-4,6-Dinitrotoluene #12
19.681		-	-	-		2,6-Dinitrotoluene #13
20.283		-	-	-		2,4-Dinitrotoluene #14
23.859		-	-	-		2-Nitrotoluene #15
25.516		-	-	-		4-Nitrotoluene #16
27.340	BB	1.10637	3.77421	4.17569		3-Nitrotoluene #17

Totals : 224.69446

Data File C:\CHEM32\1\DATA\071614\071614\5L013080.D
Sample Name: WG484160-01 BLANK

==========

Acq. Operator : ECL Seq. Line : 2
Acq. Instrument : HPLC5 Location : Vial 3
Injection Date : 7/16/2014 1:47:46 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071614\071614\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/17/2014 11:44:32 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 7,1 SOIL

==========

Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
15.583	VV	3.00013	4.82477	14.47493		Nitroglycerin #9

Totals : 14.47493

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File C:\CHEM32\1\DATA\071514\071514\5L013057.D
Sample Name: WG483912-02 LCS

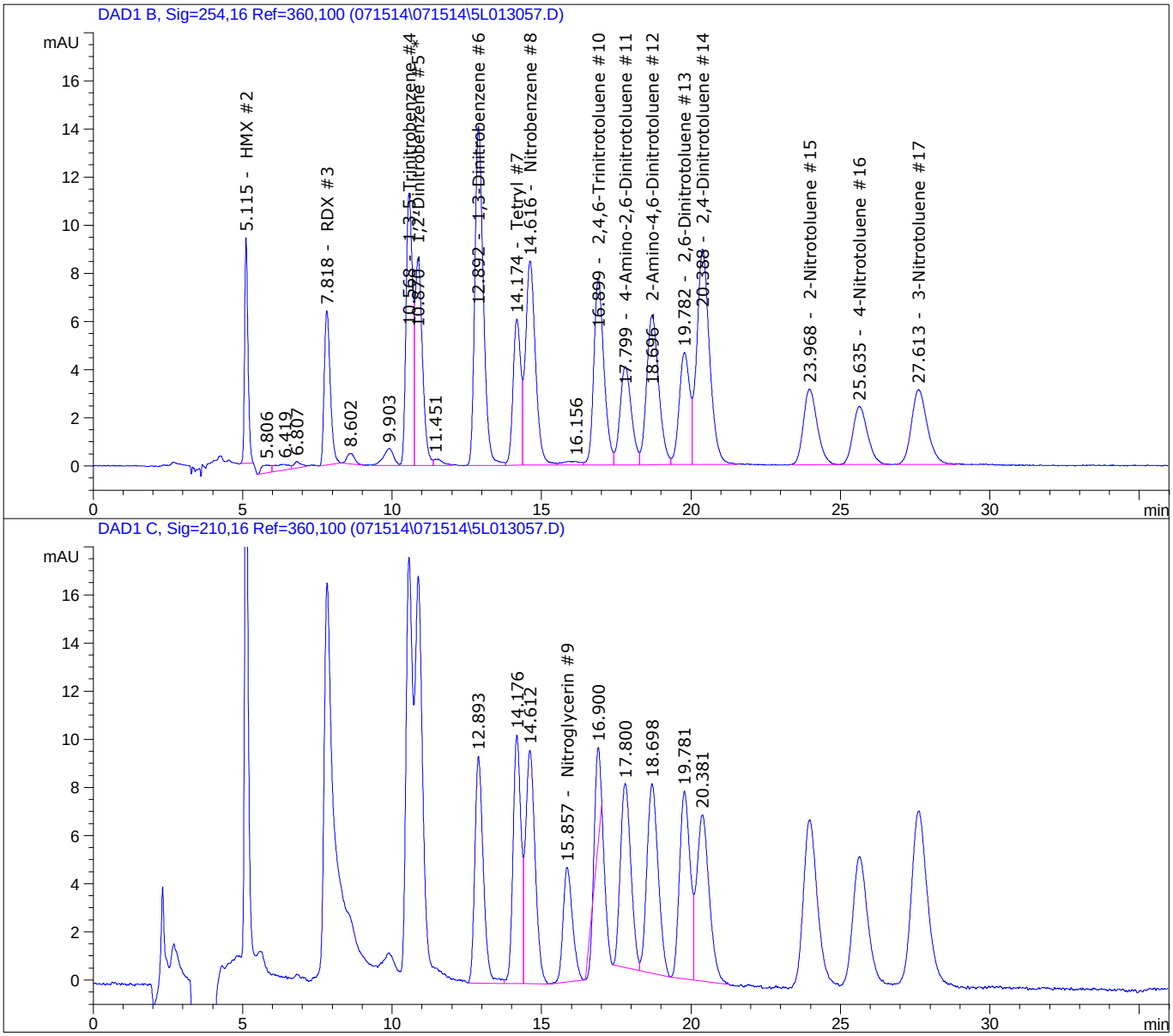
==========

Acq. Operator	: ECL	Seq. Line :	3
Acq. Instrument	: HPLC5	Location :	Vial 4
Injection Date	: 7/15/2014 11:47:38 AM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/15/2014 11:03:39 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========



Data File C:\CHEM32\1\DATA\071514\071514\5L013057.D
Sample Name: WG483912-02 LCS

==========

Acq. Operator : ECL Seq. Line : 3
Acq. Instrument : HPLC5 Location : Vial 4
Injection Date : 7/15/2014 11:47:38 AM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/15/2014 11:03:39 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========

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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 7/15/2014 11:03:22 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.115	BBA	71.99784	5.94023	427.68405		HMX #2
7.818	BBA	90.70988	5.01904	455.27659		RDX #3
10.568	VV	171.48402	2.56226	439.38744		1,3,5-Trinitrobenzene #4
10.870	VV	147.80611	3.64318	538.48482		1,2-Dinitrobenzene #5 *
12.892	BV	277.68329	1.70011	472.09299		1,3-Dinitrobenzene #6
14.174	VV	110.58243	4.44086	491.08057		Tetryl #7
14.616	VB	195.63882	2.40882	471.25843		Nitrobenzene #8
16.899	VV	182.83467	2.58814	473.20222		2,4,6-Trinitrotoluene #10
17.799	VV	108.46471	4.37913	474.98109		4-Amino-2,6-Dinitrotoluene #11
18.696	VV	175.62685	2.85211	500.90714		2-Amino-4,6-Dinitrotoluene #12
19.782	VV	114.07178	4.40282	502.23806		2,6-Dinitrotoluene #13
20.388	VB	266.17535	1.81863	484.07372		2,4-Dinitrotoluene #14
23.968	BV	101.56460	4.87543	495.17067		2-Nitrotoluene #15
25.635	VB	82.81730	5.86139	485.42422		4-Nitrotoluene #16
27.613	BB	115.47022	4.25685	491.53985		3-Nitrotoluene #17

Totals : 7202.80187

Data File C:\CHEM32\1\DATA\071514\071514\5L013057.D
Sample Name: WG483912-02 LCS

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :   3
Acq. Instrument : HPLC5                          Location : Vial 4
Injection Date  : 7/15/2014 11:47:38 AM               Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed    : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/15/2014 11:03:39 AM by ECL
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  WATER


==================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 15.857 VBA     104.95368    4.84996  509.02104    Nitroglycerin #9

Totals :                               509.02104


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                           *** End of Report ***
```

Data File C:\CHEM32\1\DATA\071614\071614\5L013081.D
Sample Name: WG484160-02 LCS

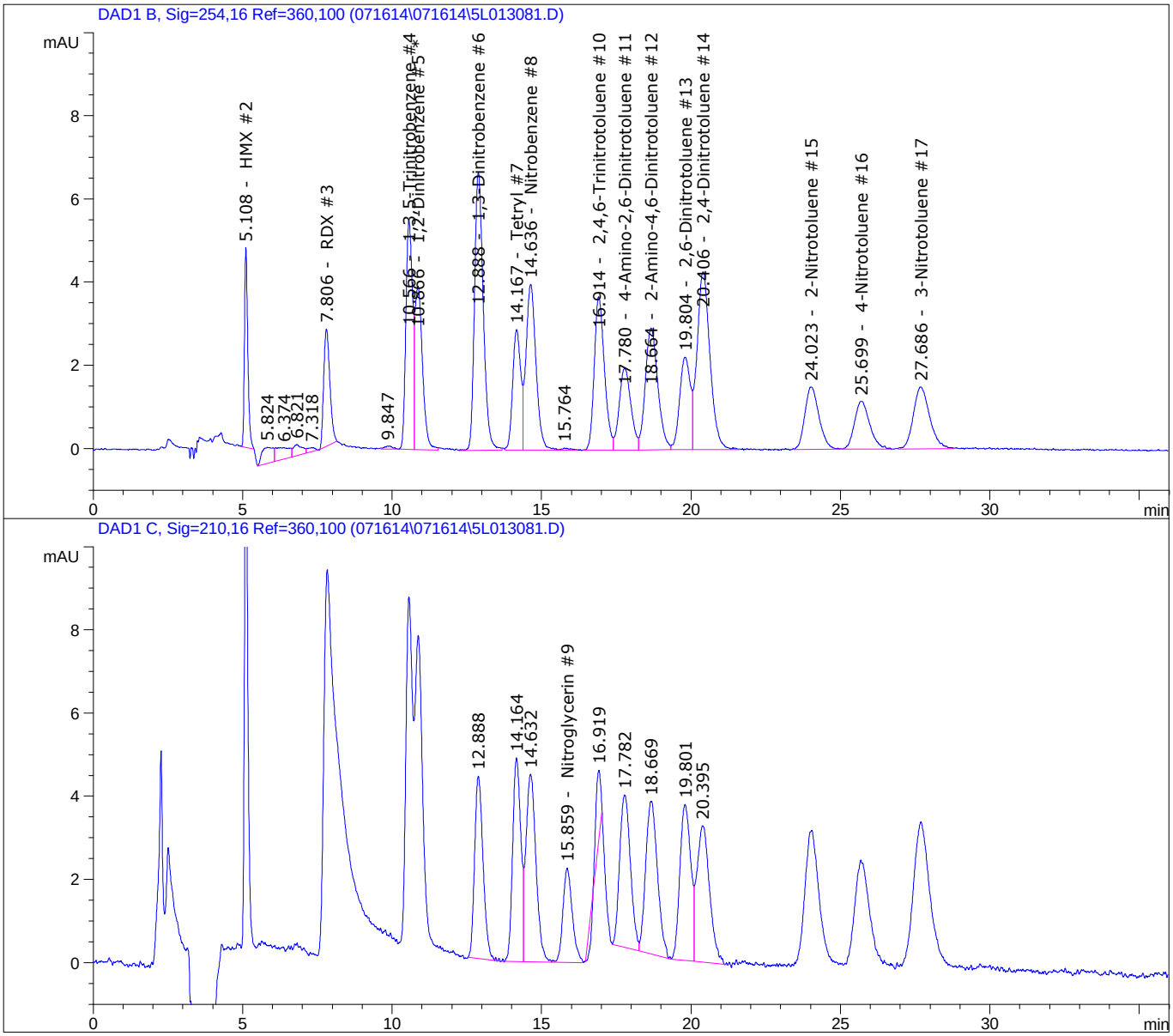
==========

Acq. Operator	: ECL	Seq. Line :	3
Acq. Instrument	: HPLC5	Location :	Vial 4
Injection Date	: 7/16/2014 2:26:45 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\071614\071614\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/17/2014 11:44:32 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 7,1 SOIL

==========



Data File C:\CHEM32\1\DATA\071614\071614\5L013081.D
Sample Name: WG484160-02 LCS

==========

Acq. Operator : ECL Seq. Line : 3
Acq. Instrument : HPLC5 Location : Vial 4
Injection Date : 7/16/2014 2:26:45 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071614\071614\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/17/2014 11:44:32 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 7,1 SOIL

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 7/16/2014 12:18:01 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.108	BBA	37.33443	5.85583	218.62402		HMX #2
7.806	BBA	40.57751	4.79834	194.70471		RDX #3
10.566	VV	85.72350	2.58148	221.29349		1,3,5-Trinitrobenzene #4
10.866	VB	68.66753	3.61046	247.92166		1,2-Dinitrobenzene #5 *
12.888	VB	135.38557	1.70502	230.83445		1,3-Dinitrobenzene #6
14.167	BV	54.64035	4.44186	242.70498		Tetryl #7
14.636	VB	92.95160	2.42913	225.79178		Nitrobenzene #8
16.914	BV	86.88469	2.58950	224.98806		2,4,6-Trinitrotoluene #10
17.780	VV	53.57508	4.37144	234.20042		4-Amino-2,6-Dinitrotoluene #11
18.664	VV	85.09206	2.85032	242.53964		2-Amino-4,6-Dinitrotoluene #12
19.804	VV	55.64037	4.38320	243.88300		2,6-Dinitrotoluene #13
20.406	VB	129.10941	1.82133	235.15044		2,4-Dinitrotoluene #14
24.023	BB	49.50456	4.83980	239.59198		2-Nitrotoluene #15
25.699	BB	40.99117	5.83160	239.04407		4-Nitrotoluene #16
27.686	BB	56.53852	4.25199	240.40107		3-Nitrotoluene #17

Totals : 3481.67375

Data File C:\CHEM32\1\DATA\071614\071614\5L013081.D
Sample Name: WG484160-02 LCS

==========

Acq. Operator : ECL Seq. Line : 3
Acq. Instrument : HPLC5 Location : Vial 4
Injection Date : 7/16/2014 2:26:45 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071614\071614\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/17/2014 11:44:32 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 7,1 SOIL

==========

Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
15.859	VBA	49.46547	4.84913	239.86436		Nitroglycerin #9

Totals : 239.86436

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========

*** End of Report ***

Data File C:\CHEM32\1\DATA\071514\071514\5L013058.D
Sample Name: WG483912-03 LCS DUP

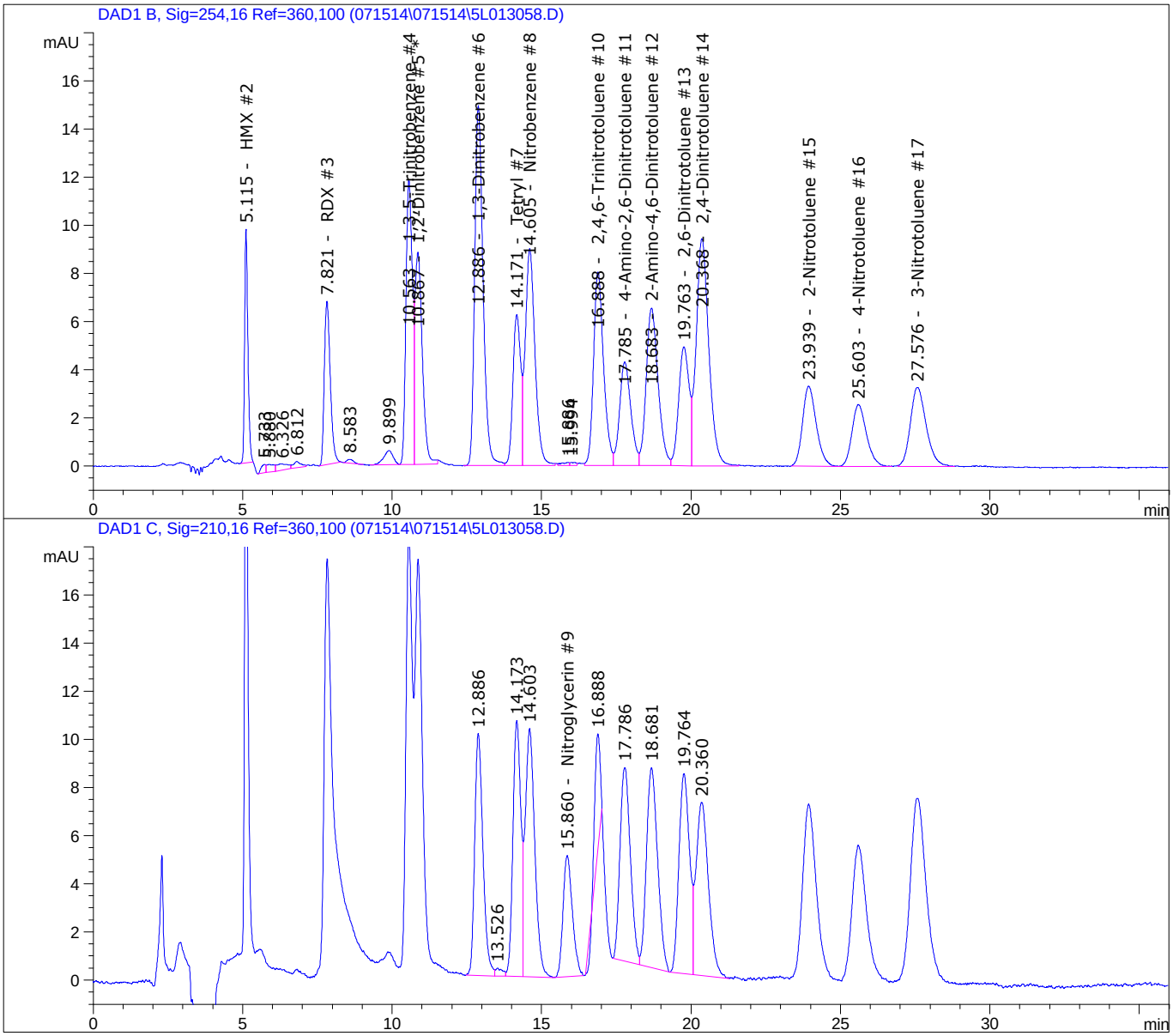
==========

Acq. Operator	: ECL	Seq. Line :	4
Acq. Instrument	: HPLC5	Location :	Vial 5
Injection Date	: 7/15/2014 12:26:38 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/15/2014 11:03:39 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========



Data File C:\CHEM32\1\DATA\071514\071514\5L013058.D
Sample Name: WG483912-03 LCS DUP

==========

Acq. Operator : ECL Seq. Line : 4
Acq. Instrument : HPLC5 Location : Vial 5
Injection Date : 7/15/2014 12:26:38 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/15/2014 11:03:39 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 7/15/2014 11:03:22 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.115	BBA	73.93728	5.94262	439.38108		HMX #2
7.821	BBA	93.52995	5.02443	469.93444		RDX #3
10.563	VV	176.91344	2.56168	453.19475		1,3,5-Trinitrobenzene #4
10.867	VB	150.70381	3.64373	549.12396		1,2-Dinitrobenzene #5 *
12.886	BV	290.49780	1.69991	493.81935		1,3-Dinitrobenzene #6
14.171	VV	112.38457	4.44084	499.08187		Tetryl #7
14.605	VB	204.31494	2.40804	491.99808		Nitrobenzene #8
16.888	BV	188.16391	2.58811	486.98850		2,4,6-Trinitrotoluene #10
17.785	VV	112.94571	4.37943	494.63757		4-Amino-2,6-Dinitrotoluene #11
18.683	VV	182.03577	2.85217	519.19687		2-Amino-4,6-Dinitrotoluene #12
19.763	VV	119.60648	4.40369	526.70978		2,6-Dinitrotoluene #13
20.368	VB	277.68948	1.81852	504.98435		2,4-Dinitrotoluene #14
23.939	BV	106.26175	4.87692	518.23042		2-Nitrotoluene #15
25.603	VB	86.68980	5.86269	508.23552		4-Nitrotoluene #16
27.576	BB	120.13279	4.25703	511.40949		3-Nitrotoluene #17

Totals : 7466.92603

Data File C:\CHEM32\1\DATA\071514\071514\5L013058.D
Sample Name: WG483912-03 LCS DUP

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :   4
Acq. Instrument : HPLC5                          Location : Vial 5
Injection Date  : 7/15/2014 12:26:38 PM                Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed    : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/15/2014 11:03:39 AM by ECL
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  WATER


==================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 15.860 VBA     109.42300    4.84999  530.70039    Nitroglycerin #9

Totals :                               530.70039


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                           *** End of Report ***
```

Data File C:\CHEM32\1\DATA\071614\071614\5L013085.D
Sample Name: WG484160-05 L14070459-02 MS

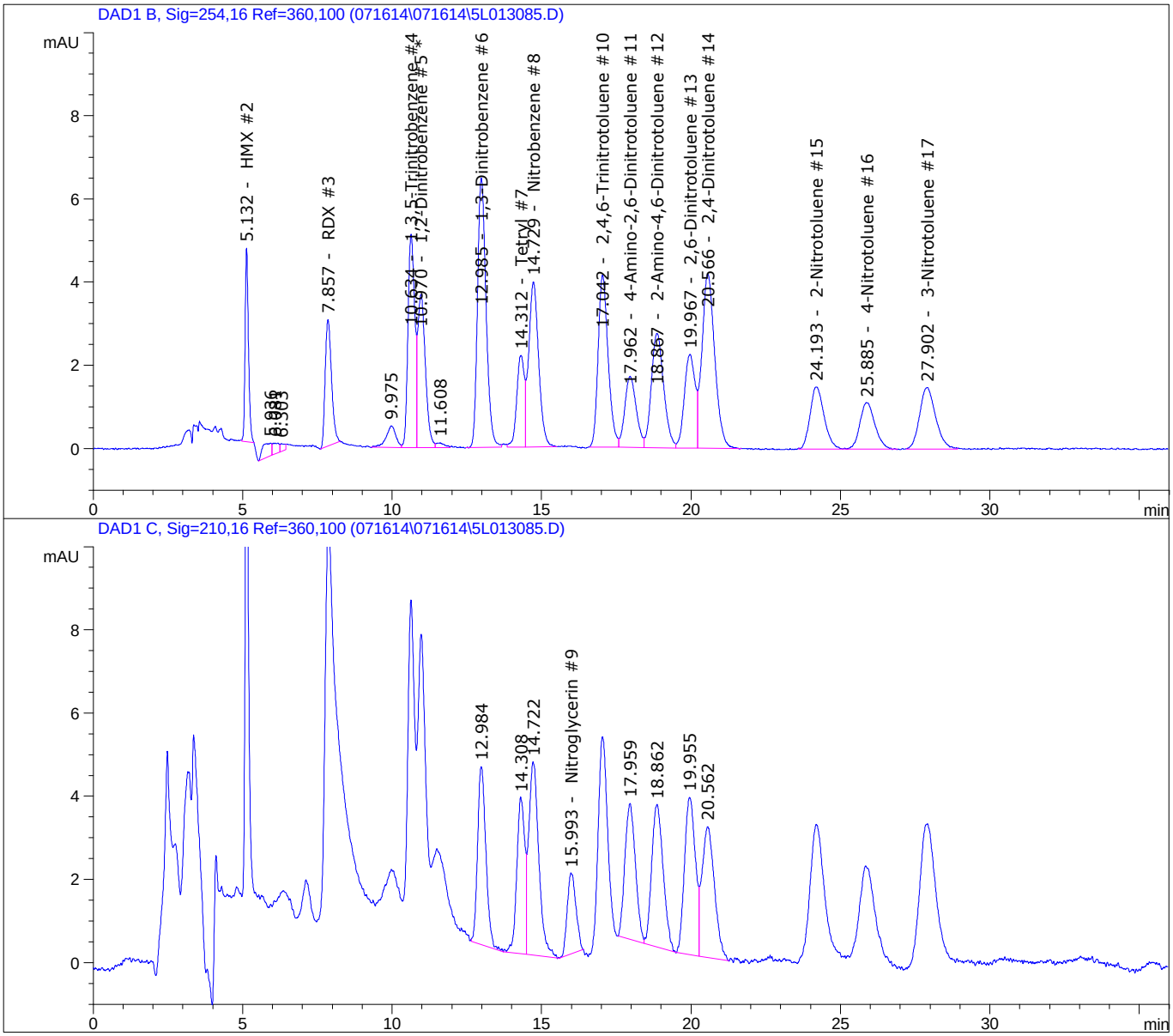
==========

Acq. Operator	: ECL	Seq. Line :	7
Acq. Instrument	: HPLC5	Location :	Vial 8
Injection Date	: 7/16/2014 5:02:54 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\071614\071614\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/17/2014 11:49:59 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 7,1 SOIL

==========



Data File C:\CHEM32\1\DATA\071614\071614\5L013085.D
Sample Name: WG484160-05 L14070459-02 MS

==========

Acq. Operator : ECL Seq. Line : 7
Acq. Instrument : HPLC5 Location : Vial 8
Injection Date : 7/16/2014 5:02:54 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071614\071614\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/17/2014 11:49:59 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 7,1 SOIL

==========

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 7/17/2014 11:47:26 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.132	BBA	36.19408	5.85030	211.74640		HMX #2
7.857	BBA	44.49883	4.83353	215.08645		RDX #3
10.634	VV	80.92525	2.58376	209.09125		1,3,5-Trinitrobenzene #4
10.970	VV	65.31141	3.60732	235.59940		1,2-Dinitrobenzene #5 *
12.985	BV	129.08220	1.70548	220.14739		1,3-Dinitrobenzene #6
14.312	VV	39.49361	4.44263	175.45541		Tetryl #7
14.729	VB	91.48082	2.42976	222.27599		Nitrobenzene #8
17.042	BV	96.44122	2.58925	249.70997		2,4,6-Trinitrotoluene #10
17.962	VV	46.12860	4.36899	201.53544		4-Amino-2,6-Dinitrotoluene #11
18.867	VV	79.25424	2.85006	225.87971		2-Amino-4,6-Dinitrotoluene #12
19.967	VV	56.55245	4.38382	247.91579		2,6-Dinitrotoluene #13
20.566	VB	125.65414	1.82147	228.87539		2,4-Dinitrotoluene #14
24.193	BV	49.57168	4.83989	239.92149		2-Nitrotoluene #15
25.885	VB	39.34848	5.82914	229.36770		4-Nitrotoluene #16
27.902	BB	55.41784	4.25179	235.62526		3-Nitrotoluene #17

Totals : 3348.23304

Data File C:\CHEM32\1\DATA\071614\071614\5L013085.D
Sample Name: WG484160-05 L14070459-02 MS

==========

Acq. Operator : ECL Seq. Line : 7
Acq. Instrument : HPLC5 Location : Vial 8
Injection Date : 7/16/2014 5:02:54 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071614\071614\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/17/2014 11:49:59 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 7,1 SOIL

==========

Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
15.993	VBA	39.31444	4.84872	190.62475		Nitroglycerin #9

Totals : 190.62475

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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*** End of Report ***

Data File C:\CHEM32\1\DATA\071614\071614\5L013086.D
Sample Name: WG484160-06 L14070459-02 MSD

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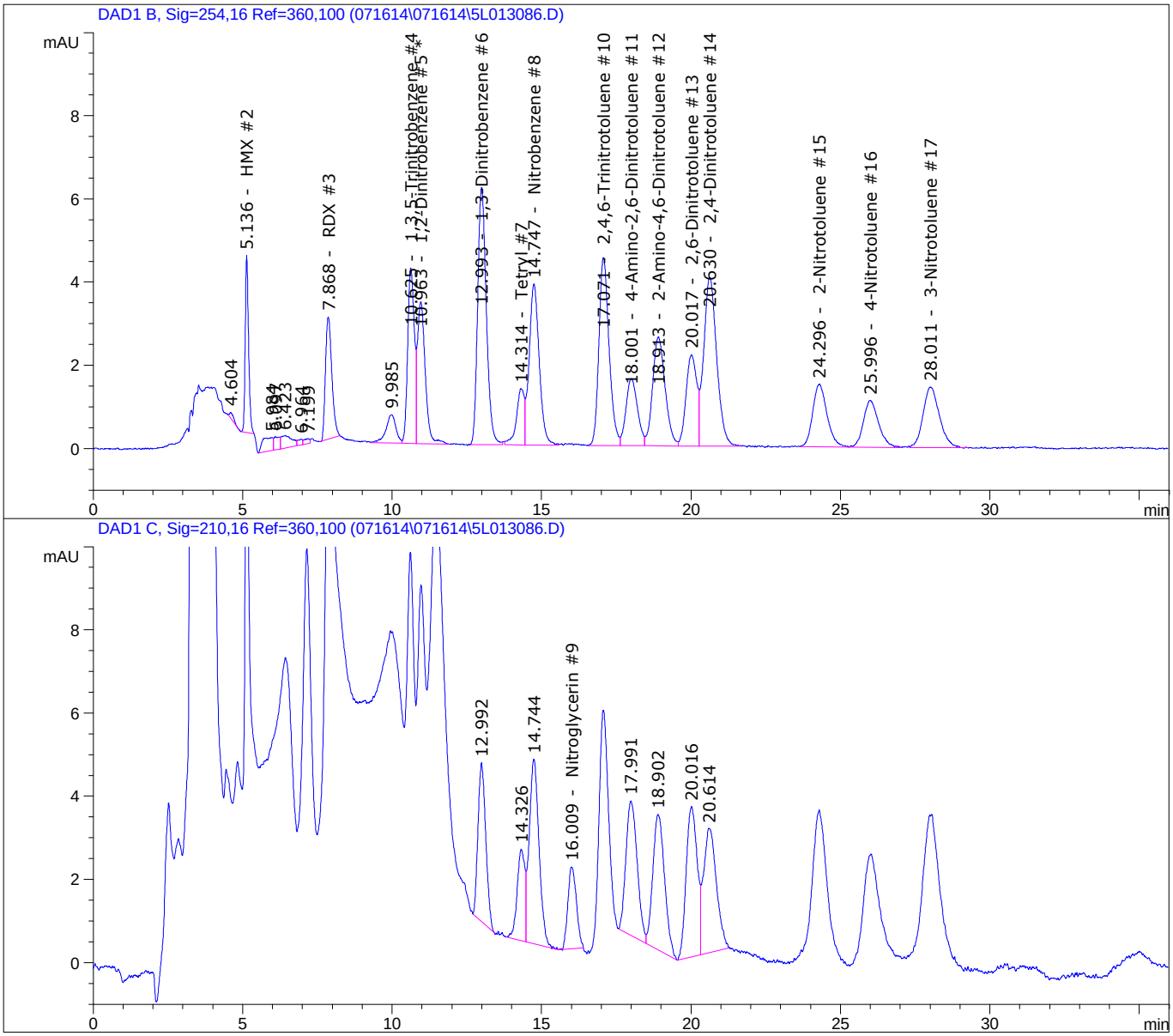
Acq. Operator	: ECL	Seq. Line :	8
Acq. Instrument	: HPLC5	Location :	Vial 9
Injection Date	: 7/16/2014 5:42:01 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\071614\071614\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/17/2014 11:49:59 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 7,1 SOIL

==========



Data File C:\CHEM32\1\DATA\071614\071614\5L013086.D
Sample Name: WG484160-06 L14070459-02 MSD

==========

Acq. Operator : ECL Seq. Line : 8
Acq. Instrument : HPLC5 Location : Vial 9
Injection Date : 7/16/2014 5:42:01 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071614\071614\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/17/2014 11:49:59 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 7,1 SOIL

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 7/17/2014 11:47:26 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.136	BBA	33.05447	5.83313	192.81093		HMX #2
7.868	BBA	43.83565	4.82802	211.63949		RDX #3
10.625	VV	65.09997	2.59365	168.84666		1,3,5-Trinitrobenzene #4
10.963	VB	62.69326	3.60464	225.98665		1,2-Dinitrobenzene #5 *
12.993	BB	124.10992	1.70588	211.71714		1,3-Dinitrobenzene #6
14.314	BV	25.00796	4.44423	111.14100		Tetryl #7
14.747	VB	91.01776	2.42996	221.16908		Nitrobenzene #8
17.071	BV	107.17066	2.58901	277.46609		2,4,6-Trinitrotoluene #10
18.001	VV	43.53022	4.36794	190.13728		4-Amino-2,6-Dinitrotoluene #11
18.913	VV	76.53297	2.84993	218.11375		2-Amino-4,6-Dinitrotoluene #12
20.017	VV	55.04819	4.38279	241.26470		2,6-Dinitrotoluene #13
20.630	VB	122.71898	1.82160	223.54489		2,4-Dinitrotoluene #14
24.296	BV	50.29119	4.84088	243.45378		2-Nitrotoluene #15
25.996	VB	39.76893	5.82979	231.84436		4-Nitrotoluene #16
28.011	BB	55.45736	4.25180	235.79364		3-Nitrotoluene #17

Totals : 3204.92943

Data File C:\CHEM32\1\DATA\071614\071614\5L013086.D
Sample Name: WG484160-06 L14070459-02 MSD

==========

Acq. Operator : ECL Seq. Line : 8
Acq. Instrument : HPLC5 Location : Vial 9
Injection Date : 7/16/2014 5:42:01 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071614\071614\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/17/2014 11:49:59 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 7,1 SOIL

==========

Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
16.009	VBA	38.87078	4.84870	188.47269		Nitroglycerin #9
Totals :				188.47269		

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========

*** End of Report ***

3.0 Attachments

Microbac Laboratories Inc.
Ohio Valley Division Analyst List
July 18, 2014

---

001 - BIO-CHEM TESTING WVDEP 220
002 - REIC Consultants, Inc. WVDEP 060
003 - Sturm Environmental
004 - MICROBAC PITTSBURGH
005 - ES LABORATORIES
006 - ALCOSAN LABORATORIES
007 - ALS LABORATORIES
008 - BENCHMARK LABORATORIES
010 - MICROBAC CHICAGOLAND
ADC - ANTHONY D. CANTER
ADG - APRIL D. GREENE
ALS - ADRIANE L. STEED
AWE - ANDREW W. ESSIG
AZH - AFTER HOURS
BAF - BRICE A. FENTON
BJO - BRIAN J. OGDEN
BKT - BRENDAN TORRENCE
BLG - BRENDA L. GREENWALT
BRG - BRENDA R. GREGORY
CAA - CASSIE A. AUGENSTEIN
CAF - CHERYL A. FLOWERS
CEB - CHAD E. BARNES
CJR - COURTNEY J. REXROAD
CLC - CHRYS L. CRAWFORD
CLS - CARA L. STRICKLER
CLW - CHARISSA L. WINTERS
CPD - CHAD P. DAVIS
CSH - CHRIS S. HILL
DAK - DEAN A. K
DCM - DAVID C. MERCKLE
DEV - DAVID E. VANDENBERG
DIH - DEANNA I. HESSON
DLB - DAVID L. BUMGARNER
DLP - DOROTHY L. PAYNE
DSM - DAVID S. MOSSOR
ECL - ERIC C. LAWSON
ENY - EMILY N. YOAK
EPT - ETHAN P. TIDD
ERP - ERIN R. PORTER
FJB - FRANCES J. BOLDEN
JBK - JEREMY B. KINNEY
JDH - JUSTIN D. HESSON
JDS - JARED D. SMITH
JJS - JOHN J. ST MARIE
JLL - JOHN L. LENT
JMW - JEANA M. WHITE
JTP - JOSHUA T. PEMBERTON
JWR - JOHN W. RICHARDS
JWS - JACK W. SHEAVES
JYH - JI Y. HU
KAJ - KELLIE A. JOHNSON
KDW - KATHRYN D. WELCH
KEB - KATIE E. BARNES
KHR - KIM H. RHODES
KRA - KATHY R. ALBERTSON
KRB - KAELY R. BECKER
KRP - KATHY R. PARSONS
LEC - LAURA E. CARPENTER
LKN - LINDA K. NEDEFF
LLS - LARRY L. STEPHENS
LSB - LESLIE S. BUCINA
MBK - MORGAN B. KNOWLTON
MDA - MIKE D. ALBERTSON
MDC - MIKE D. COCHRAN
MES - MARY E. SCHILLING
MLB - MEGAN L. BACHE
MMB - MAREN M. BEERY
MRT - MICHELLE R. TAYLOR
MSW - MATT S. WILSON
PDM - PIERCE D. MORRIS
PIT - MICROBAC WARRENDALE
PSW - PEGGY S. WEBB
QX - QIN XU
RAH - ROY A. HALSTEAD
REK - BOB E. KYER
RLB - BOB BUCHANAN
RM - RAYMOND MALEKE
RNP - RICK N. PETTY
RS - ROSEMARY SCOTT
SAV - SARAH A. VANDENBERG
SDC - SHALYN D. CONLEY
SEP - SUZANNE J. PAUGH
SLM - STEPHANIE L. MOSSBURG
SLP - SHERI L. PFALZGRAF
TB - TODD BOYLE
TLC - TYLER L. CORDELL
TMB - TIFFANY M. BAILEY
TMM - TAMMY M. MORRIS
TPA - TYLER P. AMRINE
VC - VICKI COLLIER
WJB - WILL J. BEASLEY
WRR - WESLEY R. RICHARDS
WTD - WADE T. DELONG
XXX - UNAVAILABLE OR SUBCONTRACT

Microbac Laboratories Inc.
List of Valid Qualifiers
July 18, 2014

Qualkey: STD_ND=U

Qualifier	Description
*	Surrogate or spike compound out of range
+	Correlation coefficient for the MSA is less than 0.995
<	Result is less than the associated numerical value.
>	Result is greater than the associated numerical value.
A	See the report narrative
B	Analyte present in method blank
B1	Target analyte detected in method blank at or above the method reporting limit
B3	Target analyte detected in calibration blank at or above the method reporting limit
C	Confirmed by GC/MS
CG	Confluent growth
DL	Surrogate or spike compound was diluted out
E	Estimated concentration due to sample matrix interference
EDL	Elevated sample reporting limits, presence of non-target analytes
EMPC	Estimated Maximum Possible Concentration
F, S	Estimated result below quantitation limit; method of standard additions(MSA)
FL	Free Liquid
H1	Sample analysis performed past holding time.
I	Semiquantitative result (out of instrument calibration range)
J	The analyte was positively identified, but the quantitation was below the RL
J,B	Analyte detected in both the method blank and sample above the MDL.
J,H1	The analyte was positively identified, but the quantitation was below the RL. Sample analysis performed past holding time
J,P	Estimate; columns don't agree to within 40%
J,S	Estimated concentration; analyzed by method of standard addition (MSA)
L	Sample reporting limits elevated due to matrix interference
L1	The associated blank spike (LCS) recovery was above the laboratory acceptance limits.
L2	The associated blank spike (LCS) recovery was below the laboratory acceptance limits.
M	Matrix effect; the concentration is an estimate due to matrix effect.
N	Tentatively identified compound(TIC)
NA	Not applicable
ND, L	Not detected; sample reporting limit (RL) elevated due to interference
ND, S	Not detected; analyzed by method of standard addition (MSA)
NF	Not found by library search
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentrations >40% difference between the two GC columns
Q	One or more quality control criteria failed. See narrative.
QNS	Quantity of sample not sufficient to perform analysis
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition (MSA)
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TIC	Library Search Compound
TNTC	Too numerous to count
U	Not detected at or above adjusted sample detection limit
U,H1	Not detected; sample analysis performed past holding time.
UJ	Undetected; the MDL and RL are estimated due to quality control discrepancies.
W	Post-digestion spike for furnace AA out of control limits
X	Exceeds regulatory limit
X, S	Exceeds regulatory limit; method of standard additions (MSA)
Z	Cannot be resolved from isomer - see below

COC No. A 40711

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: Arcadis - U.S., Inc.

Project Contact: Jacique Powell

Contact Phone #: 713-953-4807

Turn Around Requirements: Standard

Location: Picatinny Arsenal

Project ID: GP06PICA.LM14.3MD14 / PICA 079

Sampler (print): C. Goldsmith, N. Comrie

Signature: [signature]

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other _____

ADDITIONAL REQUIREMENTS

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	Explosives	TOTAL # (LAB USE)
1-795W001(070714)		X	7/7/14	1300	WS	1		1	
1-795D001(070714)		X	7/7/14	1300	SE	1		1	
1-795D002(070714)		X	7/7/14	1245	SE	1		1	
1-795W002(070714)		X	7/7/14	1245	WS	1		1	

Microbac OVD
Received: 07/09/2014 10:55
By: COURTNEY REXROAD 221000056700
Courtney Rexroad

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Time	Received by: (Signature)
[signature]	7/8/14	1600			

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks:
						COOLER ID# 8110

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

Internal Chain of Custody Report

Login: L14070459
Account: 2273
Project: 2273.003
Samples: 4
Due Date: 18-JUL-2014

Samplenum	Container ID	Products
L14070459-01	399567	8330

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	09-JUL-2014 16:29	CJR		
2	PREP	W1	EXT	14-JUL-2014 08:16	RAH	CLS	
3	DISP	EXT	DISP	15-JUL-2014 07:19	BJO	BJO	
4	ANALYZ*	EXT	SEMI	16-JUL-2014 13:05	ECL	RAH	

Sample extract/digestate/leachate

Samplenum	Container ID	Products
L14070459-02	399568	8330

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	09-JUL-2014 16:29	CJR		
2	PREP	W1	EXT	11-JUL-2014 09:05	JDH	CLS	
3	ANALYZ*	EXT	SEMI	16-JUL-2014 11:32	ECL	JDH	
4	STORE	EXT	A2	17-JUL-2014 08:35	CLS	JDH	

Sample extract/digestate/leachate

Samplenum	Container ID	Products
L14070459-03	399569	8330

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	09-JUL-2014 16:29	CJR		
2	PREP	W1	EXT	11-JUL-2014 09:05	JDH	CLS	
3	ANALYZ*	EXT	SEMI	16-JUL-2014 11:32	ECL	JDH	
4	STORE	EXT	A2	17-JUL-2014 08:35	CLS	JDH	

Sample extract/digestate/leachate

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Internal Chain of Custody Report

Login: L14070459
Account: 2273
Project: 2273.003
Samples: 4
Due Date: 18-JUL-2014

Samplenum	Container ID	Products
L14070459-04	399570	8330

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	09-JUL-2014 16:29	CJR		
2	PREP	W1	EXT	14-JUL-2014 08:16	RAH	CLS	
3	DISP	EXT	DISP	15-JUL-2014 07:19	BJO	BJO	
4	ANALYZ*	EXT	SEMI	16-JUL-2014 13:05	ECL	RAH	

Sample extract/digestate/leachate

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

NELAP Addendum - May 22, 2014

Non-NELAP LIMS Product and Description

The following is a list of those tests that are not included in the Microbac – OVL NELAP Scope of Accreditation:

Heat of Combustion (BTU)
Total Halide by Bomb Combustion (TX)
Particle Sizing - 200 Mesh (PS200)
Specific Gravity/Density (SPGRAV)
Total Residual Chlorine (CL-TRL)
Total Volatile Solids (all forms) (TVS)
Total Coliform Bacteria (all methods)
Fecal Coliform Bacteria (all methods)
Sulfite (SO3)
Thiodiglycol (TDG-LCMS)
Acetate (HPLC-UV)
Formate (HPLC-UV)
Acetaldehyde (HPLC-UV)
Propionaldehyde (HPLC-UV)
Fluoroborate (ISE)

SOLID AND HAZARDOUS CHEMICALS
Nitrogen, Ammonia by Method 350.1
Chromium, Hexavalent, Leachable by SM3500 Cr-B 2009
Phenolics, Total by Method 420.1

NELAP Accreditation by Laboratory SOP

NONPOTABLE WATER

OVL HPLC02/HPLC-UV

Nitroglycerin
Acetic acid
Butyric acid
Lactic acid
Propionic acid
Pyruvic acid

OVL MSS01/GC-MS

1,4-Phenylenediamine
1-Methylnaphthalene
1,4-Dioxane
Atrazine
Benzaldehyde
Biphenyl
Caprolactam

Hexamethylphosphoramide (HMPA)
Pentachlorobenzene
Pentachloroethane

NELAP Accreditation by Laboratory SOP

NONPOTABLE WATER

OVL MSV0I/GC-MS

1, 1, 2-Trichloro-1,2,2-trifluoroethane
1,3-Butadiene
Cyclohexane
Cyclohexanone
Dimethyl disulfide
Dimethylsulfide
Ethyl-t-butylether (ETBE)
Isoprene
Methylacetate
Methylcyclohexane
T-amylmethylether (TAME)
Tetrahydrofuran (THF)

OVL RSKOI/GC-FID

Isobutane
n-Butane
Propane
Propylene
Propyne

OVL HPLC07/HPLC-MS-MS

Hexamethylphosphoramide (XMPA-LCMS)

SOLID AND HAZARDOUS CHEMICALS

OVL MSS0I/GC-MS

1-Methylnaphthalene
Benzaldehyde
Biphenyl
Caprolactam
Pentachloroethane

NELAP Accreditation by Laboratory SOP

SOLID AND HAZARDOUS CHEMICALS

OVL MSV0I/GC-MS

1.3-Butadiene
Cyclohexane
Cyclohexanone
Dimethyl disulfide
Dimethylsulfide
Ethyl-t-butylether (ETBE)
Isoprene
Methylacetate
Methylcyclohexane
n-Hexane
T-amylmethylether (TAME)

Microbac

Laboratory Report Number: L14070524

Jace'que Powell
Arcadis U.S., Inc.
2929 Briarpark Dr
Houston, TX 77042

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac's Ohio Valley Division (OVD). If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed below.

Laboratory Contact:
Stephanie Mossburg – Team Chemist/Data Specialist
(740) 373-4071
Stephanie.Mossburg@microbac.com

I certify that all test results meet all of the requirements of the accrediting authority listed below. All results for soil samples are reported on a 'dry-weight' basis unless specified otherwise. Analytical results for water and wastes are reported on a 'as received' basis unless specified otherwise. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

This report was certified on July 17 2014

David E. Vandenberg

David Vandenberg – Managing Director

State of Origin: NJ
Accrediting Authority: Department of Environmental Protection ID:OH004
QAPP: Microbac OVD

Microbac

Lab Report #: L14070524
Lab Project #: 2273.003
Project Name: ARDEC (PICATINNY ARSENAL)
Lab Contact: Stephanie Mossburg

Record of Sample Receipt and Inspection

Comments/Discrepancies

This is the record of the shipment conditions and the inspection records for the samples received and reported as a sample delivery group (SDG). All of the samples were inspected and observed to conform to our receipt policies, except as noted below.

There were no discrepancies.

Discrepancy	Resolution

Coolers

Cooler #	Temperature Gun	Temperature	COC #	Airbill #	Temp Required?
00110546	H	3.0		1001892121360004575000770549396093	X

Inspection Checklist

#	Question	Result
1	Were shipping coolers sealed?	Yes
2	Were custody seals intact?	Yes
3	Were cooler temperatures in range of 0-6?	Yes
4	Was ice present?	Yes
5	Were COC's received/information complete/signed and dated?	Yes
6	Were sample containers intact and match COC?	Yes
7	Were sample labels intact and match COC?	Yes
8	Were the correct containers and volumes received?	Yes
9	Were samples received within EPA hold times?	Yes
10	Were correct preservatives used? (water only)	Yes
11	Were pH ranges acceptable? (voa's excluded)	NA
12	Were VOA samples free of headspace (less than 6mm)?	NA

Microbac

Lab Report #: L14070524
Lab Project #: 2273.003
Project Name: ARDEC (PICATINNY ARSENAL)
Lab Contact: Stephanie Mossburg

Samples Received

Client ID	Laboratory ID	Date Collected	Date Received
I-40MW001(070814)	L14070524-01	07/08/2014 13:30	07/10/2014 10:52
I-40MW002(070814)	L14070524-02	07/08/2014 13:20	07/10/2014 10:52
I-40MW003(070814)	L14070524-03	07/08/2014 13:15	07/10/2014 10:52
I-40MW005(070814)	L14070524-04	07/08/2014 13:35	07/10/2014 10:52
I-40MW006(070814)	L14070524-05	07/08/2014 13:25	07/10/2014 10:52
FB001(070814)	L14070524-06	07/08/2014 12:00	07/10/2014 10:52

Microbac REPORT L14070524
PREPARED FOR Arcadis U.S., Inc.
WORK ID:

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1.0 Summary Data

1.1 Narratives

Login Number: L14070524
Department: General Chromatography
Analyst: Eric Lawson

METHOD

Analysis SW-846 8330

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration and Tune: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: There were no MS/MSD results associated with this sample delivery group, due to insufficient volume of sample. The laboratory included an LCS and LCS duplicate in the preparation batch in lieu of the NELAC prescribed MS/MSD. Microbac recommends site specific MS/MSD samples to avoid possible data qualification.

SAMPLES

Samples: Sample 02 was analyzed at a dilution to be within calibration range. All sample results were confirmed by diode array detection.

Surrogates: All acceptance criteria were met.

Manual Integration Reason Codes

Reason #1: Data System Fails to Select Correct Peak In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peakcompletely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low areacounts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds. This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene andbenzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

Reason #4: System Establishes Incorrect Baseline There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 86223
Approved By: Mike Cochran

1.2 Certificate of Analysis

Certificate of Analysis

Sample #:	L14070524-01	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-40MW001(070814)	**Prep Method:**	METHOD	**Prep Date:**	07/14/2014 08:08
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG484128	**Analyst:**	ECL	**Run Date:**	07/15/2014 20:15
Collect Date:	07/08/2014 13:30	**Dilution:**	1	**File ID:**	5L013070.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
RDX	121-82-4	1.74		1.08	0.269
2,4,6-Trinitrotoluene	118-96-7	5.43		1.08	0.269
2-Amino-4,6-dinitrotoluene	35572-78-2	3.32		1.08	0.269
4-Amino-2,6-dinitrotoluene	19406-51-0	7.14		1.08	0.269

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	77.6	50	150	

Sample #:	L14070524-02	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-40MW002(070814)	**Prep Method:**	METHOD	**Prep Date:**	07/14/2014 08:08
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG484128	**Analyst:**	ECL	**Run Date:**	07/15/2014 20:54
Collect Date:	07/08/2014 13:20	**Dilution:**	1	**File ID:**	5L013071.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
2-Amino-4,6-dinitrotoluene	35572-78-2	6.48		1.10	0.275

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	92.4	50	150	

Sample #:	L14070524-02	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-40MW002(070814)	**Prep Method:**	METHOD	**Prep Date:**	07/14/2014 08:08
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG484128	**Analyst:**	ECL	**Run Date:**	07/16/2014 19:00
Collect Date:	07/08/2014 13:20	**Dilution:**	10	**File ID:**	5L013088.F
Sample Tag:	DL01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
RDX	121-82-4	85.5		11.0	2.75
2,4,6-Trinitrotoluene	118-96-7	97.5		11.0	2.75
4-Amino-2,6-dinitrotoluene	19406-51-0	56.9		11.0	2.75

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	89.2	50	150	

Certificate of Analysis

Sample #:	L14070524-03	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-40MW003(070814)	**Prep Method:**	METHOD	**Prep Date:**	07/14/2014 08:08
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG484128	**Analyst:**	ECL	**Run Date:**	07/15/2014 21:33
Collect Date:	07/08/2014 13:15	**Dilution:**	1	**File ID:**	5L013072.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
RDX	121-82-4	2.42		1.00	0.250
2,4,6-Trinitrotoluene	118-96-7	3.09		1.00	0.250
2-Amino-4,6-dinitrotoluene	35572-78-2	3.48		1.00	0.250
4-Amino-2,6-dinitrotoluene	19406-51-0	9.48		1.00	0.250

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	99.7	50	150	

Sample #:	L14070524-04	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-40MW005(070814)	**Prep Method:**	METHOD	**Prep Date:**	07/14/2014 08:08
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG484128	**Analyst:**	ECL	**Run Date:**	07/15/2014 22:12
Collect Date:	07/08/2014 13:35	**Dilution:**	1	**File ID:**	5L013073.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
RDX	121-82-4	1.52		1.10	0.275
2,4,6-Trinitrotoluene	118-96-7		U	1.10	0.275
2-Amino-4,6-dinitrotoluene	35572-78-2		U	1.10	0.275
4-Amino-2,6-dinitrotoluene	19406-51-0	0.728	J	1.10	0.275

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	89.3	50	150	

J	The analyte was positively identified, but the quantitation was below the RL
U	Not detected at or above adjusted sample detection limit

Sample #:	L14070524-05	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-40MW006(070814)	**Prep Method:**	METHOD	**Prep Date:**	07/14/2014 08:08
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG484128	**Analyst:**	ECL	**Run Date:**	07/15/2014 22:51
Collect Date:	07/08/2014 13:25	**Dilution:**	1	**File ID:**	5L013074.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
RDX	121-82-4	22.3		1.09	0.272

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7	4.23		1.09	0.272
2-Amino-4,6-dinitrotoluene	35572-78-2	3.87		1.09	0.272
4-Amino-2,6-dinitrotoluene	19406-51-0	7.91		1.09	0.272

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	96.4	50	150	

Sample #:	L14070524-06	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	FB001(070814)	**Prep Method:**	METHOD	**Prep Date:**	07/14/2014 08:08
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG484128	**Analyst:**	ECL	**Run Date:**	07/15/2014 23:30
Collect Date:	07/08/2014 12:00	**Dilution:**	1	**File ID:**	5L013075.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
RDX	121-82-4		U	1.00	0.250
2,4,6-Trinitrotoluene	118-96-7		U	1.00	0.250
2-Amino-4,6-dinitrotoluene	35572-78-2		U	1.00	0.250
4-Amino-2,6-dinitrotoluene	19406-51-0		U	1.00	0.250

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	99.9	50	150	

U	Not detected at or above adjusted sample detection limit

2.0 Full Sample Data Package

2.1 Semivolatiles Data

2.1.1 Explosives (8330B)

2.1.1.1 Summary Data

Login Number: L14070524
Department: General Chromatography
Analyst: Eric Lawson

METHOD

Analysis SW-846 8330

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration and Tune: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: There were no MS/MSD results associated with this sample delivery group, due to insufficient volume of sample. The laboratory included an LCS and LCS duplicate in the preparation batch in lieu of the NELAC prescribed MS/MSD. Microbac recommends site specific MS/MSD samples to avoid possible data qualification.

SAMPLES

Samples: Sample 02 was analyzed at a dilution to be within calibration range. All sample results were confirmed by diode array detection.

Surrogates: All acceptance criteria were met.

Manual Integration Reason Codes

Reason #1: Data System Fails to Select Correct Peak In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peakcompletely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low areacounts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds. This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene andbenzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

Reason #4: System Establishes Incorrect Baseline There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 86223
Approved By: Mike Cochran

Certificate of Analysis

Sample #:	L14070524-01	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-40MW001(070814)	**Prep Method:**	METHOD	**Prep Date:**	07/14/2014 08:08
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG484128	**Analyst:**	ECL	**Run Date:**	07/15/2014 20:15
Collect Date:	07/08/2014 13:30	**Dilution:**	1	**File ID:**	5L013070.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
RDX	121-82-4	1.74		1.08	0.269
2,4,6-Trinitrotoluene	118-96-7	5.43		1.08	0.269
2-Amino-4,6-dinitrotoluene	35572-78-2	3.32		1.08	0.269
4-Amino-2,6-dinitrotoluene	19406-51-0	7.14		1.08	0.269

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	77.6	50	150	

Sample #:	L14070524-02	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-40MW002(070814)	**Prep Method:**	METHOD	**Prep Date:**	07/14/2014 08:08
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG484128	**Analyst:**	ECL	**Run Date:**	07/15/2014 20:54
Collect Date:	07/08/2014 13:20	**Dilution:**	1	**File ID:**	5L013071.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
2-Amino-4,6-dinitrotoluene	35572-78-2	6.48		1.10	0.275

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	92.4	50	150	

Sample #:	L14070524-02	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-40MW002(070814)	**Prep Method:**	METHOD	**Prep Date:**	07/14/2014 08:08
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG484128	**Analyst:**	ECL	**Run Date:**	07/16/2014 19:00
Collect Date:	07/08/2014 13:20	**Dilution:**	10	**File ID:**	5L013088.F
Sample Tag:	DL01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
RDX	121-82-4	85.5		11.0	2.75
2,4,6-Trinitrotoluene	118-96-7	97.5		11.0	2.75
4-Amino-2,6-dinitrotoluene	19406-51-0	56.9		11.0	2.75

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	89.2	50	150	

Certificate of Analysis

Sample #:	L14070524-03	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-40MW003(070814)	**Prep Method:**	METHOD	**Prep Date:**	07/14/2014 08:08
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG484128	**Analyst:**	ECL	**Run Date:**	07/15/2014 21:33
Collect Date:	07/08/2014 13:15	**Dilution:**	1	**File ID:**	5L013072.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
RDX	121-82-4	2.42		1.00	0.250
2,4,6-Trinitrotoluene	118-96-7	3.09		1.00	0.250
2-Amino-4,6-dinitrotoluene	35572-78-2	3.48		1.00	0.250
4-Amino-2,6-dinitrotoluene	19406-51-0	9.48		1.00	0.250

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	99.7	50	150	

Sample #:	L14070524-04	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-40MW005(070814)	**Prep Method:**	METHOD	**Prep Date:**	07/14/2014 08:08
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG484128	**Analyst:**	ECL	**Run Date:**	07/15/2014 22:12
Collect Date:	07/08/2014 13:35	**Dilution:**	1	**File ID:**	5L013073.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
RDX	121-82-4	1.52		1.10	0.275
2,4,6-Trinitrotoluene	118-96-7		U	1.10	0.275
2-Amino-4,6-dinitrotoluene	35572-78-2		U	1.10	0.275
4-Amino-2,6-dinitrotoluene	19406-51-0	0.728	J	1.10	0.275

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	89.3	50	150	

J	The analyte was positively identified, but the quantitation was below the RL
U	Not detected at or above adjusted sample detection limit

Sample #:	L14070524-05	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-40MW006(070814)	**Prep Method:**	METHOD	**Prep Date:**	07/14/2014 08:08
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG484128	**Analyst:**	ECL	**Run Date:**	07/15/2014 22:51
Collect Date:	07/08/2014 13:25	**Dilution:**	1	**File ID:**	5L013074.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
RDX	121-82-4	22.3		1.09	0.272

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7	4.23		1.09	0.272
2-Amino-4,6-dinitrotoluene	35572-78-2	3.87		1.09	0.272
4-Amino-2,6-dinitrotoluene	19406-51-0	7.91		1.09	0.272

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	96.4	50	150	

Sample #:	L14070524-06	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	FB001(070814)	**Prep Method:**	METHOD	**Prep Date:**	07/14/2014 08:08
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG484128	**Analyst:**	ECL	**Run Date:**	07/15/2014 23:30
Collect Date:	07/08/2014 12:00	**Dilution:**	1	**File ID:**	5L013075.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
RDX	121-82-4		U	1.00	0.250
2,4,6-Trinitrotoluene	118-96-7		U	1.00	0.250
2-Amino-4,6-dinitrotoluene	35572-78-2		U	1.00	0.250
4-Amino-2,6-dinitrotoluene	19406-51-0		U	1.00	0.250

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	99.9	50	150	

U	Not detected at or above adjusted sample detection limit

2.1.1.2 QC Summary Data

Example 8330 Calculations

Sample Concentration from Linear Regression

Step 1: Retrieve Curve Data From Plot (y = mx + b)

y = response of analyte as area (from quantitation report)
x = concentration analyte
m = slope from curve
b = intercept from curve

Step 2: Retrieve y from quantitation report

Step 3: Retreive extraction data from logsheet

Vf = Final extract volume (mL)
Vi = Initial vome of sample (mL) or initial weight (g)

Step 4: Solve for concentration in extract (x):

x = (y - b)/m = [(7.774 -(- 0.04773)]/ 0.1711 = 45.2

Step 5: Solve for analyte concentration in sample (Cx):

Cx = (x) (Vf /Vi)

Example CCV Calculation: **(Vf/Vi) = 1**
HMX

Slope from curve, m:	0.171145
Intercept from curve, b:	0.0436711
Area of analyte, y:	7.774
Concentration (ug/L):	45.16830115

Example Water Calculation:

Slope from curve, m:	0.171145
Intercept from curve, b:	0.0436711
Area of analyte, y:	7.774
Volume of extract (mL):	10.00
Volume of sample extracted (mL):	1000.00
Concentration (ug/L):	0.451683011

Example Soil Calculation:
1,3,5-Trinitrobenzene

Slope from curve, m:	0.411263
Intercept from curve, b:	-0.0850241
Area of analyte, y:	20.26089
Volume of extract (mL):	20.00
Weight of sample extracted (g):	2.00
Concentration (ug/kg):	494.7178351
Concentration (mg/kg):	0.494717835

Microbac Laboratories Inc.
Sample Extract Log

Workgroup: WG483912
Analyst: RAH
Spike Analyst: RAH
Method: METHOD
Run Date: 07/14/2014 08:08
SOP: EXTNT01 Revision 1
Spike Witness: CSH
Surr Solution: STD65238

Acetonitrile Lot #: COA17000
WATER Lot #: COA17319
Methanol Lot #: COA17513
SDB-RPS (SPE DISK) Lot #: COA17386

	SAMPLE #	Type	Reference	pH	Prod	Init Amnt	Surr Amnt	Spike Amnt	Spike Sol	Final Vol	Color
1	L14070452-01	SAMP			8330	880 mL	.5 mL			10 mL	Transparent
2	L14070452-02	SAMP			8330	880 mL	.5 mL			10 mL	Transparent
3	L14070452-03	SAMP			8330	900 mL	.5 mL			10 mL	Transparent
4	L14070452-04	SAMP			8330	900 mL	.5 mL			10 mL	Transparent
5	L14070452-05	SAMP			8330	840 mL	.5 mL			10 mL	Transparent
6	L14070459-01	SAMP			8330	920 mL	.5 mL			10 mL	Transparent
7	L14070459-04	SAMP			8330	830 mL	.5 mL			10 mL	Transparent
8	L14070524-01	SAMP			8330-SPE1	930 mL	.5 mL			10 mL	Transparent
9	L14070524-02	SAMP			8330-SPE1	910 mL	.5 mL			10 mL	Transparent
10	L14070524-03	SAMP			8330-SPE1	1000 mL	.5 mL			10 mL	Transparent
11	L14070524-04	SAMP			8330-SPE1	910 mL	.5 mL			10 mL	Transparent
12	L14070524-05	SAMP			8330-SPE1	920 mL	.5 mL			10 mL	Transparent
13	L14070524-06	SAMP			8330-SPE1	1000 mL	.5 mL			10 mL	Transparent
14	L14070647-01	SAMP			8330	1000 mL	.5 mL			10 mL	Transparent
15	WG483912-01	BLANK			8330	1000 mL	.5 mL			10 mL	Transparent
16	WG483912-02	LCS			8330	1000 mL	.5 mL	.5 mL	STD65237	10 mL	Transparent
17	WG483912-03	LCS2			8330	1000 mL	.5 mL	.5 mL	STD65237	10 mL	Transparent

Due to insufficient sample volume, this preparation batch failed to include the method prescribed MS and MSD.

L14070459-04	VERY SLOW TO FILTER THROUGH SPE DISK

Analyst: RAH

Reviewer: Cheryl A. Flowers

EXTRACT - Modified 10/22/2008
PDF ID: 3653477
Report generated: 07/14/2014 16:03

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPLC5 Dataset: 070914
Analyst1: ECL Analyst2: NA
Method: 8330-PLUS SOP: HPLC02 Rev: 18

Maintenance Log ID: Syringe Filter Lot#: 00174785
Eluent ID#:
Column 1 ID: ULTRACARB5 ODS Column 2 ID: NA
Workgroups:
Internal STD: NA Surrogate STD: STD65238 Calibration STD
CCV STD: STD65351 LCS STD: STD65237 MS/MSD STD:

Comments: Pressure = 177 bar

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	5L012964.F	WG483233-01 8330 ICAL 2500 PPB	1	1	STD65351	07/09/14 13:26
2	5L012965.F	WG483233-02 8330 ICAL 1000 PPB	1	1	STD65351	07/09/14 14:05
3	5L012966.F	WG483233-03 8330 ICAL 500 PPB	1	1	STD65351	07/09/14 14:44
4	5L012967.F	WG483233-04 8330 ICAL 100 PPB	1	1	STD65351	07/09/14 15:23
5	5L012968.F	WG483233-05 8330 ICAL 50 PPB	1	1	STD65351	07/09/14 16:02
6	5L012969.F	WG483233-06 8330 ICAL 25 PPB	1	1	STD65351	07/09/14 16:41
7	5L012970.F	WG483233-07 8330 ALT 500 PPB	1	1	STD65377	07/09/14 17:20
8	5L012971.F	WG482432-01 BLANK	1	1		07/09/14 18:00
9	5L012972.F	WG482432-02 LCS	1	1		07/09/14 18:39
10	5L012973.F	WG482432-03 LCS DUP	1	1		07/09/14 19:18
11	5L012974.F	L14061431-02	1	1		07/09/14 19:57
12	5L012975.F	L14061431-04	1	1		07/09/14 20:36
13	5L012976.F	L14061689-10	1	1		07/09/14 21:15
14	5L012977.F	L14061689-12	1	1		07/09/14 21:54
15	5L012978.F	L14061689-14	1	1		07/09/14 22:33
16	5L012979.F	L14061689-16	1	1		07/09/14 23:12
17	5L012980.F	L14061689-18	1	1		07/09/14 23:51
18	5L012981.F	WG483357-01 8330 CCV 500 PPB	1	1	STD65351	07/10/14 00:30
19	5L012982.F	WG482631-01 BLANK	1	1		07/10/14 01:09
20	5L012983.F	WG482631-02 LCS	1	1		07/10/14 01:48
21	5L012984.F	WG482631-03 LCS DUP	1	1		07/10/14 02:28
22	5L012985.F	L14061689-29	1	1		07/10/14 03:07
23	5L012986.F	L14061689-31	1	1		07/10/14 03:46
24	5L012987.F	L14061689-33	1	1		07/10/14 04:25
25	5L012988.F	L14061689-35	1	1		07/10/14 05:04
26	5L012989.F	L14061689-37	1	1		07/10/14 05:43
27	5L012990.F	WG483357-02 8330 CCV 500 PPB	1	1	STD65351	07/10/14 06:22
28	5L012991.F	AcCN Rinse	1	1		07/10/14 07:01

Comments

Seq.	Rerun	Dil.	Reason	Analytes
7				
	WG483233-07 8330 ALT 500 PPB: Tetryl failed marginally low.			

Page: 1 Approved: 10-JUL-14

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPLC5 Dataset: 070914
Analyst1: ECL Analyst2: NA
Method: 8330-PLUS SOP: HPLC02 Rev: 18

Maintenance Log ID: Syringe Filter Lot#: 00174785
Eluent ID#:
Column 1 ID: ULTRACARB5 ODS Column 2 ID: NA
Workgroups:
Internal STD: NA Surrogate STD: STD65238
CCV STD: STD65351 LCS STD: STD65237

Comments

Seq.	Rerun	Dil.	Reason	Analytes
11	X		Required second column confirmation	RDX
	L14061431-02			
12	X		Required second column confirmation	RDX
	L14061431-04			
18				
	WG483357-01 8330 CCV 500 PPB: Tetryl failed low.			
20				
	WG482631-02 LCS: 6 analytes failed high. There were no hits in samples associated with this LCS.			
21				
	WG482631-03 LCS DUP: 6 analytes failed high. There were no hits in samples associated with this LCS.			
23				
	L14061689-31: 1,2-DNB surrogate failed marginally low. Sample took several hours to filter and not all the sample would filter.			
27				
	WG483357-02 8330 CCV 500 PPB: Tetryl failed low.			

Page: 2 Approved: 10-JUL-14

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPLC5 Dataset: 071514
Analyst1: ECL Analyst2: NA
Method: 8330-PLUS SOP: HPLC02 Rev: 18

Maintenance Log ID: Syringe Filter Lot#: 00174785
Eluent ID#:

Workgroups: Column 1 ID: ULTRACARB5 ODS Column 2 ID: NA

Internal STD: NA Surrogate STD: STD65238 Calibration STD
CCV STD: STD65351 LCS STD: STD65237 MS/MSD STD:

Comments: Pressure = 172 bar

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	5L013055.F	WG484130-01 8330 CCV 500 PPB	1	1	STD65351	07/15/14 09:51
2	5L013056.F	WG483912-01 BLANK	1	1		07/15/14 11:08
3	5L013057.F	WG483912-02 LCS	1	1		07/15/14 11:47
4	5L013058.F	WG483912-03 LCS DUP	1	1		07/15/14 12:26
5	5L013059.F	L14070273-37 5x	1	5		07/15/14 13:05
6	5L013060.F	L14070273-39 5x	1	5		07/15/14 13:44
7	5L013061.F	L14070273-38 10x	1	10		07/15/14 14:23
8	5L013062.F	L14070452-01	1	1		07/15/14 15:02
9	5L013063.F	L14070452-02	1	1		07/15/14 15:42
10	5L013064.F	L14070452-03	1	1		07/15/14 16:21
11	5L013065.F	L14070452-04	1	1		07/15/14 17:00
12	5L013066.F	WG484130-02 8330 CCV 500 PPB	1	1	STD65351	07/15/14 17:39
13	5L013067.F	L14070452-05	1	1		07/15/14 18:18
14	5L013068.F	L14070459-01	1	1		07/15/14 18:57
15	5L013069.F	L14070459-04	1	1		07/15/14 19:36
16	5L013070.F	L14070524-01	1	1		07/15/14 20:15
17	5L013071.F	L14070524-02	1	1		07/15/14 20:54
18	5L013072.F	L14070524-03	1	1		07/15/14 21:33
19	5L013073.F	L14070524-04	1	1		07/15/14 22:12
20	5L013074.F	L14070524-05	1	1		07/15/14 22:51
21	5L013075.F	L14070524-06	1	1		07/15/14 23:30
22	5L013076.F	L14070647-01	1	1		07/16/14 00:09
23	5L013077.F	WG484130-03 8330 CCV 500 PPB	1	1	STD65351	07/16/14 00:48
24	5L013078.F	AcCN Rinse	1	1		07/16/14 01:28

Comments

Seq.	Rerun	Dil.	Reason	Analytes
17	X	10	Over Calibration Range	3 analytes
	L14070524-02			

Page: 1 Approved: 16-JUL-14

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPLC5 Dataset: 071614
Analyst1: ECL Analyst2: NA
Method: 8330-PLUS SOP: HPLC02 Rev: 18

Maintenance Log ID: Syringe Filter Lot#: 00174785
Eluent ID#:
Column 1 ID: ULTRACARB5 ODS Column 2 ID: NA
Workgroups:
Internal STD: NA Surrogate STD: STD65238 Calibration STD
CCV STD: STD65351 LCS STD: STD65237 MS/MSD STD: STD65237

Comments: Pressure = 173 bar
Files 5L013094 to 5L013097 need rerun due to the wrong method used to acquire the data.

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	5L013079.F	WG484423-01 8330 CCV 500 PPB	1	1	STD65351	07/16/14 13:08
2	5L013080.F	WG484160-01 BLANK	7	1		07/16/14 13:47
3	5L013081.F	WG484160-02 LCS	7	1		07/16/14 14:26
4	5L013082.F	L14070003-01	7	1		07/16/14 15:05
5	5L013083.F	L14070005-01	7	1		07/16/14 15:44
6	5L013084.F	L14070459-02	7	1		07/16/14 16:23
7	5L013085.F	WG484160-05 L14070459-02 MS	7	1		07/16/14 17:02
8	5L013086.F	WG484160-06 L14070459-02 MSD	7	1		07/16/14 17:42
9	5L013087.F	L14070459-03	7	1		07/16/14 18:21
10	5L013088.F	L14070524-02 10x	1	1		07/16/14 19:00
11	5L013089.F	WG484423-02 8330 CCV 500 PPB	1	1	STD65351	07/16/14 19:39
12	5L013090.F	Solvent Rinse	1	1	STD65351	07/16/14 20:18
13	5L013091.F	Solvent Rinse	1	1	STD65351	07/16/14 20:38
14	5L013092.F	WG484425-01 PETN CCV 500 PPB	1	1	STD63527	07/16/14 20:57
15	5L013093.R	WG484160-01 BLANK	7	1		07/16/14 21:16
16	5L013094.R	WG484160-03 PETN LCS	7	1		07/16/14 21:55
17	5L013095.R	L14070003-01	7	1		07/16/14 22:34
18	5L013096.R	L14070005-01	7	1		07/16/14 23:14
19	5L013097.F	WG484425-02 PETN CCV 500 PPB	1	1	STD63527	07/16/14 23:53
20	5L013098.R	AcCN Rinse	1	1		07/17/14 00:13

Comments

Seq.	Rerun	Dil.	Reason	Analytes
8				
	L14070459-02 MSD: 1,3,5-TNB and 4-amino-2,6-DNT failed low.			
9	X	20	Over Calibration Range	2,4,6-TNT
	L14070459-03			

Page: 1 Approved: 17-JUL-14

Microbac Laboratories Inc.

Data Checklist

Date: 09-JUL-2014
Analyst: ECL
Analyst: NA
Method: 8330
Instrument: HPLC5
Curve Workgroup: NA
Runlog ID: 62106
Analytical Workgroups: L14061431, L14061689

ANALYTICAL	
System Performance Check	NA
DFTPP (MS)	NA
Endrin/DDT breakdown (8081/MS)	NA
Pentachlorophenol/benzidine tailing (MS)	NA
Eluent check (IC)/system pressure (HPLC)	X
Window standard (FID)	NA
Initial Calibration	X
Average RF	NA
Linear regression or higher order curve	X
Alternate source standard (ICV) % Difference	X
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (MS)	NA
Continuing calibration blank (CCB) (IC)	NA
Special standards	NA
Blanks	X
TCL hits	X
Surrogate recoveries	X
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	X
MS/MSD/Sample duplicates	NA
Recoveries	NA
%RPD	NA
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	X
Surrogate recoveries	X
Internal standard areas (MS)	NA
Library searches (MS)	NA
Calculations & correct factors	X
Compounds above calibration range	NA
Reruns	NA
Manual integrations	NA
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	
Check for completeness	X
Primary Reviewer	ECL
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	MDC

Primary Reviewer:
10-JUL-2014

Secondary Reviewer:
10-JUL-2014

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-10-2014 19:08:43

Microbac Laboratories Inc.

Data Checklist

Date: 15-JUL-2014
Analyst: ECL
Analyst: NA
Method: 8330
Instrument: HPLC5
Curve Workgroup: NA
Runlog ID: 62219
Analytical Workgroups: L14070273, L14070452, L14070459, L14070524, L14070647

ANALYTICAL	
System Performance Check	NA
DFTPP (MS)	NA
Endrin/DDT breakdown (8081/MS)	NA
Pentachlorophenol/benzidine tailing (MS)	NA
Eluent check (IC)/system pressure (HPLC)	X
Window standard (FID)	NA
Initial Calibration	NA
Average RF	NA
Linear regression or higher order curve	NA
Alternate source standard (ICV) % Difference	NA
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (MS)	NA
Continuing calibration blank (CCB) (IC)	NA
Special standards	NA
Blanks	X
TCL hits	X
Surrogate recoveries	X
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	X
MS/MSD/Sample duplicates	NA
Recoveries	NA
%RPD	NA
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	X
Surrogate recoveries	X
Internal standard areas (MS)	NA
Library searches (MS)	NA
Calculations & correct factors	X
Compounds above calibration range	X
Reruns	X
Manual integrations	NA
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	
Check for completeness	X
Primary Reviewer	ECL
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	MDC

Primary Reviewer:
16-JUL-2014

Secondary Reviewer:
16-JUL-2014

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-16-2014 13:49:48

Microbac Laboratories Inc.

Data Checklist

Date: 16-JUL-2014
Analyst: ECL
Analyst: NA
Method: 8330
Instrument: HPLC5
Curve Workgroup: NA
Runlog ID: 62254
Analytical Workgroups: L14070459, L14070524, L14070003, L14070005

ANALYTICAL	
System Performance Check	NA
DFTPP (MS)	NA
Endrin/DDT breakdown (8081/MS)	NA
Pentachlorophenol/benzidine tailing (MS)	NA
Eluent check (IC)/system pressure (HPLC)	X
Window standard (FID)	NA
Initial Calibration	NA
Average RF	NA
Linear regression or higher order curve	NA
Alternate source standard (ICV) % Difference	NA
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (MS)	NA
Continuing calibration blank (CCB) (IC)	NA
Special standards	X
Blanks	X
TCL hits	X
Surrogate recoveries	X
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	X
MS/MSD/Sample duplicates	X
Recoveries	X
%RPD	X
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	X
Surrogate recoveries	X
Internal standard areas (MS)	NA
Library searches (MS)	NA
Calculations & correct factors	X
Compounds above calibration range	X
Reruns	X
Manual integrations	NA
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	
Check for completeness	X
Primary Reviewer	ECL
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	MDC

Primary Reviewer:
17-JUL-2014

Secondary Reviewer:
17-JUL-2014

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-17-2014 14:10:15

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8330B

AAB#: WG484128

Login Number: L14070524

Client ID	ID	Date Collected	TCLP Date	Time Held	Max Hold	Q	Extract Date	Time Held	Max Hold	Q	Run Date	Time Held	Max Hold	Q
I-40MW001(070814)	01	07/08/14					07/14/2014	5.8	7		07/15/14	1.5	40	
I-40MW002(070814)	02	07/08/14					07/14/2014	5.8	7		07/16/14	2.5	40	
I-40MW002(070814)	02	07/08/14					07/14/2014	5.8	7		07/15/14	1.5	40	
I-40MW003(070814)	03	07/08/14					07/14/2014	5.8	7		07/15/14	1.6	40	
I-40MW005(070814)	04	07/08/14					07/14/2014	5.8	7		07/15/14	1.6	40	
I-40MW006(070814)	05	07/08/14					07/14/2014	5.8	7		07/15/14	1.6	40	
FB001(070814)	06	07/08/14					07/14/2014	5.8	7		07/15/14	1.6	40	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 3658797
Report generated 07/17/2014 14:33

Microbac Laboratories Inc.
SURROGATE STANDARDS

Login Number: L14070524
Instrument Id: HPLC5
Workgroup (AAB#): WG484128

Method: 8330
CAL ID: HPLC5-09-JUL-14
Matrix: Water

Sample Number	Dilution	Tag	1
L14070524-01	1.00	01	77.6
L14070524-02	1.00	01	92.4
L14070524-02	10.0	DL01	89.2
L14070524-03	1.00	01	99.7
L14070524-04	1.00	01	89.3
L14070524-05	1.00	01	96.4
L14070524-06	1.00	01	99.9
WG483912-01	1.00	01	87.3
WG483912-02	1.00	01	108
WG483912-03	1.00	01	110

Surrogates	Surrogate Limits		
1 - 1,2-Dinitrobenzene	50	-	150

Underline = Result out of surrogate limits

DL = surrogate diluted out
ND = surrogate not detected

SURROGATES - Modified 03/06/2008
PDF File ID: 3658805
Report generated: 07/17/2014 14:34

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L14070524
Blank File ID: 5L013056.F
Prep Date: 07/14/14 08:08
Analyzed Date: 07/15/14 11:08
Analyst: ECL

Work Group: WG484128
Blank Sample ID: WG483912-01
Instrument ID: HPLC5
Method: 8330B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG483912-02	5L013057.F	07/15/14 11:47	01
LCS2	WG483912-03	5L013058.F	07/15/14 12:26	01
I-40MW001(070814)	L14070524-01	5L013070.F	07/15/14 20:15	01
I-40MW002(070814)	L14070524-02	5L013071.F	07/15/14 20:54	01
I-40MW003(070814)	L14070524-03	5L013072.F	07/15/14 21:33	01
I-40MW005(070814)	L14070524-04	5L013073.F	07/15/14 22:12	01
I-40MW006(070814)	L14070524-05	5L013074.F	07/15/14 22:51	01
FB001(070814)	L14070524-06	5L013075.F	07/15/14 23:30	01
I-40MW002(070814)	L14070524-02	5L013088.F	07/16/14 19:00	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 3658798
Report generated 07/17/2014 14:33

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L14070524 Prep Date: 07/14/14 08:08 Sample ID: WG483912-01
Instrument ID: HPLC5 Run Date: 07/15/14 11:08 Prep Method: METHOD
File ID: 5L013056.F Analyst: ECL Method: 8330B
Workgroup (AAB#): WG484128 Matrix: Water Units: ug/L
Contract #: Cal ID: HPLC5-09-JUL-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
RDX	0.250	1.00	1.00	1	U
2,4,6-Trinitrotoluene	0.250	1.00	1.00	1	U
2-Amino-4,6-dinitrotoluene	0.250	1.00	1.00	1	U
4-Amino-2,6-dinitrotoluene	0.250	1.00	1.00	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
1,2-Dinitrobenzene	87.3	50 - 150	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 3658799
17-JUL-2014 14:33

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14070524 Analyst: ECL Prep Method: METHOD
Instrument ID: HPLC5 Matrix: Water Method: 8330B
Workgroup (AAB#): WG484128 Units: ug/L
QC Key: STD Lot #: STD65237

Sample ID: WG483912-02 LCS File ID: 5L013057.F Run Date: 07/15/2014 11:47
Sample ID: WG483912-03 LCS2 File ID: 5L013058.F Run Date: 07/15/2014 12:26

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
2,4,6-Trinitrotoluene	5.00	4.73	94.6	5.00	4.87	97.4	2.87	40 - 145	20	
2-Amino-4,6-dinitrotoluene	5.00	5.01	100	5.00	5.19	104	3.59	50 - 155	20	
4-Amino-2,6-dinitrotoluene	5.00	4.75	95.0	5.00	4.95	98.9	4.05	55 - 155	20	
RDX	5.00	4.55	91.1	5.00	4.70	94.0	3.17	50 - 160	20	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
1,2-Dinitrobenzene	108	110	50 - 150	PASS

* EXCEEDS %REC LIMIT

\# EXCEEDS RPD LIMIT

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 3658800
Report generated: 07/17/2014 14:34

Microbac Laboratories Inc.

INITIAL CALIBRATION SUMMARY

Login Number: L14070524
Analytical Method: 8330B
ICAL Workgroup: WG483233

Instrument ID: HPLC5
Initial Calibration Date: 09-JUL-14 16:41
Column ID: F

Analyte		AVG RF	% RSD	LINEAR (R)	QUAD (R^2)
2,4,6-Trinitrotoluene		2.544	2.55	1.00000	
2-Amino-4,6-Dinitrotoluene		2.763	5.50	1.00000	
4-Amino-2,6-Dinitrotoluene		4.276	3.89	1.00000	
RDX		4.468	19.1	1.00000	

R = Correlation coefficient; 0.995 minimum
R^2 = Coefficient of determination; 0.99 minimum

This method always uses linear calibration model (R)

INT_CAL - Modified 03/06/2008
PDF File ID: 3658801
Report generated 07/17/2014 14:34

Microbac Laboratories Inc.

INITIAL CALIBRATION DATA

Login Number: L14070524

Analytical Method: 8330B

Instrument ID: HPLC5

Initial Calibration Date: 09-JUL-14 16:41

Column ID: F

Analyte	WG483233-01			WG483233-02			WG483233-03		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
2,4,6-Trinitrotoluene	2500	967.202881	2.585	1000	385.309113	2.595	500	190.716125	2.622
2-Amino-4,6-Dinitrotoluene	2500	877.059021	2.850	1000	349.451172	2.862	500	172.491531	2.899
4-Amino-2,6-Dinitrotoluene	2500	570.305420	4.384	1000	228.319305	4.380	500	112.675064	4.438
RDX	2500	484.308258	5.162	1000	195.345810	5.119	500	98.4699020	5.078

INT_CAL - Modified 03/06/2008
PDF File ID: 3658801
Report generated 07/17/2014 14:34

Microbac Laboratories Inc.

INITIAL CALIBRATION DATA

Login Number: L14070524

Analytical Method: 8330B

Instrument ID: HPLC5

Initial Calibration Date: 09-JUL-14 16:41

Column ID: F

Analyte	WG483233-04			WG483233-05			WG483233-06		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
2,4,6-Trinitrotoluene	100	39.8029480	2.512	50.0	20.2711296	2.467	25.0	10.0692062	2.483
2-Amino-4,6-Dinitrotoluene	100	35.7217560	2.799	50.0	18.9889889	2.633	25.0	9.87414837	2.532
4-Amino-2,6-Dinitrotoluene	100	23.2509079	4.301	50.0	12.1103840	4.129	25.0	6.20706463	4.028
RDX	100	22.6424503	4.416	50.0	13.9189634	3.592	25.0	7.26337814	3.442

INT_CAL - Modified 03/06/2008
PDF File ID: 3658801
Report generated 07/17/2014 14:34

Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L14070524 Run Date: 07/09/2014 Sample ID: WG483233-07
Instrument ID: HPLC5 Run Time: 17:20 Method: 8330B
File ID: 5L012970.F Analyst: ECL QC Key: STD
ICal Workgroup: WG483233 Cal ID: HPLC5 - 09-JUL-14

Analyte		Expected	Found	Units	RF	%D	UCL	Q
RDX		500	511	ug/L	4.93	2.20	30	
2,4,6-Trinitrotoluene		500	500	ug/L	2.59	0	30	
2-Amino-4,6-Dinitrotoluene		500	501	ug/L	2.85	0.100	30	
4-Amino-2,6-Dinitrotoluene		500	522	ug/L	4.20	4.40	30	

* Exceeds %D Limit

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 3658802
Report generated 07/17/2014 14:34

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14070524
Run Date: 07/15/2014
Sample ID: WG484130-01
Instrument ID: HPLC5
Run Time: 09:51
Method: 8330B
File ID: 5L013055.F
Analyst: ECL
QC Key: STD
Workgroup (AAB#): WG484128
Cal ID: HPLC5 - 09-JUL-14
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
RDX		500	484	ug/L	5.20	3.27	20	
2,4,6-Trinitrotoluene		500	485	ug/L	2.67	3.02	20	
2-Amino-4,6-Dinitrotoluene		500	497	ug/L	2.87	0.651	20	
4-Amino-2,6-Dinitrotoluene		500	501	ug/L	4.37	0.226	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3658803
Report generated 07/17/2014 14:34

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14070524 Run Date: 07/15/2014 Sample ID: WG484130-02
Instrument ID: HPLC5 Run Time: 17:39 Method: 8330B
File ID: 5L013066.F Analyst: ECL QC Key: STD
Workgroup (AAB#): WG484128 Cal ID: HPLC5 - 09-JUL-14
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
RDX		500	486	ug/L	5.17	2.72	20	
2,4,6-Trinitrotoluene		500	492	ug/L	2.63	1.60	20	
2-Amino-4,6-Dinitrotoluene		500	499	ug/L	2.86	0.253	20	
4-Amino-2,6-Dinitrotoluene		500	502	ug/L	4.37	0.322	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3658803
Report generated 07/17/2014 14:34

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14070524
Run Date: 07/16/2014
Sample ID: WG484130-03
Instrument ID: HPLC5
Run Time: 00:48
Method: 8330B
File ID: 5L013077.F
Analyst: ECL
QC Key: STD
Workgroup (AAB#): WG484128
Cal ID: HPLC5 - 09-JUL-14
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
RDX		500	477	ug/L	5.27	4.55	20	
2,4,6-Trinitrotoluene		500	499	ug/L	2.59	0.158	20	
2-Amino-4,6-Dinitrotoluene		500	506	ug/L	2.82	1.14	20	
4-Amino-2,6-Dinitrotoluene		500	511	ug/L	4.29	2.10	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3658803
Report generated 07/17/2014 14:34

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14070524
Run Date: 07/16/2014
Sample ID: WG484423-01
Instrument ID: HPLC5
Run Time: 13:08
Method: 8330B
File ID: 5L013079.F
Analyst: ECL
QC Key: STD
Workgroup (AAB#): WG484128
Cal ID: HPLC5 - 09-JUL-14
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
RDX		500	454	ug/L	5.53	9.21	20	
2,4,6-Trinitrotoluene		500	477	ug/L	2.71	4.52	20	
2-Amino-4,6-Dinitrotoluene		500	492	ug/L	2.90	1.66	20	
4-Amino-2,6-Dinitrotoluene		500	494	ug/L	4.44	1.26	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3658803
Report generated 07/17/2014 14:34

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14070524
Run Date: 07/16/2014
Sample ID: WG484423-02
Instrument ID: HPLC5
Run Time: 19:39
Method: 8330B
File ID: 5L013089.F
Analyst: ECL
QC Key: STD
Workgroup (AAB#): WG484128
Cal ID: HPLC5 - 09-JUL-14
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
RDX		500	492	ug/L	5.11	1.57	20	
2,4,6-Trinitrotoluene		500	483	ug/L	2.68	3.30	20	
2-Amino-4,6-Dinitrotoluene		500	492	ug/L	2.90	1.67	20	
4-Amino-2,6-Dinitrotoluene		500	489	ug/L	4.48	2.29	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3658803
Report generated 07/17/2014 14:34

2.1.1.3 Sample Data

Data File C:\CHEM32\1\DATA\071514\071514\5L013070.D
Sample Name: L14070524-01

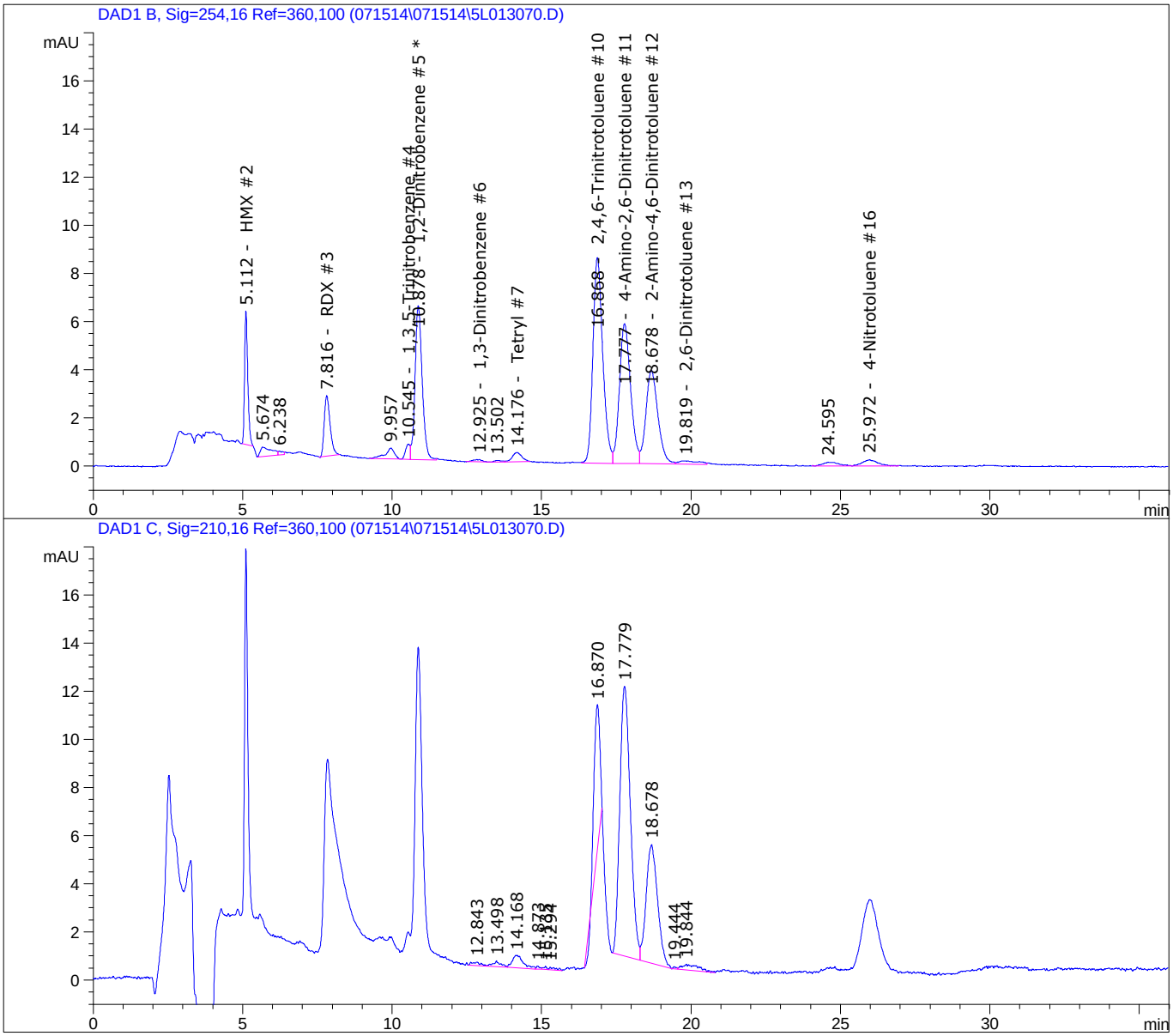
==========

Acq. Operator	: ECL	Seq. Line	: 16
Acq. Instrument	: HPLC5	Location	: Vial 16
Injection Date	: 7/15/2014 8:15:29 PM	Inj	: 1
		Inj Volume	: 100 µl

Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/16/2014 11:54:04 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========



Data File C:\CHEM32\1\DATA\071514\071514\5L013070.D
Sample Name: L14070524-01

==========

Acq. Operator : ECL Seq. Line : 16
Acq. Instrument : HPLC5 Location : Vial 16
Injection Date : 7/15/2014 8:15:29 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/16/2014 11:54:04 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 7/16/2014 11:47:45 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.112	BBA	41.57188	5.87370	244.18064		HMX #2
7.816	BBA	34.18842	4.72371	161.49629		RDX #3
10.545	VV	6.58516	3.04323	20.04012		1,3,5-Trinitrobenzene #4
10.878	VB	106.77898	3.63228	387.85068		1,2-Dinitrobenzene #5 *
12.925	BV	2.17590	2.29064	4.98422		1,3-Dinitrobenzene #6
14.176	VBA	8.41701	4.45281	37.47936		Tetryl #7
14.765		-	-	-		Nitrobenzene #8
16.868	BV	195.19879	2.58806	505.18712		2,4,6-Trinitrotoluene #10
17.777	VV	151.46523	4.38126	663.60855		4-Amino-2,6-Dinitrotoluene #11
18.678	VV	108.40467	2.85107	309.06899		2-Amino-4,6-Dinitrotoluene #12
19.819	VB	6.26052	4.08106	25.54956		2,6-Dinitrotoluene #13
20.483		-	-	-		2,4-Dinitrotoluene #14
24.110		-	-	-		2-Nitrotoluene #15
25.972	VB	8.87044	5.61803	49.83438		4-Nitrotoluene #16
27.707		-	-	-		3-Nitrotoluene #17

Totals : 2409.27991

Data File C:\CHEM32\1\DATA\071514\071514\5L013070.D
Sample Name: L14070524-01

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :  16
Acq. Instrument : HPLC5                          Location : Vial 16
Injection Date  : 7/15/2014 8:15:29 PM                Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed    : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/16/2014 11:54:04 AM by ECL
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  WATER


==================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 15.971            -          -          -         Nitroglycerin #9

Totals :                                 0.00000


2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==================================================================
                           *** End of Report ***
```

Data File C:\CHEM32\1\DATA\071514\071514\5L013070.D
Sample Name: L14070524-01

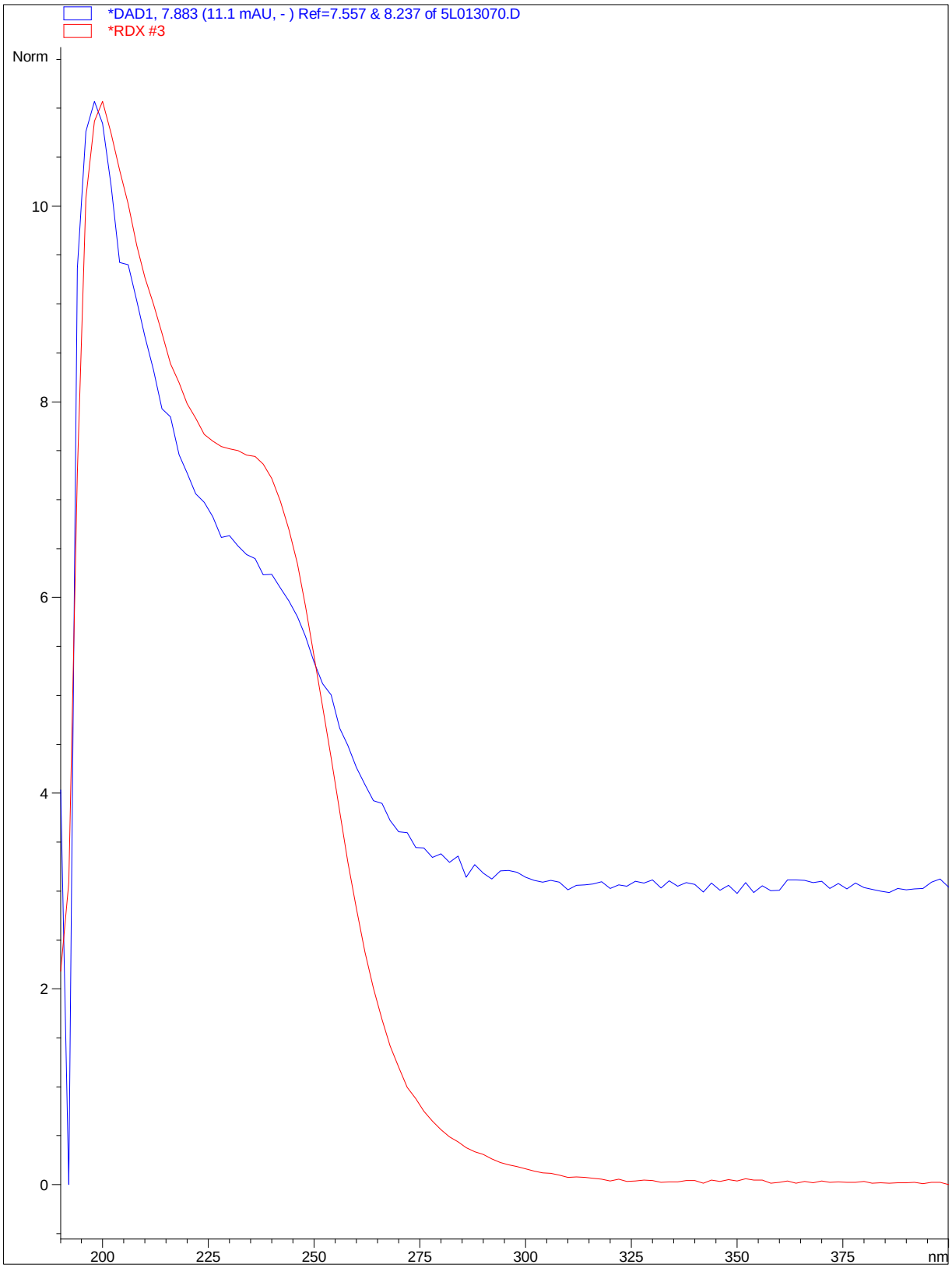
Search result of : DAD1, 7.883 (11.1 mAU, -) Ref=7.557 & 8.237
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 7.489 | 7.489 min

Library search results

#	Match	Entry	Time [min]	Name
1	905.3194	2	7.760	RDX #3

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\071514\071514\5L013070.D
Sample Name: L14070524-01

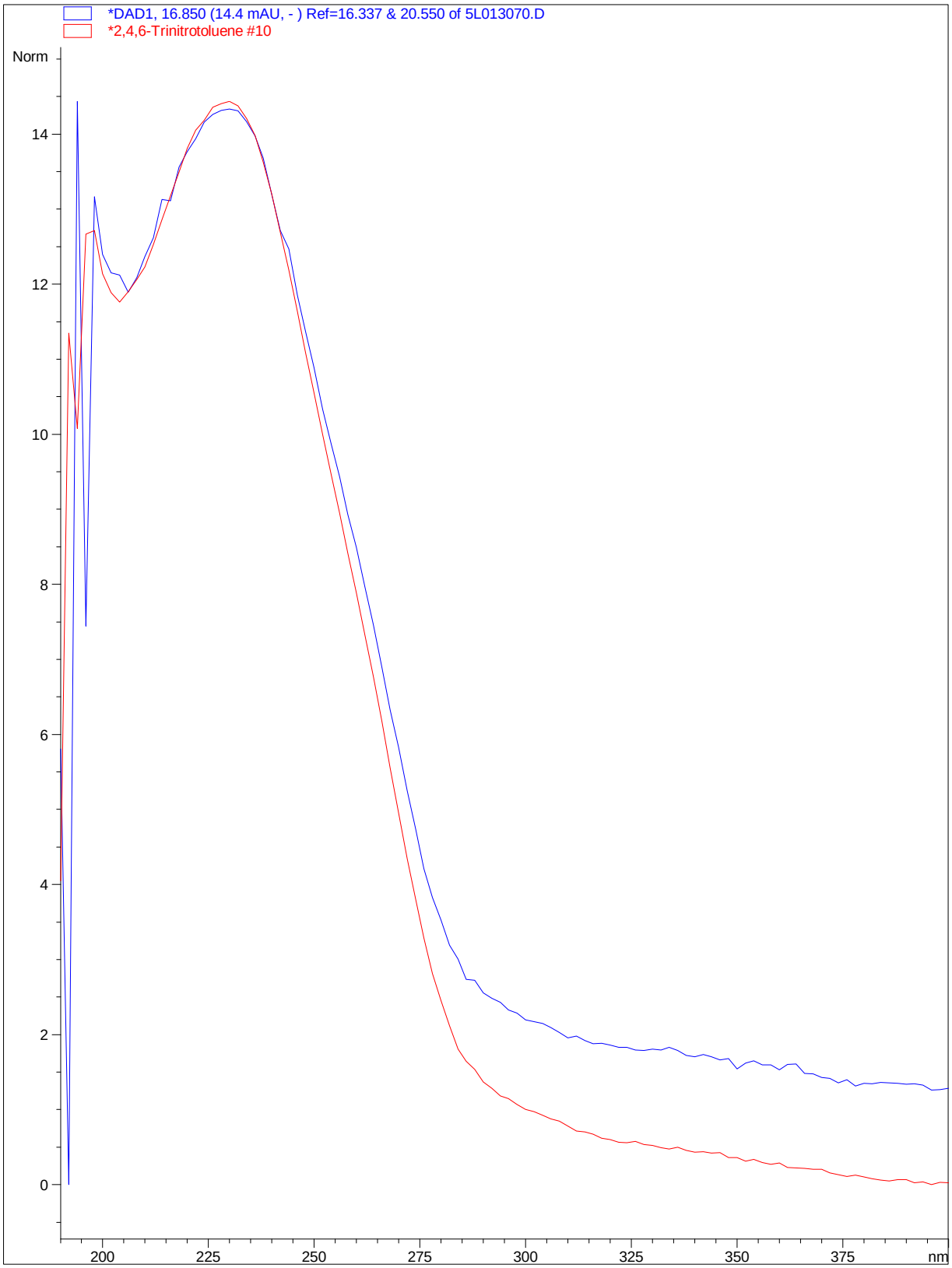
Search result of : DAD1, 16.850 (14.4 mAU, -) Ref=16.337 & 20.550
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 16.008 | 16.008 min

Library search results

#	Match	Entry	Time [min]	Name
1	932.6803	8	16.767	2,4,6-Trinitrotoluene #10
2	860.9127	9	17.596	4-Amino-2,6-Dinitrotoluene #11

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\071514\071514\5L013070.D
Sample Name: L14070524-01

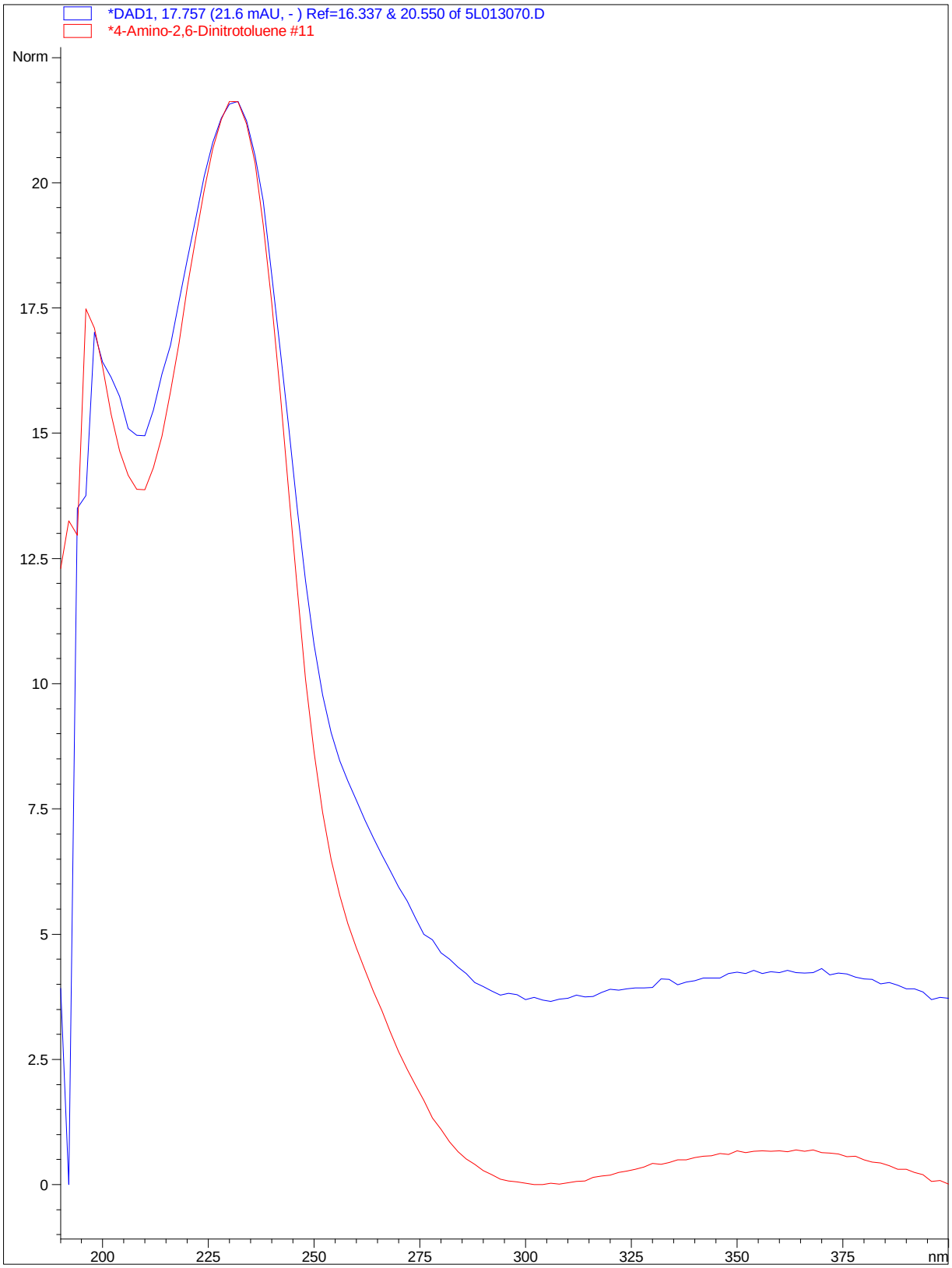
Search result of : DAD1, 17.757 (21.6 mAU, -) Ref=16.337 & 20.550
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 16.869 | 16.869 min

Library search results

#	Match	Entry	Time [min]	Name
1	915.9712	9	17.596	4-Amino-2,6-Dinitrotoluene #11
2	842.1187	10	18.472	2-Amino-4,6-Dinitrotoluene #12

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\071514\071514\5L013070.D
Sample Name: L14070524-01

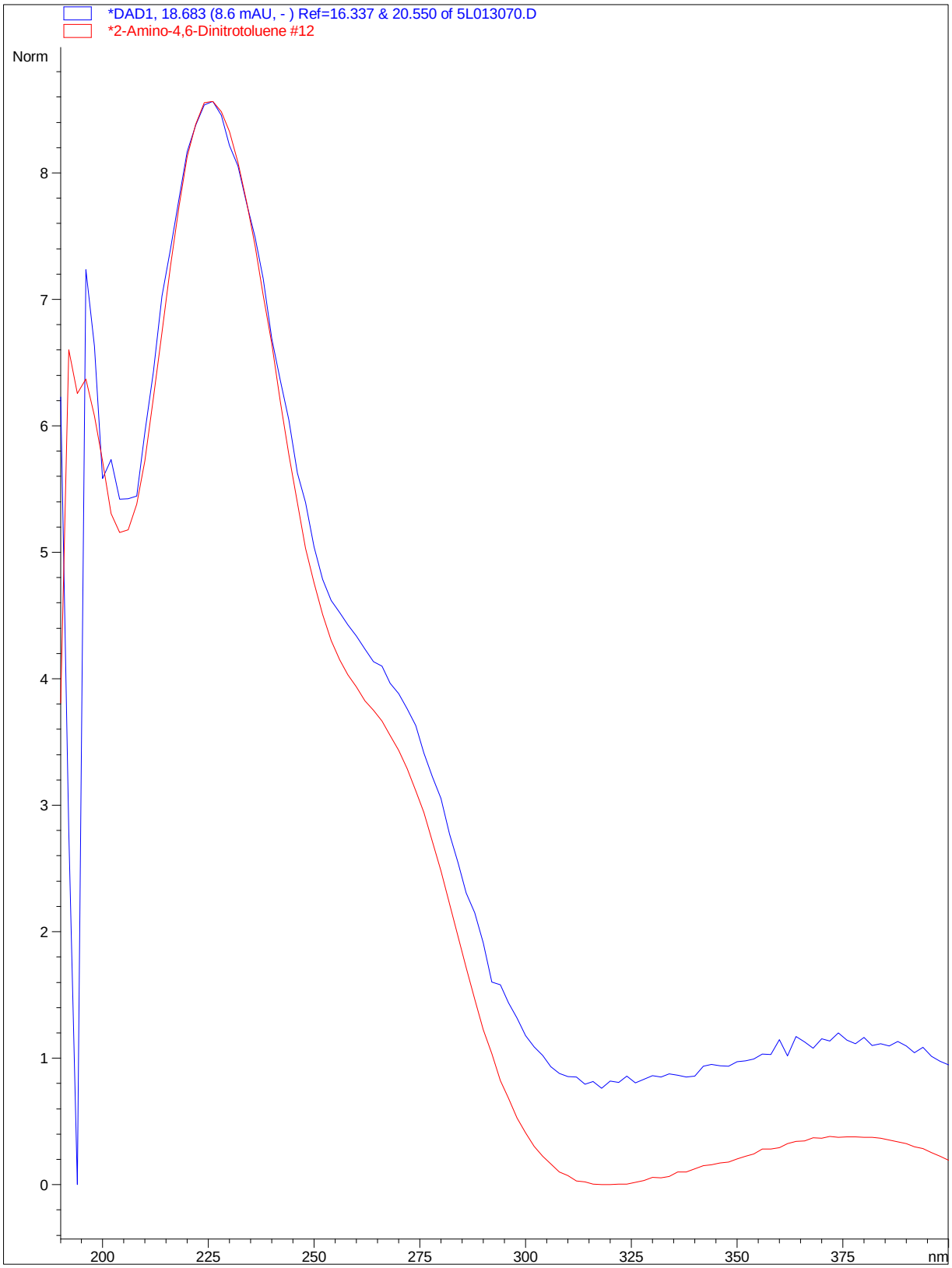
Search result of : DAD1, 18.683 (8.6 mAU, -) Ref=16.337 & 20.550
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 17.749 | 17.749 min

Library search results

#	Match	Entry	Time [min]	Name
1	915.1913	10	18.472	2-Amino-4,6-Dinitrotoluene #12
2	735.8904	11	19.600	2,6-Dinitrotoluene #13

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\071514\071514\5L013071.D
Sample Name: L14070524-02

==========

Acq. Operator	: ECL	Seq. Line :	17
Acq. Instrument	: HPLC5	Location :	Vial 17
Injection Date	: 7/15/2014 8:54:32 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/16/2014 11:54:04 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

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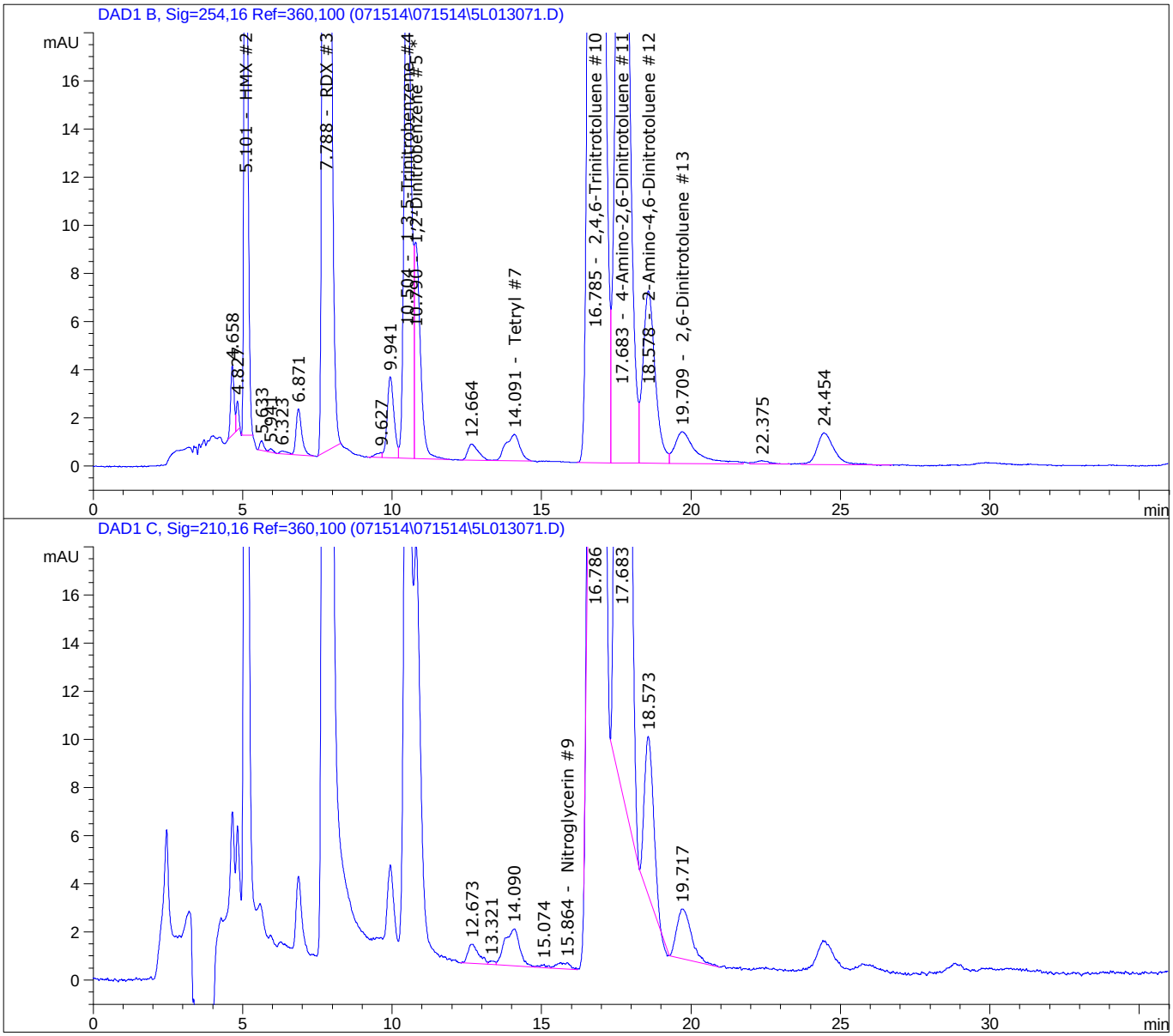

HPLC5 7/16/2014 11:59:04 AM ECL Page 1 of 3

Data File C:\CHEM32\1\DATA\071514\071514\5L013071.D
Sample Name: L14070524-02

==========

Acq. Operator : ECL Seq. Line : 17
Acq. Instrument : HPLC5 Location : Vial 17
Injection Date : 7/15/2014 8:54:32 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/16/2014 11:54:04 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 7/16/2014 11:47:45 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.101	BBA	306.89407	6.00982	1844.37731		HMX #2
7.788	BBA	1492.12341	5.18682	7739.37205		RDX #3
10.504	VV	370.10370	2.55196	944.48872		1,3,5-Trinitrobenzene #4
10.790	VB	127.03719	3.63854	462.23021		1,2-Dinitrobenzene #5 *
12.969		-	-	-		1,3-Dinitrobenzene #6
14.091	VBA	35.62876	4.44293	158.29600		Tetryl #7
14.765		-	-	-		Nitrobenzene #8
16.785	BV	3408.70679	2.58698	8818.24974		2,4,6-Trinitrotoluene #10
17.683	VV	1196.17456	4.38595	5246.36492		4-Amino-2,6-Dinitrotoluene #11
18.578	VV	206.69200	2.85236	589.56066		2-Amino-4,6-Dinitrotoluene #12
19.709	VB	64.12730	4.38827	281.40808		2,6-Dinitrotoluene #13
20.483		-	-	-		2,4-Dinitrotoluene #14
24.110		-	-	-		2-Nitrotoluene #15
25.785		-	-	-		4-Nitrotoluene #16
27.707		-	-	-		3-Nitrotoluene #17

Totals : 2.60843e4

Data File C:\CHEM32\1\DATA\071514\071514\5L013071.D
Sample Name: L14070524-02

==========

Acq. Operator : ECL Seq. Line : 17
Acq. Instrument : HPLC5 Location : Vial 17
Injection Date : 7/15/2014 8:54:32 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/16/2014 11:54:04 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========

Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
15.864	VV	7.70175	4.84060	37.28109		Nitroglycerin #9
Totals :				37.28109		

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File C:\CHEM32\1\DATA\071514\071514\5L013071.D
Sample Name: L14070524-02

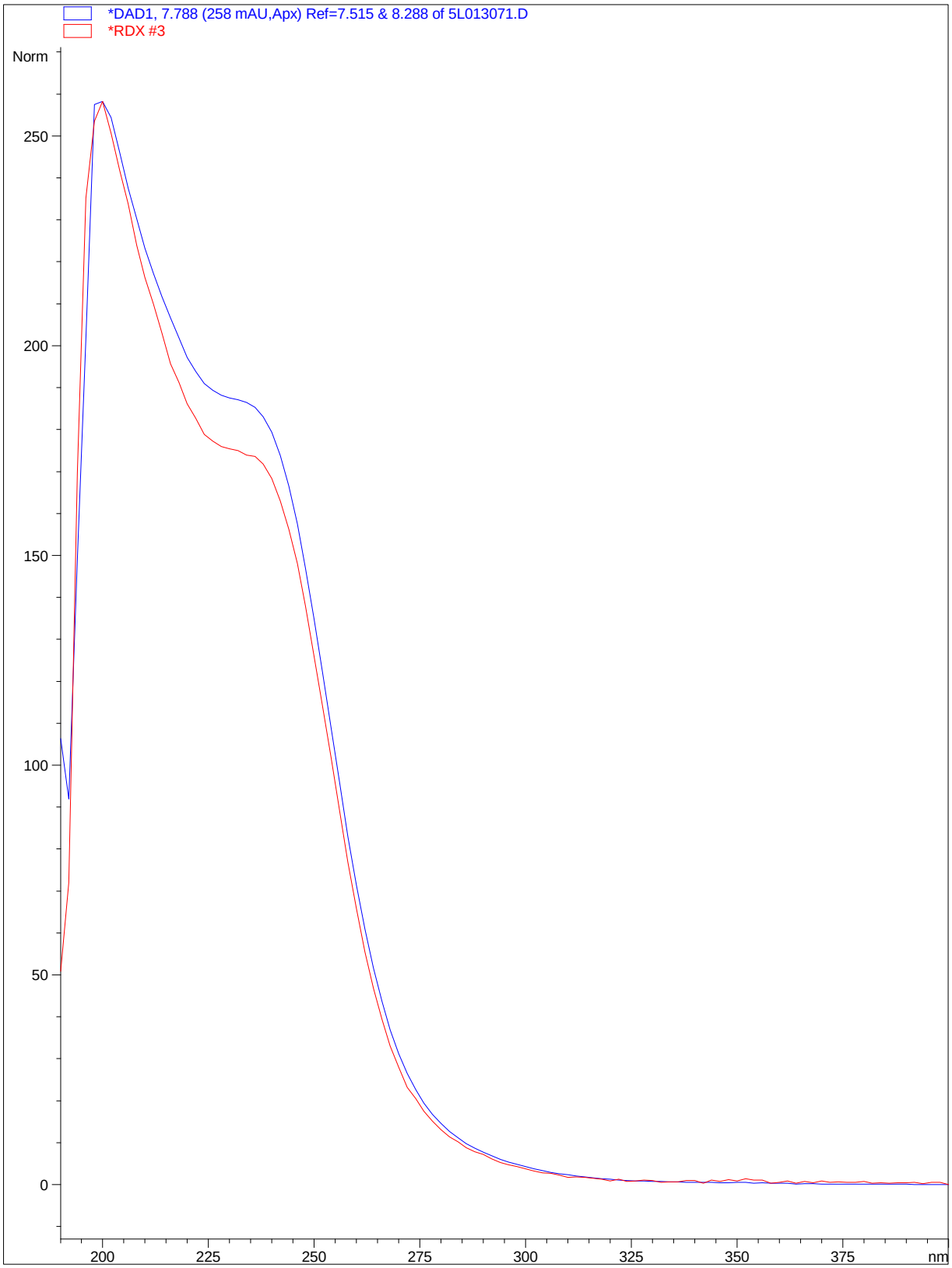
Search result of : DAD1, 7.788 (258 mAU,Apx) Ref=7.515 & 8.288
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 7.399 | 7.399 min

Library search results

#	Match	Entry	Time [min]	Name
1	992.1587	2	7.760	RDX #3

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\071514\071514\5L013071.D
Sample Name: L14070524-02

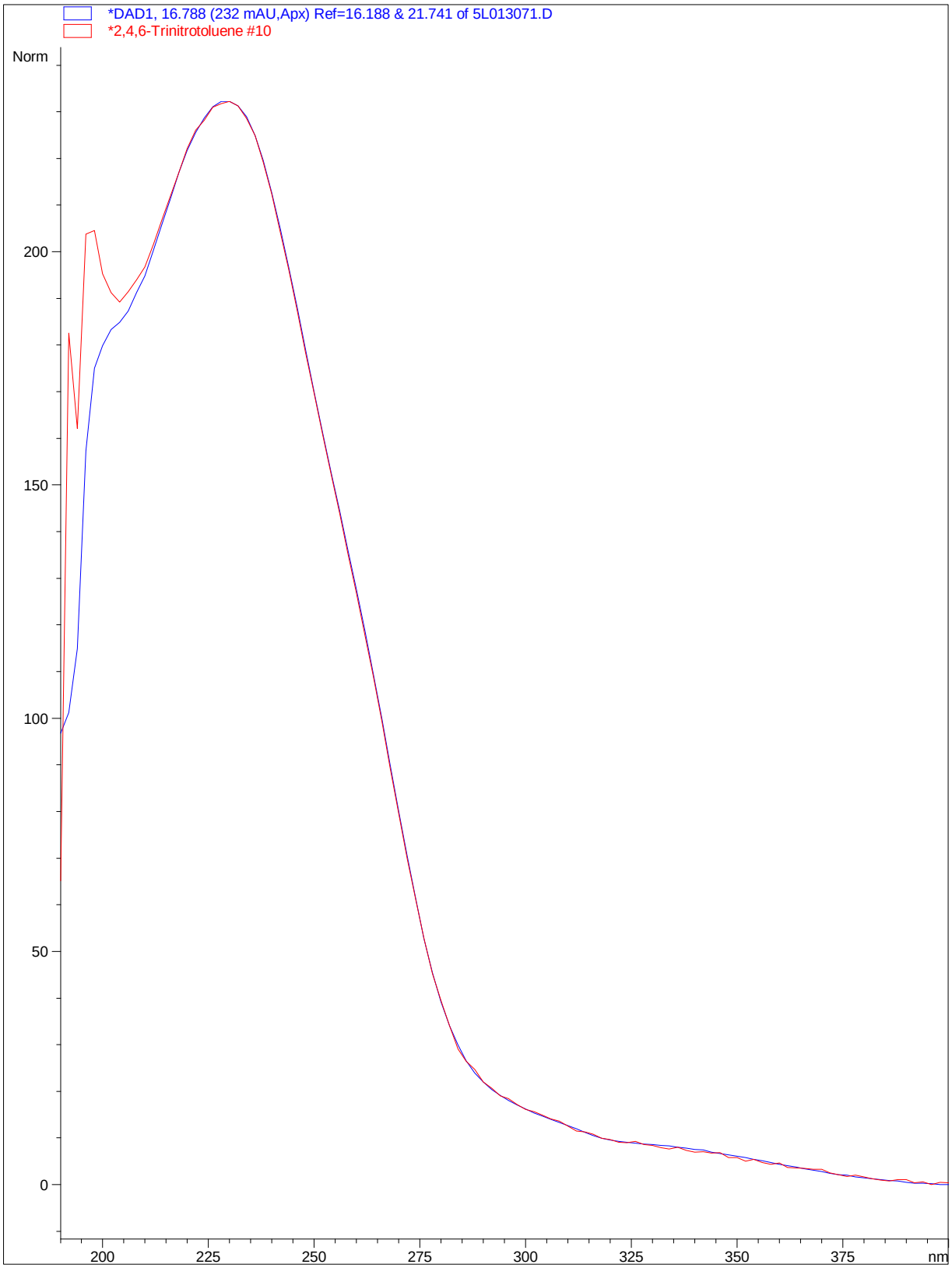
Search result of : DAD1, 16.788 (232 mAU,Apx) Ref=16.188 & 21.741
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 15.949 | 15.949 min

Library search results

#	Match	Entry	Time [min]	Name
1	984.6262	8	16.767	2,4,6-Trinitrotoluene #10
2	908.2601	9	17.596	4-Amino-2,6-Dinitrotoluene #11

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\071514\071514\5L013071.D
Sample Name: L14070524-02

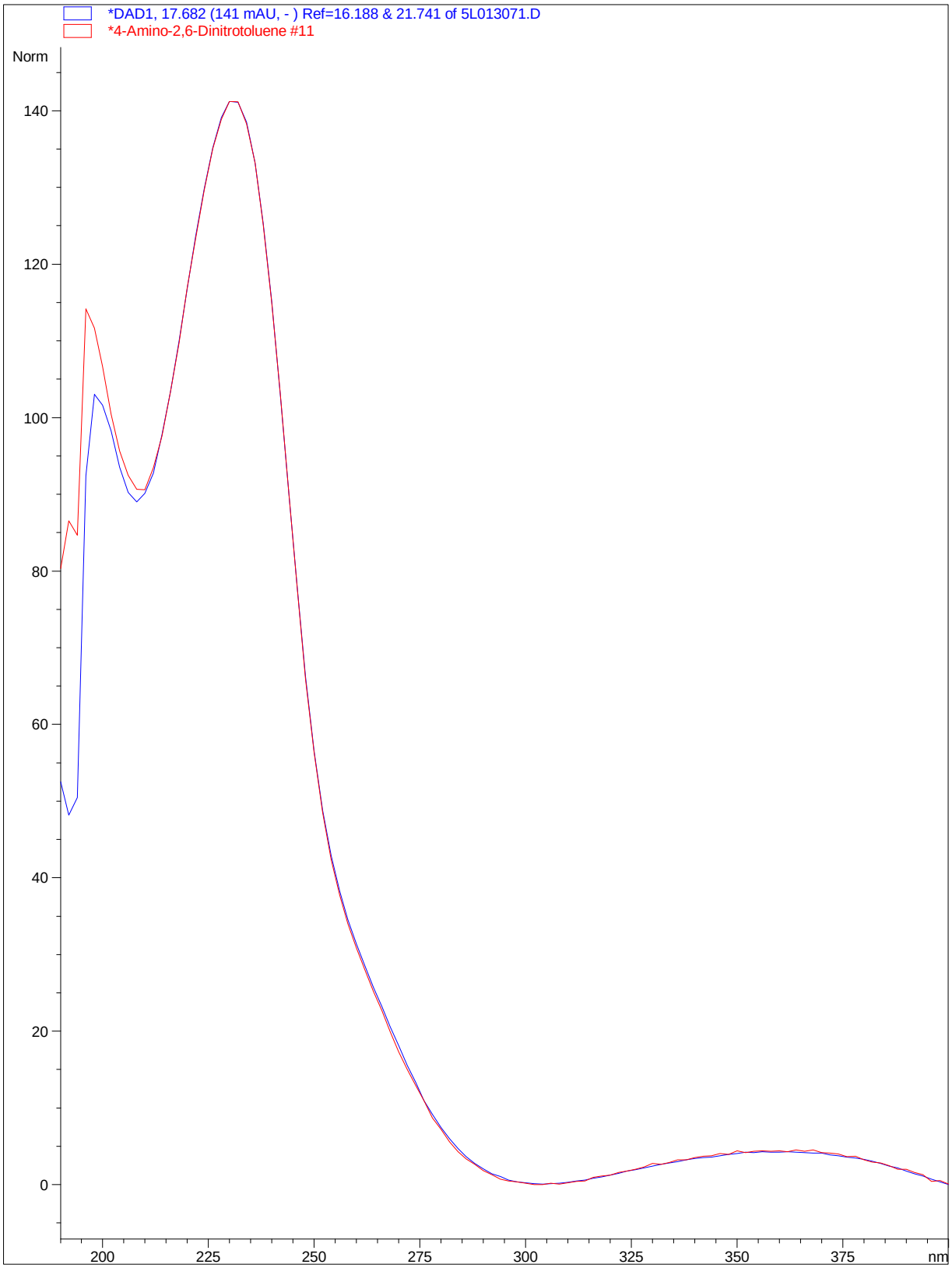
Search result of : DAD1, 17.682 (141 mAU, -) Ref=16.188 & 21.741
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 16.797 | 16.797 min

Library search results

#	Match	Entry	Time [min]	Name
1	984.3171	9	17.596	4-Amino-2,6-Dinitrotoluene #11
2	902.9501	10	18.472	2-Amino-4,6-Dinitrotoluene #12

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\071514\071514\5L013071.D
Sample Name: L14070524-02

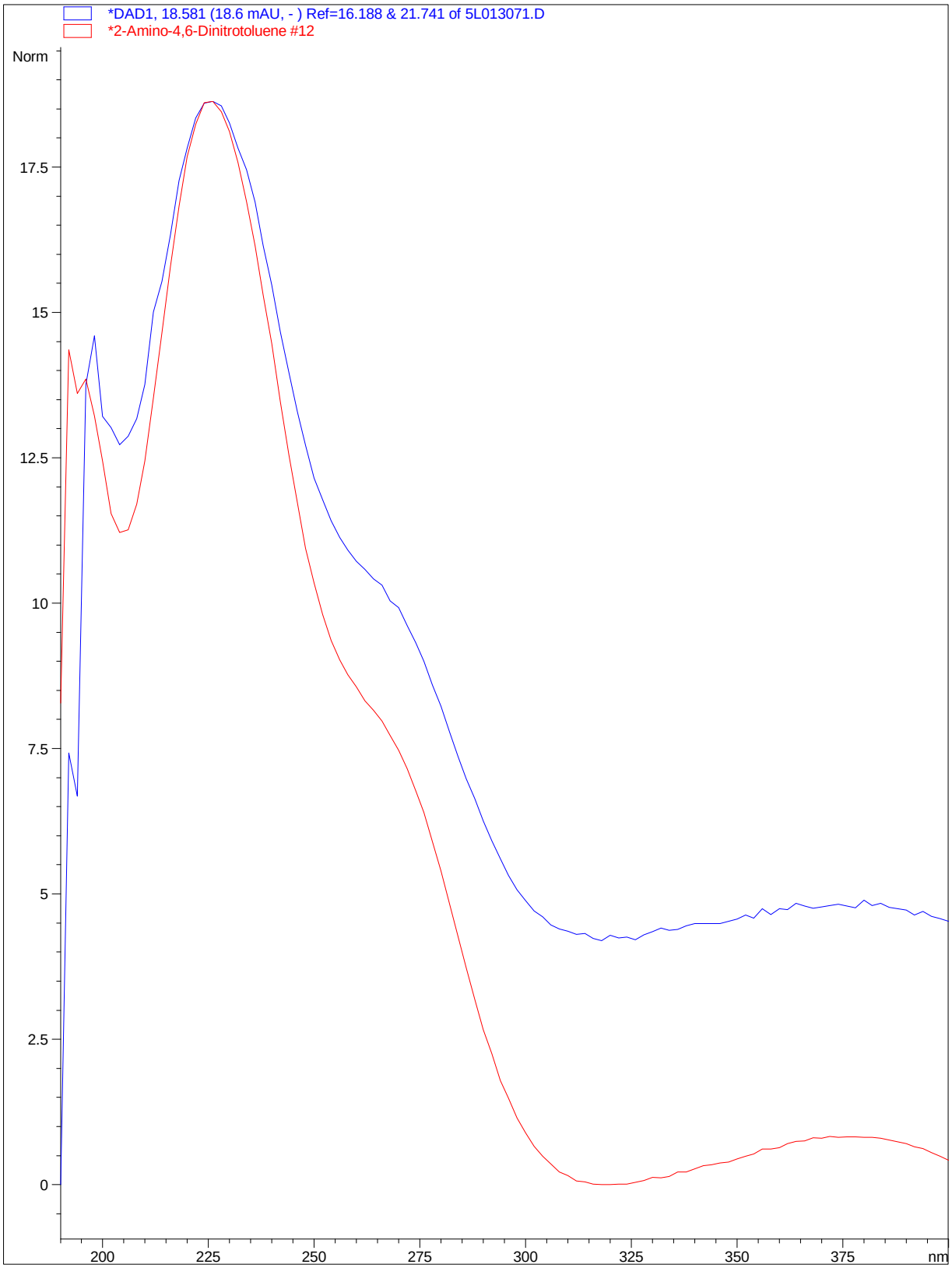
Search result of : DAD1, 18.581 (18.6 mAU, -) Ref=16.188 & 21.741
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 17.652 | 17.652 min

Library search results

#	Match	Entry	Time [min]	Name
1	906.9755	10	18.472	2-Amino-4,6-Dinitrotoluene #12

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\071614\071614\5L013088.D
Sample Name: L14070524-02 10x

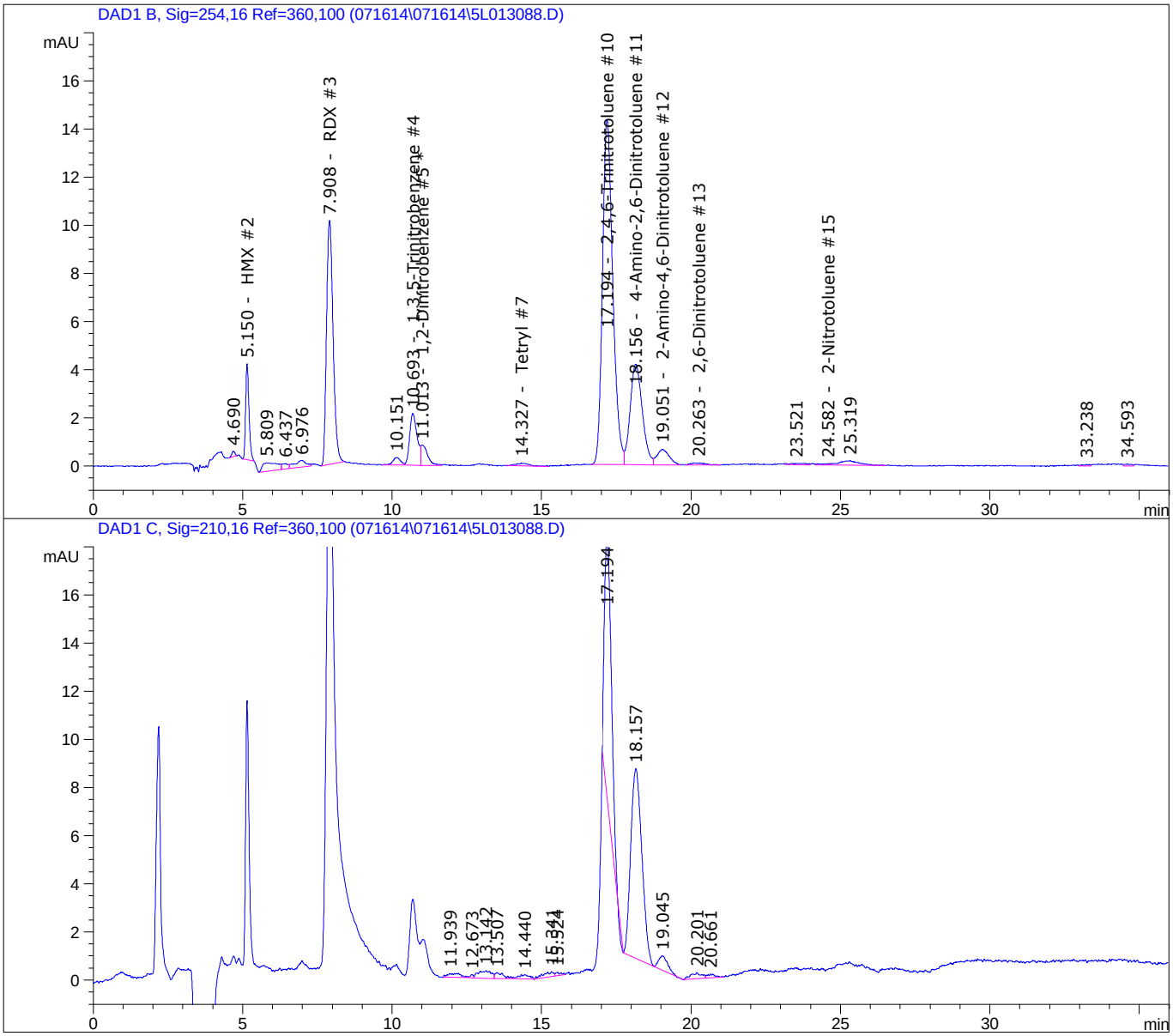
==========

Acq. Operator	: ECL	Seq. Line	: 10
Acq. Instrument	: HPLC5	Location	: Vial 11
Injection Date	: 7/16/2014 7:00:11 PM	Inj	: 1
		Inj Volume	: 100 µl

Acq. Method : C:\Chem32\1\DATA\071614\071614\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/17/2014 12:04:50 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 7,1 SOIL

==========



Data File C:\CHEM32\1\DATA\071614\071614\5L013088.D
Sample Name: L14070524-02 10x

==========

Acq. Operator : ECL Seq. Line : 10
Acq. Instrument : HPLC5 Location : Vial 11
Injection Date : 7/16/2014 7:00:11 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071614\071614\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/17/2014 12:04:50 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 7,1 SOIL

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 7/17/2014 11:57:56 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.150	BBA	31.09369	5.82064	180.98517		HMX #2
7.908	BBA	152.80589	5.09163	778.03165		RDX #3
10.693	VV	37.37705	2.63118	98.34568		1,3,5-Trinitrobenzene #4
11.013	VB	13.29321	3.35590	44.61070		1,2-Dinitrobenzene #5 *
12.969		-	-	-		1,3-Dinitrobenzene #6
14.327	BB	3.61493	4.47000	16.15873		Tetryl #7
14.765		-	-	-		Nitrobenzene #8
17.194	BV	342.87979	2.58757	887.22488		2,4,6-Trinitrotoluene #10
18.156	VV	118.24000	4.37975	517.86167		4-Amino-2,6-Dinitrotoluene #11
19.051	VV	18.40206	2.83774	52.22020		2-Amino-4,6-Dinitrotoluene #12
20.263	VB	2.76001	3.64927	10.07204		2,6-Dinitrotoluene #13
20.783		-	-	-		2,4-Dinitrotoluene #14
24.582	VV	1.11703	1.82876	2.04279		2-Nitrotoluene #15
26.232		-	-	-		4-Nitrotoluene #16
28.245		-	-	-		3-Nitrotoluene #17

Totals : 2587.55352

Data File C:\CHEM32\1\DATA\071614\071614\5L013088.D
Sample Name: L14070524-02 10x

==========

Acq. Operator : ECL Seq. Line : 10
Acq. Instrument : HPLC5 Location : Vial 11
Injection Date : 7/16/2014 7:00:11 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071614\071614\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/17/2014 12:04:50 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 7,1 SOIL

==========

Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
15.895	-	-	-			Nitroglycerin #9

Totals : 0.00000

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

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*** End of Report ***

Data File C:\CHEM32\1\DATA\071614\071614\5L013088.D
Sample Name: L14070524-02 10x

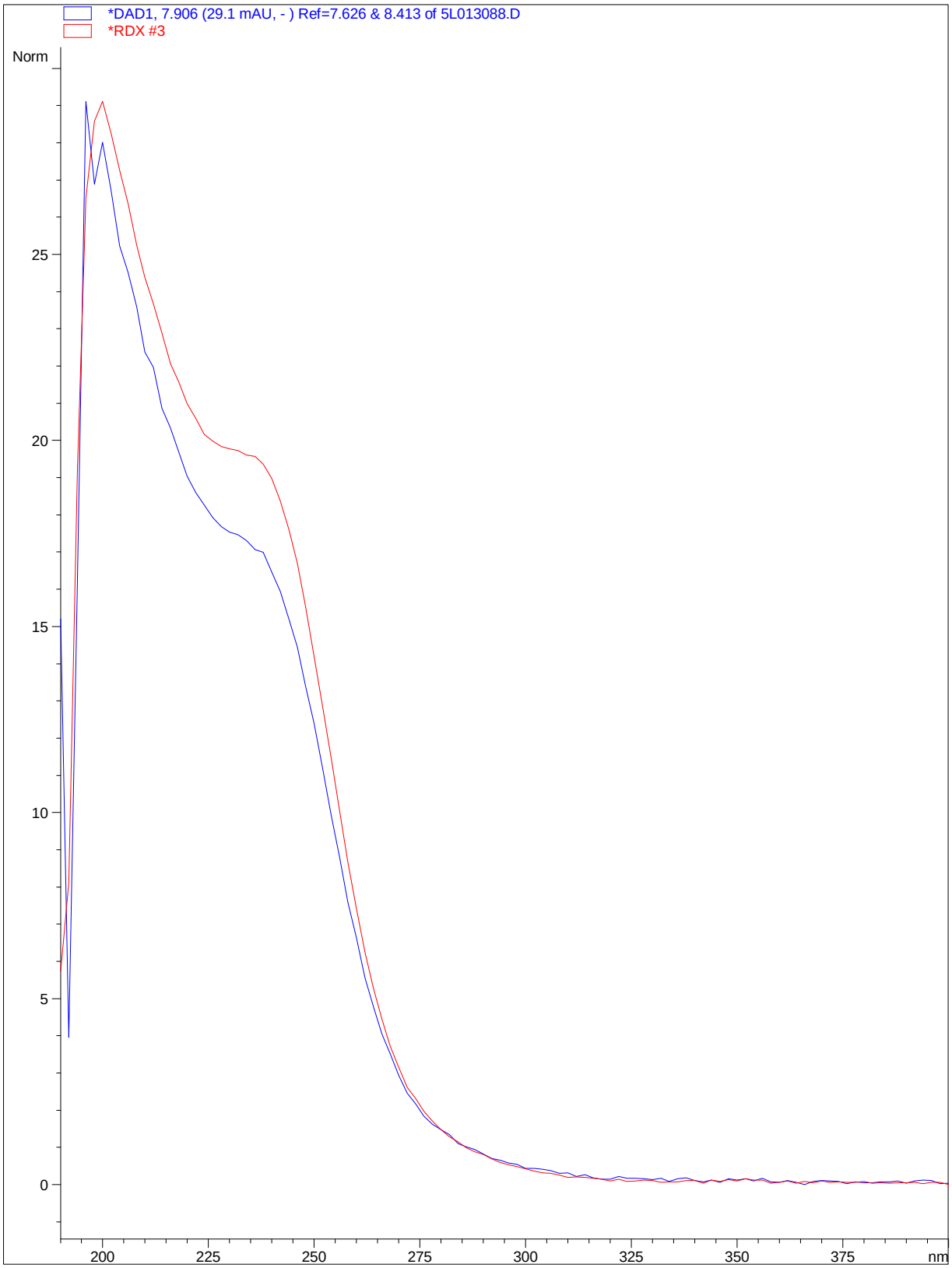
Search result of : DAD1, 7.906 (29.1 mAU, -) Ref=7.626 & 8.413
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 7.511 | 7.511 min

Library search results

#	Match	Entry	Time [min]	Name
1	981.9698	2	7.845	RDX #3

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\071614\071614\5L013088.D
Sample Name: L14070524-02 10x

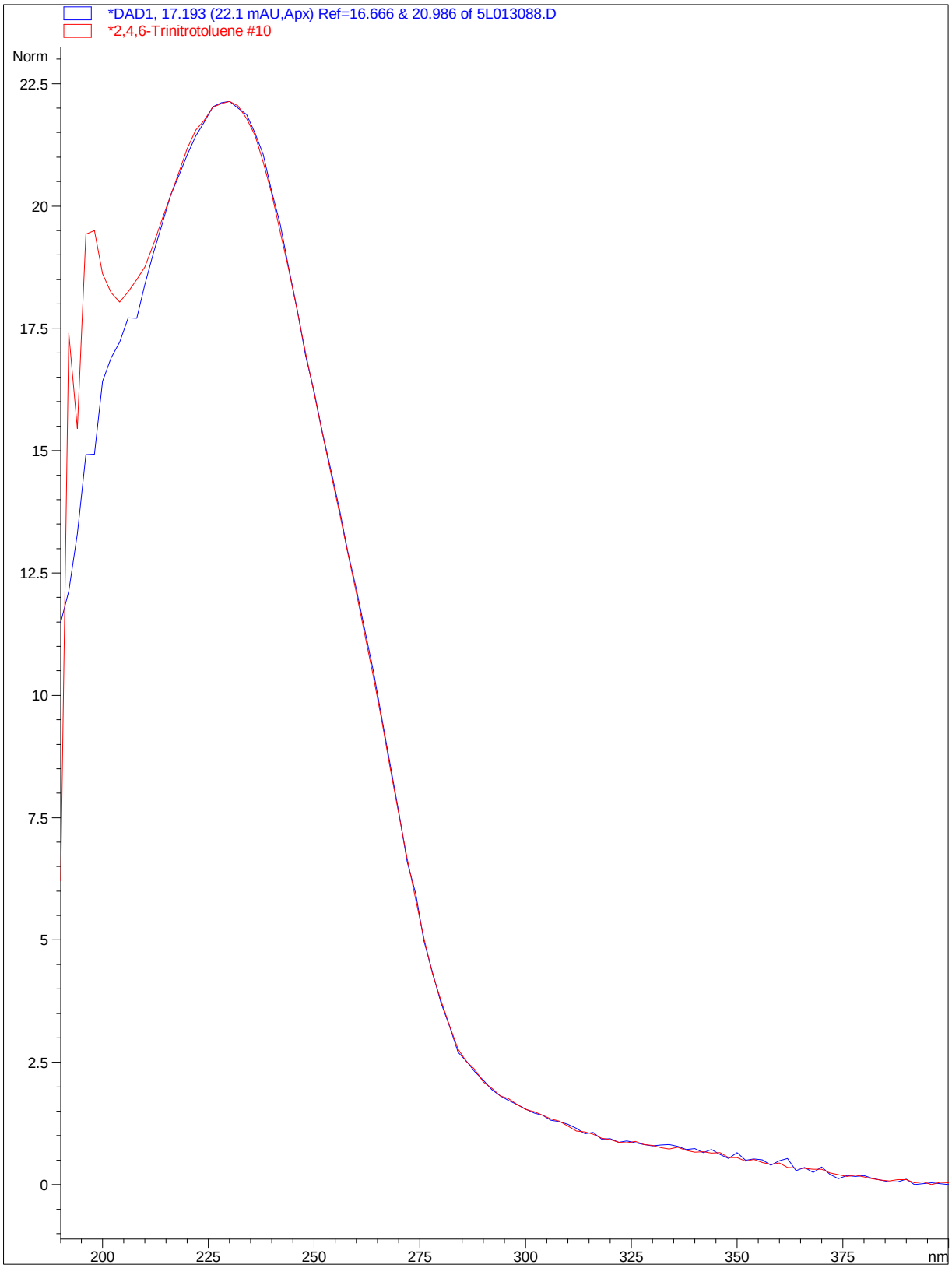
Search result of : DAD1, 17.193 (22.1 mAU,Apx) Ref=16.666 & 20.986
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 16.333 | 16.333 min

Library search results

#	Match	Entry	Time [min]	Name
1	985.9929	8	16.983	2,4,6-Trinitrotoluene #10
2	914.0302	9	17.893	4-Amino-2,6-Dinitrotoluene #11

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\071614\071614\5L013088.D
Sample Name: L14070524-02 10x

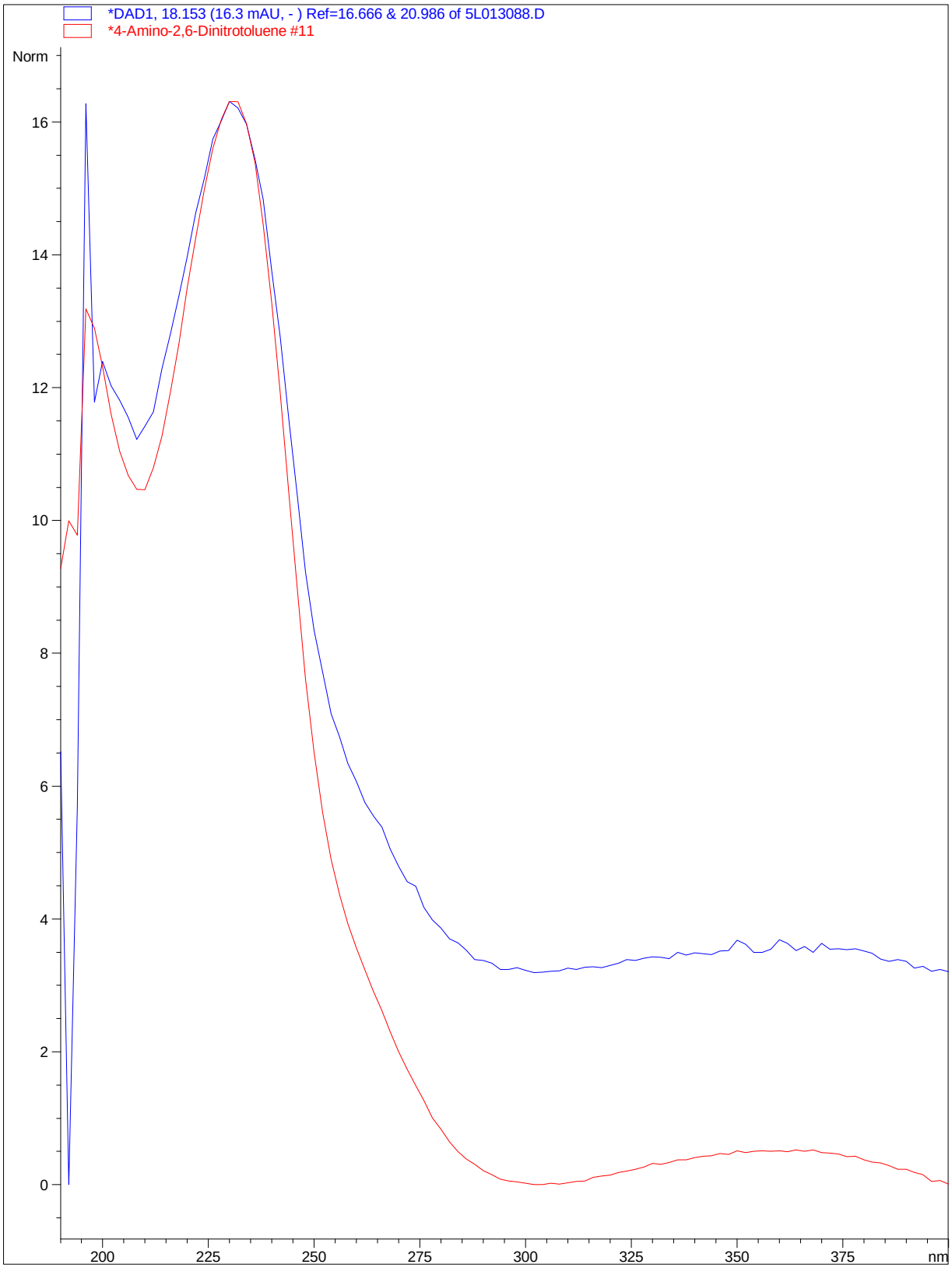
Search result of : DAD1, 18.153 (16.3 mAU, -) Ref=16.666 & 20.986
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 17.245 | 17.245 min

Library search results

#	Match	Entry	Time [min]	Name
1	915.3964	9	17.893	4-Amino-2,6-Dinitrotoluene #11
2	825.5897	10	18.802	2-Amino-4,6-Dinitrotoluene #12

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\071514\071514\5L013072.D
Sample Name: L14070524-03

==========

Acq. Operator : ECL
Seq. Line : 18
Acq. Instrument : HPLC5
Location : Vial 18
Injection Date : 7/15/2014 9:33:39 PM
Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/16/2014 12:02:11 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

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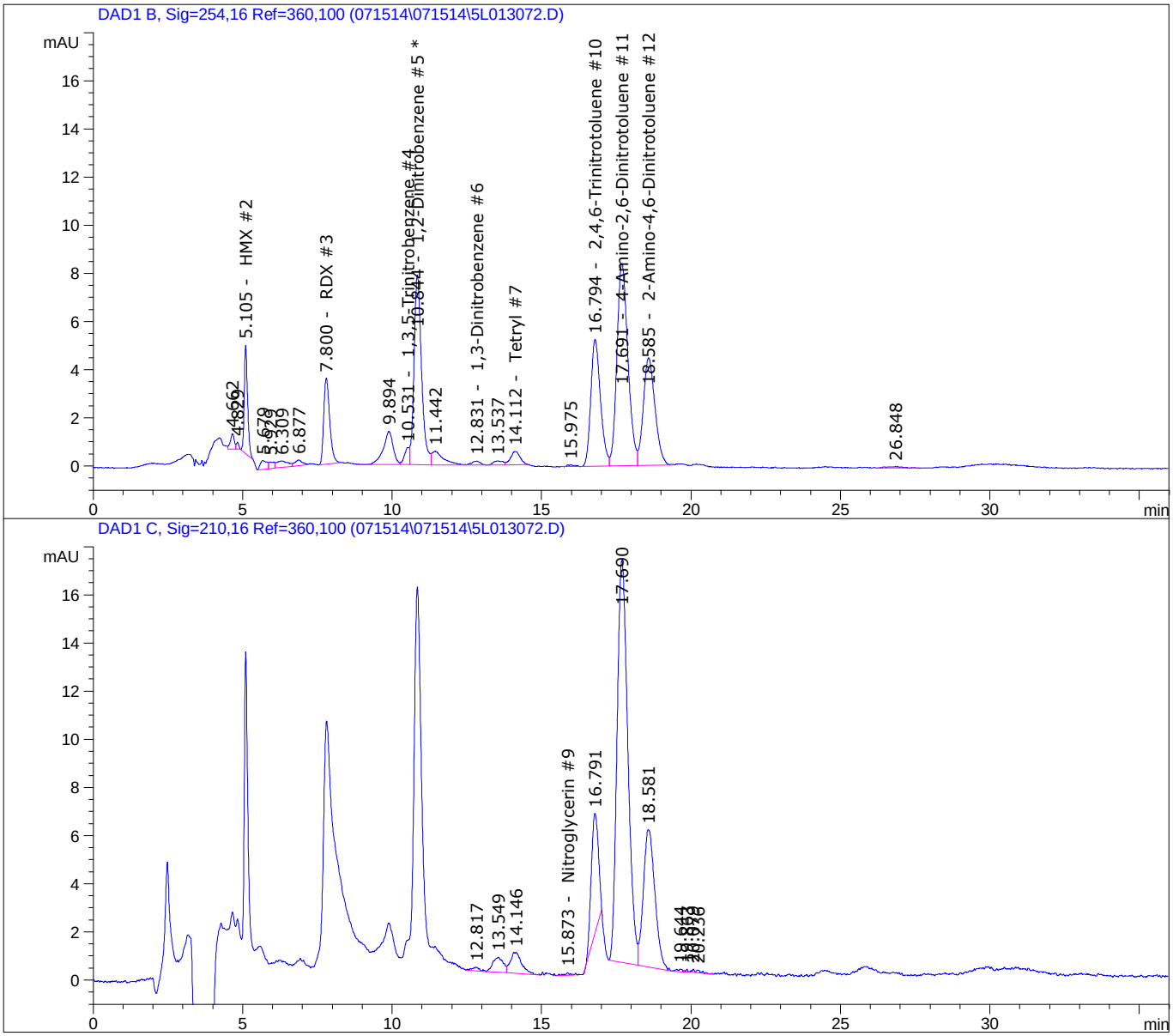

Data File C:\CHEM32\1\DATA\071514\071514\5L013072.D
Sample Name: L14070524-03

==========

Acq. Operator : ECL Seq. Line : 18
Acq. Instrument : HPLC5 Location : Vial 18
Injection Date : 7/15/2014 9:33:39 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/16/2014 12:02:11 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 7/16/2014 11:47:45 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.105	BBA	34.35869	5.84064	200.67688		HMX #2
7.800	BBA	49.70363	4.87166	242.13936		RDX #3
10.531	VV	8.29829	2.93997	24.39672		1,3,5-Trinitrobenzene #4
10.844	VV	136.96695	3.64094	498.68805		1,2-Dinitrobenzene #5 *
12.831	VV	3.40533	2.07576	7.06865		1,3-Dinitrobenzene #6
14.112	VBA	12.53245	4.44856	55.75137		Tetryl #7
14.765		-	-	-		Nitrobenzene #8
16.794	VV	119.18176	2.58880	308.53775		2,4,6-Trinitrotoluene #10
17.691	VV	216.37674	4.38287	948.35153		4-Amino-2,6-Dinitrotoluene #11
18.585	VB	122.16401	2.85137	348.33529		2-Amino-4,6-Dinitrotoluene #12
19.881		-	-	-		2,6-Dinitrotoluene #13
20.483		-	-	-		2,4-Dinitrotoluene #14
24.110		-	-	-		2-Nitrotoluene #15
25.785		-	-	-		4-Nitrotoluene #16
27.707		-	-	-		3-Nitrotoluene #17

Totals : 2633.94560

Data File C:\CHEM32\1\DATA\071514\071514\5L013072.D
Sample Name: L14070524-03

==========

Acq. Operator : ECL Seq. Line : 18
Acq. Instrument : HPLC5 Location : Vial 18
Injection Date : 7/15/2014 9:33:39 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/16/2014 12:02:11 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========

Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
15.873	VV	1.39813	4.79505	6.70409		Nitroglycerin #9

Totals : 6.70409

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File C:\CHEM32\1\DATA\071514\071514\5L013072.D
Sample Name: L14070524-03

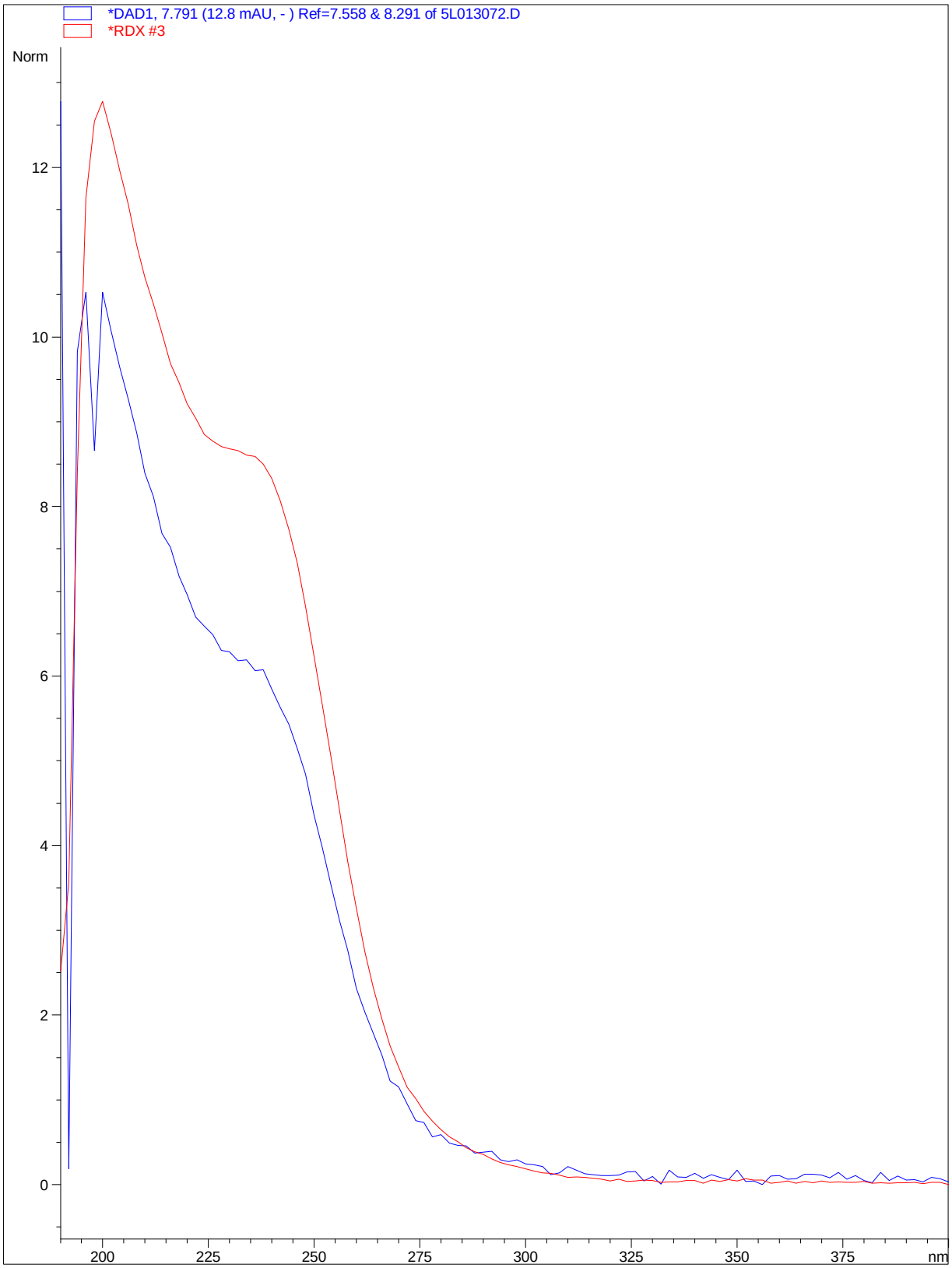
Search result of : DAD1, 7.791 (12.8 mAU, -) Ref=7.558 & 8.291
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 7.402 | 7.402 min

Library search results

#	Match	Entry	Time [min]	Name
1	883.2235	2	7.760	RDX #3

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\071514\071514\5L013072.D
Sample Name: L14070524-03

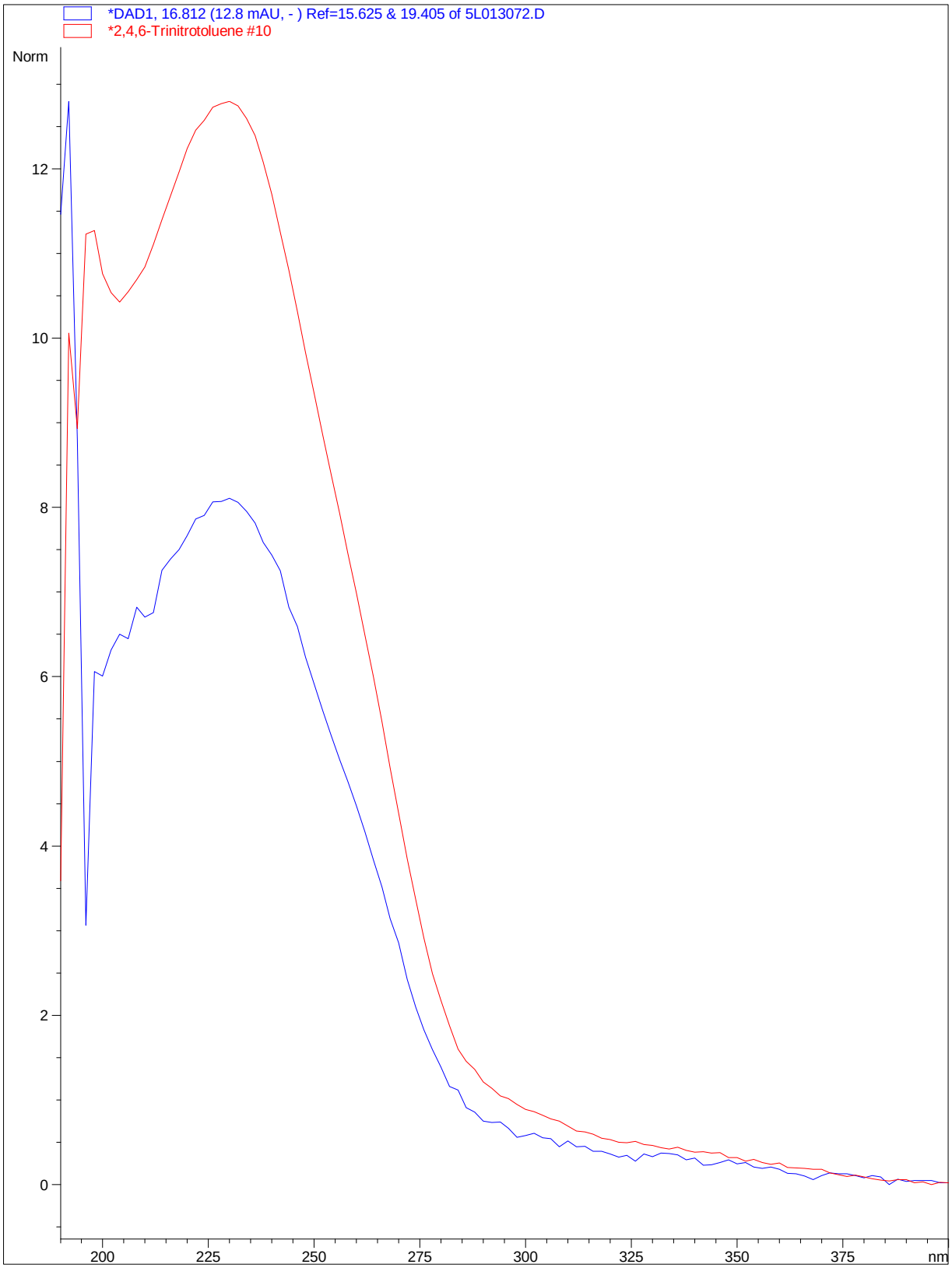
Search result of : DAD1, 16.812 (12.8 mAU, -) Ref=15.625 & 19.405
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 15.971 | 15.971 min

Library search results

#	Match	Entry	Time [min]	Name
1	866.1632	8	16.767	2,4,6-Trinitrotoluene #10
2	839.2801	9	17.596	4-Amino-2,6-Dinitrotoluene #11

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\071514\071514\5L013072.D
Sample Name: L14070524-03

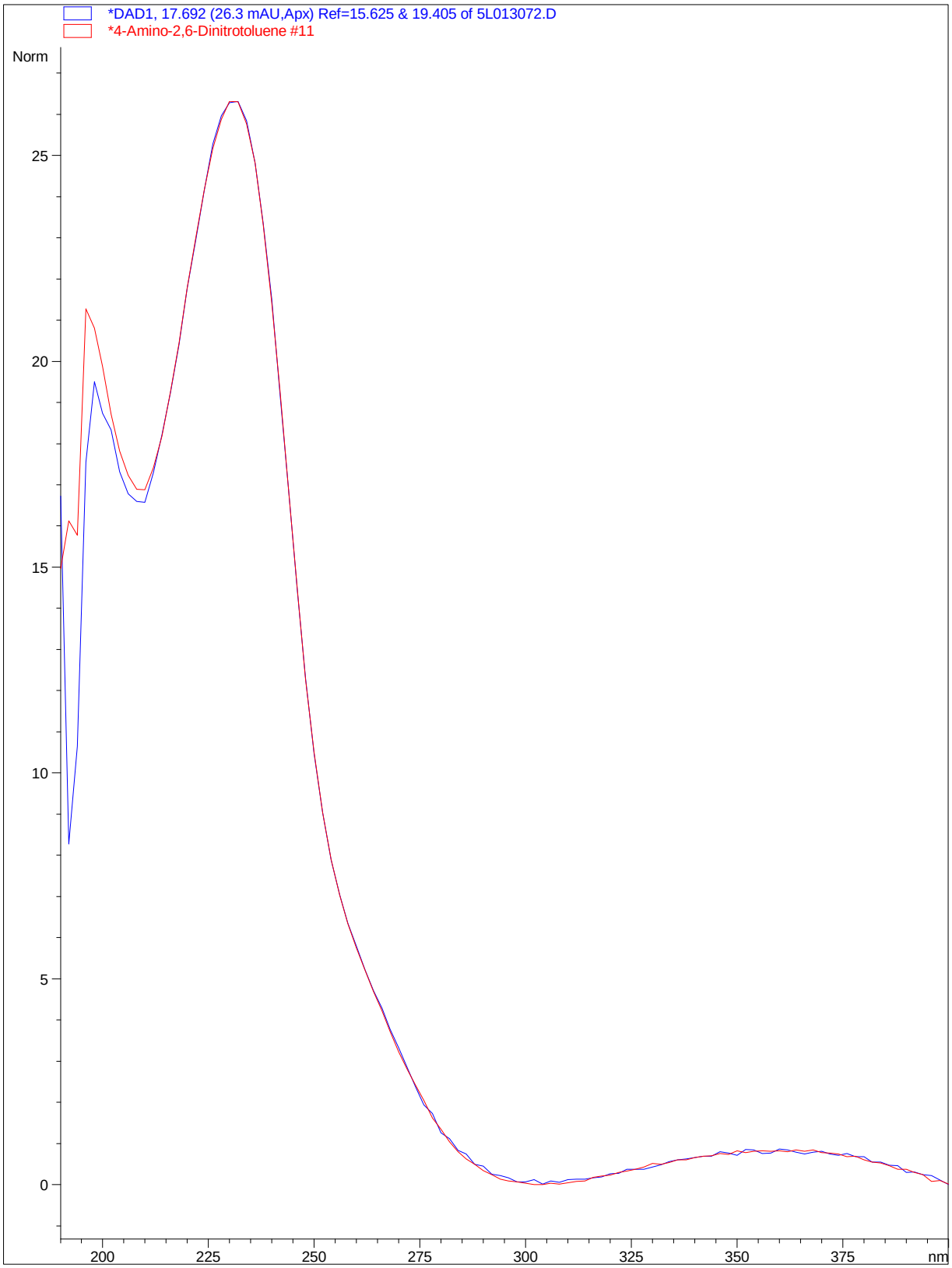
Search result of : DAD1, 17.692 (26.3 mAU,Apx) Ref=15.625 & 19.405
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 16.807 | 16.807 min

Library search results

#	Match	Entry	Time [min]	Name
1	987.4659	9	17.596	4-Amino-2,6-Dinitrotoluene #11
2	896.9223	10	18.472	2-Amino-4,6-Dinitrotoluene #12

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\071514\071514\5L013072.D
Sample Name: L14070524-03

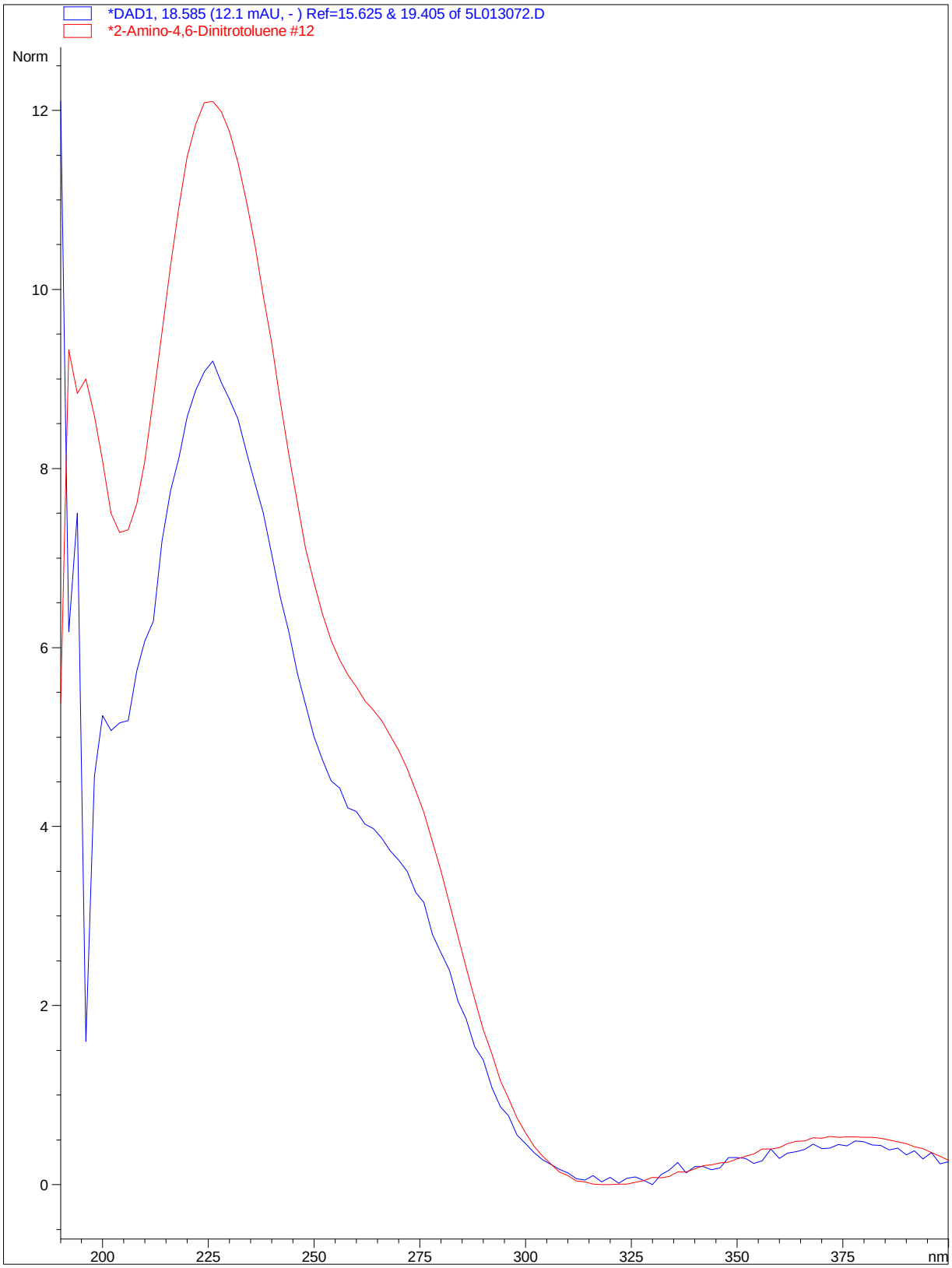
Search result of : DAD1, 18.585 (12.1 mAU, -) Ref=15.625 & 19.405
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 17.656 | 17.656 min

Library search results

#	Match	Entry	Time [min]	Name
1	904.5925	10	18.472	2-Amino-4,6-Dinitrotoluene #12

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\071514\071514\5L013073.D
Sample Name: L14070524-04

==========

Acq. Operator	: ECL	Seq. Line	: 19
Acq. Instrument	: HPLC5	Location	: Vial 19
Injection Date	: 7/15/2014 10:12:45 PM	Inj	: 1
		Inj Volume	: 100 µl

Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/16/2014 12:02:11 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

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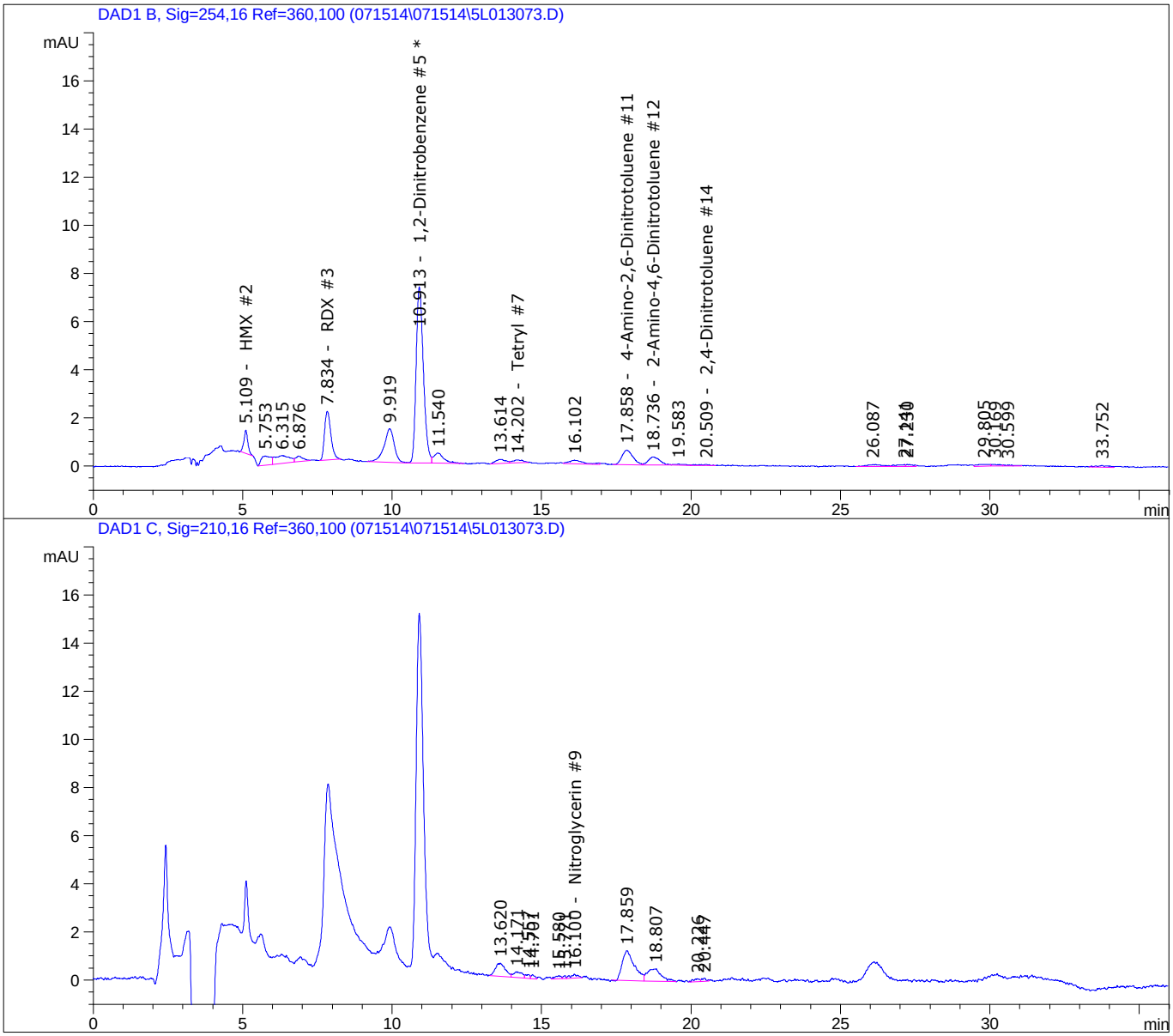

Data File C:\CHEM32\1\DATA\071514\071514\5L013073.D
Sample Name: L14070524-04

==========

Acq. Operator : ECL Seq. Line : 19
Acq. Instrument : HPLC5 Location : Vial 19
Injection Date : 7/15/2014 10:12:45 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/16/2014 12:02:11 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 7/16/2014 11:47:45 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.109	BBA	8.75990	5.28395	46.28688		HMX #2
7.834	BBA	29.74304	4.65287	138.39063		RDX #3
10.615		-	-	-		1,3,5-Trinitrobenzene #4
10.913	VV	122.71843	3.63738	446.37355		1,2-Dinitrobenzene #5 *
12.969		-	-	-		1,3-Dinitrobenzene #6
14.202	VBA	2.70560	4.48013	12.12143		Tetryl #7
14.765		-	-	-		Nitrobenzene #8
17.017		-	-	-		2,4,6-Trinitrotoluene #10
17.858	BV	15.28089	4.33338	66.21787		4-Amino-2,6-Dinitrotoluene #11
18.736	VV	8.98962	2.82092	25.35905		2-Amino-4,6-Dinitrotoluene #12
19.881		-	-	-		2,6-Dinitrotoluene #13
20.509	VV	1.21663	2.37246	2.88640		2,4-Dinitrotoluene #14
24.110		-	-	-		2-Nitrotoluene #15
25.785		-	-	-		4-Nitrotoluene #16
27.707		-	-	-		3-Nitrotoluene #17

Totals : 737.63581

Data File C:\CHEM32\1\DATA\071514\071514\5L013073.D
Sample Name: L14070524-04

==========

Acq. Operator : ECL Seq. Line : 19
Acq. Instrument : HPLC5 Location : Vial 19
Injection Date : 7/15/2014 10:12:45 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/16/2014 12:02:11 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========

Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
16.100	VBA	2.71431	4.82204	13.08851		Nitroglycerin #9

Totals : 13.08851

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File C:\CHEM32\1\DATA\071514\071514\5L013073.D
Sample Name: L14070524-04

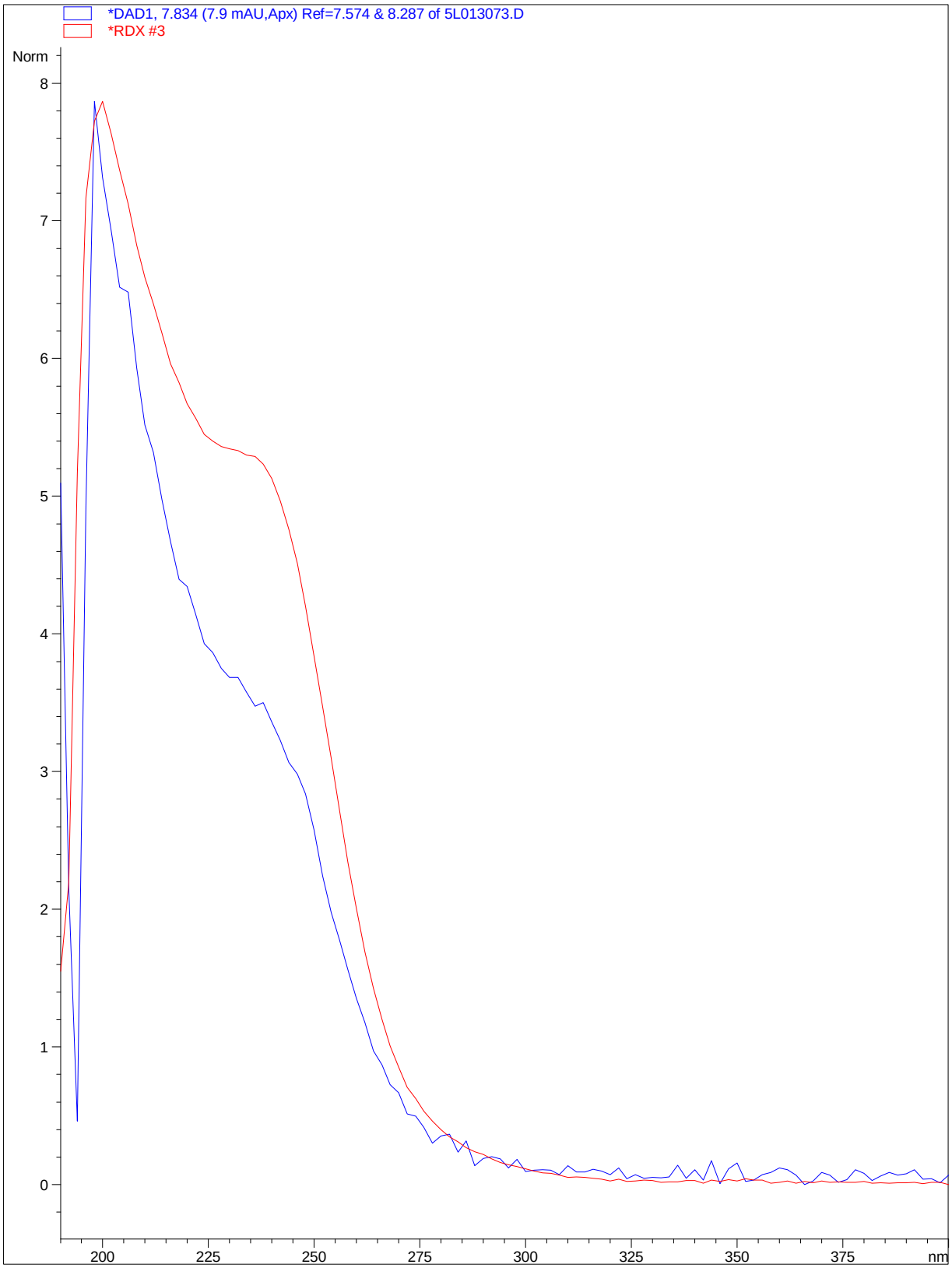
Search result of : DAD1, 7.834 (7.9 mAU,Apx) Ref=7.574 & 8.287
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 7.442 | 7.442 min

Library search results

#	Match	Entry	Time [min]	Name
1	909.7679	2	7.760	RDX #3

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\071514\071514\5L013073.D
Sample Name: L14070524-04

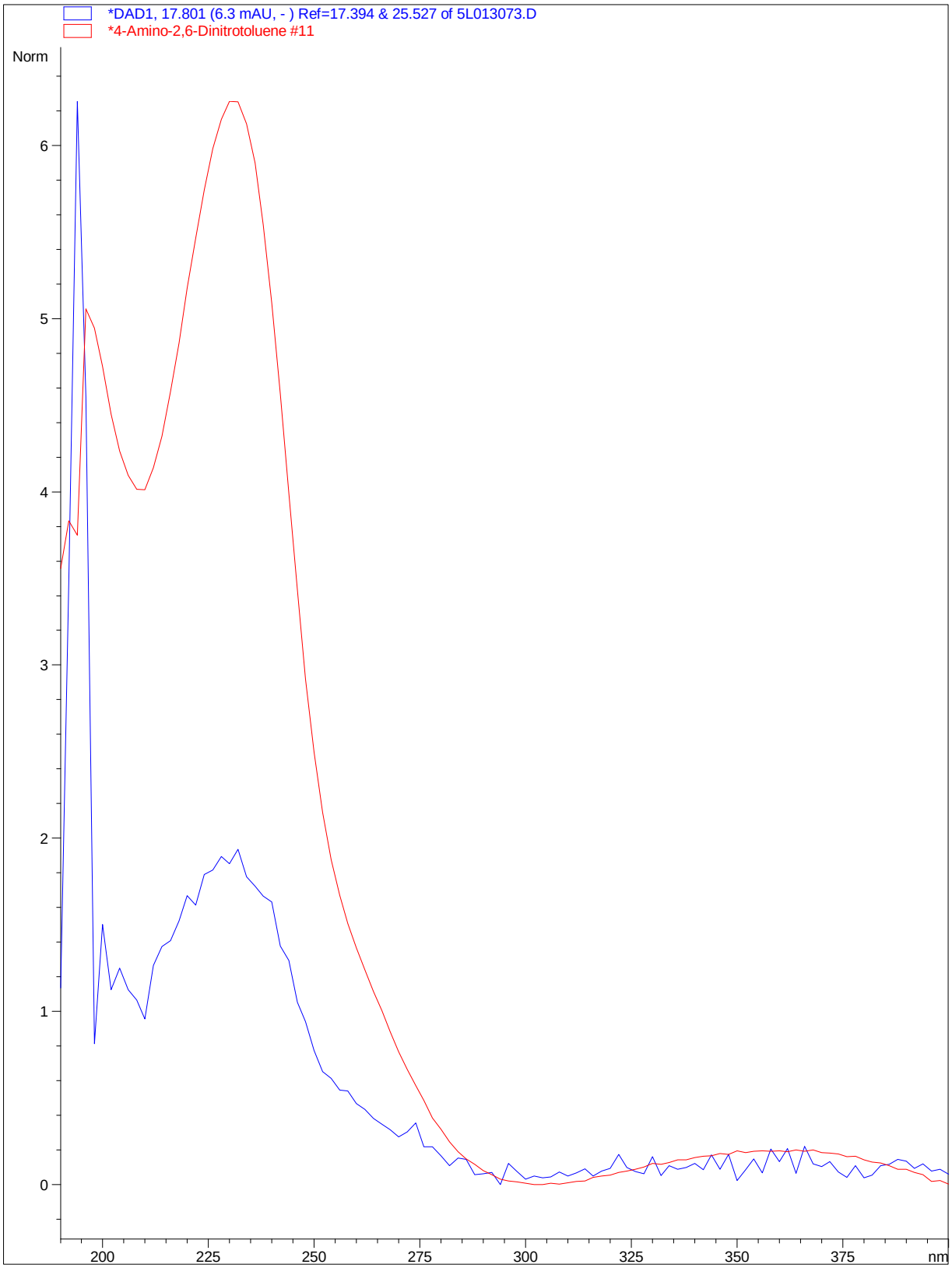
Search result of : DAD1, 17.801 (6.3 mAU, -) Ref=17.394 & 25.527
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 16.91 | 16.91 min

Library search results

#	Match	Entry	Time [min]	Name
1	580.5676	9	17.596	4-Amino-2,6-Dinitrotoluene #11
2	559.3729	10	18.472	2-Amino-4,6-Dinitrotoluene #12

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\071514\071514\5L013073.D
Sample Name: L14070524-04

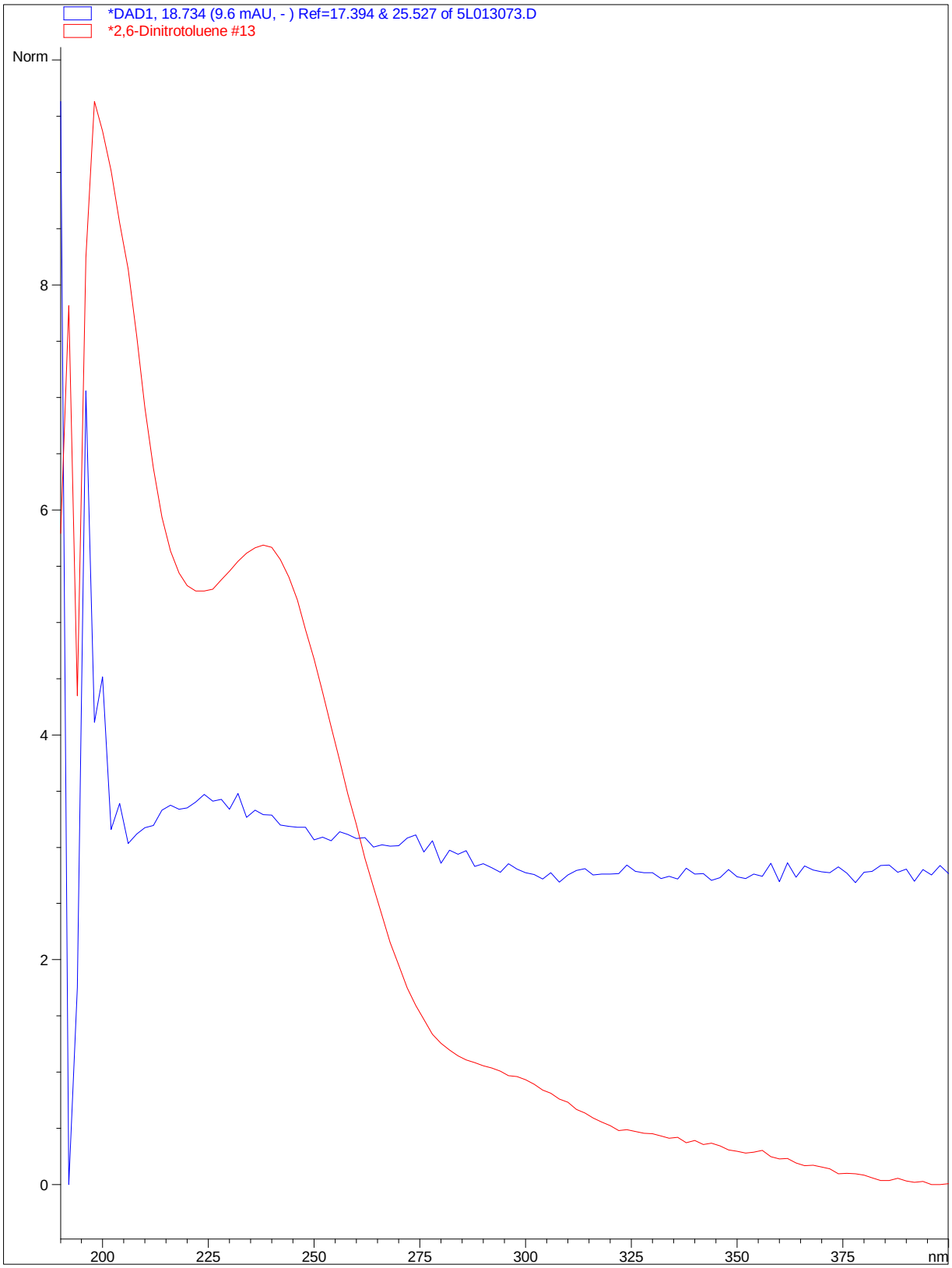
Search result of : DAD1, 18.734 (9.6 mAU, -) Ref=17.394 & 25.527
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 17.797 | 17.797 min

Library search results

#	Match	Entry	Time [min]	Name
1	147.5934	11	19.600	2,6-Dinitrotoluene #13
2	87.9916	10	18.472	2-Amino-4,6-Dinitrotoluene #12

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\071514\071514\5L013074.D
Sample Name: L14070524-05

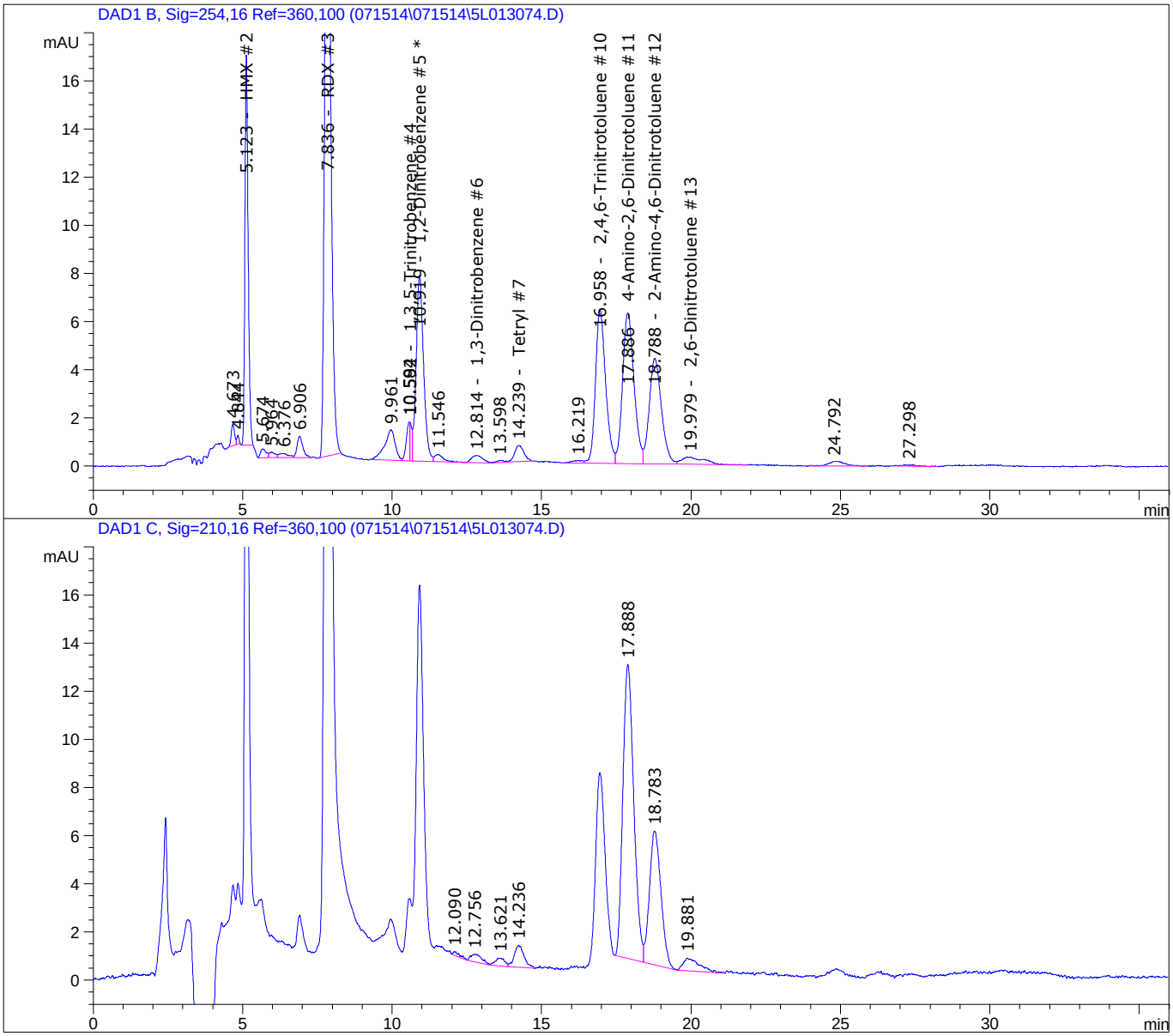
==========

Acq. Operator	: ECL	Seq. Line :	20
Acq. Instrument	: HPLC5	Location :	Vial 20
Injection Date	: 7/15/2014 10:51:47 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/16/2014 12:02:11 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========



Data File C:\CHEM32\1\DATA\071514\071514\5L013074.D
Sample Name: L14070524-05

==========

Acq. Operator : ECL Seq. Line : 20
Acq. Instrument : HPLC5 Location : Vial 20
Injection Date : 7/15/2014 10:51:47 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/16/2014 12:02:11 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========

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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 7/16/2014 11:47:45 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.123	BBA	121.49933	5.97727	726.23471		HMX #2
7.836	BBA	397.80005	5.15694	2051.43224		RDX #3
10.592	VV	7.86362	2.96191	23.29133		1,3,5-Trinitrobenzene #4
10.919	VV	132.44724	3.63989	482.09358		1,2-Dinitrobenzene #5 *
12.814	BV	7.66145	1.86449	14.28469		1,3-Dinitrobenzene #6
14.239	VBA	14.56876	4.44735	64.79230		Tetryl #7
14.765		-	-	-		Nitrobenzene #8
16.958	VV	150.47049	2.58841	389.47893		2,4,6-Trinitrotoluene #10
17.886	VV	166.12621	4.38173	727.92089		4-Amino-2,6-Dinitrotoluene #11
18.788	VV	124.99310	2.85143	356.40894		2-Amino-4,6-Dinitrotoluene #12
19.979	VB	15.36886	4.28283	65.82219		2,6-Dinitrotoluene #13
20.483		-	-	-		2,4-Dinitrotoluene #14
24.110		-	-	-		2-Nitrotoluene #15
25.785		-	-	-		4-Nitrotoluene #16
27.707		-	-	-		3-Nitrotoluene #17

Totals : 4901.75979

Data File C:\CHEM32\1\DATA\071514\071514\5L013074.D
Sample Name: L14070524-05

==========

Acq. Operator : ECL Seq. Line : 20
Acq. Instrument : HPLC5 Location : Vial 20
Injection Date : 7/15/2014 10:51:47 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/16/2014 12:02:11 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========

Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
15.971		-	-	-		Nitroglycerin #9

Totals : 0.00000

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File C:\CHEM32\1\DATA\071514\071514\5L013074.D
Sample Name: L14070524-05

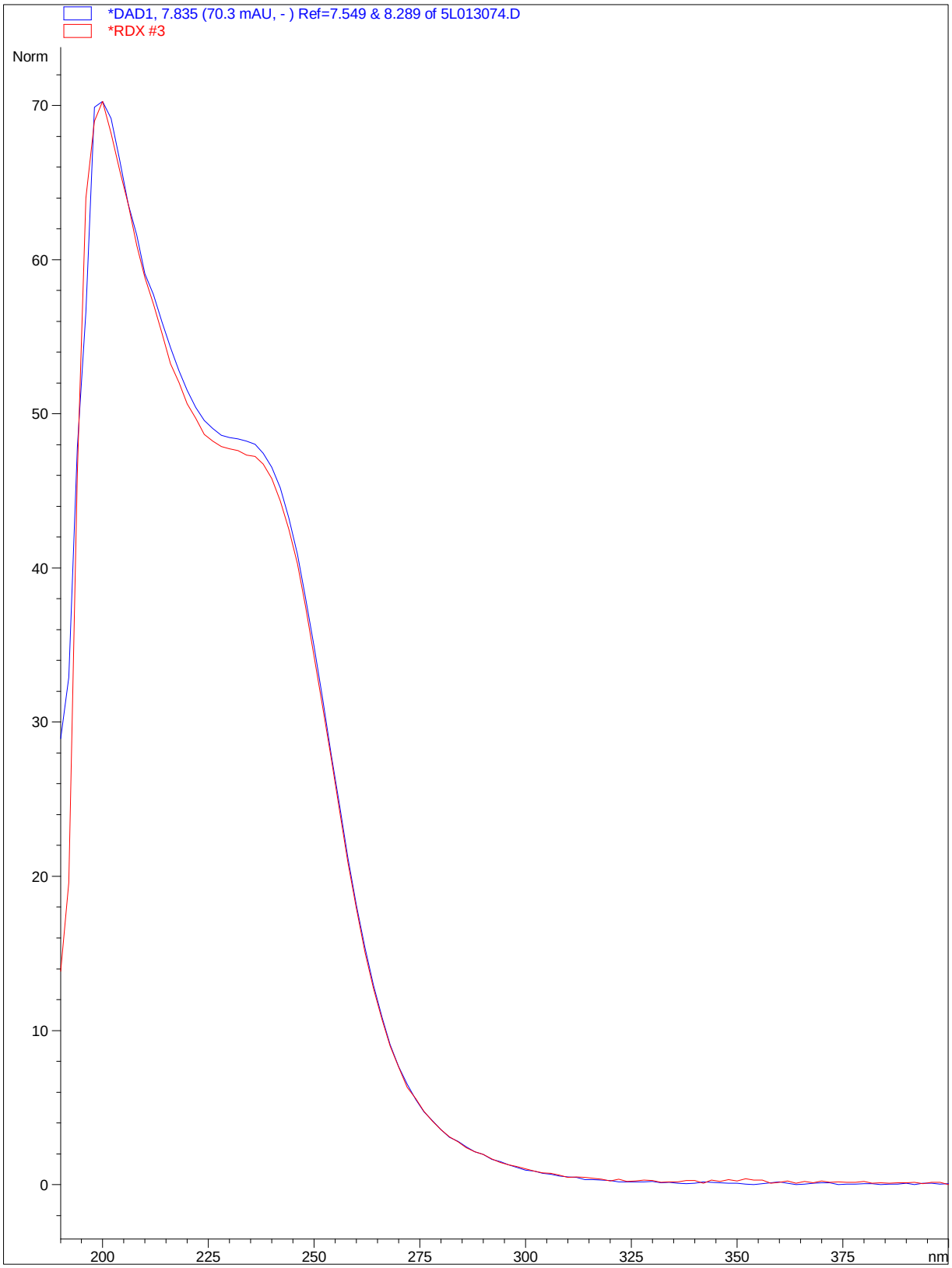
Search result of : DAD1, 7.835 (70.3 mAU, -) Ref=7.549 & 8.289
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 7.444 | 7.444 min

Library search results

#	Match	Entry	Time [min]	Name
1	991.9684	2	7.760	RDX #3

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\071514\071514\5L013074.D
Sample Name: L14070524-05

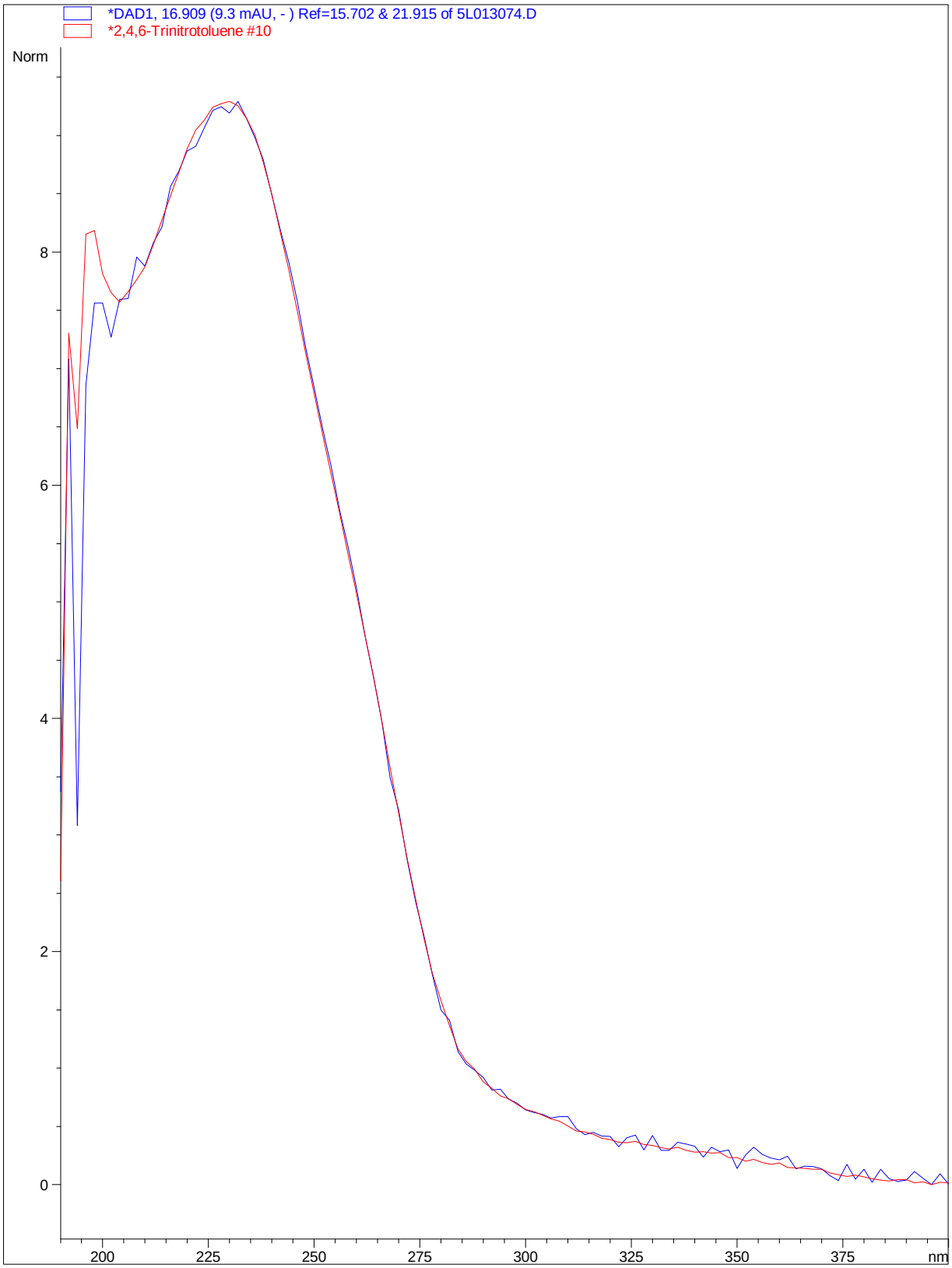
Search result of : DAD1, 16.909 (9.3 mAU, -) Ref=15.702 & 21.915
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 16.063 | 16.063 min

Library search results

#	Match	Entry	Time [min]	Name
1	988.9057	8	16.767	2,4,6-Trinitrotoluene #10
2	908.4814	9	17.596	4-Amino-2,6-Dinitrotoluene #11

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\071514\071514\5L013074.D
Sample Name: L14070524-05

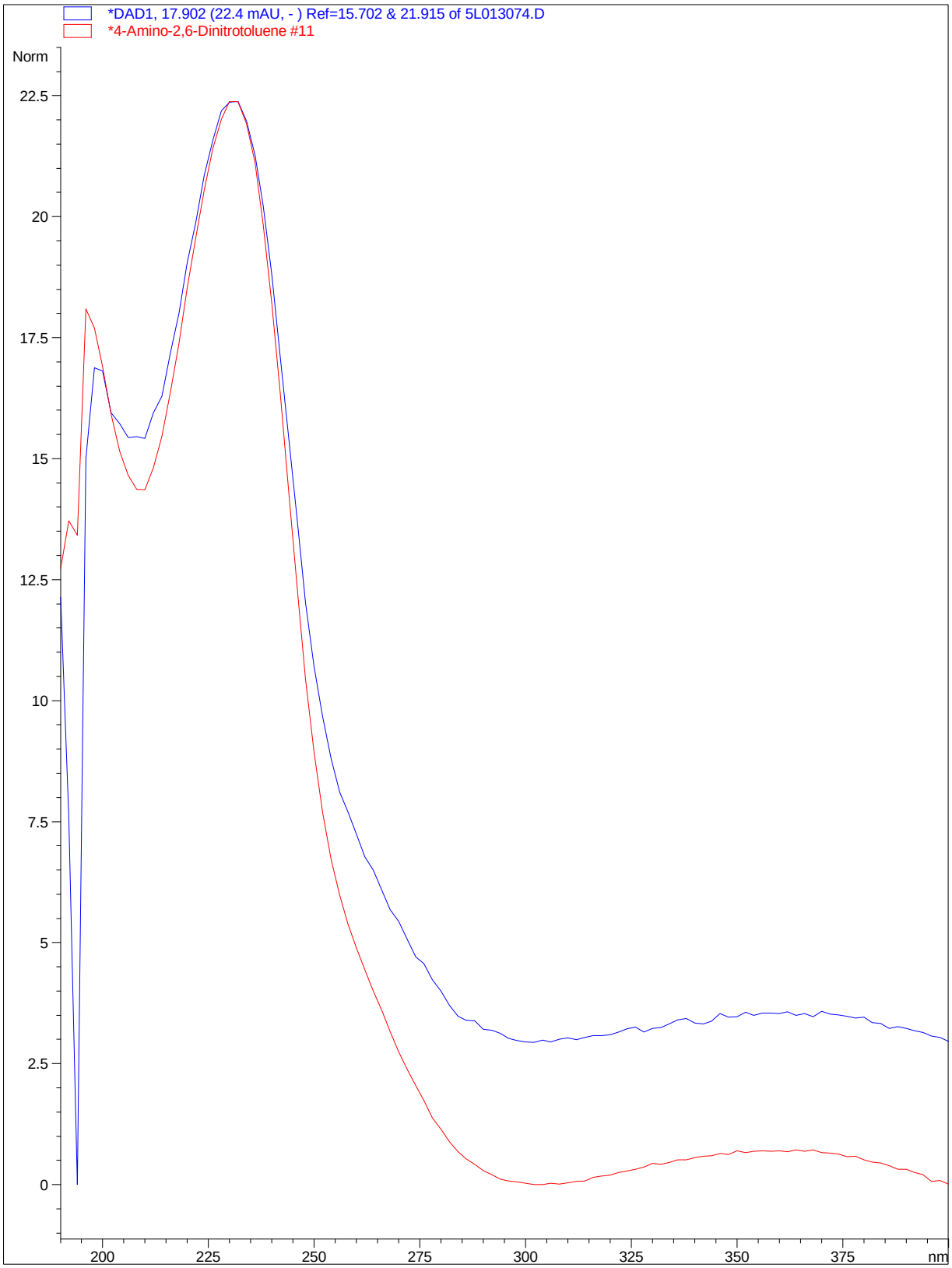
Search result of : DAD1, 17.902 (22.4 mAU, -) Ref=15.702 & 21.915
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 17.007 | 17.007 min

Library search results

#	Match	Entry	Time [min]	Name
1	938.8008	9	17.596	4-Amino-2,6-Dinitrotoluene #11
2	849.6138	10	18.472	2-Amino-4,6-Dinitrotoluene #12

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\071514\071514\5L013074.D
Sample Name: L14070524-05

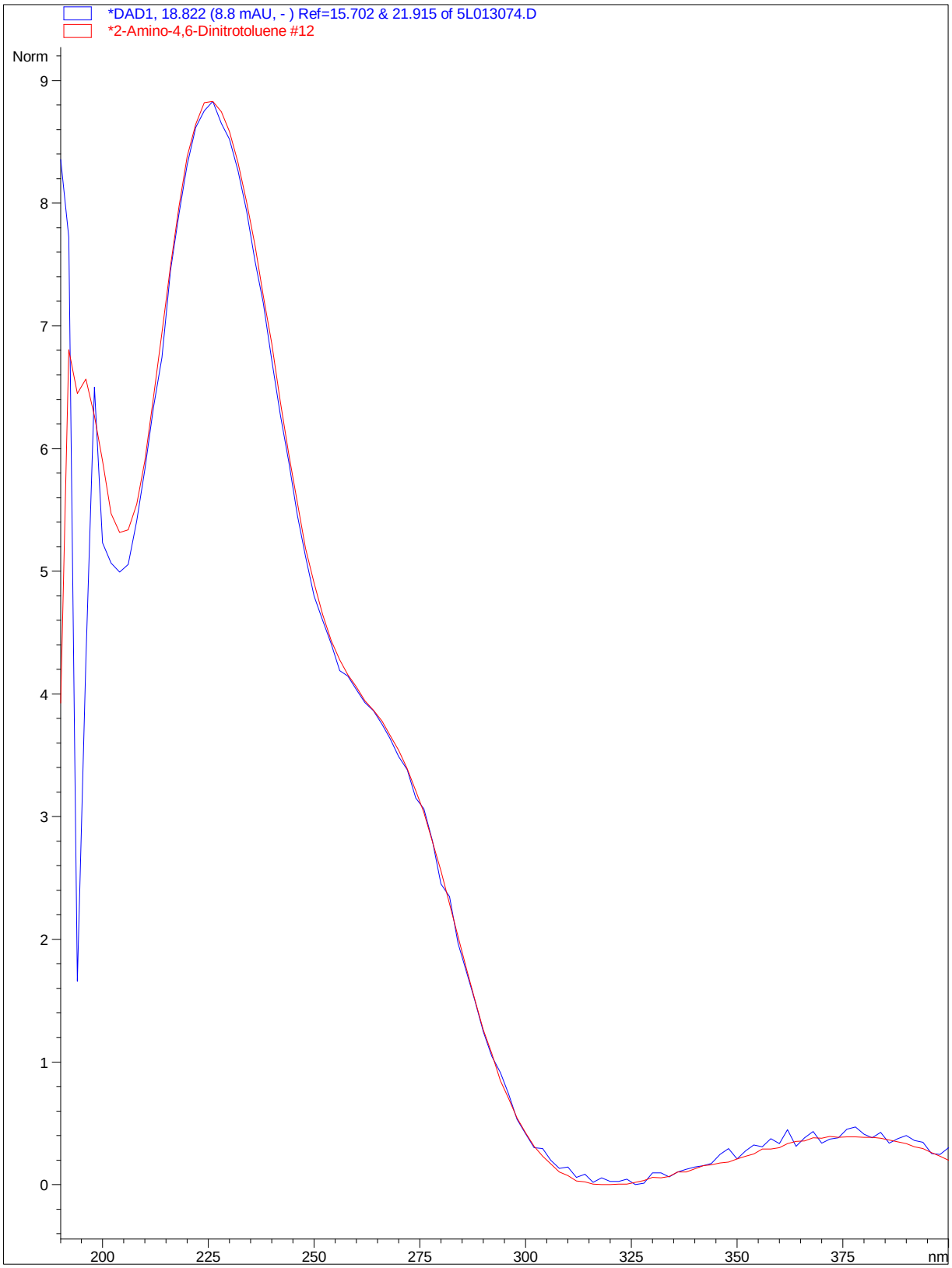
Search result of : DAD1, 18.822 (8.8 mAU, -) Ref=15.702 & 21.915
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 17.881 | 17.881 min

Library search results

#	Match	Entry	Time [min]	Name
1	946.6966	10	18.472	2-Amino-4,6-Dinitrotoluene #12
2	760.6345	11	19.600	2,6-Dinitrotoluene #13

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\071514\071514\5L013075.D
Sample Name: L14070524-06

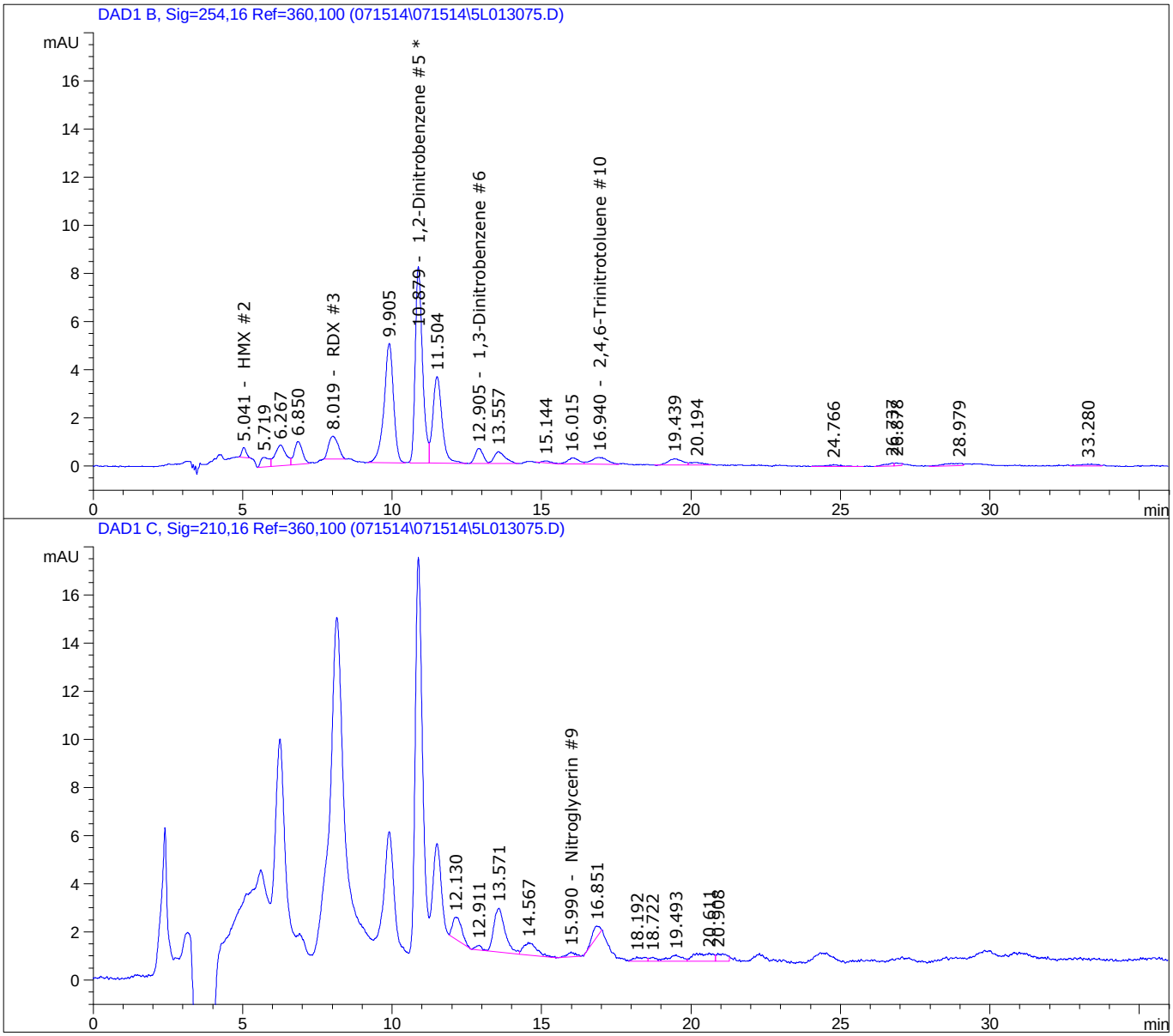
==========

Acq. Operator	: ECL	Seq. Line	: 21
Acq. Instrument	: HPLC5	Location	: Vial 21
Injection Date	: 7/15/2014 11:30:51 PM	Inj	: 1
		Inj Volume	: 100 µl

Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/16/2014 12:13:25 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========



Data File C:\CHEM32\1\DATA\071514\071514\5L013075.D
Sample Name: L14070524-06

==========

Acq. Operator : ECL Seq. Line : 21
Acq. Instrument : HPLC5 Location : Vial 21
Injection Date : 7/15/2014 11:30:51 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/16/2014 12:13:25 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========

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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 7/16/2014 11:47:45 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.041	BBA	4.08440	4.42861	18.08821		HMX #2
8.019	BBA	21.05274	4.42799	93.22128		RDX #3
10.615		-	-	-		1,3,5-Trinitrobenzene #4
10.879	VV	137.25433	3.64100	499.74320		1,2-Dinitrobenzene #5 *
12.905	BV	11.47772	1.80828	20.75497		1,3-Dinitrobenzene #6
14.220		-	-	-		Tetryl #7
14.765		-	-	-		Nitrobenzene #8
16.940	VV	11.13844	2.60711	29.03917		2,4,6-Trinitrotoluene #10
17.858		-	-	-		4-Amino-2,6-Dinitrotoluene #11
18.750		-	-	-		2-Amino-4,6-Dinitrotoluene #12
19.881		-	-	-		2,6-Dinitrotoluene #13
20.483		-	-	-		2,4-Dinitrotoluene #14
24.110		-	-	-		2-Nitrotoluene #15
25.785		-	-	-		4-Nitrotoluene #16
27.707		-	-	-		3-Nitrotoluene #17

Totals : 660.84683

Data File C:\CHEM32\1\DATA\071514\071514\5L013075.D
Sample Name: L14070524-06

==========

Acq. Operator : ECL Seq. Line : 21
Acq. Instrument : HPLC5 Location : Vial 21
Injection Date : 7/15/2014 11:30:51 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/16/2014 12:13:25 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========

Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
15.990	VV	3.96984	4.83110	19.17869		Nitroglycerin #9

Totals : 19.17869

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File C:\CHEM32\1\DATA\071514\071514\5L013075.D
Sample Name: L14070524-06

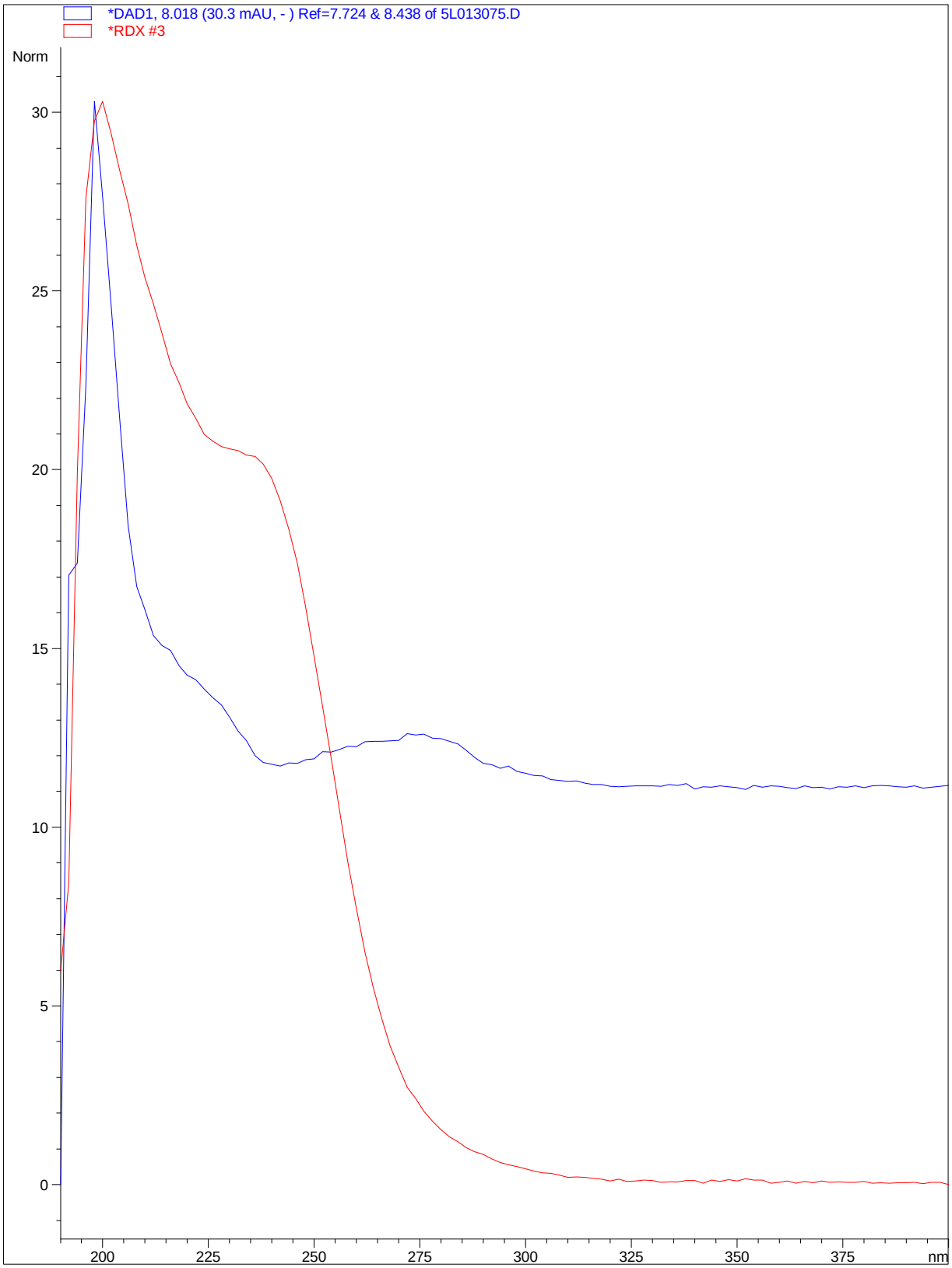
Search result of : DAD1, 8.018 (30.3 mAU, -) Ref=7.724 & 8.438
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 7.617 | 7.617 min

Library search results

#	Match	Entry	Time [min]	Name
1	463.7661	2	7.760	RDX #3

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\071514\071514\5L013075.D
Sample Name: L14070524-06

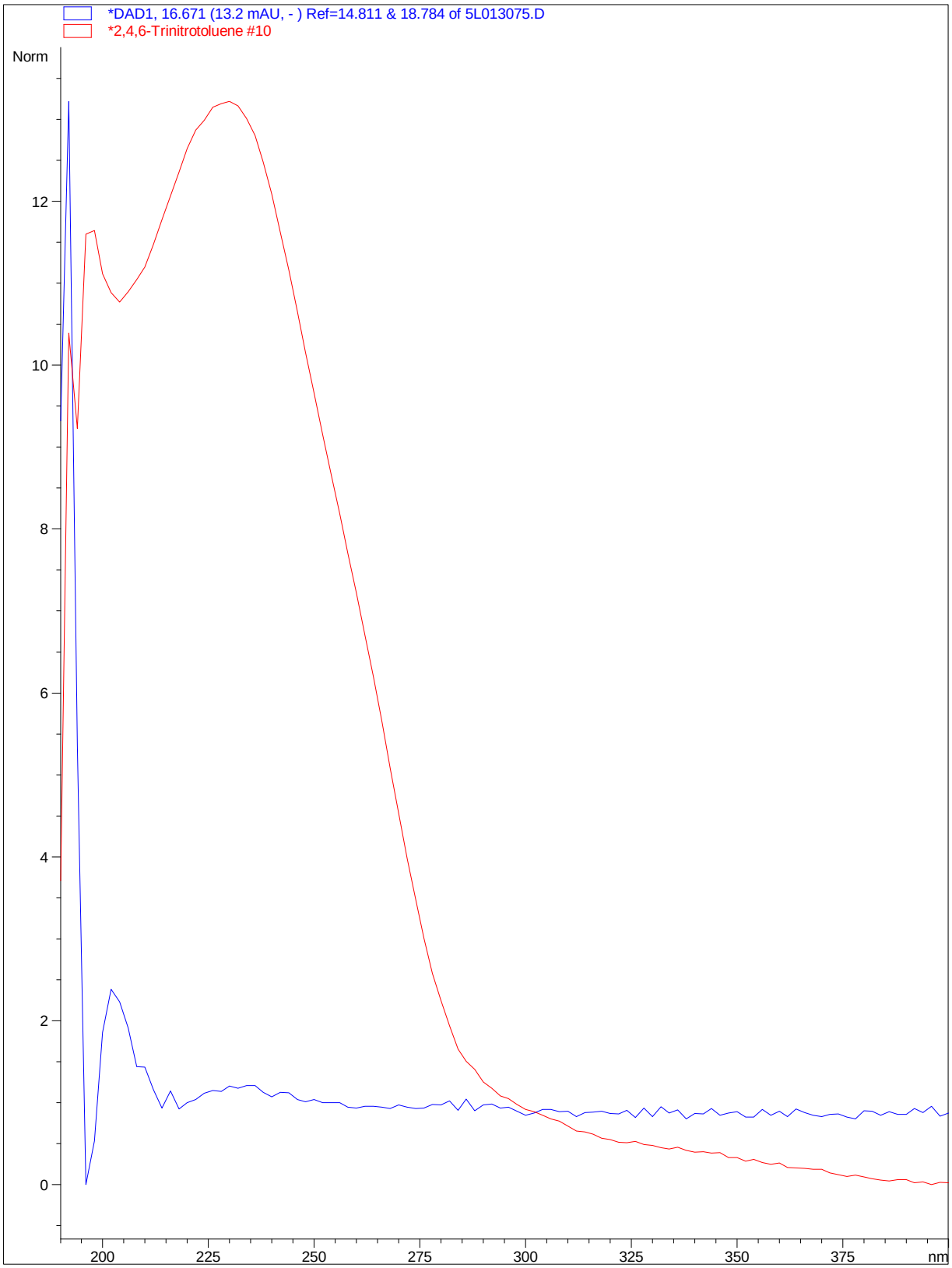
Search result of : DAD1, 16.671 (13.2 mAU, -) Ref=14.811 & 18.784
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 15.837 | 15.837 min

Library search results

#	Match	Entry	Time [min]	Name
1	37.2442	8	16.767	2,4,6-Trinitrotoluene #10

*** End of Report ***

Target + Library Spectrum



2.1.1.4 Standards Data

Data File C:\CHEM32\1\DATA\070914\070914\5L012964.D
Sample Name: WG483233-01 8330 ICAL 2500 PPB

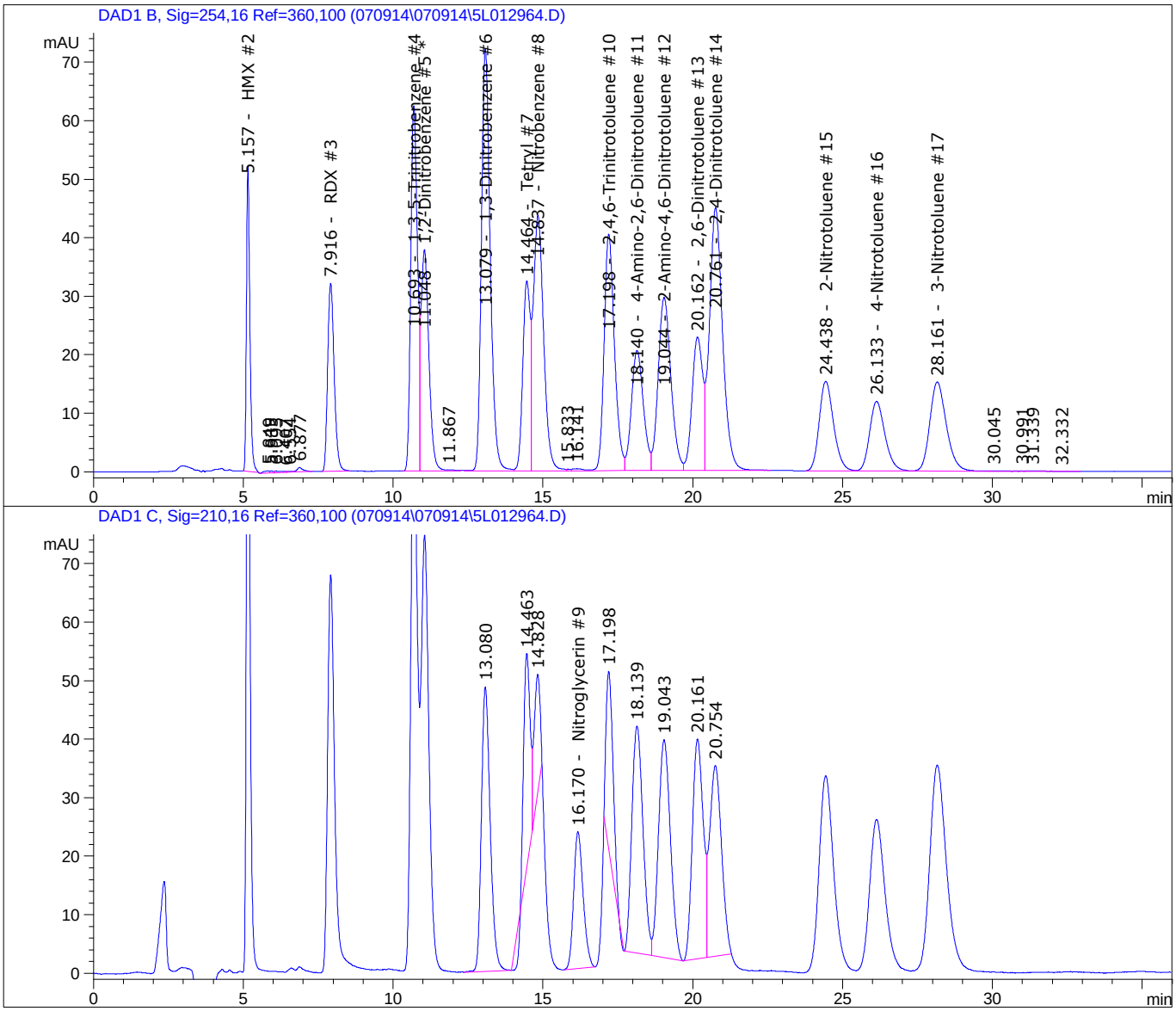
==========

Acq. Operator	: ECL	Seq. Line :	1
Acq. Instrument	: HPLC5	Location :	Vial 2
Injection Date	: 7/9/2014 1:26:31 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/10/2014 1:37:00 PM by ECL
(modified after loading)
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

==========



HPLC5 7/10/2014 1:37:05 PM ECL Page 1 of 3

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :   1
Acq. Instrument : HPLC5                          Location : Vial 2
Injection Date  : 7/9/2014 1:26:31 PM                 Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed    : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/10/2014 1:37:00 PM by ECL
                  (modified after loading)
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65351


==================================================================

==================================================================
                       External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, July 10, 2014 1:36:25 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
  5.157 BBA     414.85123    6.01934 2497.13265    HMX #2
  7.916 BBA     484.30826    5.15431 2496.27363    RDX #3
 10.693 BV      983.38068    2.54320 2500.93433    1,3,5-Trinitrobenzene #4
 11.048 VV      681.76361    3.67110 2502.82341    1,2-Dinitrobenzene #5 *
 13.079 VV     1476.04382    1.69639 2503.95045    1,3-Dinitrobenzene #6
 14.464 VV      561.56879    4.42428 2484.53489    Tetryl #7
 14.837 VV     1046.62891    2.39604 2507.76710    Nitrobenzene #8
 17.198 VV      967.20288    2.58632 2501.50061    2,4,6-Trinitrotoluene #10
 18.140 VV      570.30542    4.38038 2498.15394    4-Amino-2,6-Dinitrotoluene #11
 19.044 VV      877.05902    2.85036 2499.93268    2-Amino-4,6-Dinitrotoluene #12
 20.162 VV      566.14679    4.40596 2494.42225    2,6-Dinitrotoluene #13
 20.761 VV     1377.43542    1.81685 2502.59254    2,4-Dinitrotoluene #14
 24.438 BV      510.65686    4.89374 2499.02167    2-Nitrotoluene #15
 26.133 VV      425.73886    5.87562 2501.48152    4-Nitrotoluene #16
 28.161 VV      588.01941    4.25470 2501.84577    3-Nitrotoluene #17

Totals :                               3.74924e4
```

Data File C:\CHEM32\1\DATA\070914\070914\5L012964.D
Sample Name: WG483233-01 8330 ICAL 2500 PPB

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :   1
Acq. Instrument : HPLC5                          Location : Vial 2
Injection Date  : 7/9/2014 1:26:31 PM                 Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed    : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/10/2014 1:37:00 PM by ECL
                  (modified after loading)
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65351


==================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 16.170 BV      515.99780    4.84900 2502.07589    Nitroglycerin #9

Totals :                              2502.07589


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                           *** End of Report ***
```

Data File C:\CHEM32\1\DATA\070914\070914\5L012965.D
Sample Name: WG483233-02 8330 ICAL 1000 PPB

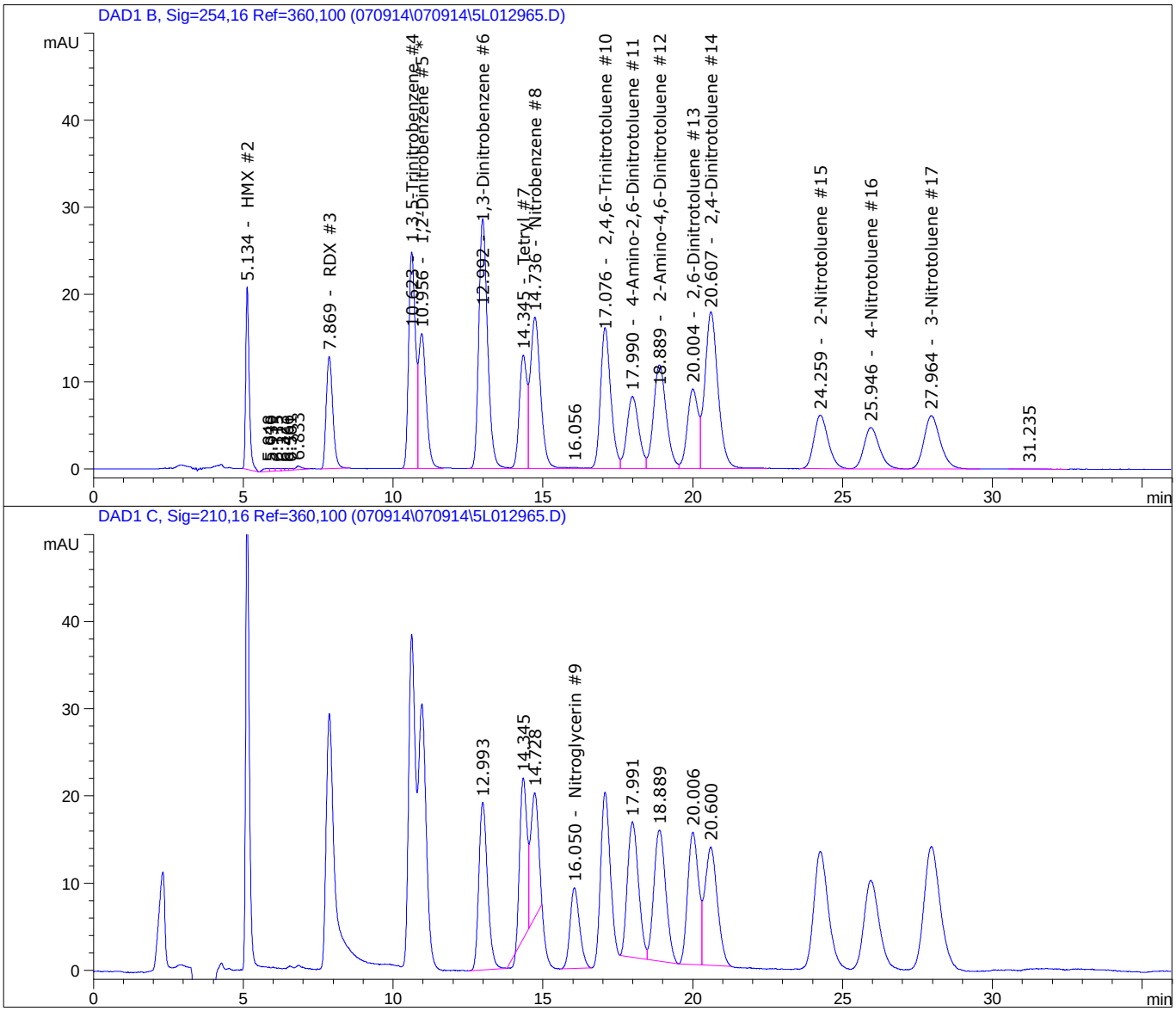
==========

Acq. Operator	: ECL	Seq. Line :	2
Acq. Instrument	: HPLC5	Location :	Vial 3
Injection Date	: 7/9/2014 2:05:37 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/10/2014 1:37:16 PM by ECL
(modified after loading)
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

==========



```
==================================================================
Acq. Operator   : ECL                           Seq. Line :   2
Acq. Instrument : HPLC5                          Location : Vial 3
Injection Date  : 7/9/2014 2:05:37 PM                 Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed    : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/10/2014 1:37:16 PM by ECL
                  (modified after loading)
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65351


==================================================================

==================================================================
                       External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, July 10, 2014 1:36:25 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
  5.134 BBA     168.39406    6.01547 1012.96869    HMX #2
  7.869 BBA     195.34581    5.15246 1006.51092    RDX #3
 10.623 BV      389.59302    2.53047  985.85277    1,3,5-Trinitrobenzene #4
 10.956 VV      274.80081    3.70400 1017.86208    1,2-Dinitrobenzene #5 *
 12.992 VV      585.61853    1.70393  997.85422    1,3-Dinitrobenzene #6
 14.345 VV      229.50737    4.31070  989.33824    Tetryl #7
 14.736 VV      413.06210    2.42380 1001.18024    Nitrobenzene #8
 17.076 VV      385.30911    2.58811  997.22381    2,4,6-Trinitrotoluene #10
 17.990 VV      228.31931    4.35863  995.16019    4-Amino-2,6-Dinitrotoluene #11
 18.889 VV      349.45117    2.84012  992.48363    2-Amino-4,6-Dinitrotoluene #12
 20.004 VV      226.93925    4.34049  985.02864    2,6-Dinitrotoluene #13
 20.607 VV      549.58862    1.82568 1003.37500    2,4-Dinitrotoluene #14
 24.259 BV      203.63292    4.86976  991.64432    2-Nitrotoluene #15
 25.946 VV      168.68358    5.85976  988.44451    4-Nitrotoluene #16
 27.964 VV      232.78145    4.24442  988.02338    3-Nitrotoluene #17

Totals :                               1.49530e4
```

Data File C:\CHEM32\1\DATA\070914\070914\5L012965.D
Sample Name: WG483233-02 8330 ICAL 1000 PPB

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :   2
Acq. Instrument : HPLC5                          Location : Vial 3
Injection Date  : 7/9/2014 2:05:37 PM                 Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed    : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/10/2014 1:37:16 PM by ECL
                  (modified after loading)
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65351


==================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 16.050 BV      205.25853    4.85696  996.93331    Nitroglycerin #9

Totals :                               996.93331


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                           *** End of Report ***
```

Data File C:\CHEM32\1\DATA\070914\070914\5L012966.D
Sample Name: WG483233-03 8330 ICAL 500 PPB

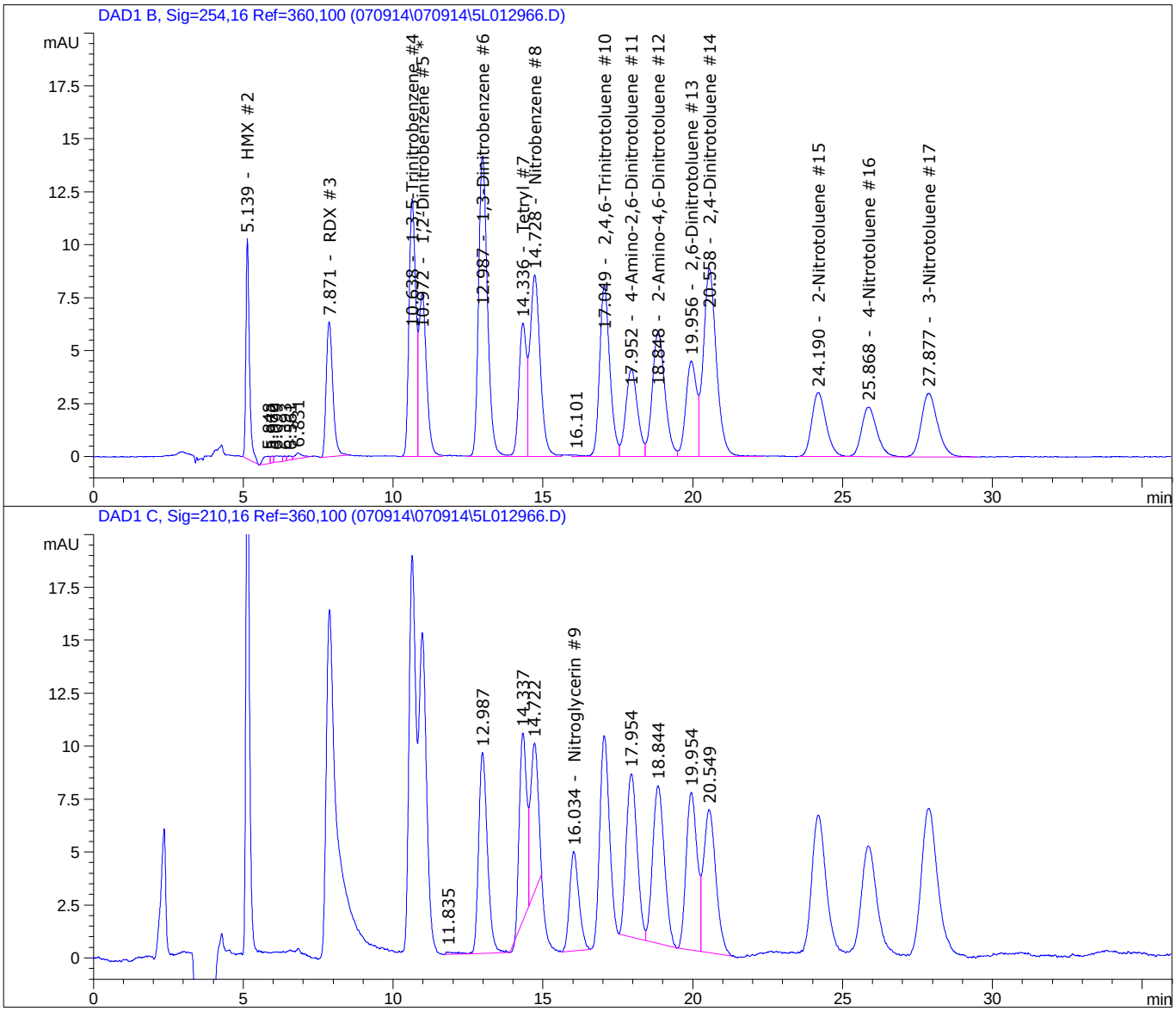
==========

Acq. Operator	: ECL	Seq. Line :	3
Acq. Instrument	: HPLC5	Location :	Vial 4
Injection Date	: 7/9/2014 2:44:44 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/10/2014 1:37:52 PM by ECL
(modified after loading)
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

==========



```
    ==================================================================
    Acq. Operator   : ECL                           Seq. Line :   3
    Acq. Instrument : HPLC5                          Location : Vial 4
    Injection Date  : 7/9/2014 2:44:44 PM                 Inj :   1
                                                   Inj Volume : 100 µl
    Acq. Method     : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
    Last changed    : 5/30/2014 10:00:02 AM by ECL
    Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
    Last changed    : 7/10/2014 1:37:52 PM by ECL
                      (modified after loading)
    Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

    Sample Info     : 1,1  STD65351


    ==================================================================

    ==================================================================
                          External Standard Report
    ==================================================================

    Sorted By             :      Signal
    Calib. Data Modified  :      Thursday, July 10, 2014 1:37:49 PM
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Use Multiplier & Dilution Factor with ISTDs

    Signal 1: DAD1 B, Sig=254,16 Ref=360,100

    RetTime  Type     Area     Amt/Area    Amount   Grp   Name
     [min]          [mAU*s]                [ug/L]
    -------|------|----------|----------|----------|--|------------------
      5.139 BBA      84.86152    5.96457  506.16231    HMX #2
      7.871 VBA      98.46990    5.14900  507.02150    RDX #3
     10.638 BV      191.39067    2.54928  487.90879    1,3,5-Trinitrobenzene #4
     10.972 VV      136.07069    3.67779  500.43986    1,2-Dinitrobenzene #5 *
     12.987 VV      288.89835    1.70895  493.71254    1,3-Dinitrobenzene #6
     14.336 VV      111.64665    4.34012  484.55975    Tetryl #7
     14.728 VV      203.07185    2.43113  493.69426    Nitrobenzene #8
     17.049 VV      190.71613    2.59432  494.77946    2,4,6-Trinitrotoluene #10
     17.952 VV      112.67506    4.37305  492.73364    4-Amino-2,6-Dinitrotoluene #11
     18.848 VV      172.49153    2.85240  492.01463    2-Amino-4,6-Dinitrotoluene #12
     19.956 VV      111.60930    4.36884  487.60324    2,6-Dinitrotoluene #13
     20.558 VB      269.68353    1.82948  493.38132    2,4-Dinitrotoluene #14
     24.190 BV      100.31861    4.89573  491.13258    2-Nitrotoluene #15
     25.868 VV       83.41754    5.89519  491.76208    4-Nitrotoluene #16
     27.877 VB      114.89574    4.27171  490.80180    3-Nitrotoluene #17

    Totals :                               7407.70778
```

Data File C:\CHEM32\1\DATA\070914\070914\5L012966.D
Sample Name: WG483233-03 8330 ICAL 500 PPB

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :   3
Acq. Instrument : HPLC5                          Location : Vial 4
Injection Date  : 7/9/2014 2:44:44 PM                 Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed    : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/10/2014 1:37:52 PM by ECL
                  (modified after loading)
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65351


==================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 16.034 BV      101.56783    4.86975  494.60998    Nitroglycerin #9

Totals :                               494.60998


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                           *** End of Report ***
```

Data File C:\CHEM32\1\DATA\070914\070914\5L012967.D
Sample Name: WG483233-04 8330 ICAL 100 PPB

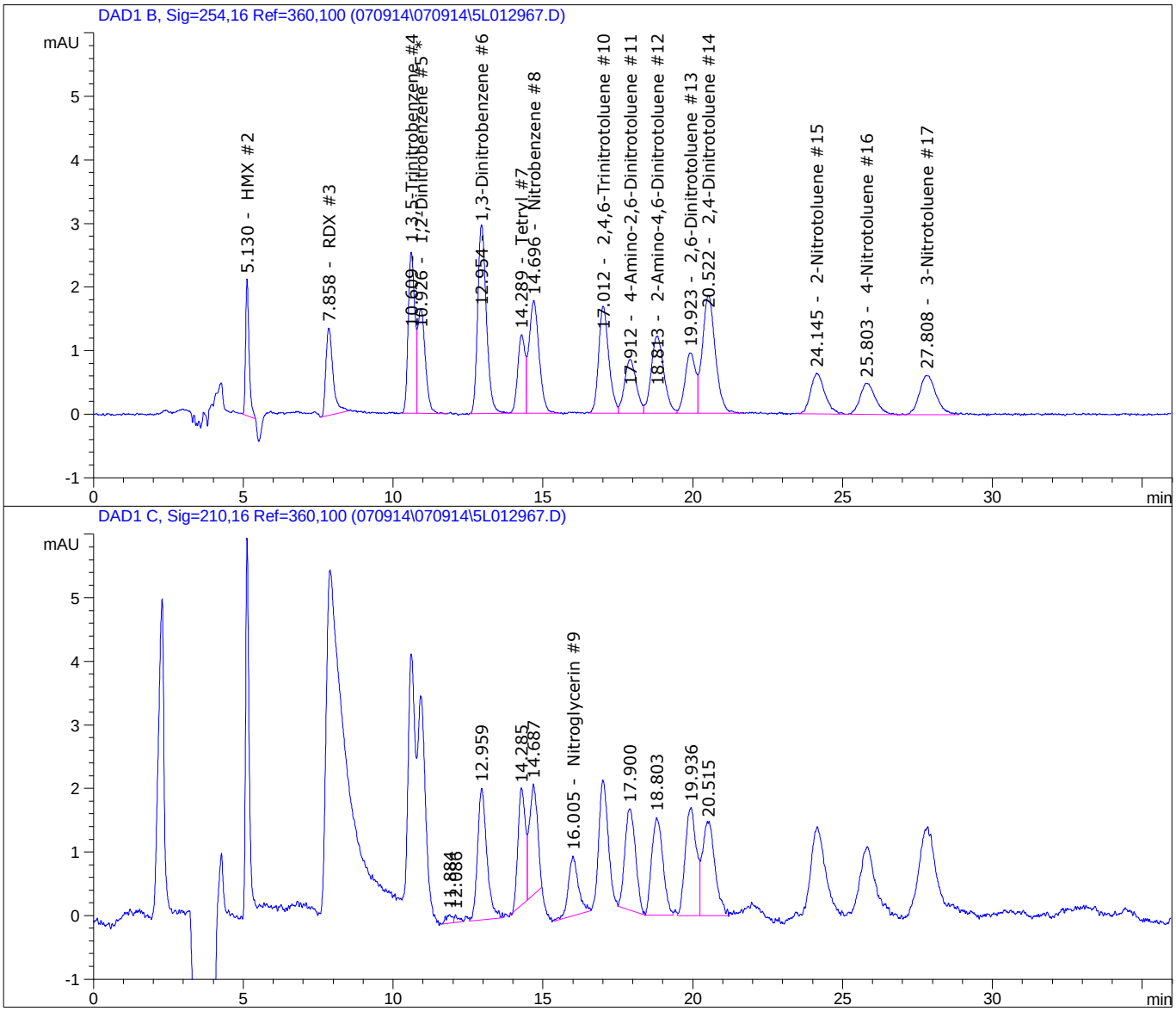
==========

Acq. Operator	: ECL	Seq. Line :	4
Acq. Instrument	: HPLC5	Location :	Vial 5
Injection Date	: 7/9/2014 3:23:45 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/10/2014 1:43:50 PM by ECL
(modified after loading)
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

==========



Data File C:\CHEM32\1\DATA\070914\070914\5L012967.D
Sample Name: WG483233-04 8330 ICAL 100 PPB

==========

Acq. Operator : ECL Seq. Line : 4
Acq. Instrument : HPLC5 Location : Vial 5
Injection Date : 7/9/2014 3:23:45 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/10/2014 1:43:50 PM by ECL
(modified after loading)
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

==========

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : Thursday, July 10, 2014 1:43:48 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.130	BBA	17.39457	5.67223	98.66602		HMX #2
7.858	BBA	22.64245	4.91813	111.35854		RDX #3
10.609	BV	39.60133	2.60088	102.99843		1,3,5-Trinitrobenzene #4
10.926	VB	28.70009	3.57993	102.74441		1,2-Dinitrobenzene #5 *
12.954	BV	60.05067	1.74720	104.92068		1,3-Dinitrobenzene #6
14.289	VV	21.59427	4.15052	89.62750		Tetryl #7
14.696	VB	41.73262	2.55164	106.48649		Nitrobenzene #8
17.012	BV	39.80295	2.61292	104.00185		2,4,6-Trinitrotoluene #10
17.912	VV	23.25091	4.35559	101.27152		4-Amino-2,6-Dinitrotoluene #11
18.813	VV	35.72176	2.86469	102.33161		2-Amino-4,6-Dinitrotoluene #12
19.923	VV	23.39913	4.27063	99.92904		2,6-Dinitrotoluene #13
20.522	VB	55.68262	1.86825	104.02887		2,4-Dinitrotoluene #14
24.145	BB	21.18709	4.90195	103.85799		2-Nitrotoluene #15
25.803	BV	17.80792	5.94300	105.83256		4-Nitrotoluene #16
27.808	VV	24.17198	4.34376	104.99734		3-Nitrotoluene #17

Totals : 1543.05284

Data File C:\CHEM32\1\DATA\070914\070914\5L012967.D
Sample Name: WG483233-04 8330 ICAL 100 PPB

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :   4
Acq. Instrument : HPLC5                          Location : Vial 5
Injection Date  : 7/9/2014 3:23:45 PM                 Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed    : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/10/2014 1:43:50 PM by ECL
                  (modified after loading)
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65351


==================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 16.005 BV       21.88299    4.93730  108.04290    Nitroglycerin #9

Totals :                               108.04290


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                           *** End of Report ***
```

Data File C:\CHEM32\1\DATA\070914\070914\5L012968.D
Sample Name: WG483233-05 8330 ICAL 50 PPB

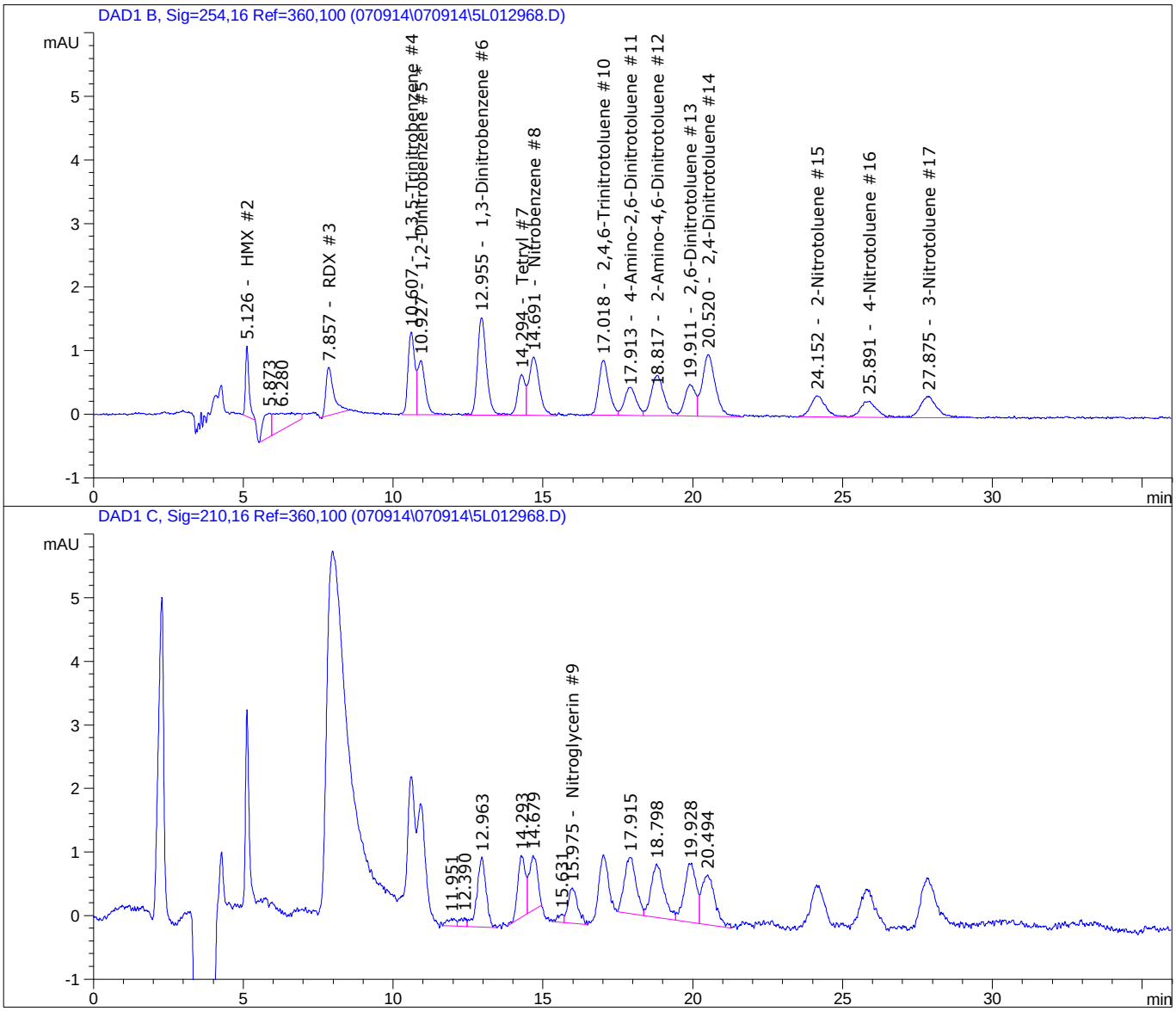
==========

Acq. Operator	: ECL	Seq. Line :	5
Acq. Instrument	: HPLC5	Location :	Vial 6
Injection Date	: 7/9/2014 4:02:48 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/10/2014 1:44:37 PM by ECL
(modified after loading)
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

==========



```
==================================================================
Acq. Operator   : ECL                           Seq. Line :   5
Acq. Instrument : HPLC5                          Location : Vial 6
Injection Date  : 7/9/2014 4:02:48 PM                 Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed    : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/10/2014 1:44:37 PM by ECL
                  (modified after loading)
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65351


==================================================================

==================================================================
                       External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, July 10, 2014 1:44:34 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100
```

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.126	BBA	9.14081	5.20970	47.62092		HMX #2
7.857	BBA	13.91896	4.28502	59.64300		RDX #3
10.607	BV	20.38415	2.67574	54.54273		1,3,5-Trinitrobenzene #4
10.927	VB	15.42879	3.47784	53.65894		1,2-Dinitrobenzene #5 *
12.955	BB	31.77382	1.75262	55.68738		1,3-Dinitrobenzene #6
14.294	BV	11.32651	4.17745	47.31595		Tetryl #7
14.691	VV	21.95632	2.60068	57.10142		Nitrobenzene #8
17.018	BV	20.27113	2.61027	52.91311		2,4,6-Trinitrotoluene #10
17.913	VV	12.11038	4.33988	52.55759		4-Amino-2,6-Dinitrotoluene #11
18.817	VV	18.98899	2.86242	54.35451		2-Amino-4,6-Dinitrotoluene #12
19.911	VV	12.29927	4.23992	52.14796		2,6-Dinitrotoluene #13
20.520	VB	29.66468	1.86209	55.23841		2,4-Dinitrotoluene #14
24.152	BV	11.46259	4.83950	55.47323		2-Nitrotoluene #15
25.891	VV	10.05669	5.81711	58.50082		4-Nitrotoluene #16
27.875	VB	13.30298	4.33866	57.71705		3-Nitrotoluene #17

Totals : 814.47301

Data File C:\CHEM32\1\DATA\070914\070914\5L012968.D
Sample Name: WG483233-05 8330 ICAL 50 PPB

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :   5
Acq. Instrument : HPLC5                          Location : Vial 6
Injection Date  : 7/9/2014 4:02:48 PM                 Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed    : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/10/2014 1:44:37 PM by ECL
                  (modified after loading)
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65351


==================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 15.975 VV       12.55221    4.81277   60.41091    Nitroglycerin #9

Totals :                               60.41091


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                           *** End of Report ***
```

Data File C:\CHEM32\1\DATA\070914\070914\5L012969.D
Sample Name: WG483233-06 8330 ICAL 25 PPB

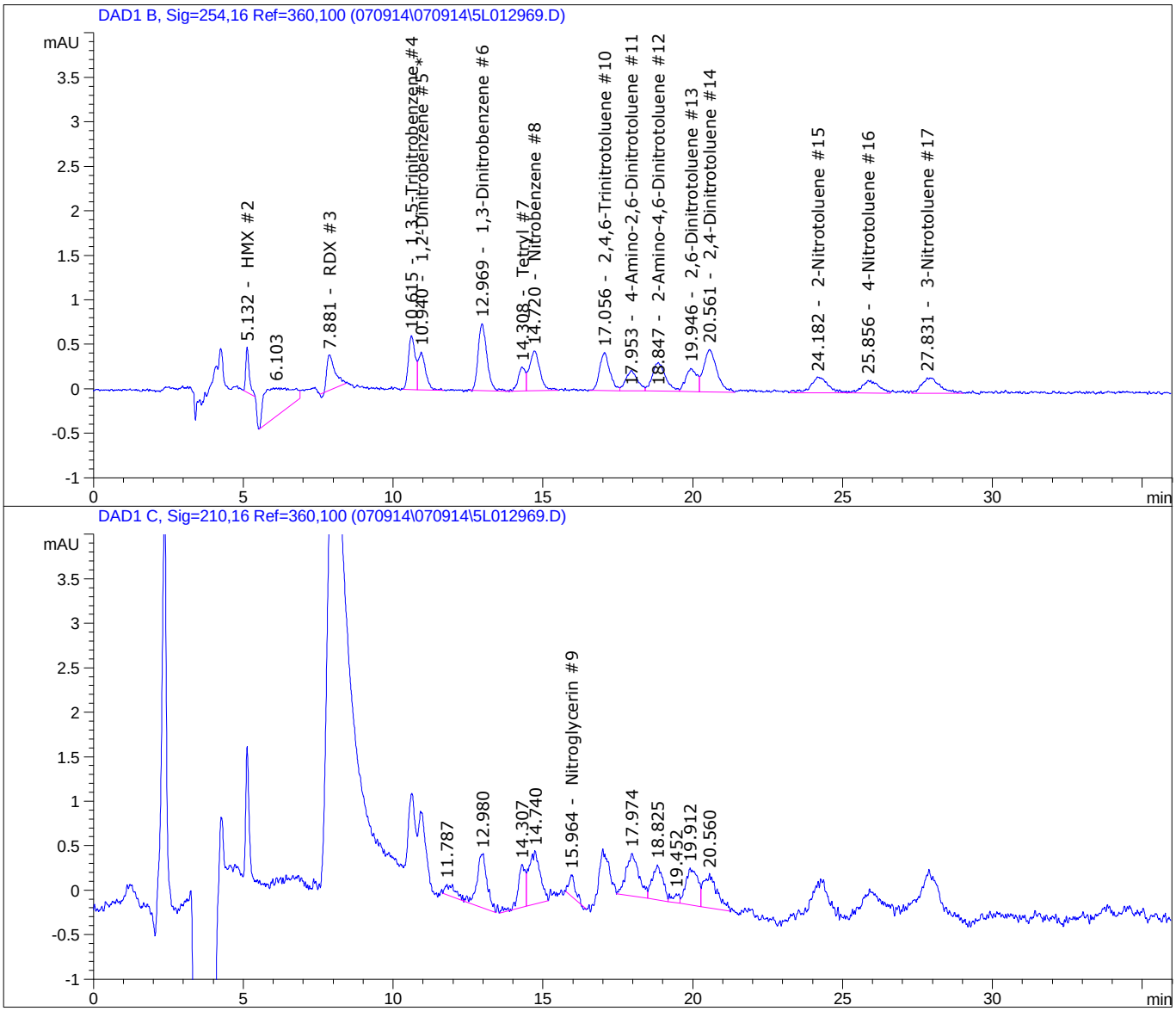
==========

Acq. Operator	: ECL	Seq. Line :	6
Acq. Instrument	: HPLC5	Location :	Vial 7
Injection Date	: 7/9/2014 4:41:52 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/10/2014 1:45:56 PM by ECL
(modified after loading)
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

==========



```
==================================================================
Acq. Operator   : ECL                           Seq. Line :   6
Acq. Instrument : HPLC5                          Location : Vial 7
Injection Date  : 7/9/2014 4:41:52 PM                 Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed    : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/10/2014 1:45:56 PM by ECL
                  (modified after loading)
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65351


==================================================================

==================================================================
                       External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, July 10, 2014 1:45:54 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100
```

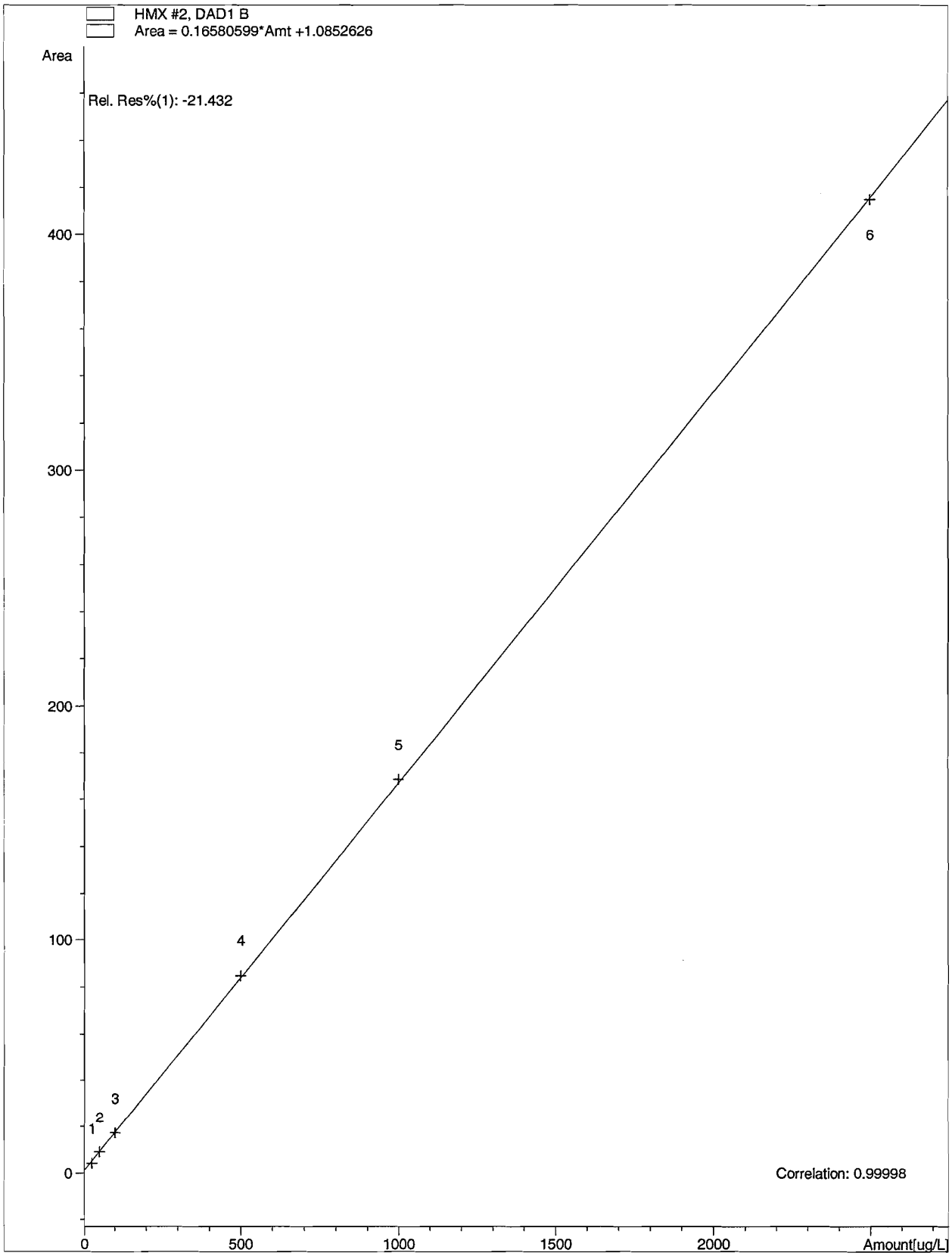
RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.132	BBA	4.10941	4.43837	18.23905		HMX #2
7.881	BBA	7.26338	2.96675	21.54861		RDX #3
10.615	BV	9.60365	2.88602	27.71632		1,3,5-Trinitrobenzene #4
10.940	VB	7.20785	3.08939	22.26787		1,2-Dinitrobenzene #5 *
12.969	BV	15.50592	1.77897	27.58458		1,3-Dinitrobenzene #6
14.308	VV	4.55197	4.46380	20.31909		Tetryl #7
14.720	VB	11.06604	2.71552	30.05007		Nitrobenzene #8
17.056	BV	10.06921	2.60926	26.27316		2,4,6-Trinitrotoluene #10
17.953	VV	6.20706	4.25552	26.41432		4-Amino-2,6-Dinitrotoluene #11
18.847	VV	9.87415	2.82387	27.88330		2-Amino-4,6-Dinitrotoluene #12
19.946	VV	6.74628	4.10557	27.69737		2,6-Dinitrotoluene #13
20.561	VV	14.61115	1.86241	27.21198		2,4-Dinitrotoluene #14
24.182	BV	7.37311	4.44260	32.75578		2-Nitrotoluene #15
25.856	VV	5.51677	5.45234	30.07931		4-Nitrotoluene #16
27.831	BB	7.28426	4.18751	30.50287		3-Nitrotoluene #17

Totals : 396.54368

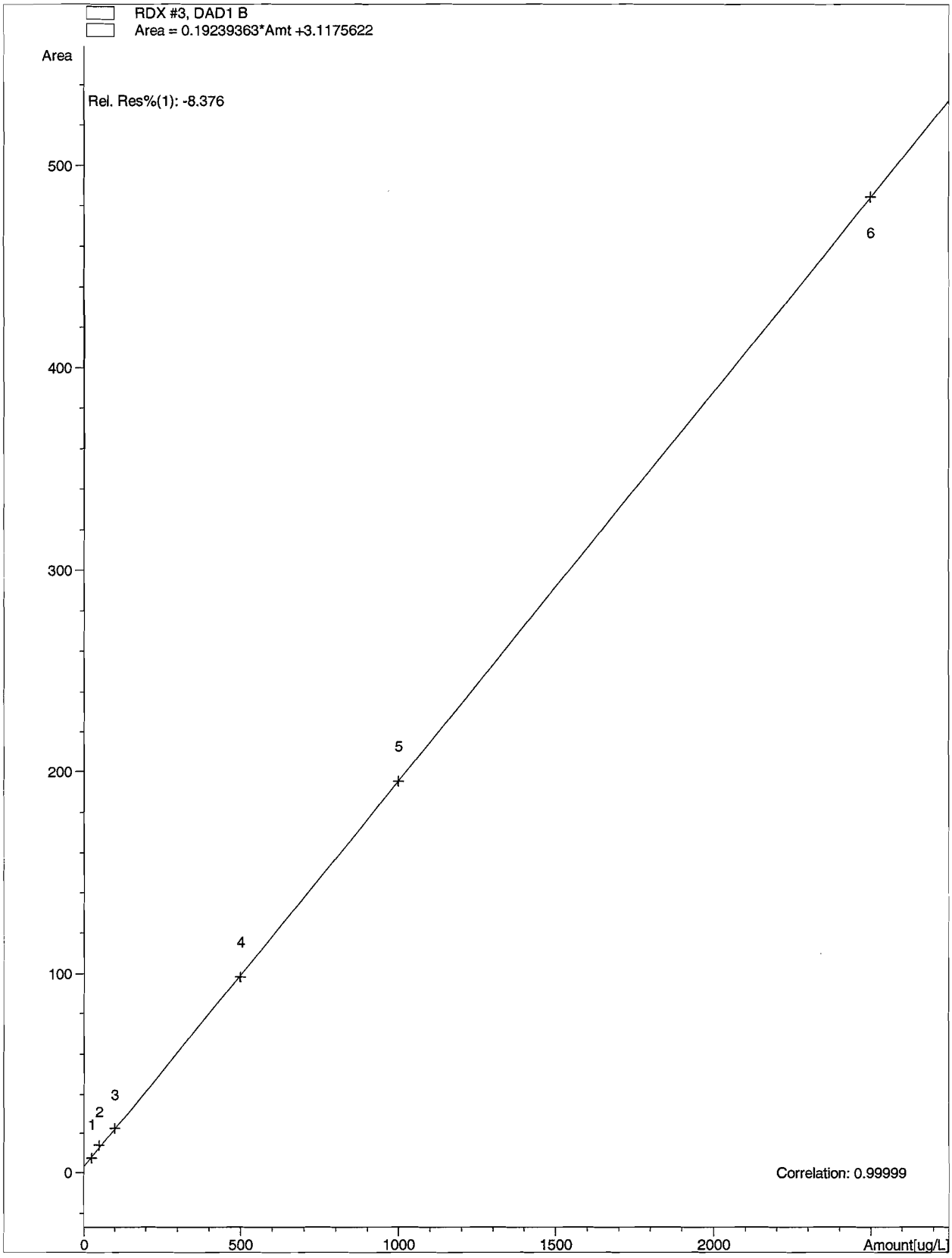
Data File C:\CHEM32\1\DATA\070914\070914\5L012969.D
Sample Name: WG483233-06 8330 ICAL 25 PPB

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :   6
Acq. Instrument : HPLC5                          Location : Vial 7
Injection Date  : 7/9/2014 4:41:52 PM                 Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed    : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/10/2014 1:45:56 PM by ECL
                  (modified after loading)
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65351


==================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 15.964 BV        3.53736    4.82871   17.08088    Nitroglycerin #9

Totals :                                17.08088


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                           *** End of Report ***
```

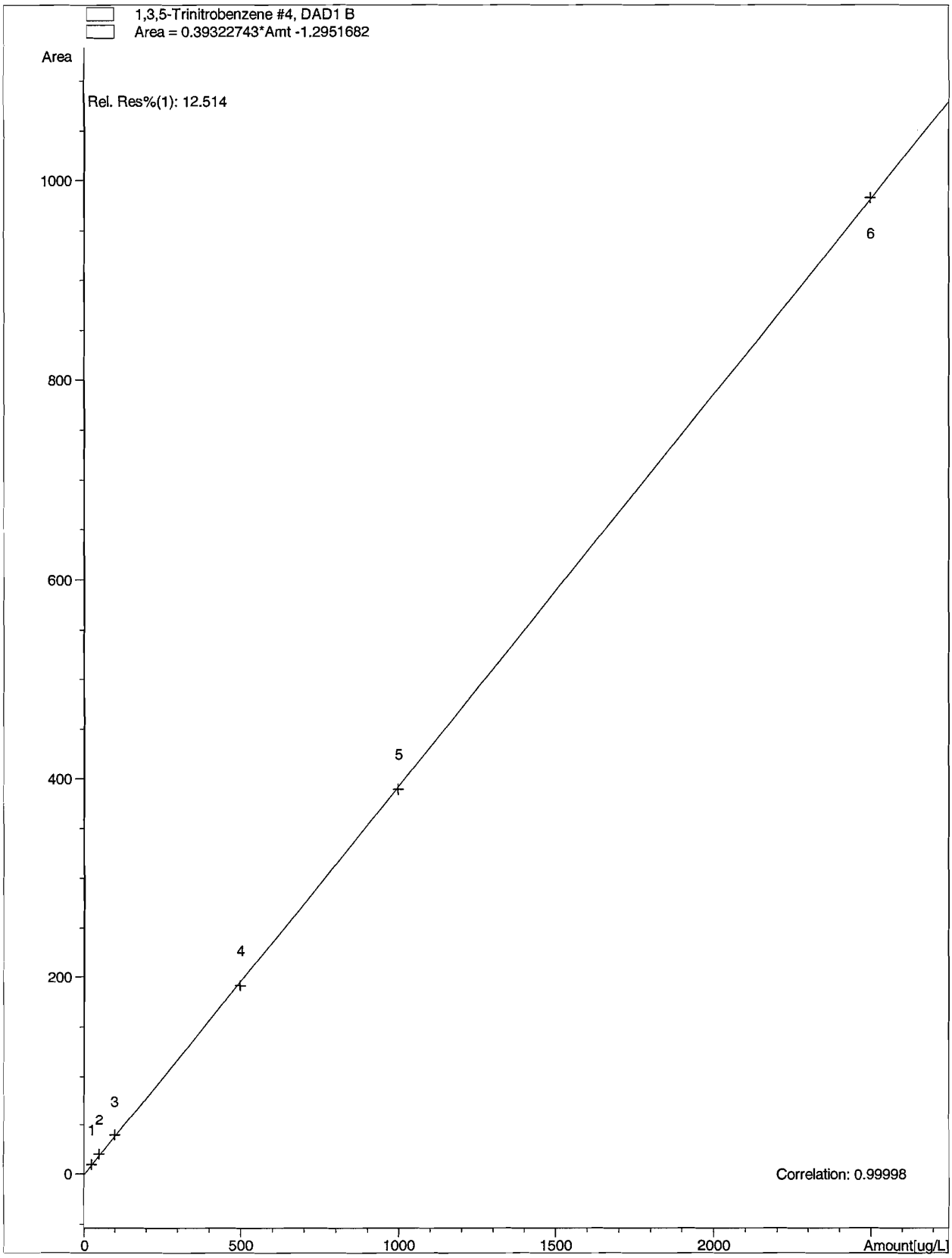
Calibration Curve



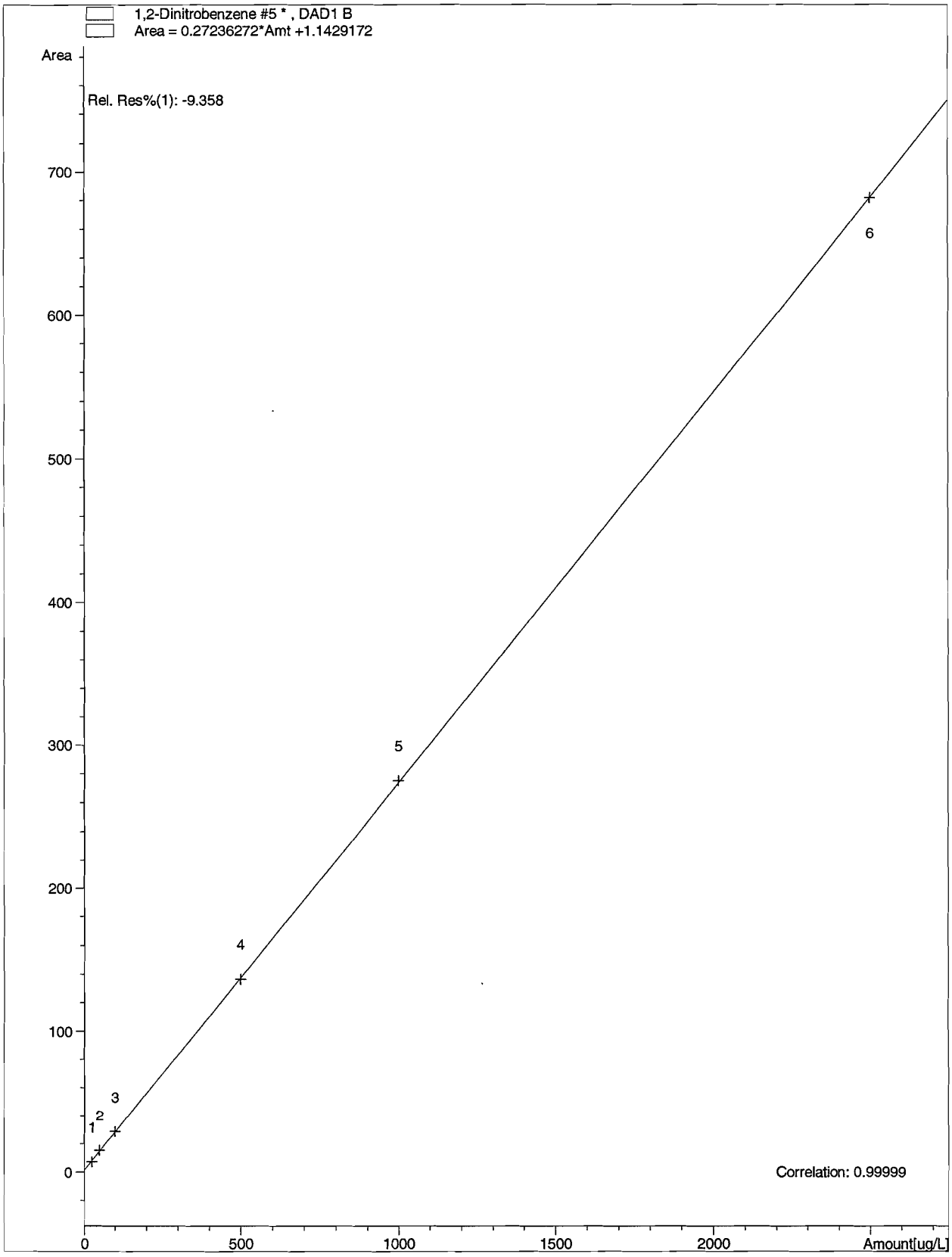
Calibration Curve



Calibration Curve



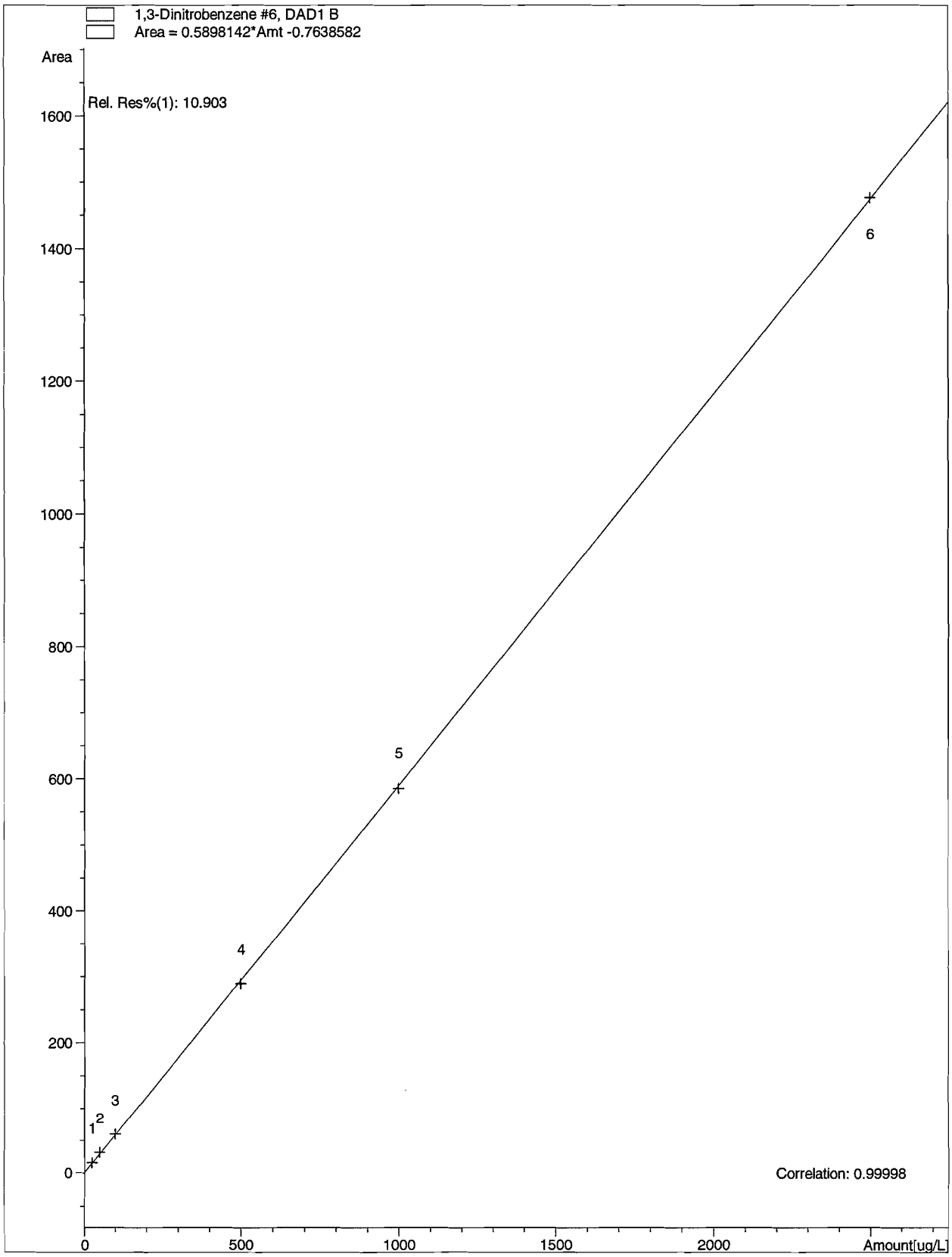
Calibration Curve



HPLC5 7/10/2014 1:47:03 PM ECL

Page 1 of 1

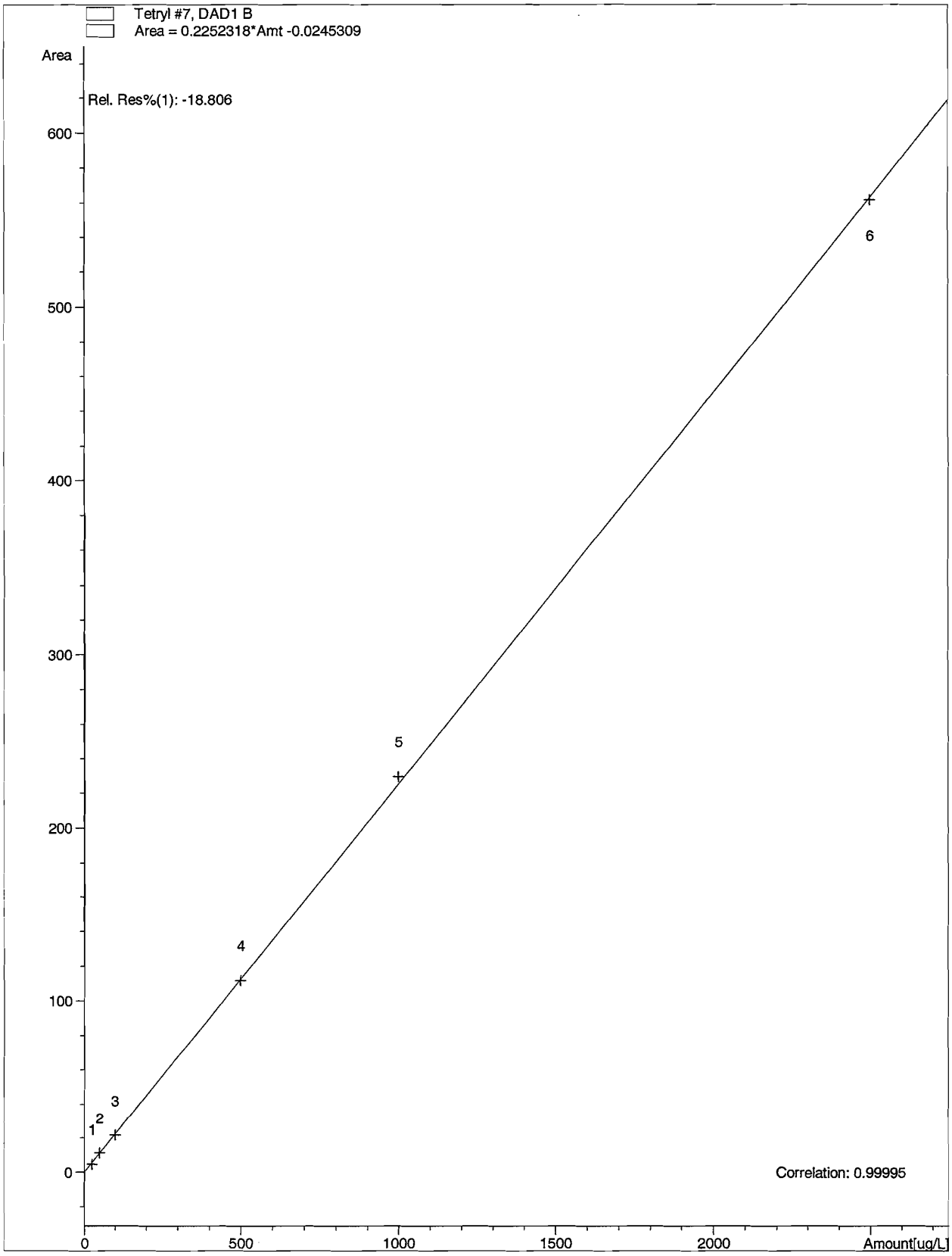
Calibration Curve



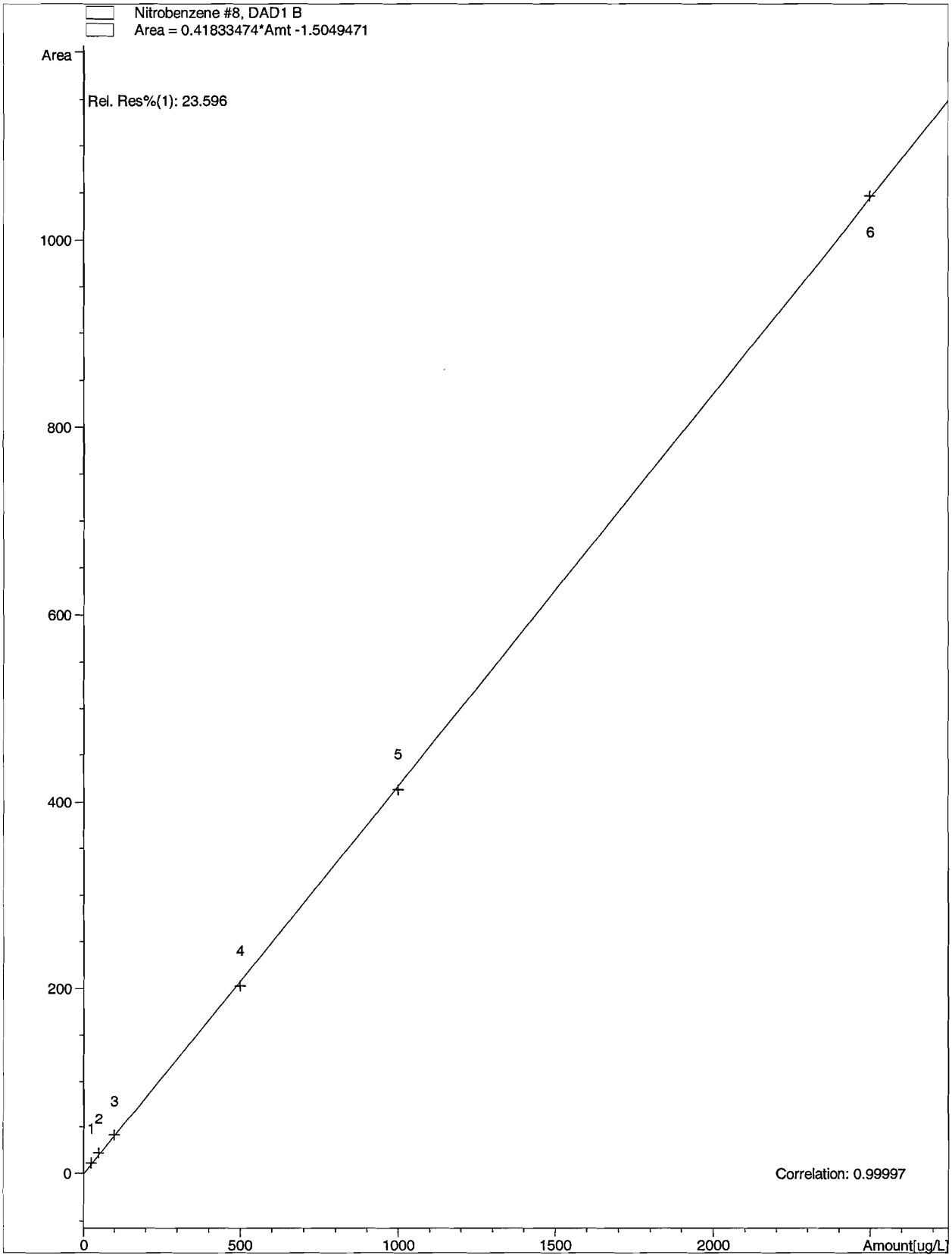
HPLC5 7/10/2014 1:47:17 PM ECL

Page 1 of 1

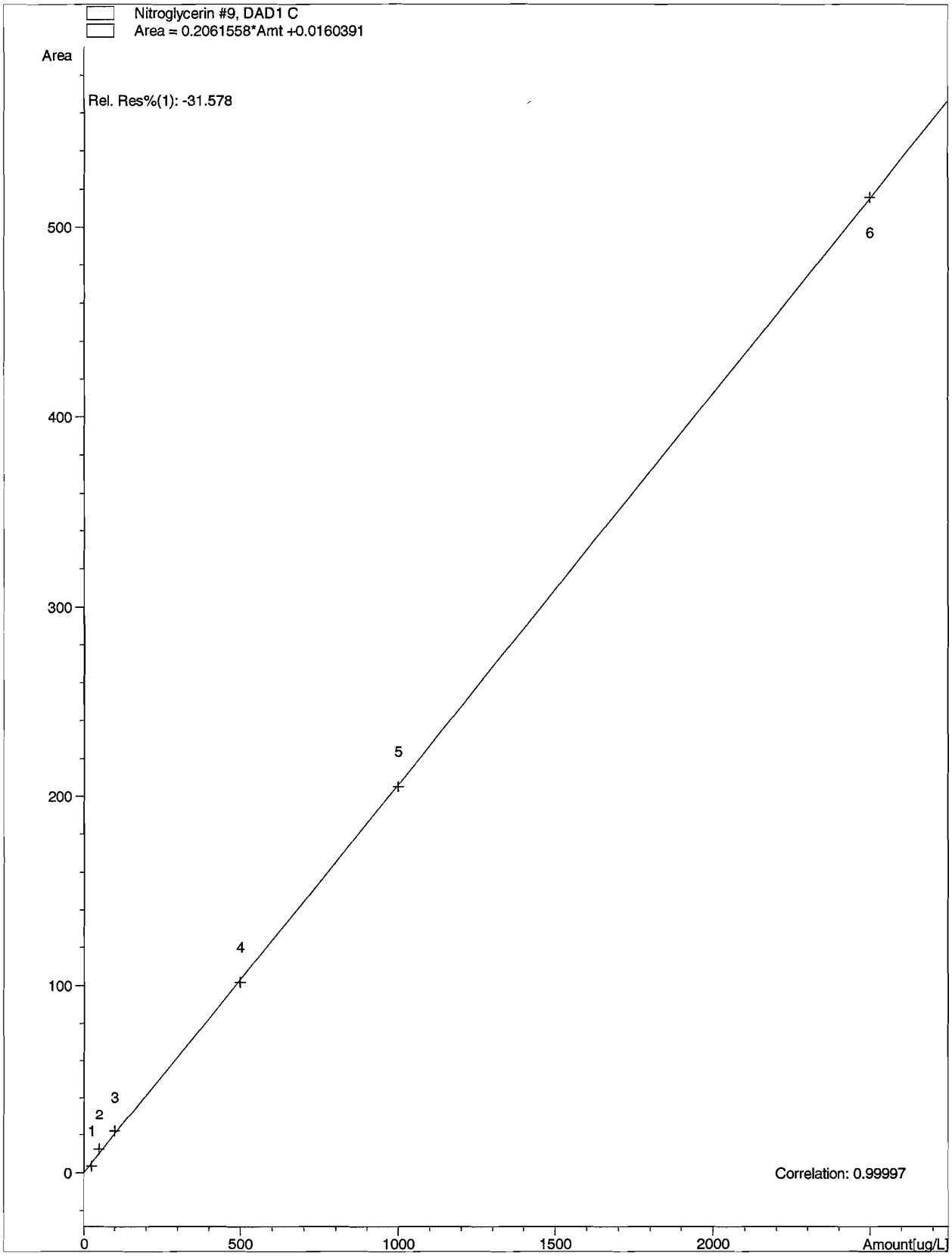
Calibration Curve



Calibration Curve



Calibration Curve



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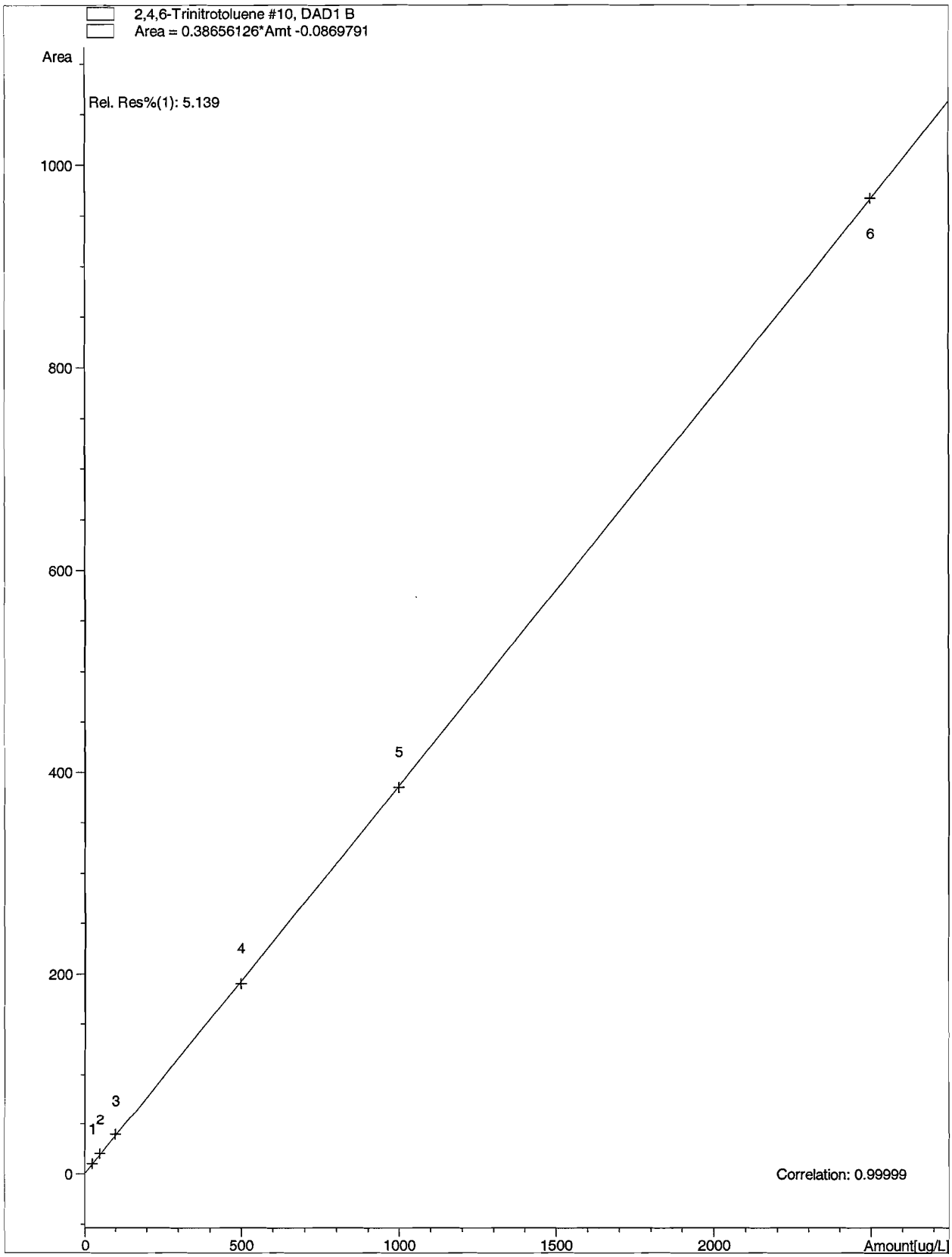
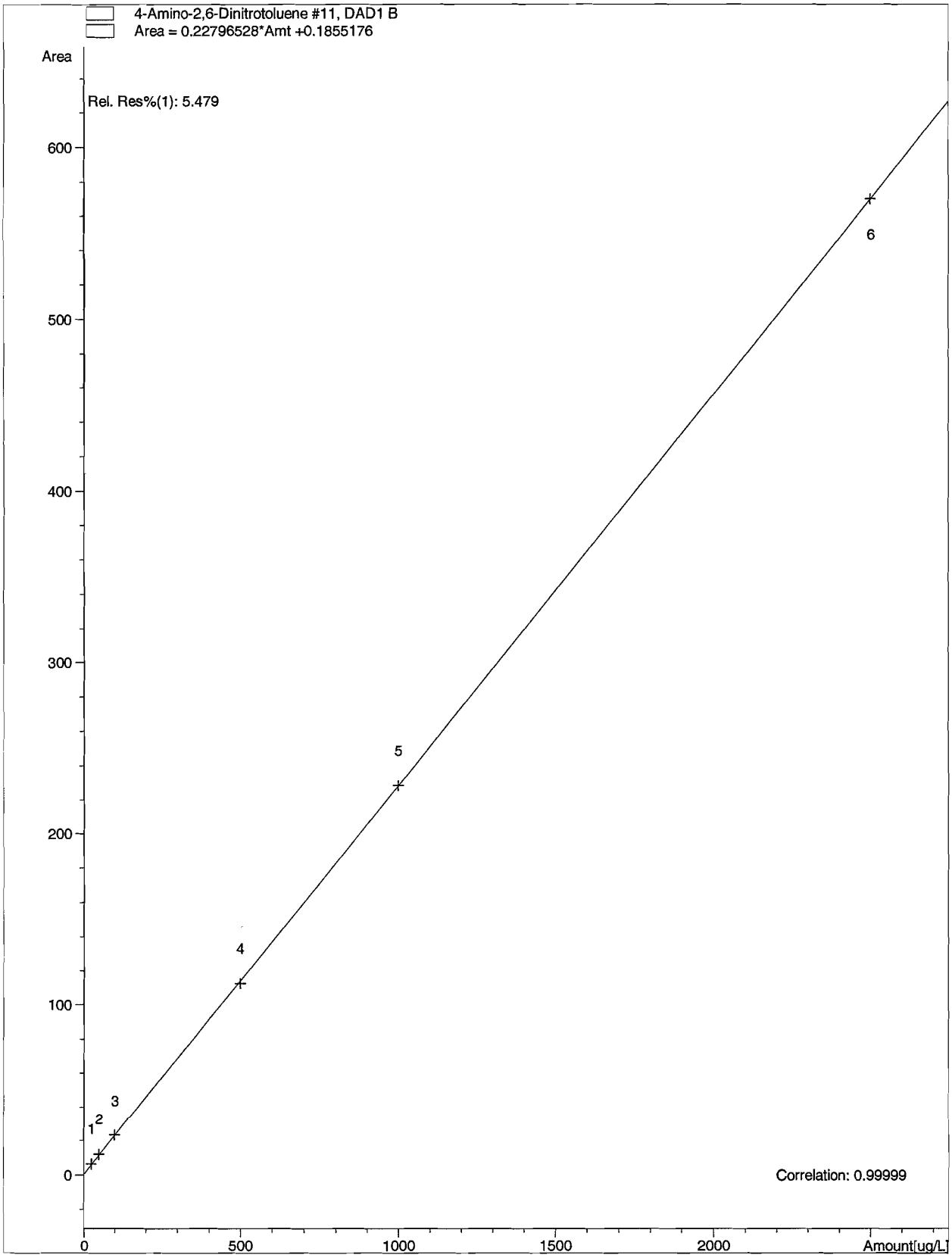


Calibration Curve



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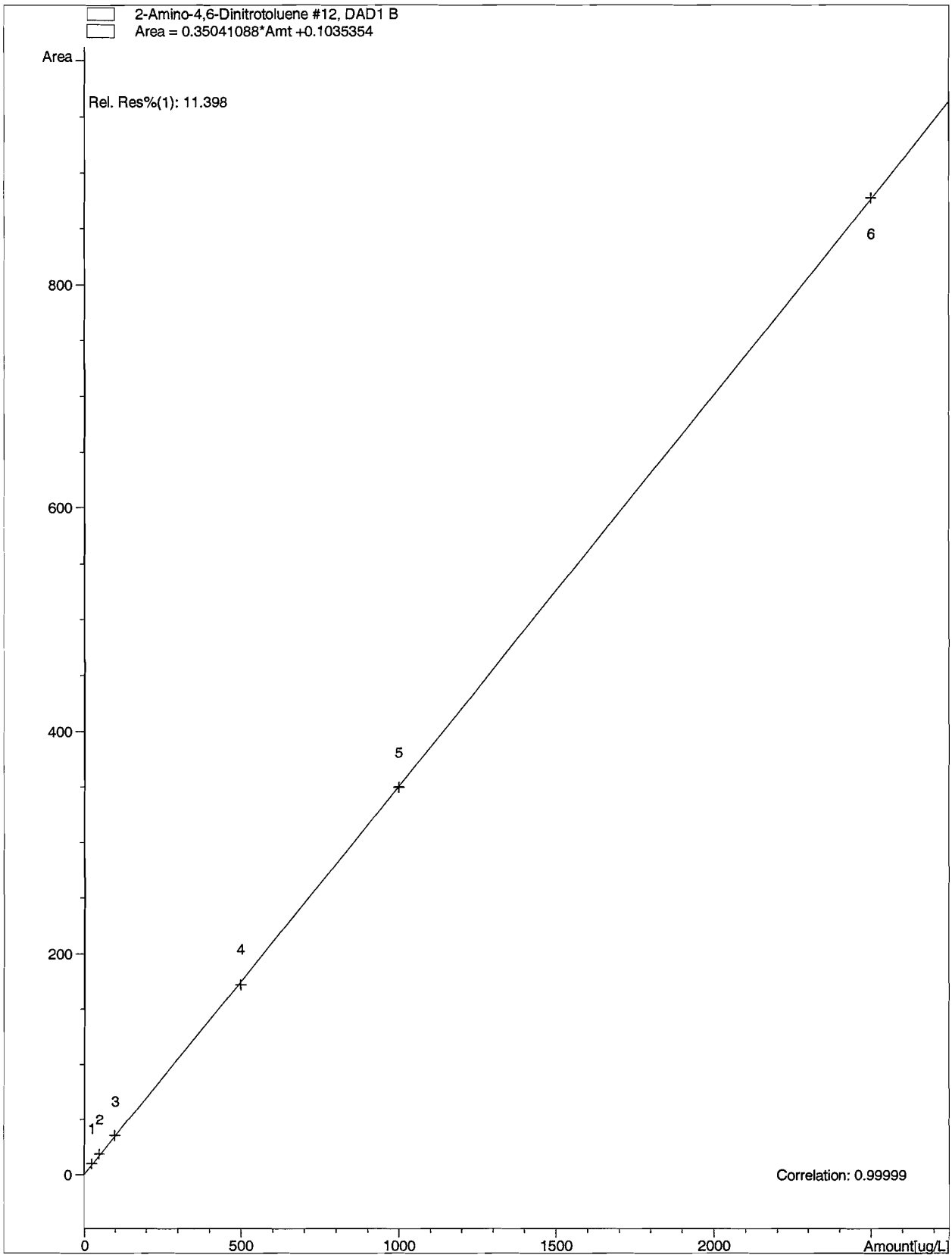
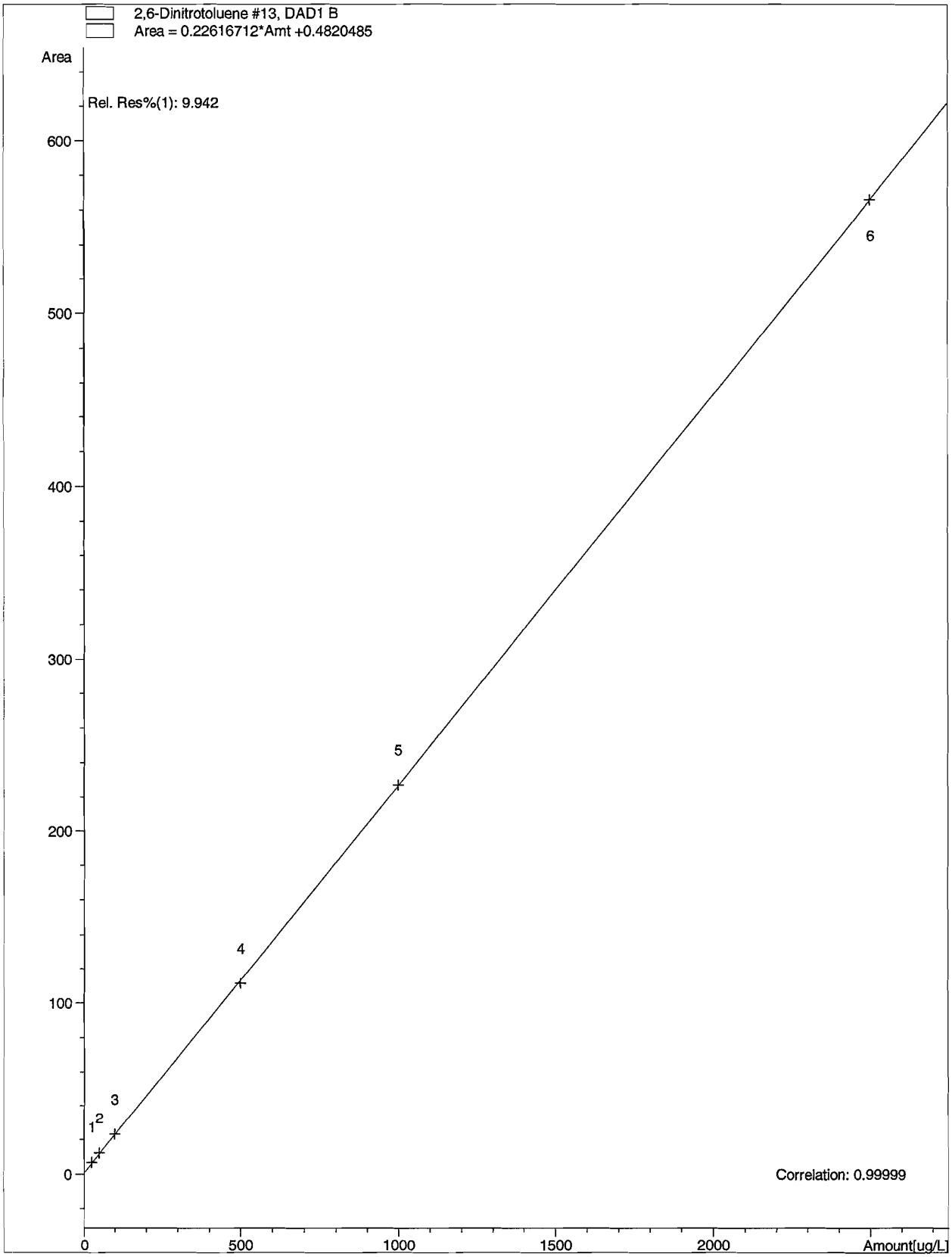
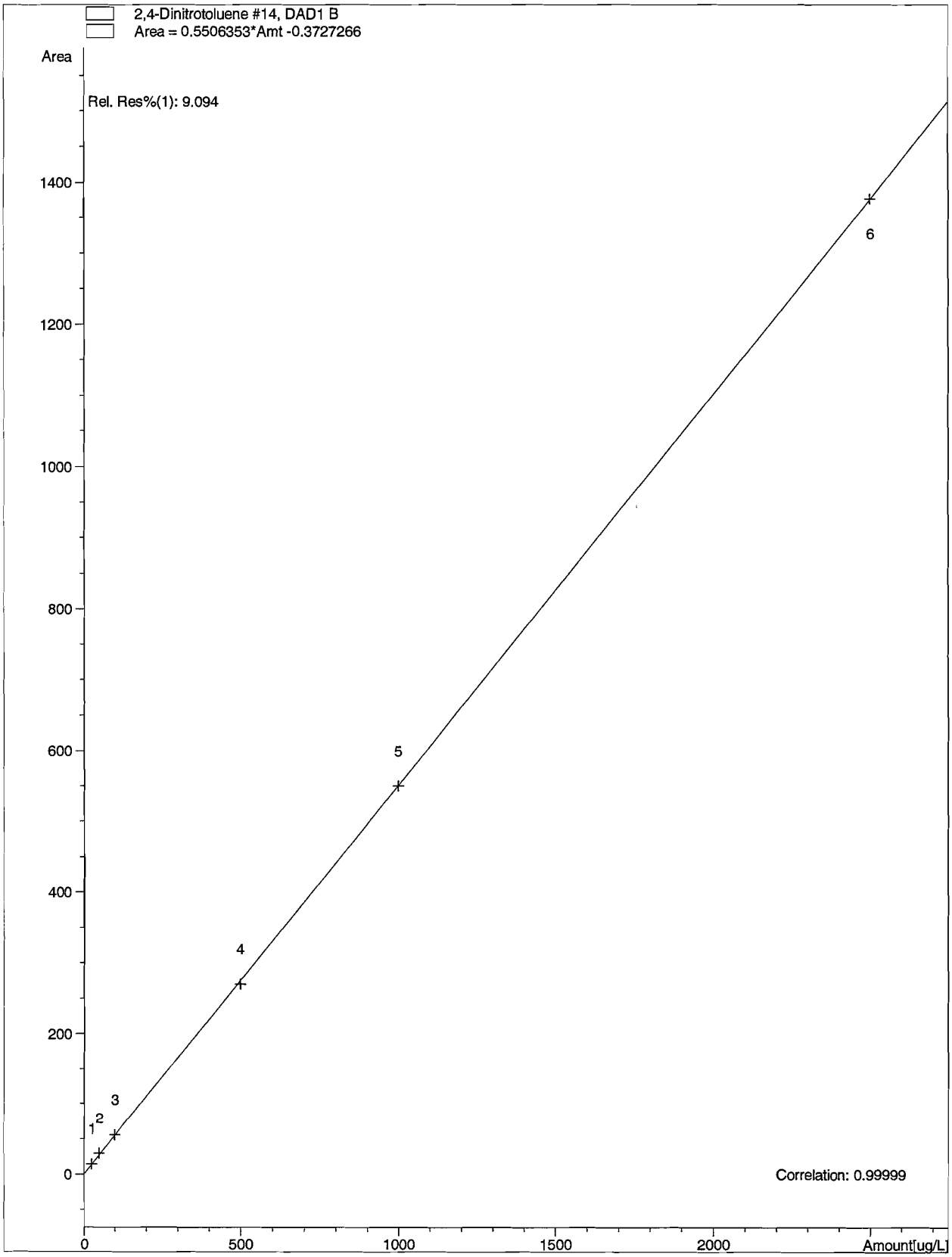


Calibration Curve



Calibration Curve



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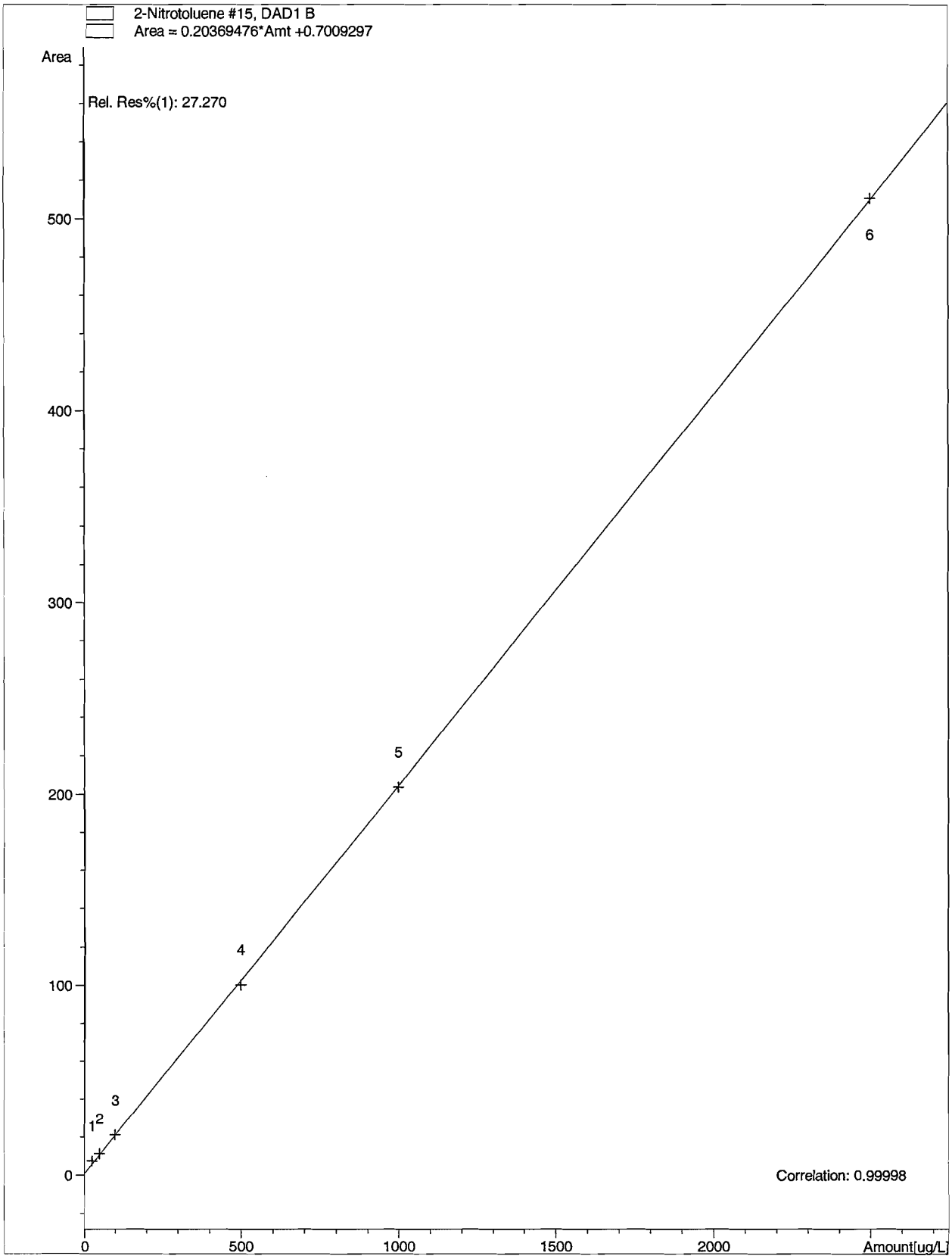
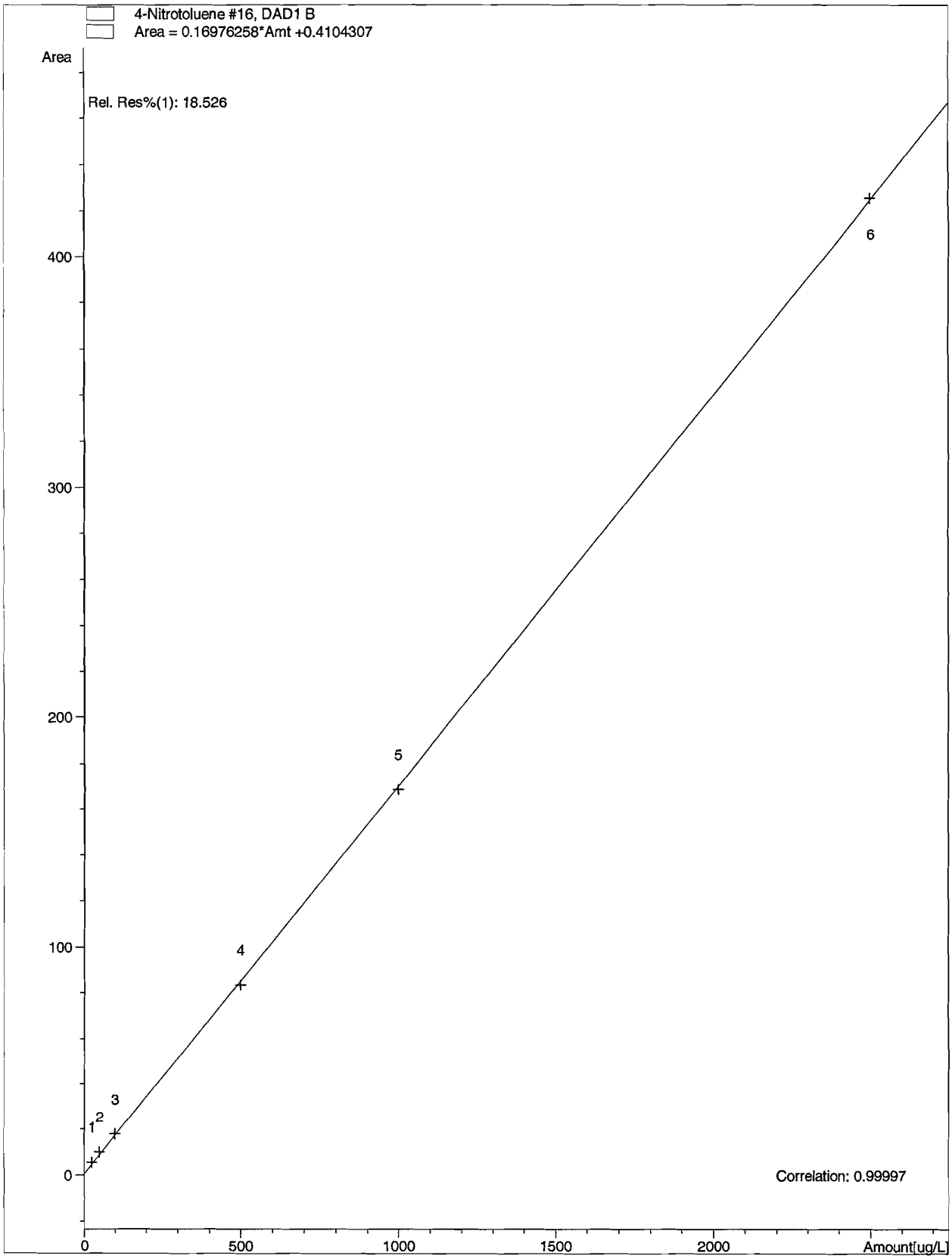
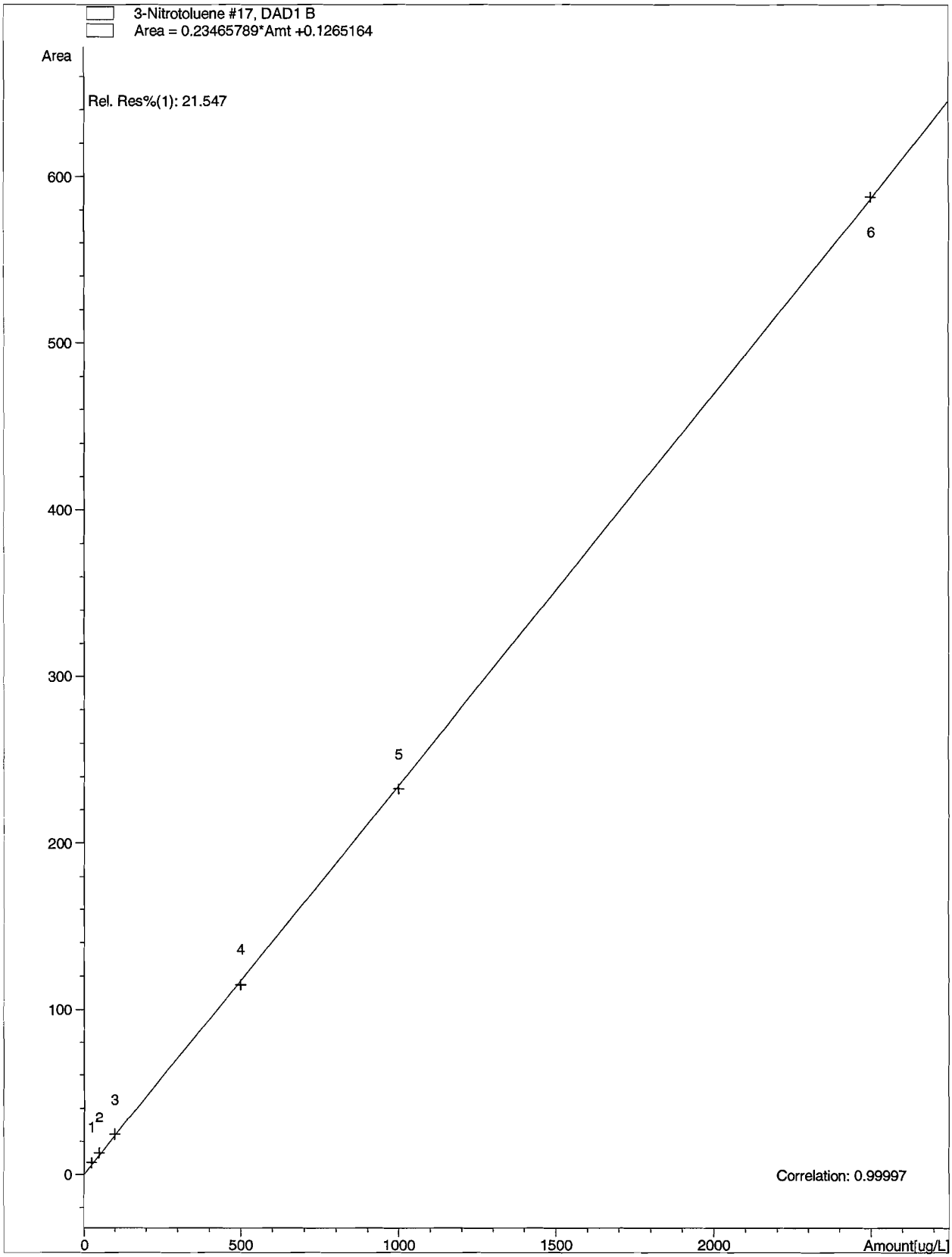


Calibration Curve



Calibration Curve



Data File C:\CHEM32\1\DATA\070914\070914\5L012970.D
Sample Name: WG483233-07 8330 ALT 500 PPB

==========

Acq. Operator	: ECL	Seq. Line :	7
Acq. Instrument	: HPLC5	Location :	Vial 8
Injection Date	: 7/9/2014 5:20:54 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/10/2014 1:59:18 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65377

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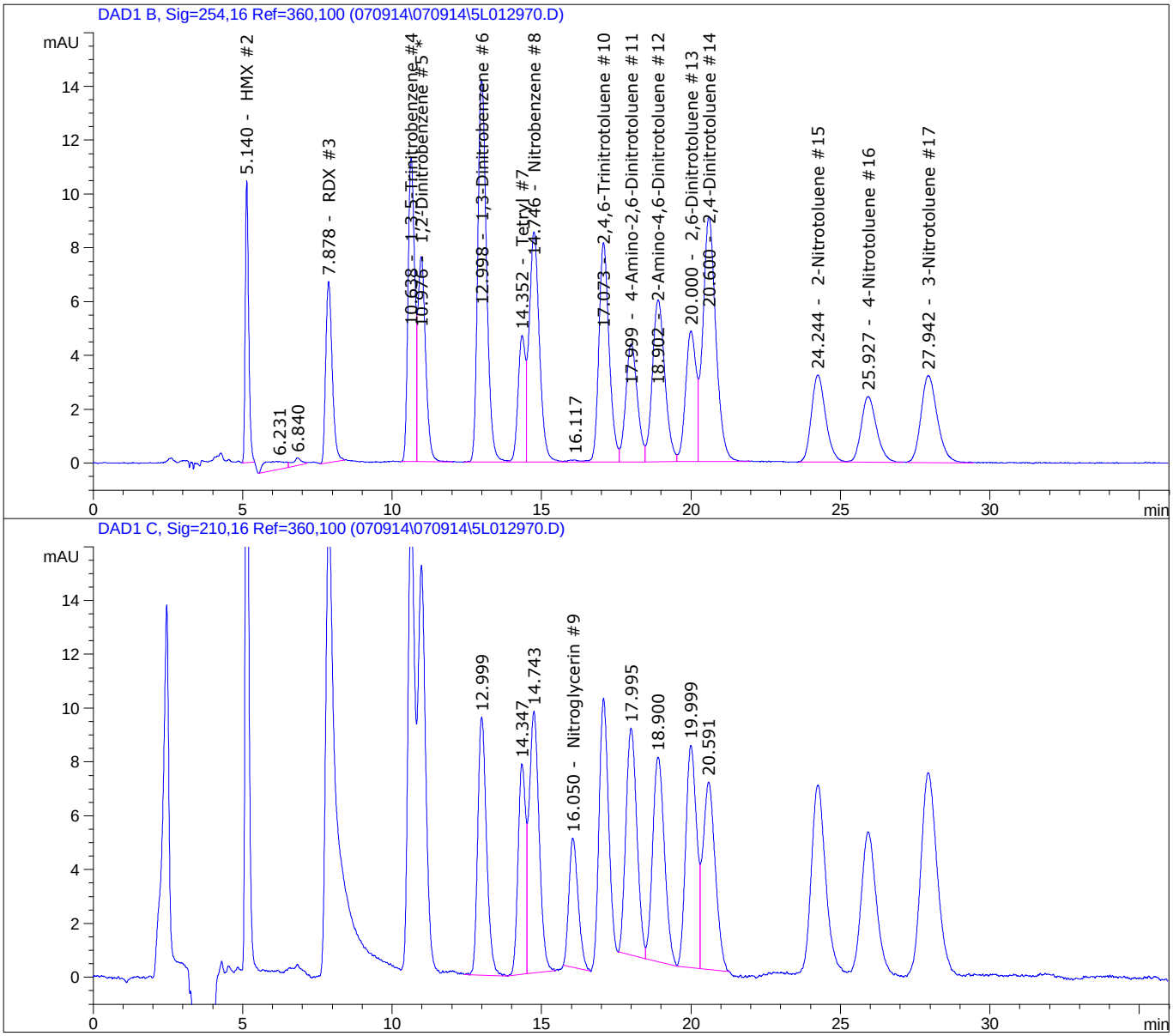

Data File C:\CHEM32\1\DATA\070914\070914\5L012970.D
Sample Name: WG483233-07 8330 ALT 500 PPB

==========

Acq. Operator : ECL Seq. Line : 7
Acq. Instrument : HPLC5 Location : Vial 8
Injection Date : 7/9/2014 5:20:54 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/10/2014 1:59:18 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65377

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : Thursday, July 10, 2014 1:45:54 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.140	BBA	81.42204	5.95076	484.52278		HMX #2
7.878	BBA	101.44180	5.03794	511.05768		RDX #3
10.638	BV	175.82787	2.56179	450.43408		1,3,5-Trinitrobenzene #4
10.976	VB	135.31775	3.64056	492.63288		1,2-Dinitrobenzene #5 *
12.998	BV	287.83264	1.69995	489.30070		1,3-Dinitrobenzene #6
14.352	VV	79.57870	4.44124	353.42802		Tetryl #7
14.746	VV	203.11357	2.40814	489.12629		Nitrobenzene #8
17.073	VV	193.14346	2.58808	499.87016		2,4,6-Trinitrotoluene #10
17.999	VV	119.16287	4.37980	521.90998		4-Amino-2,6-Dinitrotoluene #11
18.902	VV	175.50751	2.85211	500.56658		2-Amino-4,6-Dinitrotoluene #12
20.000	VV	120.07474	4.40376	528.78017		2,6-Dinitrotoluene #13
20.600	VB	276.27838	1.81853	502.42167		2,4-Dinitrotoluene #14
24.244	BV	107.03011	4.87716	522.00252		2-Nitrotoluene #15
25.927	VB	87.69344	5.86301	514.14753		4-Nitrotoluene #16
27.942	BB	123.18578	4.25715	524.41986		3-Nitrotoluene #17

Totals : 7384.62091

Data File C:\CHEM32\1\DATA\070914\070914\5L012970.D
Sample Name: WG483233-07 8330 ALT 500 PPB

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :   7
Acq. Instrument : HPLC5                          Location : Vial 8
Injection Date  : 7/9/2014 5:20:54 PM                 Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed    : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/10/2014 1:59:18 PM by ECL
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65377


==================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 16.050 BV      103.53637    4.84995  502.14609    Nitroglycerin #9

Totals :                               502.14609


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                           *** End of Report ***
```

Data File C:\CHEM32\1\DATA\071514\071514\5L013055.D
Sample Name: WG484130-01 8330 CCV 500 PPB

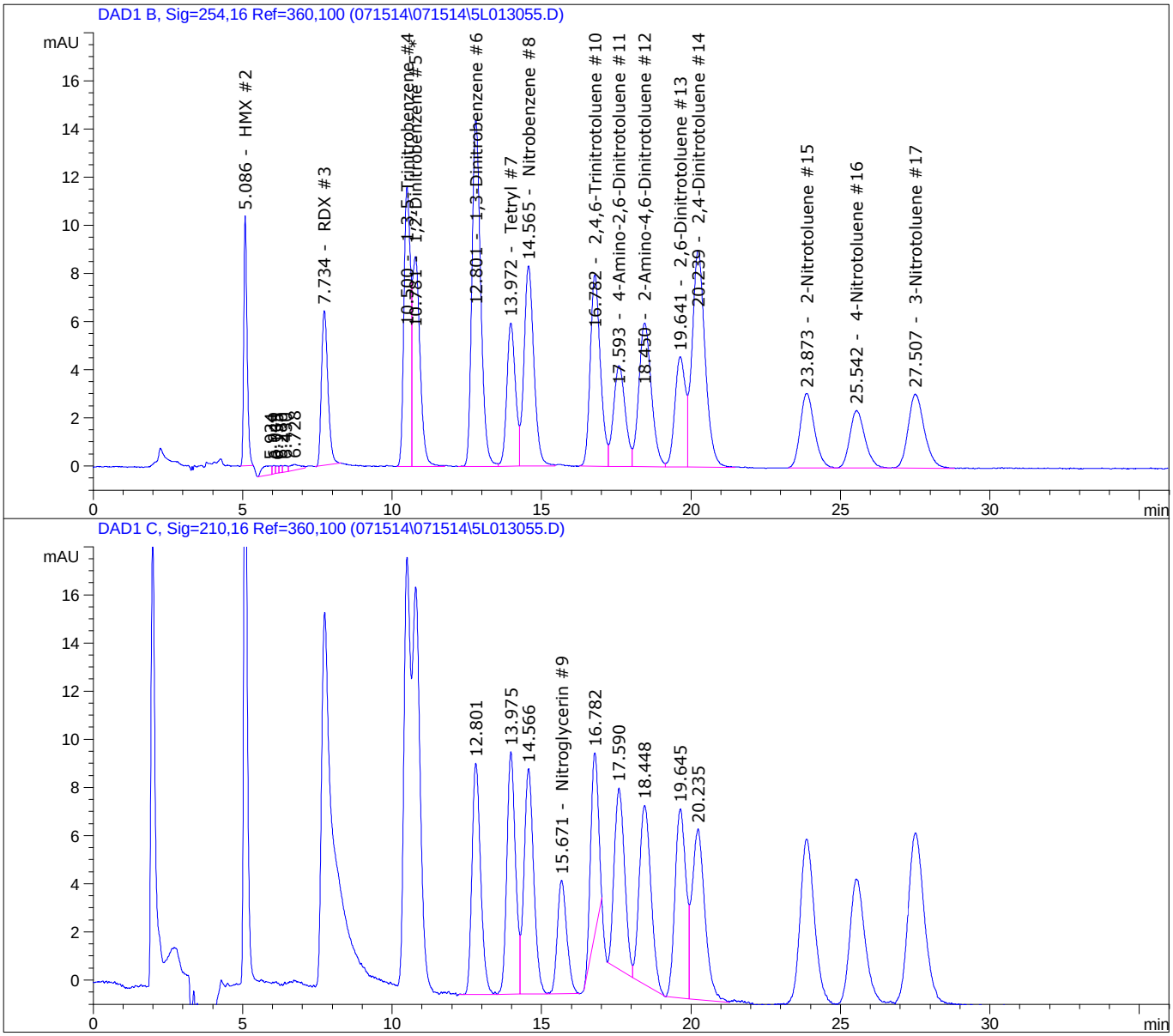
==========

Acq. Operator	: ECL	Seq. Line :	1
Acq. Instrument	: HPLC5	Location :	Vial 2
Injection Date	: 7/15/2014 9:51:40 AM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/15/2014 11:03:39 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

==========



Data File C:\CHEM32\1\DATA\071514\071514\5L013055.D
Sample Name: WG484130-01 8330 CCV 500 PPB

==========

Acq. Operator : ECL Seq. Line : 1
Acq. Instrument : HPLC5 Location : Vial 2
Injection Date : 7/15/2014 9:51:40 AM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/15/2014 11:03:39 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 7/15/2014 11:03:22 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.086	BBA	80.79105	5.95013	480.71715		HMX #2
7.734	BBA	96.17024	5.02918	483.65781		RDX #3
10.500	BV	181.61237	2.56119	465.14440		1,3,5-Trinitrobenzene #4
10.781	VB	151.92268	3.64395	553.59914		1,2-Dinitrobenzene #5 *
12.801	VV	293.23438	1.69987	498.45907		1,3-Dinitrobenzene #6
13.972	VV	120.34174	4.44078	534.41064		Tetryl #7
14.565	VB	191.07359	2.40926	460.34556		Nitrobenzene #8
16.782	BV	187.35155	2.58811	484.88699		2,4,6-Trinitrotoluene #10
17.593	VV	114.42587	4.37952	501.13050		4-Amino-2,6-Dinitrotoluene #11
18.450	VV	174.16806	2.85210	496.74407		2-Amino-4,6-Dinitrotoluene #12
19.641	VV	112.77374	4.40261	496.49872		2,6-Dinitrotoluene #13
20.239	VB	274.01880	1.81855	498.31808		2,4-Dinitrotoluene #14
23.873	BV	102.31928	4.87568	498.87565		2-Nitrotoluene #15
25.542	VB	84.19858	5.86187	493.56075		4-Nitrotoluene #16
27.507	BB	116.33798	4.25689	495.23783		3-Nitrotoluene #17

Totals : 7441.58634

Data File C:\CHEM32\1\DATA\071514\071514\5L013055.D
Sample Name: WG484130-01 8330 CCV 500 PPB

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :   1
Acq. Instrument : HPLC5                          Location : Vial 2
Injection Date  : 7/15/2014 9:51:40 AM                Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed    : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/15/2014 11:03:39 AM by ECL
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65351


==================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 15.671 VV      103.71152    4.84995  502.99571    Nitroglycerin #9

Totals :                               502.99571


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                          *** End of Report ***
```

Data File C:\CHEM32\1\DATA\071514\071514\5L013066.D
Sample Name: WG484130-02 8330 CCV 500 PPB

==========

Acq. Operator	: ECL	Seq. Line	: 12
Acq. Instrument	: HPLC5	Location	: Vial 2
Injection Date	: 7/15/2014 5:39:16 PM	Inj	: 1
		Inj Volume	: 100 µl

Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/16/2014 11:48:03 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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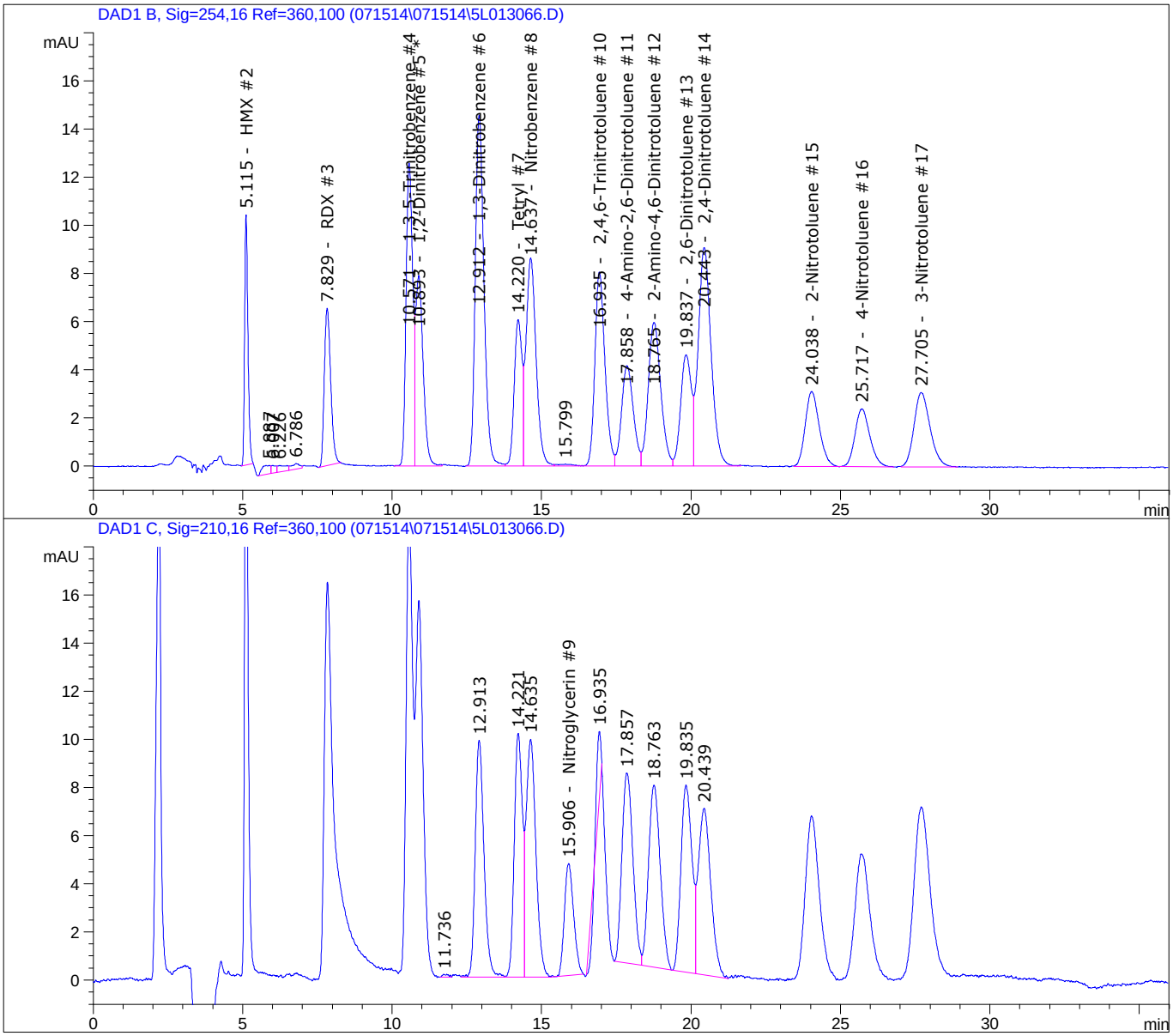

HPLC5 7/16/2014 11:48:06 AM ECL Page 1 of 3

Data File C:\CHEM32\1\DATA\071514\071514\5L013066.D
Sample Name: WG484130-02 8330 CCV 500 PPB

==========

Acq. Operator : ECL Seq. Line : 12
Acq. Instrument : HPLC5 Location : Vial 2
Injection Date : 7/15/2014 5:39:16 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/16/2014 11:48:03 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 7/16/2014 11:47:45 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.115	BBA	80.22762	5.94956	477.31901		HMX #2
7.829	BBA	96.69693	5.03010	486.39536		RDX #3
10.571	VV	196.47856	2.55982	502.94999		1,3,5-Trinitrobenzene #4
10.893	VV	138.00121	3.64117	502.48539		1,2-Dinitrobenzene #5 *
12.912	BV	294.55692	1.69985	500.70137		1,3-Dinitrobenzene #6
14.220	VV	109.31130	4.44087	485.43694		Tetryl #7
14.637	VV	203.36327	2.40812	489.72317		Nitrobenzene #8
16.935	VV	190.09331	2.58810	491.97968		2,4,6-Trinitrotoluene #10
17.858	VV	114.53542	4.37953	501.61103		4-Amino-2,6-Dinitrotoluene #11
18.765	VV	174.86572	2.85210	498.73505		2-Amino-4,6-Dinitrotoluene #12
19.837	VV	114.65386	4.40292	504.81172		2,6-Dinitrotoluene #13
20.443	VB	273.97244	1.81855	498.23389		2,4-Dinitrotoluene #14
24.038	BV	102.07102	4.87559	497.65686		2-Nitrotoluene #15
25.717	VB	83.81696	5.86173	491.31282		4-Nitrotoluene #16
27.705	BB	116.18784	4.25688	494.59801		3-Nitrotoluene #17

Totals : 7423.95029

Data File C:\CHEM32\1\DATA\071514\071514\5L013066.D
Sample Name: WG484130-02 8330 CCV 500 PPB

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :  12
Acq. Instrument : HPLC5                          Location : Vial 2
Injection Date  : 7/15/2014 5:39:16 PM                Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed    : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/16/2014 11:48:03 AM by ECL
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65351


==================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 15.906 VBA      99.36372    4.84992  481.90580    Nitroglycerin #9

Totals :                              481.90580


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                          *** End of Report ***
```

Data File C:\CHEM32\1\DATA\071514\071514\5L013077.D
Sample Name: WG484130-03 8330 CCV 500 PPB

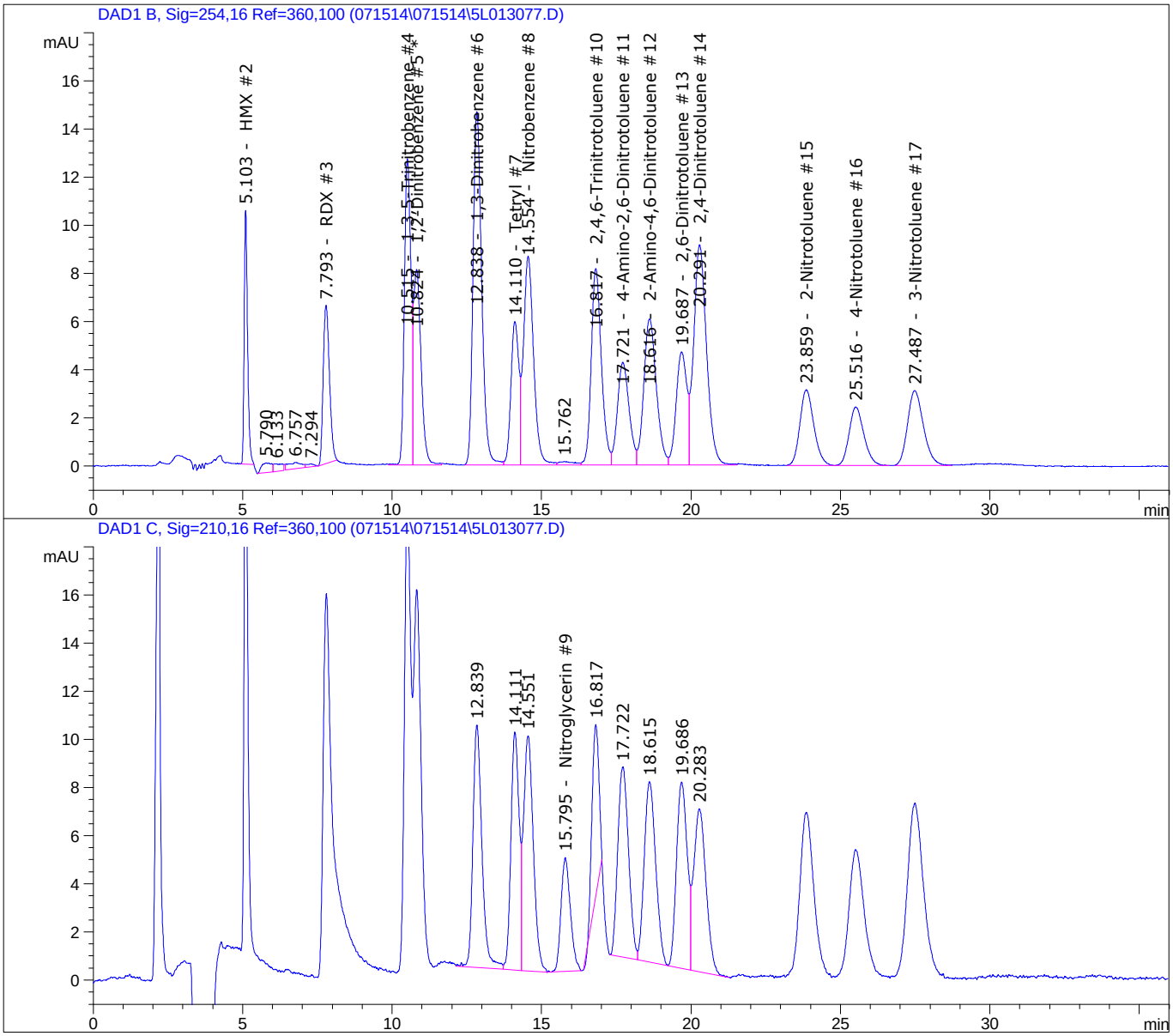
==========

Acq. Operator	: ECL	Seq. Line	: 23
Acq. Instrument	: HPLC5	Location	: Vial 2
Injection Date	: 7/16/2014 12:48:54 AM	Inj	: 1
		Inj Volume	: 100 µl

Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/16/2014 12:18:17 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

==========



HPLC5 7/16/2014 12:18:20 PM ECL Page 1 of 3

Data File C:\CHEM32\1\DATA\071514\071514\5L013077.D
Sample Name: WG484130-03 8330 CCV 500 PPB

==========

Acq. Operator : ECL Seq. Line : 23
Acq. Instrument : HPLC5 Location : Vial 2
Injection Date : 7/16/2014 12:48:54 AM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/16/2014 12:18:17 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 7/16/2014 12:18:01 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.103	BBA	82.30057	5.95161	489.82129		HMX #2
7.793	BBA	94.93999	5.02700	477.26338		RDX #3
10.515	VV	197.08702	2.55977	504.49734		1,3,5-Trinitrobenzene #4
10.824	VB	140.00073	3.64160	509.82681		1,2-Dinitrobenzene #5 *
12.838	BB	296.61606	1.69982	504.19254		1,3-Dinitrobenzene #6
14.110	BV	109.81809	4.44086	487.68702		Tetryl #7
14.554	VV	204.57274	2.40802	492.61433		Nitrobenzene #8
16.817	BV	192.88742	2.58808	499.20780		2,4,6-Trinitrotoluene #10
17.721	VV	116.56636	4.37965	510.52004		4-Amino-2,6-Dinitrotoluene #11
18.616	VV	177.30592	2.85213	505.69888		2-Amino-4,6-Dinitrotoluene #12
19.687	VV	116.01836	4.40314	510.84488		2,6-Dinitrotoluene #13
20.291	VB	274.69626	1.81855	499.54840		2,4-Dinitrotoluene #14
23.859	BV	101.81216	4.87551	496.38601		2-Nitrotoluene #15
25.516	VB	83.24487	5.86154	487.94287		4-Nitrotoluene #16
27.487	BB	114.46313	4.25681	487.24809		3-Nitrotoluene #17

Totals : 7463.29968

Data File C:\CHEM32\1\DATA\071514\071514\5L013077.D
Sample Name: WG484130-03 8330 CCV 500 PPB

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :  23
Acq. Instrument : HPLC5                          Location : Vial 2
Injection Date  : 7/16/2014 12:48:54 AM               Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed    : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/16/2014 12:18:17 PM by ECL
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65351


==================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 15.795 VV      103.13168    4.84995  500.18304    Nitroglycerin #9

Totals :                               500.18304


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                          *** End of Report ***
```

Data File C:\CHEM32\1\DATA\071614\071614\5L013079.D
Sample Name: WG484423-01 8330 CCV 500 PPB

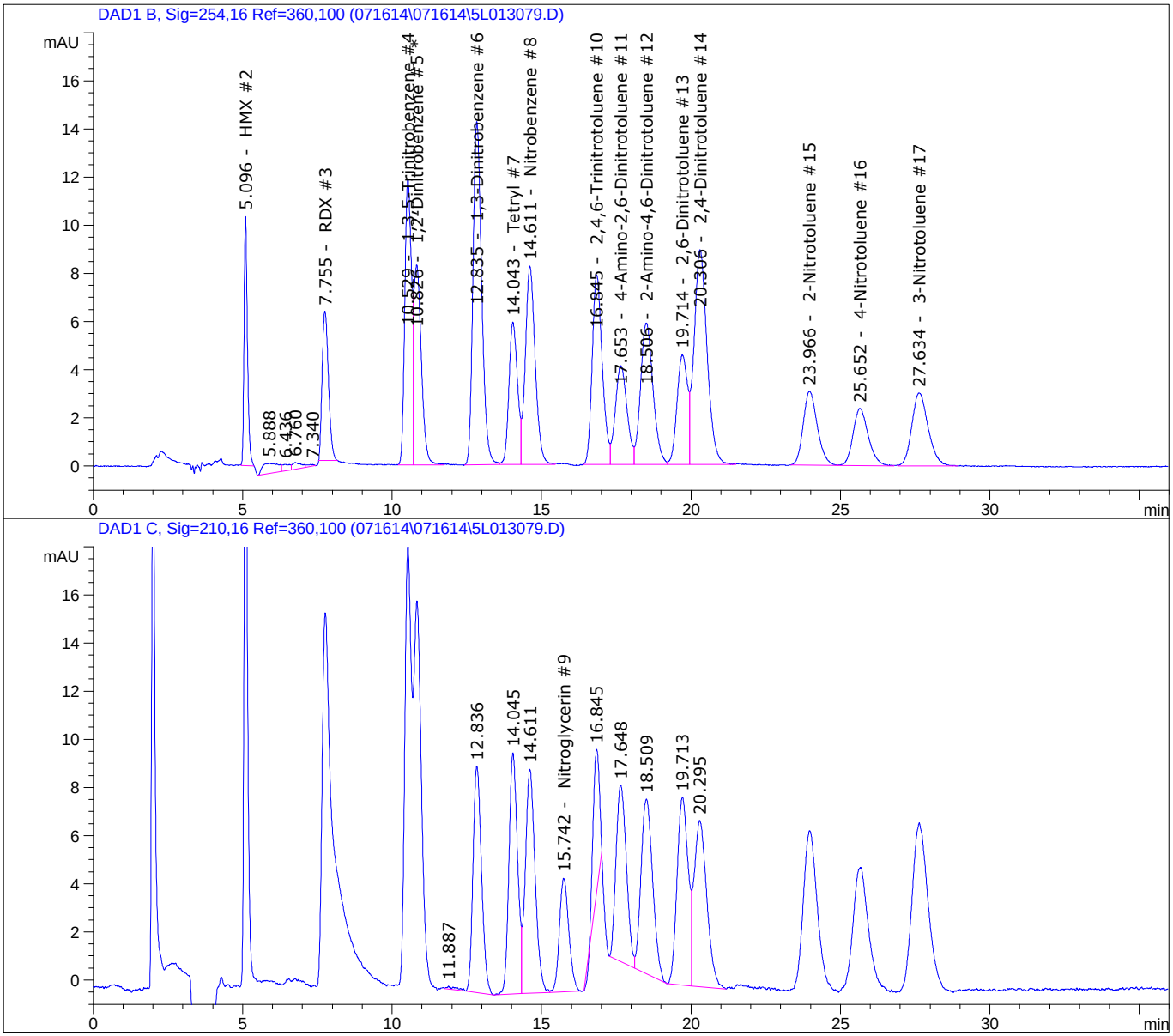
==========

Acq. Operator	: ECL	Seq. Line :	1
Acq. Instrument	: HPLC5	Location :	Vial 2
Injection Date	: 7/16/2014 1:08:44 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\071614\071614\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/16/2014 12:18:17 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

==========



Data File C:\CHEM32\1\DATA\071614\071614\5L013079.D
Sample Name: WG484423-01 8330 CCV 500 PPB

==========

Acq. Operator : ECL Seq. Line : 1
Acq. Instrument : HPLC5 Location : Vial 2
Injection Date : 7/16/2014 1:08:44 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071614\071614\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/16/2014 12:18:17 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 7/16/2014 12:18:01 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.096	BBA	81.20397	5.95054	483.20756		HMX #2
7.755	BBA	90.45601	5.01854	453.95707		RDX #3
10.529	BV	187.98370	2.56058	481.34708		1,3,5-Trinitrobenzene #4
10.826	VB	143.21323	3.64227	521.62172		1,2-Dinitrobenzene #5 *
12.835	BV	289.40741	1.69992	491.97064		1,3-Dinitrobenzene #6
14.043	VV	118.27640	4.44079	525.24080		Tetryl #7
14.611	VB	189.11279	2.40945	455.65841		Nitrobenzene #8
16.845	BV	184.46106	2.58813	477.40955		2,4,6-Trinitrotoluene #10
17.653	VV	112.73207	4.37941	493.70042		4-Amino-2,6-Dinitrotoluene #11
18.506	VV	172.39206	2.85208	491.67573		2-Amino-4,6-Dinitrotoluene #12
19.714	VV	111.06363	4.40232	488.93747		2,6-Dinitrotoluene #13
20.306	VB	272.18851	1.81857	494.99411		2,4-Dinitrotoluene #14
23.966	BV	101.58867	4.87543	495.28884		2-Nitrotoluene #15
25.652	VB	84.14170	5.86185	493.22571		4-Nitrotoluene #16
27.634	BB	115.11205	4.25684	490.01350		3-Nitrotoluene #17

Totals : 7338.24861

Data File C:\CHEM32\1\DATA\071614\071614\5L013079.D
Sample Name: WG484423-01 8330 CCV 500 PPB

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :   1
Acq. Instrument : HPLC5                          Location : Vial 2
Injection Date  : 7/16/2014 1:08:44 PM                Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\071614\071614\8330PLUS.M
Last changed    : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/16/2014 12:18:17 PM by ECL
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65351


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Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 15.742 VV      104.10603    4.84995  504.90932    Nitroglycerin #9

Totals :                               504.90932


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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                           *** End of Report ***
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Data File C:\CHEM32\1\DATA\071614\071614\5L013089.D
Sample Name: WG484423-02 8330 CCV 500 PPB

==========

Acq. Operator	: ECL	Seq. Line	: 11
Acq. Instrument	: HPLC5	Location	: Vial 2
Injection Date	: 7/16/2014 7:39:14 PM	Inj	: 1
		Inj Volume	: 100 µl

Acq. Method : C:\Chem32\1\DATA\071614\071614\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/17/2014 12:08:02 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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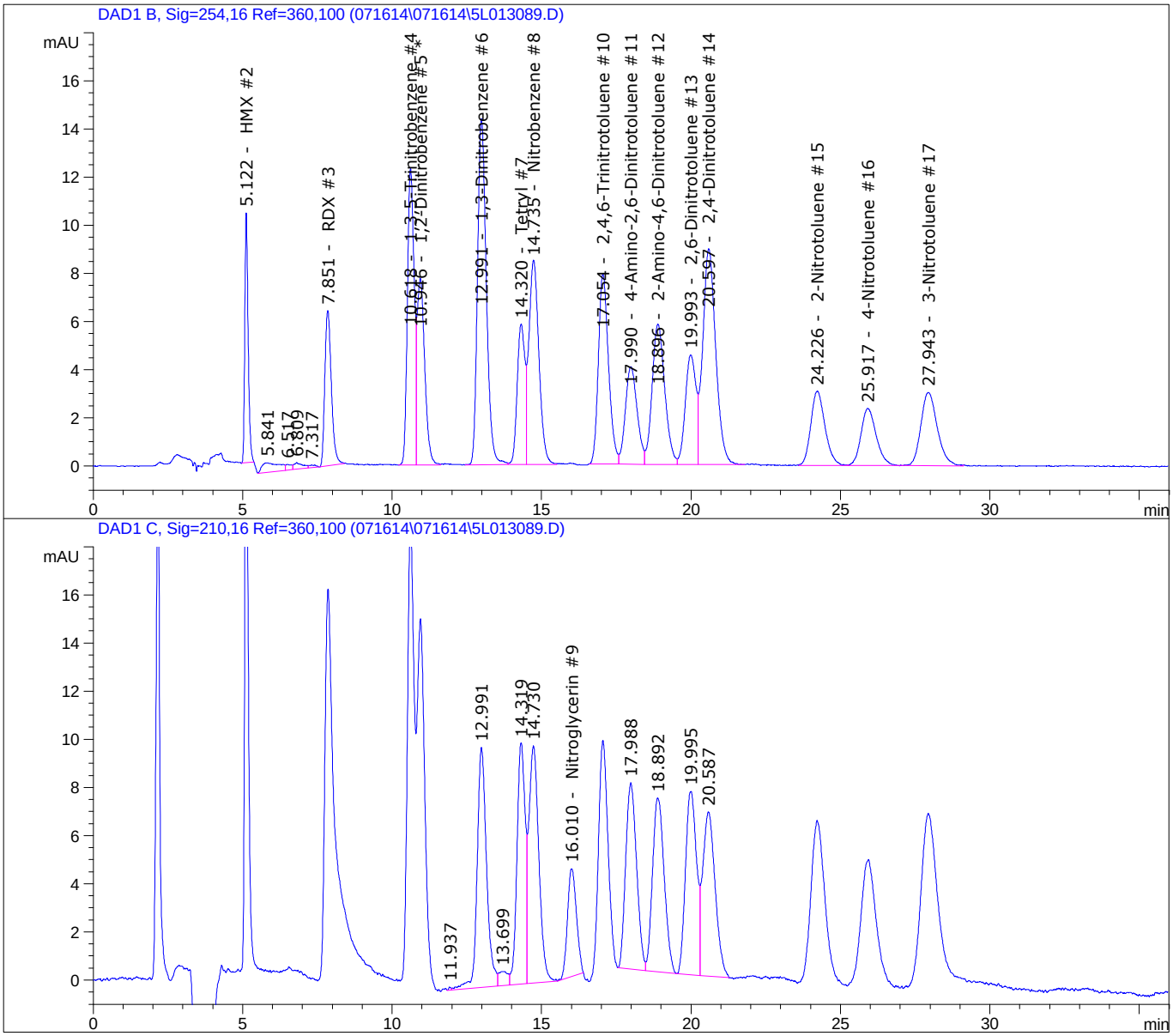

Data File C:\CHEM32\1\DATA\071614\071614\5L013089.D
Sample Name: WG484423-02 8330 CCV 500 PPB

==========

Acq. Operator : ECL Seq. Line : 11
Acq. Instrument : HPLC5 Location : Vial 2
Injection Date : 7/16/2014 7:39:14 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071614\071614\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/17/2014 12:08:02 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 7/17/2014 12:07:42 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.122	BBA	81.08292	5.95042	482.47746		HMX #2
7.851	BBA	97.80183	5.03199	492.13826		RDX #3
10.618	VV	194.79105	2.55997	498.65854		1,3,5-Trinitrobenzene #4
10.946	VV	136.68178	3.64087	497.64102		1,2-Dinitrobenzene #5 *
12.991	BV	294.26151	1.69985	500.20051		1,3-Dinitrobenzene #6
14.320	VV	104.42396	4.44091	463.73776		Tetryl #7
14.735	VV	199.75462	2.40844	481.09696		Nitrobenzene #8
17.054	BV	186.81215	2.58812	483.49161		2,4,6-Trinitrotoluene #10
17.990	VV	111.56063	4.37934	488.56174		4-Amino-2,6-Dinitrotoluene #11
18.896	VV	172.38951	2.85208	491.66846		2-Amino-4,6-Dinitrotoluene #12
19.993	VV	112.49751	4.40256	495.27740		2,6-Dinitrotoluene #13
20.597	VB	271.63977	1.81858	493.99756		2,4-Dinitrotoluene #14
24.226	BV	101.98489	4.87557	497.23403		2-Nitrotoluene #15
25.917	VV	84.52222	5.86198	495.46717		4-Nitrotoluene #16
27.943	VB	116.42082	4.25689	495.59085		3-Nitrotoluene #17

Totals : 7357.23934

Data File C:\CHEM32\1\DATA\071614\071614\5L013089.D
Sample Name: WG484423-02 8330 CCV 500 PPB

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :  11
Acq. Instrument : HPLC5                          Location : Vial 2
Injection Date  : 7/16/2014 7:39:14 PM                Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\071614\071614\8330PLUS.M
Last changed    : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/17/2014 12:08:02 PM by ECL
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65351


==================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 16.010 VBA      92.57795    4.84986  448.99008    Nitroglycerin #9

Totals :                               448.99008


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                          *** End of Report ***
```

RETENTION TIME WINDOWS

Lab Name: Microbac Laboratories, Inc.

Instrument ID: HPLC5

Column: Ultracarb 5 ODS

	STANDARD #1	STANDARD #2	STANDARD #3
Date Run	12/13/11	12/14/11	12/15/11
File #	5L005951	5L005994	5L006024

COMPOUND	STD #1 RT	STD #2 RT	STD #3 RT	RT WIN
HMX	5.719	5.716	5.719	0.005
RDX	8.757	8.748	8.752	0.014
1,3,5-Trinitrobenzene	11.812	11.800	11.809	0.019
1,2-Dinitrobenzene (Surr.)	12.113	12.093	12.099	0.031
1,3-Dinitrobenzene	14.419	14.394	14.412	0.039
Tetryl	15.864	15.829	15.856	0.055
Nitrobenzene	16.264	16.233	16.258	0.049
Nitroglycerin	17.745	17.709	17.731	0.054
2,4,6-Trinitrotoluene	18.831	18.795	18.827	0.059
4-Amino-2,6-Dinitrotoluene	19.804	19.762	19.798	0.068
2-Amino-4,6-Dinitrotoluene	20.906	20.858	20.893	0.074
2,6-Dinitrotoluene	21.945	21.898	21.940	0.077
2,4-Dinitrotoluene	22.706	22.651	22.693	0.086
2-Nitrotoluene	26.468	26.403	26.465	0.110
4-Nitrotoluene	28.336	28.254	28.330	0.137
3-Nitrotoluene	30.532	30.451	30.533	0.141

2.1.1.5 Raw QC Data

Data File C:\CHEM32\1\DATA\071514\071514\5L013056.D
Sample Name: WG483912-01 BLANK

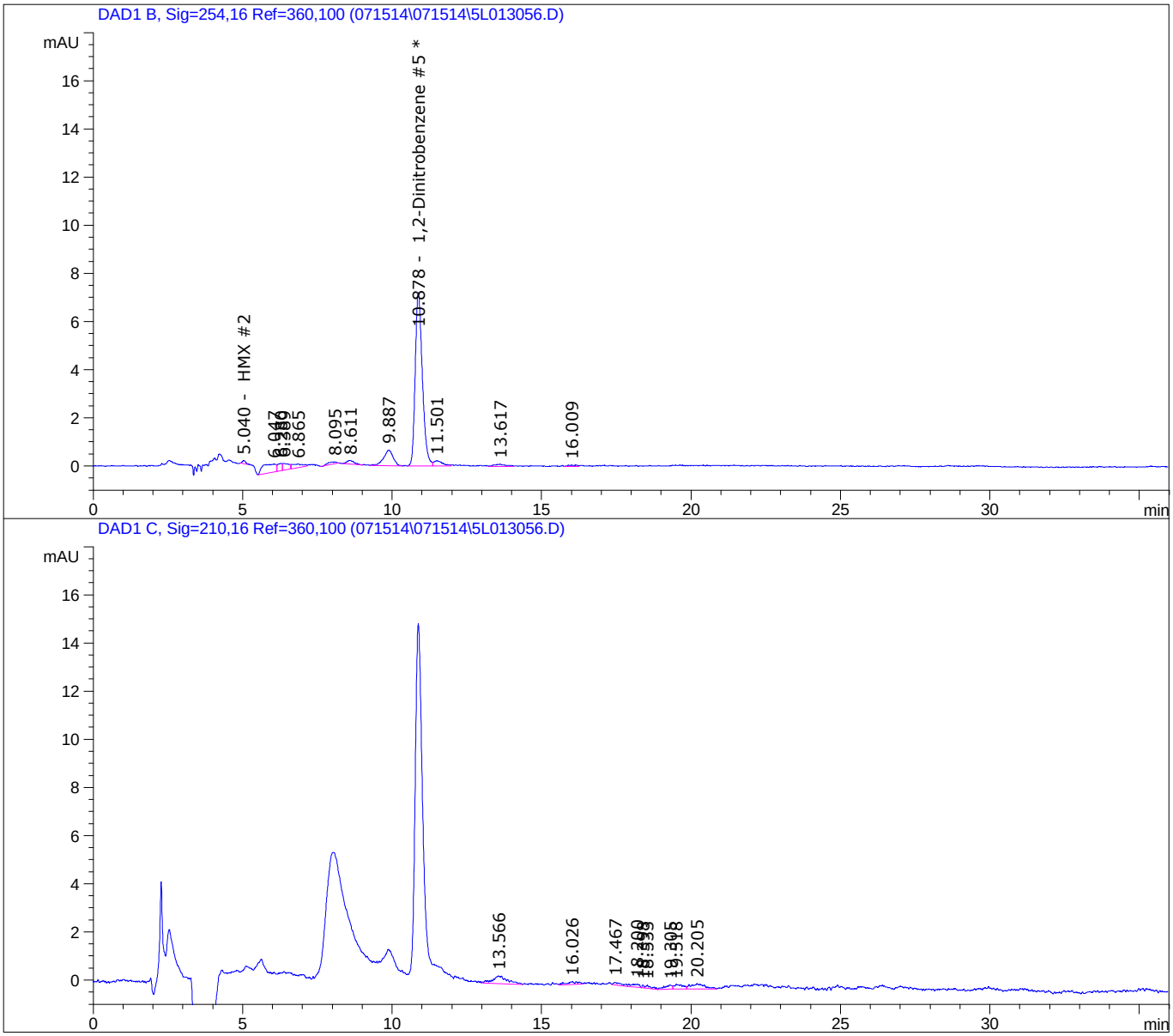
==========

Acq. Operator	: ECL	Seq. Line :	2
Acq. Instrument	: HPLC5	Location :	Vial 3
Injection Date	: 7/15/2014 11:08:34 AM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/15/2014 11:03:39 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========



Data File C:\CHEM32\1\DATA\071514\071514\5L013056.D
Sample Name: WG483912-01 BLANK

==========

Acq. Operator : ECL Seq. Line : 2
Acq. Instrument : HPLC5 Location : Vial 3
Injection Date : 7/15/2014 11:08:34 AM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/15/2014 11:03:39 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 7/15/2014 11:03:22 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.040	BBA	1.01064	0.00000	0.00000		HMX #2
7.734		-	-	-		RDX #3
10.515		-	-	-		1,3,5-Trinitrobenzene #4
10.878	VV	120.09334	3.63663	436.73533		1,2-Dinitrobenzene #5 *
12.869		-	-	-		1,3-Dinitrobenzene #6
13.972		-	-	-		Tetryl #7
14.565		-	-	-		Nitrobenzene #8
16.817		-	-	-		2,4,6-Trinitrotoluene #10
17.593		-	-	-		4-Amino-2,6-Dinitrotoluene #11
18.450		-	-	-		2-Amino-4,6-Dinitrotoluene #12
19.681		-	-	-		2,6-Dinitrotoluene #13
20.283		-	-	-		2,4-Dinitrotoluene #14
23.910		-	-	-		2-Nitrotoluene #15
25.585		-	-	-		4-Nitrotoluene #16
27.507		-	-	-		3-Nitrotoluene #17

Totals : 436.73533

Data File C:\CHEM32\1\DATA\071514\071514\5L013056.D
Sample Name: WG483912-01 BLANK

==========

Acq. Operator : ECL Seq. Line : 2
Acq. Instrument : HPLC5 Location : Vial 3
Injection Date : 7/15/2014 11:08:34 AM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/15/2014 11:03:39 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========

Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
15.671	-	-	-			Nitroglycerin #9

Totals : 0.00000

3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Negative results set to zero (cal. curve intercept), (HMX #2)

==========

*** End of Report ***

Data File C:\CHEM32\1\DATA\071514\071514\5L013057.D
Sample Name: WG483912-02 LCS

==========

Acq. Operator	: ECL	Seq. Line :	3
Acq. Instrument	: HPLC5	Location :	Vial 4
Injection Date	: 7/15/2014 11:47:38 AM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/15/2014 11:03:39 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

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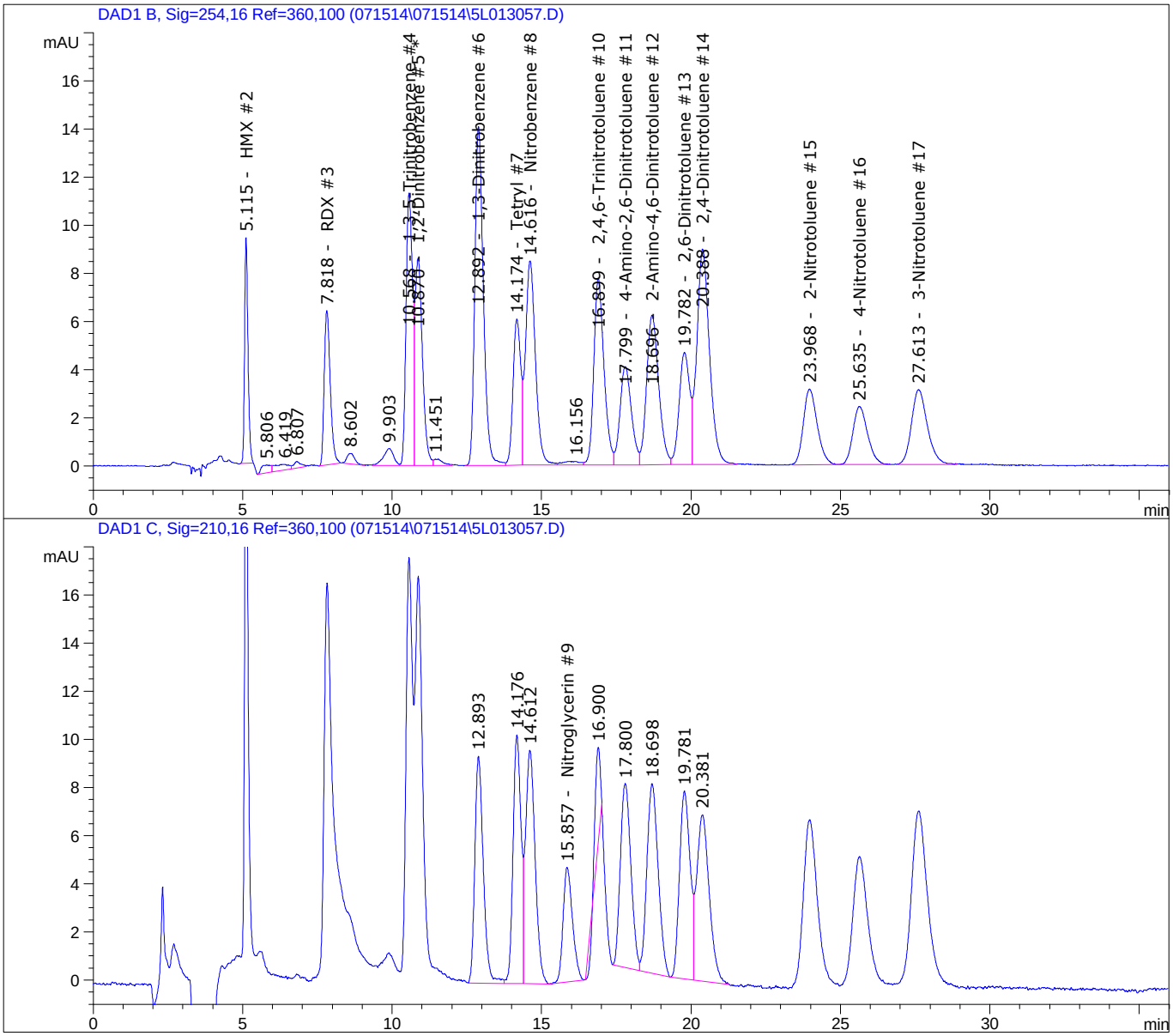

Data File C:\CHEM32\1\DATA\071514\071514\5L013057.D
Sample Name: WG483912-02 LCS

==========

Acq. Operator : ECL Seq. Line : 3
Acq. Instrument : HPLC5 Location : Vial 4
Injection Date : 7/15/2014 11:47:38 AM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/15/2014 11:03:39 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 7/15/2014 11:03:22 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.115	BBA	71.99784	5.94023	427.68405		HMX #2
7.818	BBA	90.70988	5.01904	455.27659		RDX #3
10.568	VV	171.48402	2.56226	439.38744		1,3,5-Trinitrobenzene #4
10.870	VV	147.80611	3.64318	538.48482		1,2-Dinitrobenzene #5 *
12.892	BV	277.68329	1.70011	472.09299		1,3-Dinitrobenzene #6
14.174	VV	110.58243	4.44086	491.08057		Tetryl #7
14.616	VB	195.63882	2.40882	471.25843		Nitrobenzene #8
16.899	VV	182.83467	2.58814	473.20222		2,4,6-Trinitrotoluene #10
17.799	VV	108.46471	4.37913	474.98109		4-Amino-2,6-Dinitrotoluene #11
18.696	VV	175.62685	2.85211	500.90714		2-Amino-4,6-Dinitrotoluene #12
19.782	VV	114.07178	4.40282	502.23806		2,6-Dinitrotoluene #13
20.388	VB	266.17535	1.81863	484.07372		2,4-Dinitrotoluene #14
23.968	BV	101.56460	4.87543	495.17067		2-Nitrotoluene #15
25.635	VB	82.81730	5.86139	485.42422		4-Nitrotoluene #16
27.613	BB	115.47022	4.25685	491.53985		3-Nitrotoluene #17

Totals : 7202.80187

Data File C:\CHEM32\1\DATA\071514\071514\5L013057.D
Sample Name: WG483912-02 LCS

```
==========================================================================
Acq. Operator   : ECL                           Seq. Line :   3
Acq. Instrument : HPLC5                          Location : Vial 4
Injection Date  : 7/15/2014 11:47:38 AM               Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed    : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/15/2014 11:03:39 AM by ECL
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  WATER


==========================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 15.857 VBA     104.95368    4.84996  509.02104    Nitroglycerin #9

Totals :                               509.02104


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========================================================================
                           *** End of Report ***
```

Data File C:\CHEM32\1\DATA\071514\071514\5L013058.D
Sample Name: WG483912-03 LCS DUP

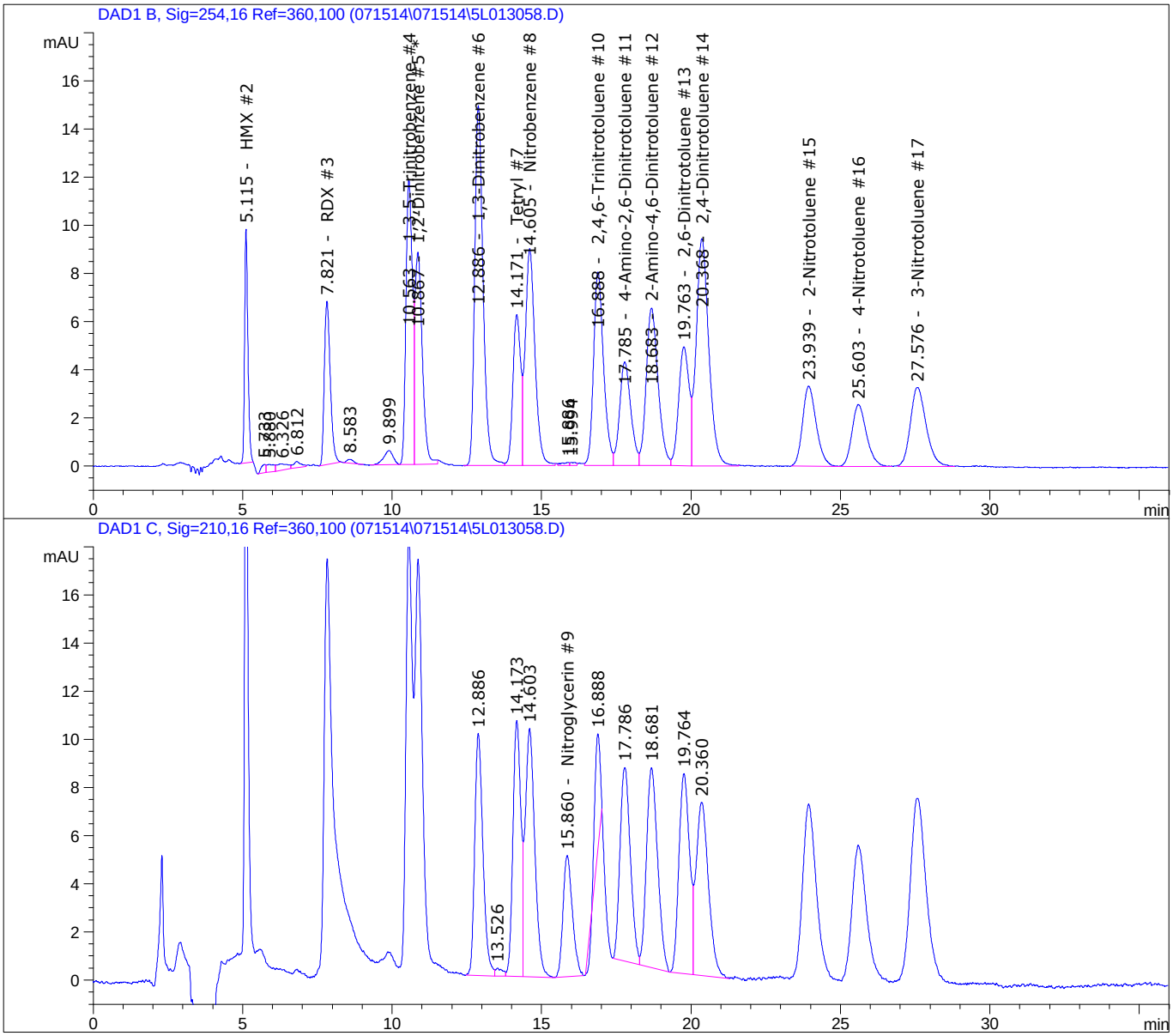
==========

Acq. Operator	: ECL	Seq. Line :	4
Acq. Instrument	: HPLC5	Location :	Vial 5
Injection Date	: 7/15/2014 12:26:38 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/15/2014 11:03:39 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========



Data File C:\CHEM32\1\DATA\071514\071514\5L013058.D
Sample Name: WG483912-03 LCS DUP

==========

Acq. Operator : ECL Seq. Line : 4
Acq. Instrument : HPLC5 Location : Vial 5
Injection Date : 7/15/2014 12:26:38 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/15/2014 11:03:39 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========

==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 7/15/2014 11:03:22 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.115	BBA	73.93728	5.94262	439.38108		HMX #2
7.821	BBA	93.52995	5.02443	469.93444		RDX #3
10.563	VV	176.91344	2.56168	453.19475		1,3,5-Trinitrobenzene #4
10.867	VB	150.70381	3.64373	549.12396		1,2-Dinitrobenzene #5 *
12.886	BV	290.49780	1.69991	493.81935		1,3-Dinitrobenzene #6
14.171	VV	112.38457	4.44084	499.08187		Tetryl #7
14.605	VB	204.31494	2.40804	491.99808		Nitrobenzene #8
16.888	BV	188.16391	2.58811	486.98850		2,4,6-Trinitrotoluene #10
17.785	VV	112.94571	4.37943	494.63757		4-Amino-2,6-Dinitrotoluene #11
18.683	VV	182.03577	2.85217	519.19687		2-Amino-4,6-Dinitrotoluene #12
19.763	VV	119.60648	4.40369	526.70978		2,6-Dinitrotoluene #13
20.368	VB	277.68948	1.81852	504.98435		2,4-Dinitrotoluene #14
23.939	BV	106.26175	4.87692	518.23042		2-Nitrotoluene #15
25.603	VB	86.68980	5.86269	508.23552		4-Nitrotoluene #16
27.576	BB	120.13279	4.25703	511.40949		3-Nitrotoluene #17

Totals : 7466.92603

Data File C:\CHEM32\1\DATA\071514\071514\5L013058.D
Sample Name: WG483912-03 LCS DUP

```
==========================================================================
Acq. Operator   : ECL                           Seq. Line :   4
Acq. Instrument : HPLC5                          Location : Vial 5
Injection Date  : 7/15/2014 12:26:38 PM                Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\071514\071514\8330PLUS.M
Last changed    : 7/10/2014 3:15:03 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/15/2014 11:03:39 AM by ECL
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  WATER


==========================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 15.860 VBA     109.42300    4.84999  530.70039    Nitroglycerin #9

Totals :                               530.70039


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========================================================================
                           *** End of Report ***
```

3.0 Attachments

Microbac Laboratories Inc.
Ohio Valley Division Analyst List
July 17, 2014

---

001 - BIO-CHEM TESTING WVDEP 220
002 - REIC Consultants, Inc. WVDEP 060
003 - Sturm Environmental
004 - MICROBAC PITTSBURGH
005 - ES LABORATORIES
006 - ALCOSAN LABORATORIES
007 - ALS LABORATORIES
008 - BENCHMARK LABORATORIES
010 - MICROBAC CHICAGOLAND
ADC - ANTHONY D. CANTER
ADG - APRIL D. GREENE
ALS - ADRIANE L. STEED
AWE - ANDREW W. ESSIG
AZH - AFTER HOURS
BAF - BRICE A. FENTON
BJO - BRIAN J. OGDEN
BKT - BRENDAN TORRENCE
BLG - BRENDA L. GREENWALT
BRG - BRENDA R. GREGORY
CAA - CASSIE A. AUGENSTEIN
CAF - CHERYL A. FLOWERS
CEB - CHAD E. BARNES
CJR - COURTNEY J. REXROAD
CLC - CHRYS L. CRAWFORD
CLS - CARA L. STRICKLER
CLW - CHARISSA L. WINTERS
CPD - CHAD P. DAVIS
CSH - CHRIS S. HILL
DAK - DEAN A. K
DCM - DAVID C. MERCKLE
DEV - DAVID E. VANDENBERG
DIH - DEANNA I. HESSON
DLB - DAVID L. BUMGARNER
DLP - DOROTHY L. PAYNE
DSM - DAVID S. MOSSOR
ECL - ERIC C. LAWSON
ENY - EMILY N. YOAK
EPT - ETHAN P. TIDD
ERP - ERIN R. PORTER
FJB - FRANCES J. BOLDEN
JBK - JEREMY B. KINNEY
JDH - JUSTIN D. HESSON
JDS - JARED D. SMITH
JJS - JOHN J. ST MARIE
JLL - JOHN L. LENT
JMW - JEANA M. WHITE
JTP - JOSHUA T. PEMBERTON
JWR - JOHN W. RICHARDS
JWS - JACK W. SHEAVES
JYH - JI Y. HU
KAJ - KELLIE A. JOHNSON
KDW - KATHRYN D. WELCH
KEB - KATIE E. BARNES
KHR - KIM H. RHODES
KRA - KATHY R. ALBERTSON
KRB - KAELY R. BECKER
KRP - KATHY R. PARSONS
LEC - LAURA E. CARPENTER
LKN - LINDA K. NEDEFF
LLS - LARRY L. STEPHENS
LSB - LESLIE S. BUCINA
MBK - MORGAN B. KNOWLTON
MDA - MIKE D. ALBERTSON
MDC - MIKE D. COCHRAN
MES - MARY E. SCHILLING
MLB - MEGAN L. BACHE
MMB - MAREN M. BEERY
MRT - MICHELLE R. TAYLOR
MSW - MATT S. WILSON
PDM - PIERCE D. MORRIS
PIT - MICROBAC WARRENDALE
PSW - PEGGY S. WEBB
QX - QIN XU
RAH - ROY A. HALSTEAD
REK - BOB E. KYER
RLB - BOB BUCHANAN
RM - RAYMOND MALEKE
RNP - RICK N. PETTY
RS - ROSEMARY SCOTT
SAV - SARAH A. VANDENBERG
SDC - SHALYN D. CONLEY
SEP - SUZANNE J. PAUGH
SLM - STEPHANIE L. MOSSBURG
SLP - SHERI L. PFALZGRAF
TB - TODD BOYLE
TLC - TYLER L. CORDELL
TMB - TIFFANY M. BAILEY
TMM - TAMMY M. MORRIS
TPA - TYLER P. AMRINE
VC - VICKI COLLIER
WJB - WILL J. BEASLEY
WRR - WESLEY R. RICHARDS
WTD - WADE T. DELONG
XXX - UNAVAILABLE OR SUBCONTRACT

Microbac Laboratories Inc.
List of Valid Qualifiers
July 17, 2014

Qualkey: STD_ND=U

Qualifier	Description
*	Surrogate or spike compound out of range
+	Correlation coefficient for the MSA is less than 0.995
<	Result is less than the associated numerical value.
>	Result is greater than the associated numerical value.
A	See the report narrative
B	Analyte present in method blank
B1	Target analyte detected in method blank at or above the method reporting limit
B3	Target analyte detected in calibration blank at or above the method reporting limit
C	Confirmed by GC/MS
CG	Confluent growth
DL	Surrogate or spike compound was diluted out
E	Estimated concentration due to sample matrix interference
EDL	Elevated sample reporting limits, presence of non-target analytes
EMPC	Estimated Maximum Possible Concentration
F, S	Estimated result below quantitation limit; method of standard additions(MSA)
FL	Free Liquid
H1	Sample analysis performed past holding time.
I	Semiquantitative result (out of instrument calibration range)
J	The analyte was positively identified, but the quantitation was below the RL
J,B	Analyte detected in both the method blank and sample above the MDL.
J,H1	The analyte was positively identified, but the quantitation was below the RL. Sample analysis performed past holding time
J,P	Estimate; columns don't agree to within 40%
J,S	Estimated concentration; analyzed by method of standard addition (MSA)
L	Sample reporting limits elevated due to matrix interference
L1	The associated blank spike (LCS) recovery was above the laboratory acceptance limits.
L2	The associated blank spike (LCS) recovery was below the laboratory acceptance limits.
M	Matrix effect; the concentration is an estimate due to matrix effect.
N	Tentatively identified compound(TIC)
NA	Not applicable
ND, L	Not detected; sample reporting limit (RL) elevated due to interference
ND, S	Not detected; analyzed by method of standard addition (MSA)
NF	Not found by library search
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentrations >40% difference between the two GC columns
Q	One or more quality control criteria failed. See narrative.
QNS	Quantity of sample not sufficient to perform analysis
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition (MSA)
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TIC	Library Search Compound
TNTC	Too numerous to count
U	Not detected at or above adjusted sample detection limit
U,H1	Not detected; sample analysis performed past holding time.
UJ	Undetected; the MDL and RL are estimated due to quality control discrepancies.
W	Post-digestion spike for furnace AA out of control limits
X	Exceeds regulatory limit
X, S	Exceeds regulatory limit; method of standard additions (MSA)
Z	Cannot be resolved from isomer - see below

COC No. A 42140

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: ARCADIS - U.S. Inc.

Project Contact: Jacqueline Powell

Contact Phone #: 715-953-4807

Turn Around Requirements: Standard

Location: Picatinny Arsenal

Project ID: G406PICA. LM14. 3MO14/PICA 079

Sampler (print): C. Goldsmith, N. Bonnie

Signature: [signature]

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other _____

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	2-Amino-4,6 DNT	4-Amino-2,6 DNT	Amino DNT	RDX	2,4,6-TNT										TOTAL # (LAB USE)	ADDITIONAL REQUIREMENTS
1-40mw001(070814)		X	7/8/14	1330	WG	1		X	X	X	X	X											
1-40mw002(070814)		X	7/8/14	1320	WG	1		X	X	X	X	X											
1-40mw003(070814)		X	7/8/14	1315	WG	1		X	X	X	X	X											
1-40mw005(070814)		X	7/8/14	1335	WG	1		X	X	X	X	X											
1-40mw006(070814)		X	7/8/14	1325	WG	1		X	X	X	X	X											
FB001(070814)		X	7/8/14	1200	WG	1		X	X	X	X	X											

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
[signature]	7/9/14	1600			
Relinquished by: (Signature)	Date	Time			

Microbac OVD
Received: 07/10/2014 10:52
By: CARA STRICKLER
221000056779

Cara Strickler

Remarks: COOLER ID# 10546

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

Page 1 of 1

Internal Chain of Custody Report

Login: L14070524
Account: 2273
Project: 2273.003
Samples: 6
Due Date: 21-JUL-2014

Samplenum	Container ID	Products
L14070524-01	400266	8330-SPE1

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	10-JUL-2014 16:00	CLS		
2	PREP	W1	EXT	14-JUL-2014 08:16	RAH	CLS	
3	DISP	EXT	DISP	15-JUL-2014 07:19	BJO	BJO	
4	ANALYZ*	EXT	SEMI	16-JUL-2014 13:05	ECL	RAH	

Sample extract/digestate/leachate

Samplenum	Container ID	Products
L14070524-02	400267	8330-SPE1

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	10-JUL-2014 16:00	CLS		
2	PREP	W1	EXT	14-JUL-2014 08:16	RAH	CLS	
3	DISP	EXT	DISP	15-JUL-2014 07:19	BJO	BJO	
4	ANALYZ*	EXT	SEMI	16-JUL-2014 13:05	ECL	RAH	

Sample extract/digestate/leachate

Samplenum	Container ID	Products
L14070524-03	400268	8330-SPE1

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	10-JUL-2014 16:00	CLS		
2	PREP	W1	EXT	14-JUL-2014 08:16	RAH	CLS	
3	DISP	EXT	DISP	15-JUL-2014 07:19	BJO	BJO	
4	ANALYZ*	EXT	SEMI	16-JUL-2014 13:05	ECL	RAH	

Sample extract/digestate/leachate

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Internal Chain of Custody Report

Login: L14070524
Account: 2273
Project: 2273.003
Samples: 6
Due Date: 21-JUL-2014

Samplenum	Container ID	Products
L14070524-04	400269	8330-SPE1

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	10-JUL-2014 16:00	CLS		
2	PREP	W1	EXT	14-JUL-2014 08:16	RAH	CLS	
3	DISP	EXT	DISP	15-JUL-2014 07:19	BJO	BJO	
4	ANALYZ*	EXT	SEMI	16-JUL-2014 13:05	ECL	RAH	

Sample extract/digestate/leachate

Samplenum	Container ID	Products
L14070524-05	400270	8330-SPE1

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	10-JUL-2014 16:00	CLS		
2	PREP	W1	EXT	14-JUL-2014 08:16	RAH	CLS	
3	DISP	EXT	DISP	15-JUL-2014 07:19	BJO	BJO	
4	ANALYZ*	EXT	SEMI	16-JUL-2014 13:05	ECL	RAH	

Sample extract/digestate/leachate

Samplenum	Container ID	Products
L14070524-06	400271	8330-SPE1

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	10-JUL-2014 16:00	CLS		
2	PREP	W1	EXT	14-JUL-2014 08:16	RAH	CLS	
3	DISP	EXT	DISP	15-JUL-2014 07:19	BJO	BJO	
4	ANALYZ*	EXT	SEMI	16-JUL-2014 13:05	ECL	RAH	

Sample extract/digestate/leachate

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

NELAP Addendum - May 22, 2014

Non-NELAP LIMS Product and Description

The following is a list of those tests that are not included in the Microbac – OVL NELAP Scope of Accreditation:

Heat of Combustion (BTU)
Total Halide by Bomb Combustion (TX)
Particle Sizing - 200 Mesh (PS200)
Specific Gravity/Density (SPGRAV)
Total Residual Chlorine (CL-TRL)
Total Volatile Solids (all forms) (TVS)
Total Coliform Bacteria (all methods)
Fecal Coliform Bacteria (all methods)
Sulfite (SO3)
Thiodiglycol (TDG-LCMS)
Acetate (HPLC-UV)
Formate (HPLC-UV)
Acetaldehyde (HPLC-UV)
Propionaldehyde (HPLC-UV)
Fluoroborate (ISE)

SOLID AND HAZARDOUS CHEMICALS
Nitrogen, Ammonia by Method 350.1
Chromium, Hexavalent, Leachable by SM3500 Cr-B 2009
Phenolics, Total by Method 420.1

NELAP Accreditation by Laboratory SOP

NONPOTABLE WATER

OVL HPLC02/HPLC-UV

Nitroglycerin
Acetic acid
Butyric acid
Lactic acid
Propionic acid
Pyruvic acid

OVL MSS01/GC-MS

1,4-Phenylenediamine
1-Methylnaphthalene
1,4-Dioxane
Atrazine
Benzaldehyde
Biphenyl
Caprolactam

Hexamethylphosphoramide (HMPA)
Pentachlorobenzene
Pentachloroethane

NELAP Accreditation by Laboratory SOP

NONPOTABLE WATER

OVL MSV0I/GC-MS

1, 1, 2-Trichloro-1,2,2-trifluoroethane
1,3-Butadiene
Cyclohexane
Cyclohexanone
Dimethyl disulfide
Dimethylsulfide
Ethyl-t-butylether (ETBE)
Isoprene
Methylacetate
Methylcyclohexane
T-amylmethylether (TAME)
Tetrahydrofuran (THF)

OVL RSKOI/GC-FID

Isobutane
n-Butane
Propane
Propylene
Propyne

OVL HPLC07/HPLC-MS-MS

Hexamethylphosphoramide (XMPA-LCMS)

SOLID AND HAZARDOUS CHEMICALS

OVL MSS0I/GC-MS

1-Methylnaphthalene
Benzaldehyde
Biphenyl
Caprolactam
Pentachloroethane

NELAP Accreditation by Laboratory SOP

SOLID AND HAZARDOUS CHEMICALS

OVL MSV0I/GC-MS

1.3-Butadiene
Cyclohexane
Cyclohexanone
Dimethyl disulfide
Dimethylsulfide
Ethyl-t-butylether (ETBE)
Isoprene
Methylacetate
Methylcyclohexane
n-Hexane
T-amylmethylether (TAME)

Microbac

Laboratory Report Number: L14081687

Jace'que Powell
Arcadis U.S., Inc.
2929 Briarpark Dr
Houston, TX 77042

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac's Ohio Valley Division (OVD). If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed below.

Laboratory Contact:
Stephanie Mossburg – Team Chemist/Data Specialist
(740) 373-4071
Stephanie.Mossburg@microbac.com

I certify that all test results meet all of the requirements of the accrediting authority listed below. All results for soil samples are reported on a 'dry-weight' basis unless specified otherwise. Analytical results for water and wastes are reported on a 'as received' basis unless specified otherwise. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

This report was certified on September 10 2014

David E. Vandenberg

David Vandenberg – Managing Director

State of Origin: NJ
Accrediting Authority: Department of Environmental Protection ID:OH004
QAPP: Microbac OVD

Microbac

Lab Report #: L14081687
Lab Project #: 2273.003
Project Name: ARDEC (PICATINNY ARSENAL)
Lab Contact: Stephanie Mossburg

Record of Sample Receipt and Inspection

Comments/Discrepancies

This is the record of the shipment conditions and the inspection records for the samples received and reported as a sample delivery group (SDG). All of the samples were inspected and observed to conform to our receipt policies, except as noted below.

There were no discrepancies.

Discrepancy	Resolution

Coolers

Cooler #	Temperature Gun	Temperature	COC #	Airbill #	Temp Required?
0019762	H	6.0		1001892134210004575000770974137241	X
00110854	H	4.0		1002826434210004575000770974137701	X
0019670	H	4.0		1002826434210004575000770974137539	X
0019880	H	1.0		1002826434210004575000770974137789	X
00110307	H	5.0		1001892134210004575000770981689726	X

Inspection Checklist

#	Question	Result
1	Were shipping coolers sealed?	Yes
2	Were custody seals intact?	Yes
3	Were cooler temperatures in range of 0-6?	Yes
4	Was ice present?	Yes
5	Were COC's received/information complete/signed and dated?	Yes
6	Were sample containers intact and match COC?	Yes
7	Were sample labels intact and match COC?	Yes
8	Were the correct containers and volumes received?	Yes
9	Were samples received within EPA hold times?	Yes
10	Were correct preservatives used? (water only)	Yes
11	Were pH ranges acceptable? (voa's excluded)	NA
12	Were VOA samples free of headspace (less than 6mm)?	NA

Microbac

Lab Report #: L14081687
Lab Project #: 2273.003
Project Name: ARDEC (PICATINNY ARSENAL)
Lab Contact: Stephanie Mossburg

Samples Received

Client ID	Laboratory ID	Date Collected	Date Received
I-40MW001(082714)	L14081687-01	08/27/2014 14:05	08/29/2014 10:17
I-40MW005(082714)	L14081687-02	08/27/2014 14:15	08/29/2014 10:17
I-40MW006(082714)	L14081687-03	08/27/2014 14:10	08/29/2014 10:17
I-93MW002(082714)	L14081687-04	08/27/2014 14:30	08/29/2014 10:17
I-157MW001(082714)	L14081687-05	08/27/2014 14:50	08/29/2014 10:17
I-157MW003(082714)	L14081687-06	08/27/2014 14:40	08/29/2014 10:17
I-157MW004(082714)	L14081687-07	08/27/2014 14:35	08/29/2014 10:17
I-157MW002(082714)	L14081687-08	08/27/2014 14:25	08/29/2014 10:17
I-40MW003(082714)	L14081687-09	08/27/2014 13:55	08/29/2014 10:17
I-40MW002(082714)	L14081687-10	08/27/2014 14:00	08/29/2014 10:17
FB001(082714)	L14081687-11	08/27/2014 12:00	08/29/2014 10:17
I-74SW001(082714)	L14081687-12	08/26/2014 14:10	08/29/2014 10:17
I-79SD001(082714)	L14081687-13	08/26/2014 14:10	08/29/2014 10:17
I-79SW002(082714)	L14081687-14	08/26/2014 14:05	08/29/2014 10:17
I-79SC002(082614)	L14081687-15	08/26/2014 14:05	08/29/2014 10:17

Microbac REPORT L14081687
PREPARED FOR Arcadis U.S., Inc.
WORK ID:

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1.0 Summary Data

1.1 Narratives

Login Number: L14081687
Department: General Chromatography
Analyst: Eric Lawson

METHOD

Analysis SW-846 8330

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample L14081687-14 - 810 mLs of sample was received but only 470mLs would pass through the extraction disk.

CALIBRATION

Initial Calibration: For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration and Tune: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: The MS/MSD results were not associated with this sample delivery group.

SAMPLES

Samples: Samples 06 and 10 were analyzed at dilutions to be within calibration range. All sample results were confirmed by diode array detection.

Surrogates: Sample 07 was not re-extracted due to insufficient sample volume remaining.

Sample #	Analyte	Date	Result	Lower	Upper	Type
L14081687-07	1,2-Dinitrobenzene	2014-09-03 04:40:41	46.2	50	150	Recovery

Manual Integration Reason Codes

Reason #1: Data System Fails to Select Correct Peak In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peakcompletely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low areacounts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds. This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene andbenzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

Reason #4: System Establishes Incorrect Baseline There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 88438
Approved By: Jeremy Kinney

1.2 Certificate of Analysis

Certificate of Analysis

Sample #:	L14081687-01	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-40MW001(082714)	**Prep Method:**	METHOD	**Prep Date:**	08/29/2014 11:00
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG490587	**Analyst:**	ECL	**Run Date:**	09/03/2014 00:07
Collect Date:	08/27/2014 14:05	**Dilution:**	1	**File ID:**	5L013492.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7	7.65		1.05	0.263
2-Amino-4,6-dinitrotoluene	35572-78-2	4.73		1.05	0.263
4-Amino-2,6-dinitrotoluene	19406-51-0	9.76		1.05	0.263
RDX	121-82-4	1.72		1.05	0.263

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	80.2	50	150	

Sample #:	L14081687-02	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-40MW005(082714)	**Prep Method:**	METHOD	**Prep Date:**	08/29/2014 11:00
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG490587	**Analyst:**	ECL	**Run Date:**	09/03/2014 00:46
Collect Date:	08/27/2014 14:15	**Dilution:**	1	**File ID:**	5L013493.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7		U	1.06	0.266
2-Amino-4,6-dinitrotoluene	35572-78-2		U	1.06	0.266
4-Amino-2,6-dinitrotoluene	19406-51-0		U	1.06	0.266
RDX	121-82-4		U	1.06	0.266

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	83.1	50	150	

U	Not detected at or above adjusted sample detection limit

Sample #:	L14081687-03	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-40MW006(082714)	**Prep Method:**	METHOD	**Prep Date:**	08/29/2014 11:00
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG490587	**Analyst:**	ECL	**Run Date:**	09/03/2014 01:25
Collect Date:	08/27/2014 14:10	**Dilution:**	1	**File ID:**	5L013494.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7	3.00		1.08	0.269
2-Amino-4,6-dinitrotoluene	35572-78-2	3.04		1.08	0.269

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
4-Amino-2,6-dinitrotoluene	19406-51-0	5.99		1.08	0.269
RDX	121-82-4	9.29		1.08	0.269

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	79.0	50	150	

Sample #:	L14081687-04	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-93MW002(082714)	**Prep Method:**	METHOD	**Prep Date:**	08/29/2014 11:00
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG490587	**Analyst:**	ECL	**Run Date:**	09/03/2014 02:04
Collect Date:	08/27/2014 14:30	**Dilution:**	1	**File ID:**	5L013495.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7		U	1.12	0.281
2-Amino-4,6-dinitrotoluene	35572-78-2		U	1.12	0.281
4-Amino-2,6-dinitrotoluene	19406-51-0		U	1.12	0.281
RDX	121-82-4		U	1.12	0.281

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	81.2	50	150	

U	Not detected at or above adjusted sample detection limit

Sample #:	L14081687-05	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-157MW001(082714)	**Prep Method:**	METHOD	**Prep Date:**	08/29/2014 11:00
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG490587	**Analyst:**	ECL	**Run Date:**	09/03/2014 02:43
Collect Date:	08/27/2014 14:50	**Dilution:**	1	**File ID:**	5L013496.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7		U	1.12	0.281
2-Amino-4,6-dinitrotoluene	35572-78-2		U	1.12	0.281
4-Amino-2,6-dinitrotoluene	19406-51-0	2.38		1.12	0.281
RDX	121-82-4	3.20		1.12	0.281

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	90.7	50	150	

U	Not detected at or above adjusted sample detection limit

Certificate of Analysis

Sample #:	L14081687-06	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-157MW003(082714)	**Prep Method:**	METHOD	**Prep Date:**	08/29/2014 11:00
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG490587	**Analyst:**	ECL	**Run Date:**	09/03/2014 03:22
Collect Date:	08/27/2014 14:40	**Dilution:**	1	**File ID:**	5L013497.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
2-Amino-4,6-dinitrotoluene	35572-78-2	15.7		1.05	0.263

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	91.7	50	150	

Sample #:	L14081687-06	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-157MW003(082714)	**Prep Method:**	METHOD	**Prep Date:**	08/29/2014 11:00
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG490587	**Analyst:**	ECL	**Run Date:**	09/04/2014 14:02
Collect Date:	08/27/2014 14:40	**Dilution:**	10	**File ID:**	5L013521.F
Sample Tag:	DL01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7	159		10.5	2.63
4-Amino-2,6-dinitrotoluene	19406-51-0	51.1		10.5	2.63
RDX	121-82-4	70.1		10.5	2.63

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	86.3	50	150	

Sample #:	L14081687-07	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-157MW004(082714)	**Prep Method:**	METHOD	**Prep Date:**	08/29/2014 11:00
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG490587	**Analyst:**	ECL	**Run Date:**	09/03/2014 04:40
Collect Date:	08/27/2014 14:35	**Dilution:**	1	**File ID:**	5L013499.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7		U	1.10	0.275
2-Amino-4,6-dinitrotoluene	35572-78-2		U	1.10	0.275
4-Amino-2,6-dinitrotoluene	19406-51-0		U	1.10	0.275
RDX	121-82-4		U	1.10	0.275

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	46.2	50	150	*

*	Surrogate or spike compound out of range

U	Not detected at or above adjusted sample detection limit

Sample #:	L14081687-08	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-157MW002(082714)	**Prep Method:**	METHOD	**Prep Date:**	08/29/2014 11:00
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG490587	**Analyst:**	ECL	**Run Date:**	09/03/2014 05:19
Collect Date:	08/27/2014 14:25	**Dilution:**	1	**File ID:**	5L013500.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7		U	1.06	0.266
2-Amino-4,6-dinitrotoluene	35572-78-2	0.610	J	1.06	0.266
4-Amino-2,6-dinitrotoluene	19406-51-0	1.86		1.06	0.266
RDX	121-82-4	0.872	J	1.06	0.266

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	79.3	50	150	

J	The analyte was positively identified, but the quantitation was below the RL
U	Not detected at or above adjusted sample detection limit

Sample #:	L14081687-09	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-40MW003(082714)	**Prep Method:**	METHOD	**Prep Date:**	09/02/2014 09:37
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG490860	**Analyst:**	ECL	**Run Date:**	09/05/2014 17:47
Collect Date:	08/27/2014 13:55	**Dilution:**	1	**File ID:**	5L013543.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7	1.77		1.09	0.272
2-Amino-4,6-dinitrotoluene	35572-78-2	2.40		1.09	0.272
4-Amino-2,6-dinitrotoluene	19406-51-0	5.79		1.09	0.272
RDX	121-82-4	1.47		1.09	0.272

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	77.8	50	150	

Sample #:	L14081687-10	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-40MW002(082714)	**Prep Method:**	METHOD	**Prep Date:**	09/02/2014 09:37
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG490860	**Analyst:**	ECL	**Run Date:**	09/05/2014 18:26
Collect Date:	08/27/2014 14:00	**Dilution:**	1	**File ID:**	5L013544.F
Sample Tag:	01	**Units:**	ug/L		

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
2-Amino-4,6-dinitrotoluene	35572-78-2	5.11		1.14	0.284

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	89.7	50	150	

Sample #:	L14081687-10	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-40MW002(082714)	**Prep Method:**	METHOD	**Prep Date:**	09/02/2014 09:37
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG490860	**Analyst:**	ECL	**Run Date:**	09/08/2014 15:42
Collect Date:	08/27/2014 14:00	**Dilution:**	10	**File ID:**	5L013577.F
Sample Tag:	DL01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7	94.1		11.4	2.84
4-Amino-2,6-dinitrotoluene	19406-51-0	45.5		11.4	2.84
RDX	121-82-4	211		11.4	2.84

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	83.9	50	150	

Sample #:	L14081687-11	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	FB001(082714)	**Prep Method:**	METHOD	**Prep Date:**	09/02/2014 09:37
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG490860	**Analyst:**	ECL	**Run Date:**	09/05/2014 19:05
Collect Date:	08/27/2014 12:00	**Dilution:**	1	**File ID:**	5L013545.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7		U	1.00	0.250
2-Amino-4,6-dinitrotoluene	35572-78-2		U	1.00	0.250
4-Amino-2,6-dinitrotoluene	19406-51-0		U	1.00	0.250
RDX	121-82-4		U	1.00	0.250

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	85.0	50	150	

U	Not detected at or above adjusted sample detection limit

Certificate of Analysis

Sample #:	L14081687-12	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-74SW001(082714)	**Prep Method:**	METHOD	**Prep Date:**	08/29/2014 11:00
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG490587	**Analyst:**	ECL	**Run Date:**	09/03/2014 05:58
Collect Date:	08/26/2014 14:10	**Dilution:**	1	**File ID:**	5L013501.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7		U	1.06	0.266
2-Amino-4,6-dinitrotoluene	35572-78-2		U	1.06	0.266
4-Amino-2,6-dinitrotoluene	19406-51-0		U	1.06	0.266
RDX	121-82-4		U	1.06	0.266

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	76.4	50	150	

U	Not detected at or above adjusted sample detection limit

Sample #:	L14081687-13	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-79SD001(082714)	**Prep Method:**	METHOD	**Prep Date:**	09/03/2014 14:05
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG490986	**Analyst:**	ECL	**Run Date:**	09/05/2014 01:55
Collect Date:	08/26/2014 14:10	**Dilution:**	1	**File ID:**	5L013539.F
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	99.4

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7		U	0.266	0.106
2-Amino-4,6-dinitrotoluene	35572-78-2		U	0.266	0.106
4-Amino-2,6-dinitrotoluene	19406-51-0		U	0.266	0.106
RDX	121-82-4		U	0.266	0.106

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	84.6	50	150	

U	Not detected at or above adjusted sample detection limit

Sample #:	L14081687-14	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-79SW002(082714)	**Prep Method:**	METHOD	**Prep Date:**	08/29/2014 11:00
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG490587	**Analyst:**	ECL	**Run Date:**	09/03/2014 06:37
Collect Date:	08/26/2014 14:05	**Dilution:**	1	**File ID:**	5L013502.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7		U	2.13	0.532

Certificate of Analysis

Analyte	CAS #	Result	Qual	RL	MDL
2-Amino-4,6-dinitrotoluene	35572-78-2		U	2.13	0.532
4-Amino-2,6-dinitrotoluene	19406-51-0		U	2.13	0.532
RDX	121-82-4		U	2.13	0.532

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	50.0	50	150	

U	Not detected at or above adjusted sample detection limit

Sample #:	L14081687-15	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-79SC002(082614)	**Prep Method:**	METHOD	**Prep Date:**	09/03/2014 14:05
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG490986	**Analyst:**	ECL	**Run Date:**	09/05/2014 02:34
Collect Date:	08/26/2014 14:05	**Dilution:**	1	**File ID:**	5L013540.F
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	99.2

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7		U	0.230	0.0919
2-Amino-4,6-dinitrotoluene	35572-78-2		U	0.230	0.0919
4-Amino-2,6-dinitrotoluene	19406-51-0		U	0.230	0.0919
RDX	121-82-4		U	0.230	0.0919

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	83.2	50	150	

U	Not detected at or above adjusted sample detection limit

Microbac

Lab Report #: L14081687
Lab Project #: 2273.003
Project Name: ARDEC (PICATINNY ARSENAL)
Lab Contact: Stephanie Mossburg

Sample #: L14081687-13 **Client ID:** I-79SD001(082714) **Matrix:** Soil **Collect Date:** 08/26/2014 14:10

Analyte	Result	Units	Qualifier
Percent Solids	99.4	weight %	

Sample #: L14081687-15 **Client ID:** I-79SC002(082614) **Matrix:** Soil **Collect Date:** 08/26/2014 14:05

Analyte	Result	Units	Qualifier
Percent Solids	99.2	weight %	

2.0 Full Sample Data Package

2.1 Semivolatiles Data

2.1.1 Explosives (8330B)

2.1.1.1 Summary Data

Login Number: L14081687
Department: General Chromatography
Analyst: Eric Lawson

METHOD

Analysis SW-846 8330

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample L14081687-14 - 810 mLs of sample was received but only 470mLs would pass through the extraction disk.

CALIBRATION

Initial Calibration: For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration and Tune: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: The MS/MSD results were not associated with this sample delivery group.

SAMPLES

Samples: Samples 06 and 10 were analyzed at dilutions to be within calibration range. All sample results were confirmed by diode array detection.

Surrogates: Sample 07 was not re-extracted due to insufficient sample volume remaining.

Sample #	Analyte	Date	Result	Lower	Upper	Type
L14081687-07	1,2-Dinitrobenzene	2014-09-03 04:40:41	46.2	50	150	Recovery

Manual Integration Reason Codes

Reason #1: Data System Fails to Select Correct Peak In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peakcompletely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low areacounts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds. This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene andbenzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

Reason #4: System Establishes Incorrect Baseline There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 88438
Approved By: Jeremy Kinney

Certificate of Analysis

Sample #:	L14081687-01	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-40MW001(082714)	**Prep Method:**	METHOD	**Prep Date:**	08/29/2014 11:00
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG490587	**Analyst:**	ECL	**Run Date:**	09/03/2014 00:07
Collect Date:	08/27/2014 14:05	**Dilution:**	1	**File ID:**	5L013492.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7	7.65		1.05	0.263
2-Amino-4,6-dinitrotoluene	35572-78-2	4.73		1.05	0.263
4-Amino-2,6-dinitrotoluene	19406-51-0	9.76		1.05	0.263
RDX	121-82-4	1.72		1.05	0.263

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	80.2	50	150	

Sample #:	L14081687-02	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-40MW005(082714)	**Prep Method:**	METHOD	**Prep Date:**	08/29/2014 11:00
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG490587	**Analyst:**	ECL	**Run Date:**	09/03/2014 00:46
Collect Date:	08/27/2014 14:15	**Dilution:**	1	**File ID:**	5L013493.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7		U	1.06	0.266
2-Amino-4,6-dinitrotoluene	35572-78-2		U	1.06	0.266
4-Amino-2,6-dinitrotoluene	19406-51-0		U	1.06	0.266
RDX	121-82-4		U	1.06	0.266

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	83.1	50	150	

U	Not detected at or above adjusted sample detection limit

Sample #:	L14081687-03	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-40MW006(082714)	**Prep Method:**	METHOD	**Prep Date:**	08/29/2014 11:00
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG490587	**Analyst:**	ECL	**Run Date:**	09/03/2014 01:25
Collect Date:	08/27/2014 14:10	**Dilution:**	1	**File ID:**	5L013494.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7	3.00		1.08	0.269
2-Amino-4,6-dinitrotoluene	35572-78-2	3.04		1.08	0.269

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Analyte	CAS #	Result	Qual	RL	MDL
4-Amino-2,6-dinitrotoluene	19406-51-0	5.99		1.08	0.269
RDX	121-82-4	9.29		1.08	0.269

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	79.0	50	150	

Sample #:	L14081687-04	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-93MW002(082714)	**Prep Method:**	METHOD	**Prep Date:**	08/29/2014 11:00
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG490587	**Analyst:**	ECL	**Run Date:**	09/03/2014 02:04
Collect Date:	08/27/2014 14:30	**Dilution:**	1	**File ID:**	5L013495.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7		U	1.12	0.281
2-Amino-4,6-dinitrotoluene	35572-78-2		U	1.12	0.281
4-Amino-2,6-dinitrotoluene	19406-51-0		U	1.12	0.281
RDX	121-82-4		U	1.12	0.281

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	81.2	50	150	

U	Not detected at or above adjusted sample detection limit

Sample #:	L14081687-05	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-157MW001(082714)	**Prep Method:**	METHOD	**Prep Date:**	08/29/2014 11:00
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG490587	**Analyst:**	ECL	**Run Date:**	09/03/2014 02:43
Collect Date:	08/27/2014 14:50	**Dilution:**	1	**File ID:**	5L013496.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7		U	1.12	0.281
2-Amino-4,6-dinitrotoluene	35572-78-2		U	1.12	0.281
4-Amino-2,6-dinitrotoluene	19406-51-0	2.38		1.12	0.281
RDX	121-82-4	3.20		1.12	0.281

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	90.7	50	150	

U	Not detected at or above adjusted sample detection limit

Certificate of Analysis

Sample #:	L14081687-06	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-157MW003(082714)	**Prep Method:**	METHOD	**Prep Date:**	08/29/2014 11:00
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG490587	**Analyst:**	ECL	**Run Date:**	09/03/2014 03:22
Collect Date:	08/27/2014 14:40	**Dilution:**	1	**File ID:**	5L013497.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
2-Amino-4,6-dinitrotoluene	35572-78-2	15.7		1.05	0.263

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	91.7	50	150	

Sample #:	L14081687-06	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-157MW003(082714)	**Prep Method:**	METHOD	**Prep Date:**	08/29/2014 11:00
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG490587	**Analyst:**	ECL	**Run Date:**	09/04/2014 14:02
Collect Date:	08/27/2014 14:40	**Dilution:**	10	**File ID:**	5L013521.F
Sample Tag:	DL01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7	159		10.5	2.63
4-Amino-2,6-dinitrotoluene	19406-51-0	51.1		10.5	2.63
RDX	121-82-4	70.1		10.5	2.63

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	86.3	50	150	

Sample #:	L14081687-07	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-157MW004(082714)	**Prep Method:**	METHOD	**Prep Date:**	08/29/2014 11:00
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG490587	**Analyst:**	ECL	**Run Date:**	09/03/2014 04:40
Collect Date:	08/27/2014 14:35	**Dilution:**	1	**File ID:**	5L013499.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7		U	1.10	0.275
2-Amino-4,6-dinitrotoluene	35572-78-2		U	1.10	0.275
4-Amino-2,6-dinitrotoluene	19406-51-0		U	1.10	0.275
RDX	121-82-4		U	1.10	0.275

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	46.2	50	150	*

*	Surrogate or spike compound out of range

U	Not detected at or above adjusted sample detection limit

Sample #:	L14081687-08	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-157MW002(082714)	**Prep Method:**	METHOD	**Prep Date:**	08/29/2014 11:00
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG490587	**Analyst:**	ECL	**Run Date:**	09/03/2014 05:19
Collect Date:	08/27/2014 14:25	**Dilution:**	1	**File ID:**	5L013500.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7		U	1.06	0.266
2-Amino-4,6-dinitrotoluene	35572-78-2	0.610	J	1.06	0.266
4-Amino-2,6-dinitrotoluene	19406-51-0	1.86		1.06	0.266
RDX	121-82-4	0.872	J	1.06	0.266

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	79.3	50	150	

J	The analyte was positively identified, but the quantitation was below the RL
U	Not detected at or above adjusted sample detection limit

Sample #:	L14081687-09	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-40MW003(082714)	**Prep Method:**	METHOD	**Prep Date:**	09/02/2014 09:37
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG490860	**Analyst:**	ECL	**Run Date:**	09/05/2014 17:47
Collect Date:	08/27/2014 13:55	**Dilution:**	1	**File ID:**	5L013543.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7	1.77		1.09	0.272
2-Amino-4,6-dinitrotoluene	35572-78-2	2.40		1.09	0.272
4-Amino-2,6-dinitrotoluene	19406-51-0	5.79		1.09	0.272
RDX	121-82-4	1.47		1.09	0.272

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	77.8	50	150	

Sample #:	L14081687-10	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-40MW002(082714)	**Prep Method:**	METHOD	**Prep Date:**	09/02/2014 09:37
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG490860	**Analyst:**	ECL	**Run Date:**	09/05/2014 18:26
Collect Date:	08/27/2014 14:00	**Dilution:**	1	**File ID:**	5L013544.F
Sample Tag:	01	**Units:**	ug/L		

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Analyte	CAS #	Result	Qual	RL	MDL
2-Amino-4,6-dinitrotoluene	35572-78-2	5.11		1.14	0.284

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	89.7	50	150	

Sample #:	L14081687-10	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-40MW002(082714)	**Prep Method:**	METHOD	**Prep Date:**	09/02/2014 09:37
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG490860	**Analyst:**	ECL	**Run Date:**	09/08/2014 15:42
Collect Date:	08/27/2014 14:00	**Dilution:**	10	**File ID:**	5L013577.F
Sample Tag:	DL01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7	94.1		11.4	2.84
4-Amino-2,6-dinitrotoluene	19406-51-0	45.5		11.4	2.84
RDX	121-82-4	211		11.4	2.84

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	83.9	50	150	

Sample #:	L14081687-11	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	FB001(082714)	**Prep Method:**	METHOD	**Prep Date:**	09/02/2014 09:37
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG490860	**Analyst:**	ECL	**Run Date:**	09/05/2014 19:05
Collect Date:	08/27/2014 12:00	**Dilution:**	1	**File ID:**	5L013545.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7		U	1.00	0.250
2-Amino-4,6-dinitrotoluene	35572-78-2		U	1.00	0.250
4-Amino-2,6-dinitrotoluene	19406-51-0		U	1.00	0.250
RDX	121-82-4		U	1.00	0.250

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	85.0	50	150	

U	Not detected at or above adjusted sample detection limit

Certificate of Analysis

Sample #:	L14081687-12	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-74SW001(082714)	**Prep Method:**	METHOD	**Prep Date:**	08/29/2014 11:00
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG490587	**Analyst:**	ECL	**Run Date:**	09/03/2014 05:58
Collect Date:	08/26/2014 14:10	**Dilution:**	1	**File ID:**	5L013501.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7		U	1.06	0.266
2-Amino-4,6-dinitrotoluene	35572-78-2		U	1.06	0.266
4-Amino-2,6-dinitrotoluene	19406-51-0		U	1.06	0.266
RDX	121-82-4		U	1.06	0.266

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	76.4	50	150	

U	Not detected at or above adjusted sample detection limit

Sample #:	L14081687-13	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-79SD001(082714)	**Prep Method:**	METHOD	**Prep Date:**	09/03/2014 14:05
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG490986	**Analyst:**	ECL	**Run Date:**	09/05/2014 01:55
Collect Date:	08/26/2014 14:10	**Dilution:**	1	**File ID:**	5L013539.F
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	99.4

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7		U	0.266	0.106
2-Amino-4,6-dinitrotoluene	35572-78-2		U	0.266	0.106
4-Amino-2,6-dinitrotoluene	19406-51-0		U	0.266	0.106
RDX	121-82-4		U	0.266	0.106

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	84.6	50	150	

U	Not detected at or above adjusted sample detection limit

Sample #:	L14081687-14	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-79SW002(082714)	**Prep Method:**	METHOD	**Prep Date:**	08/29/2014 11:00
Matrix:	Water	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG490587	**Analyst:**	ECL	**Run Date:**	09/03/2014 06:37
Collect Date:	08/26/2014 14:05	**Dilution:**	1	**File ID:**	5L013502.F
Sample Tag:	01	**Units:**	ug/L		

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7		U	2.13	0.532

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Analyte	CAS #	Result	Qual	RL	MDL
2-Amino-4,6-dinitrotoluene	35572-78-2		U	2.13	0.532
4-Amino-2,6-dinitrotoluene	19406-51-0		U	2.13	0.532
RDX	121-82-4		U	2.13	0.532

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	50.0	50	150	

U	Not detected at or above adjusted sample detection limit

Sample #:	L14081687-15	**PrePrep Method:**	N/A	**Instrument:**	HPLC5
Client ID:	I-79SC002(082614)	**Prep Method:**	METHOD	**Prep Date:**	09/03/2014 14:05
Matrix:	Soil	**Analytical Method:**	8330B	**Cal Date:**	07/09/2014 16:41
Workgroup #:	WG490986	**Analyst:**	ECL	**Run Date:**	09/05/2014 02:34
Collect Date:	08/26/2014 14:05	**Dilution:**	1	**File ID:**	5L013540.F
Sample Tag:	01	**Units:**	mg/kg	**Percent Solid:**	99.2

Analyte	CAS #	Result	Qual	RL	MDL
2,4,6-Trinitrotoluene	118-96-7		U	0.230	0.0919
2-Amino-4,6-dinitrotoluene	35572-78-2		U	0.230	0.0919
4-Amino-2,6-dinitrotoluene	19406-51-0		U	0.230	0.0919
RDX	121-82-4		U	0.230	0.0919

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dinitrobenzene	83.2	50	150	

U	Not detected at or above adjusted sample detection limit

2.1.1.2 QC Summary Data

Example 8330 Calculations

Sample Concentration from Linear Regression

Step 1: Retrieve Curve Data From Plot (y = mx + b)

y = response of analyte as area (from quantitation report)
x = concentration analyte
m = slope from curve
b = intercept from curve

Step 2: Retrieve y from quantitation report

Step 3: Retreive extraction data from logsheet

Vf = Final extract volume (mL)
Vi = Initial vome of sample (mL) or initial weight (g)

Step 4: Solve for concentration in extract (x):

x = (y - b)/m = [(7.774 -(- 0.04773)]/ 0.1711 = 45.2

Step 5: Solve for analyte concentration in sample (Cx):

Cx = (x) (Vf /Vi)

Example CCV Calculation: **(Vf/Vi) = 1**
HMX

Slope from curve, m:	0.171145
Intercept from curve, b:	0.0436711
Area of analyte, y:	7.774
Concentration (ug/L):	45.16830115

Example Water Calculation:

Slope from curve, m:	0.171145
Intercept from curve, b:	0.0436711
Area of analyte, y:	7.774
Volume of extract (mL):	10.00
Volume of sample extracted (mL):	1000.00
Concentration (ug/L):	0.451683011

Example Soil Calculation:
1,3,5-Trinitrobenzene

Slope from curve, m:	0.411263
Intercept from curve, b:	-0.0850241
Area of analyte, y:	20.26089
Volume of extract (mL):	20.00
Weight of sample extracted (g):	2.00
Concentration (ug/kg):	494.7178351
Concentration (mg/kg):	0.494717835

Microbac Laboratories Inc.
Sample Extract Log

Workgroup: WG490381
Analyst: CSH
Spike Analyst: CSH
Method: METHOD
Run Date: 08/29/2014 11:00
SOP: EXTNT01 Revision 1
Spike Witness: RAH
Surr Solution: STD65797

Acetonitrile Lot #: COA17588
WATER Lot #: COA17319
Methanol Lot #: COA17513
SDB-RPS (SPE DISK) Lot #: COA17603

	SAMPLE #	Type	Reference	pH	Prod	Init Amnt	Surr Amnt	Spike Amnt	Spike Sol	Final Vol	Color
1	L14081443-01	SAMP			8330-SPE1	980 mL	.5 mL			10 mL	Transparent
2	L14081443-02	SAMP			8330-SPE1	980 mL	.5 mL			10 mL	Transparent
3	L14081443-03	SAMP			8330-SPE1	920 mL	.5 mL			10 mL	Transparent
4	L14081443-04	SAMP			8330-SPE1	1000 mL	.5 mL			10 mL	Transparent
5	L14081443-05	SAMP			8330-SPE1	830 mL	.5 mL			10 mL	Transparent
6	L14081544-13	SAMP			8330	930 mL	.5 mL			10 mL	Transparent
7	L14081544-14	SAMP			8330	900 mL	.5 mL			10 mL	Transparent
8	L14081544-15	SAMP			8330	900 mL	.5 mL			10 mL	Transparent
9	L14081657-01	SAMP			8330-SPE1	950 mL	.5 mL			10 mL	Transparent
10	L14081687-01	SAMP			8330-SPE	950 mL	.5 mL			10 mL	Transparent
11	L14081687-02	SAMP			8330-SPE	940 mL	.5 mL			10 mL	Transparent
12	L14081687-03	SAMP			8330-SPE	930 mL	.5 mL			10 mL	Transparent
13	L14081687-04	SAMP			8330-SPE	890 mL	.5 mL			10 mL	Transparent
14	L14081687-05	SAMP			8330-SPE	890 mL	.5 mL			10 mL	Transparent
15	L14081687-06	SAMP			8330-SPE	950 mL	.5 mL			10 mL	Transparent
16	L14081687-07	SAMP			8330-SPE	910 mL	.5 mL			10 mL	Transparent
17	L14081687-08	SAMP			8330-SPE	940 mL	.5 mL			10 mL	Transparent
18	L14081687-12	SAMP			8330-SPE	940 mL	.5 mL			10 mL	Transparent
19	L14081687-14	SAMP			8330-SPE	470 mL	.5 mL			10 mL	Transparent
20	WG490381-01	BLANK			8330	1000 mL	.5 mL			10 mL	Transparent
21	WG490381-02	LCS			8330	1000 mL	.5 mL	.5 mL	STD65796	10 mL	Transparent
22	WG490381-03	LCS2			8330	1000 mL	.5 mL	.5 mL	STD65796	10 mL	Transparent
23	WG490381-04	LCS			8330	1000 mL	.5 mL	.5 mL	STD66074	10 mL	Transparent

L14081443-05 =980mL was received but only 530mL passed through extraction disc.
L14081687-14 =810mL was received but only 470mL passed through extraction disc.

Analyst: Chris Hill

Reviewer: [illegible]

EXTRACT - Modified 10/22/2008
PDF ID: 3734579
Report generated: 08/29/2014 18:22

Microbac Laboratories Inc.
Sample Extract Log

Workgroup: WG490559
Analyst: RAH
Spike Analyst: RAH
Method: METHOD
Run Date: 09/02/2014 09:37
SOP: EXTNT01 Revision 1
Spike Witness: JDH
Surr Solution: STD65797

Acetonitrile Lot #: COA17588
WATER Lot #: COA17319
Methanol Lot #: COA17513
SDB-RPS (SPE DISK) Lot #: COA17603

	SAMPLE #	Type	Reference	pH	Prod	Init Amnt	Surr Amnt	Spike Amnt	Spike Sol	Final Vol	Color
1	L14081687-09	SAMP			8330-SPE	920 mL	.5 mL			10 mL	Transparent
2	L14081687-10	SAMP			8330-SPE	880 mL	.5 mL			10 mL	Transparent
3	L14081687-11	SAMP			8330-SPE	1000 mL	.5 mL			10 mL	Transparent
4	L14081692-01	SAMP			8330	880 mL	.5 mL			10 mL	Transparent
5	L14081692-02	SAMP			8330	960 mL	.5 mL			10 mL	Transparent
6	L14081692-03	SAMP			8330	900 mL	.5 mL			10 mL	Transparent
7	L14081692-04	SAMP			8330	850 mL	.5 mL			10 mL	Transparent
8	L14081692-30	SAMP			8330	780 mL	.5 mL			10 mL	Transparent
9	L14081692-32	SAMP			8330	910 mL	.5 mL			10 mL	Transparent
10	L14081692-34	SAMP			8330	930 mL	.5 mL			10 mL	Transparent
11	L14081692-36	SAMP			8330	1000 mL	.5 mL			10 mL	Transparent
12	L14081692-38	SAMP			8330	960 mL	.5 mL			10 mL	Transparent
13	L14081692-39	SAMP			8330	1000 mL	.5 mL			10 mL	Transparent
14	L14081692-40	SAMP			8330	900 mL	.5 mL			10 mL	Transparent
15	L14081692-43	SAMP			8330	1000 mL	.5 mL			10 mL	Transparent
16	L14081692-44	SAMP			8330	960 mL	.5 mL			10 mL	Transparent
17	L14081692-45	SAMP			8330	1000 mL	.5 mL			10 mL	Transparent
18	L14081692-46	SAMP			8330	960 mL	.5 mL			10 mL	Transparent
19	L14081692-47	SAMP			8330	940 mL	.5 mL			10 mL	Transparent
20	L14081692-48	SAMP			8330	950 mL	.5 mL			10 mL	Transparent
21	WG490559-01	BLANK			8330	1000 mL	.5 mL			10 mL	Transparent
22	WG490559-02	LCS			8330	1000 mL	.5 mL	.5 mL	STD65796	10 mL	Transparent
23	WG490559-03	LCS2			8330	1000 mL	.5 mL	.5 mL	STD65796	10 mL	Transparent
24	WG490559-04	LCS			8330	1000 mL	.5 mL	.5 mL	STD66074	10 mL	Transparent

Due to insufficient sample volume, this preparation batch failed to include the method prescribed MS and MSD.

L14081692-30	ONLY 780ML FILTERED THROUGH SPE DISK DUE TO A LARGE AMOUNT OF SEDIMENT IN SAMPLE

Analyst: [signature]

Reviewer: Cheryl A. Flowers

EXTRACT - Modified 10/22/2008
PDF ID: 3736480
Report generated: 09/08/2014 14:35

Microbac Laboratories Inc.
Continuous Sample Extract Log

Workgroup: WG490739
Analyst: RAH
Spike Analyst: RAH
Method: METHOD
Run Date: 09/03/2014 14:05
SOP: EXTNT02 Revison 11
Spike Witness: CPD
Surr Solution: STD65797

TIME ON: _____ OFF: _____ ON: _____ OFF: _____
Acetonitrile Lot #: COA17588
WATER Lot #: COA17319

	SAMPLE #	Type	Reference	Prod	pH	Init Amnt	Surr Amnt	Spike Amnt	Spike Sol	Final Vol	Color
1	L14081441-01	SAMP		8330-SPE1		9.95 g	1 mL			40 mL	Transparent
2	L14081441-02	SAMP		8330-SPE1		10.77 g	1 mL			40 mL	Transparent
3	L14081441-03	SAMP		8330-SPE1		10.28 g	1 mL			40 mL	Transparent
4	L14081441-04	SAMP		8330-SPE1		10.02 g	1 mL			40 mL	Transparent
5	L14081441-05	RS01		8330-SPE1		10.34 g	1 mL			40 mL	Transparent
6	L14081441-06	MS01	L14081441-05	8330-SPE1		10.32 g	1 mL	1 mL	STD65796	40 mL	Transparent
7	L14081441-07	SD01	L14081441-05	8330-SPE1		9.95 g	1 mL	1 mL	STD65796	40 mL	Transparent
8	L14081441-08	SAMP		8330-SPE1		10.17 g	1 mL			40 mL	Transparent
9	L14081441-09	SAMP		8330-SPE1		10.32 g	1 mL			40 mL	Transparent
10	L14081441-10	SAMP		8330-SPE1		10.41 g	1 mL			40 mL	Transparent
11	L14081441-11	SAMP		8330-SPE1		10.59 g	1 mL			40 mL	Transparent
12	L14081441-12	SAMP		8330-SPE1		9.97 g	1 mL			40 mL	Transparent
13	L14081441-13	SAMP		8330-SPE1		10.04 g	1 mL			40 mL	Transparent
14	L14081687-13	SAMP		8330-SPE		9.39 g	1 mL			40 mL	Transparent
15	L14081687-15	SAMP		8330-SPE		10.88 g	1 mL			40 mL	Transparent
16	WG490739-01	BLANK		8330-SPE		10 g	1 mL			40 mL	Transparent
17	WG490739-02	LCS		8330-SPE		10 g	1 mL	1 mL	STD65796	40 mL	Transparent
18	WG490739-03	REF	L14081441-05	8330-SPE1		10.34 g	1 mL			40 mL	Transparent
19	WG490739-04	MS	L14081441-05	8330-SPE1		10.32 g	1 mL	1 mL	STD65796	40 mL	Transparent
20	WG490739-05	MSD	L14081441-05	8330-SPE1		9.95 g	1 mL	1 mL	STD65796	40 mL	Transparent

CTRL TEMP ON@ 3.1C, OFF@ 3.1C

BATH TEMP ON@ 12C, OFF@ 18C

Analyst: [signature]

Reviewer: Cheryl A. Flowers

EXTRACT - Modified 01/23/2009
PDF ID: 3740307
Report generated: 09/04/2014 11:55

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPLC5 Dataset: 070914
Analyst1: ECL Analyst2: NA
Method: 8330-PLUS SOP: HPLC02 Rev: 18

Maintenance Log ID: Syringe Filter Lot#: 00174785
Eluent ID#:
Workgroups: Column 1 ID: ULTRACARB5 ODS Column 2 ID: NA

Internal STD: NA Surrogate STD: STD65238 Calibration STD
CCV STD: STD65351 LCS STD: STD65237 MS/MSD STD:

Comments: Pressure = 177 bar

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	5L012964.F	WG483233-01 8330 ICAL 2500 PPB	1	1	STD65351	07/09/14 13:26
2	5L012965.F	WG483233-02 8330 ICAL 1000 PPB	1	1	STD65351	07/09/14 14:05
3	5L012966.F	WG483233-03 8330 ICAL 500 PPB	1	1	STD65351	07/09/14 14:44
4	5L012967.F	WG483233-04 8330 ICAL 100 PPB	1	1	STD65351	07/09/14 15:23
5	5L012968.F	WG483233-05 8330 ICAL 50 PPB	1	1	STD65351	07/09/14 16:02
6	5L012969.F	WG483233-06 8330 ICAL 25 PPB	1	1	STD65351	07/09/14 16:41
7	5L012970.F	WG483233-07 8330 ALT 500 PPB	1	1	STD65377	07/09/14 17:20
8	5L012971.F	WG482432-01 BLANK	1	1		07/09/14 18:00
9	5L012972.F	WG482432-02 LCS	1	1		07/09/14 18:39
10	5L012973.F	WG482432-03 LCS DUP	1	1		07/09/14 19:18
11	5L012974.F	L14061431-02	1	1		07/09/14 19:57
12	5L012975.F	L14061431-04	1	1		07/09/14 20:36
13	5L012976.F	L14061689-10	1	1		07/09/14 21:15
14	5L012977.F	L14061689-12	1	1		07/09/14 21:54
15	5L012978.F	L14061689-14	1	1		07/09/14 22:33
16	5L012979.F	L14061689-16	1	1		07/09/14 23:12
17	5L012980.F	L14061689-18	1	1		07/09/14 23:51
18	5L012981.F	WG483357-01 8330 CCV 500 PPB	1	1	STD65351	07/10/14 00:30
19	5L012982.F	WG482631-01 BLANK	1	1		07/10/14 01:09
20	5L012983.F	WG482631-02 LCS	1	1		07/10/14 01:48
21	5L012984.F	WG482631-03 LCS DUP	1	1		07/10/14 02:28
22	5L012985.F	L14061689-29	1	1		07/10/14 03:07
23	5L012986.F	L14061689-31	1	1		07/10/14 03:46
24	5L012987.F	L14061689-33	1	1		07/10/14 04:25
25	5L012988.F	L14061689-35	1	1		07/10/14 05:04
26	5L012989.F	L14061689-37	1	1		07/10/14 05:43
27	5L012990.F	WG483357-02 8330 CCV 500 PPB	1	1	STD65351	07/10/14 06:22
28	5L012991.F	AcCN Rinse	1	1		07/10/14 07:01

Comments

Seq.	Rerun	Dil.	Reason	Analytes
7				
	WG483233-07 8330 ALT 500 PPB: Tetryl failed marginally low.			

Page: 1 Approved: 10-JUL-14

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPLC5 Dataset: 070914
Analyst1: ECL Analyst2: NA
Method: 8330-PLUS SOP: HPLC02 Rev: 18

Maintenance Log ID: Syringe Filter Lot#: 00174785
Eluent ID#:
Column 1 ID: ULTRACARB5 ODS Column 2 ID: NA
Workgroups:
Internal STD: NA Surrogate STD: STD65238
CCV STD: STD65351 LCS STD: STD65237

Comments

Seq.	Rerun	Dil.	Reason	Analytes
11	X		Required second column confirmation	RDX
	L14061431-02			
12	X		Required second column confirmation	RDX
	L14061431-04			
18				
	WG483357-01 8330 CCV 500 PPB: Tetryl failed low.			
20				
	WG482631-02 LCS: 6 analytes failed high. There were no hits in samples associated with this LCS.			
21				
	WG482631-03 LCS DUP: 6 analytes failed high. There were no hits in samples associated with this LCS.			
23				
	L14061689-31: 1,2-DNB surrogate failed marginally low. Sample took several hours to filter and not all the sample would filter.			
27				
	WG483357-02 8330 CCV 500 PPB: Tetryl failed low.			

Page: 2 Approved: 10-JUL-14

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPLC5 Dataset: 090214
Analyst1: ECL Analyst2: NA
Method: 8330-PLUS SOP: HPLC02 Rev: 18

Maintenance Log ID: 51521 Syringe Filter Lot#: 00180133
Eluent ID#:
Workgroups: Column 1 ID: ULTRACARB 5 Column 2 ID: NA

Internal STD: NA Surrogate STD: STD65797 Calibration STD
CCV STD: STD65351 LCS STD: STD65796 MS/MSD STD:

Comments: Pressure = 188 bar

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	5L013478.F	WG490599-01 8330 CCV 500 PPB	1	1	STD65351	09/02/14 15:00
2	5L013479.F	WG490381-01 BLANK	1	1		09/02/14 15:39
3	5L013480.F	WG490381-02 LCS	1	1		09/02/14 16:18
4	5L013481.F	WG490381-03 LCS DUP	1	1		09/02/14 16:57
5	5L013482.F	L14081443-01	1	1		09/02/14 17:36
6	5L013483.F	L14081443-02	1	1		09/02/14 18:15
7	5L013484.F	L14081443-03	1	1		09/02/14 18:54
8	5L013485.F	L14081443-04	1	1		09/02/14 19:33
9	5L013486.F	L14081443-05	1	1		09/02/14 20:12
10	5L013487.F	L14081657-01	1	1		09/02/14 20:52
11	5L013488.F	WG490599-02 8330 CCV 500 PPB	1	1	STD65351	09/02/14 21:31
12	5L013489.F	L14081544-13	1	1		09/02/14 22:10
13	5L013490.F	L14081544-14	1	1		09/02/14 22:49
14	5L013491.F	L14081544-15	1	1		09/02/14 23:28
15	5L013492.F	L14081687-01	1	1		09/03/14 00:07
16	5L013493.F	L14081687-02	1	1		09/03/14 00:46
17	5L013494.F	L14081687-03	1	1		09/03/14 01:25
18	5L013495.F	L14081687-04	1	1		09/03/14 02:04
19	5L013496.F	L14081687-05	1	1		09/03/14 02:43
20	5L013497.F	L14081687-06	1	1		09/03/14 03:22
21	5L013498.F	WG490599-03 8330 CCV 500 PPB	1	1	STD65351	09/03/14 04:01
22	5L013499.F	L14081687-07	1	1		09/03/14 04:40
23	5L013500.F	L14081687-08	1	1		09/03/14 05:19
24	5L013501.F	L14081687-12	1	1		09/03/14 05:58
25	5L013502.F	L14081687-14	1	1		09/03/14 06:37
26	5L013503.F	WG490599-04 8330 CCV 500 PPB	1	1	STD65351	09/03/14 07:16

Comments

Seq.	Rerun	Dil.	Reason	Analytes
5				
	L14081443-01: 1,2-DNB surrogate failed low. QNS for re-extraction.			
6				
	L14081443-02: 1,2-DNB surrogate failed low. QNS for re-extraction.			

Page: 1 Approved: 04-SEP-14

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPLC5 Dataset: 090214
Analyst1: ECL Analyst2: NA
Method: 8330-PLUS SOP: HPLC02 Rev: 18

Maintenance Log ID: 51521 Syringe Filter Lot#: 00180133
Eluent ID#:
Column 1 ID: ULTRACARB 5 Column 2 ID: NA
Workgroups:
Internal STD: NA Surrogate STD: STD65797
CCV STD: STD65351 LCS STD: STD65796

Comments

Seq.	Rerun	Dil.	Reason	Analytes
7	X		Required second column confirmation	4 analytes
	L14081443-03			
9				
	L14081443-05: 1,2-DNB surrogate failed low. QNS for re-extraction.			
11				
	WG490599-02 8330 CCV 500 PPB: Tetryl failed marginally low.			
20	X	10	Over Calibration Range	3 analytes
	L14081687-06			
21				
	WG490599-03 8330 CCV 500 PPB: Tetryl failed low.			
22				
	L14081687-07: 1,2-DNB surrogate failed low. QNS for re-extraction.			
26				
	WG490599-04 8330 CCV 500 PPB: Tetryl failed low.			

Page: 2 Approved: 04-SEP-14

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPLC5 Dataset: 090414
Analyst1: ECL Analyst2: NA
Method: 8330-PLUS SOP: HPLC02 Rev: 18

Maintenance Log ID: Syringe Filter Lot#: 00180133
Eluent ID#:
Workgroups: Column 1 ID: ULTRACARB 5 Column 2 ID: NA

Internal STD: NA Surrogate STD: STD65797 Calibration STD
CCV STD: STD65351 LCS STD: STD65796 MS/MSD STD: STD65796

Comments: Pressure = 186 bar
All the L14081441 samples need 2nd column confirmations.

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	5L013517.F	WG490918-01 8330 CCV 500 PPB	1	1	STD65351	09/04/14 11:10
2	5L013518.F	WG490559-01 BLANK	1	1		09/04/14 12:05
3	5L013519.F	WG490559-02 LCS	1	1		09/04/14 12:44
4	5L013520.F	WG490559-03 LCS DUP	1	1		09/04/14 13:23
5	5L013521.F	L14081687-06 10x	1	10		09/04/14 14:02
6	5L013522.F	WG490739-01 BLANK	7	1		09/04/14 14:51
7	5L013523.F	WG490739-02 LCS	7	1		09/04/14 15:30
8	5L013524.F	L14081441-01	7	1		09/04/14 16:09
9	5L013525.F	L14081441-02	7	1		09/04/14 16:49
10	5L013526.F	L14081441-03	7	1		09/04/14 17:28
11	5L013527.F	L14081441-04	7	1		09/04/14 18:07
12	5L013528.F	WG490918-02 8330 CCV 500 PPB	1	1	STD65351	09/04/14 18:46
13	5L013529.F	L14081441-05 REF	7	1		09/04/14 19:25
14	5L013530.F	L14081441-06 MS	7	1		09/04/14 20:04
15	5L013531.F	L14081441-07 MSD	7	1		09/04/14 20:43
16	5L013532.F	L14081441-08	7	1		09/04/14 21:22
17	5L013533.F	L14081441-09	7	1		09/04/14 22:01
18	5L013534.F	L14081441-10	7	1		09/04/14 22:40
19	5L013535.F	L14081441-11	7	1		09/04/14 23:19
20	5L013536.F	L14081441-12	7	1		09/04/14 23:58
21	5L013537.F	L14081441-13	7	1		09/05/14 00:37
22	5L013538.F	WG490918-03 8330 CCV 500 PPB	1	1	STD65351	09/05/14 01:16
23	5L013539.F	L14081687-13	7	1		09/05/14 01:55
24	5L013540.F	L14081687-15	7	1		09/05/14 02:34
25	5L013541.F	WG490918-04 8330 CCV 500 PPB	1	1	STD65351	09/05/14 03:14

Comments

Seq.	Rerun	Dil.	Reason	Analytes
12				
	WG490918-02 8330 CCV 500 PPB: Tetryl failed marginally low.			
16	X	100	Over Calibration Range	2,4,6-TNT
	L14081441-08			
17	X	100	Over Calibration Range	2-amino-4,6-DNT

Page: 1 Approved: 05-SEP-14

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPLC5 Dataset: 090414
Analyst1: ECL Analyst2: NA
Method: 8330-PLUS SOP: HPLC02 Rev: 18

Maintenance Log ID: Syringe Filter Lot#: 00180133
Eluent ID#:
Column 1 ID: ULTRACARB 5 Column 2 ID: NA
Workgroups:
Internal STD: NA Surrogate STD: STD65797
CCV STD: STD65351 LCS STD: STD65796 STD65796

Comments

Seq.	Rerun	Dil.	Reason	Analytes
	L14081441-09: Also needs a 1000x dilution for 2 other analytes.			
19	X	10	Over Calibration Range	2,4,6-TNT
	L14081441-11			

Page: 2 Approved: 05-SEP-14

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPLC5 Dataset: 090514
Analyst1: ECL Analyst2: NA
Method: 8330-PLUS SOP: HPLC02 Rev: 18

Maintenance Log ID: Syringe Filter Lot#: 00180133
Eluent ID#:
Workgroups: Column 1 ID: ULTRACARB 5 Column 2 ID: NA
Internal STD: NA Surrogate STD: STD65797 Calibration STD
CCV STD: STD65351 LCS STD: MS/MSD STD:

Comments: Pressure = 190 bar
The L14081441 samples all need 2nd column confirmations.

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	5L013542.F	WG491289-01 8330 CCV 500 PPB	1	1	STD65351	09/05/14 17:08
2	5L013543.F	L14081687-09	1	1		09/05/14 17:47
3	5L013544.F	L14081687-10	1	1		09/05/14 18:26
4	5L013545.F	L14081687-11	1	1		09/05/14 19:05
5	5L013546.F	L14081692-01	1	1		09/05/14 19:44
6	5L013547.F	L14081692-02	1	1		09/05/14 20:23
7	5L013548.F	L14081692-03	1	1		09/05/14 21:02
8	5L013549.F	L14081692-04	1	1		09/05/14 21:41
9	5L013550.F	L14081692-30	1	1		09/05/14 22:20
10	5L013551.F	L14081692-32	1	1		09/05/14 22:59
11	5L013552.F	L14081692-34	1	1		09/05/14 23:38
12	5L013553.F	WG491289-02 8330 CCV 500 PPB	1	1	STD65351	09/06/14 00:17
13	5L013554.F	L14081692-36	1	1		09/06/14 00:57
14	5L013555.F	L14081692-38	1	1		09/06/14 01:36
15	5L013556.F	L14081692-39	1	1		09/06/14 02:15
16	5L013557.F	L14081692-40	1	1		09/06/14 02:54
17	5L013558.F	L14081692-43	1	1		09/06/14 03:33
18	5L013559.F	L14081692-44	1	1		09/06/14 04:12
19	5L013560.F	L14081692-45	1	1		09/06/14 04:51
20	5L013561.F	L14081692-46	1	1		09/06/14 05:30
21	5L013562.F	L14081692-47	1	1		09/06/14 06:09
22	5L013563.F	L14081692-48	1	1		09/06/14 06:48
23	5L013564.F	WG491289-03 8330 CCV 500 PPB	1	1	STD65351	09/06/14 07:27
24	5L013565.F	L14081441-08 100x	7	100		09/06/14 08:06
25	5L013566.F	L14081441-11 10x	7	10		09/06/14 08:45
26	5L013567.F	L14081441-09 10000x	7	10000		09/06/14 09:24
27	5L013568.F	L14081441-09 1000x	7	1000		09/06/14 10:03
28	5L013569.F	L14081441-09 100x	7	100		09/06/14 10:42
29	5L013570.F	Solvent Rinse	1	1		09/06/14 11:21
30	5L013571.F	WG491289-04 8330 CCV 500 PPB	1	1	STD65351	09/06/14 12:00
31	5L013572.F	Solvent Rinse	1	1		09/06/14 12:40

Comments

Page: 1 Approved: 08-SEP-14

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPLC5 Dataset: 090514
Analyst1: ECL Analyst2: NA
Method: 8330-PLUS SOP: HPLC02 Rev: 18

Maintenance Log ID: Syringe Filter Lot#: 00180133
Eluent ID#:
Column 1 ID: ULTRACARB 5 Column 2 ID: NA
Workgroups:
Internal STD: NA Surrogate STD: STD65797
CCV STD: STD65351 LCS STD:

Comments

Seq.	Rerun	Dil.	Reason	Analytes
3	X	10	Over Calibration Range	3 analytes
	L14081687-10			
23				
	WG491289-03 8330 CCV 500 PPB: Tetryl failed low.			
27				
	L14081441-09 1000x: Not used.			
30				
	WG491289-03 8330 CCV 500 PPB: Tetryl failed low.			

Page: 2 Approved: 08-SEP-14

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPLC5 Dataset: 090814
Analyst1: ECL Analyst2: NA
Method: 8330-PLUS SOP: HPLC02 Rev: 18

Maintenance Log ID: Syringe Filter Lot#: 00180133
Eluent ID#:
Column 1 ID: ULTRACARB 5 Column 2 ID: NA
Workgroups:
Internal STD: NA Surrogate STD: STD65797 Calibration STD
CCV STD: STD65351 LCS STD: STD65796 MS/MSD STD:

Comments: Pressure = 183 bar

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	5L013573.F	WG491373-01 8330 CCV 500 PPB	1	1	STD65351	09/08/14 12:33
2	5L013574.F	WG490877-01 BLANK	1	1		09/08/14 13:45
3	5L013575.F	WG490877-02 LCS	1	1		09/08/14 14:24
4	5L013576.F	WG490877-03 LCS DUP	1	1		09/08/14 15:03
5	5L013577.F	L14081687-10 10x	1	10		09/08/14 15:42
6	5L013578.F	L14081692-49	1	1		09/08/14 16:21
7	5L013579.F	L14081692-50	1	1		09/08/14 17:00
8	5L013580.F	L14081692-51	1	1		09/08/14 17:39
9	5L013581.F	L14081692-52	1	1		09/08/14 18:18
10	5L013582.F	L14081692-53	1	1		09/08/14 18:57
11	5L013583.F	L14081692-54	1	1		09/08/14 19:36
12	5L013584.F	WG491373-02 8330 CCV 500 PPB	1	1	STD65351	09/08/14 20:15
13	5L013585.F	L14081692-55	1	1		09/08/14 20:54
14	5L013586.F	L14081692-57	1	1		09/08/14 21:33
15	5L013587.F	WG491373-03 8330 CCV 500 PPB	1	1	STD65351	09/08/14 22:13

Comments

Seq.	Rerun	Dil.	Reason	Analytes
5				
	L14081687-10 10x: Diluted so the results would be within calibration range.			
15				
	WG491373-03 8330 CCV 500 PPB: Tetryl failed low.			

Page: 1 Approved: 09-SEP-14

Microbac Laboratories Inc.

Data Checklist

Date: 09-JUL-2014
Analyst: ECL
Analyst: NA
Method: 8330
Instrument: HPLC5
Curve Workgroup: NA
Runlog ID: 62106
Analytical Workgroups: L14061431, L14061689

ANALYTICAL	
System Performance Check	NA
DFTPP (MS)	NA
Endrin/DDT breakdown (8081/MS)	NA
Pentachlorophenol/benzidine tailing (MS)	NA
Eluent check (IC)/system pressure (HPLC)	X
Window standard (FID)	NA
Initial Calibration	X
Average RF	NA
Linear regression or higher order curve	X
Alternate source standard (ICV) % Difference	X
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (MS)	NA
Continuing calibration blank (CCB) (IC)	NA
Special standards	NA
Blanks	X
TCL hits	X
Surrogate recoveries	X
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	X
MS/MSD/Sample duplicates	NA
Recoveries	NA
%RPD	NA
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	X
Surrogate recoveries	X
Internal standard areas (MS)	NA
Library searches (MS)	NA
Calculations & correct factors	X
Compounds above calibration range	NA
Reruns	NA
Manual integrations	NA
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	
Check for completeness	X
Primary Reviewer	ECL
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	MDC

Primary Reviewer:
10-JUL-2014

Secondary Reviewer:
10-JUL-2014

CHECKLIST1 - Modified 03/05/2008
Generated: JUL-10-2014 19:08:43

Microbac Laboratories Inc.

Data Checklist

Date: 02-SEP-2014
Analyst: ECL
Analyst: NA
Method: 8330
Instrument: HPLC5
Curve Workgroup: NA
Runlog ID: 63226
Analytical Workgroups: L14081443, L14081544, L14081657, L14081687

ANALYTICAL	
System Performance Check	NA
DFTPP (MS)	NA
Endrin/DDT breakdown (8081/MS)	NA
Pentachlorophenol/benzidine tailing (MS)	NA
Eluent check (IC)/system pressure (HPLC)	X
Window standard (FID)	NA
Initial Calibration	NA
Average RF	NA
Linear regression or higher order curve	NA
Alternate source standard (ICV) % Difference	NA
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (MS)	NA
Continuing calibration blank (CCB) (IC)	NA
Special standards	NA
Blanks	X
TCL hits	X
Surrogate recoveries	X
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	X
MS/MSD/Sample duplicates	NA
Recoveries	NA
%RPD	NA
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	X
Surrogate recoveries	X
Internal standard areas (MS)	NA
Library searches (MS)	NA
Calculations & correct factors	X
Compounds above calibration range	X
Reruns	NA
Manual integrations	NA
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	
Check for completeness	X
Primary Reviewer	ECL
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	MDC

Primary Reviewer:
03-SEP-2014

Secondary Reviewer:
04-SEP-2014

CHECKLIST1 - Modified 03/05/2008
Generated: SEP-04-2014 11:29:06

Microbac Laboratories Inc.

Data Checklist

Date: 04-SEP-2014
Analyst: ECL
Analyst: NA
Method: 8330
Instrument: HPLC5
Curve Workgroup: NA
Runlog ID: 63275
Analytical Workgroups: L14081687, L14081441

ANALYTICAL	
System Performance Check	NA
DFTPP (MS)	NA
Endrin/DDT breakdown (8081/MS)	NA
Pentachlorophenol/benzidine tailing (MS)	NA
Eluent check (IC)/system pressure (HPLC)	X
Window standard (FID)	NA
Initial Calibration	NA
Average RF	NA
Linear regression or higher order curve	NA
Alternate source standard (ICV) % Difference	NA
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (MS)	NA
Continuing calibration blank (CCB) (IC)	NA
Special standards	NA
Blanks	X
TCL hits	X
Surrogate recoveries	X
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	X
MS/MSD/Sample duplicates	X
Recoveries	X
%RPD	X
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	X
Surrogate recoveries	X
Internal standard areas (MS)	NA
Library searches (MS)	NA
Calculations & correct factors	X
Compounds above calibration range	X
Reruns	NA
Manual integrations	NA
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	
Check for completeness	X
Primary Reviewer	ECL
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	JBK

Primary Reviewer:
05-SEP-2014

Secondary Reviewer:
05-SEP-2014

CHECKLIST1 - Modified 03/05/2008
Generated: SEP-05-2014 15:51:49

Microbac Laboratories Inc.

Data Checklist

Date: 05-SEP-2014
Analyst: ECL
Analyst: NA
Method: 8330
Instrument: HPLC5
Curve Workgroup: NA
Runlog ID: 63293
Analytical Workgroups: L14081687, L14081692, L14081441

ANALYTICAL	
System Performance Check	NA
DFTPP (MS)	NA
Endrin/DDT breakdown (8081/MS)	NA
Pentachlorophenol/benzidine tailing (MS)	NA
Eluent check (IC)/system pressure (HPLC)	X
Window standard (FID)	NA
Initial Calibration	NA
Average RF	NA
Linear regression or higher order curve	NA
Alternate source standard (ICV) % Difference	NA
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (MS)	NA
Continuing calibration blank (CCB) (IC)	NA
Special standards	NA
Blanks	NA
TCL hits	NA
Surrogate recoveries	NA
LCS/LCSD (Laboratory Control Sample)	NA
Recoveries	NA
Surrogate recoveries	NA
MS/MSD/Sample duplicates	NA
Recoveries	NA
%RPD	NA
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	X
Surrogate recoveries	X
Internal standard areas (MS)	NA
Library searches (MS)	NA
Calculations & correct factors	X
Compounds above calibration range	X
Reruns	X
Manual integrations	NA
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	
Check for completeness	X
Primary Reviewer	ECL
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	JBK

Primary Reviewer:
08-SEP-2014

Secondary Reviewer:
08-SEP-2014

CHECKLIST1 - Modified 03/05/2008
Generated: SEP-08-2014 14:24:09

Microbac Laboratories Inc.

Data Checklist

Date: 08-SEP-2014
Analyst: ECL
Analyst: NA
Method: 8330
Instrument: HPLC5
Curve Workgroup: NA
Runlog ID: 63312
Analytical Workgroups: L14081687, L14081692

ANALYTICAL	
System Performance Check	NA
DFTPP (MS)	NA
Endrin/DDT breakdown (8081/MS)	NA
Pentachlorophenol/benzidine tailing (MS)	NA
Eluent check (IC)/system pressure (HPLC)	X
Window standard (FID)	NA
Initial Calibration	NA
Average RF	NA
Linear regression or higher order curve	NA
Alternate source standard (ICV) % Difference	NA
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (MS)	NA
Continuing calibration blank (CCB) (IC)	NA
Special standards	NA
Blanks	X
TCL hits	X
Surrogate recoveries	X
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	X
MS/MSD/Sample duplicates	NA
Recoveries	NA
%RPD	NA
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	X
Surrogate recoveries	X
Internal standard areas (MS)	NA
Library searches (MS)	NA
Calculations & correct factors	X
Compounds above calibration range	NA
Reruns	X
Manual integrations	NA
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	
Check for completeness	X
Primary Reviewer	ECL
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	JBK

Primary Reviewer:
09-SEP-2014

Secondary Reviewer:
09-SEP-2014

CHECKLIST1 - Modified 03/05/2008
Generated: SEP-09-2014 15:47:45

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8330B AAB#: WG490587

Login Number: L14081687

Client ID	ID	Date Collected	TCLP Date	Time Held	Max Hold	Q	Extract Date	Time Held	Max Hold	Q	Run Date	Time Held	Max Hold	Q
I-40MW001(082714)	01	08/27/14					08/29/2014	1.9	7		09/03/14	4.5	40	
I-40MW005(082714)	02	08/27/14					08/29/2014	1.9	7		09/03/14	4.6	40	
I-40MW006(082714)	03	08/27/14					08/29/2014	1.9	7		09/03/14	4.6	40	
I-93MW002(082714)	04	08/27/14					08/29/2014	1.9	7		09/03/14	4.6	40	
I-157MW001(082714)	05	08/27/14					08/29/2014	1.8	7		09/03/14	4.7	40	
I-157MW003(082714)	06	08/27/14					08/29/2014	1.8	7		09/04/14	6.1	40	
I-157MW003(082714)	06	08/27/14					08/29/2014	1.8	7		09/03/14	4.7	40	
I-157MW004(082714)	07	08/27/14					08/29/2014	1.9	7		09/03/14	4.7	40	
I-157MW002(082714)	08	08/27/14					08/29/2014	1.9	7		09/03/14	4.8	40	
I-74SW001(082714)	12	08/26/14					08/29/2014	2.9	7		09/03/14	4.8	40	
I-79SW002(082714)	14	08/26/14					08/29/2014	2.9	7		09/03/14	4.8	40	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 3738900
Report generated 09/09/2014 15:58

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8330B

AAB#: WG490860

Login Number: L14081687

Client ID	ID	Date Collected	TCLP Date	Time Held	Max Hold	Q	Extract Date	Time Held	Max Hold	Q	Run Date	Time Held	Max Hold	Q
I-40MW003(082714)	09	08/27/14					09/02/2014	5.8	7		09/05/14	3.3	40	
I-40MW002(082714)	10	08/27/14					09/02/2014	5.8	7		09/05/14	3.4	40	
I-40MW002(082714)	10	08/27/14					09/02/2014	5.8	7		09/08/14	6.3	40	
FB001(082714)	11	08/27/14					09/02/2014	5.9	7		09/05/14	3.4	40	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 3738900
Report generated 09/09/2014 15:58

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8330B

AAB#: WG490986

Login Number: L14081687

Client ID	ID	Date Collected	TCLP Date	Time Held	Max Hold	Q	Extract Date	Time Held	Max Hold	Q	Run Date	Time Held	Max Hold	Q
I-79SD001(082714)	13	08/26/14					09/03/2014	8	14		09/05/14	1.5	40	
I-79SC002(082614)	15	08/26/14					09/03/2014	8	14		09/05/14	1.5	40	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 3738900
Report generated 09/09/2014 15:58

Microbac Laboratories Inc.
SURROGATE STANDARDS

Login Number: L14081687
Instrument Id: HPLC5
Workgroup (AAB#): WG490587

Method: 8330
CAL ID: HPLC5-09-JUL-14
Matrix: Water

Sample Number	Dilution	Tag	1
L14081687-01	1.00	01	80.2
L14081687-02	1.00	01	83.1
L14081687-03	1.00	01	79.0
L14081687-04	1.00	01	81.2
L14081687-05	1.00	01	90.7
L14081687-06	1.00	01	91.7
L14081687-06	10.0	DL01	86.3
L14081687-07	1.00	01	46.2
L14081687-08	1.00	01	79.3
L14081687-12	1.00	01	76.4
L14081687-14	1.00	01	50.0
WG490381-01	1.00	01	87.2
WG490381-02	1.00	01	96.9
WG490381-03	1.00	01	91.6

Surrogates	Surrogate Limits		
1 - 1,2-Dinitrobenzene	50	-	150

Underline = Result out of surrogate limits

DL = surrogate diluted out
ND = surrogate not detected

SURROGATES - Modified 03/06/2008
PDF File ID: 3738908
Report generated: 09/09/2014 15:59

Microbac Laboratories Inc.
SURROGATE STANDARDS

Login Number: L14081687
Instrument Id: HPLC5
Workgroup (AAB#): WG490860

Method: 8330
CAL ID: HPLC5-09-JUL-14
Matrix: Water

Sample Number	Dilution	Tag	1
L14081687-09	1.00	01	77.8
L14081687-10	1.00	01	89.7
L14081687-10	10.0	DL01	83.9
L14081687-11	1.00	01	85.0
WG490559-01	1.00	01	86.6
WG490559-02	1.00	01	96.5
WG490559-03	1.00	01	87.8

Surrogates	Surrogate Limits		
1 - 1,2-Dinitrobenzene	50	-	150

Underline = Result out of surrogate limits

DL = surrogate diluted out
ND = surrogate not detected

SURROGATES - Modified 03/06/2008
PDF File ID: 3738908
Report generated: 09/09/2014 15:59

Microbac Laboratories Inc.
SURROGATE STANDARDS

Login Number: L14081687
Instrument Id: HPLC5
Workgroup (AAB#): WG490986

Method: 8330
CAL ID: HPLC5-09-JUL-14
Matrix: Soil

Sample Number	Dilution	Tag	1
L14081687-13	1.00	01	84.6
L14081687-15	1.00	01	83.2
WG490739-01	1.00	01	85.3
WG490739-02	1.00	01	89.9

Surrogates	Surrogate Limits		
1 - 1,2-Dinitrobenzene	50	-	150

Underline = Result out of surrogate limits

DL = surrogate diluted out
ND = surrogate not detected

SURROGATES - Modified 03/06/2008
PDF File ID: 3738908
Report generated: 09/09/2014 15:59

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L14081687
Blank File ID: 5L013479.F
Prep Date: 08/29/14 11:00
Analyzed Date: 09/02/14 15:39
Analyst: ECL

Work Group: WG490587
Blank Sample ID: WG490381-01
Instrument ID: HPLC5
Method: 8330B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG490381-02	5L013480.F	09/02/14 16:18	01
LCS2	WG490381-03	5L013481.F	09/02/14 16:57	01
I-40MW001(082714)	L14081687-01	5L013492.F	09/03/14 00:07	01
I-40MW005(082714)	L14081687-02	5L013493.F	09/03/14 00:46	01
I-40MW006(082714)	L14081687-03	5L013494.F	09/03/14 01:25	01
I-93MW002(082714)	L14081687-04	5L013495.F	09/03/14 02:04	01
I-157MW001(082714)	L14081687-05	5L013496.F	09/03/14 02:43	01
I-157MW003(082714)	L14081687-06	5L013497.F	09/03/14 03:22	01
I-157MW004(082714)	L14081687-07	5L013499.F	09/03/14 04:40	01
I-157MW002(082714)	L14081687-08	5L013500.F	09/03/14 05:19	01
I-74SW001(082714)	L14081687-12	5L013501.F	09/03/14 05:58	01
I-79SW002(082714)	L14081687-14	5L013502.F	09/03/14 06:37	01
I-157MW003(082714)	L14081687-06	5L013521.F	09/04/14 14:02	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 3738901
Report generated 09/09/2014 15:58

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L14081687
Blank File ID: 5L013518.F
Prep Date: 09/02/14 09:37
Analyzed Date: 09/04/14 12:05
Analyst: ECL

Work Group: WG490860
Blank Sample ID: WG490559-01
Instrument ID: HPLC5
Method: 8330B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG490559-02	5L013519.F	09/04/14 12:44	01
LCS2	WG490559-03	5L013520.F	09/04/14 13:23	01
I-40MW003(082714)	L14081687-09	5L013543.F	09/05/14 17:47	01
I-40MW002(082714)	L14081687-10	5L013544.F	09/05/14 18:26	01
FB001(082714)	L14081687-11	5L013545.F	09/05/14 19:05	01
I-40MW002(082714)	L14081687-10	5L013577.F	09/08/14 15:42	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 3738901
Report generated 09/09/2014 15:58

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L14081687
Blank File ID: 5L013522.F
Prep Date: 09/03/14 14:05
Analyzed Date: 09/04/14 14:51
Analyst: ECL

Work Group: WG490986
Blank Sample ID: WG490739-01
Instrument ID: HPLC5
Method: 8330B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG490739-02	5L013523.F	09/04/14 15:30	01
I-79SD001(082714)	L14081687-13	5L013539.F	09/05/14 01:55	01
I-79SC002(082614)	L14081687-15	5L013540.F	09/05/14 02:34	01

Report Name: BLANK_SUMMARY
PDF File ID: 3738901
Report generated 09/09/2014 15:58

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L14081687 Prep Date: 08/29/14 11:00 Sample ID: WG490381-01
Instrument ID: HPLC5 Run Date: 09/02/14 15:39 Prep Method: METHOD
File ID: 5L013479.F Analyst: ECL Method: 8330B
Workgroup (AAB#): WG490587 Matrix: Water Units: ug/L
Contract #: Cal ID: HPLC5-09-JUL-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
2,4,6-Trinitrotoluene	0.250	1.00	1.00	1	U
2-Amino-4,6-dinitrotoluene	0.250	1.00	1.00	1	U
4-Amino-2,6-dinitrotoluene	0.250	1.00	1.00	1	U
RDX	0.250	1.00	1.00	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
1,2-Dinitrobenzene	87.2	50 - 150	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 3738902
09-SEP-2014 15:58

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L14081687 Prep Date: 09/02/14 09:37 Sample ID: WG490559-01
Instrument ID: HPLC5 Run Date: 09/04/14 12:05 Prep Method: METHOD
File ID: 5L013518.F Analyst: ECL Method: 8330B
Workgroup (AAB#): WG490860 Matrix: Water Units: ug/L
Contract #: Cal ID: HPLC5-09-JUL-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
2,4,6-Trinitrotoluene	0.250	1.00	1.00	1	U
2-Amino-4,6-dinitrotoluene	0.250	1.00	1.00	1	U
4-Amino-2,6-dinitrotoluene	0.250	1.00	1.00	1	U
RDX	0.250	1.00	1.00	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
1,2-Dinitrobenzene	86.6	50 - 150	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 3738902
09-SEP-2014 15:58

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L14081687 Prep Date: 09/03/14 14:05 Sample ID: WG490739-01
Instrument ID: HPLC5 Run Date: 09/04/14 14:51 Prep Method: METHOD
File ID: 5L013522.F Analyst: ECL Method: 8330B
Workgroup (AAB#): WG490986 Matrix: Soil Units: mg/kg
Contract #: Cal ID: HPLC5-09-JUL-14

Analytes	MDL	RL	Concentration	Dilution	Qualifier
2,4,6-Trinitrotoluene	0.100	0.250	0.250	1	U
2-Amino-4,6-dinitrotoluene	0.100	0.250	0.250	1	U
4-Amino-2,6-dinitrotoluene	0.100	0.250	0.250	1	U
RDX	0.100	0.250	0.250	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
1,2-Dinitrobenzene	85.3	50 - 150	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 3738902
09-SEP-2014 15:58

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14081687 Run Date: 09/04/2014 Sample ID: WG490739-02
Instrument ID: HPLC5 Run Time: 15:30 Prep Method: METHOD
File ID: 5L013523.F Analyst: ECL Method: 8330B
Workgroup (AAB#): WG490986 Matrix: Soil Units: mg/kg
QC Key: STD Lot#: STD65796 Cal ID: HPLC5-09-JUL-14

Analytes	Expected	Found	% Rec	LCS Limits	Q
2,4,6-Trinitrotoluene	1.00	0.844	84.4	40 - 130	
2-Amino-4,6-dinitrotoluene	1.00	1.02	102	80 - 125	
4-Amino-2,6-dinitrotoluene	1.00	0.948	94.8	80 - 125	
RDX	1.00	0.881	88.1	70 - 135	

Surrogates	% Recovery	Surrogate Limits	Qualifier
1,2-Dinitrobenzene	89.9	50 - 150	PASS

* EXCEEDS %REC LIMIT

LCS - Modified 03/06/2008
PDF File ID: 3743746
Report generated: 09/10/2014 08:33

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14081687 Analyst: ECL Prep Method: METHOD
Instrument ID: HPLC5 Matrix: Water Method: 8330B
Workgroup (AAB#): WG490587 Units: ug/L
QC Key: STD Lot #: STD65796

Sample ID: WG490381-02 LCS File ID: 5L013480.F Run Date: 09/02/2014 16:18
Sample ID: WG490381-03 LCS2 File ID: 5L013481.F Run Date: 09/02/2014 16:57

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
2,4,6-Trinitrotoluene	5.00	4.62	92.4	5.00	4.58	91.6	0.925	40 - 145	20	
2-Amino-4,6-dinitrotoluene	5.00	5.07	101	5.00	4.91	98.3	3.08	50 - 155	20	
4-Amino-2,6-dinitrotoluene	5.00	4.97	99.5	5.00	4.82	96.3	3.21	55 - 155	20	
RDX	5.00	4.41	88.1	5.00	4.16	83.2	5.83	50 - 160	20	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
1,2-Dinitrobenzene	96.9	91.6	50 - 150	PASS

* EXCEEDS %REC LIMIT

\# EXCEEDS RPD LIMIT

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 3738903
Report generated: 09/09/2014 15:58

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L14081687 Analyst: ECL Prep Method: METHOD
Instrument ID: HPLC5 Matrix: Water Method: 8330B
Workgroup (AAB#): WG490860 Units: ug/L
QC Key: STD Lot #: STD65796

Sample ID: WG490559-02 LCS File ID: 5L013519.F Run Date: 09/04/2014 12:44
Sample ID: WG490559-03 LCS2 File ID: 5L013520.F Run Date: 09/04/2014 13:23

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
2,4,6-Trinitrotoluene	5.00	4.60	92.0	5.00	4.22	84.4	8.61	40 - 145	20	
2-Amino-4,6-dinitrotoluene	5.00	5.26	105	5.00	4.90	98.0	7.08	50 - 155	20	
4-Amino-2,6-dinitrotoluene	5.00	4.99	99.8	5.00	4.64	92.8	7.27	55 - 155	20	
RDX	5.00	4.70	94.1	5.00	4.38	87.6	7.16	50 - 160	20	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
1,2-Dinitrobenzene	96.5	87.8	50 - 150	PASS

* EXCEEDS %REC LIMIT

\# EXCEEDS RPD LIMIT

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 3738903
Report generated: 09/09/2014 15:58

Microbac Laboratories Inc.

INITIAL CALIBRATION SUMMARY

Login Number: L14081687
Analytical Method: 8330B
ICAL Workgroup: WG483233

Instrument ID: HPLC5
Initial Calibration Date: 09-JUL-14 16:41
Column ID: F

Analyte		AVG RF	% RSD	LINEAR (R)	QUAD (R^2)
2,4,6-Trinitrotoluene		2.544	2.55	1.00000	
2-Amino-4,6-Dinitrotoluene		2.763	5.50	1.00000	
4-Amino-2,6-Dinitrotoluene		4.276	3.89	1.00000	
RDX		4.468	19.1	1.00000	

R = Correlation coefficient; 0.995 minimum
R^2 = Coefficient of determination; 0.99 minimum

This method always uses linear calibration model (R)

INT_CAL - Modified 03/06/2008
PDF File ID: 3738904
Report generated 09/09/2014 15:58

Microbac Laboratories Inc.

INITIAL CALIBRATION DATA

Login Number: L14081687

Analytical Method: 8330B

Instrument ID: HPLC5

Initial Calibration Date: 09-JUL-14 16:41

Column ID: F

Analyte	WG483233-01			WG483233-02			WG483233-03		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
2,4,6-Trinitrotoluene	2500	967.202881	2.585	1000	385.309113	2.595	500	190.716125	2.622
2-Amino-4,6-Dinitrotoluene	2500	877.059021	2.850	1000	349.451172	2.862	500	172.491531	2.899
4-Amino-2,6-Dinitrotoluene	2500	570.305420	4.384	1000	228.319305	4.380	500	112.675064	4.438
RDX	2500	484.308258	5.162	1000	195.345810	5.119	500	98.4699020	5.078

INT_CAL - Modified 03/06/2008
PDF File ID: 3738904
Report generated 09/09/2014 15:58

Microbac Laboratories Inc.

INITIAL CALIBRATION DATA

Login Number: L14081687

Analytical Method: 8330B

Instrument ID: HPLC5

Initial Calibration Date: 09-JUL-14 16:41

Column ID: F

Analyte	WG483233-04			WG483233-05			WG483233-06		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
2,4,6-Trinitrotoluene	100	39.8029480	2.512	50.0	20.2711296	2.467	25.0	10.0692062	2.483
2-Amino-4,6-Dinitrotoluene	100	35.7217560	2.799	50.0	18.9889889	2.633	25.0	9.87414837	2.532
4-Amino-2,6-Dinitrotoluene	100	23.2509079	4.301	50.0	12.1103840	4.129	25.0	6.20706463	4.028
RDX	100	22.6424503	4.416	50.0	13.9189634	3.592	25.0	7.26337814	3.442

INT_CAL - Modified 03/06/2008
PDF File ID: 3738904
Report generated 09/09/2014 15:58

Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L14081687 Run Date: 07/09/2014 Sample ID: WG483233-07
Instrument ID: HPLC5 Run Time: 17:20 Method: 8330B
File ID: 5L012970.F Analyst: ECL QC Key: STD
ICal Workgroup: WG483233 Cal ID: HPLC5 - 09-JUL-14

Analyte		Expected	Found	Units	RF	%D	UCL	Q
2,4,6-Trinitrotoluene		500	500	ug/L	2.59	0	30	
2-Amino-4,6-Dinitrotoluene		500	501	ug/L	2.85	0.100	30	
4-Amino-2,6-Dinitrotoluene		500	522	ug/L	4.20	4.40	30	
RDX		500	511	ug/L	4.93	2.20	30	

* Exceeds %D Limit

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 3738905
Report generated 09/09/2014 15:58

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14081687
Run Date: 09/02/2014
Sample ID: WG490599-01
Instrument ID: HPLC5
Run Time: 15:00
Method: 8330B
File ID: 5L013478.F
Analyst: ECL
QC Key: STD
Workgroup (AAB#): WG490587
Cal ID: HPLC5 - 09-JUL-14
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
2,4,6-Trinitrotoluene		500	483	ug/L	2.68	3.32	20	
2-Amino-4,6-Dinitrotoluene		500	516	ug/L	2.77	3.14	20	
4-Amino-2,6-Dinitrotoluene		500	519	ug/L	4.22	3.87	20	
RDX		500	507	ug/L	4.97	1.43	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3738906
Report generated 09/09/2014 15:58

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14081687
Run Date: 09/02/2014
Sample ID: WG490599-02
Instrument ID: HPLC5
Run Time: 21:31
Method: 8330B
File ID: 5L013488.F
Analyst: ECL
QC Key: STD
Workgroup (AAB#): WG490587
Cal ID: HPLC5 - 09-JUL-14
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
2,4,6-Trinitrotoluene		500	501	ug/L	2.58	0.213	20	
2-Amino-4,6-Dinitrotoluene		500	516	ug/L	2.76	3.20	20	
4-Amino-2,6-Dinitrotoluene		500	529	ug/L	4.14	5.87	20	
RDX		500	531	ug/L	4.75	6.16	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3738906
Report generated 09/09/2014 15:58

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14081687 Run Date: 09/03/2014 Sample ID: WG490599-03

Instrument ID: HPLC5 Run Time: 04:01 Method: 8330B

File ID: 5L013498.F Analyst: ECL QC Key: STD

Workgroup (AAB#): WG490587 Cal ID: HPLC5 - 09-JUL-14

Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
2,4,6-Trinitrotoluene		500	485	ug/L	2.67	3.07	20	
2-Amino-4,6-Dinitrotoluene		500	503	ug/L	2.84	0.534	20	
4-Amino-2,6-Dinitrotoluene		500	508	ug/L	4.31	1.67	20	
RDX		500	498	ug/L	5.06	0.466	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008

PDF File ID: 3738906

Report generated 09/09/2014 15:58

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14081687
Run Date: 09/03/2014
Sample ID: WG490599-04
Instrument ID: HPLC5
Run Time: 07:16
Method: 8330B
File ID: 5L013503.F
Analyst: ECL
QC Key: STD
Workgroup (AAB#): WG490587
Cal ID: HPLC5 - 09-JUL-14
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
2,4,6-Trinitrotoluene		500	483	ug/L	2.68	3.42	20	
2-Amino-4,6-Dinitrotoluene		500	488	ug/L	2.92	2.32	20	
4-Amino-2,6-Dinitrotoluene		500	495	ug/L	4.42	0.982	20	
RDX		500	504	ug/L	5.00	0.801	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3738906
Report generated 09/09/2014 15:58

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14081687
Run Date: 09/04/2014
Sample ID: WG490918-01
Instrument ID: HPLC5
Run Time: 11:10
Method: 8330B
File ID: 5L013517.F
Analyst: ECL
QC Key: STD
Workgroup (AAB#): WG490587
Cal ID: HPLC5 - 09-JUL-14
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
2,4,6-Trinitrotoluene		500	485	ug/L	2.67	2.90	20	
2-Amino-4,6-Dinitrotoluene		500	520	ug/L	2.74	3.92	20	
4-Amino-2,6-Dinitrotoluene		500	520	ug/L	4.21	3.92	20	
RDX		500	497	ug/L	5.06	0.584	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3738906
Report generated 09/09/2014 15:58

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14081687
Run Date: 09/04/2014
Sample ID: WG490918-02
Instrument ID: HPLC5
Run Time: 18:46
Method: 8330B
File ID: 5L013528.F
Analyst: ECL
QC Key: STD
Workgroup (AAB#): WG490587
Cal ID: HPLC5 - 09-JUL-14
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
2,4,6-Trinitrotoluene		500	503	ug/L	2.57	0.677	20	
2-Amino-4,6-Dinitrotoluene		500	519	ug/L	2.75	3.81	20	
4-Amino-2,6-Dinitrotoluene		500	535	ug/L	4.10	6.94	20	
RDX		500	507	ug/L	4.97	1.40	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3738906
Report generated 09/09/2014 15:58

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14081687
Run Date: 09/05/2014
Sample ID: WG490918-03
Instrument ID: HPLC5
Run Time: 01:16
Method: 8330B
File ID: 5L013538.F
Analyst: ECL
QC Key: STD
Workgroup (AAB#): WG490986
Cal ID: HPLC5 - 09-JUL-14
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
2,4,6-Trinitrotoluene		0.500	0.508	mg/kg	2.55	1.69	20	
2-Amino-4,6-Dinitrotoluene		0.500	0.508	mg/kg	2.81	1.65	20	
4-Amino-2,6-Dinitrotoluene		0.500	0.529	mg/kg	4.14	5.87	20	
RDX		0.500	0.505	mg/kg	4.98	1.03	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3738906
Report generated 09/09/2014 15:58

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14081687
Run Date: 09/05/2014
Sample ID: WG490918-04
Instrument ID: HPLC5
Run Time: 03:14
Method: 8330B
File ID: 5L013541.F
Analyst: ECL
QC Key: STD
Workgroup (AAB#): WG490986
Cal ID: HPLC5 - 09-JUL-14
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
2,4,6-Trinitrotoluene		0.500	0.491	mg/kg	2.64	1.87	20	
2-Amino-4,6-Dinitrotoluene		0.500	0.511	mg/kg	2.79	2.23	20	
4-Amino-2,6-Dinitrotoluene		0.500	0.514	mg/kg	4.26	2.85	20	
RDX		0.500	0.504	mg/kg	5.00	0.754	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3738906
Report generated 09/09/2014 15:58

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14081687
Run Date: 09/05/2014
Sample ID: WG491289-01
Instrument ID: HPLC5
Run Time: 17:08
Method: 8330B
File ID: 5L013542.F
Analyst: ECL
QC Key: STD
Workgroup (AAB#): WG490860
Cal ID: HPLC5 - 09-JUL-14
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
2,4,6-Trinitrotoluene		500	482	ug/L	2.69	3.62	20	
2-Amino-4,6-Dinitrotoluene		500	513	ug/L	2.78	2.65	20	
4-Amino-2,6-Dinitrotoluene		500	518	ug/L	4.23	3.55	20	
RDX		500	500	ug/L	5.03	0.0527	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3738906
Report generated 09/09/2014 15:58

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14081687
Run Date: 09/06/2014
Sample ID: WG491289-02
Instrument ID: HPLC5
Run Time: 00:17
Method: 8330B
File ID: 5L013553.F
Analyst: ECL
QC Key: STD
Workgroup (AAB#): WG490860
Cal ID: HPLC5 - 09-JUL-14
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
2,4,6-Trinitrotoluene		500	490	ug/L	2.64	1.97	20	
2-Amino-4,6-Dinitrotoluene		500	522	ug/L	2.73	4.33	20	
4-Amino-2,6-Dinitrotoluene		500	527	ug/L	4.16	5.41	20	
RDX		500	492	ug/L	5.12	1.65	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3738906
Report generated 09/09/2014 15:58

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14081687
Run Date: 09/08/2014
Sample ID: WG491373-01
Instrument ID: HPLC5
Run Time: 12:33
Method: 8330B
File ID: 5L013573.F
Analyst: ECL
QC Key: STD
Workgroup (AAB#): WG490860
Cal ID: HPLC5 - 09-JUL-14
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
2,4,6-Trinitrotoluene		500	484	ug/L	2.68	3.28	20	
2-Amino-4,6-Dinitrotoluene		500	525	ug/L	2.72	5.03	20	
4-Amino-2,6-Dinitrotoluene		500	528	ug/L	4.15	5.58	20	
RDX		500	496	ug/L	5.08	0.843	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3738906
Report generated 09/09/2014 15:58

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L14081687
Run Date: 09/08/2014
Sample ID: WG491373-02
Instrument ID: HPLC5
Run Time: 20:15
Method: 8330B
File ID: 5L013584.F
Analyst: ECL
QC Key: STD
Workgroup (AAB#): WG490860
Cal ID: HPLC5 - 09-JUL-14
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
2,4,6-Trinitrotoluene		500	492	ug/L	2.63	1.65	20	
2-Amino-4,6-Dinitrotoluene		500	526	ug/L	2.71	5.13	20	
4-Amino-2,6-Dinitrotoluene		500	536	ug/L	4.09	7.21	20	
RDX		500	492	ug/L	5.12	1.68	20	

* Exceeds %D Criteria

CCV - Modified 03/05/2008
PDF File ID: 3738906
Report generated 09/09/2014 15:58

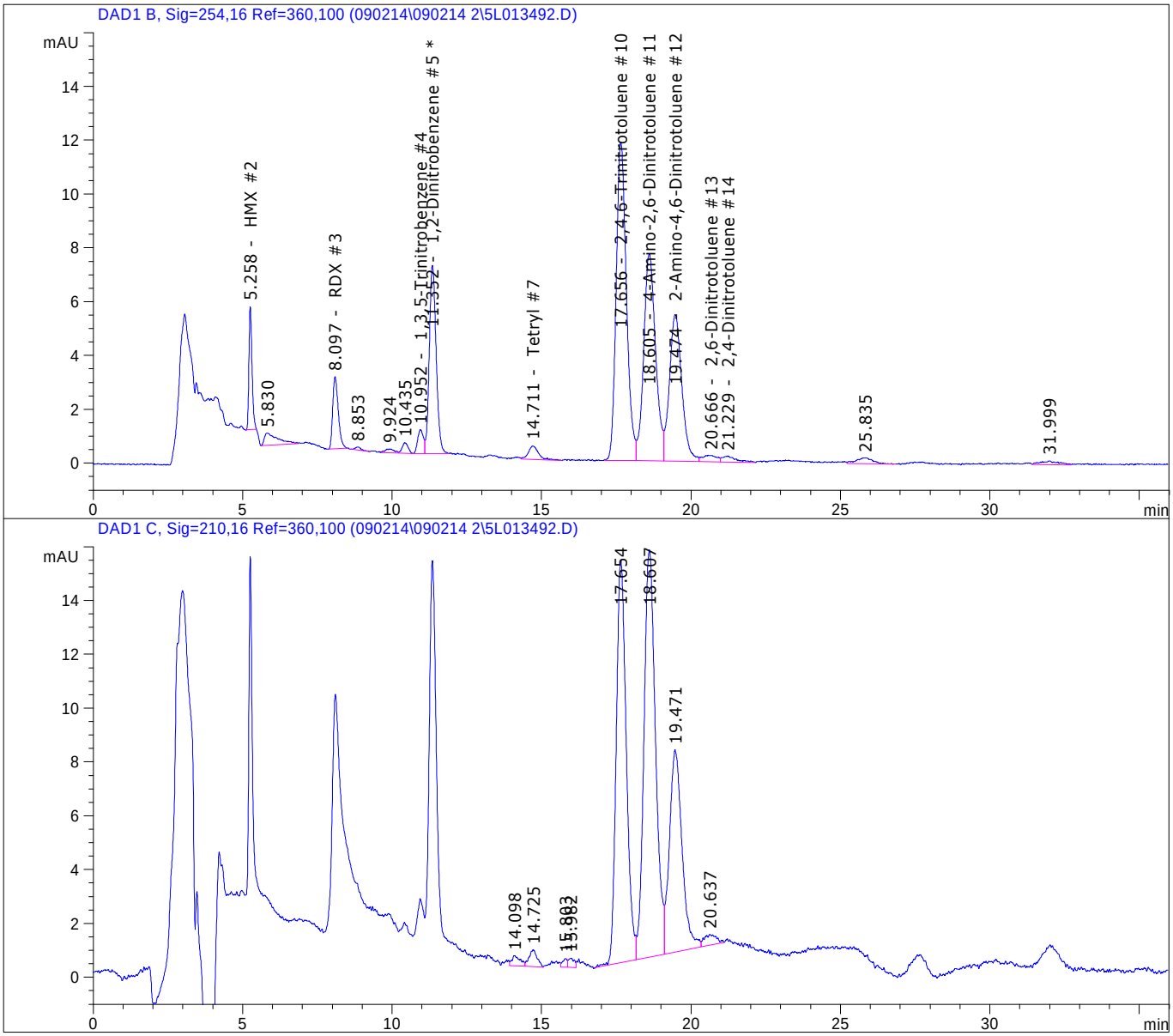
2.1.1.3 Sample Data

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013492.D
Sample Name: L14081687-01

==========

Acq. Operator	: ECL	Seq. Line :	15
Acq. Instrument	: HPLC5	Location :	Vial 15
Injection Date	: 9/3/2014 12:07:09 AM	Inj :	1
		Inj Volume :	100 µl
Acq. Method	: C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M		
Last changed	: 9/2/2014 2:17:53 PM by ECL		
Analysis Method	: C:\CHEM32\1\METHODS\8330PLDA.M		
Last changed	: 9/3/2014 3:26:41 PM by ECL		
Method Info	: OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013		
Sample Info	: 1,1 WATER		

==========



Data File C:\CHEM32\1\DATA\090214\090214 2\5L013492.D
Sample Name: L14081687-01

==========

Acq. Operator : ECL Seq. Line : 15
Acq. Instrument : HPLC5 Location : Vial 15
Injection Date : 9/3/2014 12:07:09 AM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 3:26:41 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 9/3/2014 3:26:32 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.258	VBA	32.97651	5.83266	192.34071		HMX #2
8.097	BBA	34.46672	4.72754	162.94281		RDX #3
10.952	VV	11.74467	2.82350	33.16106		1,3,5-Trinitrobenzene #4
11.352	VBA	110.33712	3.63354	400.91465		1,2-Dinitrobenzene #5 *
13.417		-	-	-		1,3-Dinitrobenzene #6
14.711	VV	12.32203	4.44871	54.81715		Tetryl #7
15.277		-	-	-		Nitrobenzene #8
17.656	BV	280.75510	2.58771	726.51376		2,4,6-Trinitrotoluene #10
18.605	VV	211.47176	4.38278	926.83517		4-Amino-2,6-Dinitrotoluene #11
19.474	VV	157.62335	2.85192	449.52890		2-Amino-4,6-Dinitrotoluene #12
20.666	VV	8.16928	4.16061	33.98918		2,6-Dinitrotoluene #13
21.229	VV	7.20050	1.91009	13.75361		2,4-Dinitrotoluene #14
25.021		-	-	-		2-Nitrotoluene #15
26.730		-	-	-		4-Nitrotoluene #16
28.911		-	-	-		3-Nitrotoluene #17

Totals : 2994.79700

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013492.D
Sample Name: L14081687-01

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :  15
Acq. Instrument : HPLC5                          Location : Vial 15
Injection Date  : 9/3/2014 12:07:09 AM                Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed    : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 9/3/2014 3:26:41 PM by ECL
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1 WATER


==================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 16.599            -          -          -         Nitroglycerin #9

Totals :                                 0.00000


2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==================================================================
                           *** End of Report ***
```

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013492.D
Sample Name: L14081687-01

Search result of : DAD1, 8.009 (8.5 mAU,Up2) Ref=7.882 & 8.529
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 7.608 | 7.608 min

Library search results

#	Match	Entry	Time [min]	ID	ID Name
1	883.1303	2	8.065	0	RDX #3

*** End of Report ***

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013492.D
Sample Name: L14081687-01

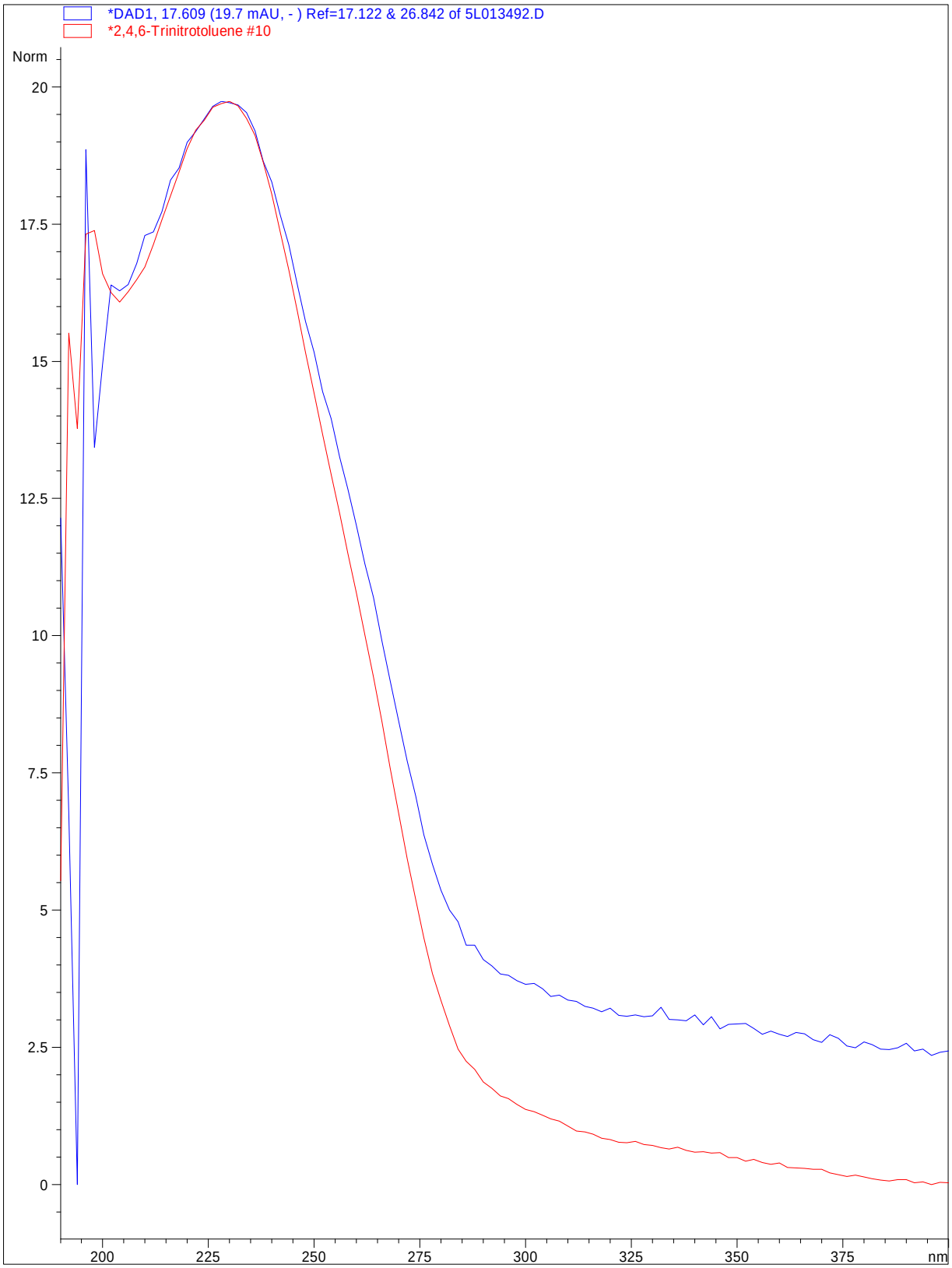
Search result of : DAD1, 17.609 (19.7 mAU, -) Ref=17.122 & 26.842
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 16.728 | 16.728 min

Library search results

#	Match	Entry	Time [min]	ID	ID Name
1	926.1956	8	17.650	0	2,4,6-Trinitrotoluene #10

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\090214\090214 2\5L013492.D
Sample Name: L14081687-01

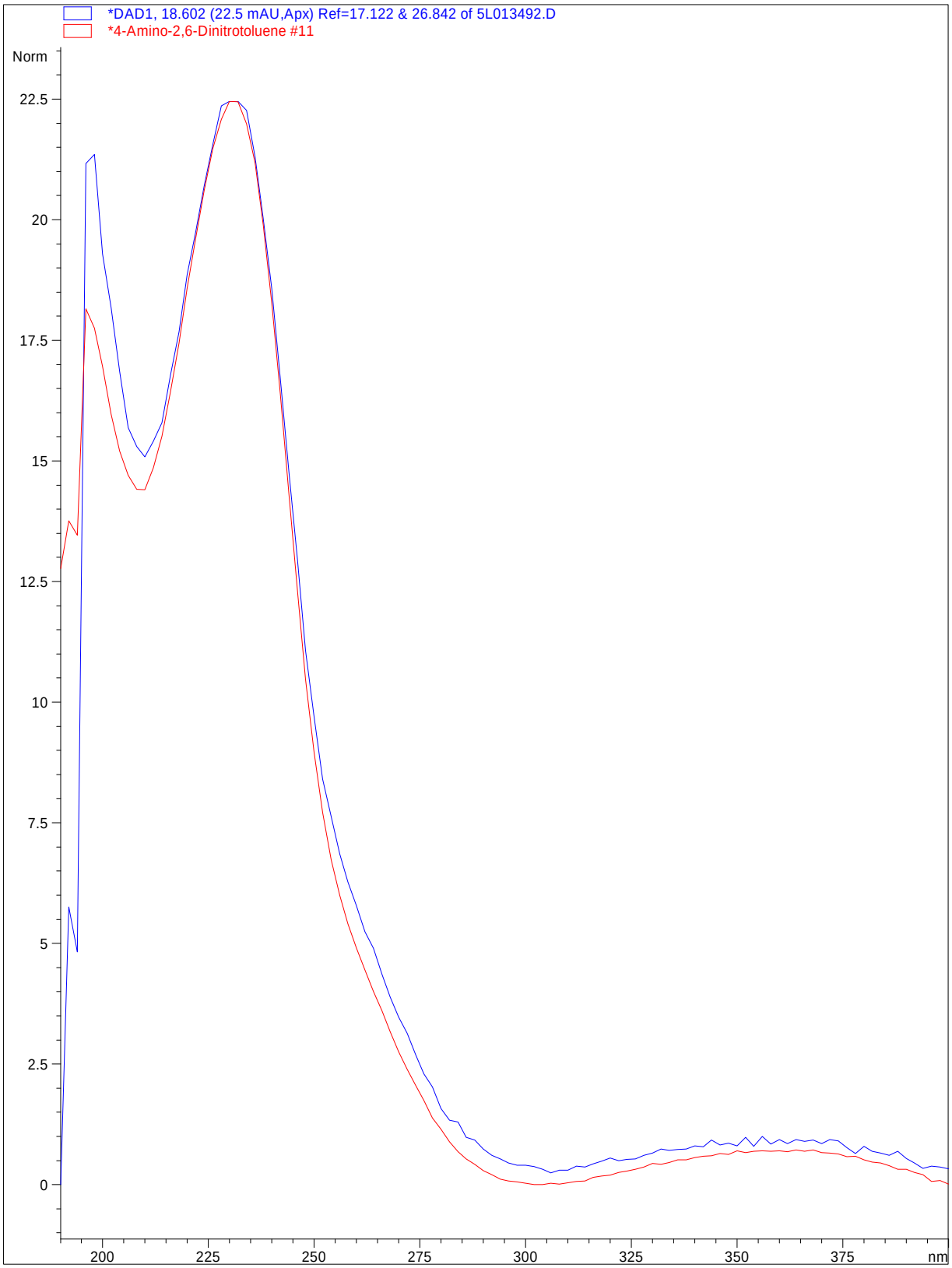
Search result of : DAD1, 18.602 (22.5 mAU,Apx) Ref=17.122 & 26.842
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 17.672 | 17.672 min

Library search results

#	Match	Entry	Time [min]	ID	ID Name
1	943.5710	9	18.587	0	4-Amino-2,6-Dinitrotoluene #11
2	866.5763	10	19.370	0	2-Amino-4,6-Dinitrotoluene #12

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\090214\090214 2\5L013492.D
Sample Name: L14081687-01

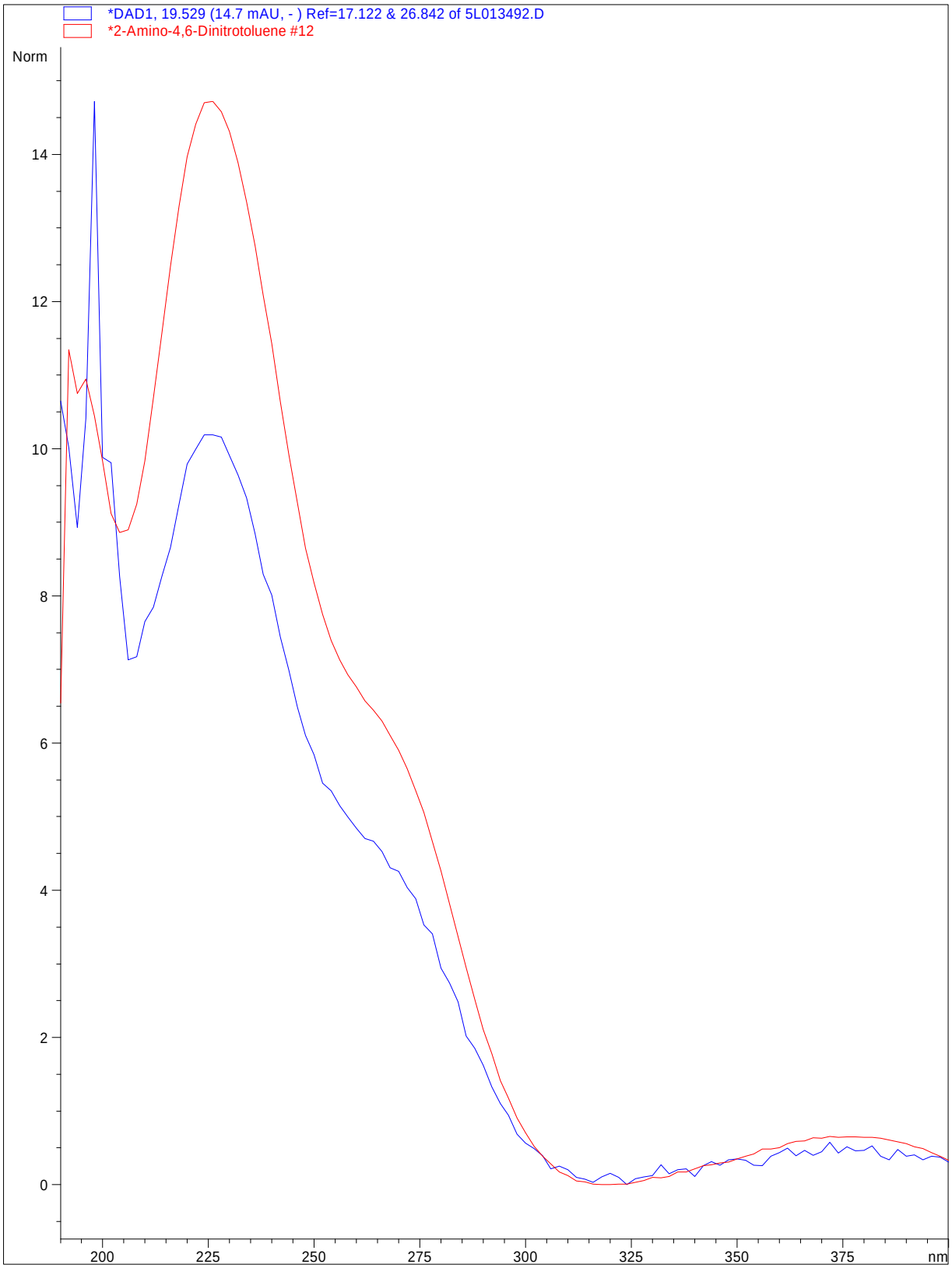
Search result of : DAD1, 19.529 (14.7 mAU, -) Ref=17.122 & 26.842
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 18.552 | 18.552 min

Library search results

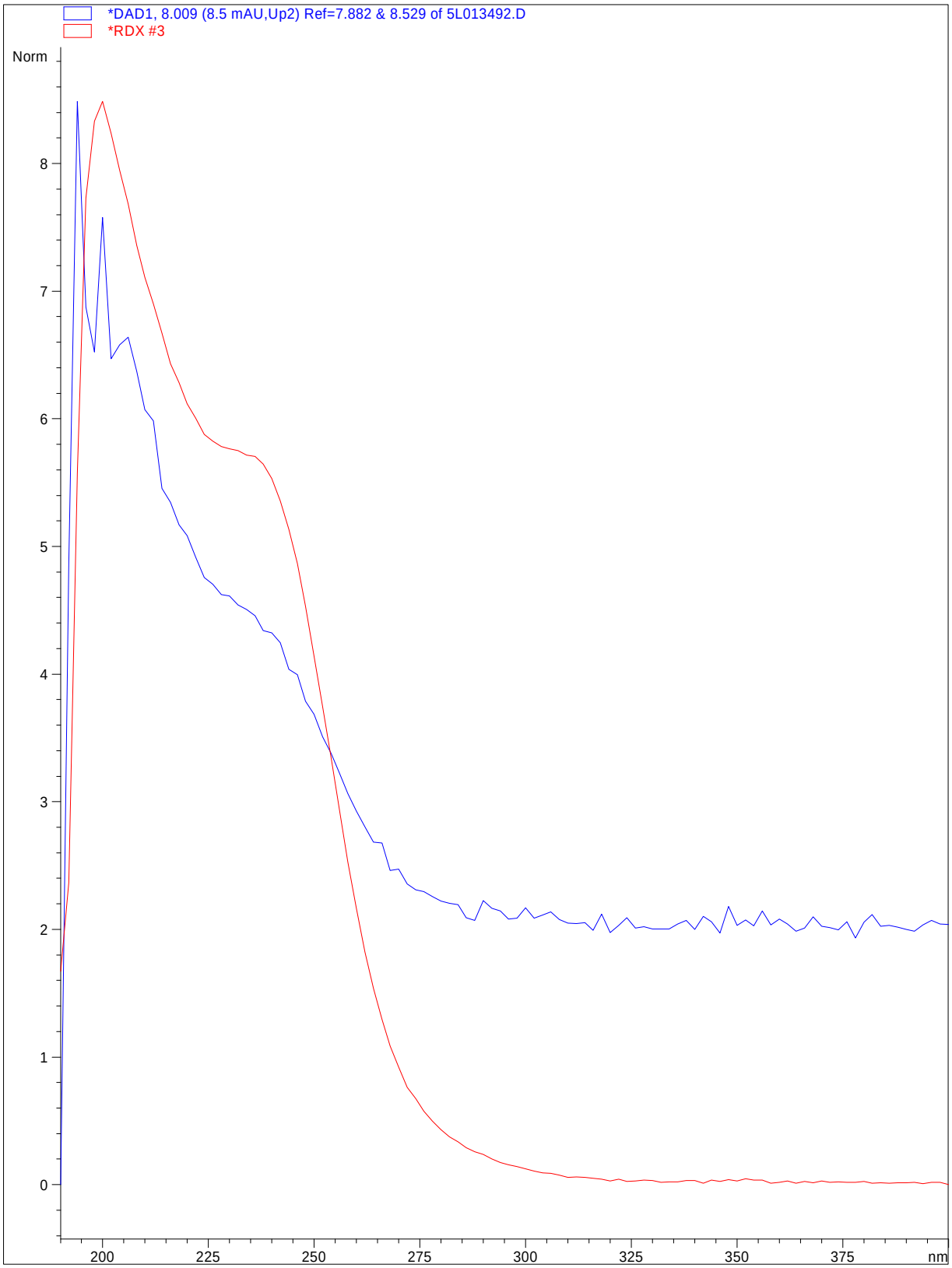
#	Match	Entry	Time [min]	ID	ID Name
1	926.9509	10	19.370	0	2-Amino-4,6-Dinitrotoluene #12
2	895.4347	9	18.587	0	4-Amino-2,6-Dinitrotoluene #11

*** End of Report ***

Target + Library Spectrum



Target + Library Spectrum



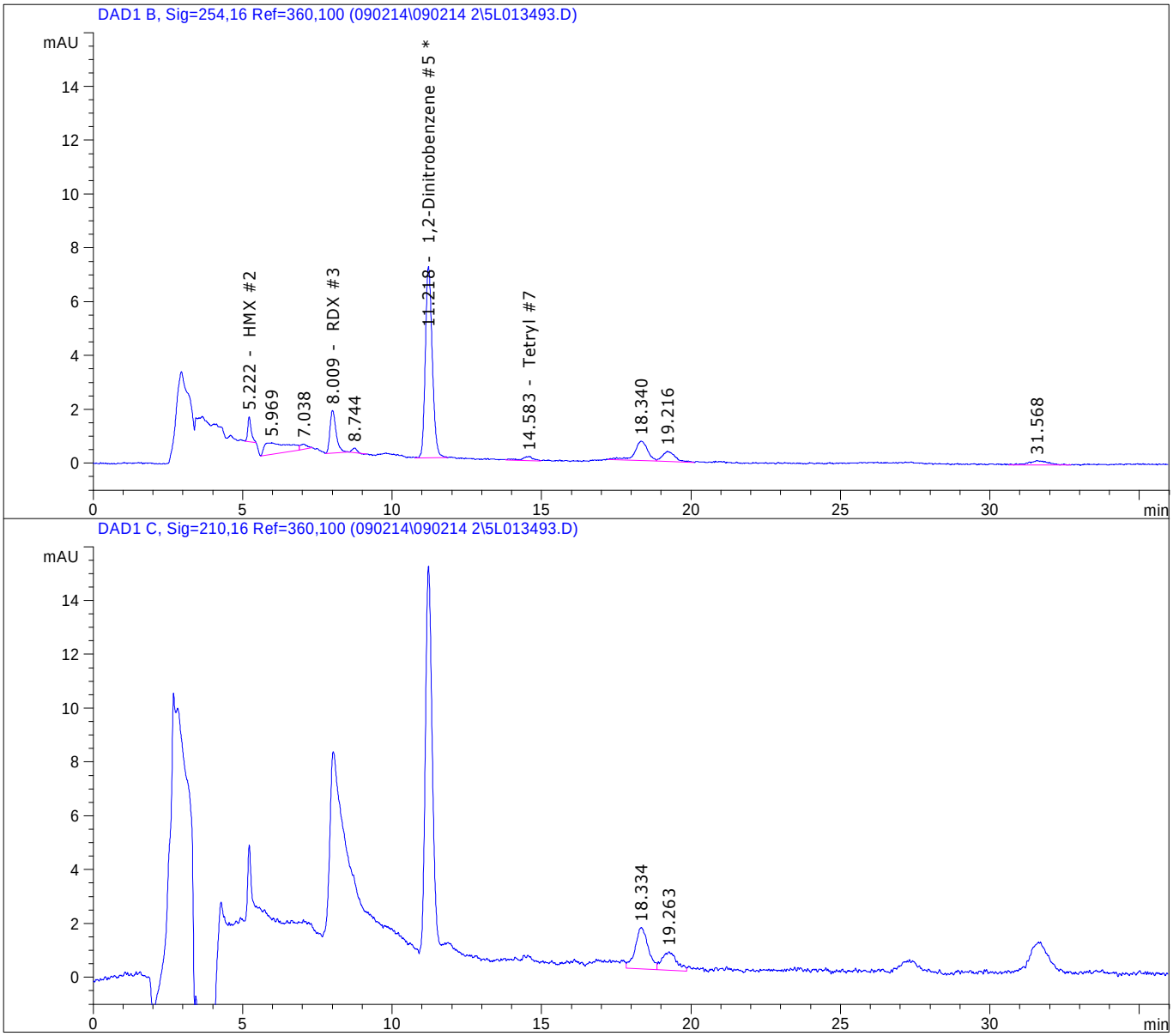
Data File C:\CHEM32\1\DATA\090214\090214 2\5L013493.D
Sample Name: L14081687-02

==========

Acq. Operator : ECL
Seq. Line : 16
Acq. Instrument : HPLC5
Location : Vial 16
Injection Date : 9/3/2014 12:46:16 AM
Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 3:26:41 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========



HPLC5 9/3/2014 3:36:13 PM ECL
Page 1 of 3

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013493.D
Sample Name: L14081687-02

==========

Acq. Operator : ECL Seq. Line : 16
Acq. Instrument : HPLC5 Location : Vial 16
Injection Date : 9/3/2014 12:46:16 AM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 3:26:41 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 9/3/2014 3:26:32 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.222	VBA	7.61557	5.17167	39.38526		HMX #2
8.009	BBA	22.32575	4.47188	99.83798		RDX #3
10.924		-	-	-		1,3,5-Trinitrobenzene #4
11.218	VBA	114.25820	3.63485	415.31119		1,2-Dinitrobenzene #5 *
13.417		-	-	-		1,3-Dinitrobenzene #6
14.583	BV	3.86138	4.46808	17.25292		Tetryl #7
15.277		-	-	-		Nitrobenzene #8
17.635		-	-	-		2,4,6-Trinitrotoluene #10
18.612		-	-	-		4-Amino-2,6-Dinitrotoluene #11
19.501		-	-	-		2-Amino-4,6-Dinitrotoluene #12
20.630		-	-	-		2,6-Dinitrotoluene #13
21.226		-	-	-		2,4-Dinitrotoluene #14
25.021		-	-	-		2-Nitrotoluene #15
26.730		-	-	-		4-Nitrotoluene #16
28.911		-	-	-		3-Nitrotoluene #17

Totals : 571.78735

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013493.D
Sample Name: L14081687-02

==========

Acq. Operator : ECL Seq. Line : 16
Acq. Instrument : HPLC5 Location : Vial 16
Injection Date : 9/3/2014 12:46:16 AM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 3:26:41 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========

Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
16.599		-	-	-		Nitroglycerin #9

Totals : 0.00000

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013493.D
Sample Name: L14081687-02

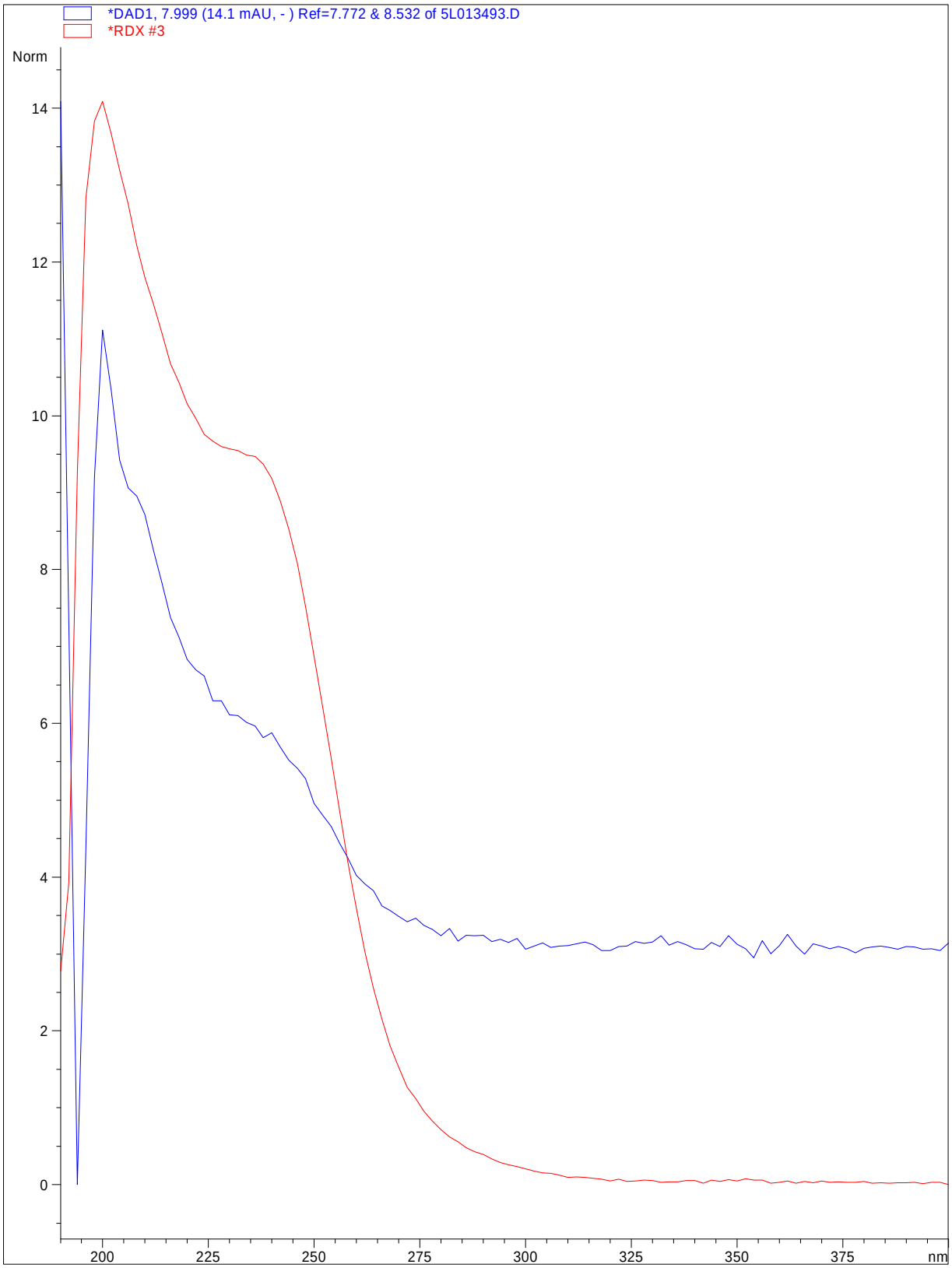
Search result of : DAD1, 7.999 (14.1 mAU, -) Ref=7.772 & 8.532
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 7.599 | 7.599 min

Library search results

#	Match	Entry	Time [min]	ID	ID Name
1	624.0426	2	8.065	0	RDX #3

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\090214\090214 2\5L013494.D
Sample Name: L14081687-03

==========

Acq. Operator	: ECL	Seq. Line :	17
Acq. Instrument	: HPLC5	Location :	Vial 17
Injection Date	: 9/3/2014 1:25:17 AM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 3:44:01 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

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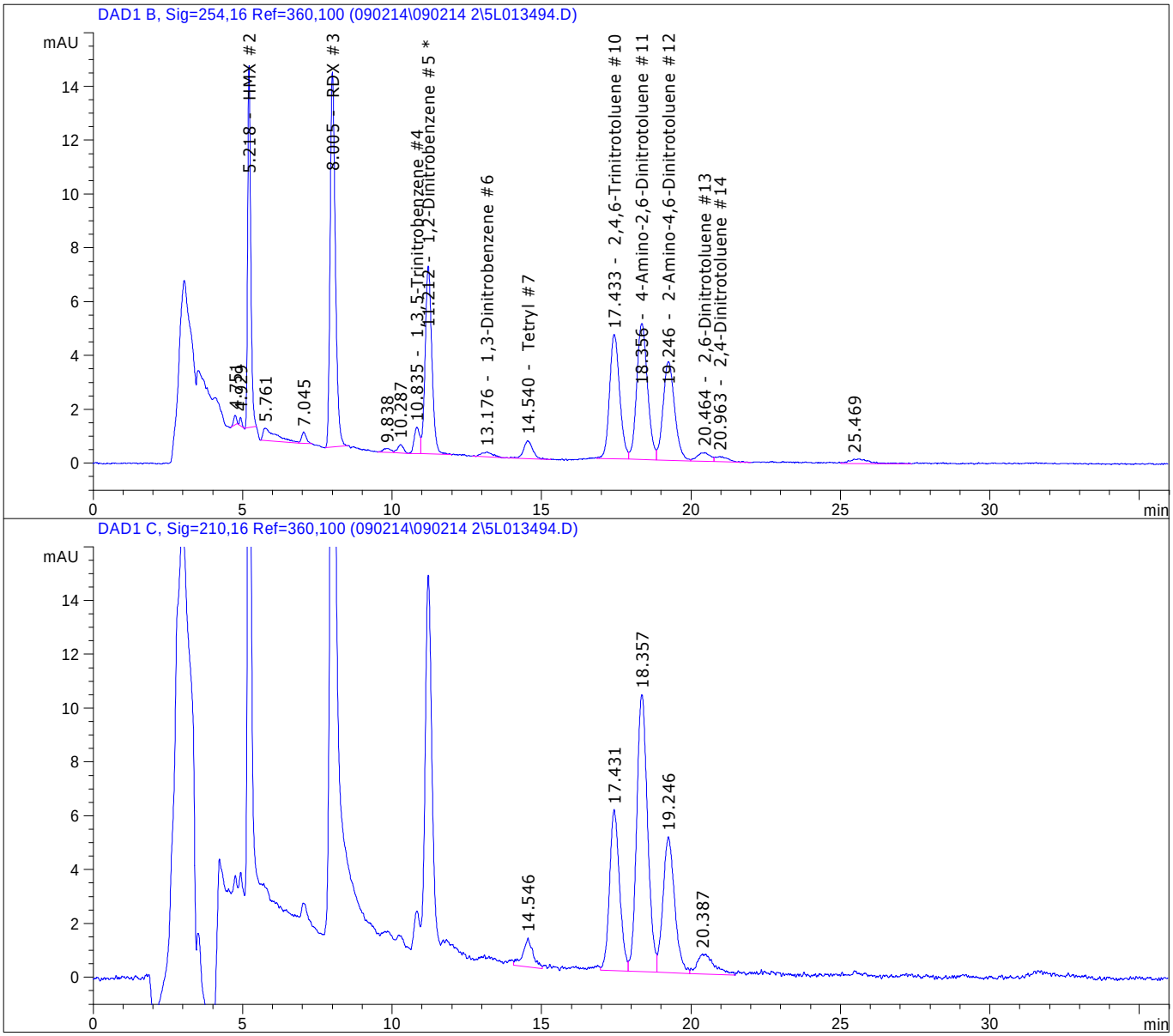

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013494.D
Sample Name: L14081687-03

==========

Acq. Operator : ECL Seq. Line : 17
Acq. Instrument : HPLC5 Location : Vial 17
Injection Date : 9/3/2014 1:25:17 AM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 3:44:01 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 9/3/2014 3:43:32 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.218	VBA	96.29747	5.96317	574.23864		HMX #2
8.005	BBA	169.41679	5.10203	864.36976		RDX #3
10.835	VV	12.59358	2.80459	35.31989		1,3,5-Trinitrobenzene #4
11.212	VBA	108.73801	3.63298	395.04341		1,2-Dinitrobenzene #5 *
13.176	BV	4.74964	1.96812	9.34786		1,3-Dinitrobenzene #6
14.540	VB	14.68762	4.44729	65.32005		Tetryl #7
15.042		-	-	-		Nitrobenzene #8
17.433	BV	107.83779	2.58900	279.19189		2,4,6-Trinitrotoluene #10
18.356	VV	127.26012	4.38024	557.42962		4-Amino-2,6-Dinitrotoluene #11
19.246	VV	99.07119	2.85081	282.43317		2-Amino-4,6-Dinitrotoluene #12
20.464	VV	9.90895	4.20641	41.68113		2,6-Dinitrotoluene #13
20.963	VV	5.97709	1.92933	11.53181		2,4-Dinitrotoluene #14
24.817		-	-	-		2-Nitrotoluene #15
26.526		-	-	-		4-Nitrotoluene #16
28.598		-	-	-		3-Nitrotoluene #17

Totals : 3115.90723

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013494.D
Sample Name: L14081687-03

```
    ==================================================================
    Acq. Operator   : ECL                           Seq. Line :  17
    Acq. Instrument : HPLC5                          Location : Vial 17
    Injection Date  : 9/3/2014 1:25:17 AM                 Inj :   1
                                                   Inj Volume : 100 µl
    Acq. Method     : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
    Last changed    : 9/2/2014 2:17:53 PM by ECL
    Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
    Last changed    : 9/3/2014 3:44:01 PM by ECL
    Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

    Sample Info     : 1,1 WATER


    ==================================================================


    Signal 2: DAD1 C, Sig=210,16 Ref=360,100

    RetTime  Type     Area     Amt/Area    Amount   Grp   Name
     [min]          [mAU*s]                [ug/L]
    -------|------|----------|----------|----------|--|------------------
     16.419            -          -          -         Nitroglycerin #9

    Totals :                                 0.00000


    2 Warnings or Errors :

    Warning : Calibration warnings (see calibration table listing)
    Warning : Calibrated compound(s) not found

    ==================================================================
                              *** End of Report ***
```

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013494.D
Sample Name: L14081687-03

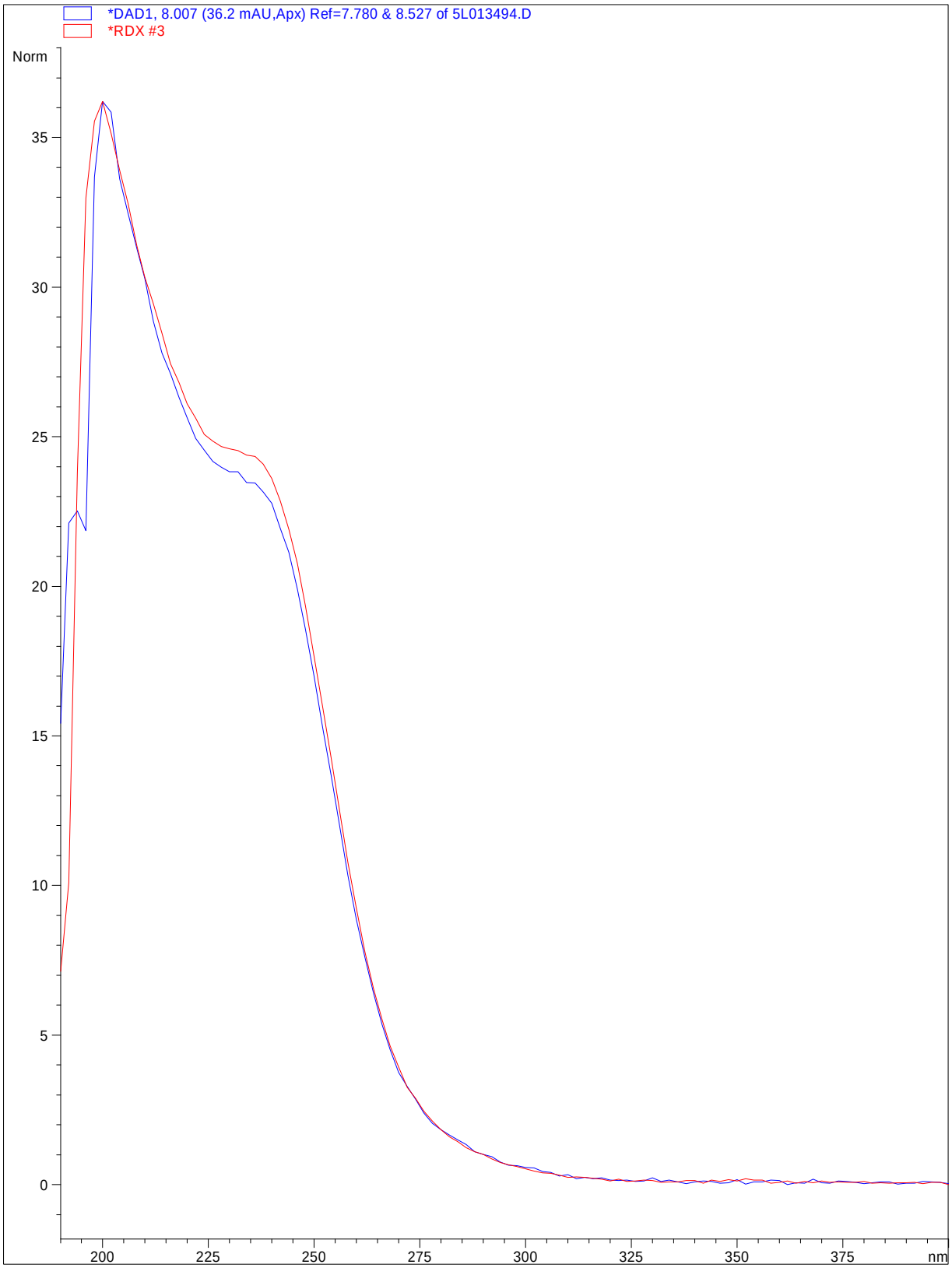
Search result of : DAD1, 8.007 (36.2 mAU,Apx) Ref=7.780 & 8.527
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 7.606 | 7.606 min

Library search results

#	Match	Entry	Time [min]	ID	ID Name
1	976.3912	2	8.065	0	RDX #3

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\090214\090214 2\5L013494.D
Sample Name: L14081687-03

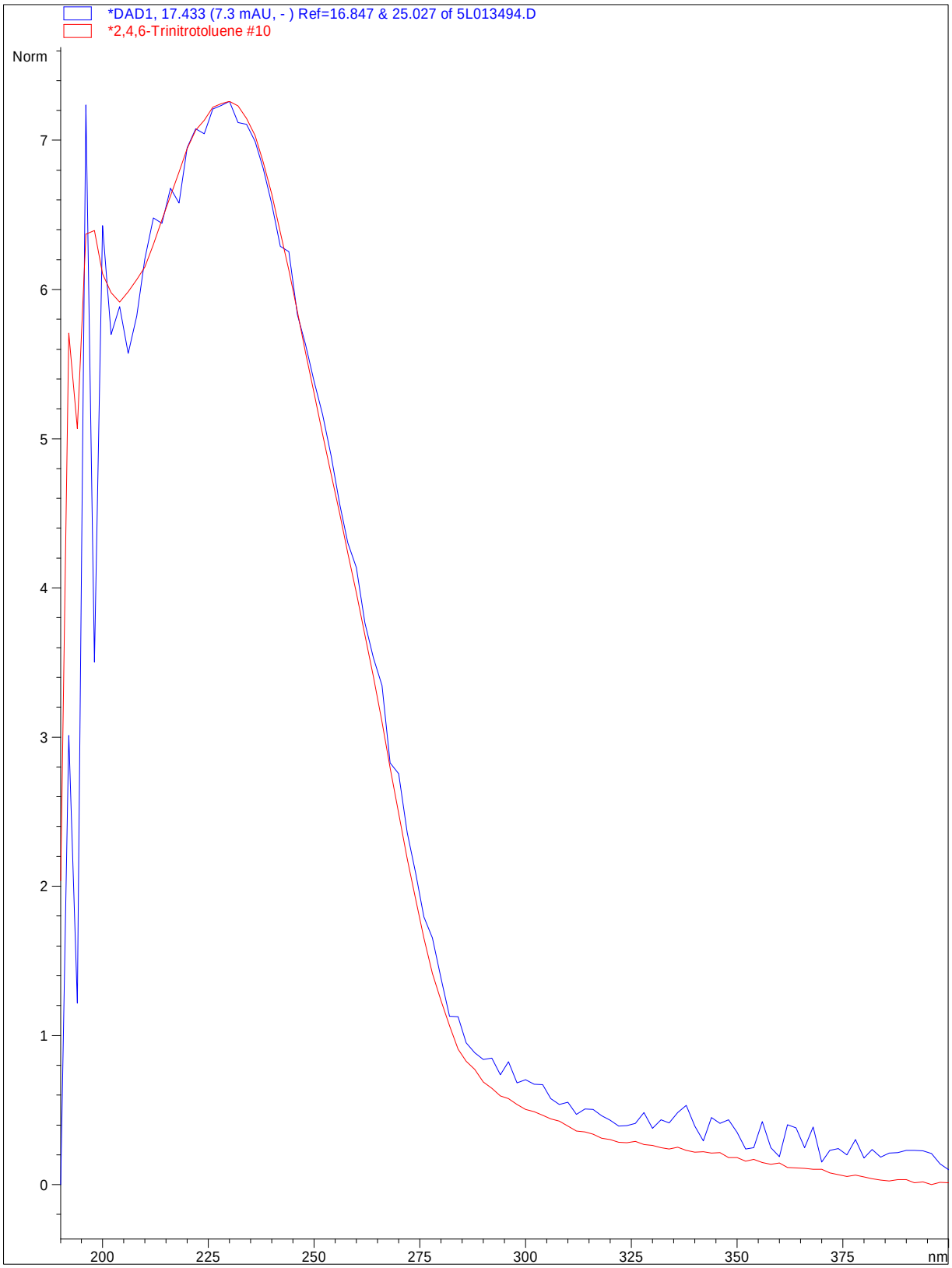
Search result of : DAD1, 17.433 (7.3 mAU, -) Ref=16.847 & 25.027
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 16.562 | 16.562 min

Library search results

#	Match	Entry	Time [min]	ID	ID Name
1	952.6591	8	17.650	0	2,4,6-Trinitrotoluene #10

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\090214\090214 2\5L013494.D
Sample Name: L14081687-03

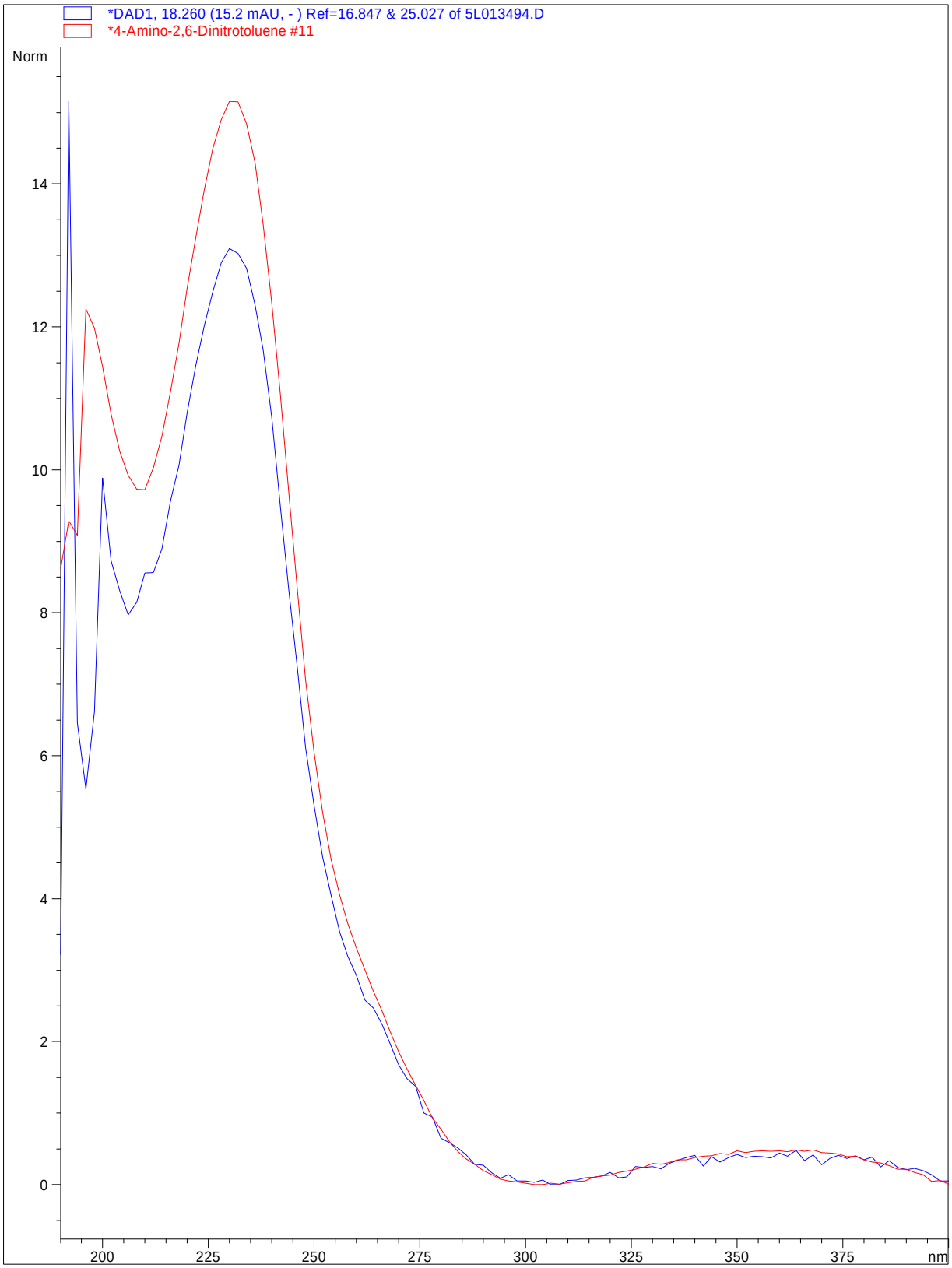
Search result of : DAD1, 18.260 (15.2 mAU, -) Ref=16.847 & 25.027
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 17.347 | 17.347 min

Library search results

#	Match	Entry	Time [min]	ID	ID Name
1	946.3108	9	18.587	0	4-Amino-2,6-Dinitrotoluene #11
2	899.7821	8	17.650	0	2,4,6-Trinitrotoluene #10

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\090214\090214 2\5L013494.D
Sample Name: L14081687-03

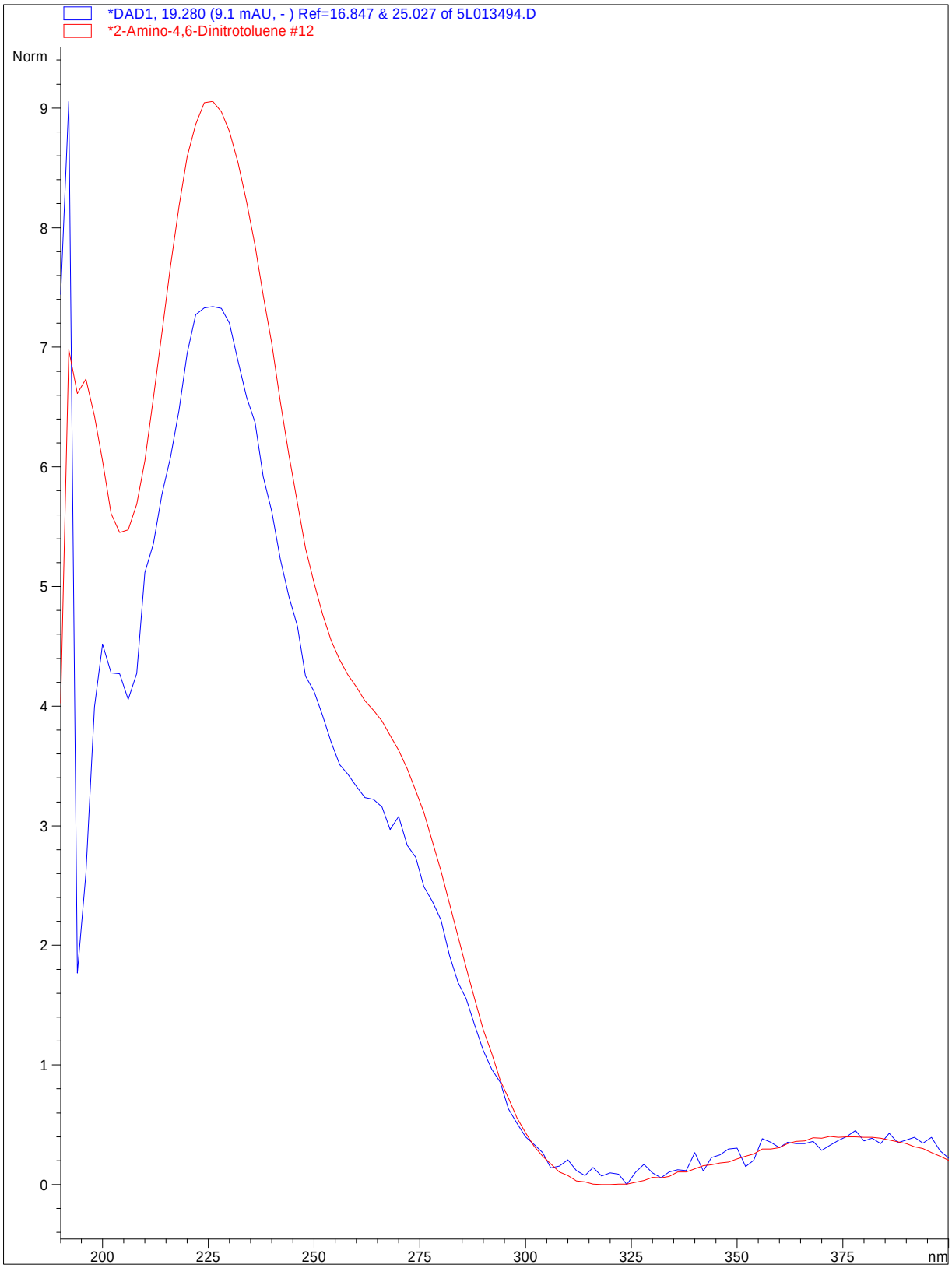
Search result of : DAD1, 19.280 (9.1 mAU, -) Ref=16.847 & 25.027
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 18.316 | 18.316 min

Library search results

#	Match	Entry	Time [min]	ID	ID Name
1	920.2304	10	19.370	0	2-Amino-4,6-Dinitrotoluene #12
2	840.2256	9	18.587	0	4-Amino-2,6-Dinitrotoluene #11

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\090214\090214 2\5L013495.D
Sample Name: L14081687-04

==========

Acq. Operator : ECL
Seq. Line : 18
Acq. Instrument : HPLC5
Location : Vial 18
Injection Date : 9/3/2014 2:04:21 AM
Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 3:44:01 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

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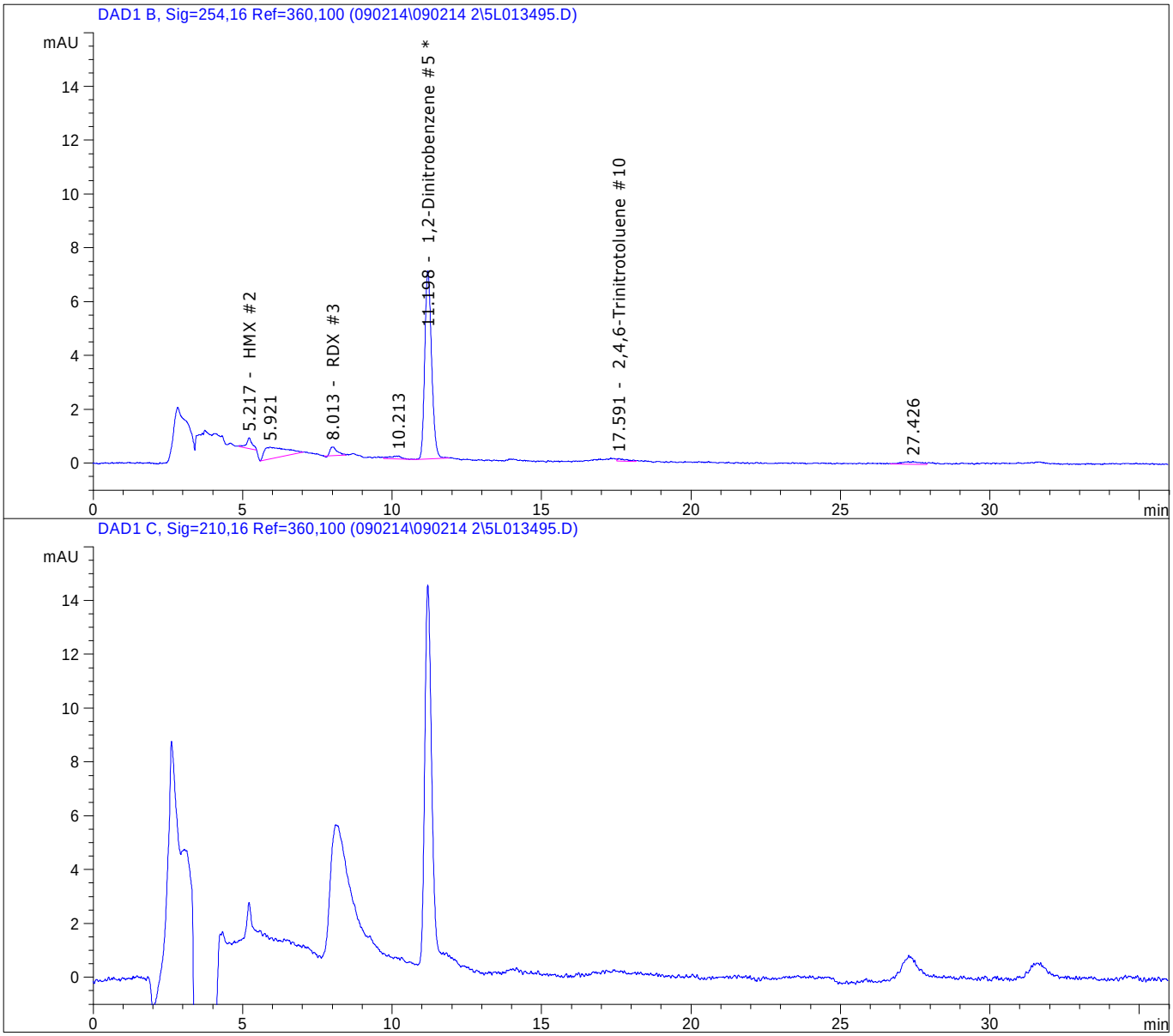

HPLC5 9/3/2014 3:46:54 PM ECL
Page 1 of 3

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013495.D
Sample Name: L14081687-04

==========

Acq. Operator : ECL Seq. Line : 18
Acq. Instrument : HPLC5 Location : Vial 18
Injection Date : 9/3/2014 2:04:21 AM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 3:44:01 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 9/3/2014 3:43:32 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.217	BBA	5.39598	4.81814	25.99858		HMX #2
8.013	BBA	5.29231	2.13586	11.30366		RDX #3
10.827		-	-	-		1,3,5-Trinitrobenzene #4
11.198	VBA	111.77916	3.63403	406.20920		1,2-Dinitrobenzene #5 *
13.228		-	-	-		1,3-Dinitrobenzene #6
14.636		-	-	-		Tetryl #7
15.042		-	-	-		Nitrobenzene #8
17.591	VB	2.31257	2.68421	6.20743		2,4,6-Trinitrotoluene #10
18.356		-	-	-		4-Amino-2,6-Dinitrotoluene #11
19.246		-	-	-		2-Amino-4,6-Dinitrotoluene #12
20.436		-	-	-		2,6-Dinitrotoluene #13
21.028		-	-	-		2,4-Dinitrotoluene #14
24.817		-	-	-		2-Nitrotoluene #15
26.526		-	-	-		4-Nitrotoluene #16
28.598		-	-	-		3-Nitrotoluene #17

Totals : 449.71887

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013495.D
Sample Name: L14081687-04

==========

Acq. Operator : ECL Seq. Line : 18
Acq. Instrument : HPLC5 Location : Vial 18
Injection Date : 9/3/2014 2:04:21 AM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 3:44:01 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========

Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
16.419		-	-	-		Nitroglycerin #9

Totals : 0.00000

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013496.D
Sample Name: L14081687-05

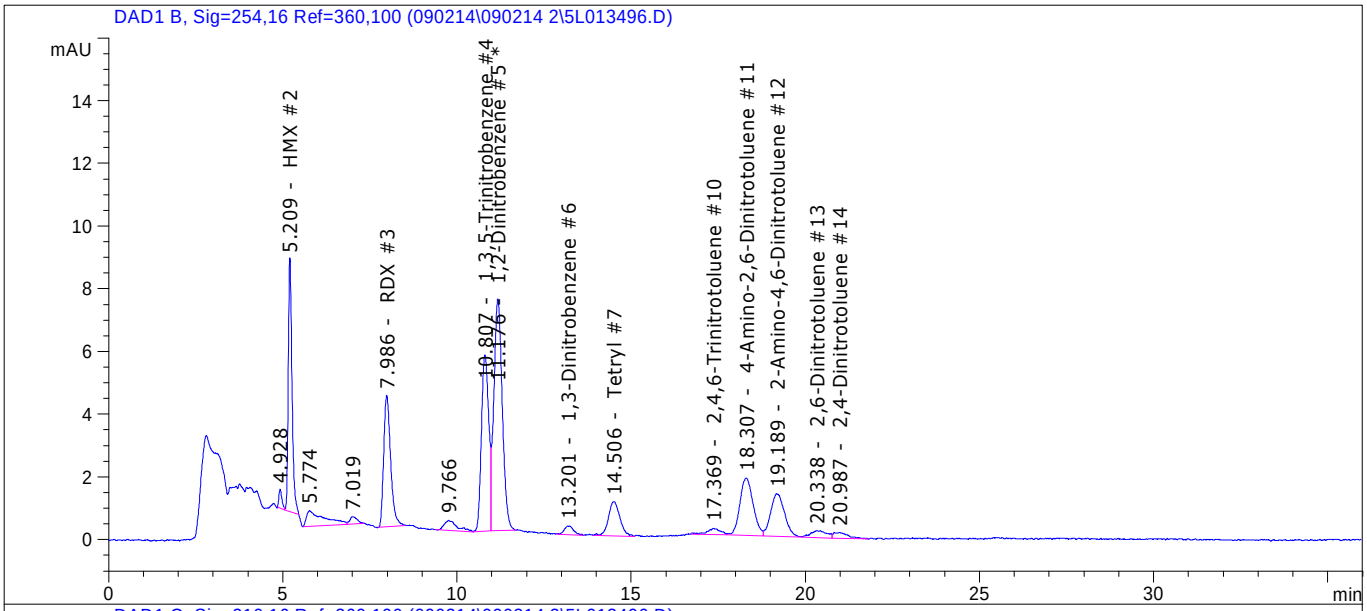
==========

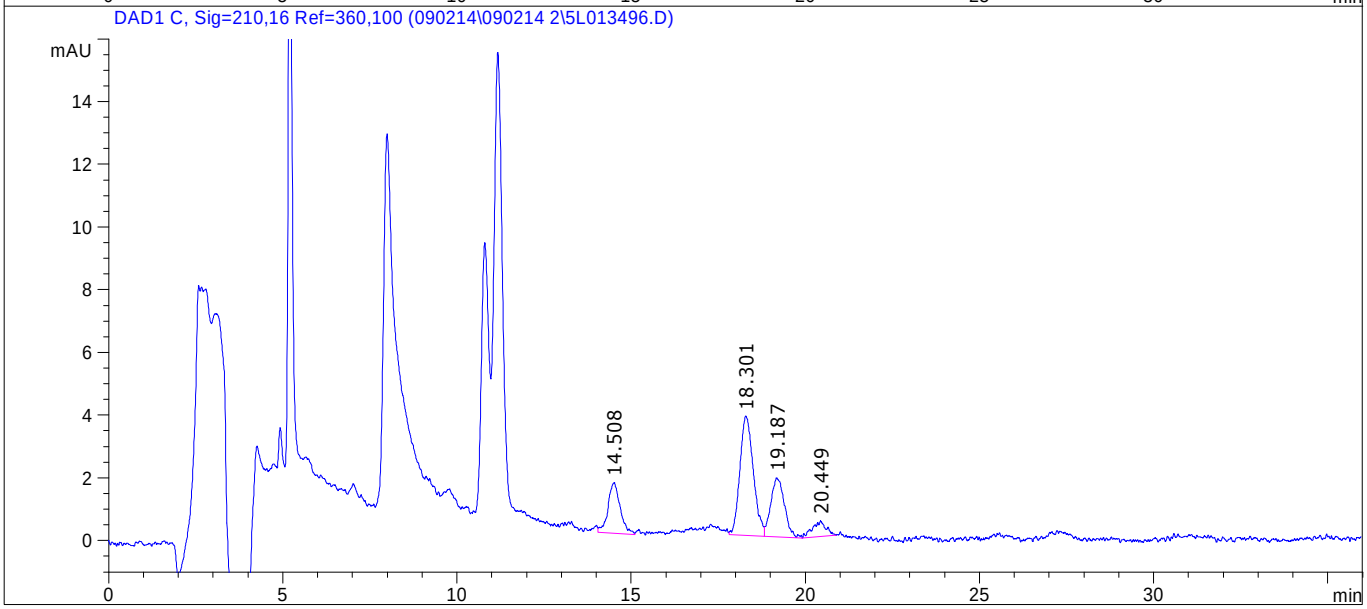
Acq. Operator	: ECL	Seq. Line :	19
Acq. Instrument	: HPLC5	Location :	Vial 19
Injection Date	: 9/3/2014 2:43:26 AM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 3:44:01 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========





Data File C:\CHEM32\1\DATA\090214\090214 2\5L013496.D
Sample Name: L14081687-05

==========

Acq. Operator : ECL Seq. Line : 19
Acq. Instrument : HPLC5 Location : Vial 19
Injection Date : 9/3/2014 2:43:26 AM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 3:44:01 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 9/3/2014 3:43:32 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.209	VBA	60.59092	5.92312	358.88727		HMX #2
7.986	BBA	57.96254	4.91812	285.06648		RDX #3
10.807	VV	82.66242	2.58290	213.50899		1,3,5-Trinitrobenzene #4
11.176	VBA	124.61005	3.63790	453.31876		1,2-Dinitrobenzene #5 *
13.201	BV	5.32595	1.93861	10.32496		1,3-Dinitrobenzene #6
14.506	VV	25.34117	4.44417	112.62042		Tetryl #7
15.042		-	-	-		Nitrobenzene #8
17.369	BV	5.44016	2.62827	14.29822		2,4,6-Trinitrotoluene #10
18.307	VV	48.54541	4.36987	212.13708		4-Amino-2,6-Dinitrotoluene #11
19.189	VV	38.06795	2.84603	108.34257		2-Amino-4,6-Dinitrotoluene #12
20.338	VV	7.27803	4.12866	30.04850		2,6-Dinitrotoluene #13
20.987	VV	5.53666	1.93834	10.73195		2,4-Dinitrotoluene #14
24.817		-	-	-		2-Nitrotoluene #15
26.526		-	-	-		4-Nitrotoluene #16
28.598		-	-	-		3-Nitrotoluene #17

Totals : 1809.28520

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013496.D
Sample Name: L14081687-05

==========

Acq. Operator : ECL Seq. Line : 19
Acq. Instrument : HPLC5 Location : Vial 19
Injection Date : 9/3/2014 2:43:26 AM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 3:44:01 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========

Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
16.419		-	-	-		Nitroglycerin #9

Totals : 0.00000

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013496.D
Sample Name: L14081687-05

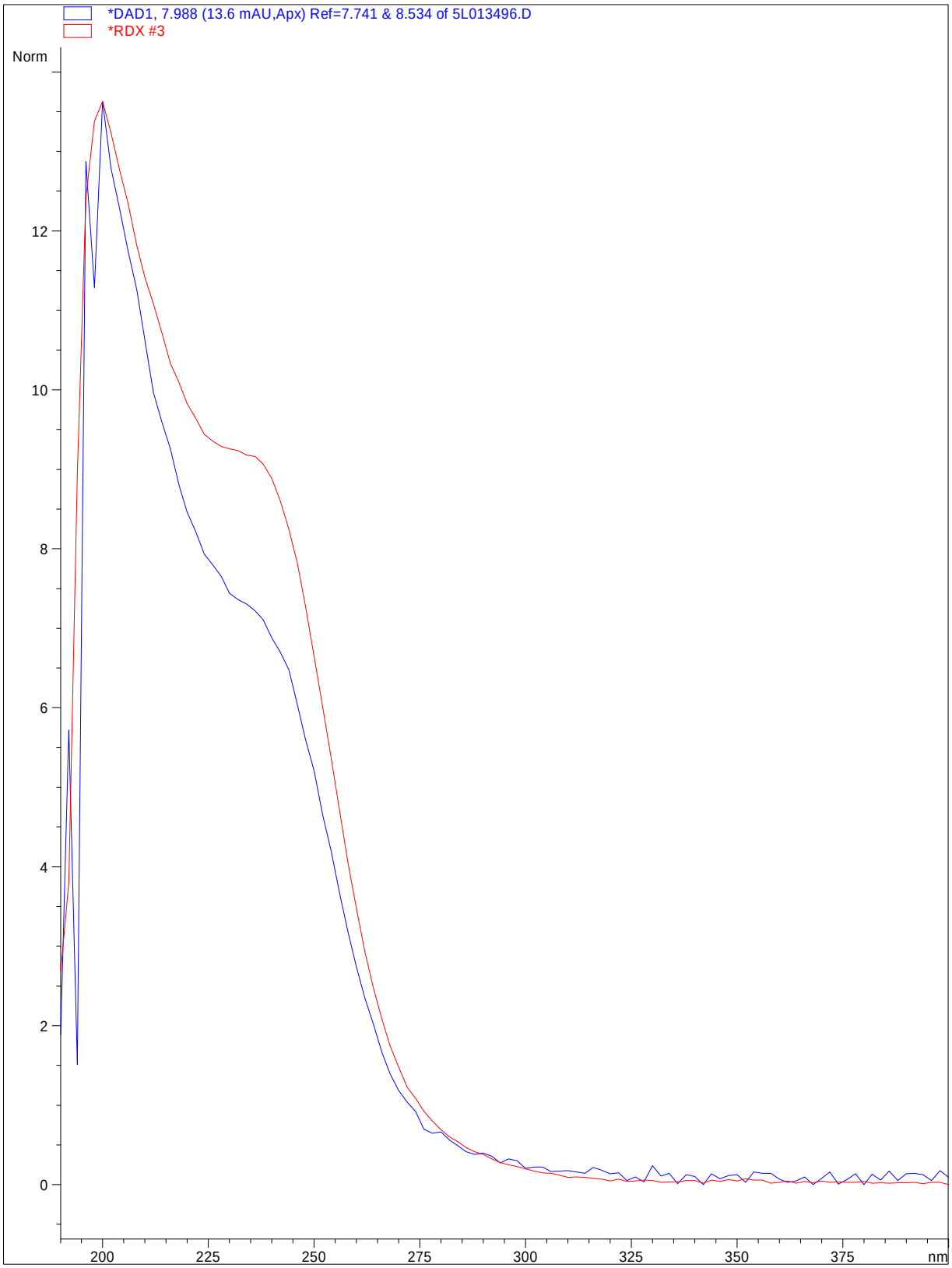
Search result of : DAD1, 7.988 (13.6 mAU,Apx) Ref=7.741 & 8.534
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 7.588 | 7.588 min

Library search results

#	Match	Entry	Time [min]	ID	ID Name
1	959.6391	2	8.065	0	RDX #3

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\090214\090214 2\5L013496.D
Sample Name: L14081687-05

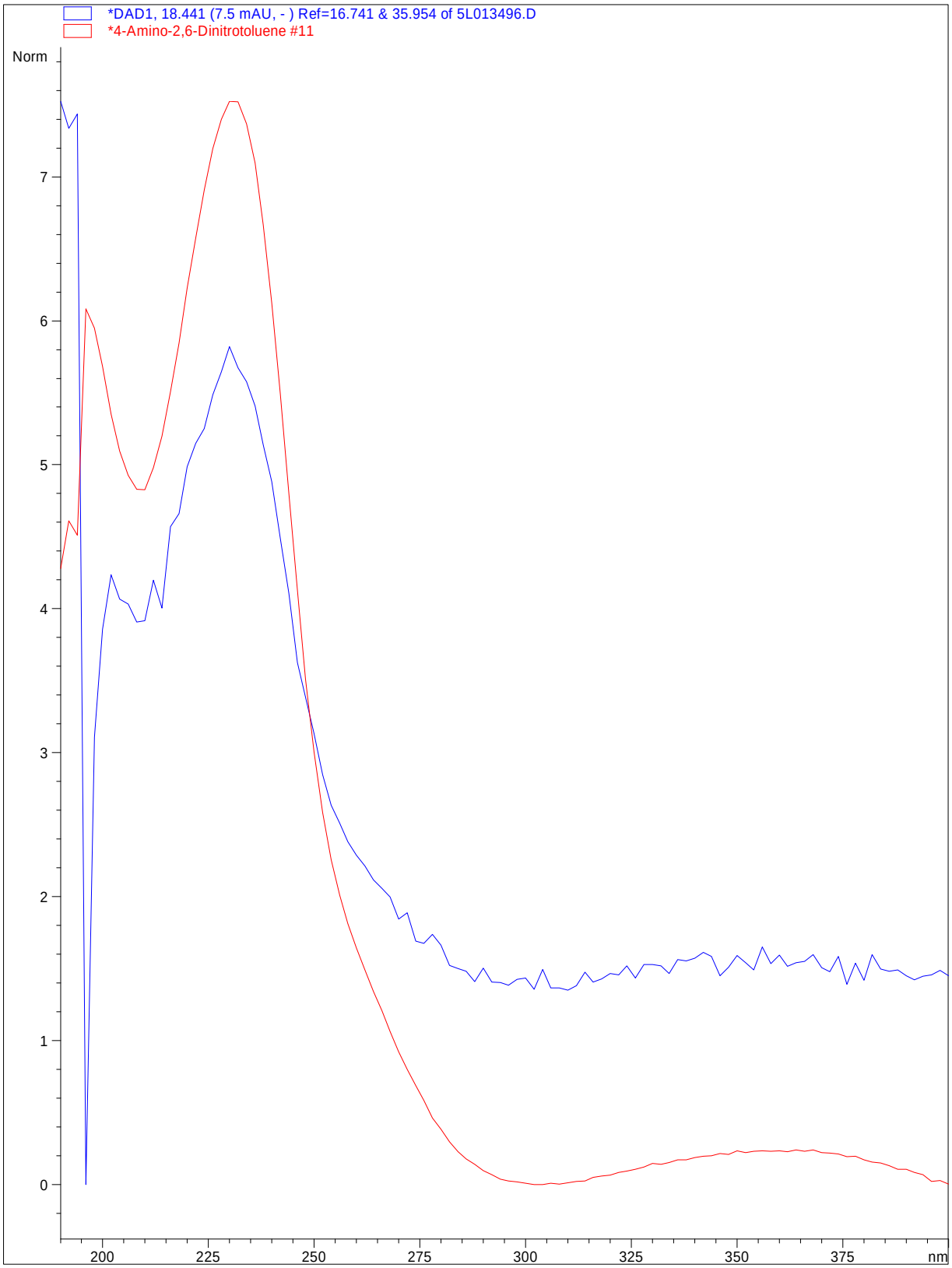
Search result of : DAD1, 18.441 (7.5 mAU, -) Ref=16.741 & 35.954
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 17.519 | 17.519 min

Library search results

#	Match	Entry	Time [min]	ID	ID Name
1	765.7644	9	18.587	0	4-Amino-2,6-Dinitrotoluene #11
2	674.4466	8	17.650	0	2,4,6-Trinitrotoluene #10

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\090214\090214 2\5L013496.D
Sample Name: L14081687-05

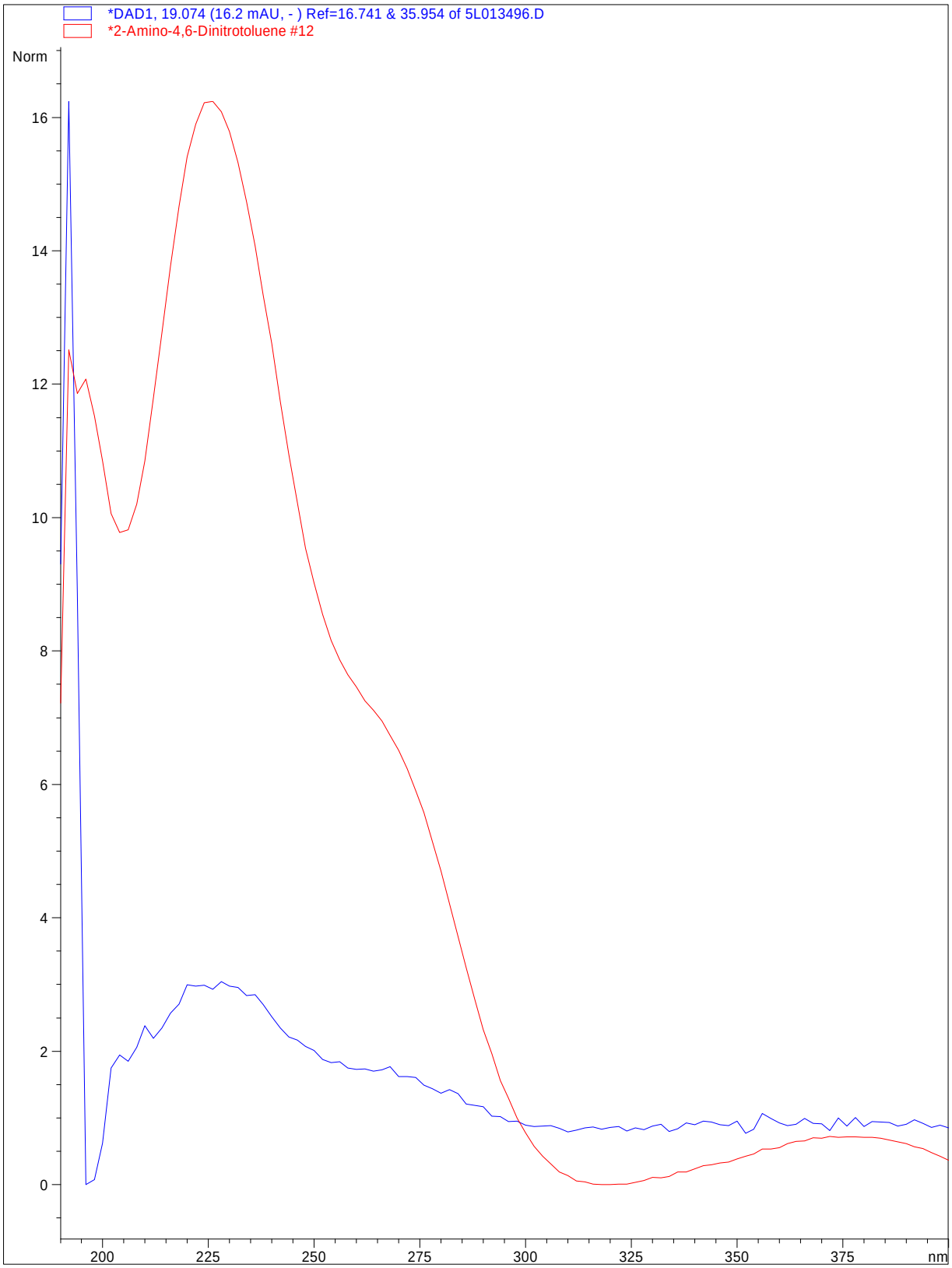
Search result of : DAD1, 19.301 (15.5 mAU, -) Ref=16.741 & 35.954
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 18.336 | 18.336 min

Library search results

#	Match	Entry	Time [min]	ID	ID Name
1	324.3726	10	19.370	0	2-Amino-4,6-Dinitrotoluene #12
2	279.8633	9	18.587	0	4-Amino-2,6-Dinitrotoluene #11

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\090214\090214 2\5L013497.D
Sample Name: L14081687-06

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Acq. Operator	: ECL	Seq. Line :	20
Acq. Instrument	: HPLC5	Location :	Vial 20
Injection Date	: 9/3/2014 3:22:31 AM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 3:44:01 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

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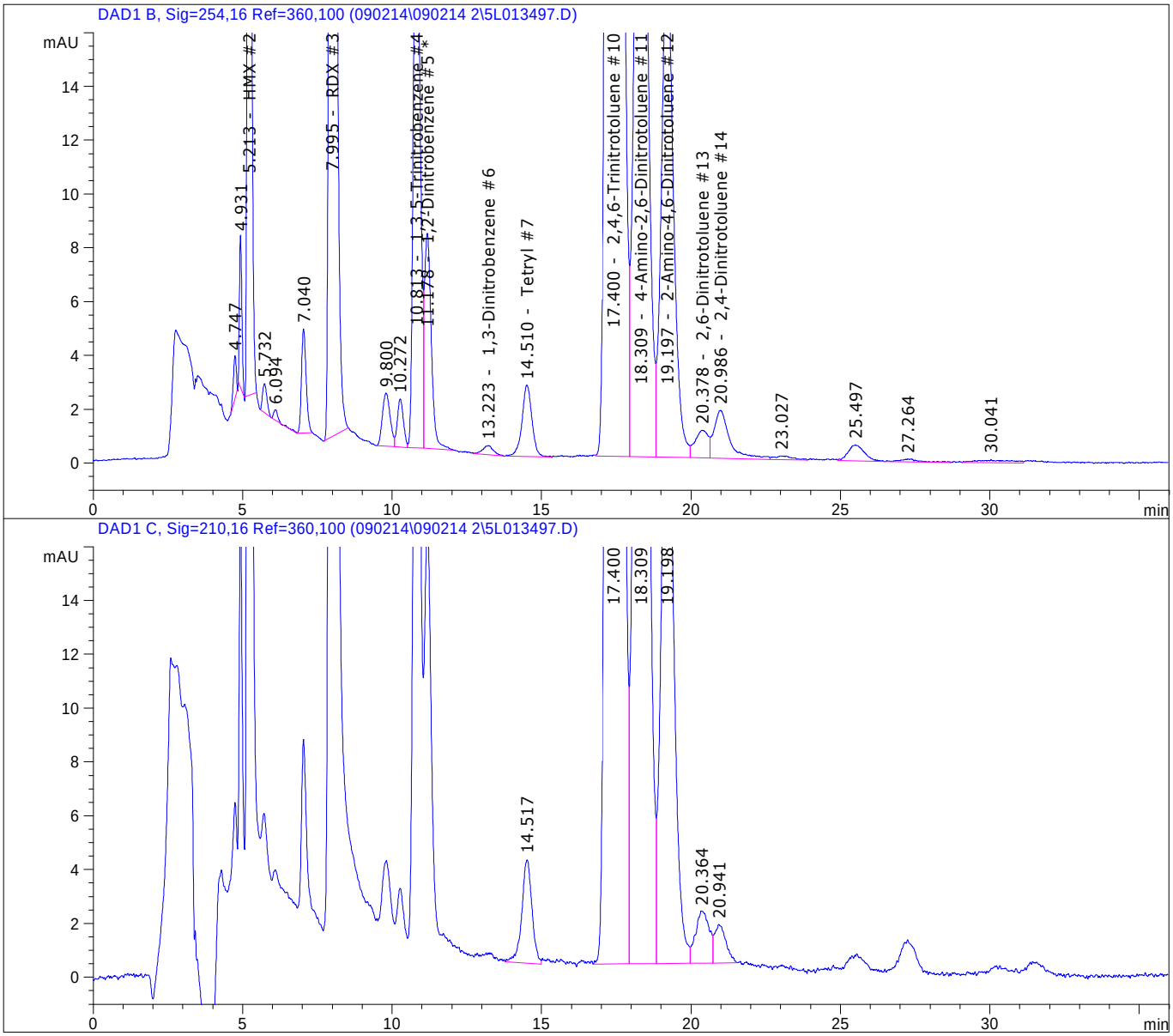

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013497.D
Sample Name: L14081687-06

==========

Acq. Operator : ECL Seq. Line : 20
Acq. Instrument : HPLC5 Location : Vial 20
Injection Date : 9/3/2014 3:22:31 AM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 3:44:01 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 9/3/2014 3:43:32 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.213	VBA	587.57147	6.02001	3537.18344		HMX #2
7.995	BBA	1284.13013	5.18506	6658.29004		RDX #3
10.813	VV	364.10184	2.55210	929.22564		1,3,5-Trinitrobenzene #4
11.178	VBA	126.08217	3.63829	458.72376		1,2-Dinitrobenzene #5 *
13.223	BV	8.39002	1.84981	15.51993		1,3-Dinitrobenzene #6
14.510	VV	62.07198	4.44163	275.70046		Tetryl #7
15.042		-	-	-		Nitrobenzene #8
17.400	BV	5714.39404	2.58695	1.47829e4		2,4,6-Trinitrotoluene #10
18.309	VV	1071.62048	4.38587	4699.99190		4-Amino-2,6-Dinitrotoluene #11
19.197	VV	524.31708	2.85323	1495.99678		2-Amino-4,6-Dinitrotoluene #12
20.378	VV	31.99146	4.35489	139.31915		2,6-Dinitrotoluene #13
20.986	VV	65.37548	1.82644	119.40427		2,4-Dinitrotoluene #14
24.817		-	-	-		2-Nitrotoluene #15
26.526		-	-	-		4-Nitrotoluene #16
28.598		-	-	-		3-Nitrotoluene #17

Totals : 3.31122e4

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013497.D
Sample Name: L14081687-06

==========

Acq. Operator : ECL Seq. Line : 20
Acq. Instrument : HPLC5 Location : Vial 20
Injection Date : 9/3/2014 3:22:31 AM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 3:44:01 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========

Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
16.419		-	-	-		Nitroglycerin #9

Totals : 0.00000

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013497.D
Sample Name: L14081687-06

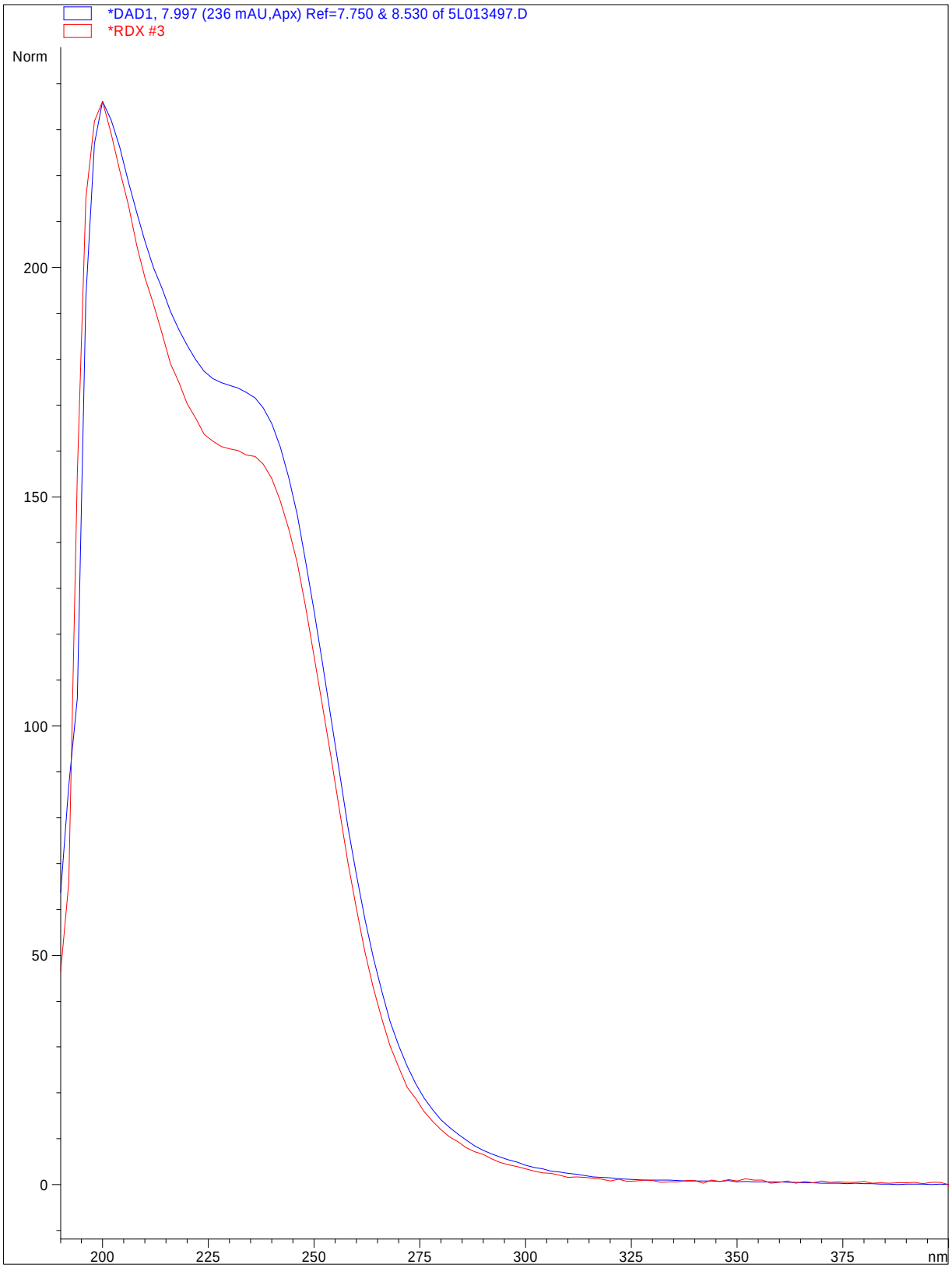
Search result of : DAD1, 7.997 (236 mAU,Apx) Ref=7.750 & 8.530
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 7.597 | 7.597 min

Library search results

#	Match	Entry	Time [min]	ID	ID Name
1	991.4976	2	8.065	0	RDX #3

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\090214\090214 2\5L013497.D
Sample Name: L14081687-06

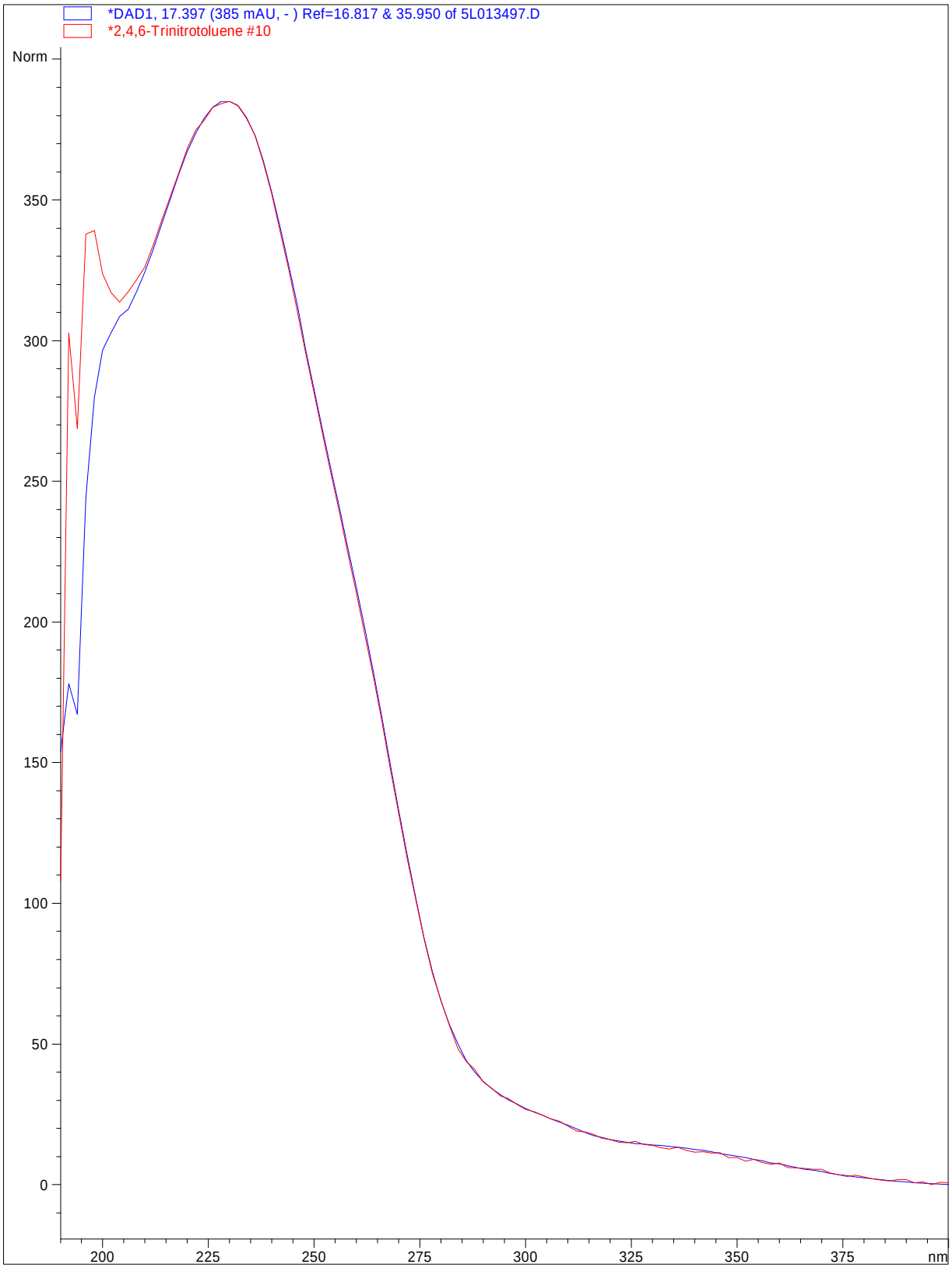
Search result of : DAD1, 17.397 (385 mAU, -) Ref=16.817 & 35.950
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 16.527 | 16.527 min

Library search results

#	Match	Entry	Time [min]	ID	ID Name
1	982.5556	8	17.650	0	2,4,6-Trinitrotoluene #10

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\090214\090214 2\5L013497.D
Sample Name: L14081687-06

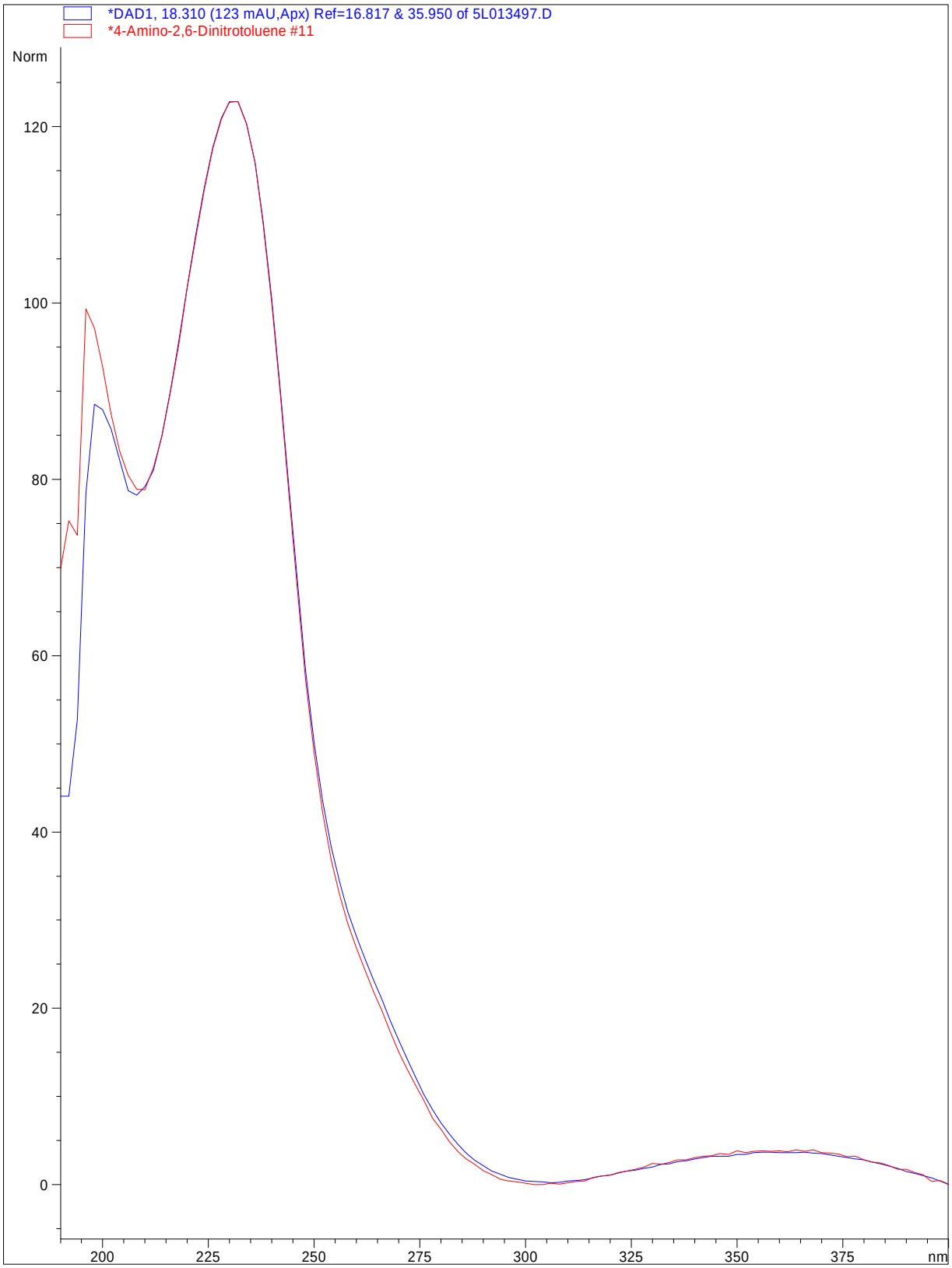
Search result of : DAD1, 18.310 (123 mAU,Apx) Ref=16.817 & 35.950
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 17.395 | 17.395 min

Library search results

#	Match	Entry	Time [min]	ID	ID Name
1	986.0811	9	18.587	0	4-Amino-2,6-Dinitrotoluene #11
2	924.8740	8	17.650	0	2,4,6-Trinitrotoluene #10
3	910.1507	10	19.189	0	2-Amino-4,6-Dinitrotoluene #12

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\090214\090214 2\5L013497.D
Sample Name: L14081687-06

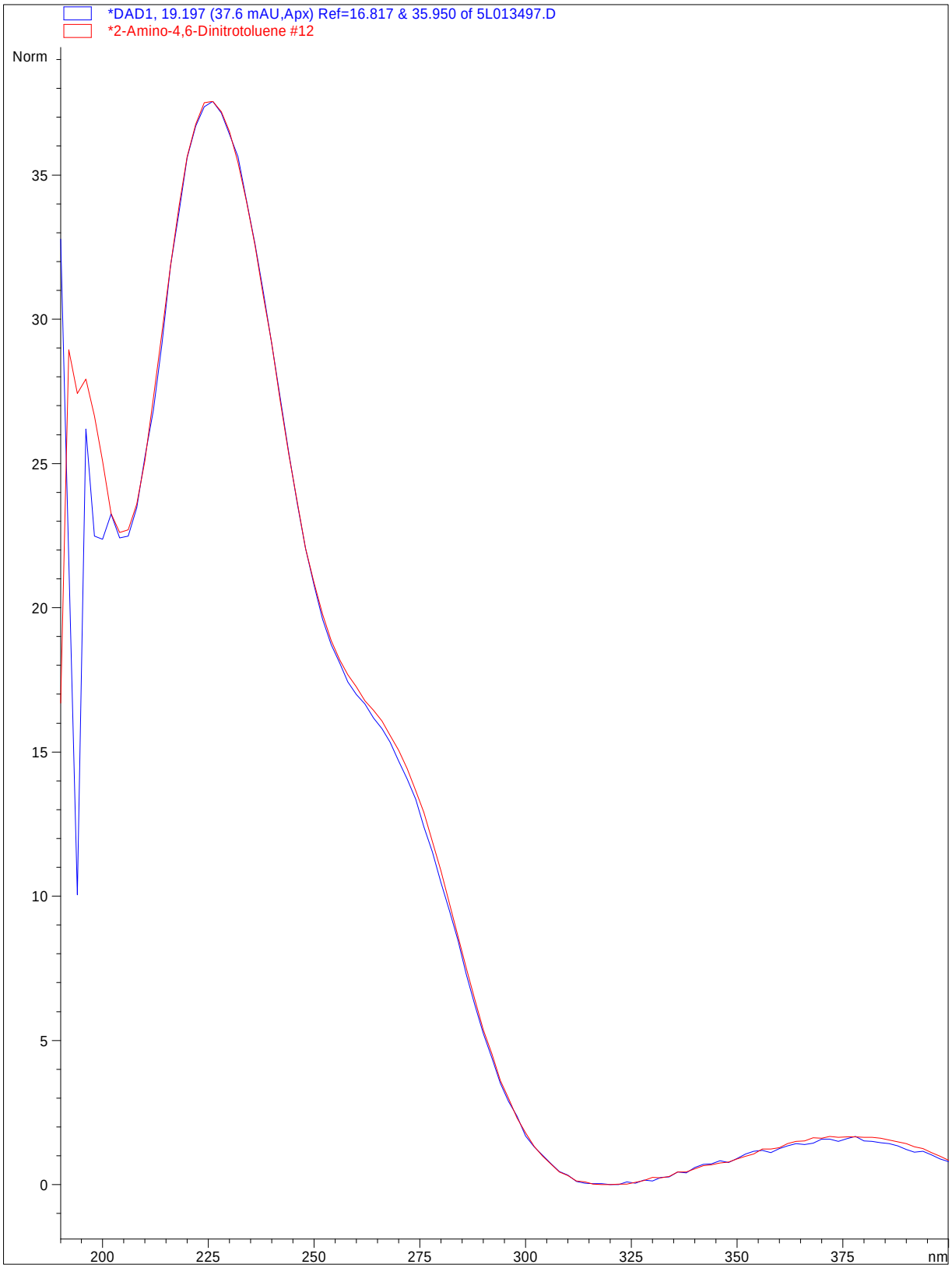
Search result of : DAD1, 19.197 (37.6 mAU,Apx) Ref=16.817 & 35.950
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 18.237 | 18.237 min

Library search results

#	Match	Entry	Time [min]	ID	ID Name
1	962.0710	10	19.189	0	2-Amino-4,6-Dinitrotoluene #12
2	897.1544	9	18.587	0	4-Amino-2,6-Dinitrotoluene #11

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\090414\090414 2\5L013521.D
Sample Name: L14081687-06 10x

==========

Acq. Operator	: ECL	Seq. Line :	5
Acq. Instrument	: HPLC5	Location :	Vial 6
Injection Date	: 9/4/2014 2:02:13 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\090414\090414 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/5/2014 2:24:48 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,10 WATER

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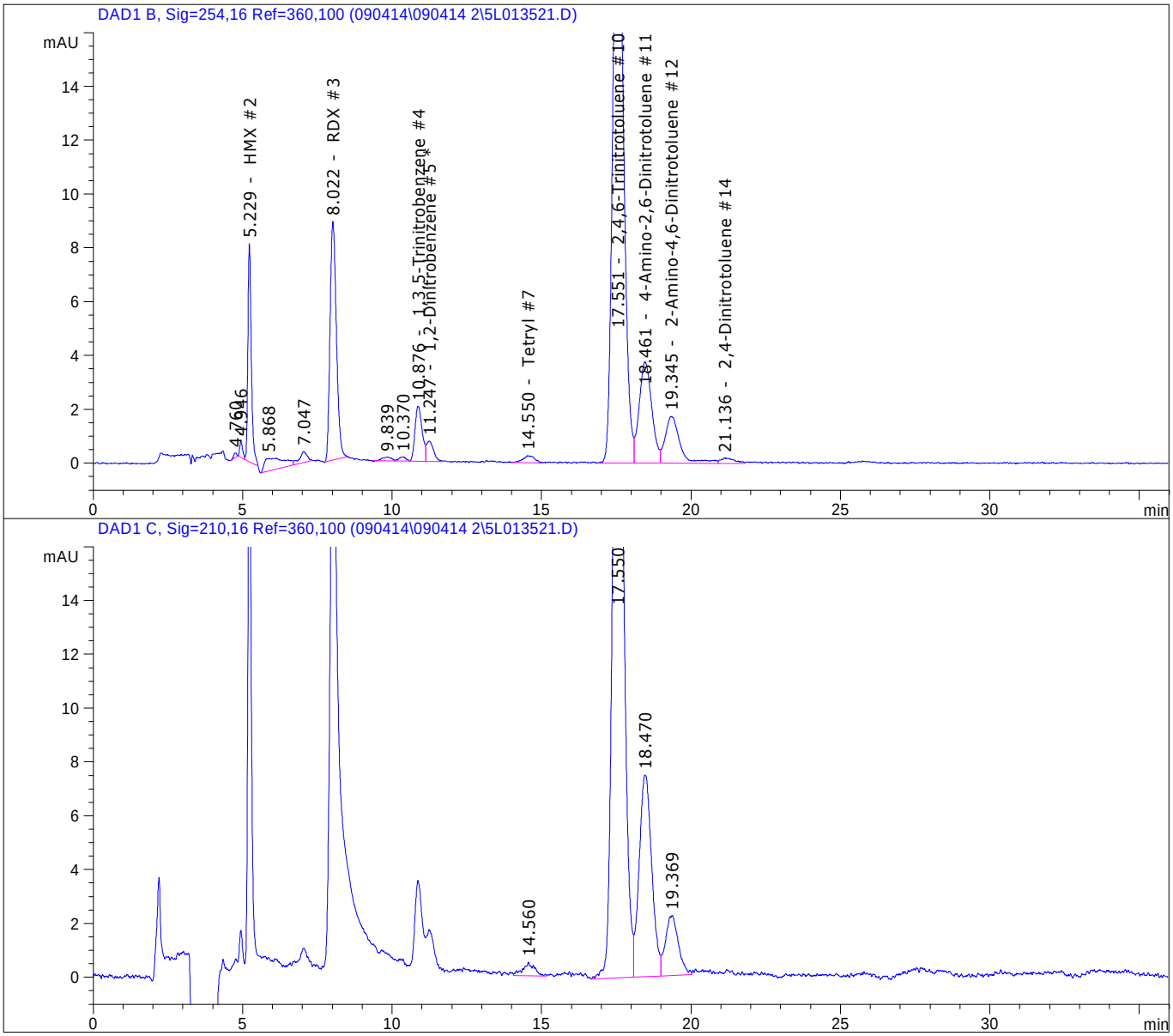

HPLC5 9/5/2014 2:25:39 PM ECL Page 1 of 3

Data File C:\CHEM32\1\DATA\090414\090414 2\5L013521.D
Sample Name: L14081687-06 10x

==========

Acq. Operator : ECL Seq. Line : 5
Acq. Instrument : HPLC5 Location : Vial 6
Injection Date : 9/4/2014 2:02:13 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090414\090414 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/5/2014 2:24:48 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,10 WATER

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 9/5/2014 2:22:47 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.229	VBA	64.48464	5.92964	382.37086		HMX #2
8.022	BBA	131.17299	5.07415	665.59080		RDX #3
10.876	VV	34.42985	2.63872	90.85077		1,3,5-Trinitrobenzene #4
11.247	VBA	12.90174	3.34632	43.17339		1,2-Dinitrobenzene #5 *
13.323		-	-	-		1,3-Dinitrobenzene #6
14.550	VV	7.46993	4.45445	33.27443		Tetryl #7
15.168		-	-	-		Nitrobenzene #8
17.551	VV	583.95459	2.58730	1510.86418		2,4,6-Trinitrotoluene #10
18.461	VV	110.79192	4.37929	485.18970		4-Amino-2,6-Dinitrotoluene #11
19.345	VV	60.11930	2.84888	171.27255		2-Amino-4,6-Dinitrotoluene #12
20.631		-	-	-		2,6-Dinitrotoluene #13
21.136	VV	6.35033	1.92268	12.20964		2,4-Dinitrotoluene #14
25.083		-	-	-		2-Nitrotoluene #15
26.822		-	-	-		4-Nitrotoluene #16
28.934		-	-	-		3-Nitrotoluene #17

Totals : 3394.79632

Data File C:\CHEM32\1\DATA\090414\090414 2\5L013521.D
Sample Name: L14081687-06 10x

==========

Acq. Operator : ECL Seq. Line : 5
Acq. Instrument : HPLC5 Location : Vial 6
Injection Date : 9/4/2014 2:02:13 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090414\090414 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/5/2014 2:24:48 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,10 WATER

==========

Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
16.566		-	-	-		Nitroglycerin #9

Totals : 0.00000

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File C:\CHEM32\1\DATA\090414\090414 2\5L013521.D
Sample Name: L14081687-06 10x

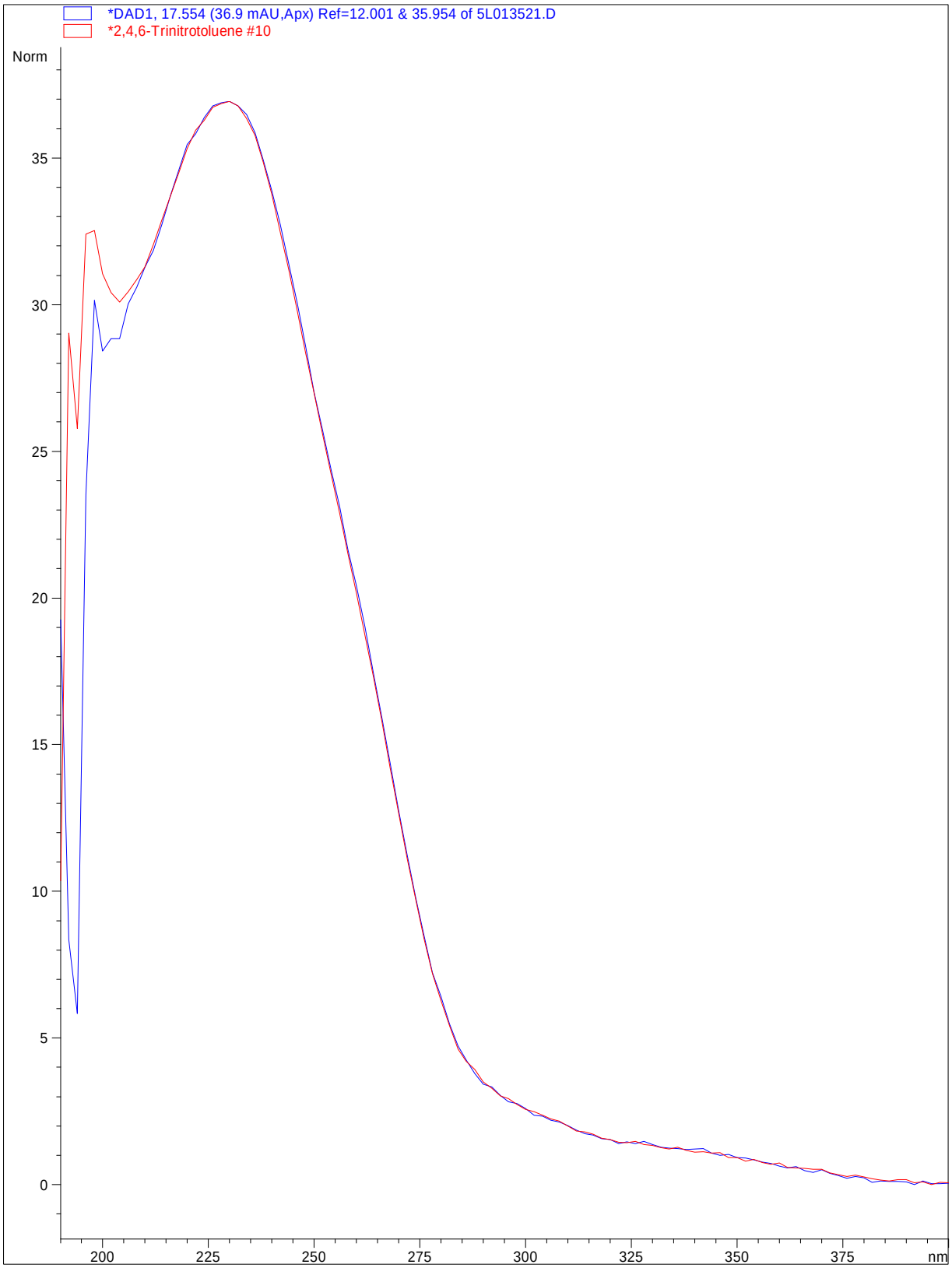
Search result of : DAD1, 17.554 (36.9 mAU,Apx) Ref=12.001 & 35.954
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 16.676 | 16.676 min

Library search results

#	Match	Entry	Time [min]	ID	ID Name
1	952.7792	8	17.650	0	2,4,6-Trinitrotoluene #10

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\090414\090414 2\5L013521.D
Sample Name: L14081687-06 10x

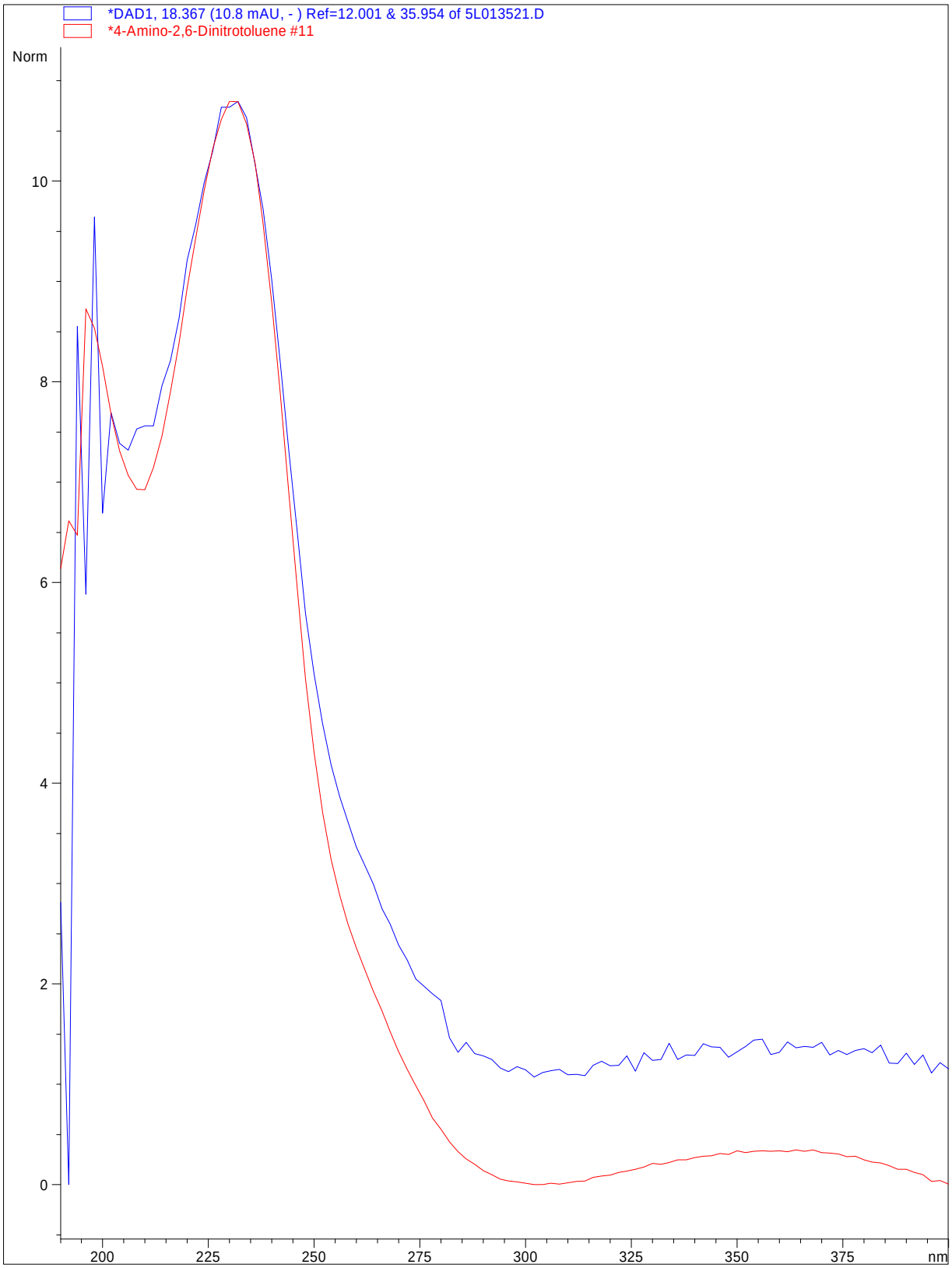
Search result of : DAD1, 18.367 (10.8 mAU, -) Ref=12.001 & 35.954
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 17.449 | 17.449 min

Library search results

#	Match	Entry	Time [min]	ID	ID Name
1	930.0594	9	18.587	0	4-Amino-2,6-Dinitrotoluene #11
2	881.6665	8	17.650	0	2,4,6-Trinitrotoluene #10
3	863.7658	10	19.189	0	2-Amino-4,6-Dinitrotoluene #12

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\090414\090414 2\5L013521.D
Sample Name: L14081687-06 10x

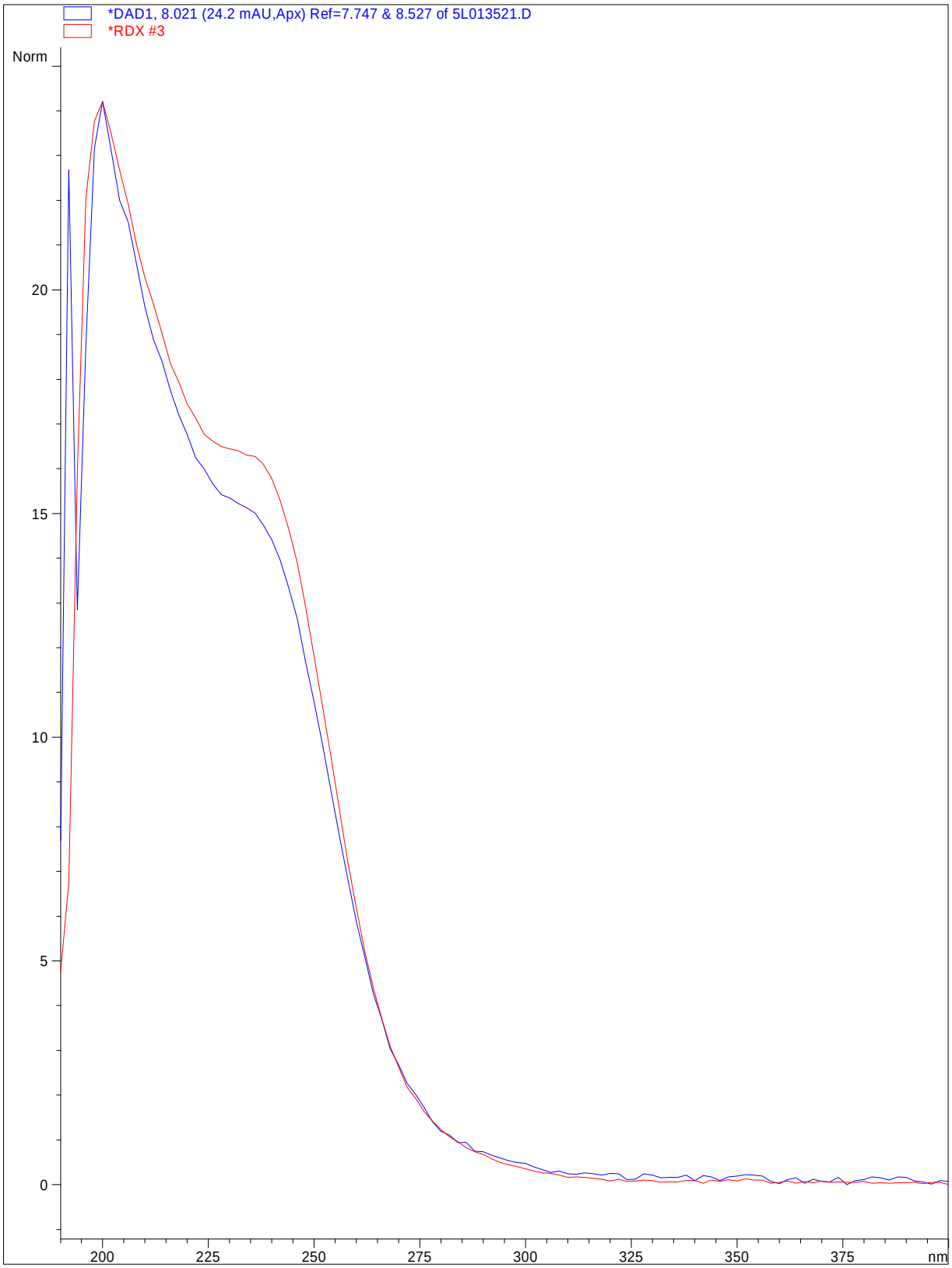
Search result of : DAD1, 8.021 (24.2 mAU,Apx) Ref=7.747 & 8.527
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 7.62 | 7.62 min

Library search results

#	Match	Entry	Time [min]	ID	ID Name
1	953.6600	2	8.065	0	RDX #3

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\090214\090214 2\5L013499.D
Sample Name: L14081687-07

==========

Acq. Operator	: ECL	Seq. Line :	22
Acq. Instrument	: HPLC5	Location :	Vial 21
Injection Date	: 9/3/2014 4:40:41 AM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 3:44:01 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

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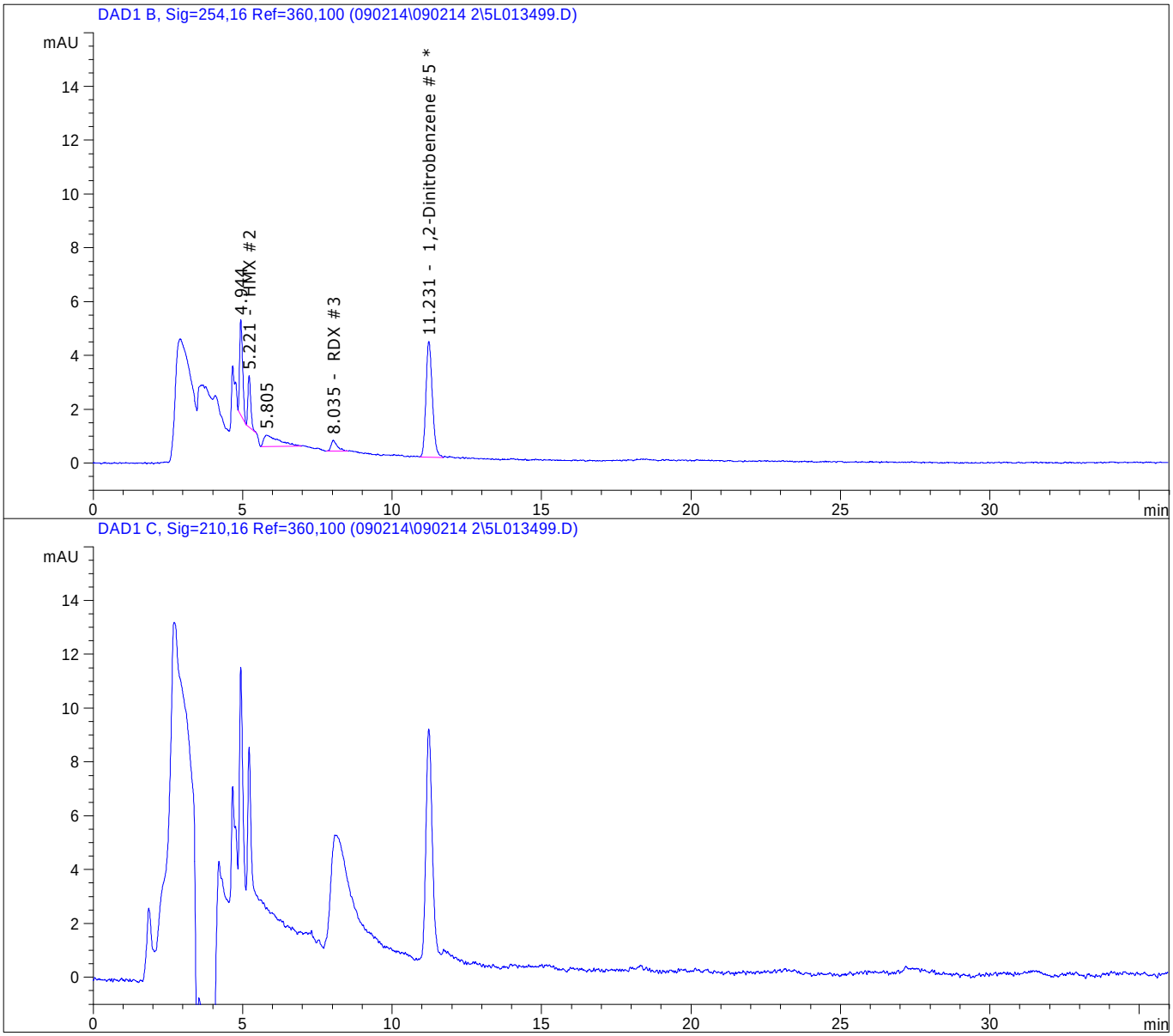

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013499.D
Sample Name: L14081687-07

==========

Acq. Operator : ECL Seq. Line : 22
Acq. Instrument : HPLC5 Location : Vial 21
Injection Date : 9/3/2014 4:40:41 AM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 3:44:01 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 9/3/2014 3:43:32 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.221	VBA	12.73991	5.51738	70.29090		HMX #2
8.035	VBA	6.00887	2.50098	15.02809		RDX #3
10.827		-	-	-		1,3,5-Trinitrobenzene #4
11.231	BV	64.04871	3.60606	230.96332		1,2-Dinitrobenzene #5 *
13.228		-	-	-		1,3-Dinitrobenzene #6
14.636		-	-	-		Tetryl #7
15.042		-	-	-		Nitrobenzene #8
17.433		-	-	-		2,4,6-Trinitrotoluene #10
18.356		-	-	-		4-Amino-2,6-Dinitrotoluene #11
19.246		-	-	-		2-Amino-4,6-Dinitrotoluene #12
20.436		-	-	-		2,6-Dinitrotoluene #13
21.028		-	-	-		2,4-Dinitrotoluene #14
24.817		-	-	-		2-Nitrotoluene #15
26.526		-	-	-		4-Nitrotoluene #16
28.598		-	-	-		3-Nitrotoluene #17

Totals : 316.28230

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013499.D
Sample Name: L14081687-07

==========

Acq. Operator : ECL Seq. Line : 22
Acq. Instrument : HPLC5 Location : Vial 21
Injection Date : 9/3/2014 4:40:41 AM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 3:44:01 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

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Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
16.419	-	-		-		Nitroglycerin #9

Totals : 0.00000

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

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*** End of Report ***

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013500.D
Sample Name: L14081687-08

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Acq. Operator	: ECL	Seq. Line :	23
Acq. Instrument	: HPLC5	Location :	Vial 22
Injection Date	: 9/3/2014 5:19:46 AM	Inj :	1
		Inj Volume :	100 µl
Acq. Method	: C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M		
Last changed	: 9/2/2014 2:17:53 PM by ECL		
Analysis Method	: C:\CHEM32\1\METHODS\8330PLDA.M		
Last changed	: 9/3/2014 3:56:31 PM by ECL		
Method Info	: OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013		
Sample Info	: 1,1 WATER		

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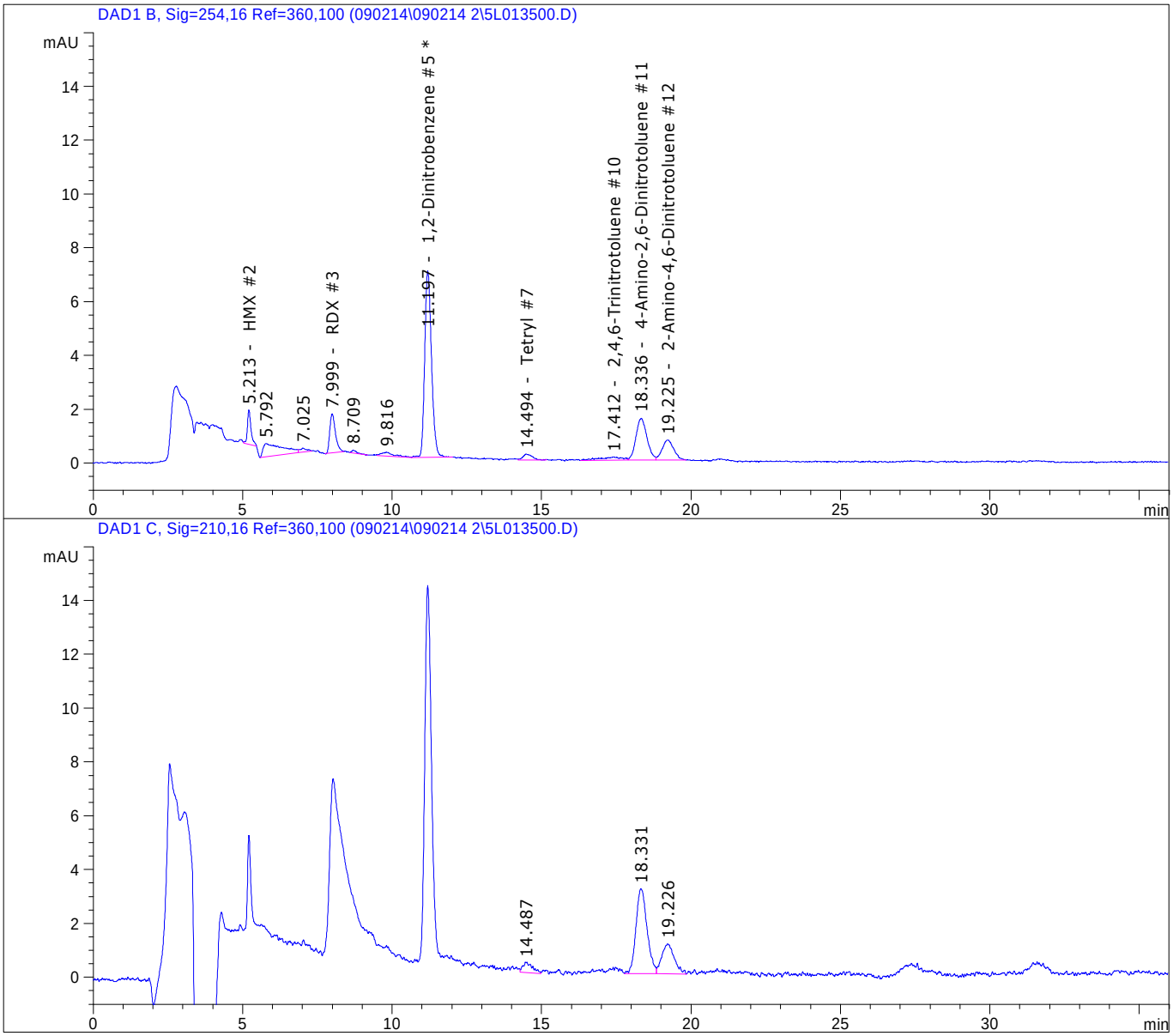

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013500.D
Sample Name: L14081687-08

==========

Acq. Operator : ECL Seq. Line : 23
Acq. Instrument : HPLC5 Location : Vial 22
Injection Date : 9/3/2014 5:19:46 AM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 3:56:31 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 9/3/2014 3:43:32 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.213	VBA	10.54411	5.41038	57.04771		HMX #2
7.999	BBA	18.87869	4.33935	81.92127		RDX #3
10.827		-	-	-		1,3,5-Trinitrobenzene #4
11.197	VB	109.15075	3.63313	396.55880		1,2-Dinitrobenzene #5 *
13.228		-	-	-		1,3-Dinitrobenzene #6
14.494	VB	5.04982	4.46144	22.52945		Tetryl #7
15.042		-	-	-		Nitrobenzene #8
17.412	VV	6.50951	2.62148	17.06454		2,4,6-Trinitrotoluene #10
18.336	VV	39.98603	4.36628	174.59024		4-Amino-2,6-Dinitrotoluene #11
19.225	VBA	20.18878	2.83916	57.31912		2-Amino-4,6-Dinitrotoluene #12
20.436		-	-	-		2,6-Dinitrotoluene #13
21.028		-	-	-		2,4-Dinitrotoluene #14
24.817		-	-	-		2-Nitrotoluene #15
26.526		-	-	-		4-Nitrotoluene #16
28.598		-	-	-		3-Nitrotoluene #17

Totals : 807.03113

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013500.D
Sample Name: L14081687-08

==========

Acq. Operator : ECL Seq. Line : 23
Acq. Instrument : HPLC5 Location : Vial 22
Injection Date : 9/3/2014 5:19:46 AM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 3:56:31 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========

Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
16.419		-	-	-		Nitroglycerin #9

Totals : 0.00000

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

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*** End of Report ***

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013500.D
Sample Name: L14081687-08

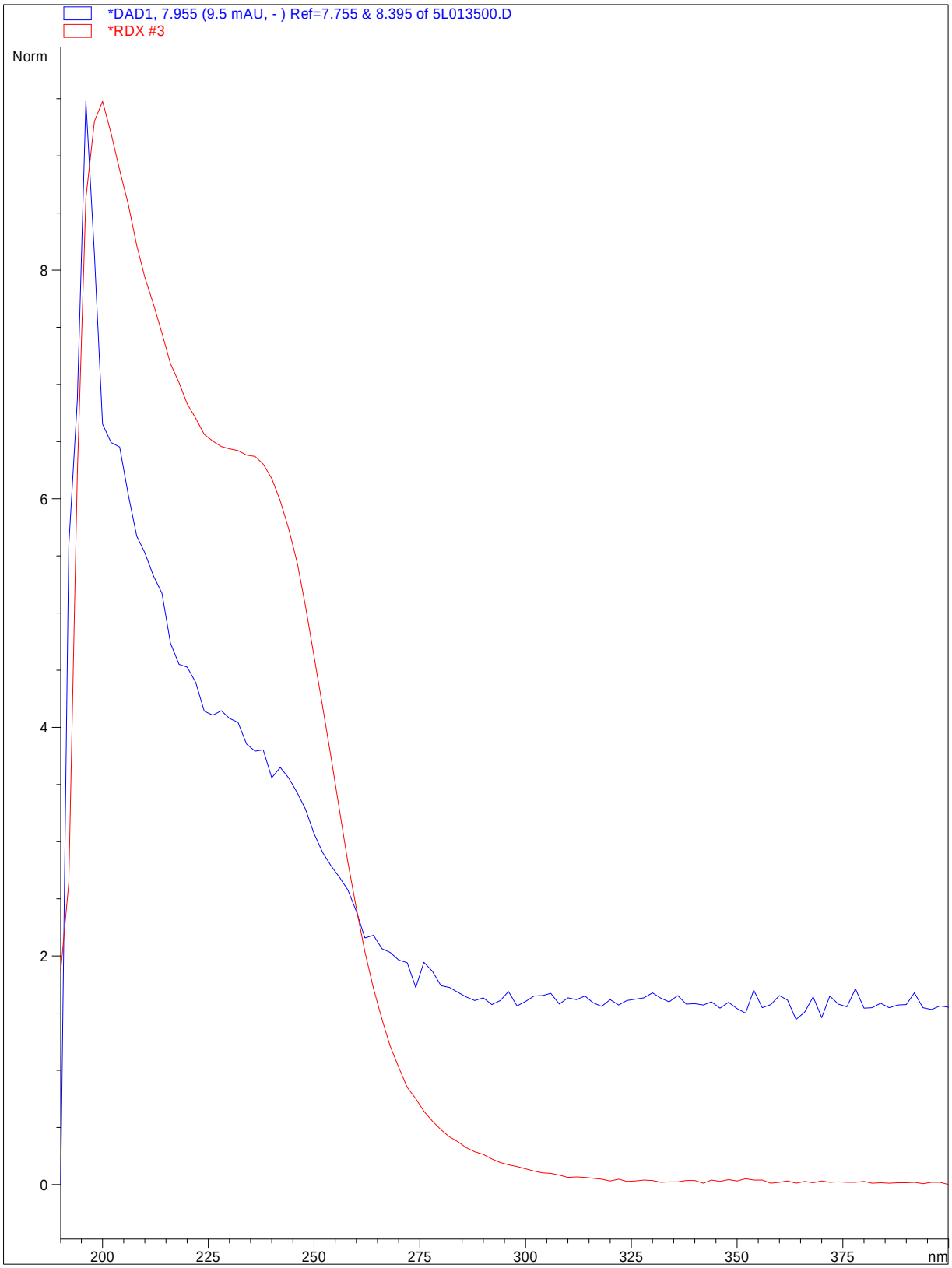
Search result of : DAD1, 7.955 (9.5 mAU, -) Ref=7.755 & 8.395
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 7.558 | 7.558 min

Library search results

#	Match	Entry	Time [min]	ID	ID Name
1	842.3859	2	8.065	0	RDX #3

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\090214\090214 2\5L013500.D
Sample Name: L14081687-08

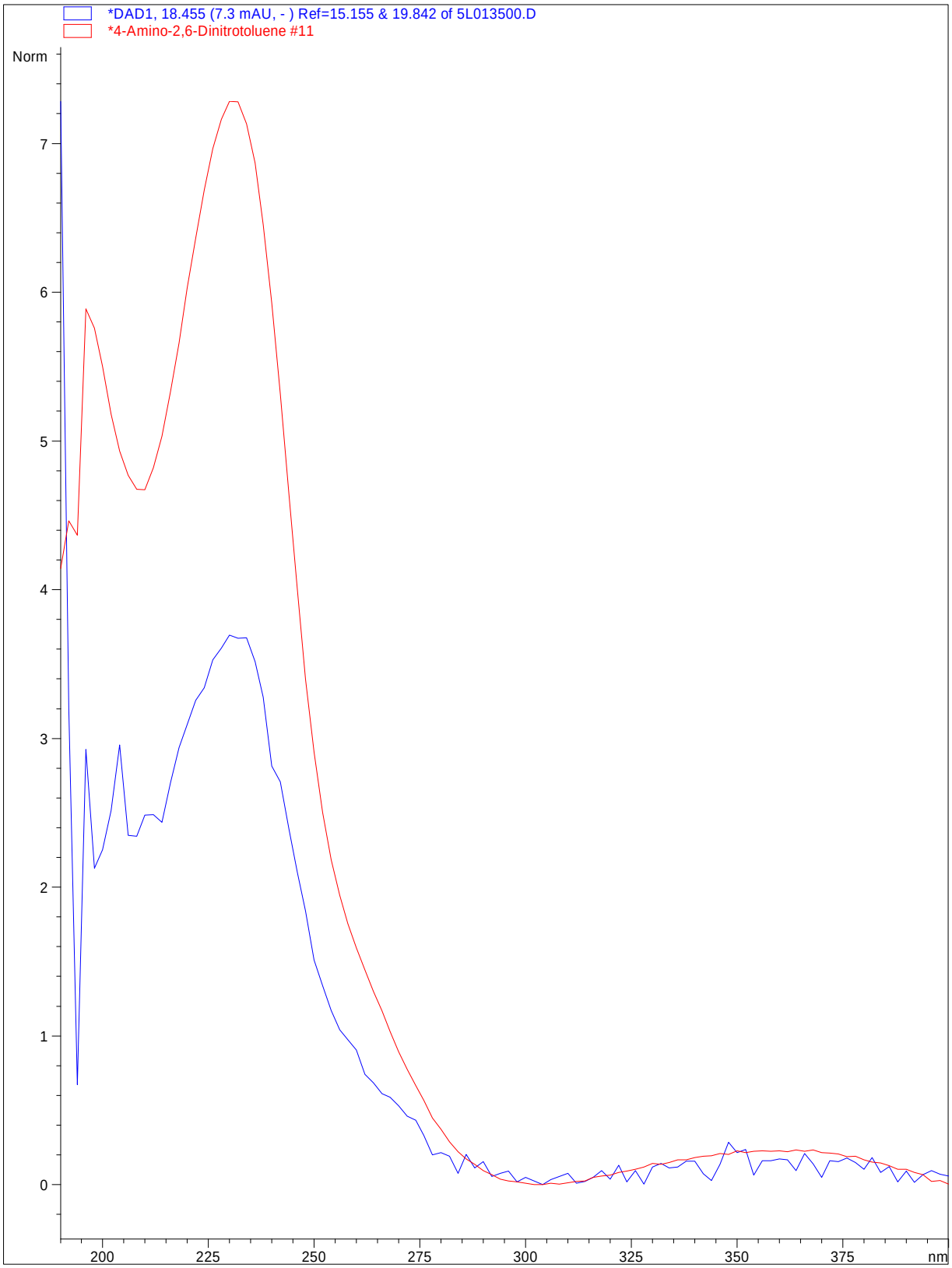
Search result of : DAD1, 18.455 (7.3 mAU, -) Ref=15.155 & 19.842
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 17.533 | 17.533 min

Library search results

#	Match	Entry	Time [min]	ID	ID Name
1	841.5338	9	18.587	0	4-Amino-2,6-Dinitrotoluene #11
2	745.1184	10	19.189	0	2-Amino-4,6-Dinitrotoluene #12
3	717.7863	8	17.650	0	2,4,6-Trinitrotoluene #10

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\090214\090214 2\5L013500.D
Sample Name: L14081687-08

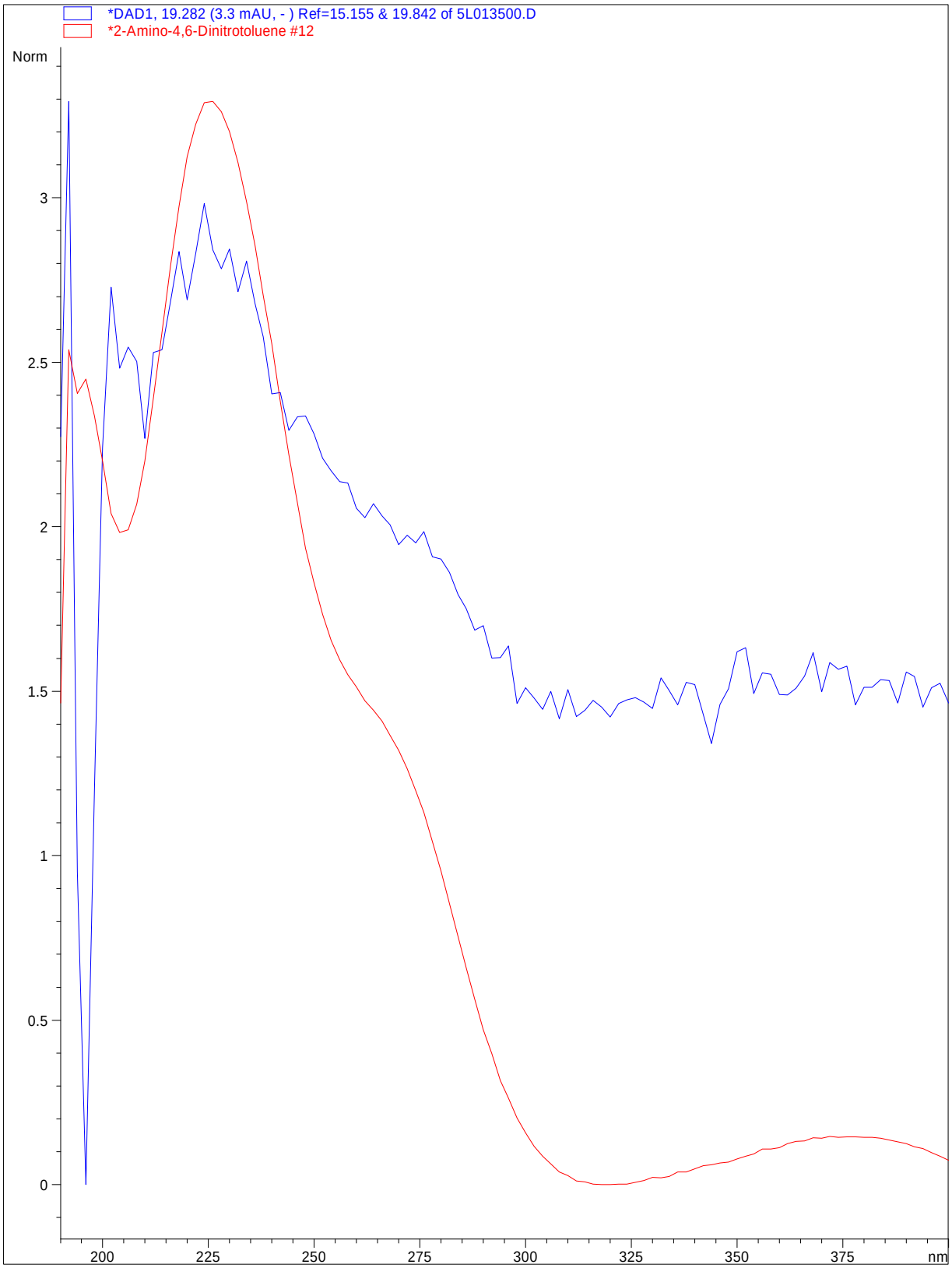
Search result of : DAD1, 19.282 (3.3 mAU, -) Ref=15.155 & 19.842
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 18.318 | 18.318 min

Library search results

#	Match	Entry	Time [min]	ID	ID Name
1	628.4981	10	19.189	0	2-Amino-4,6-Dinitrotoluene #12
2	545.2858	9	18.587	0	4-Amino-2,6-Dinitrotoluene #11

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\090514\090514\5L013543.D
Sample Name: L14081687-09

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Acq. Operator	: ECL	Seq. Line :	2
Acq. Instrument	: HPLC5	Location :	Vial 3
Injection Date	: 9/5/2014 5:47:31 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\090514\090514\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/5/2014 3:10:53 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

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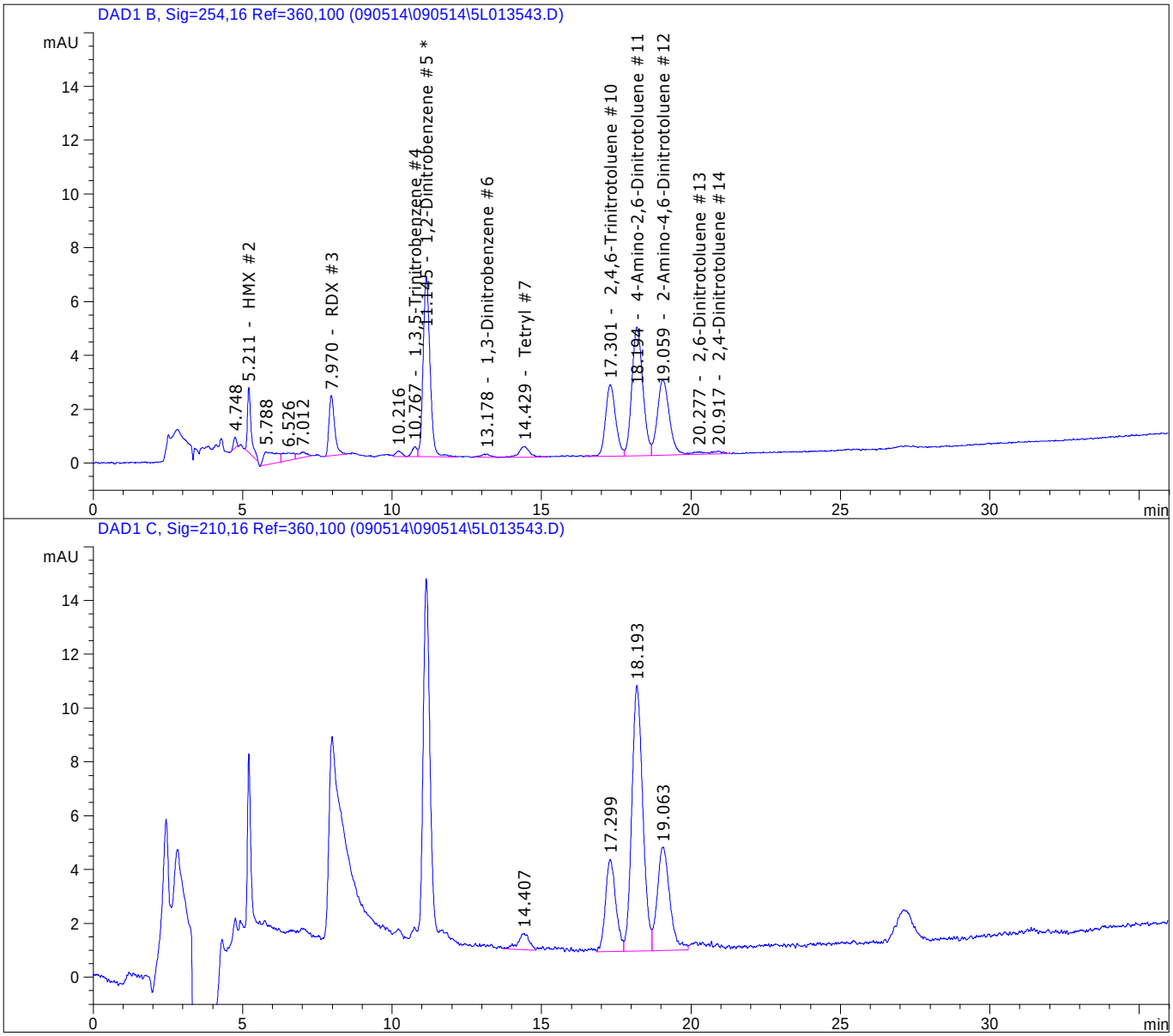

HPLC5 9/8/2014 8:47:38 AM ECL Page 1 of 3

Data File C:\CHEM32\1\DATA\090514\090514\5L013543.D
Sample Name: L14081687-09

==========

Acq. Operator : ECL Seq. Line : 2
Acq. Instrument : HPLC5 Location : Vial 3
Injection Date : 9/5/2014 5:47:31 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090514\090514\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/5/2014 3:10:53 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 9/5/2014 3:10:37 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.211	BBA	20.58100	5.71312	117.58164		HMX #2
7.970	VBA	29.15024	4.64180	135.30948		RDX #3
10.767	VV	4.36766	3.29717	14.40089		1,3,5-Trinitrobenzene #4
11.145	VV	107.06580	3.63238	388.90374		1,2-Dinitrobenzene #5 *
13.178	BV	2.52801	2.20774	5.58120		1,3-Dinitrobenzene #6
14.429	VB	10.29892	4.45045	45.83480		Tetryl #7
15.054		-	-	-		Nitrobenzene #8
17.301	VV	62.98500	2.59048	163.16167		2,4,6-Trinitrotoluene #10
18.194	VV	121.71600	4.37995	533.10960		4-Amino-2,6-Dinitrotoluene #11
19.059	VV	77.39855	2.84998	220.58395		2-Amino-4,6-Dinitrotoluene #12
20.277	VV	3.21990	3.75957	12.10543		2,6-Dinitrotoluene #13
20.917	VV	2.50055	2.08679	5.21811		2,4-Dinitrotoluene #14
24.580		-	-	-		2-Nitrotoluene #15
26.267		-	-	-		4-Nitrotoluene #16
28.319		-	-	-		3-Nitrotoluene #17

Totals : 1641.79050

Data File C:\CHEM32\1\DATA\090514\090514\5L013543.D
Sample Name: L14081687-09

==========

Acq. Operator : ECL Seq. Line : 2
Acq. Instrument : HPLC5 Location : Vial 3
Injection Date : 9/5/2014 5:47:31 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090514\090514\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/5/2014 3:10:53 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========

Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
16.316		-	-	-		Nitroglycerin #9

Totals : 0.00000

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

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*** End of Report ***

Data File C:\CHEM32\1\DATA\090514\090514\5L013543.D
Sample Name: L14081687-09

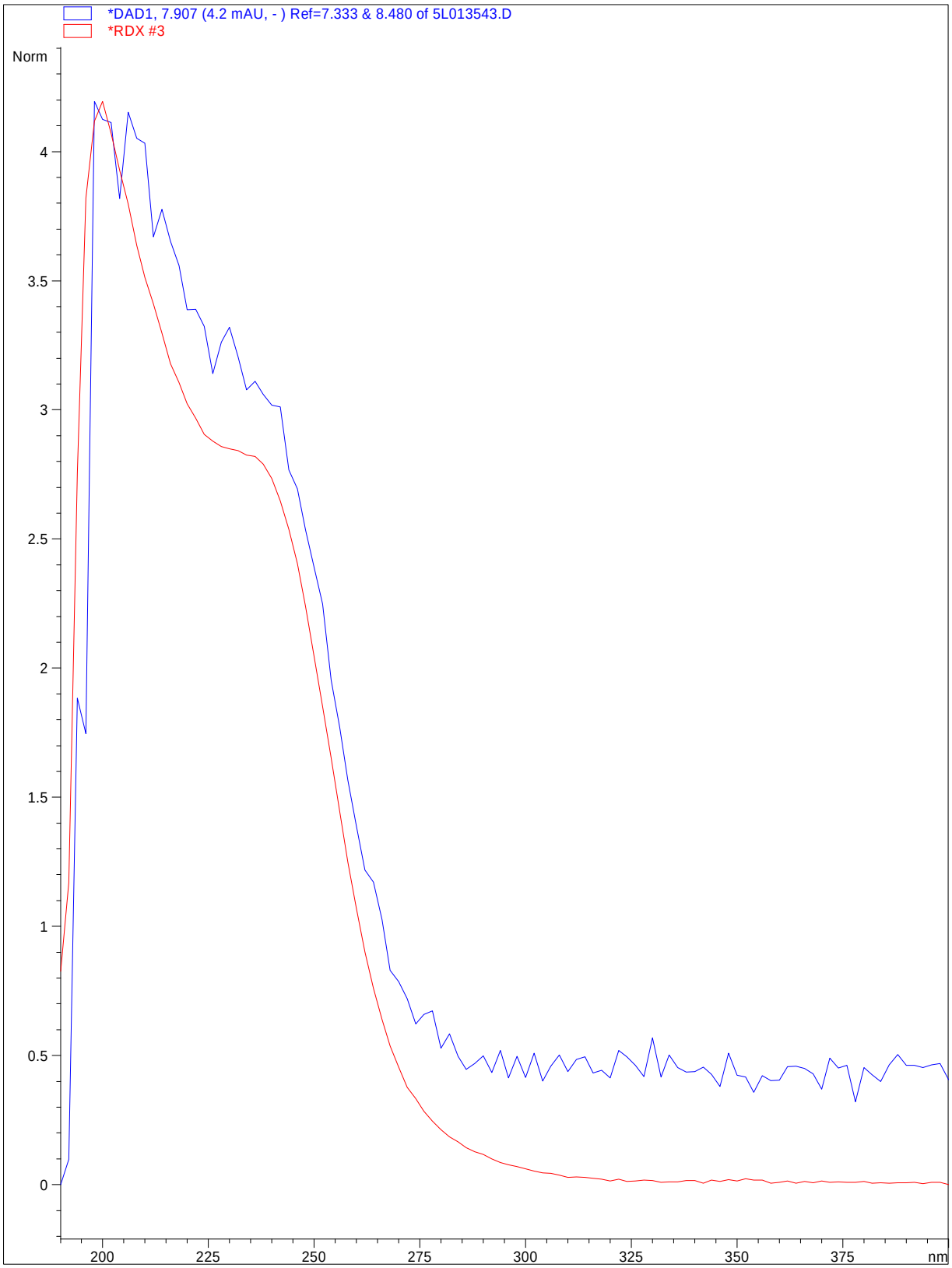
Search result of : DAD1, 7.907 (4.2 mAU, -) Ref=7.333 & 8.480
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 7.511 | 7.511 min

Library search results

#	Match	Entry	Time [min]	ID	ID Name
1	941.2000	2	7.932	0	RDX #3

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\090514\090514\5L013543.D
Sample Name: L14081687-09

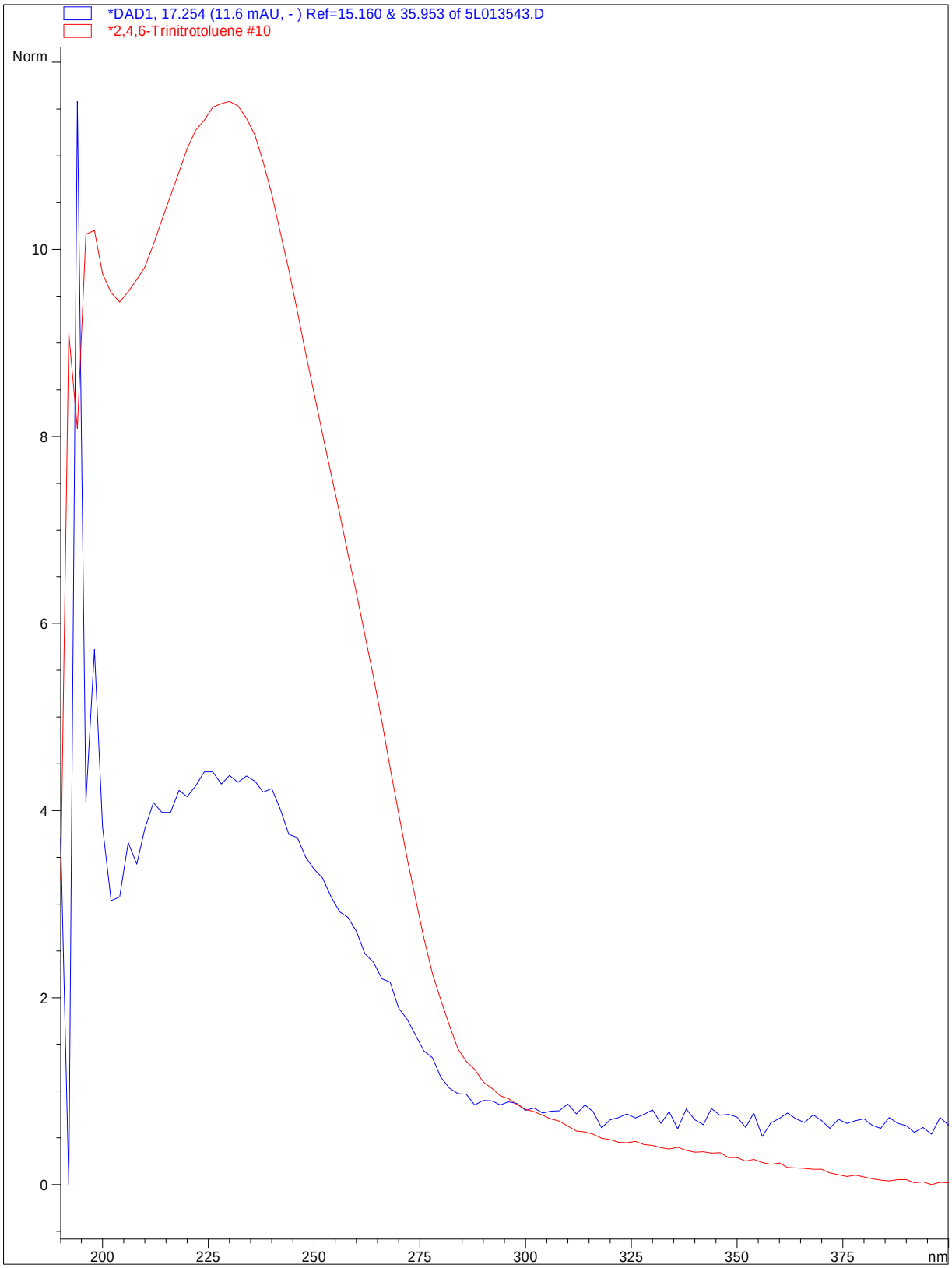
Search result of : DAD1, 17.254 (11.6 mAU, -) Ref=15.160 & 35.953
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 16.391 | 16.391 min

Library search results

#	Match	Entry	Time [min]	ID	ID Name
1	720.2880	8	17.267	0	2,4,6-Trinitrotoluene #10

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\090514\090514\5L013543.D
Sample Name: L14081687-09

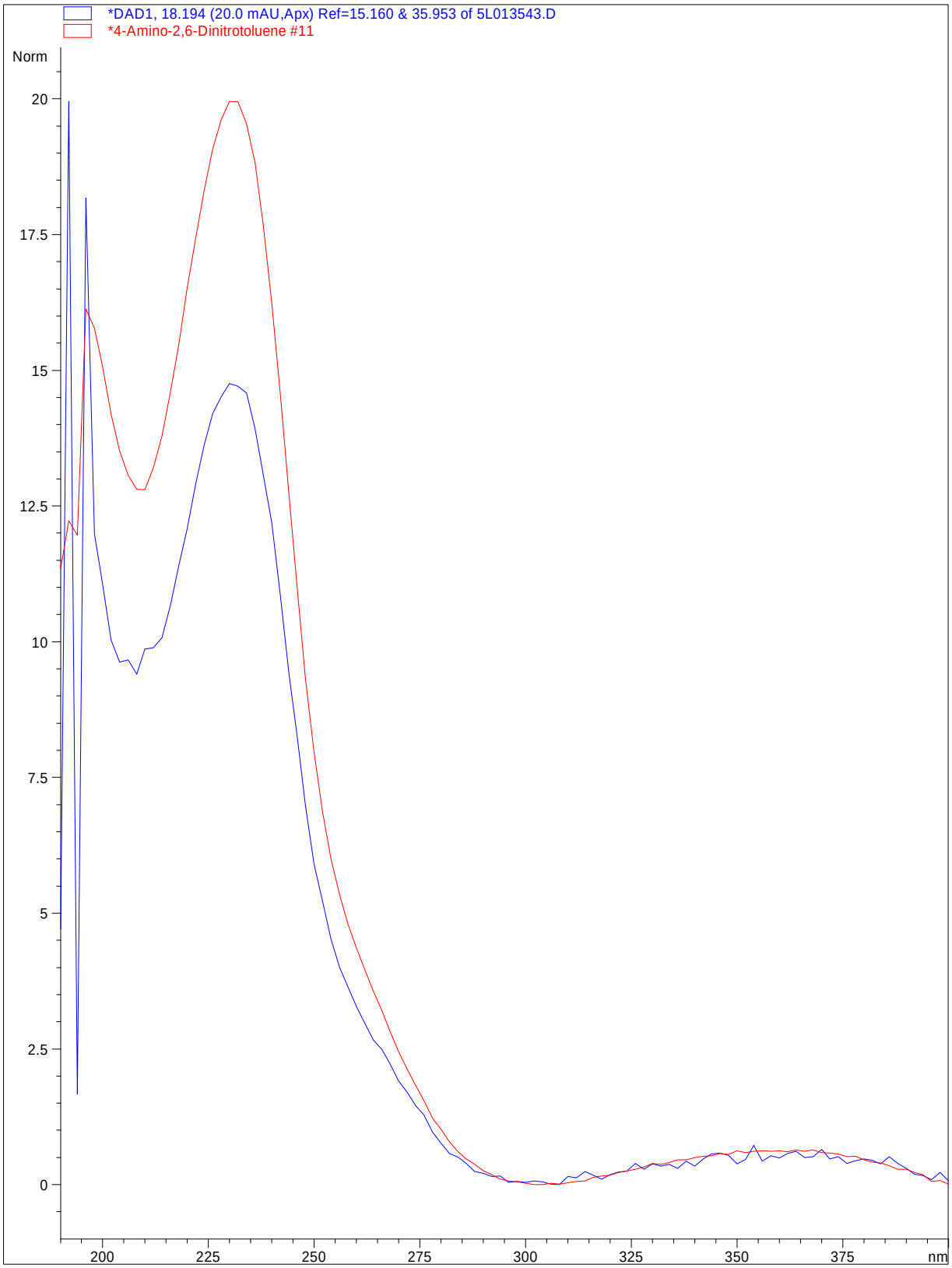
Search result of : DAD1, 18.194 (20.0 mAU,Apx) Ref=15.160 & 35.953
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 17.284 | 17.284 min

Library search results

#	Match	Entry	Time [min]	ID	ID Name
1	923.7883	9	18.131	0	4-Amino-2,6-Dinitrotoluene #11
2	851.4719	10	18.986	0	2-Amino-4,6-Dinitrotoluene #12

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\090514\090514\5L013543.D
Sample Name: L14081687-09

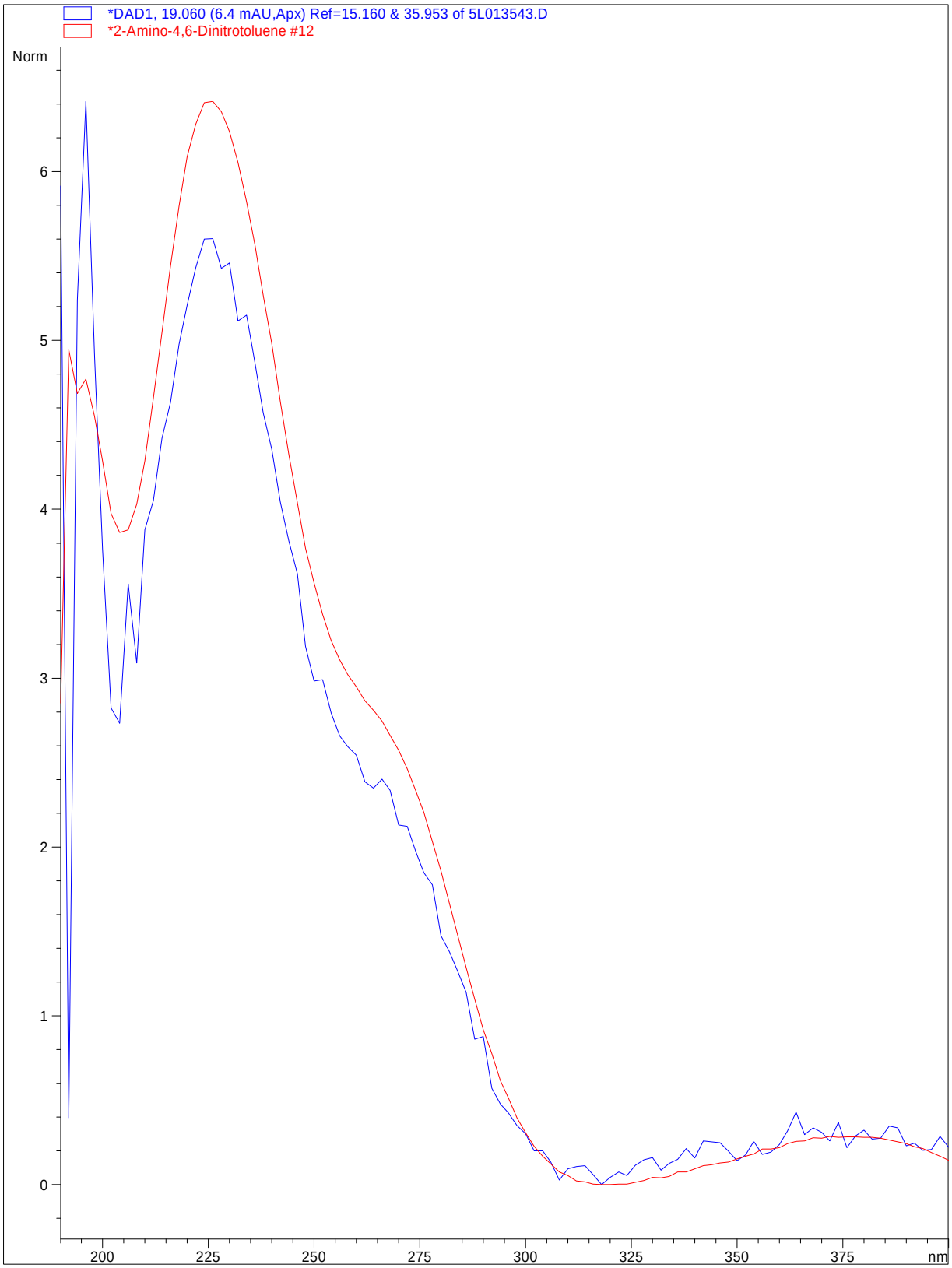
Search result of : DAD1, 19.060 (6.4 mAU,Apx) Ref=15.160 & 35.953
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 18.107 | 18.107 min

Library search results

#	Match	Entry	Time [min]	ID	ID Name
1	909.3277	10	18.986	0	2-Amino-4,6-Dinitrotoluene #12
2	870.4564	9	18.131	0	4-Amino-2,6-Dinitrotoluene #11

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\090514\090514\5L013544.D
Sample Name: L14081687-10

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Acq. Operator	: ECL	Seq. Line :	3
Acq. Instrument	: HPLC5	Location :	Vial 4
Injection Date	: 9/5/2014 6:26:33 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\090514\090514\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/5/2014 3:10:53 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

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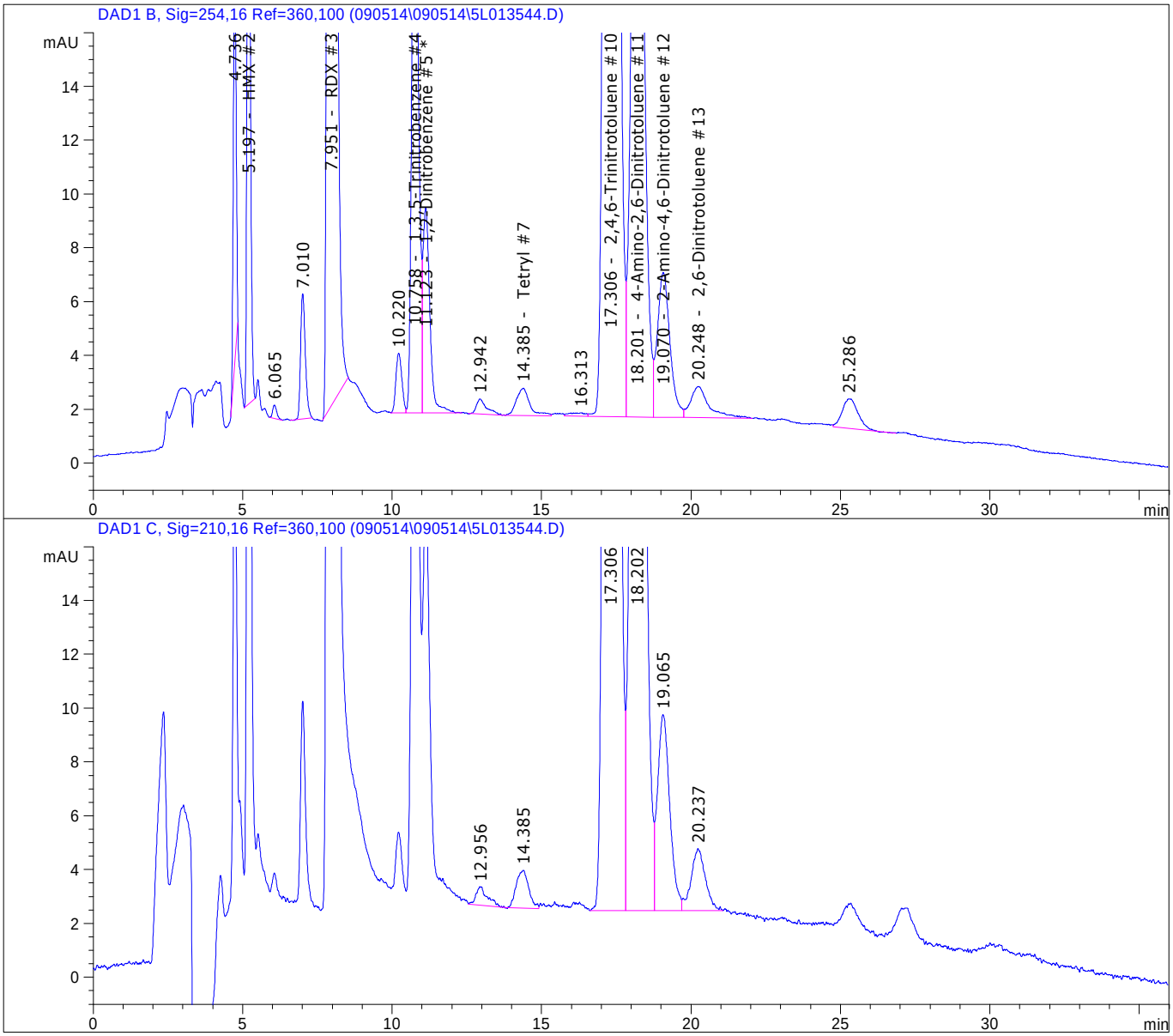

Data File C:\CHEM32\1\DATA\090514\090514\5L013544.D
Sample Name: L14081687-10

==========

Acq. Operator : ECL Seq. Line : 3
Acq. Instrument : HPLC5 Location : Vial 4
Injection Date : 9/5/2014 6:26:33 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090514\090514\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/5/2014 3:10:53 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 9/5/2014 3:10:37 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.197	BV	223.82649	6.00190	1343.38468		HMX #2
7.951	BBA	3612.83716	5.19319	1.87622e4		RDX #3
10.758	VV	357.97678	2.55226	913.64925		1,3,5-Trinitrobenzene #4
11.123	VB	123.31717	3.63755	448.57186		1,2-Dinitrobenzene #5 *
13.221		-	-	-		1,3-Dinitrobenzene #6
14.385	VV	31.52547	4.44333	140.07790		Tetryl #7
15.054		-	-	-		Nitrobenzene #8
17.306	VV	3239.55029	2.58698	8380.65676		2,4,6-Trinitrotoluene #10
18.201	VV	918.35443	4.38575	4027.66999		4-Amino-2,6-Dinitrotoluene #11
19.070	VV	157.53934	2.85192	449.28914		2-Amino-4,6-Dinitrotoluene #12
20.248	VV	50.18194	4.37904	219.74852		2,6-Dinitrotoluene #13
20.798		-	-	-		2,4-Dinitrotoluene #14
24.580		-	-	-		2-Nitrotoluene #15
26.267		-	-	-		4-Nitrotoluene #16
28.319		-	-	-		3-Nitrotoluene #17

Totals : 3.46852e4

Data File C:\CHEM32\1\DATA\090514\090514\5L013544.D
Sample Name: L14081687-10

```
==========================================================================
Acq. Operator   : ECL                            Seq. Line :   3
Acq. Instrument : HPLC5                           Location : Vial 4
Injection Date  : 9/5/2014 6:26:33 PM                  Inj :   1
                                                Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\090514\090514\8330PLUS.M
Last changed    : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 9/5/2014 3:10:53 PM by ECL
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1 WATER


==========================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 16.316            -          -          -         Nitroglycerin #9

Totals :                                 0.00000


2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========================================================================
                           *** End of Report ***
```

Data File C:\CHEM32\1\DATA\090514\090514\5L013544.D
Sample Name: L14081687-10

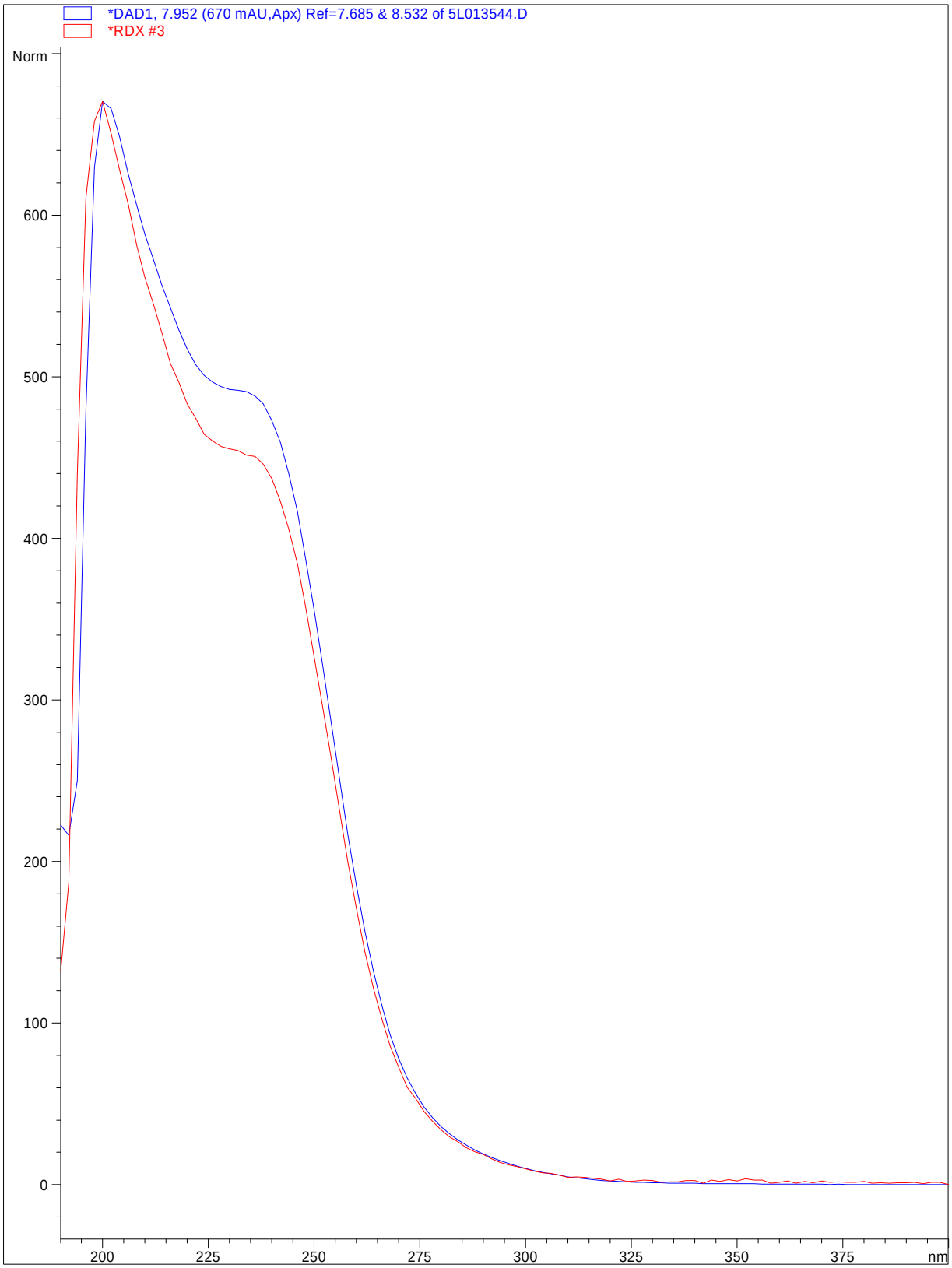
Search result of : DAD1, 7.952 (670 mAU,Apx) Ref=7.685 & 8.532
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 7.554 | 7.554 min

Library search results

#	Match	Entry	Time [min]	ID	ID Name
1	984.4657	2	7.932	0	RDX #3

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\090514\090514\5L013544.D
Sample Name: L14081687-10

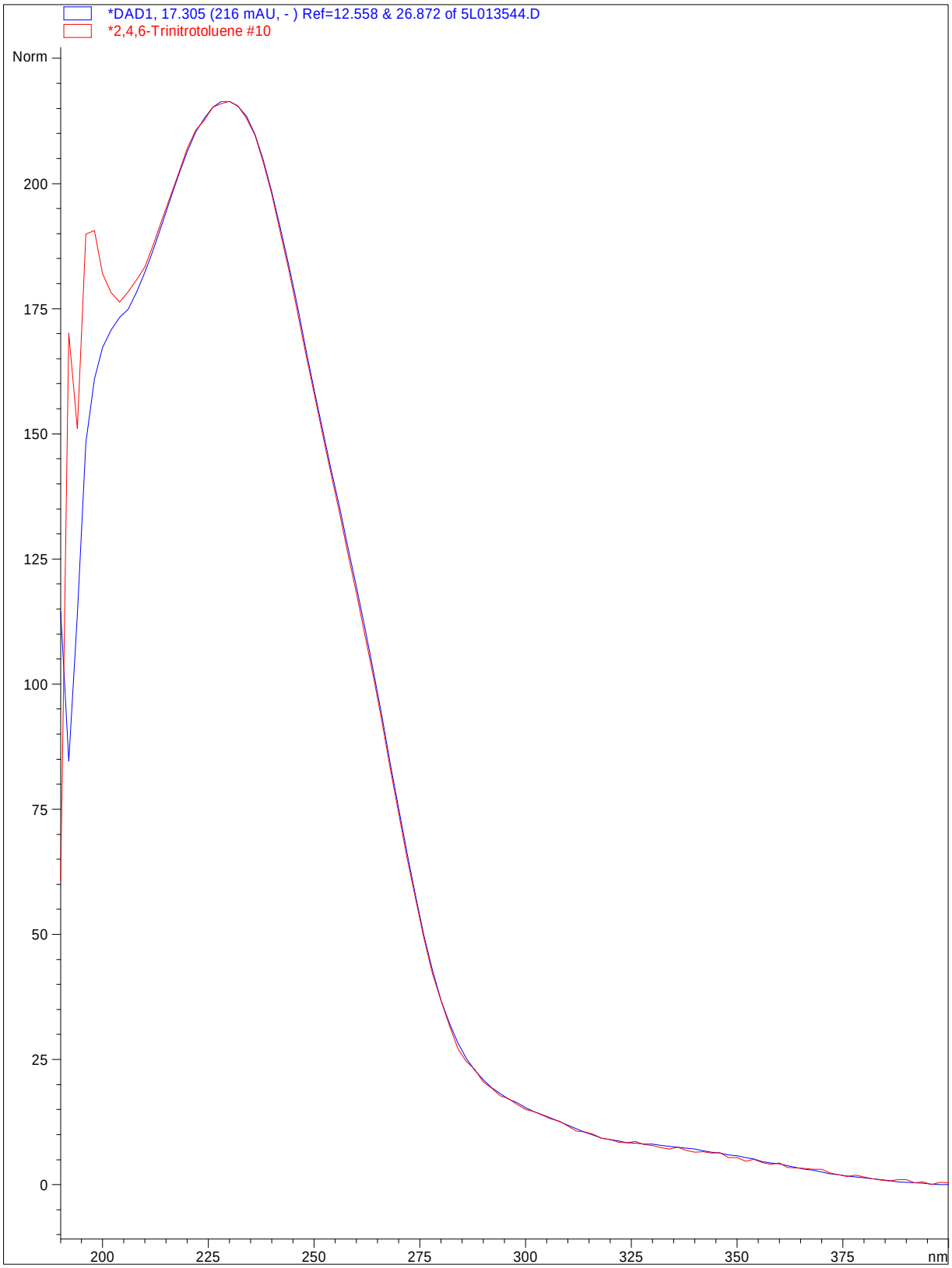
Search result of : DAD1, 17.305 (216 mAU, -) Ref=12.558 & 26.872
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 16.44 | 16.44 min

Library search results

#	Match	Entry	Time [min]	ID	ID Name
1	980.0702	8	17.267	0	2,4,6-Trinitrotoluene #10
2	909.0818	9	18.131	0	4-Amino-2,6-Dinitrotoluene #11

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\090514\090514\5L013544.D
Sample Name: L14081687-10

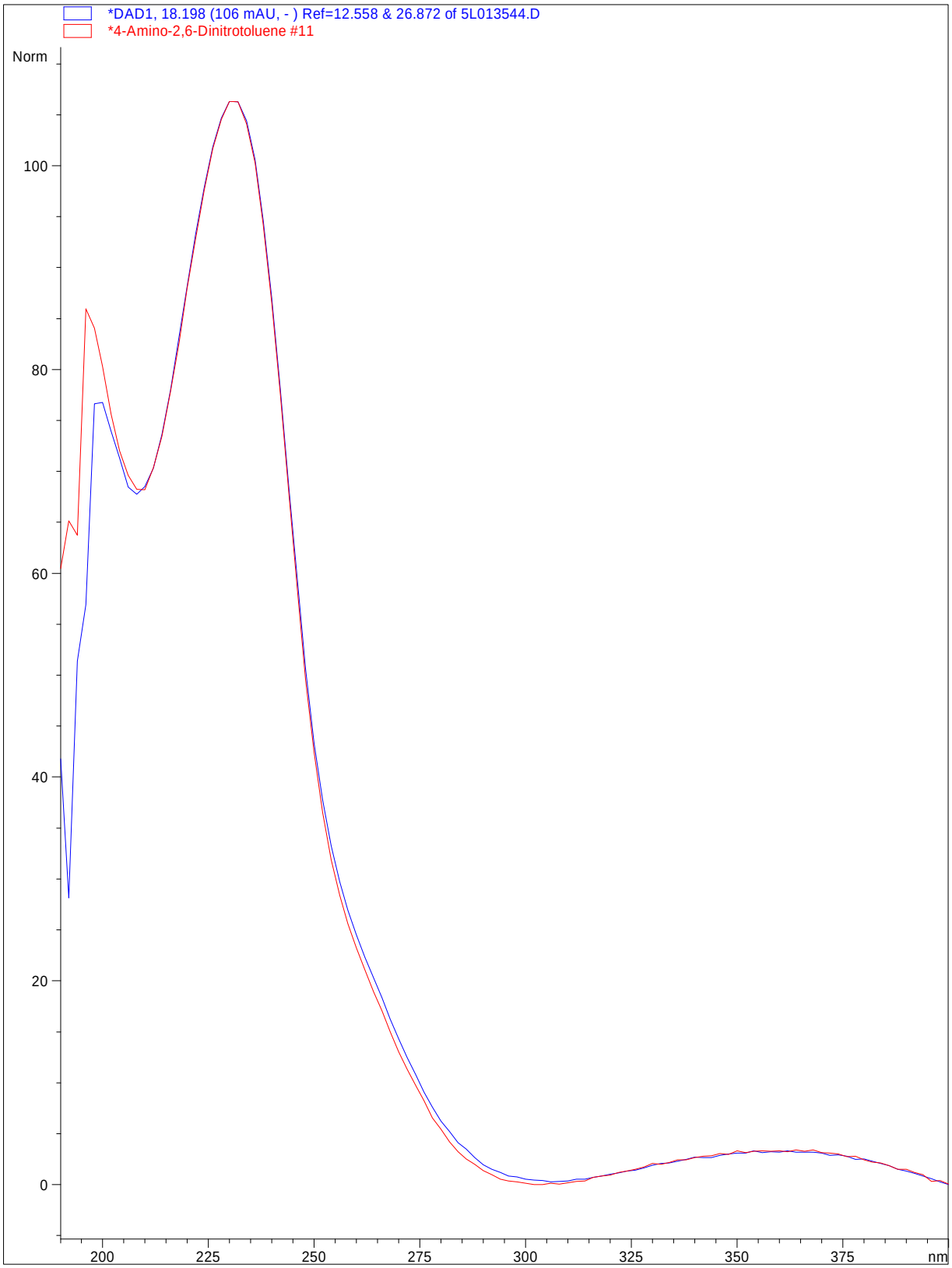
Search result of : DAD1, 18.198 (106 mAU, -) Ref=12.558 & 26.872
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 17.288 | 17.288 min

Library search results

#	Match	Entry	Time [min]	ID	ID Name
1	979.9447	9	18.131	0	4-Amino-2,6-Dinitrotoluene #11
2	904.6452	10	18.986	0	2-Amino-4,6-Dinitrotoluene #12

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\090514\090514\5L013544.D
Sample Name: L14081687-10

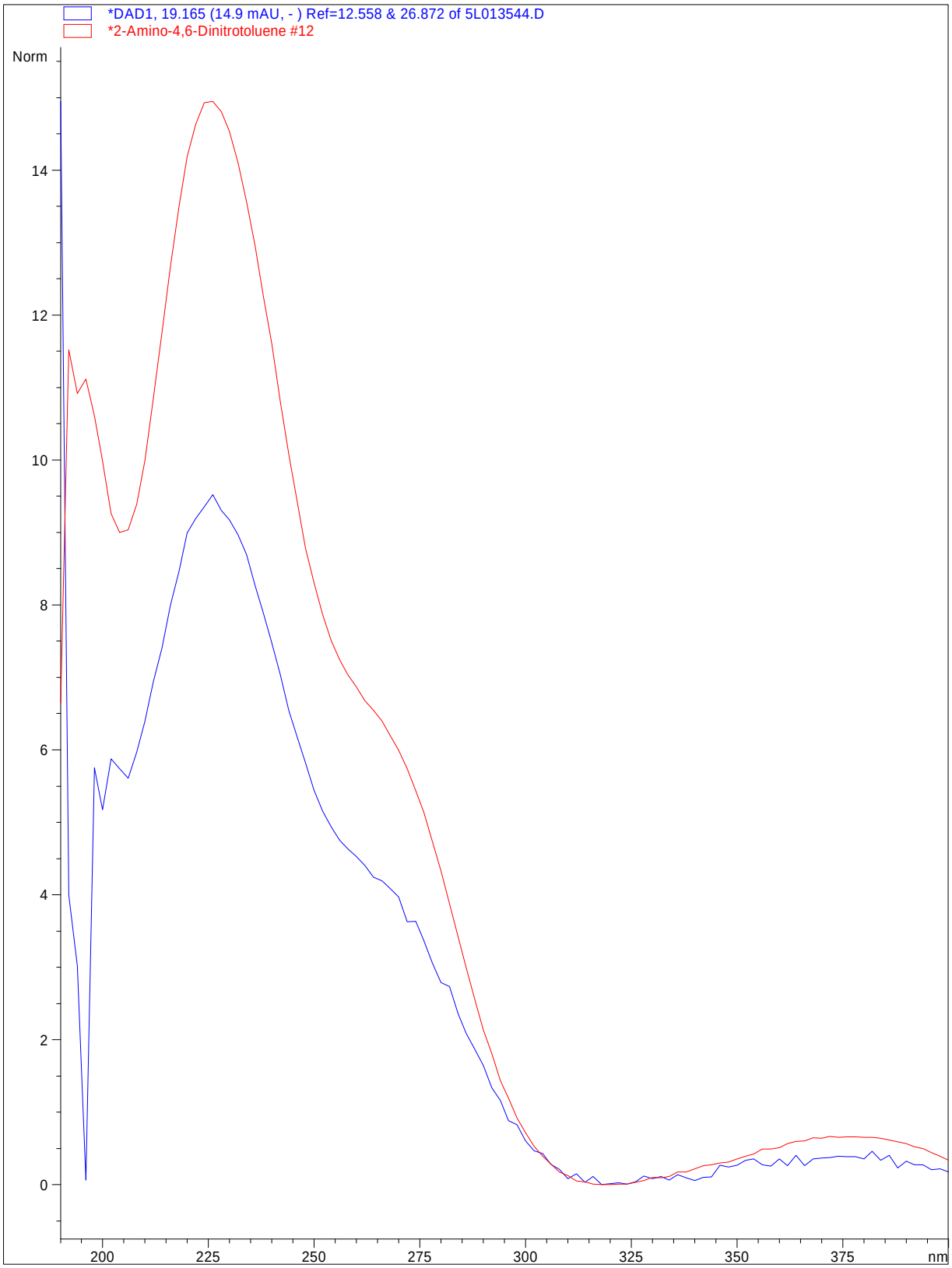
Search result of : DAD1, 19.165 (14.9 mAU, -) Ref=12.558 & 26.872
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 18.207 | 18.207 min

Library search results

#	Match	Entry	Time [min]	ID	ID Name
1	834.8557	10	18.986	0	2-Amino-4,6-Dinitrotoluene #12

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\090814\090814\5L013577.D
Sample Name: L14081687-10 10x

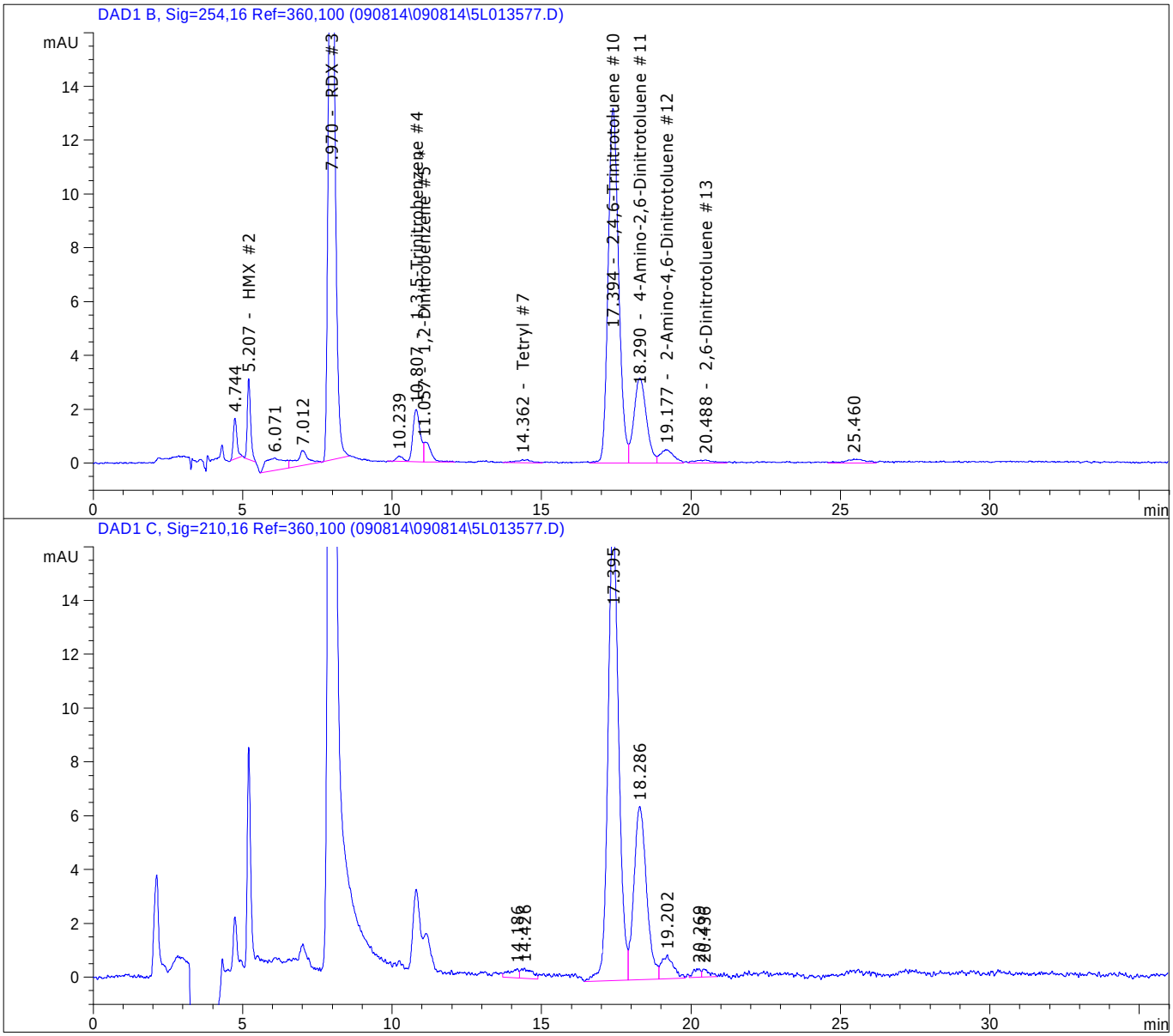
==========

Acq. Operator	: ECL	Seq. Line :	5
Acq. Instrument	: HPLC5	Location :	Vial 6
Injection Date	: 9/8/2014 3:42:21 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\090814\090814\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/9/2014 8:18:20 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,10 WATER

==========



Data File C:\CHEM32\1\DATA\090814\090814\5L013577.D
Sample Name: L14081687-10 10x

==========

Acq. Operator : ECL Seq. Line : 5
Acq. Instrument : HPLC5 Location : Vial 6
Injection Date : 9/8/2014 3:42:21 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090814\090814\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/9/2014 8:18:20 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,10 WATER

==========

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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 9/9/2014 8:14:57 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.207	BBA	23.17172	5.74867	133.20666		HMX #2
7.970	VBA	360.32480	5.15271	1856.64798		RDX #3
10.807	VF	32.91613	2.64312	87.00130		1,3,5-Trinitrobenzene #4
11.057	VB	12.57469	3.33786	41.97260		1,2-Dinitrobenzene #5 *
13.163		-	-	-		1,3-Dinitrobenzene #6
14.362	VV	4.00531	4.46706	17.89197		Tetryl #7
14.971		-	-	-		Nitrobenzene #8
17.394	VV	320.12073	2.58761	828.34918		2,4,6-Trinitrotoluene #10
18.290	VV	91.37041	4.37773	399.99464		4-Amino-2,6-Dinitrotoluene #11
19.177	VV	15.51841	2.83475	43.99087		2-Amino-4,6-Dinitrotoluene #12
20.488	VV	4.93045	3.98922	19.66865		2,6-Dinitrotoluene #13
20.936		-	-	-		2,4-Dinitrotoluene #14
24.704		-	-	-		2-Nitrotoluene #15
26.420		-	-	-		4-Nitrotoluene #16
28.477		-	-	-		3-Nitrotoluene #17

Totals : 3428.72385

Data File C:\CHEM32\1\DATA\090814\090814\5L013577.D
Sample Name: L14081687-10 10x

==========

Acq. Operator : ECL Seq. Line : 5
Acq. Instrument : HPLC5 Location : Vial 6
Injection Date : 9/8/2014 3:42:21 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090814\090814\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/9/2014 8:18:20 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,10 WATER

==========

Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
16.297		-	-	-		Nitroglycerin #9

Totals : 0.00000

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File C:\CHEM32\1\DATA\090814\090814\5L013577.D
Sample Name: L14081687-10 10x

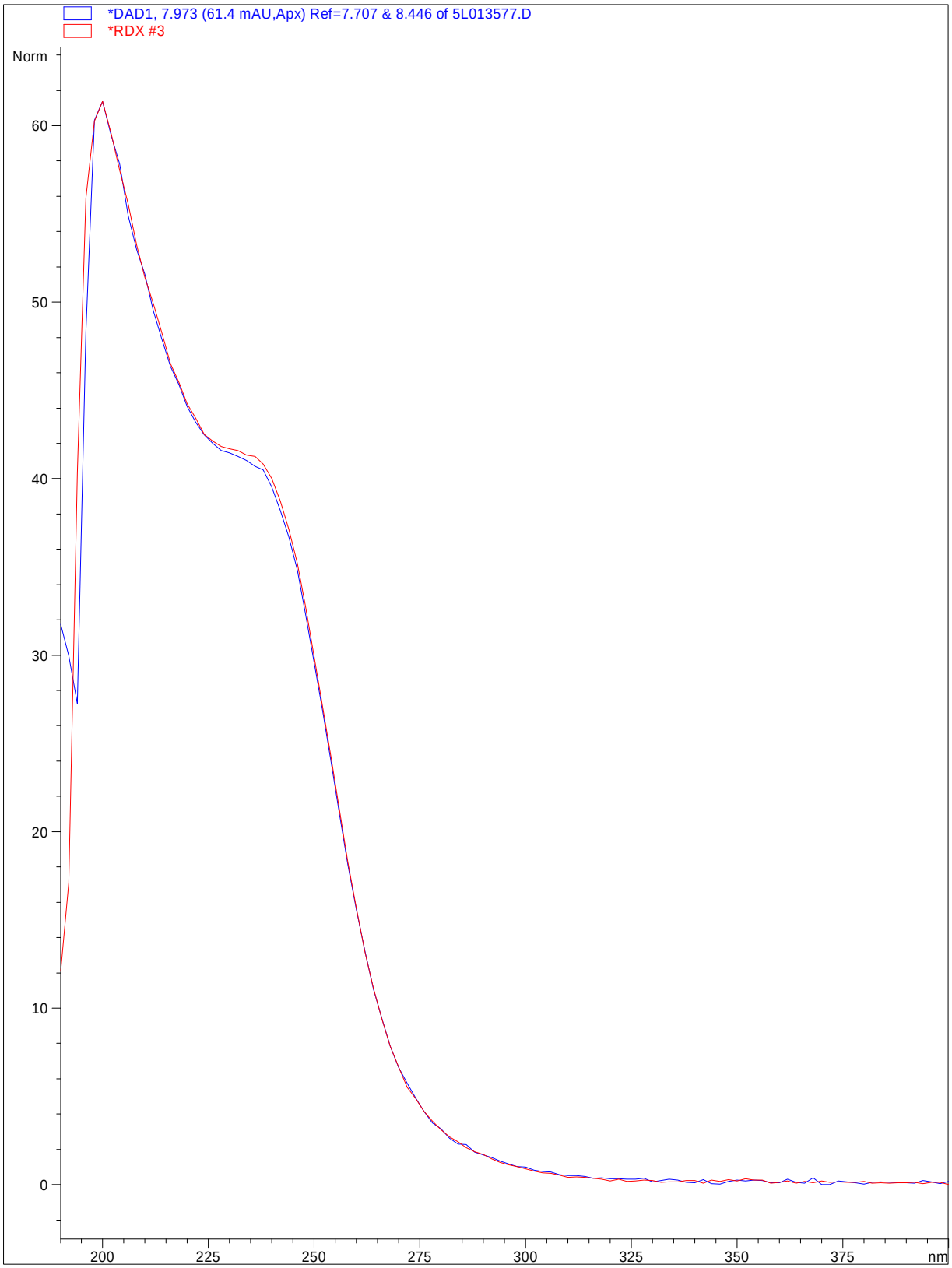
Search result of : DAD1, 7.973 (61.4 mAU,Apx) Ref=7.707 & 8.446
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 7.575 | 7.575 min

Library search results

#	Match	Entry	Time [min]	ID	ID Name
1	981.6772	2	7.983	0	RDX #3

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\090814\090814\5L013577.D
Sample Name: L14081687-10 10x

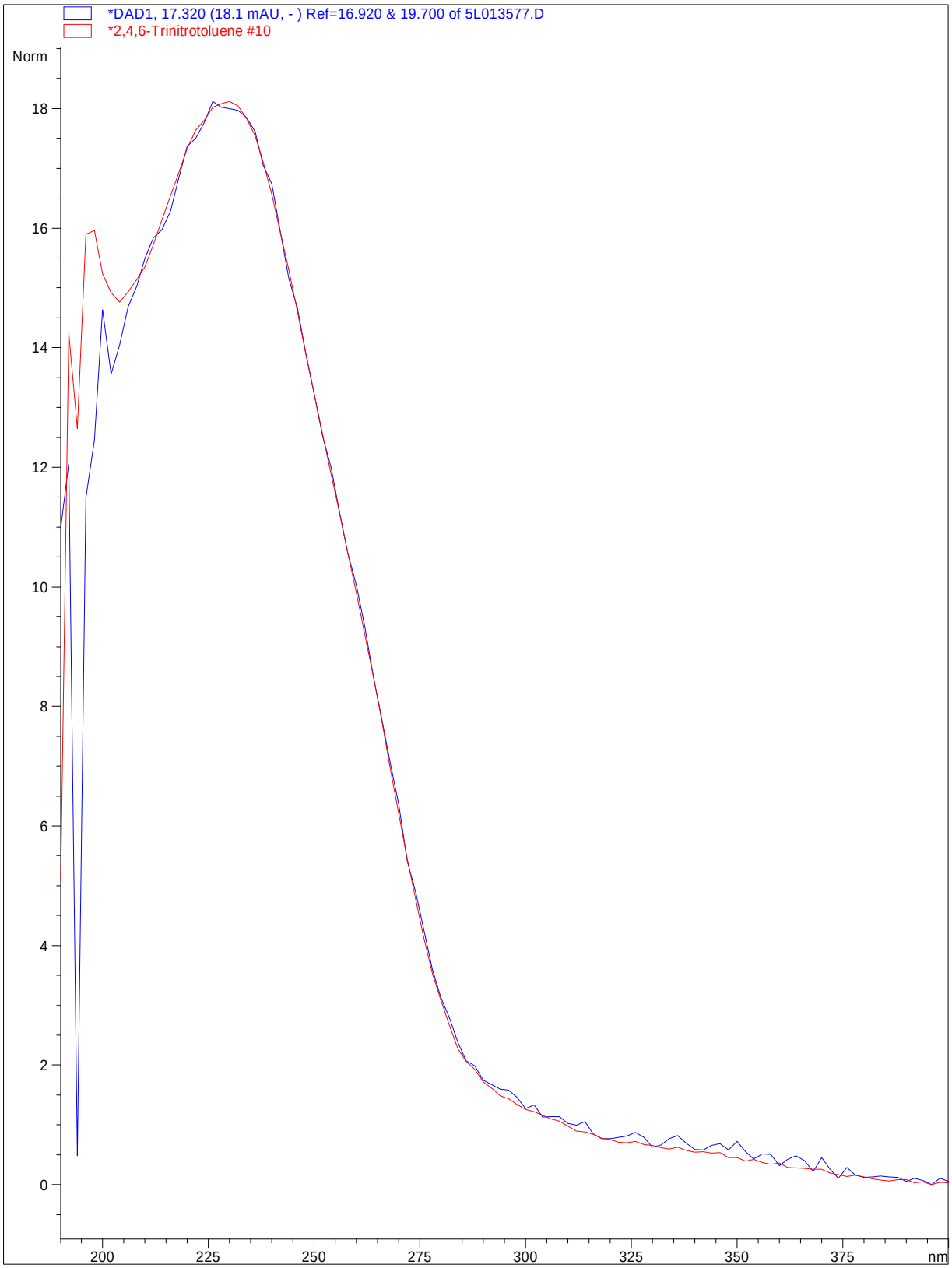
Search result of : DAD1, 17.320 (18.1 mAU, -) Ref=16.920 & 19.700
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 16.454 | 16.454 min

Library search results

#	Match	Entry	Time [min]	ID	ID Name
1	955.4674	8	17.411	0	2,4,6-Trinitrotoluene #10

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\090814\090814\5L013577.D
Sample Name: L14081687-10 10x

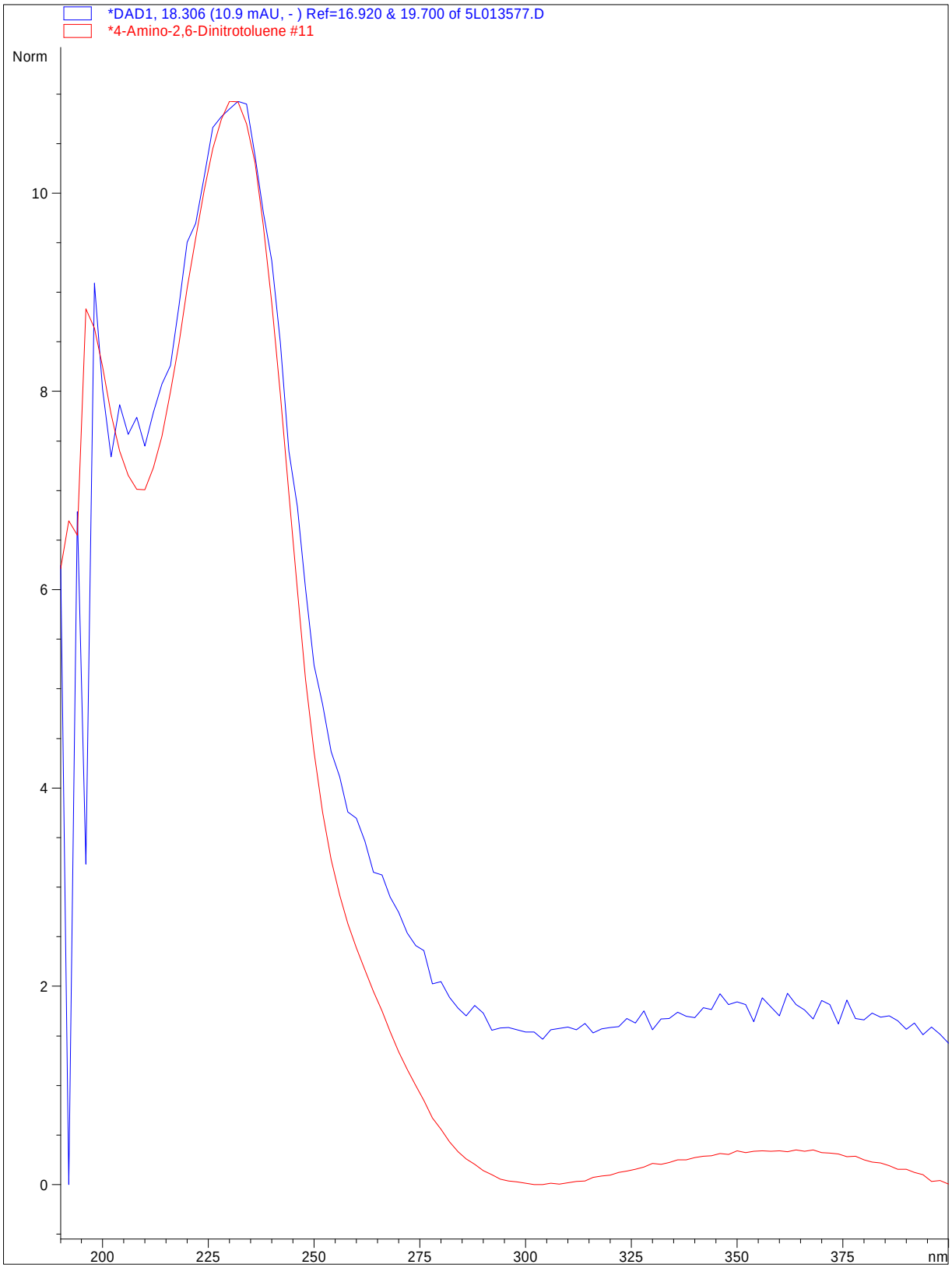
Search result of : DAD1, 18.306 (10.9 mAU, -) Ref=16.920 & 19.700
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 17.391 | 17.391 min

Library search results

#	Match	Entry	Time [min]	ID	ID Name
1	917.8769	9	18.314	0	4-Amino-2,6-Dinitrotoluene #11
2	849.8113	8	17.411	0	2,4,6-Trinitrotoluene #10
3	840.0318	10	19.203	0	2-Amino-4,6-Dinitrotoluene #12

*** End of Report ***

Target + Library Spectrum

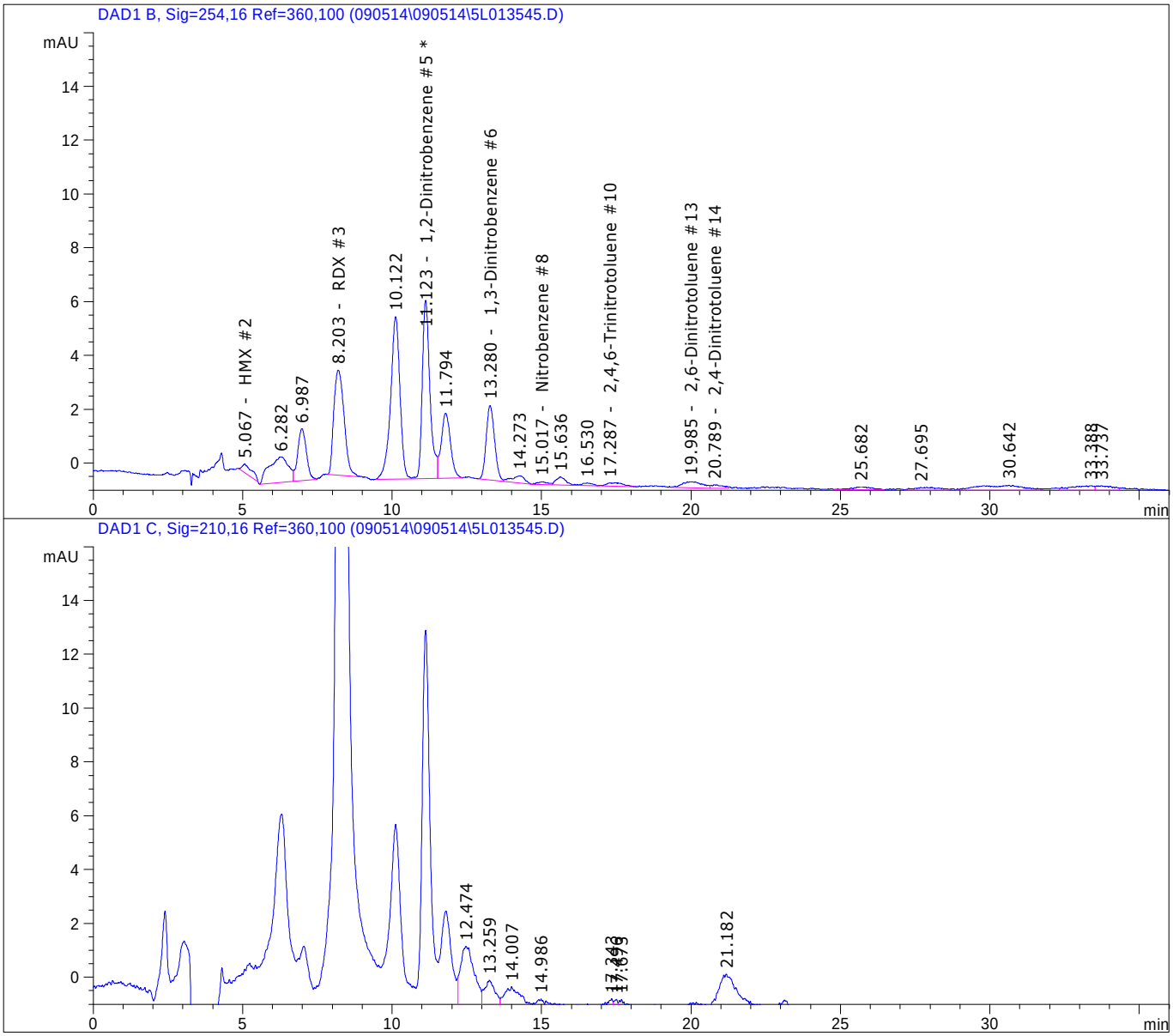


Data File C:\CHEM32\1\DATA\090514\090514\5L013545.D
Sample Name: L14081687-11

==========

Acq. Operator	: ECL	Seq. Line :	4
Acq. Instrument	: HPLC5	Location :	Vial 5
Injection Date	: 9/5/2014 7:05:37 PM	Inj :	1
		Inj Volume :	100 µl
Acq. Method	: C:\Chem32\1\DATA\090514\090514\8330PLUS.M		
Last changed	: 9/2/2014 2:17:53 PM by ECL		
Analysis Method	: C:\CHEM32\1\METHODS\8330PLDA.M		
Last changed	: 9/8/2014 9:19:31 AM by ECL		
Method Info	: OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013		
Sample Info	: 1,1 WATER		

==========



Data File C:\CHEM32\1\DATA\090514\090514\5L013545.D
Sample Name: L14081687-11

==========

Acq. Operator : ECL Seq. Line : 4
Acq. Instrument : HPLC5 Location : Vial 5
Injection Date : 9/5/2014 7:05:37 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090514\090514\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/8/2014 9:19:31 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========

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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 9/5/2014 3:10:37 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.067	BBA	8.57650	5.26797	45.18073		HMX #2
8.203	BBA	93.19871	5.02381	468.21273		RDX #3
10.818		-	-	-		1,3,5-Trinitrobenzene #4
11.123	VV	116.93803	3.63569	425.15039		1,2-Dinitrobenzene #5 *
13.280	BV	53.58406	1.71962	92.14414		1,3-Dinitrobenzene #6
14.634		-	-	-		Tetryl #7
15.017	VV	2.61491	3.76618	9.84824		Nitrobenzene #8
17.287	VV	5.66696	2.62662	14.88493		2,4,6-Trinitrotoluene #10
18.126		-	-	-		4-Amino-2,6-Dinitrotoluene #11
19.000		-	-	-		2-Amino-4,6-Dinitrotoluene #12
19.985	VV	10.68536	4.22204	45.11402		2,6-Dinitrotoluene #13
20.789	VB	3.47732	2.01075	6.99201		2,4-Dinitrotoluene #14
24.580		-	-	-		2-Nitrotoluene #15
26.267		-	-	-		4-Nitrotoluene #16
28.319		-	-	-		3-Nitrotoluene #17

Totals : 1107.52720

Data File C:\CHEM32\1\DATA\090514\090514\5L013545.D
Sample Name: L14081687-11

```
==========================================================================
Acq. Operator   : ECL                            Seq. Line :   4
Acq. Instrument : HPLC5                           Location : Vial 5
Injection Date  : 9/5/2014 7:05:37 PM                  Inj :   1
                                                Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\090514\090514\8330PLUS.M
Last changed    : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 9/8/2014 9:19:31 AM by ECL
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1 WATER


==========================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 16.316            -          -          -         Nitroglycerin #9

Totals :                                 0.00000


2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========================================================================
                           *** End of Report ***
```

Data File C:\CHEM32\1\DATA\090514\090514\5L013545.D
Sample Name: L14081687-11

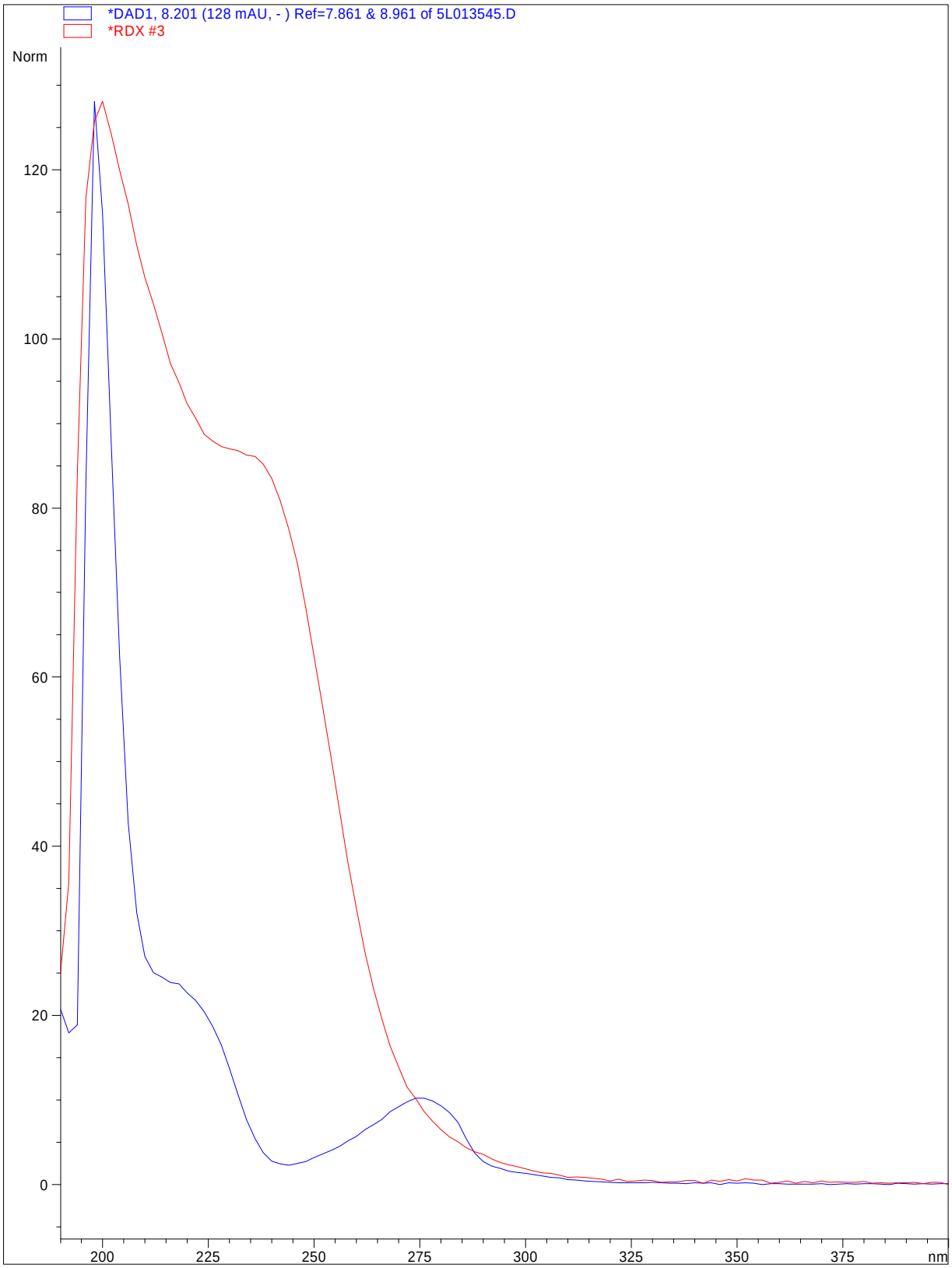
Search result of : DAD1, 8.201 (128 mAU, -) Ref=7.861 & 8.961
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 7.791 | 7.791 min

Library search results

#	Match	Entry	Time [min]	ID	ID Name
1	495.3881	2	7.932	0	RDX #3

*** End of Report ***

Target + Library Spectrum



Data File C:\CHEM32\1\DATA\090214\090214 2\5L013501.D
Sample Name: L14081687-12

==========

Acq. Operator : ECL
Seq. Line : 24
Acq. Instrument : HPLC5
Location : Vial 23
Injection Date : 9/3/2014 5:58:47 AM
Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 3:56:31 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

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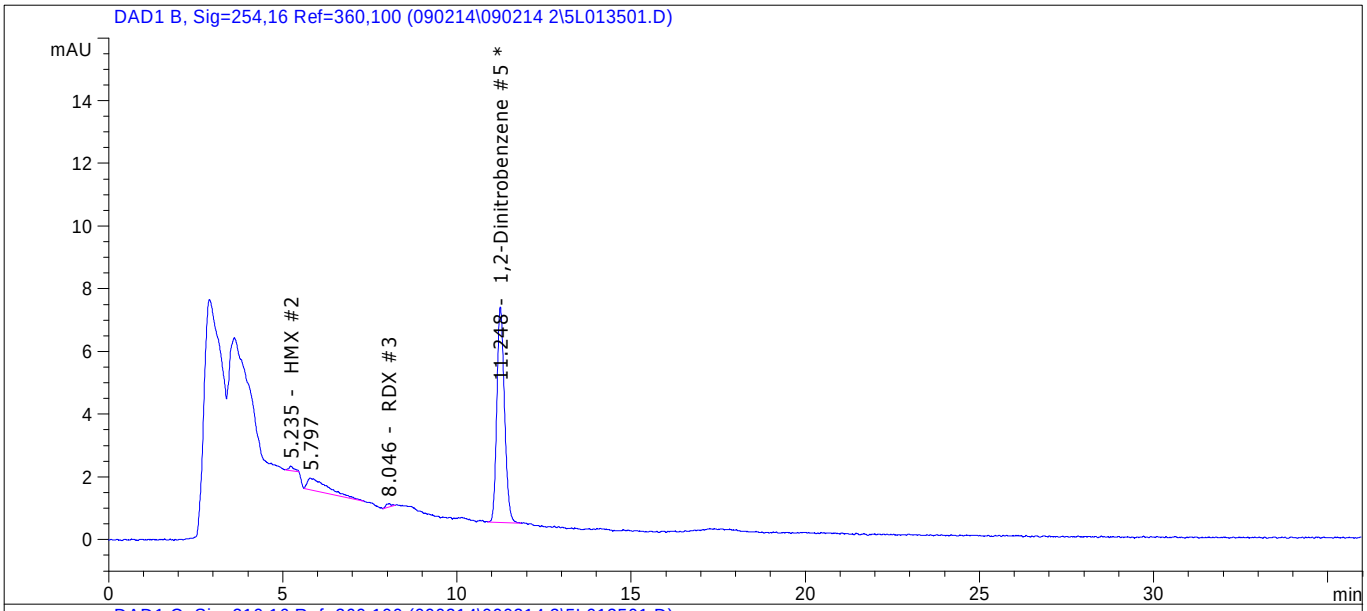

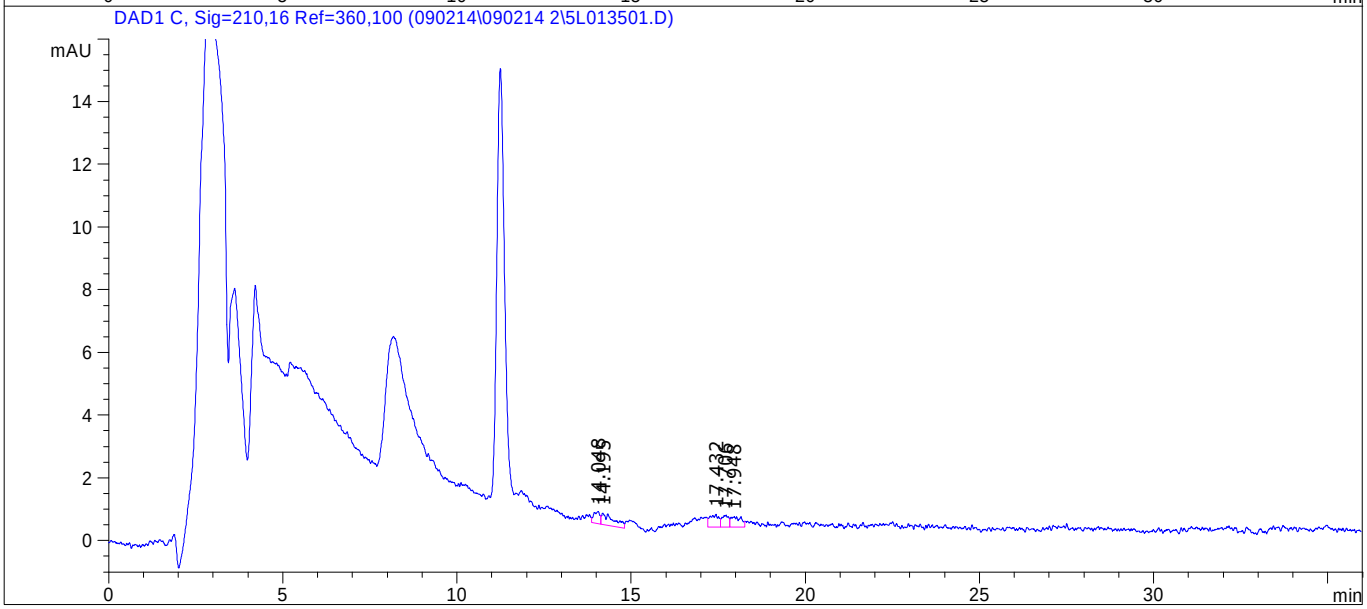

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013501.D
Sample Name: L14081687-12

==========

Acq. Operator : ECL Seq. Line : 24
Acq. Instrument : HPLC5 Location : Vial 23
Injection Date : 9/3/2014 5:58:47 AM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 3:56:31 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 9/3/2014 3:43:32 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.235	BBA	1.48659	1.62819	2.42045		HMX #2
8.046	BBA	1.11668	0.00000	0.00000		RDX #3
10.827		-	-	-		1,3,5-Trinitrobenzene #4
11.248	VBA	105.23769	3.63170	382.19172		1,2-Dinitrobenzene #5 *
13.228		-	-	-		1,3-Dinitrobenzene #6
14.636		-	-	-		Tetryl #7
15.042		-	-	-		Nitrobenzene #8
17.433		-	-	-		2,4,6-Trinitrotoluene #10
18.356		-	-	-		4-Amino-2,6-Dinitrotoluene #11
19.246		-	-	-		2-Amino-4,6-Dinitrotoluene #12
20.436		-	-	-		2,6-Dinitrotoluene #13
21.028		-	-	-		2,4-Dinitrotoluene #14
24.817		-	-	-		2-Nitrotoluene #15
26.526		-	-	-		4-Nitrotoluene #16
28.598		-	-	-		3-Nitrotoluene #17

Totals : 384.61217

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013501.D
Sample Name: L14081687-12

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :  24
Acq. Instrument : HPLC5                          Location : Vial 23
Injection Date  : 9/3/2014 5:58:47 AM                 Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed    : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 9/3/2014 3:56:31 PM by ECL
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1 WATER


==================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 16.419            -          -          -         Nitroglycerin #9

Totals :                                 0.00000


3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Negative results set to zero (cal. curve intercept), (RDX #3)

==================================================================
                          *** End of Report ***
```

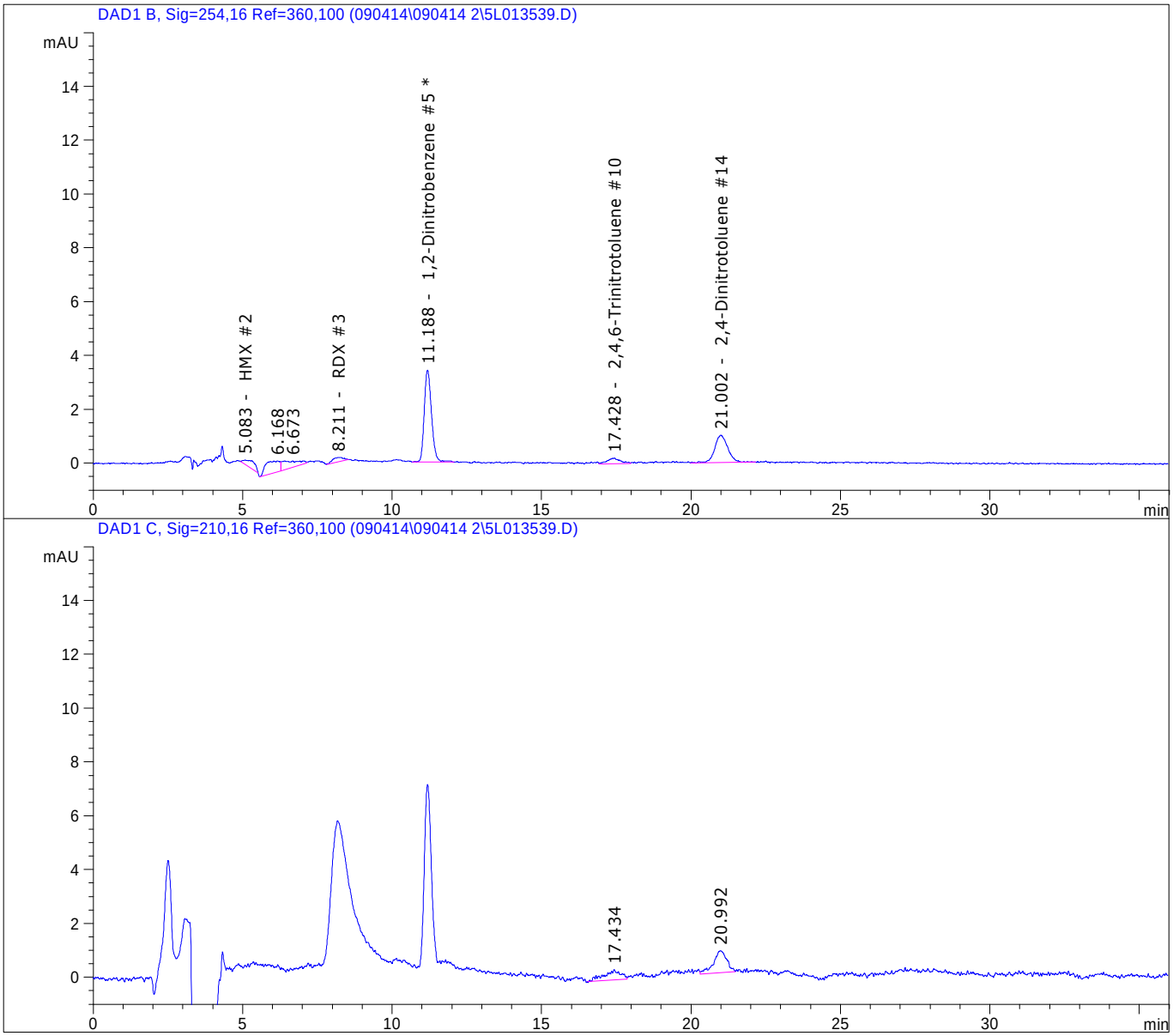
Data File C:\CHEM32\1\DATA\090414\090414 2\5L013539.D
Sample Name: L14081687-13

==========

Acq. Operator : ECL
Seq. Line : 23
Acq. Instrument : HPLC5
Location : Vial 22
Injection Date : 9/5/2014 1:55:51 AM
Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090414\090414 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/5/2014 2:54:19 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 7,1 SOIL

==========



HPLC5 9/5/2014 3:05:03 PM ECL
Page 1 of 3

Data File C:\CHEM32\1\DATA\090414\090414 2\5L013539.D
Sample Name: L14081687-13

==========

Acq. Operator : ECL Seq. Line : 23
Acq. Instrument : HPLC5 Location : Vial 22
Injection Date : 9/5/2014 1:55:51 AM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090414\090414 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/5/2014 2:54:19 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 7,1 SOIL

==========

==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 9/5/2014 2:45:25 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.083	BBA	6.57799	5.03610	33.12745		HMX #2
8.211	VBA	3.96126	1.10704	4.38527		RDX #3
10.818		-	-	-		1,3,5-Trinitrobenzene #4
11.188	VV	58.73445	3.60013	211.45161		1,2-Dinitrobenzene #5 *
13.221		-	-	-		1,3-Dinitrobenzene #6
14.634		-	-	-		Tetryl #7
15.054		-	-	-		Nitrobenzene #8
17.428	VV	6.13580	2.62358	16.09777		2,4,6-Trinitrotoluene #10
18.535		-	-	-		4-Amino-2,6-Dinitrotoluene #11
19.213		-	-	-		2-Amino-4,6-Dinitrotoluene #12
20.455		-	-	-		2,6-Dinitrotoluene #13
21.002	VB	31.45043	1.83761	57.79352		2,4-Dinitrotoluene #14
24.875		-	-	-		2-Nitrotoluene #15
26.611		-	-	-		4-Nitrotoluene #16
28.665		-	-	-		3-Nitrotoluene #17

Totals : 322.85561

Data File C:\CHEM32\1\DATA\090414\090414 2\5L013539.D
Sample Name: L14081687-13

==========

Acq. Operator : ECL Seq. Line : 23
Acq. Instrument : HPLC5 Location : Vial 22
Injection Date : 9/5/2014 1:55:51 AM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090414\090414 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/5/2014 2:54:19 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 7,1 SOIL

==========

Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
16.416		-	-	-		Nitroglycerin #9

Totals : 0.00000

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

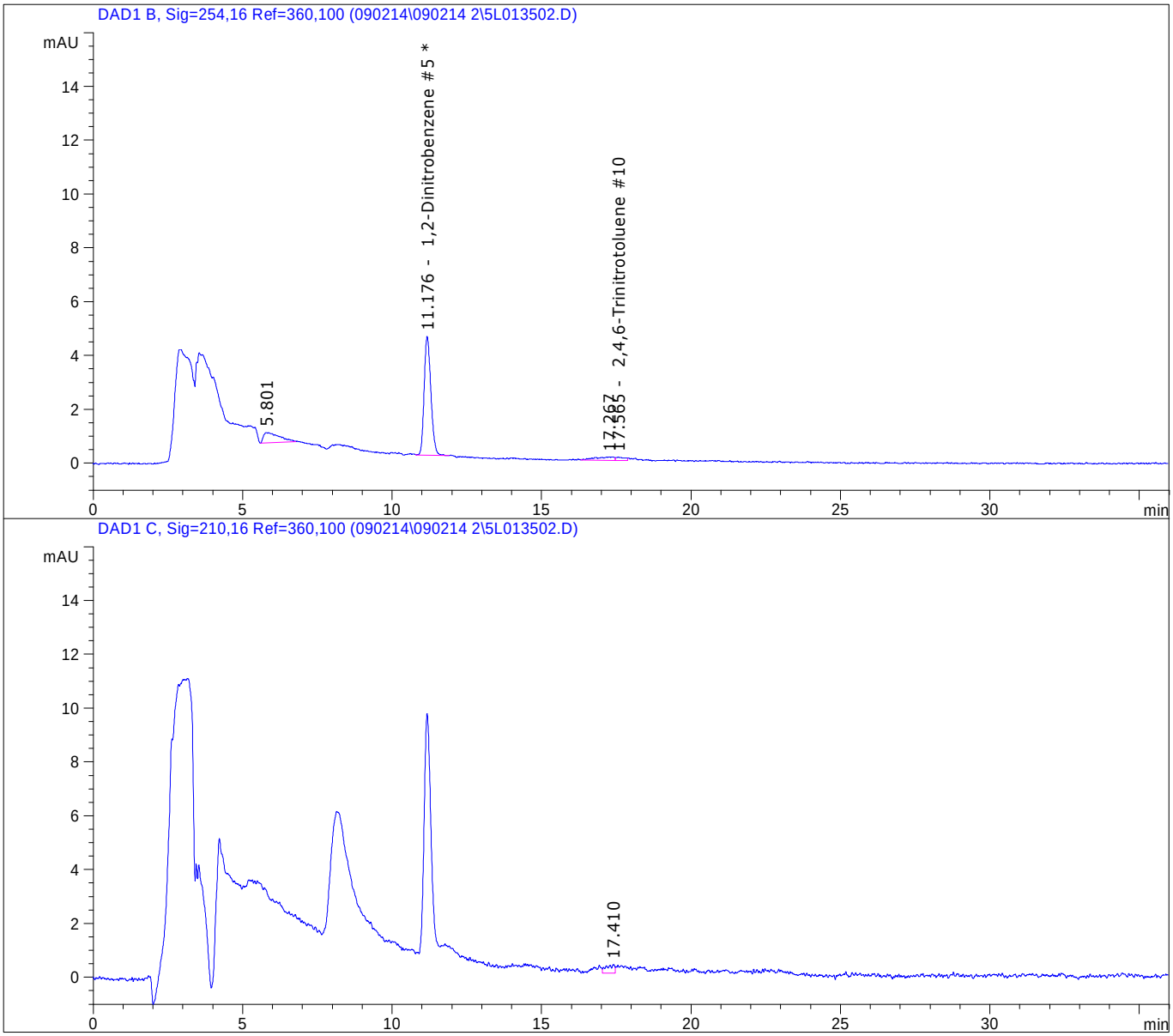
Data File C:\CHEM32\1\DATA\090214\090214 2\5L013502.D
Sample Name: L14081687-14

==========

Acq. Operator : ECL
Seq. Line : 25
Acq. Instrument : HPLC5
Location : Vial 24
Injection Date : 9/3/2014 6:37:51 AM
Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 3:56:31 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========



HPLC5 9/3/2014 4:00:30 PM ECL
Page 1 of 3

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013502.D
Sample Name: L14081687-14

==========

Acq. Operator : ECL Seq. Line : 25
Acq. Instrument : HPLC5 Location : Vial 24
Injection Date : 9/3/2014 6:37:51 AM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 3:56:31 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========

==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 9/3/2014 3:43:32 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.216		-	-	-		HMX #2
7.992		-	-	-		RDX #3
10.827		-	-	-		1,3,5-Trinitrobenzene #4
11.176	VB	69.20238	3.61094	249.88537		1,2-Dinitrobenzene #5 *
13.228		-	-	-		1,3-Dinitrobenzene #6
14.636		-	-	-		Tetryl #7
15.042		-	-	-		Nitrobenzene #8
17.565	VB	2.58790	2.67386	6.91968		2,4,6-Trinitrotoluene #10
18.356		-	-	-		4-Amino-2,6-Dinitrotoluene #11
19.246		-	-	-		2-Amino-4,6-Dinitrotoluene #12
20.436		-	-	-		2,6-Dinitrotoluene #13
21.028		-	-	-		2,4-Dinitrotoluene #14
24.817		-	-	-		2-Nitrotoluene #15
26.526		-	-	-		4-Nitrotoluene #16
28.598		-	-	-		3-Nitrotoluene #17

Totals : 256.80505

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013502.D
Sample Name: L14081687-14

==========

Acq. Operator : ECL Seq. Line : 25
Acq. Instrument : HPLC5 Location : Vial 24
Injection Date : 9/3/2014 6:37:51 AM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 3:56:31 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========

Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
16.419		-	-	-		Nitroglycerin #9

Totals : 0.00000

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

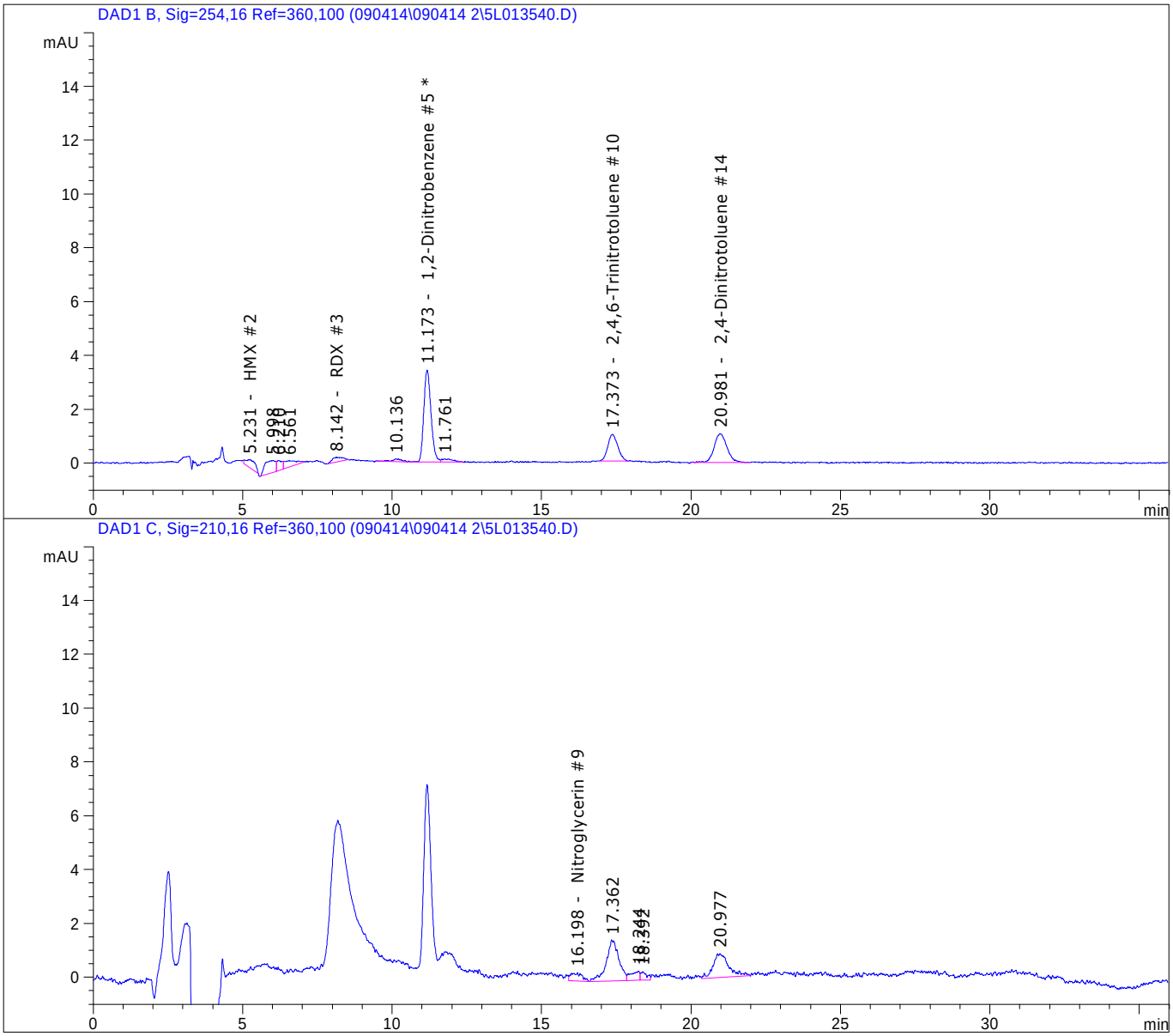
Data File C:\CHEM32\1\DATA\090414\090414 2\5L013540.D
Sample Name: L14081687-15

==========

Acq. Operator : ECL
Seq. Line : 24
Acq. Instrument : HPLC5
Location : Vial 23
Injection Date : 9/5/2014 2:34:55 AM
Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090414\090414 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/5/2014 3:06:01 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 7,1 SOIL

==========



Data File C:\CHEM32\1\DATA\090414\090414 2\5L013540.D
Sample Name: L14081687-15

==========

Acq. Operator : ECL Seq. Line : 24
Acq. Instrument : HPLC5 Location : Vial 23
Injection Date : 9/5/2014 2:34:55 AM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090414\090414 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/5/2014 3:06:01 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 7,1 SOIL

==========

==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 9/5/2014 2:45:25 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.231	BBA	7.01135	5.09761	35.74112		HMX #2
8.142	VBA	3.97865	1.12492	4.47566		RDX #3
10.818		-	-	-		1,3,5-Trinitrobenzene #4
11.173	VV	57.76686	3.59893	207.89901		1,2-Dinitrobenzene #5 *
13.221		-	-	-		1,3-Dinitrobenzene #6
14.634		-	-	-		Tetryl #7
15.054		-	-	-		Nitrobenzene #8
17.373	BBA	23.17793	2.59662	60.18428		2,4,6-Trinitrotoluene #10
18.535		-	-	-		4-Amino-2,6-Dinitrotoluene #11
19.213		-	-	-		2-Amino-4,6-Dinitrotoluene #12
20.455		-	-	-		2,6-Dinitrotoluene #13
20.981	BV	32.34785	1.83701	59.42333		2,4-Dinitrotoluene #14
24.875		-	-	-		2-Nitrotoluene #15
26.611		-	-	-		4-Nitrotoluene #16
28.665		-	-	-		3-Nitrotoluene #17

Totals : 367.72340

Data File C:\CHEM32\1\DATA\090414\090414 2\5L013540.D
Sample Name: L14081687-15

==========

Acq. Operator : ECL Seq. Line : 24
Acq. Instrument : HPLC5 Location : Vial 23
Injection Date : 9/5/2014 2:34:55 AM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090414\090414 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/5/2014 3:06:01 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 7,1 SOIL

==========

Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
16.198	VV	7.71137	4.84061	37.32775		Nitroglycerin #9
Totals :				37.32775		

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File C:\CHEM32\1\DATA\090414\090414 2\5L013540.D
Sample Name: L14081687-15

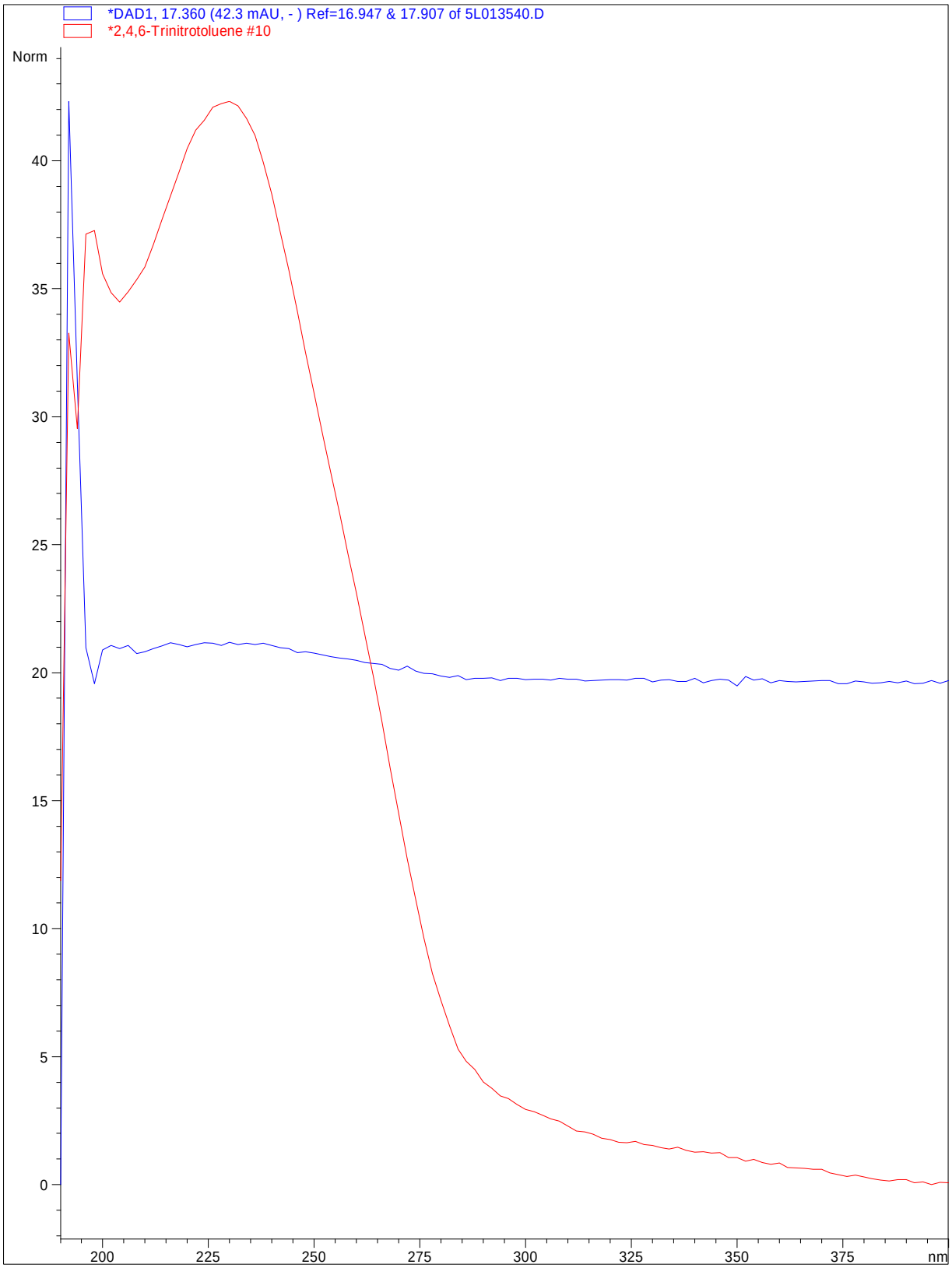
Search result of : DAD1, 17.360 (42.3 mAU, -) Ref=16.947 & 17.907
Library used : C:\CHEM32\SPECLIBS\8330MID.UVL
Library Name :
Parameters : Window 16.492 | 16.492 min

Library search results

#	Match	Entry	Time [min]	ID	ID Name
1	85.7114	8	17.373	0	2,4,6-Trinitrotoluene #10

*** End of Report ***

Target + Library Spectrum



2.1.1.4 Standards Data

Data File C:\CHEM32\1\DATA\070914\070914\5L012964.D
Sample Name: WG483233-01 8330 ICAL 2500 PPB

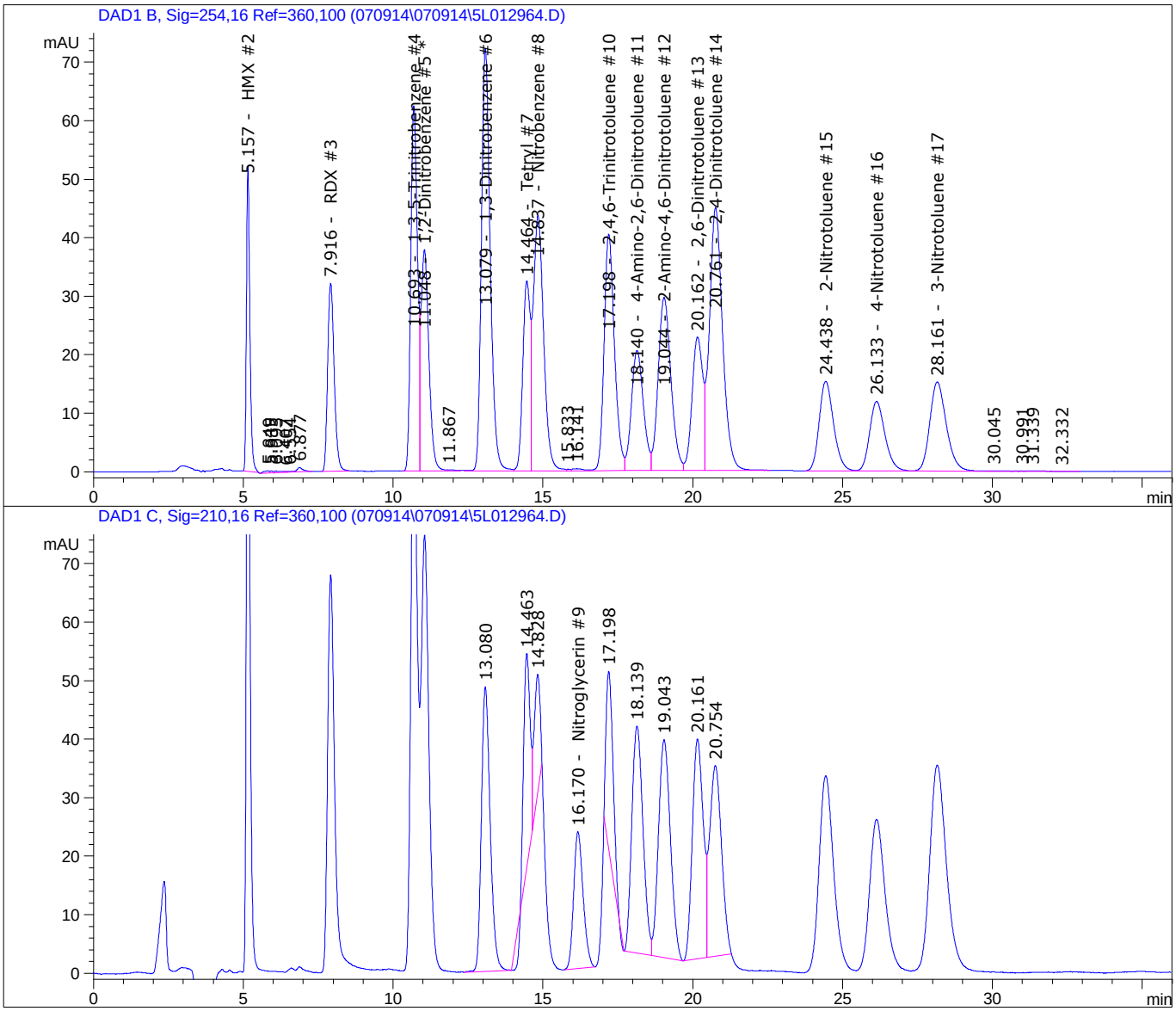
==========

Acq. Operator	: ECL	Seq. Line :	1
Acq. Instrument	: HPLC5	Location :	Vial 2
Injection Date	: 7/9/2014 1:26:31 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/10/2014 1:37:00 PM by ECL
(modified after loading)
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

==========



```
==================================================================
Acq. Operator   : ECL                           Seq. Line :   1
Acq. Instrument : HPLC5                          Location : Vial 2
Injection Date  : 7/9/2014 1:26:31 PM                 Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed    : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/10/2014 1:37:00 PM by ECL
                  (modified after loading)
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65351


==================================================================

==================================================================
                       External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, July 10, 2014 1:36:25 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
  5.157 BBA     414.85123    6.01934 2497.13265    HMX #2
  7.916 BBA     484.30826    5.15431 2496.27363    RDX #3
 10.693 BV      983.38068    2.54320 2500.93433    1,3,5-Trinitrobenzene #4
 11.048 VV      681.76361    3.67110 2502.82341    1,2-Dinitrobenzene #5 *
 13.079 VV     1476.04382    1.69639 2503.95045    1,3-Dinitrobenzene #6
 14.464 VV      561.56879    4.42428 2484.53489    Tetryl #7
 14.837 VV     1046.62891    2.39604 2507.76710    Nitrobenzene #8
 17.198 VV      967.20288    2.58632 2501.50061    2,4,6-Trinitrotoluene #10
 18.140 VV      570.30542    4.38038 2498.15394    4-Amino-2,6-Dinitrotoluene #11
 19.044 VV      877.05902    2.85036 2499.93268    2-Amino-4,6-Dinitrotoluene #12
 20.162 VV      566.14679    4.40596 2494.42225    2,6-Dinitrotoluene #13
 20.761 VV     1377.43542    1.81685 2502.59254    2,4-Dinitrotoluene #14
 24.438 BV      510.65686    4.89374 2499.02167    2-Nitrotoluene #15
 26.133 VV      425.73886    5.87562 2501.48152    4-Nitrotoluene #16
 28.161 VV      588.01941    4.25470 2501.84577    3-Nitrotoluene #17

Totals :                               3.74924e4
```

Data File C:\CHEM32\1\DATA\070914\070914\5L012964.D
Sample Name: WG483233-01 8330 ICAL 2500 PPB

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :   1
Acq. Instrument : HPLC5                          Location : Vial 2
Injection Date  : 7/9/2014 1:26:31 PM                 Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed    : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/10/2014 1:37:00 PM by ECL
                  (modified after loading)
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65351


==================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 16.170 BV      515.99780    4.84900 2502.07589    Nitroglycerin #9

Totals :                              2502.07589


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                           *** End of Report ***
```

Data File C:\CHEM32\1\DATA\070914\070914\5L012965.D
Sample Name: WG483233-02 8330 ICAL 1000 PPB

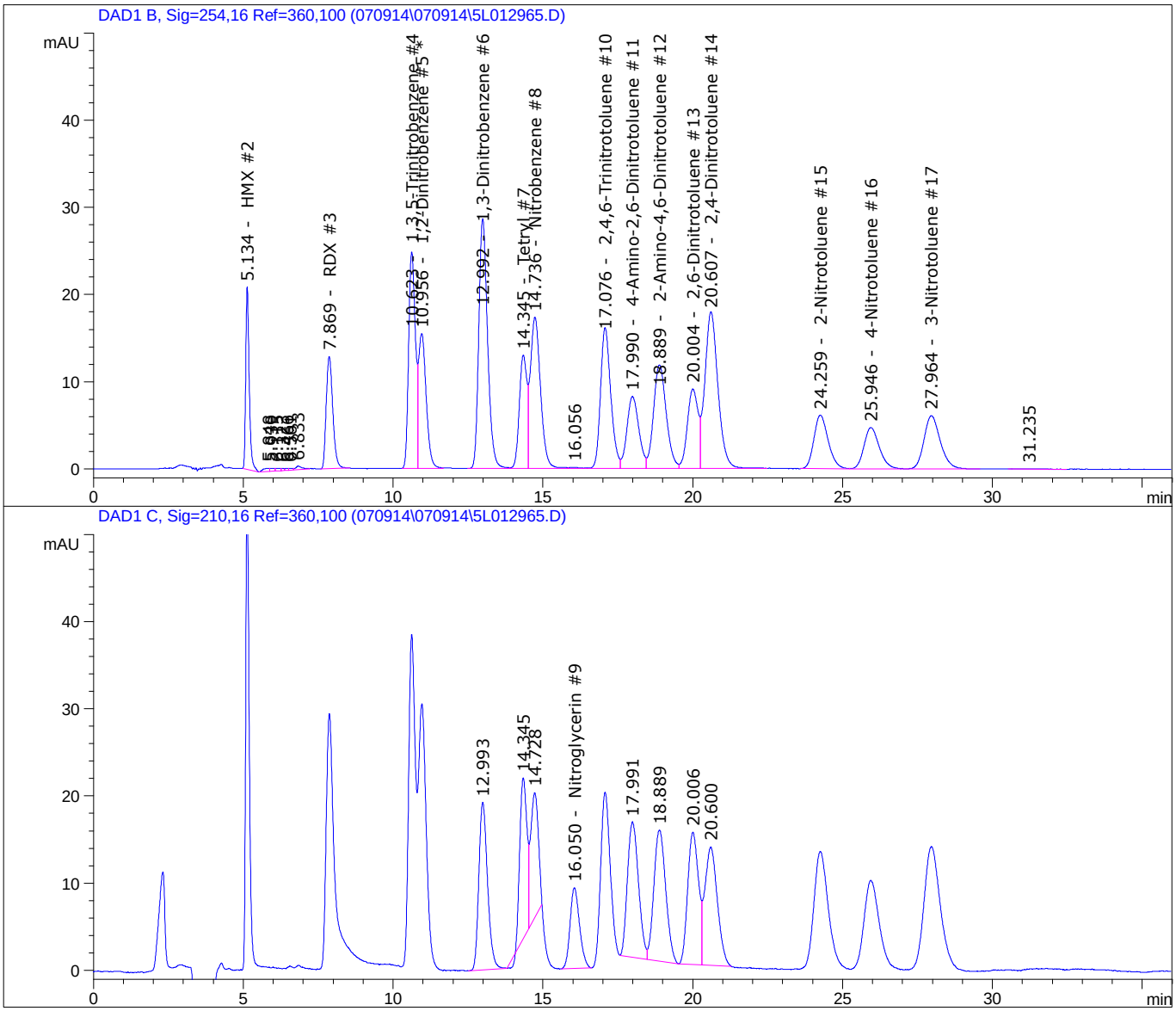
==========

Acq. Operator	: ECL	Seq. Line :	2
Acq. Instrument	: HPLC5	Location :	Vial 3
Injection Date	: 7/9/2014 2:05:37 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/10/2014 1:37:16 PM by ECL
(modified after loading)
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

==========



```
==================================================================
Acq. Operator   : ECL                           Seq. Line :   2
Acq. Instrument : HPLC5                          Location : Vial 3
Injection Date  : 7/9/2014 2:05:37 PM                 Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed    : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/10/2014 1:37:16 PM by ECL
                  (modified after loading)
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65351


==================================================================

==================================================================
                       External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, July 10, 2014 1:36:25 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
  5.134 BBA     168.39406    6.01547 1012.96869    HMX #2
  7.869 BBA     195.34581    5.15246 1006.51092    RDX #3
 10.623 BV      389.59302    2.53047  985.85277    1,3,5-Trinitrobenzene #4
 10.956 VV      274.80081    3.70400 1017.86208    1,2-Dinitrobenzene #5 *
 12.992 VV      585.61853    1.70393  997.85422    1,3-Dinitrobenzene #6
 14.345 VV      229.50737    4.31070  989.33824    Tetryl #7
 14.736 VV      413.06210    2.42380 1001.18024    Nitrobenzene #8
 17.076 VV      385.30911    2.58811  997.22381    2,4,6-Trinitrotoluene #10
 17.990 VV      228.31931    4.35863  995.16019    4-Amino-2,6-Dinitrotoluene #11
 18.889 VV      349.45117    2.84012  992.48363    2-Amino-4,6-Dinitrotoluene #12
 20.004 VV      226.93925    4.34049  985.02864    2,6-Dinitrotoluene #13
 20.607 VV      549.58862    1.82568 1003.37500    2,4-Dinitrotoluene #14
 24.259 BV      203.63292    4.86976  991.64432    2-Nitrotoluene #15
 25.946 VV      168.68358    5.85976  988.44451    4-Nitrotoluene #16
 27.964 VV      232.78145    4.24442  988.02338    3-Nitrotoluene #17

Totals :                               1.49530e4
```

Data File C:\CHEM32\1\DATA\070914\070914\5L012965.D
Sample Name: WG483233-02 8330 ICAL 1000 PPB

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :   2
Acq. Instrument : HPLC5                          Location : Vial 3
Injection Date  : 7/9/2014 2:05:37 PM                 Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed    : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/10/2014 1:37:16 PM by ECL
                  (modified after loading)
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65351


==================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 16.050 BV      205.25853    4.85696  996.93331    Nitroglycerin #9

Totals :                               996.93331


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                           *** End of Report ***
```

Data File C:\CHEM32\1\DATA\070914\070914\5L012966.D
Sample Name: WG483233-03 8330 ICAL 500 PPB

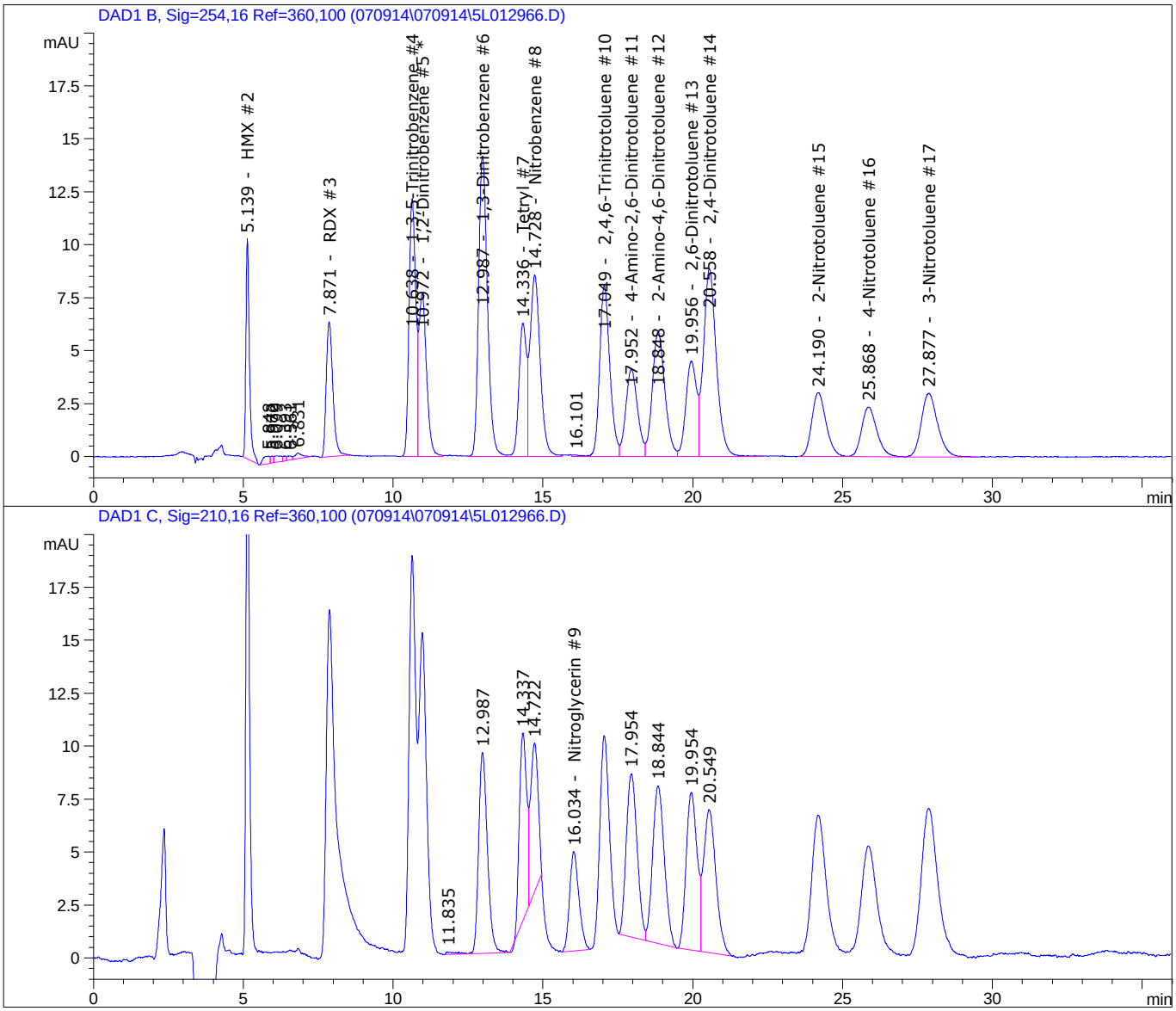
==========

Acq. Operator	: ECL	Seq. Line :	3
Acq. Instrument	: HPLC5	Location :	Vial 4
Injection Date	: 7/9/2014 2:44:44 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/10/2014 1:37:52 PM by ECL
(modified after loading)
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

==========



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    ==================================================================
    Acq. Operator   : ECL                           Seq. Line :   3
    Acq. Instrument : HPLC5                          Location : Vial 4
    Injection Date  : 7/9/2014 2:44:44 PM                 Inj :   1
                                                   Inj Volume : 100 µl
    Acq. Method     : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
    Last changed    : 5/30/2014 10:00:02 AM by ECL
    Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
    Last changed    : 7/10/2014 1:37:52 PM by ECL
                      (modified after loading)
    Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

    Sample Info     : 1,1  STD65351


    ==================================================================

    ==================================================================
                          External Standard Report
    ==================================================================

    Sorted By             :      Signal
    Calib. Data Modified  :      Thursday, July 10, 2014 1:37:49 PM
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Use Multiplier & Dilution Factor with ISTDs

    Signal 1: DAD1 B, Sig=254,16 Ref=360,100

    RetTime  Type     Area     Amt/Area    Amount   Grp   Name
     [min]          [mAU*s]                [ug/L]
    -------|------|----------|----------|----------|--|------------------
      5.139 BBA      84.86152    5.96457  506.16231    HMX #2
      7.871 VBA      98.46990    5.14900  507.02150    RDX #3
     10.638 BV      191.39067    2.54928  487.90879    1,3,5-Trinitrobenzene #4
     10.972 VV      136.07069    3.67779  500.43986    1,2-Dinitrobenzene #5 *
     12.987 VV      288.89835    1.70895  493.71254    1,3-Dinitrobenzene #6
     14.336 VV      111.64665    4.34012  484.55975    Tetryl #7
     14.728 VV      203.07185    2.43113  493.69426    Nitrobenzene #8
     17.049 VV      190.71613    2.59432  494.77946    2,4,6-Trinitrotoluene #10
     17.952 VV      112.67506    4.37305  492.73364    4-Amino-2,6-Dinitrotoluene #11
     18.848 VV      172.49153    2.85240  492.01463    2-Amino-4,6-Dinitrotoluene #12
     19.956 VV      111.60930    4.36884  487.60324    2,6-Dinitrotoluene #13
     20.558 VB      269.68353    1.82948  493.38132    2,4-Dinitrotoluene #14
     24.190 BV      100.31861    4.89573  491.13258    2-Nitrotoluene #15
     25.868 VV       83.41754    5.89519  491.76208    4-Nitrotoluene #16
     27.877 VB      114.89574    4.27171  490.80180    3-Nitrotoluene #17

    Totals :                               7407.70778
```

Data File C:\CHEM32\1\DATA\070914\070914\5L012966.D
Sample Name: WG483233-03 8330 ICAL 500 PPB

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :   3
Acq. Instrument : HPLC5                          Location : Vial 4
Injection Date  : 7/9/2014 2:44:44 PM                 Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed    : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/10/2014 1:37:52 PM by ECL
                  (modified after loading)
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65351


==================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 16.034 BV      101.56783    4.86975  494.60998    Nitroglycerin #9

Totals :                               494.60998


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                           *** End of Report ***
```

Data File C:\CHEM32\1\DATA\070914\070914\5L012967.D
Sample Name: WG483233-04 8330 ICAL 100 PPB

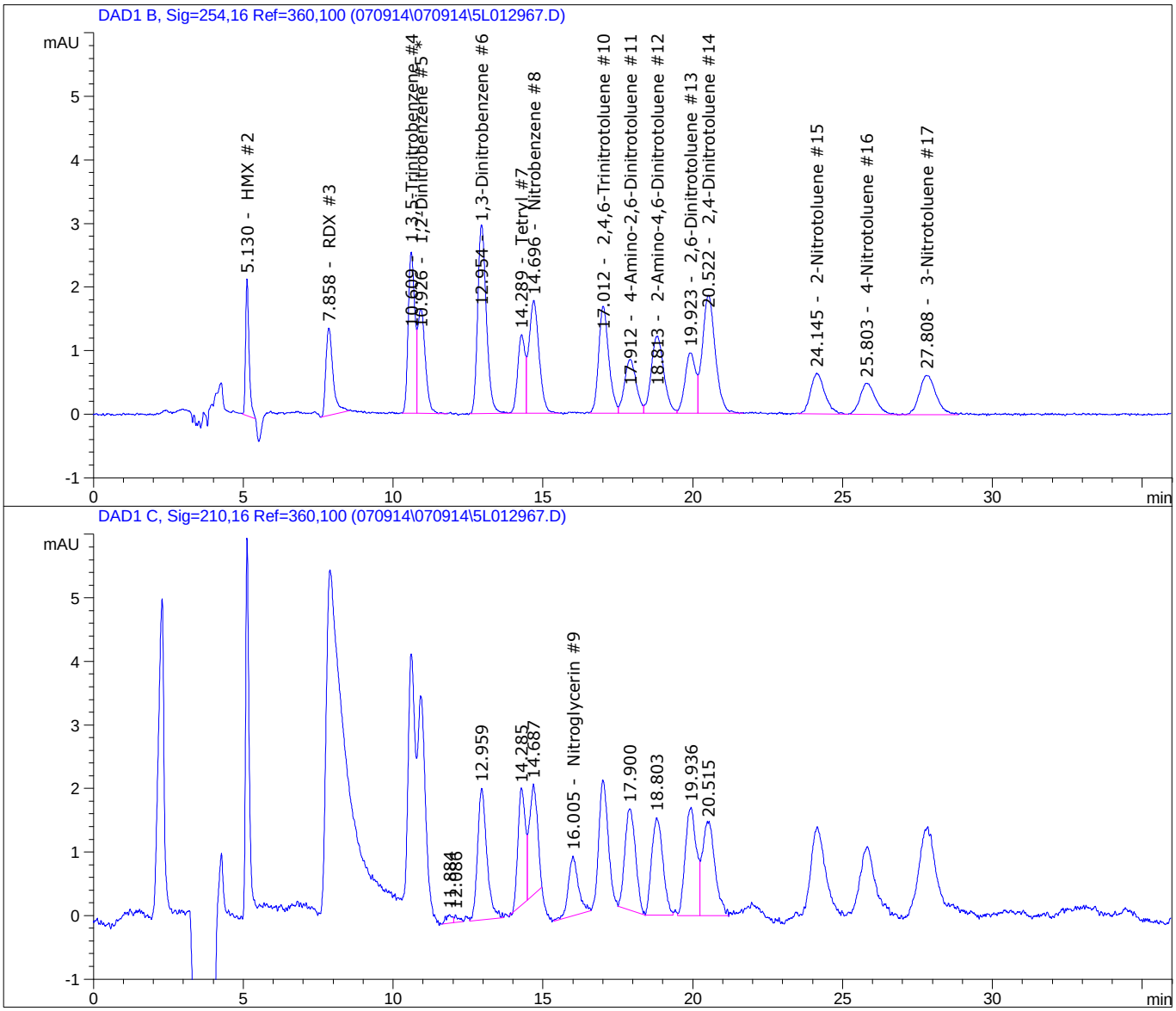
==========

Acq. Operator	: ECL	Seq. Line :	4
Acq. Instrument	: HPLC5	Location :	Vial 5
Injection Date	: 7/9/2014 3:23:45 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/10/2014 1:43:50 PM by ECL
(modified after loading)
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

==========



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==================================================================
Acq. Operator   : ECL                           Seq. Line :   4
Acq. Instrument : HPLC5                          Location : Vial 5
Injection Date  : 7/9/2014 3:23:45 PM                 Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed    : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/10/2014 1:43:50 PM by ECL
                  (modified after loading)
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65351


==================================================================

==================================================================
                       External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, July 10, 2014 1:43:48 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
  5.130 BBA      17.39457    5.67223   98.66602    HMX #2
  7.858 BBA      22.64245    4.91813  111.35854    RDX #3
 10.609 BV       39.60133    2.60088  102.99843    1,3,5-Trinitrobenzene #4
 10.926 VB       28.70009    3.57993  102.74441    1,2-Dinitrobenzene #5 *
 12.954 BV       60.05067    1.74720  104.92068    1,3-Dinitrobenzene #6
 14.289 VV       21.59427    4.15052   89.62750    Tetryl #7
 14.696 VB       41.73262    2.55164  106.48649    Nitrobenzene #8
 17.012 BV       39.80295    2.61292  104.00185    2,4,6-Trinitrotoluene #10
 17.912 VV       23.25091    4.35559  101.27152    4-Amino-2,6-Dinitrotoluene #11
 18.813 VV       35.72176    2.86469  102.33161    2-Amino-4,6-Dinitrotoluene #12
 19.923 VV       23.39913    4.27063   99.92904    2,6-Dinitrotoluene #13
 20.522 VB       55.68262    1.86825  104.02887    2,4-Dinitrotoluene #14
 24.145 BB       21.18709    4.90195  103.85799    2-Nitrotoluene #15
 25.803 BV       17.80792    5.94300  105.83256    4-Nitrotoluene #16
 27.808 VV       24.17198    4.34376  104.99734    3-Nitrotoluene #17

Totals :                                1543.05284
```

Data File C:\CHEM32\1\DATA\070914\070914\5L012967.D
Sample Name: WG483233-04 8330 ICAL 100 PPB

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :   4
Acq. Instrument : HPLC5                          Location : Vial 5
Injection Date  : 7/9/2014 3:23:45 PM                 Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed    : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/10/2014 1:43:50 PM by ECL
                  (modified after loading)
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65351


==================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 16.005 BV       21.88299    4.93730  108.04290    Nitroglycerin #9

Totals :                               108.04290


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                           *** End of Report ***
```

Data File C:\CHEM32\1\DATA\070914\070914\5L012968.D
Sample Name: WG483233-05 8330 ICAL 50 PPB

==========

Acq. Operator	: ECL	Seq. Line :	5
Acq. Instrument	: HPLC5	Location :	Vial 6
Injection Date	: 7/9/2014 4:02:48 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/10/2014 1:44:37 PM by ECL
(modified after loading)
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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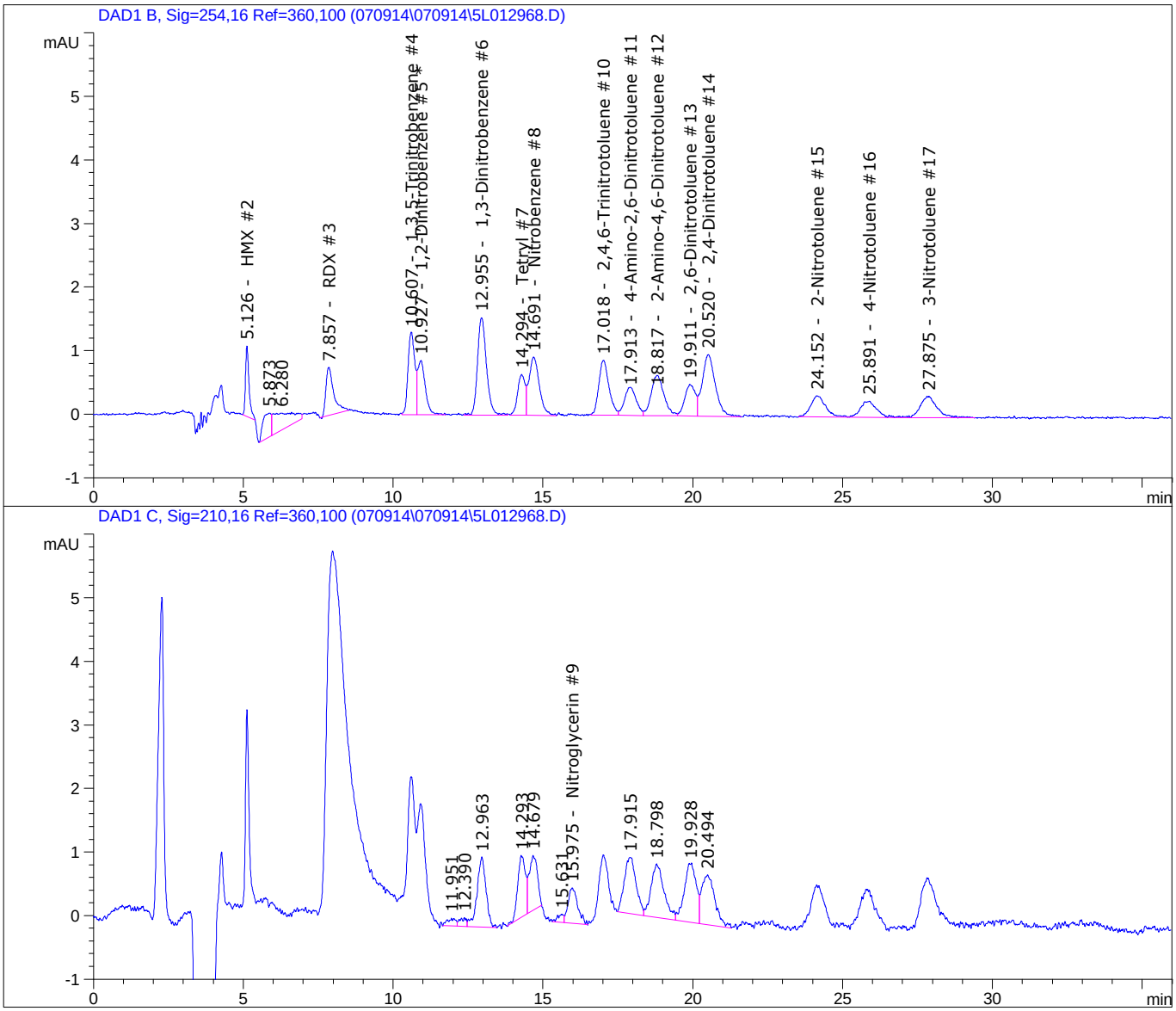

Data File C:\CHEM32\1\DATA\070914\070914\5L012968.D
Sample Name: WG483233-05 8330 ICAL 50 PPB

==========

Acq. Operator : ECL Seq. Line : 5
Acq. Instrument : HPLC5 Location : Vial 6
Injection Date : 7/9/2014 4:02:48 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/10/2014 1:44:37 PM by ECL
(modified after loading)
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : Thursday, July 10, 2014 1:44:34 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.126	BBA	9.14081	5.20970	47.62092		HMX #2
7.857	BBA	13.91896	4.28502	59.64300		RDX #3
10.607	BV	20.38415	2.67574	54.54273		1,3,5-Trinitrobenzene #4
10.927	VB	15.42879	3.47784	53.65894		1,2-Dinitrobenzene #5 *
12.955	BB	31.77382	1.75262	55.68738		1,3-Dinitrobenzene #6
14.294	BV	11.32651	4.17745	47.31595		Tetryl #7
14.691	VV	21.95632	2.60068	57.10142		Nitrobenzene #8
17.018	BV	20.27113	2.61027	52.91311		2,4,6-Trinitrotoluene #10
17.913	VV	12.11038	4.33988	52.55759		4-Amino-2,6-Dinitrotoluene #11
18.817	VV	18.98899	2.86242	54.35451		2-Amino-4,6-Dinitrotoluene #12
19.911	VV	12.29927	4.23992	52.14796		2,6-Dinitrotoluene #13
20.520	VB	29.66468	1.86209	55.23841		2,4-Dinitrotoluene #14
24.152	BV	11.46259	4.83950	55.47323		2-Nitrotoluene #15
25.891	VV	10.05669	5.81711	58.50082		4-Nitrotoluene #16
27.875	VB	13.30298	4.33866	57.71705		3-Nitrotoluene #17

Totals : 814.47301

Data File C:\CHEM32\1\DATA\070914\070914\5L012968.D
Sample Name: WG483233-05 8330 ICAL 50 PPB

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :   5
Acq. Instrument : HPLC5                          Location : Vial 6
Injection Date  : 7/9/2014 4:02:48 PM                 Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed    : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/10/2014 1:44:37 PM by ECL
                  (modified after loading)
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65351


==================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 15.975 VV       12.55221    4.81277   60.41091    Nitroglycerin #9

Totals :                               60.41091


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                           *** End of Report ***
```

Data File C:\CHEM32\1\DATA\070914\070914\5L012969.D
Sample Name: WG483233-06 8330 ICAL 25 PPB

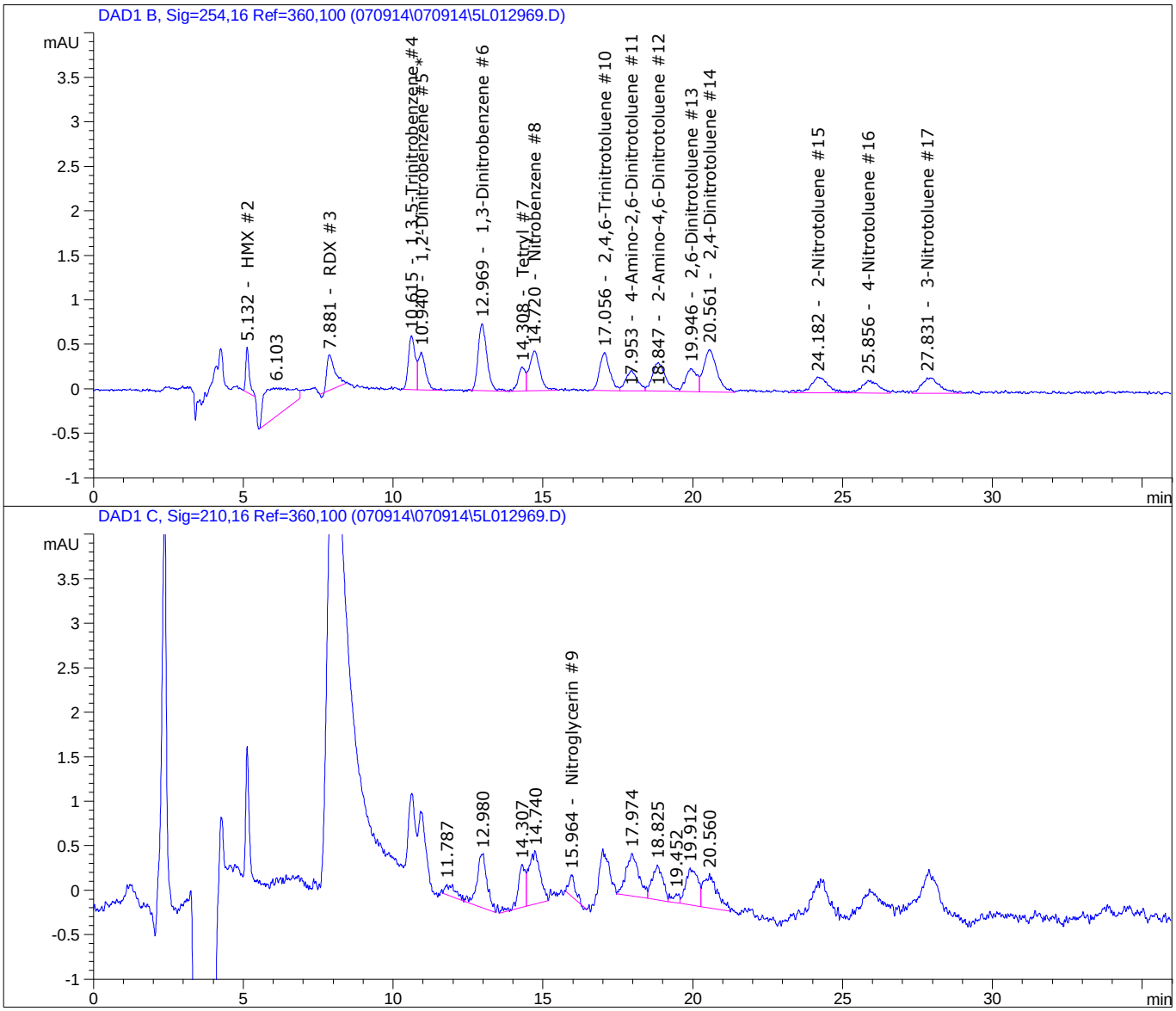
==========

Acq. Operator	: ECL	Seq. Line :	6
Acq. Instrument	: HPLC5	Location :	Vial 7
Injection Date	: 7/9/2014 4:41:52 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/10/2014 1:45:56 PM by ECL
(modified after loading)
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

==========



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==================================================================
Acq. Operator   : ECL                           Seq. Line :   6
Acq. Instrument : HPLC5                          Location : Vial 7
Injection Date  : 7/9/2014 4:41:52 PM                 Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed    : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/10/2014 1:45:56 PM by ECL
                  (modified after loading)
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65351


==================================================================

==================================================================
                       External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, July 10, 2014 1:45:54 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100
```
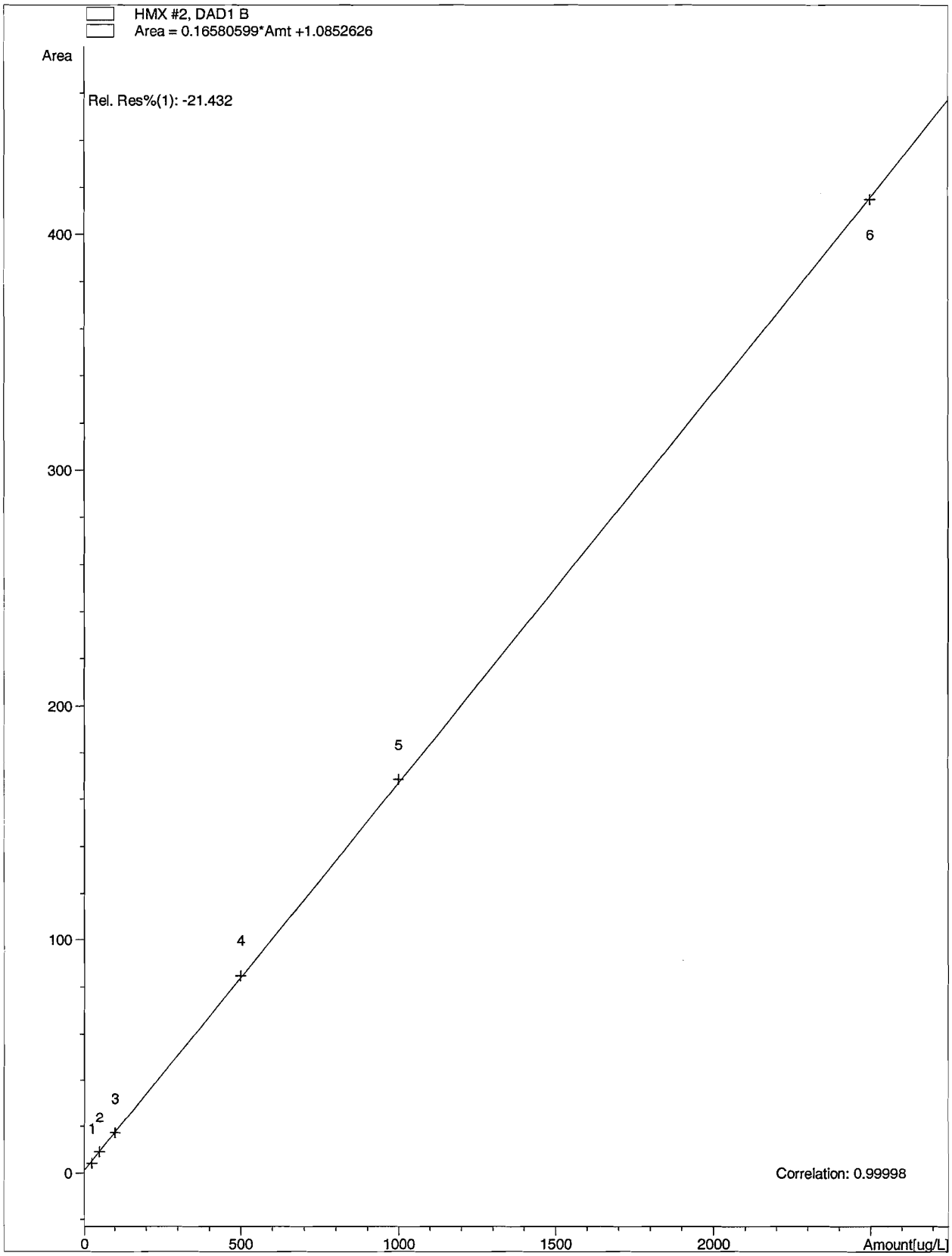

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.132	BBA	4.10941	4.43837	18.23905		HMX #2
7.881	BBA	7.26338	2.96675	21.54861		RDX #3
10.615	BV	9.60365	2.88602	27.71632		1,3,5-Trinitrobenzene #4
10.940	VB	7.20785	3.08939	22.26787		1,2-Dinitrobenzene #5 *
12.969	BV	15.50592	1.77897	27.58458		1,3-Dinitrobenzene #6
14.308	VV	4.55197	4.46380	20.31909		Tetryl #7
14.720	VB	11.06604	2.71552	30.05007		Nitrobenzene #8
17.056	BV	10.06921	2.60926	26.27316		2,4,6-Trinitrotoluene #10
17.953	VV	6.20706	4.25552	26.41432		4-Amino-2,6-Dinitrotoluene #11
18.847	VV	9.87415	2.82387	27.88330		2-Amino-4,6-Dinitrotoluene #12
19.946	VV	6.74628	4.10557	27.69737		2,6-Dinitrotoluene #13
20.561	VV	14.61115	1.86241	27.21198		2,4-Dinitrotoluene #14
24.182	BV	7.37311	4.44260	32.75578		2-Nitrotoluene #15
25.856	VV	5.51677	5.45234	30.07931		4-Nitrotoluene #16
27.831	BB	7.28426	4.18751	30.50287		3-Nitrotoluene #17

Totals : 396.54368

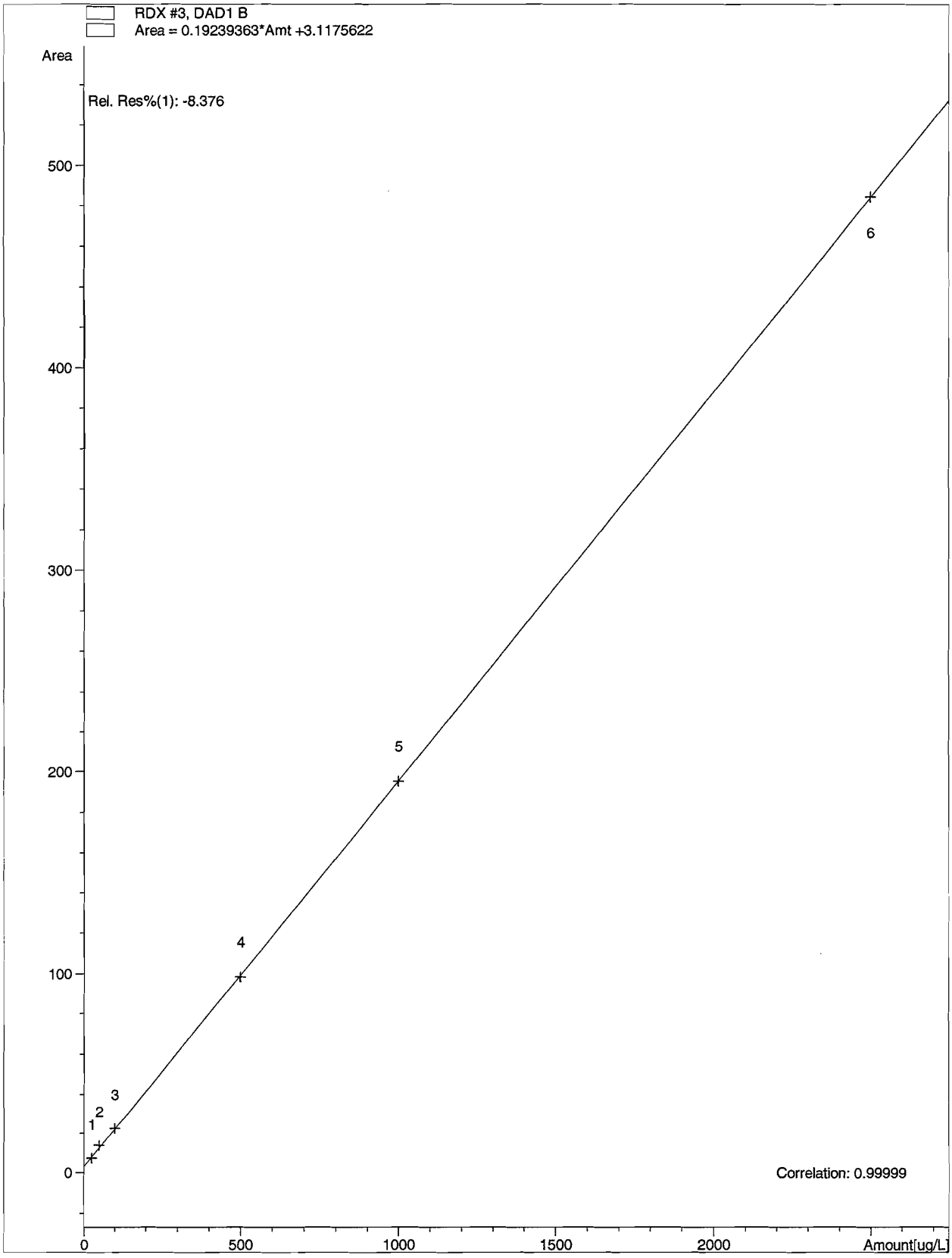
Data File C:\CHEM32\1\DATA\070914\070914\5L012969.D
Sample Name: WG483233-06 8330 ICAL 25 PPB

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :   6
Acq. Instrument : HPLC5                          Location : Vial 7
Injection Date  : 7/9/2014 4:41:52 PM                 Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed    : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/10/2014 1:45:56 PM by ECL
                  (modified after loading)
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65351


==================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 15.964 BV        3.53736    4.82871   17.08088    Nitroglycerin #9

Totals :                                17.08088


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                           *** End of Report ***
```

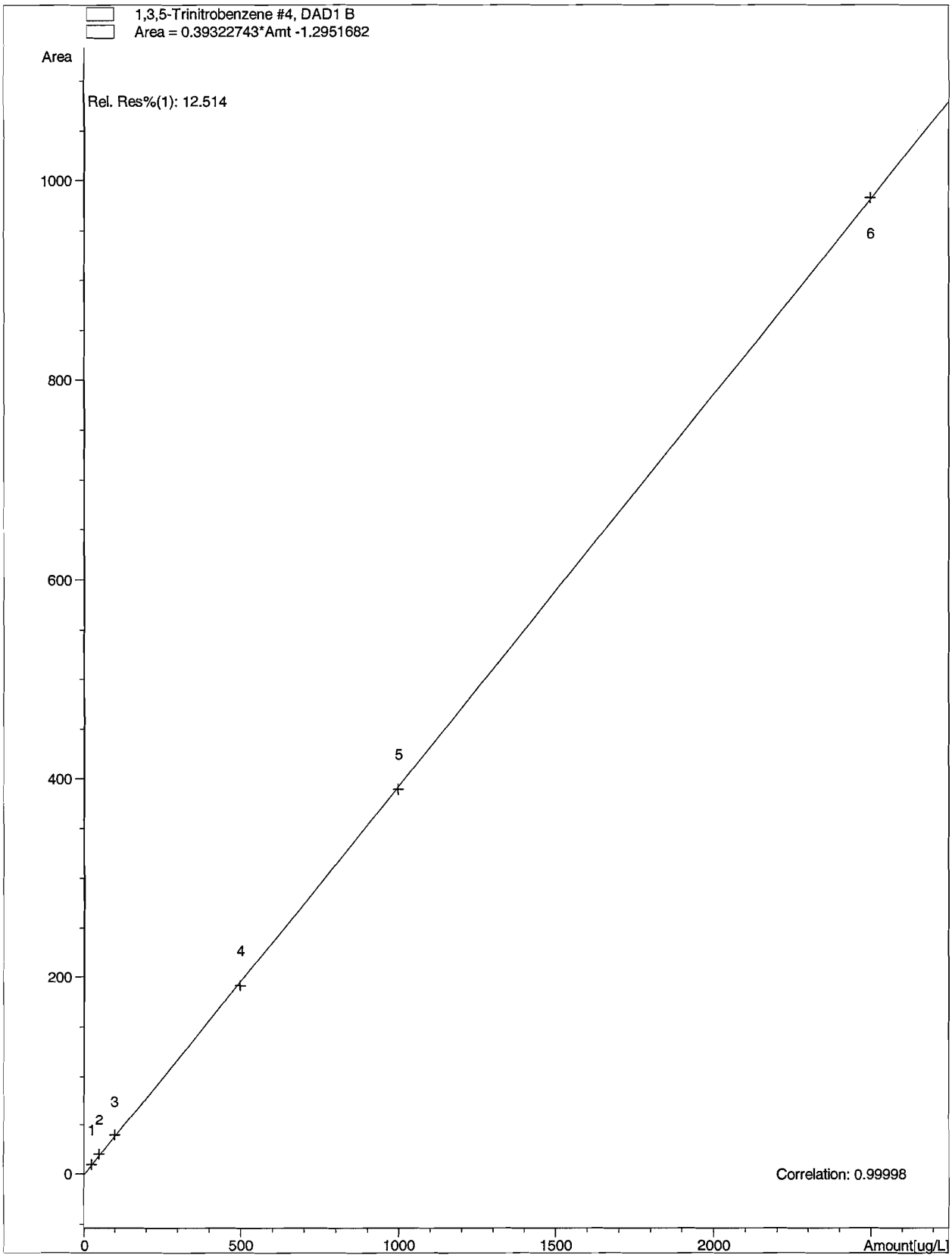
Calibration Curve



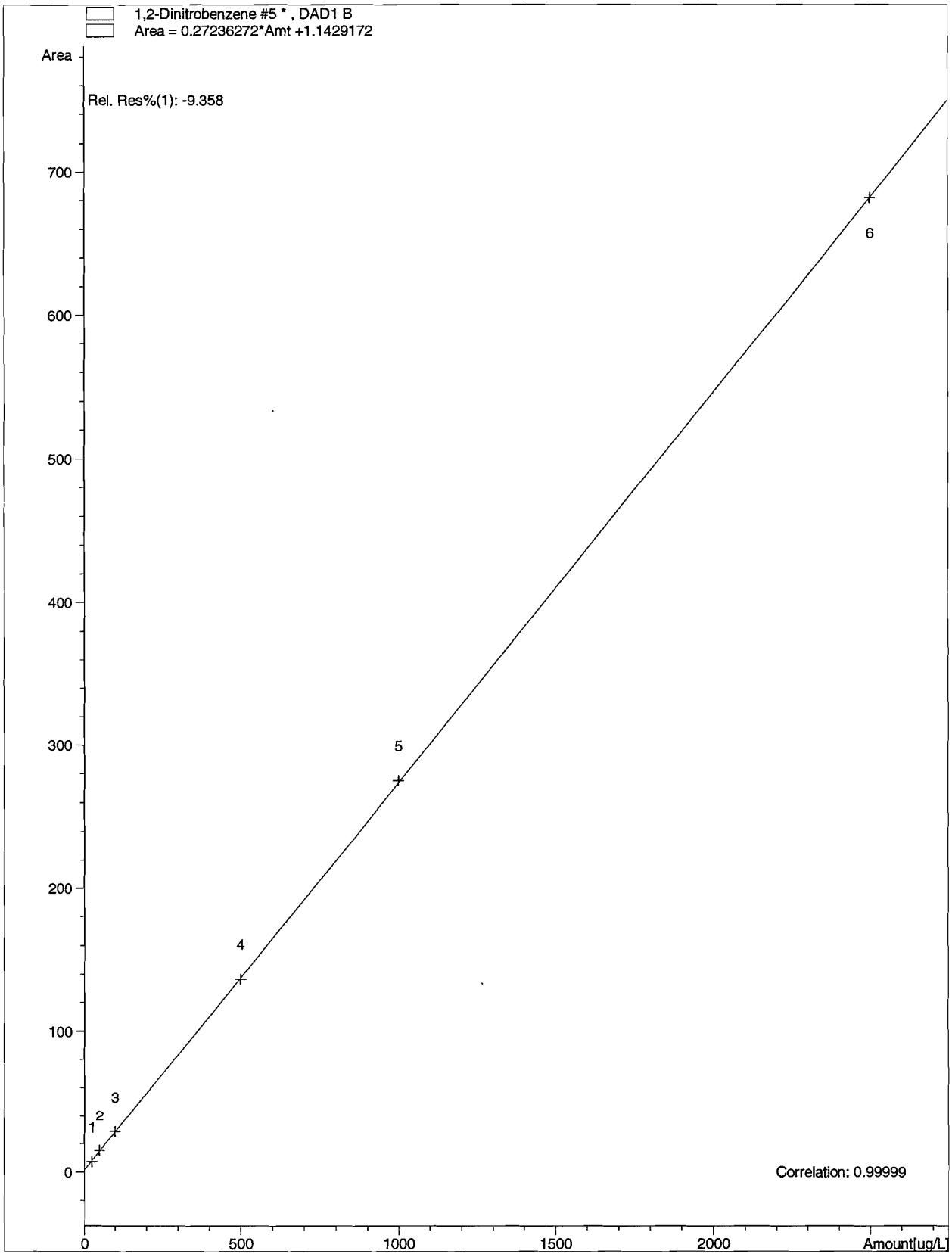
Calibration Curve



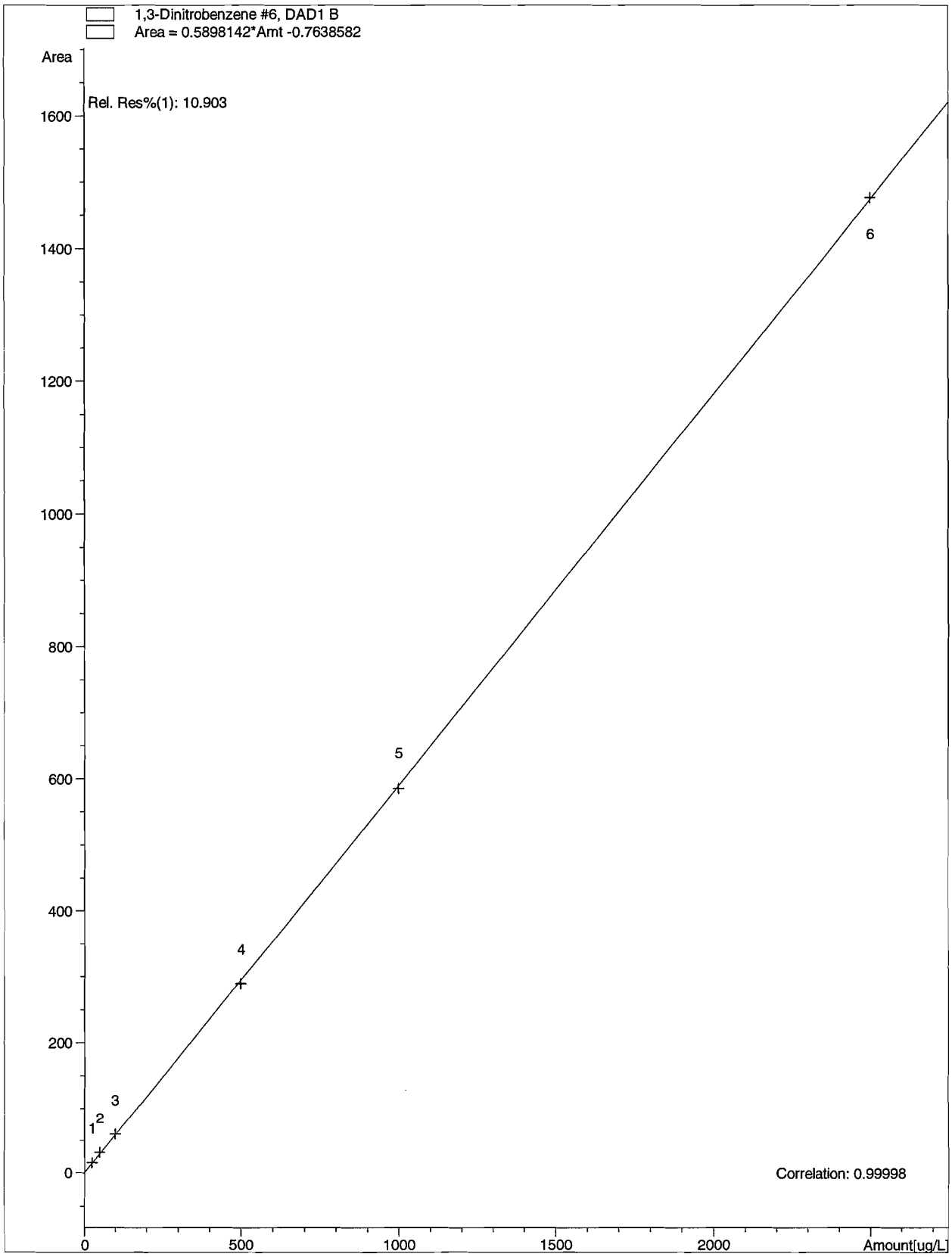
Calibration Curve



Calibration Curve



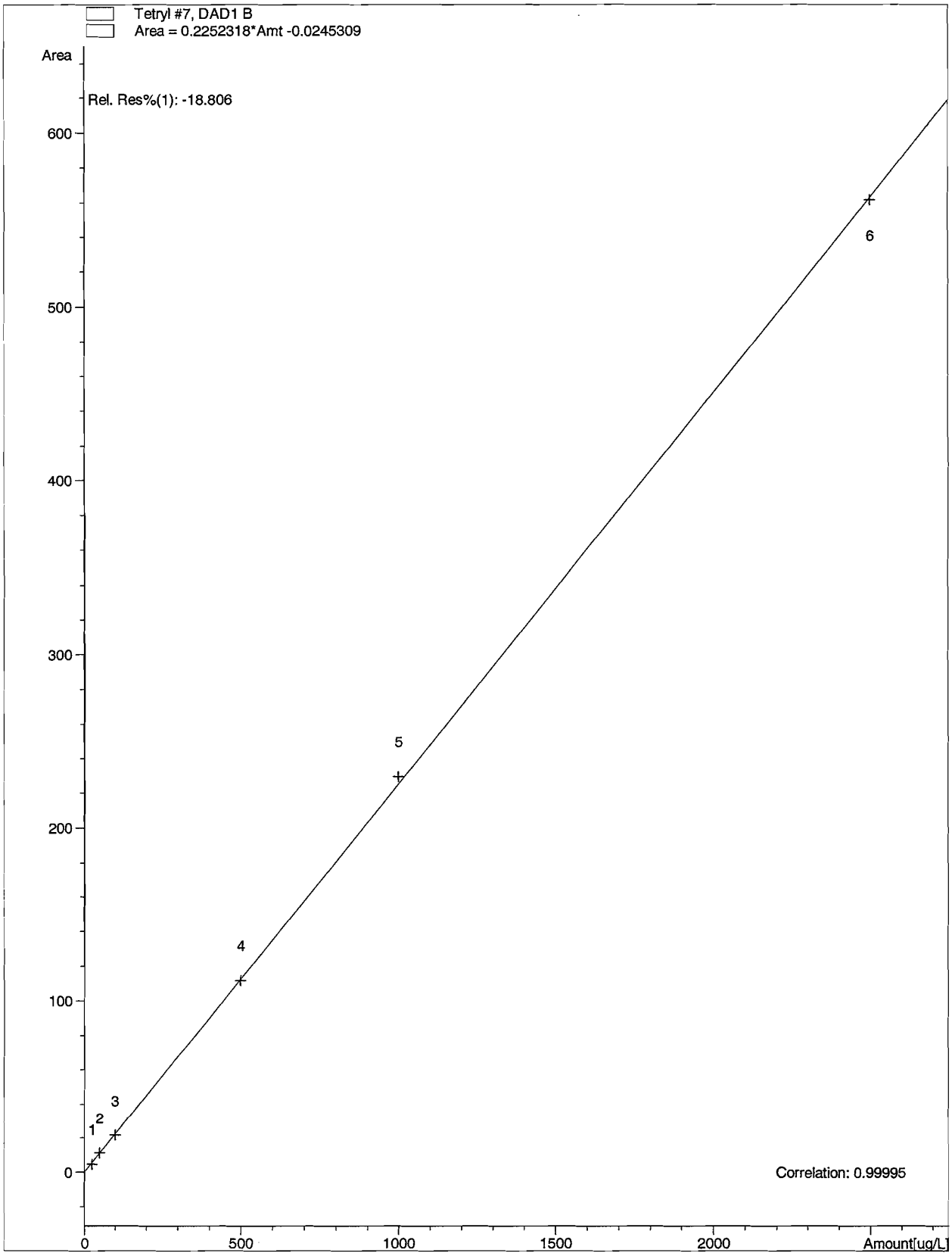
Calibration Curve



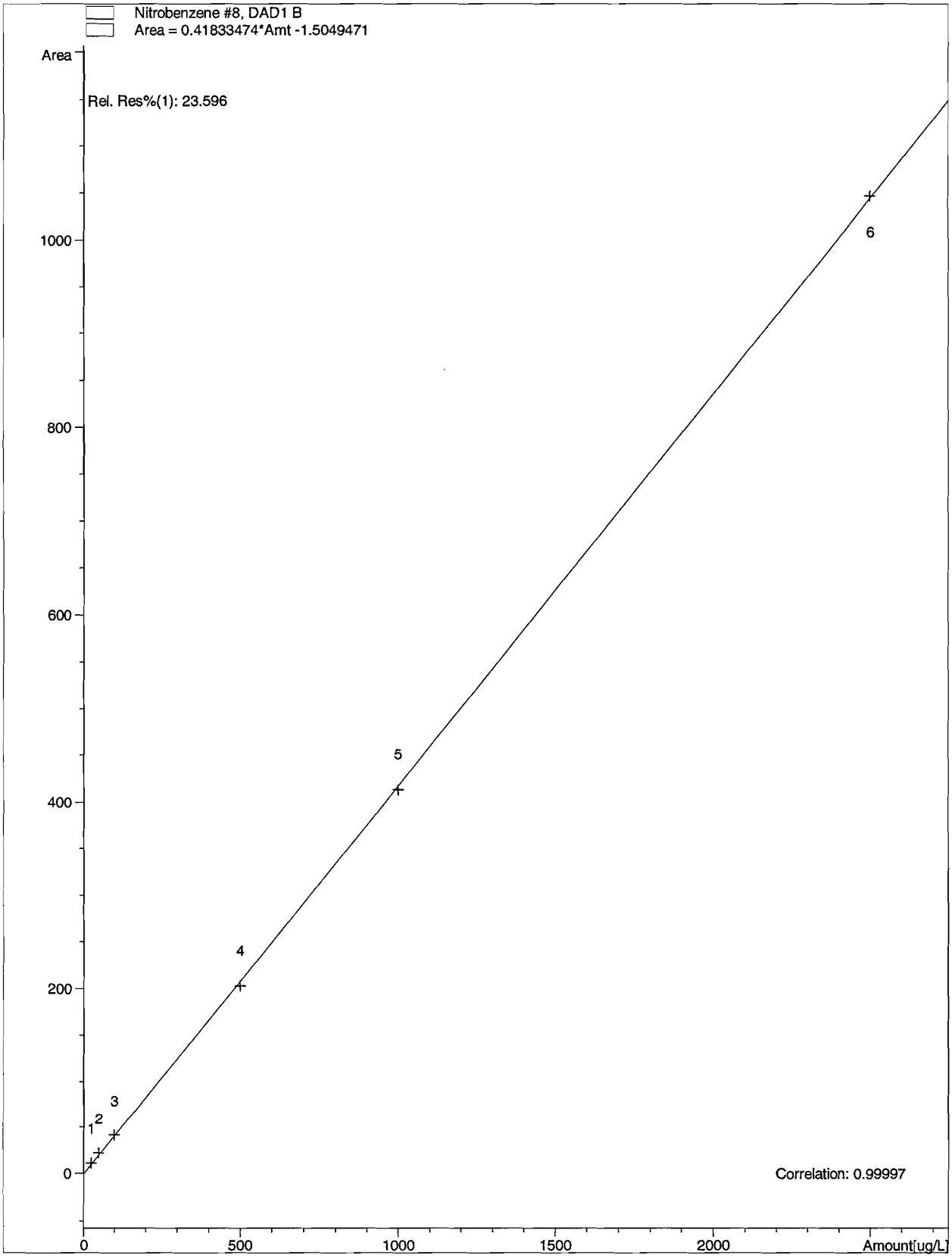
HPLC5 7/10/2014 1:47:17 PM ECL

Page 1 of 1

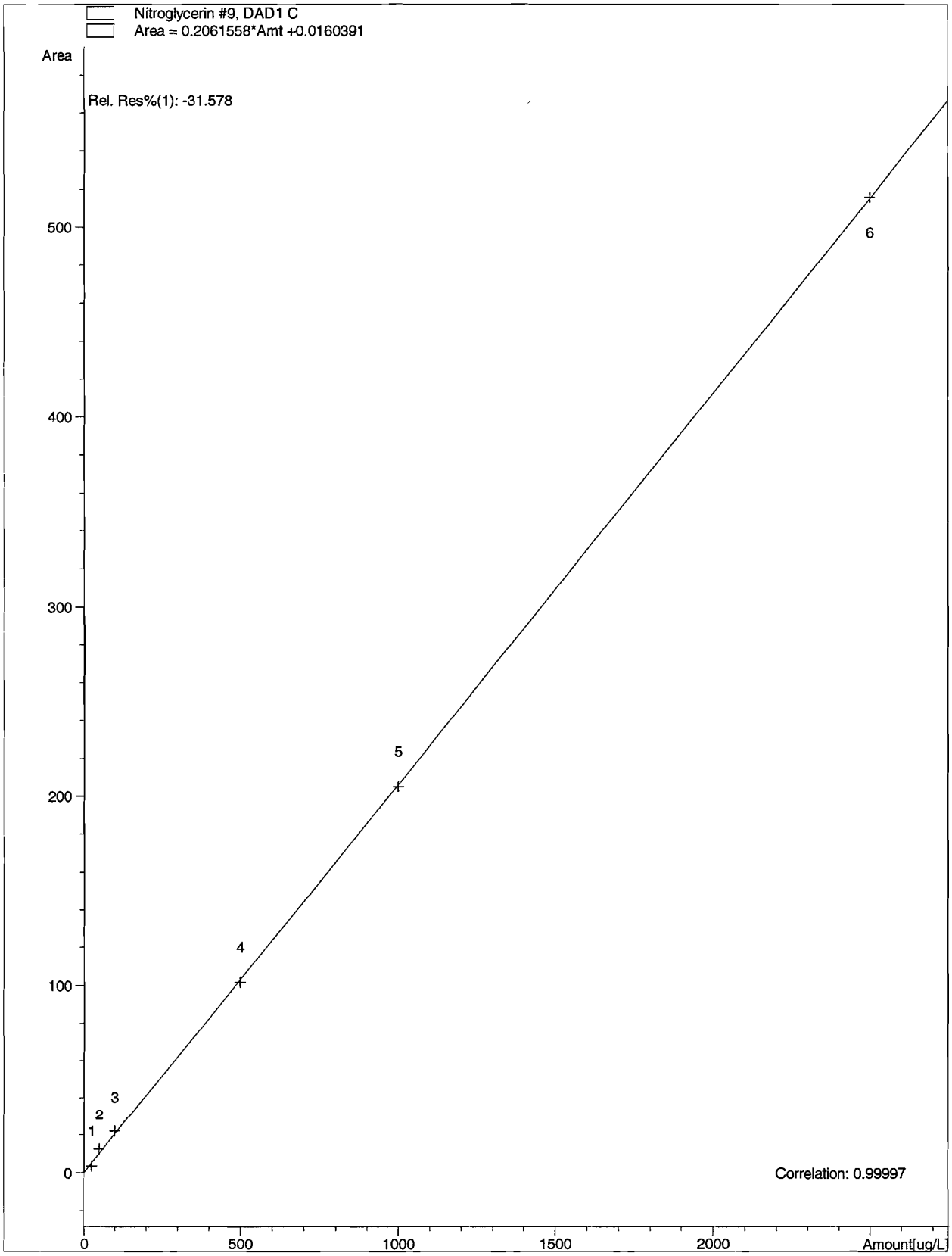
Calibration Curve



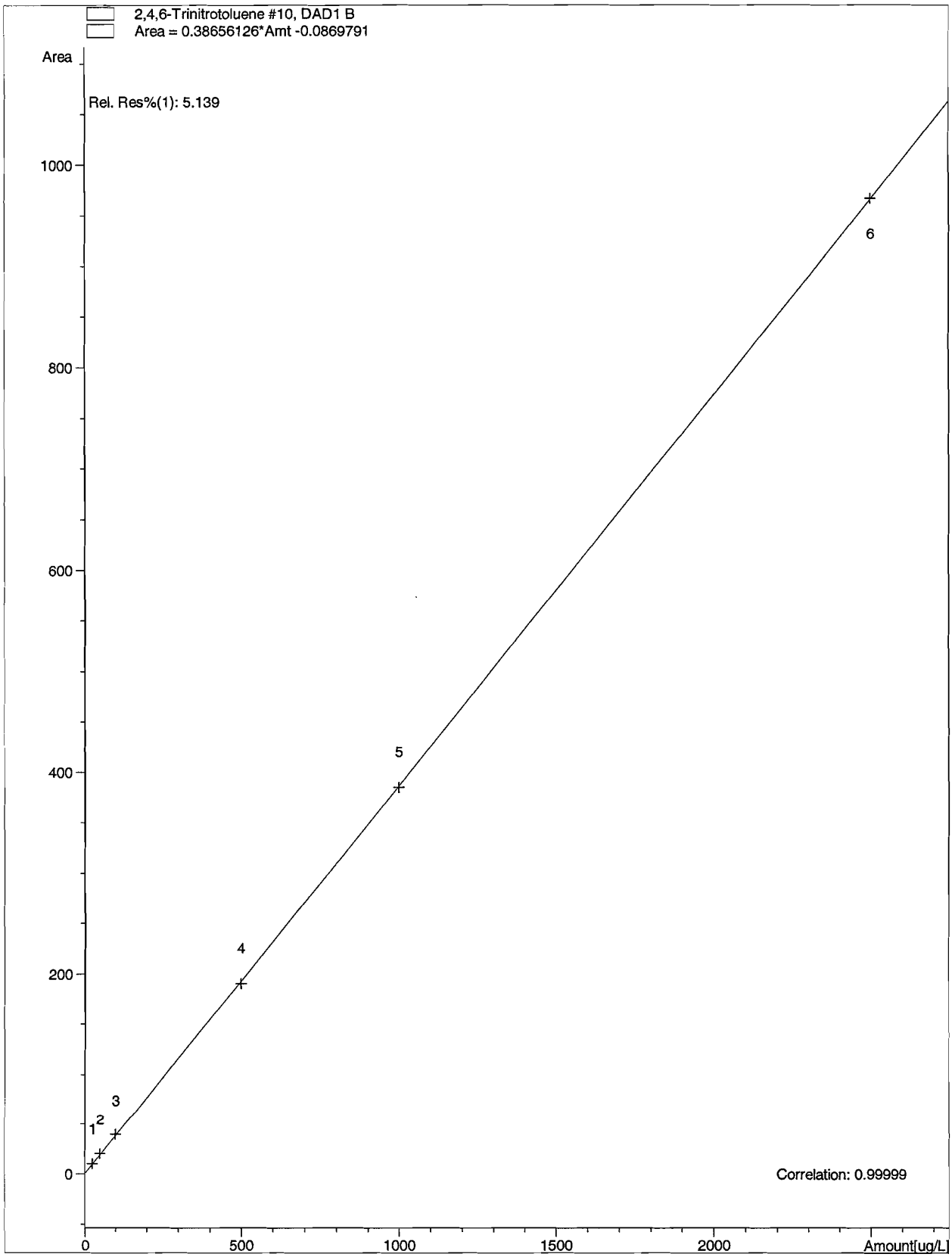
Calibration Curve



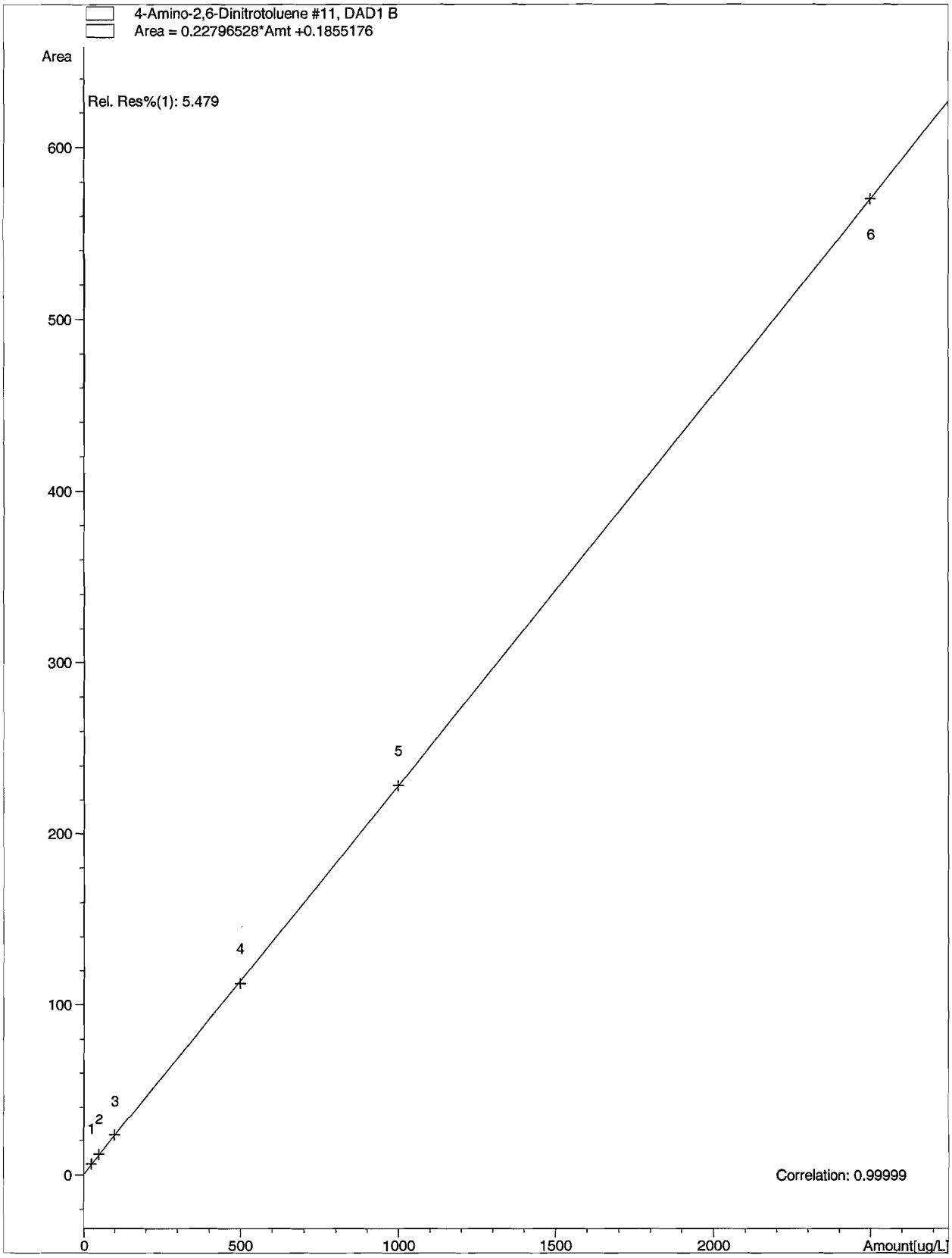
Calibration Curve



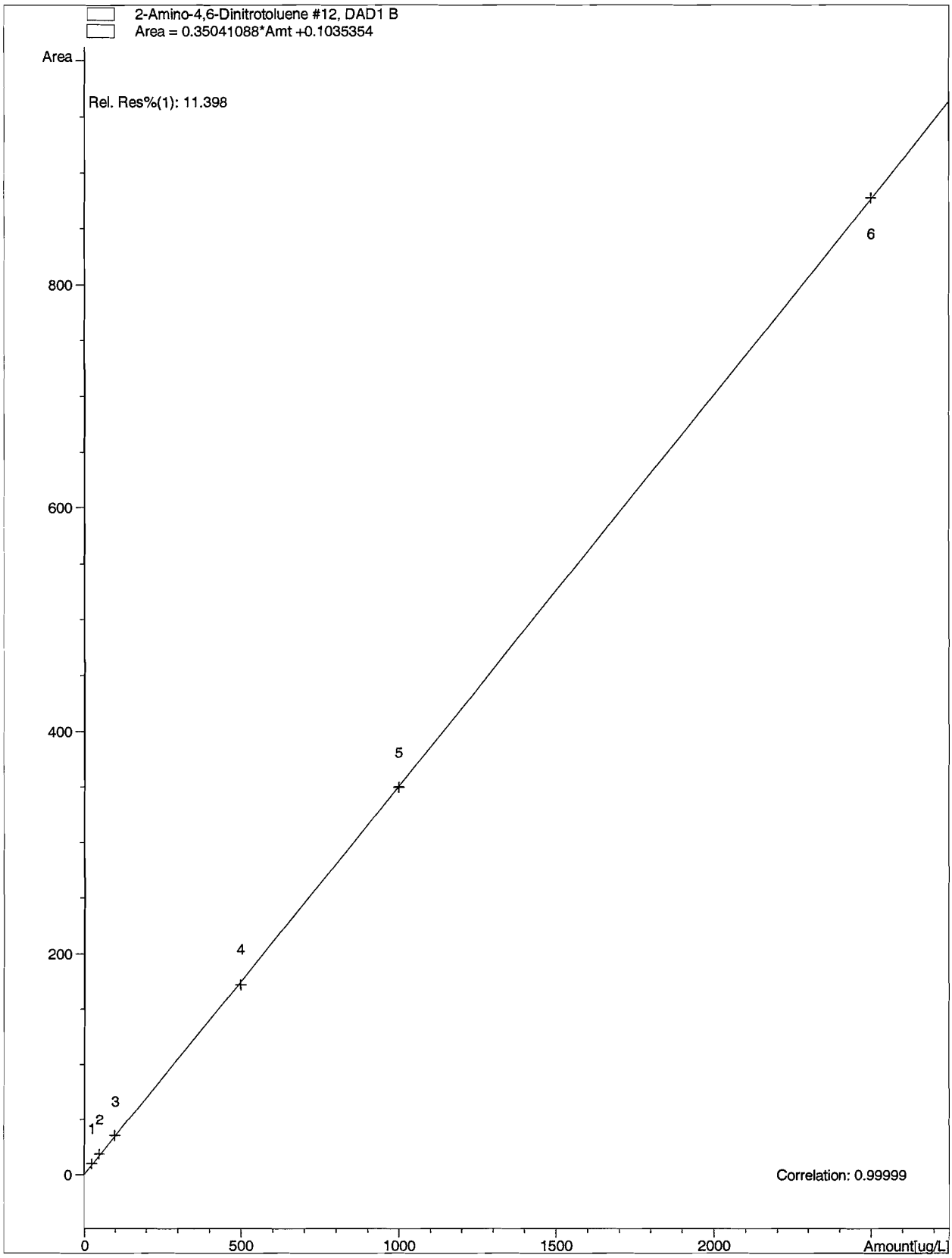
Calibration Curve



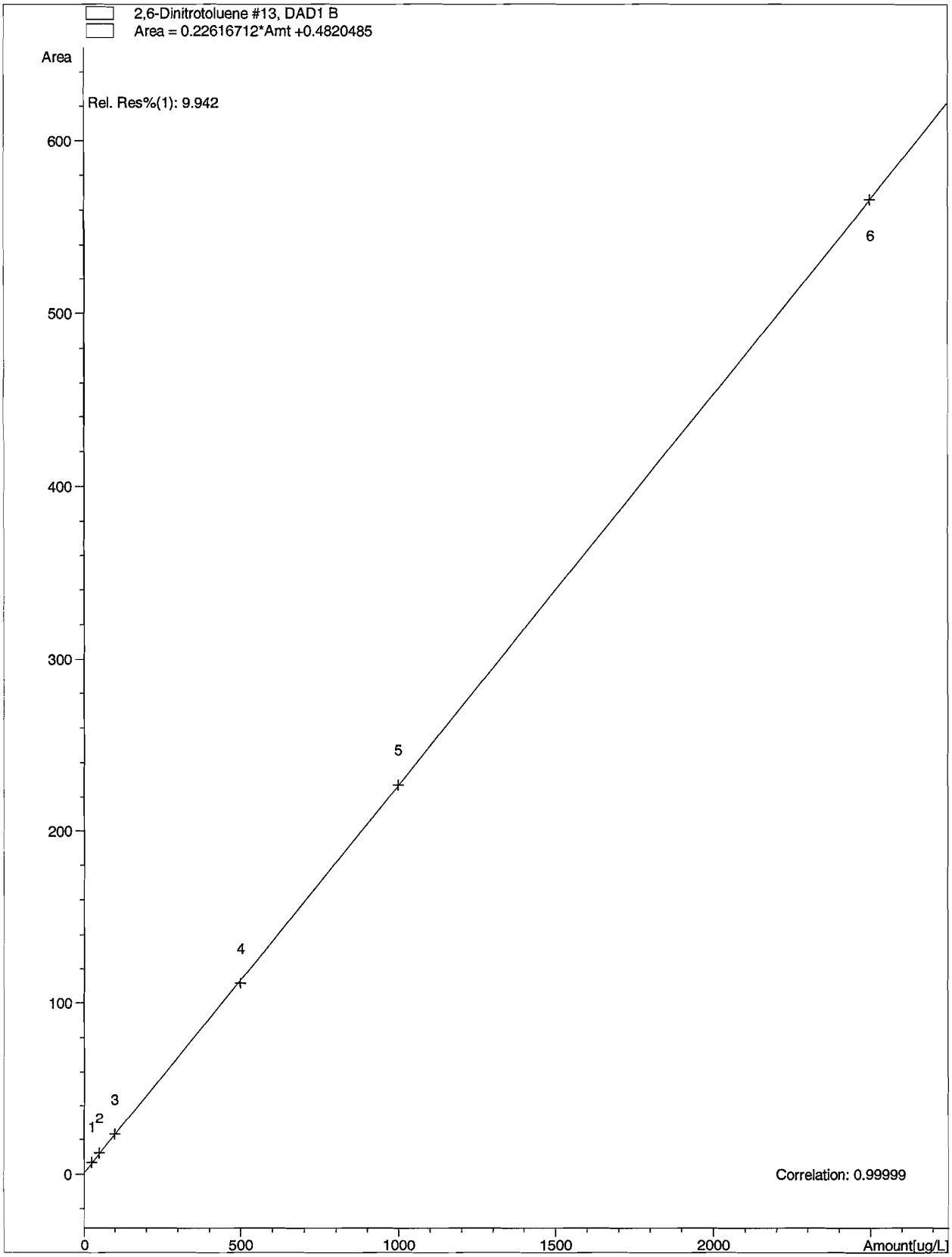
Calibration Curve



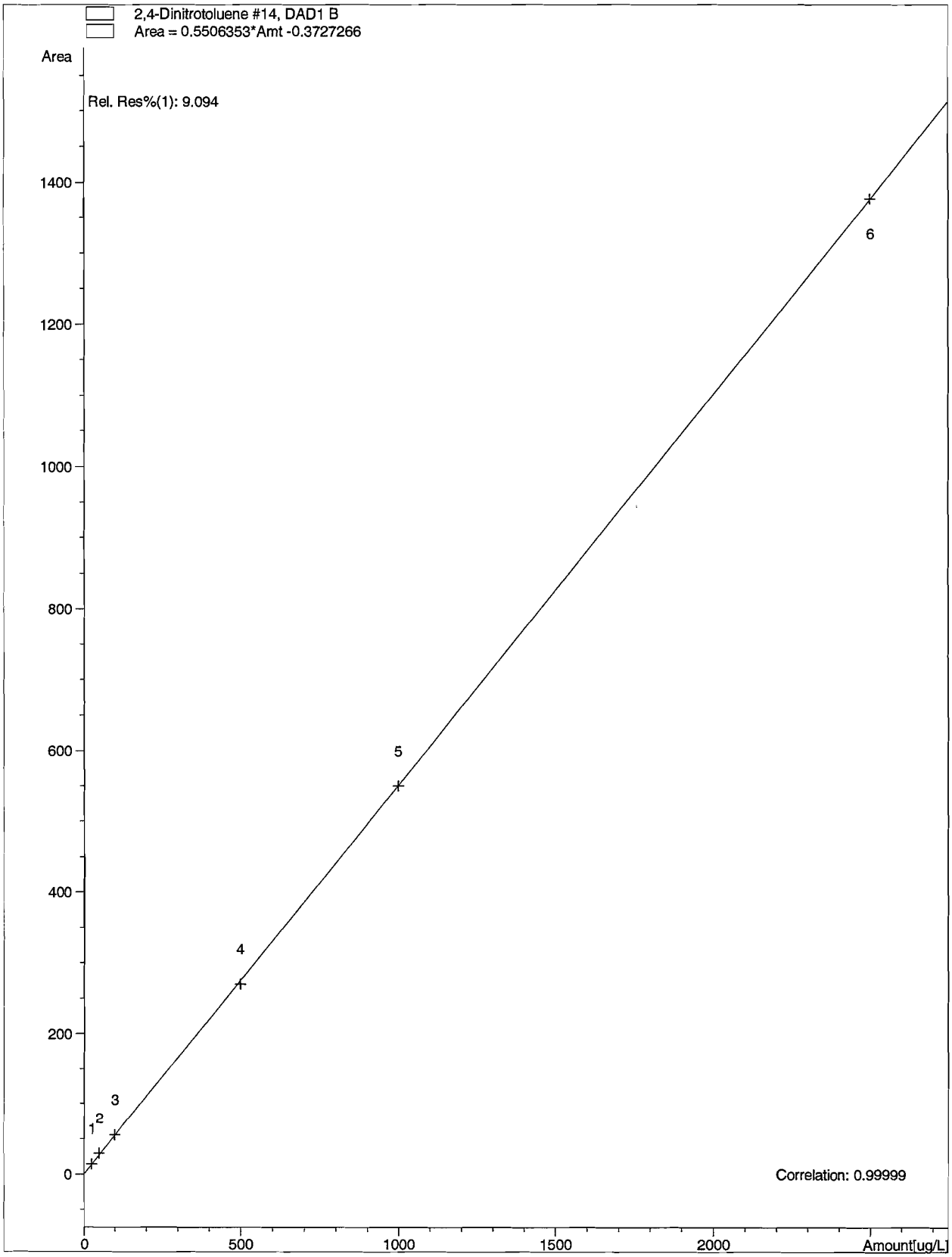
Calibration Curve



Calibration Curve



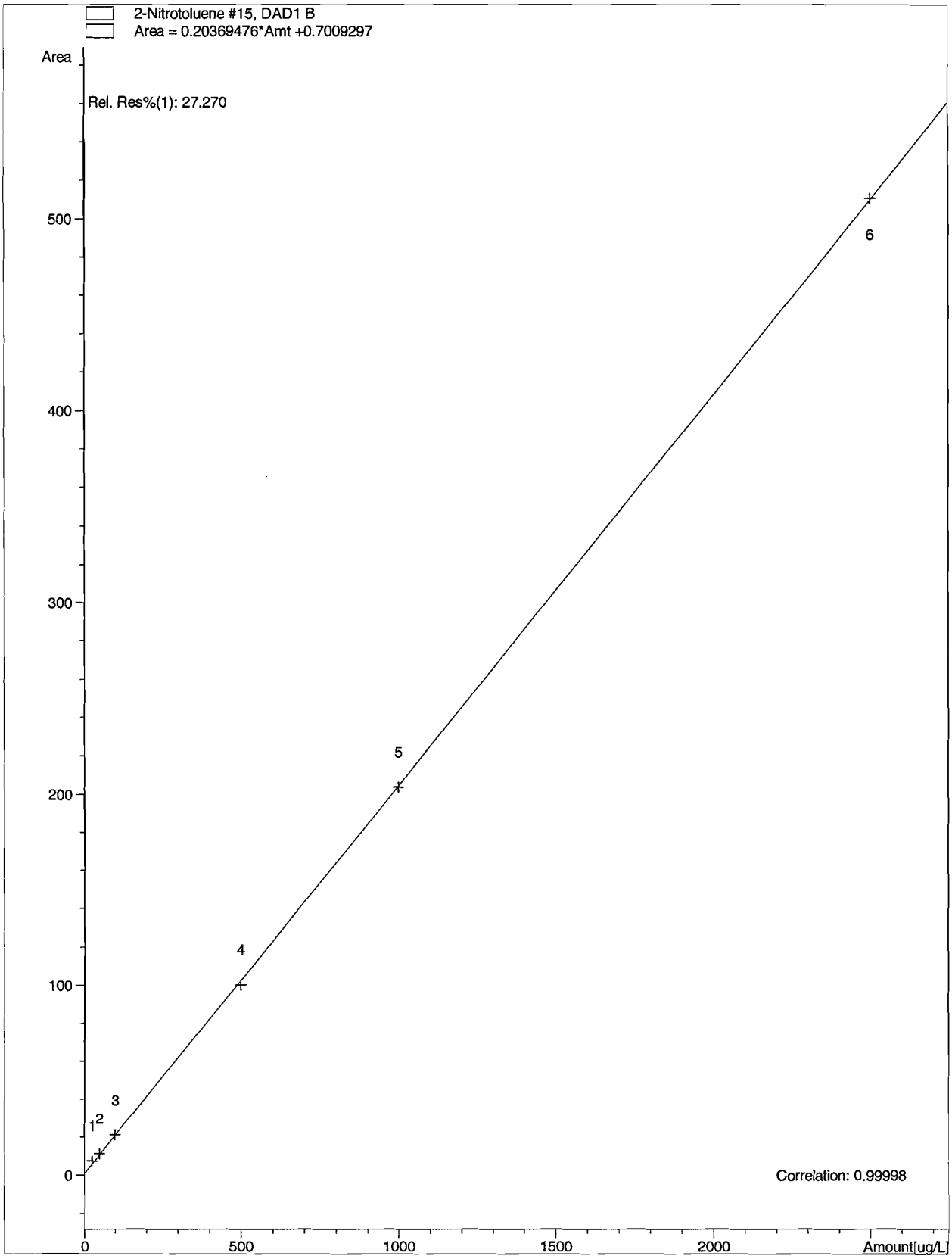
Calibration Curve



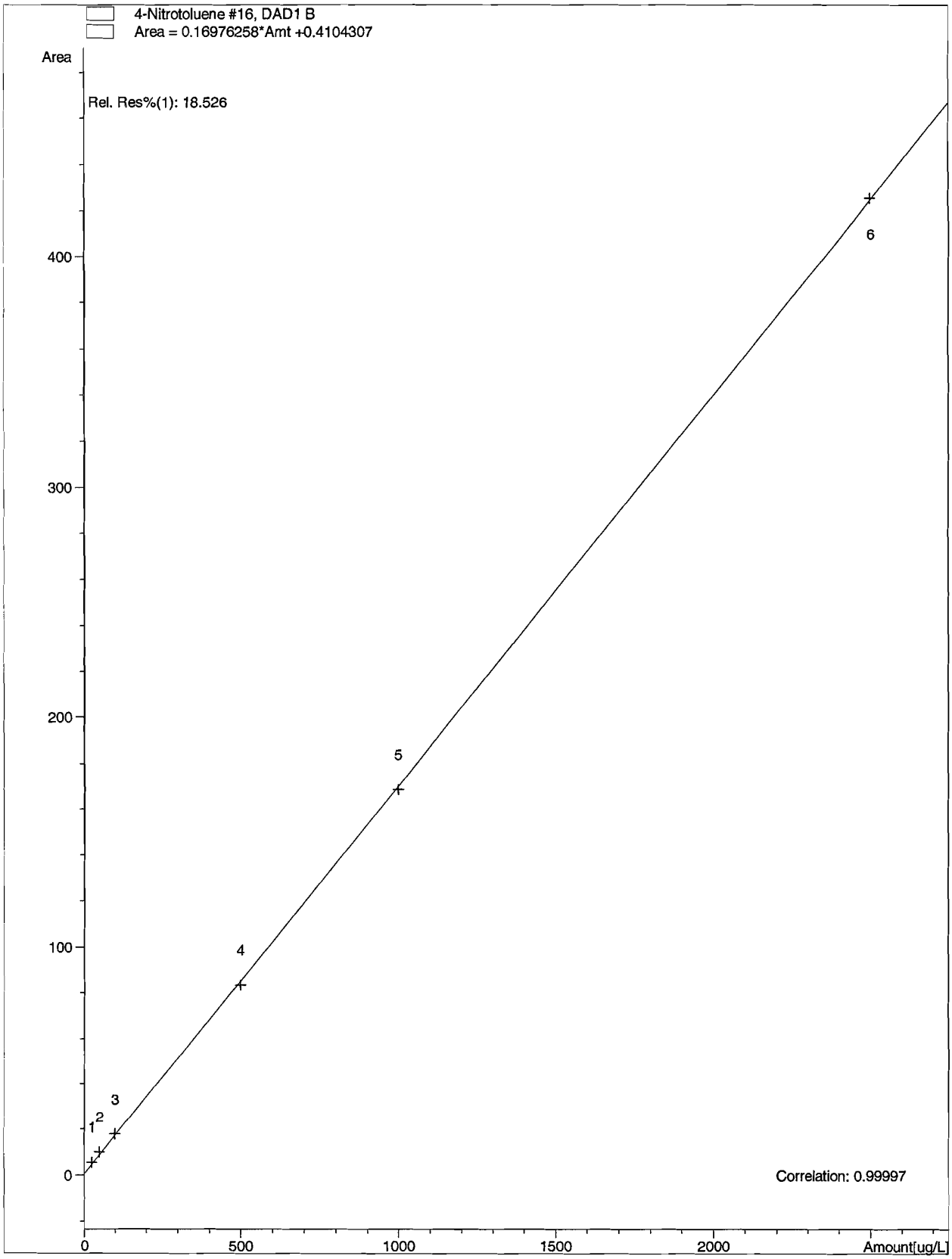
HPLC5 7/10/2014 1:48:32 PM ECL

Page 1 of 1

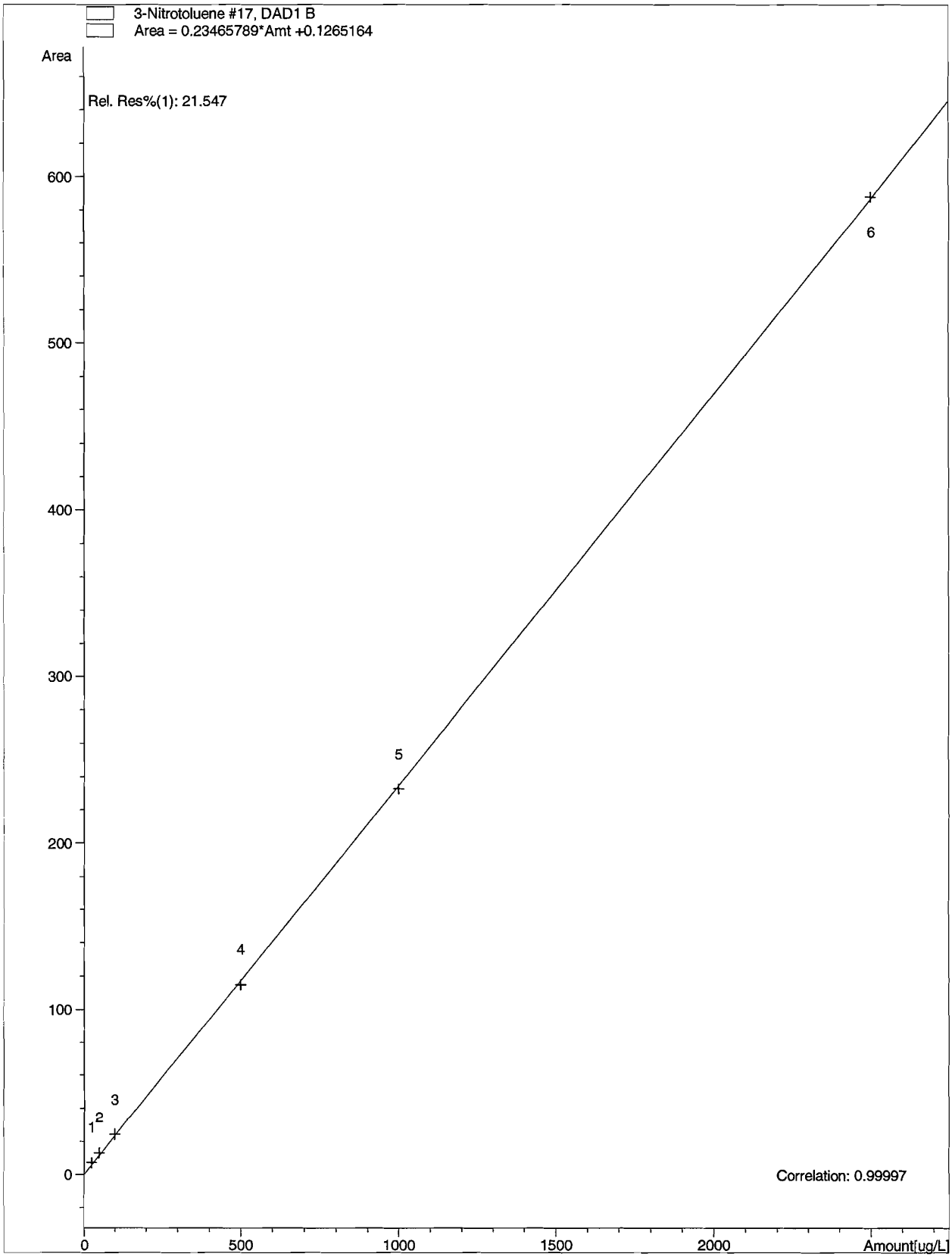
Calibration Curve



Calibration Curve



Calibration Curve



Data File C:\CHEM32\1\DATA\070914\070914\5L012970.D
Sample Name: WG483233-07 8330 ALT 500 PPB

==========

Acq. Operator	: ECL	Seq. Line :	7
Acq. Instrument	: HPLC5	Location :	Vial 8
Injection Date	: 7/9/2014 5:20:54 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/10/2014 1:59:18 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65377

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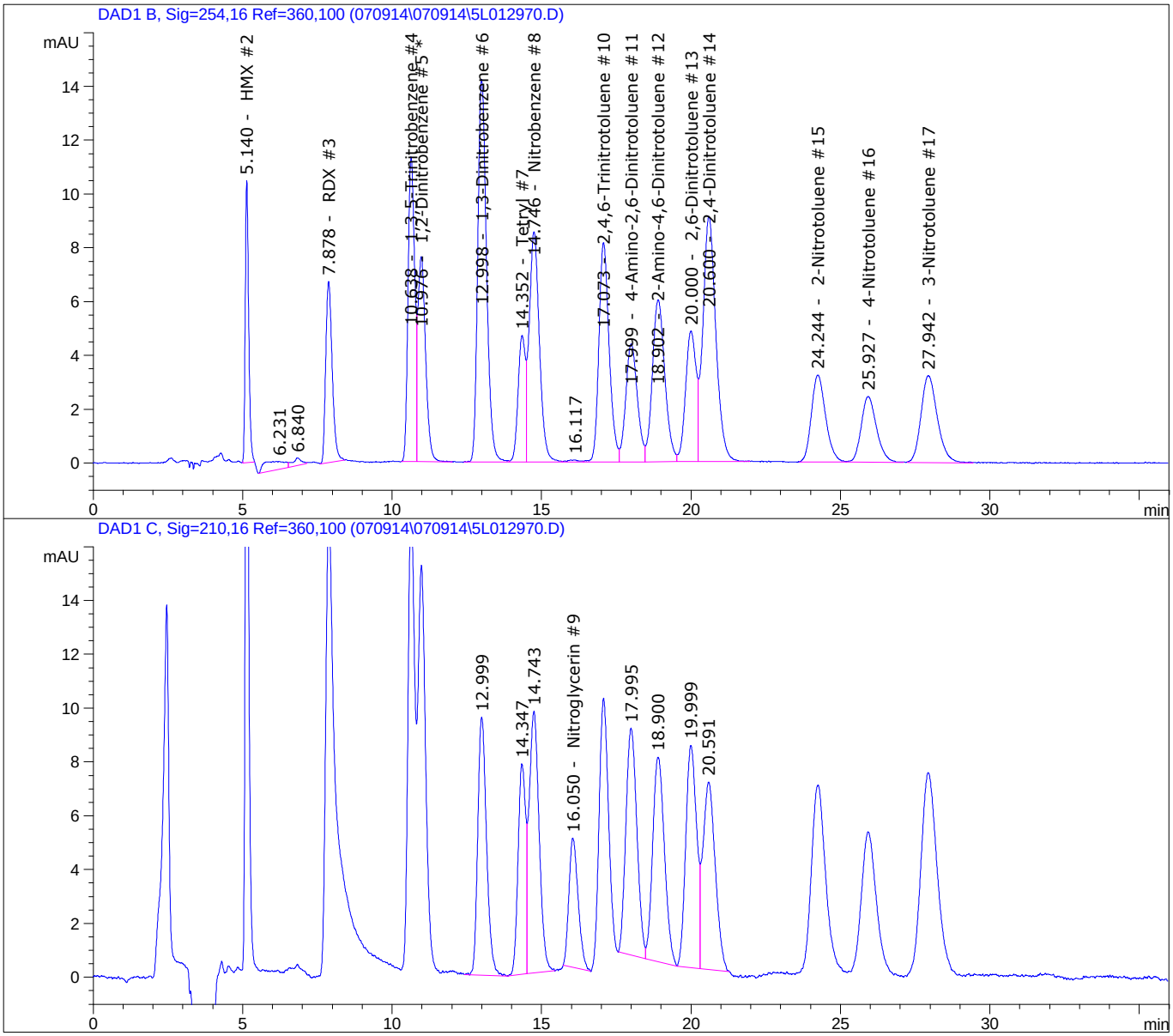

Data File C:\CHEM32\1\DATA\070914\070914\5L012970.D
Sample Name: WG483233-07 8330 ALT 500 PPB

==========

Acq. Operator : ECL Seq. Line : 7
Acq. Instrument : HPLC5 Location : Vial 8
Injection Date : 7/9/2014 5:20:54 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 7/10/2014 1:59:18 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65377

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : Thursday, July 10, 2014 1:45:54 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.140	BBA	81.42204	5.95076	484.52278		HMX #2
7.878	BBA	101.44180	5.03794	511.05768		RDX #3
10.638	BV	175.82787	2.56179	450.43408		1,3,5-Trinitrobenzene #4
10.976	VB	135.31775	3.64056	492.63288		1,2-Dinitrobenzene #5 *
12.998	BV	287.83264	1.69995	489.30070		1,3-Dinitrobenzene #6
14.352	VV	79.57870	4.44124	353.42802		Tetryl #7
14.746	VV	203.11357	2.40814	489.12629		Nitrobenzene #8
17.073	VV	193.14346	2.58808	499.87016		2,4,6-Trinitrotoluene #10
17.999	VV	119.16287	4.37980	521.90998		4-Amino-2,6-Dinitrotoluene #11
18.902	VV	175.50751	2.85211	500.56658		2-Amino-4,6-Dinitrotoluene #12
20.000	VV	120.07474	4.40376	528.78017		2,6-Dinitrotoluene #13
20.600	VB	276.27838	1.81853	502.42167		2,4-Dinitrotoluene #14
24.244	BV	107.03011	4.87716	522.00252		2-Nitrotoluene #15
25.927	VB	87.69344	5.86301	514.14753		4-Nitrotoluene #16
27.942	BB	123.18578	4.25715	524.41986		3-Nitrotoluene #17

Totals : 7384.62091

Data File C:\CHEM32\1\DATA\070914\070914\5L012970.D
Sample Name: WG483233-07 8330 ALT 500 PPB

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==================================================================
Acq. Operator   : ECL                           Seq. Line :   7
Acq. Instrument : HPLC5                          Location : Vial 8
Injection Date  : 7/9/2014 5:20:54 PM                 Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\070914\070914\8330PLUS.M
Last changed    : 5/30/2014 10:00:02 AM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 7/10/2014 1:59:18 PM by ECL
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1  STD65377


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Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 16.050 BV      103.53637    4.84995  502.14609    Nitroglycerin #9

Totals :                               502.14609


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                          *** End of Report ***
```

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013478.D
Sample Name: WG490599-01 8330 CCV 500 PPB

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Acq. Operator	: ECL	Seq. Line :	1
Acq. Instrument	: HPLC5	Location :	Vial 2
Injection Date	: 9/2/2014 3:00:27 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 2:53:57 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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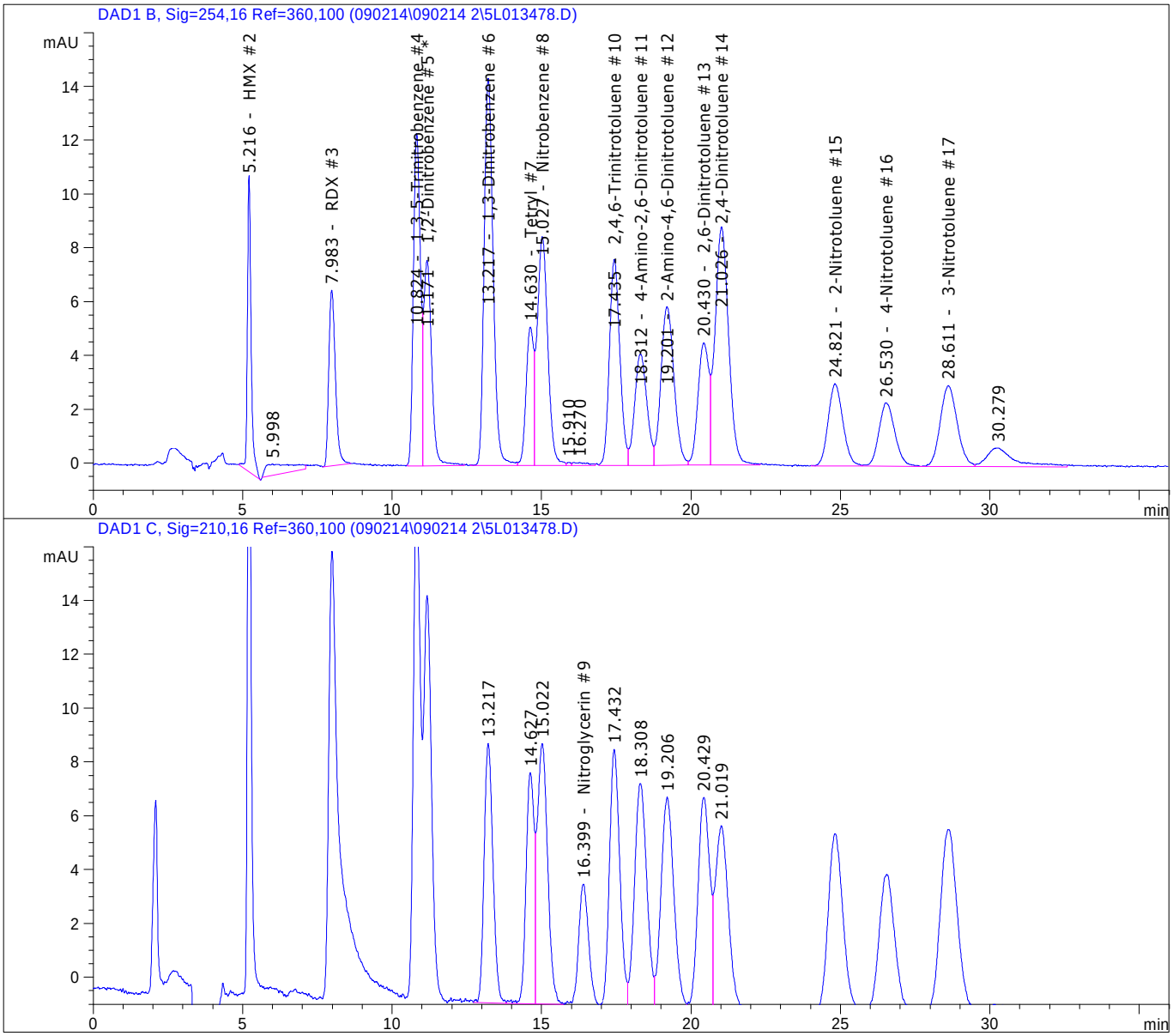

HPLC5 9/3/2014 2:53:59 PM ECL Page 1 of 3

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013478.D
Sample Name: WG490599-01 8330 CCV 500 PPB

==========

Acq. Operator : ECL Seq. Line : 1
Acq. Instrument : HPLC5 Location : Vial 2
Injection Date : 9/2/2014 3:00:27 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 2:53:57 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 9/3/2014 2:53:21 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.216	BBA	93.39404	5.96106	556.72760		HMX #2
7.983	BBA	100.69182	5.03675	507.15950		RDX #3
10.824	BV	201.74847	2.55938	516.35168		1,3,5-Trinitrobenzene #4
11.171	VB	140.53065	3.64171	511.77246		1,2-Dinitrobenzene #5 *
13.217	BV	300.63257	1.69976	511.00233		1,3-Dinitrobenzene #6
14.630	VV	91.33609	4.44106	405.62933		Tetryl #7
15.027	VV	208.48495	2.40769	501.96621		Nitrobenzene #8
17.435	BV	186.77789	2.58812	483.40299		2,4,6-Trinitrotoluene #10
18.312	VV	118.58366	4.37977	519.36917		4-Amino-2,6-Dinitrotoluene #11
19.201	VV	180.81549	2.85216	515.71446		2-Amino-4,6-Dinitrotoluene #12
20.430	VV	115.39879	4.40304	508.10542		2,6-Dinitrotoluene #13
21.026	VB	280.16373	1.81850	509.47778		2,4-Dinitrotoluene #14
24.821	BV	105.31281	4.87663	513.57177		2-Nitrotoluene #15
26.530	VV	87.89076	5.86307	515.30986		4-Nitrotoluene #16
28.611	VV	118.39178	4.25697	503.99012		3-Nitrotoluene #17

Totals : 7579.55068

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013478.D
Sample Name: WG490599-01 8330 CCV 500 PPB

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==================================================================
Acq. Operator   : ECL                           Seq. Line :   1
Acq. Instrument : HPLC5                          Location : Vial 2
Injection Date  : 9/2/2014 3:00:27 PM                 Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed    : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 9/3/2014 2:53:57 PM by ECL
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1 STD65351


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Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 16.399 VV      102.79951    4.84994  498.57182    Nitroglycerin #9

Totals :                               498.57182


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                           *** End of Report ***
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Data File C:\CHEM32\1\DATA\090214\090214 2\5L013488.D
Sample Name: WG490599-02 8330 CCV 500 PPB

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Acq. Operator : ECL
Seq. Line : 11
Acq. Instrument : HPLC5
Location : Vial 2
Injection Date : 9/2/2014 9:31:03 PM
Inj : 1
Inj Volume : 100 µl

Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 3:10:34 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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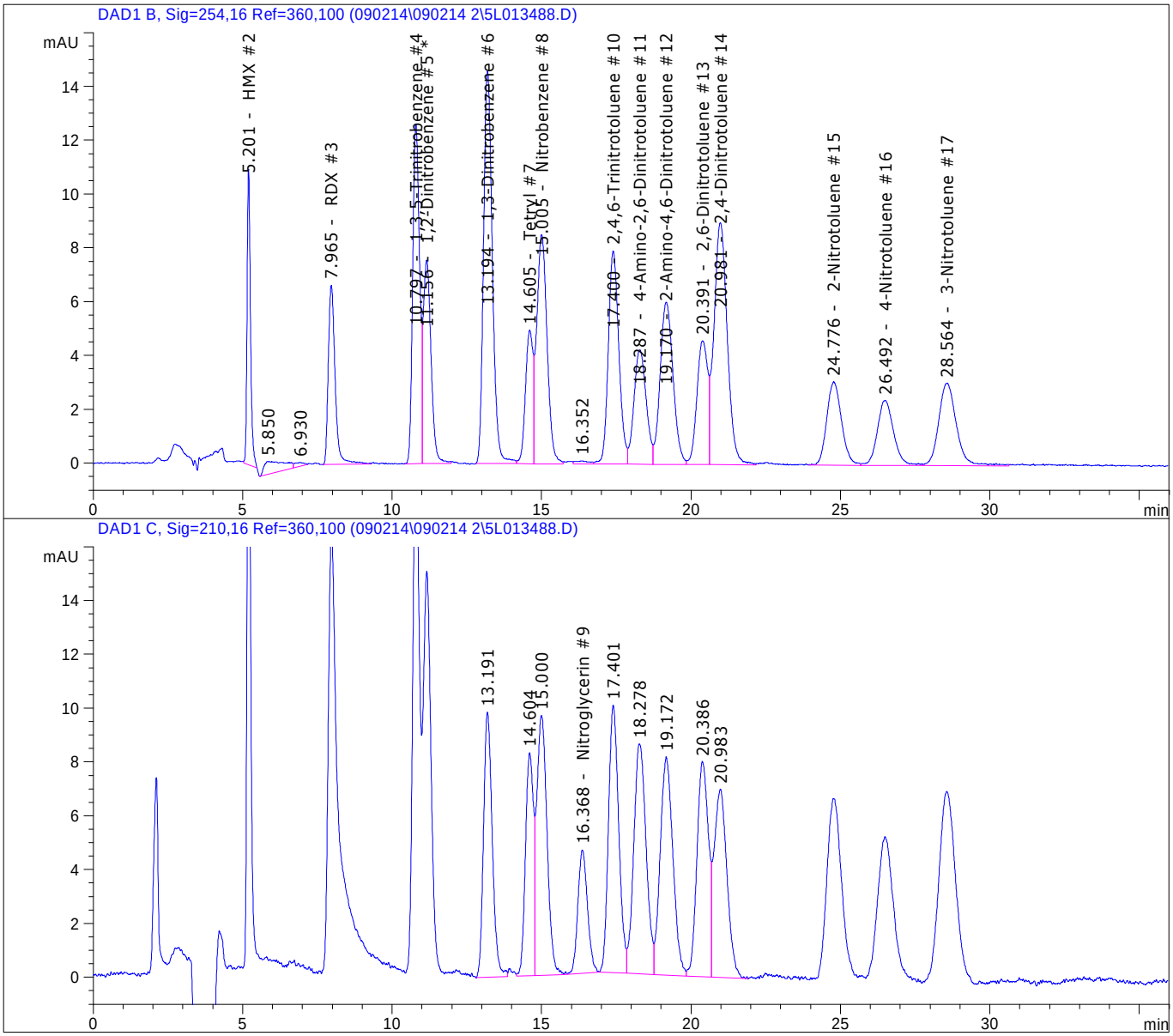

HPLC5 9/3/2014 3:10:36 PM ECL
Page 1 of 3

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013488.D
Sample Name: WG490599-02 8330 CCV 500 PPB

==========

Acq. Operator : ECL Seq. Line : 11
Acq. Instrument : HPLC5 Location : Vial 2
Injection Date : 9/2/2014 9:31:03 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 3:10:34 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 9/3/2014 2:53:21 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.201	BBA	86.58601	5.95555	515.66739		HMX #2
7.965	BV	105.24078	5.04371	530.80352		RDX #3
10.797	BV	203.09422	2.55928	519.77400		1,3,5-Trinitrobenzene #4
11.156	VB	135.71169	3.64065	494.07925		1,2-Dinitrobenzene #5 *
13.194	BV	299.18225	1.69978	508.54339		1,3-Dinitrobenzene #6
14.605	VV	87.57385	4.44111	388.92548		Tetryl #7
15.005	VV	204.49506	2.40802	492.42863		Nitrobenzene #8
17.400	VV	193.60626	2.58807	501.06738		2,4,6-Trinitrotoluene #10
18.287	VV	120.86288	4.37990	529.36731		4-Amino-2,6-Dinitrotoluene #11
19.170	VV	180.91060	2.85216	515.98588		2-Amino-4,6-Dinitrotoluene #12
20.391	VV	116.46597	4.40321	512.82395		2,6-Dinitrotoluene #13
20.981	VV	279.25348	1.81851	507.82470		2,4-Dinitrotoluene #14
24.776	VV	106.25083	4.87692	518.17683		2-Nitrotoluene #15
26.492	VV	91.31297	5.86410	535.46866		4-Nitrotoluene #16
28.564	VB	126.22880	4.25725	537.38777		3-Nitrotoluene #17

Totals : 7608.32413

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013488.D
Sample Name: WG490599-02 8330 CCV 500 PPB

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==================================================================
Acq. Operator   : ECL                           Seq. Line :  11
Acq. Instrument : HPLC5                          Location : Vial 2
Injection Date  : 9/2/2014 9:31:03 PM                 Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed    : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 9/3/2014 3:10:34 PM by ECL
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1 STD65351


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Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 16.368 VV      102.87419    4.84994  498.93406    Nitroglycerin #9

Totals :                               498.93406


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                           *** End of Report ***
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Data File C:\CHEM32\1\DATA\090214\090214 2\5L013498.D
Sample Name: WG490599-03 8330 CCV 500 PPB

==========

Acq. Operator	: ECL	Seq. Line	: 21
Acq. Instrument	: HPLC5	Location	: Vial 2
Injection Date	: 9/3/2014 4:01:38 AM	Inj	: 1
		Inj Volume	: 100 µl

Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 3:44:01 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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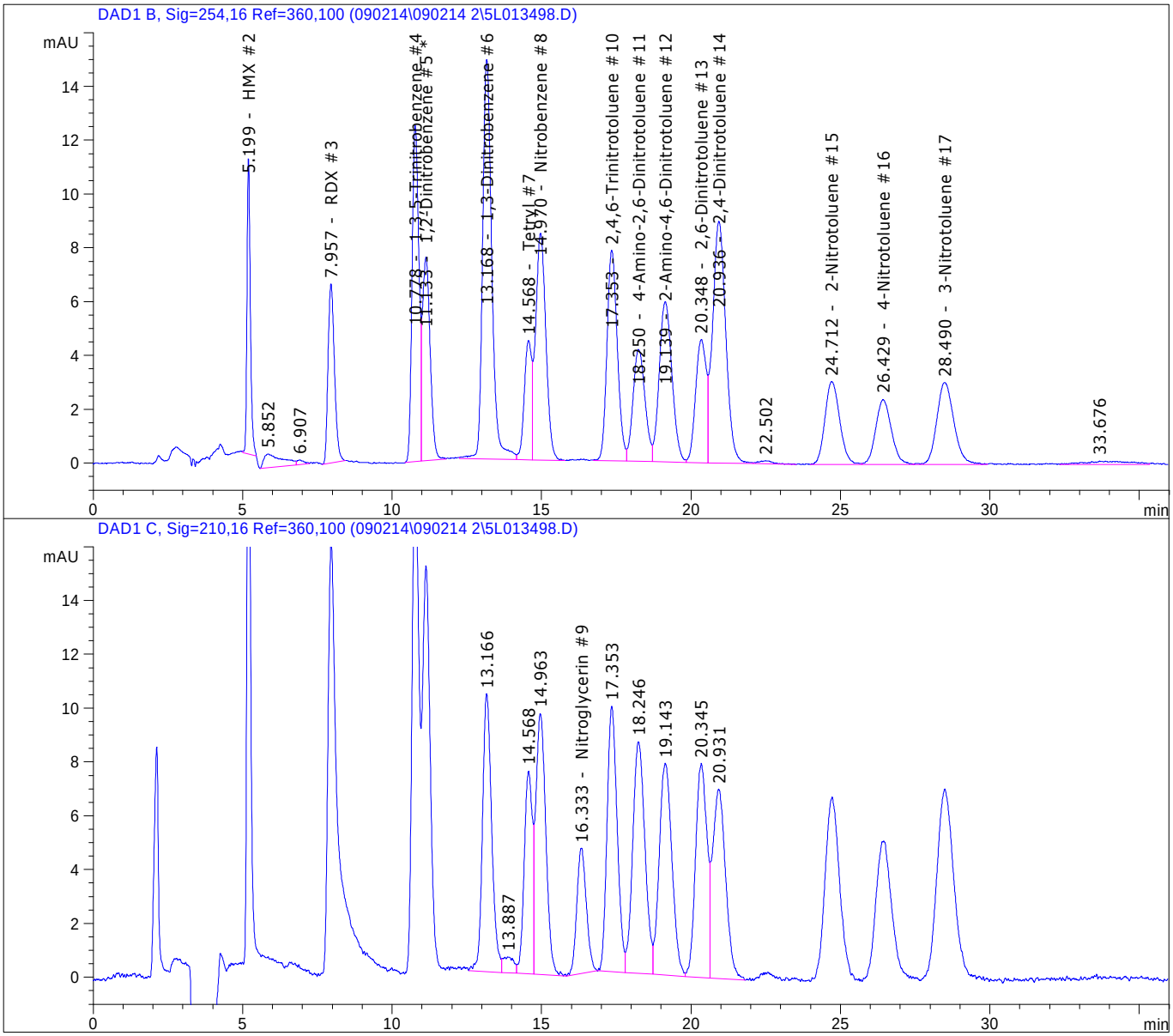

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==================================================================
Acq. Operator   : ECL                           Seq. Line :  21
Acq. Instrument : HPLC5                          Location : Vial 2
Injection Date  : 9/3/2014 4:01:38 AM                 Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed    : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 9/3/2014 3:44:01 PM by ECL
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1 STD65351


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==================================================================
                      External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/3/2014 3:43:32 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
  5.199 BBA      86.29828    5.95530  513.93207    HMX #2
  7.957 VBA      98.86652    5.03378  497.67221    RDX #3
 10.778 BV      200.10081    2.55952  512.16159    1,3,5-Trinitrobenzene #4
 11.133 VV      132.91902    3.64000  483.82578    1,2-Dinitrobenzene #5 *
 13.168 BV      317.66797    1.69953  539.88498    1,3-Dinitrobenzene #6
 14.568 VV       77.45849    4.44128  344.01457    Tetryl #7
 14.970 VV      200.81946    2.40834  483.64237    Nitrobenzene #8
 17.353 BV      187.25974    2.58811  484.64948    2,4,6-Trinitrotoluene #10
 18.250 VV      116.07382    4.37962  508.35945    4-Amino-2,6-Dinitrotoluene #11
 19.139 VV      176.24463    2.85212  502.67017    2-Amino-4,6-Dinitrotoluene #12
 20.348 VV      114.02433    4.40282  502.02824    2,6-Dinitrotoluene #13
 20.936 VV      277.27536    1.81853  504.23227    2,4-Dinitrotoluene #14
 24.712 VV      106.43866    4.87698  519.09893    2-Nitrotoluene #15
 26.429 VV       88.10797    5.86314  516.58934    4-Nitrotoluene #16
 28.490 VB      121.65713    4.25709  517.90549    3-Nitrotoluene #17

Totals :                               7430.66693
```

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013498.D
Sample Name: WG490599-03 8330 CCV 500 PPB

==========

Acq. Operator : ECL Seq. Line : 21
Acq. Instrument : HPLC5 Location : Vial 2
Injection Date : 9/3/2014 4:01:38 AM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 3:44:01 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
16.333	VV	104.22348	4.84995	505.47905		Nitroglycerin #9

Totals : 505.47905

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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*** End of Report ***

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013503.D
Sample Name: WG490599-04 8330 CCV 500 PPB

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Acq. Operator	: ECL	Seq. Line	: 26
Acq. Instrument	: HPLC5	Location	: Vial 2
Injection Date	: 9/3/2014 7:16:55 AM	Inj	: 1
		Inj Volume	: 100 µl

Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 3:56:31 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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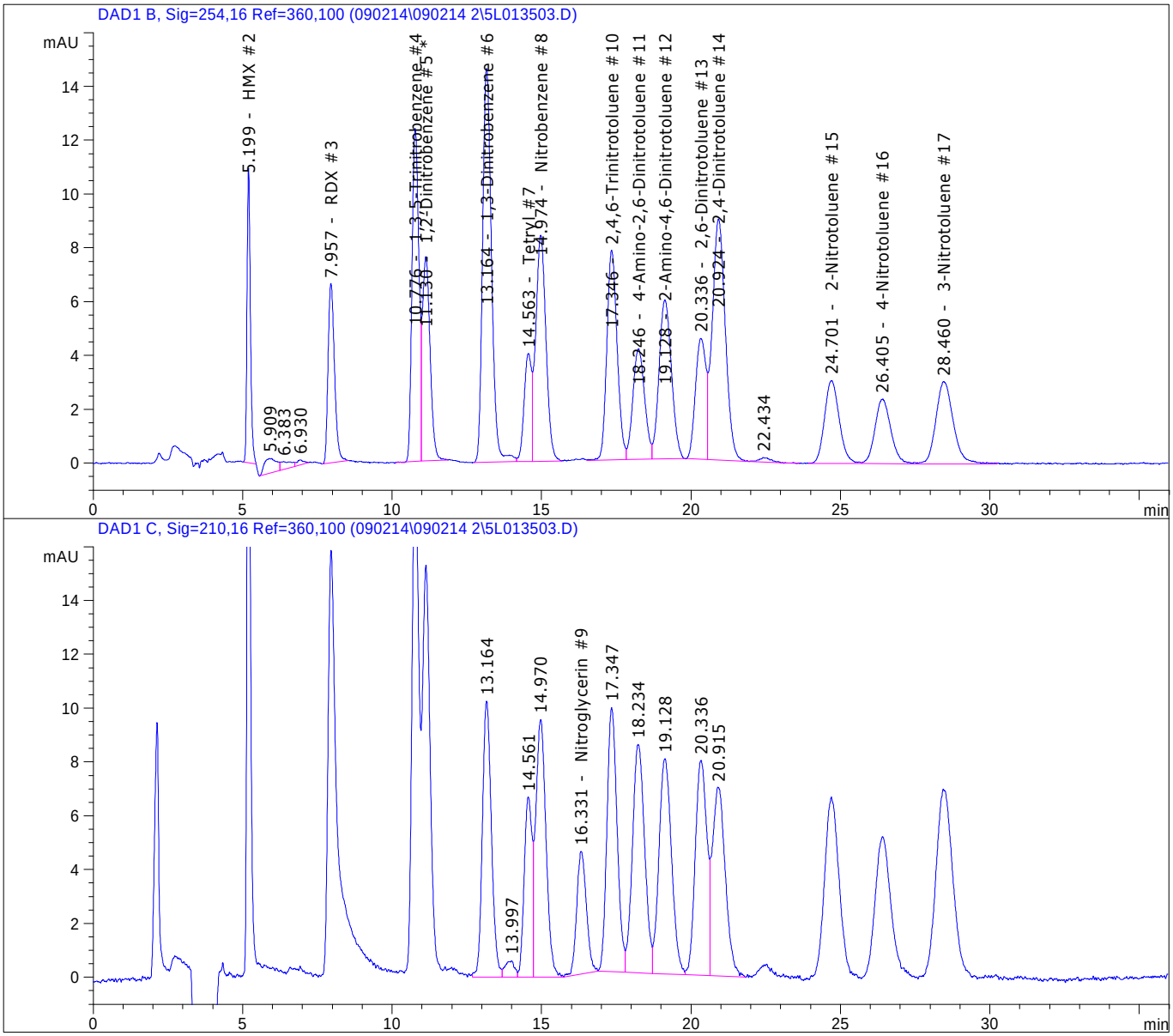

HPLC5 9/3/2014 4:00:53 PM ECL Page 1 of 3

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013503.D
Sample Name: WG490599-04 8330 CCV 500 PPB

==========

Acq. Operator : ECL Seq. Line : 26
Acq. Instrument : HPLC5 Location : Vial 2
Injection Date : 9/3/2014 7:16:55 AM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 3:56:31 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 9/3/2014 3:43:32 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.199	BBA	84.81793	5.95398	505.00388		HMX #2
7.957	VBA	100.08529	5.03577	504.00696		RDX #3
10.776	BV	197.69176	2.55972	506.03522		1,3,5-Trinitrobenzene #4
11.130	VBA	133.69684	3.64019	486.68159		1,2-Dinitrobenzene #5 *
13.164	BV	301.32712	1.69975	512.17990		1,3-Dinitrobenzene #6
14.563	VV	69.51186	4.44144	308.73259		Tetryl #7
14.974	VV	199.76466	2.40844	481.12096		Nitrobenzene #8
17.346	VV	186.59296	2.58812	482.92458		2,4,6-Trinitrotoluene #10
18.246	VV	113.04926	4.37943	495.09182		4-Amino-2,6-Dinitrotoluene #11
19.128	VBA	171.23645	2.85207	488.37786		2-Amino-4,6-Dinitrotoluene #12
20.336	BV	110.00587	4.40213	484.26060		2,6-Dinitrotoluene #13
20.924	VV	273.12344	1.81856	496.69204		2,4-Dinitrotoluene #14
24.701	BV	106.26459	4.87692	518.24436		2-Nitrotoluene #15
26.405	VV	88.81786	5.86336	520.77097		4-Nitrotoluene #16
28.460	VB	123.80343	4.25717	527.05200		3-Nitrotoluene #17

Totals : 7317.17533

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013503.D
Sample Name: WG490599-04 8330 CCV 500 PPB

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :  26
Acq. Instrument : HPLC5                          Location : Vial 2
Injection Date  : 9/3/2014 7:16:55 AM                 Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed    : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 9/3/2014 3:56:31 PM by ECL
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1 STD65351


==================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 16.331 VV      102.86108    4.84994  498.87048    Nitroglycerin #9

Totals :                               498.87048


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                           *** End of Report ***
```

Data File C:\CHEM32\1\DATA\090414\090414 2\5L013517.D
Sample Name: WG490918-01 8330 CCV 500 PPB

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Acq. Operator	: ECL	Seq. Line :	1
Acq. Instrument	: HPLC5	Location :	Vial 2
Injection Date	: 9/4/2014 11:10:16 AM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\090414\090414 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/4/2014 12:01:51 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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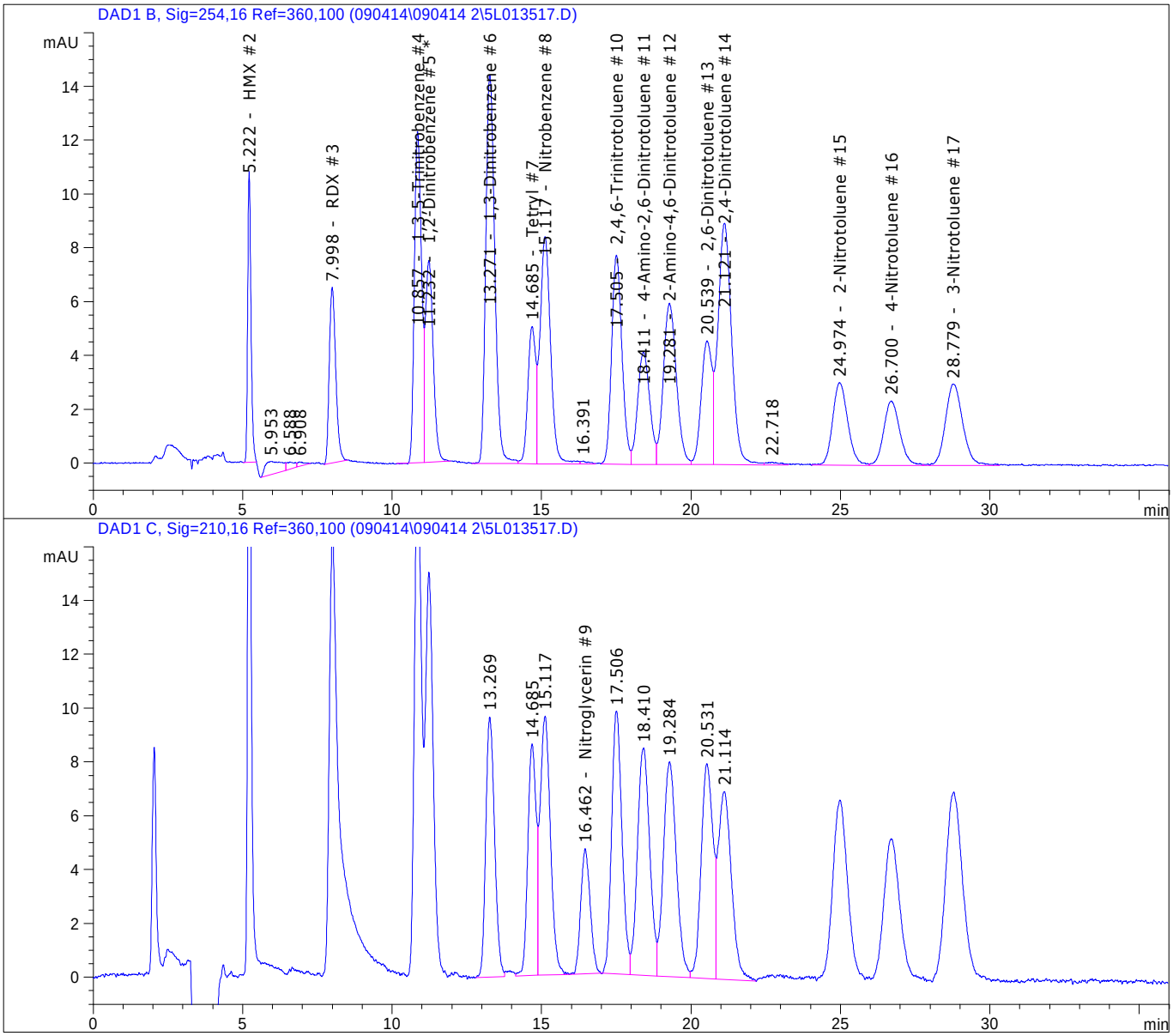

HPLC5 9/4/2014 12:01:55 PM ECL Page 1 of 3

Data File C:\CHEM32\1\DATA\090414\090414 2\5L013517.D
Sample Name: WG490918-01 8330 CCV 500 PPB

==========

Acq. Operator : ECL Seq. Line : 1
Acq. Instrument : HPLC5 Location : Vial 2
Injection Date : 9/4/2014 11:10:16 AM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090414\090414 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/4/2014 12:01:51 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 9/3/2014 3:43:32 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.222	VBA	83.46374	5.95272	496.83654		HMX #2
7.998	BBA	98.75285	5.03359	497.08139		RDX #3
10.857	BV	202.87396	2.55929	519.21386		1,3,5-Trinitrobenzene #4
11.232	VBA	135.64159	3.64064	493.82188		1,2-Dinitrobenzene #5 *
13.271	VV	300.74692	1.69976	511.19620		1,3-Dinitrobenzene #6
14.685	VV	94.94971	4.44102	421.67335		Tetryl #7
15.117	VV	207.04367	2.40781	498.52092		Nitrobenzene #8
17.505	BV	187.58737	2.58811	485.49704		2,4,6-Trinitrotoluene #10
18.411	VV	118.64115	4.37977	519.62138		4-Amino-2,6-Dinitrotoluene #11
19.281	VV	182.17975	2.85217	519.60777		2-Amino-4,6-Dinitrotoluene #12
20.539	VV	115.70827	4.40309	509.47381		2,6-Dinitrotoluene #13
21.121	VV	285.12372	1.81846	518.48554		2,4-Dinitrotoluene #14
24.974	VV	108.39492	4.87756	528.70281		2-Nitrotoluene #15
26.700	VV	89.89785	5.86369	527.13277		4-Nitrotoluene #16
28.779	VB	123.59711	4.25716	526.17276		3-Nitrotoluene #17

Totals : 7573.03803

Data File C:\CHEM32\1\DATA\090414\090414 2\5L013517.D
Sample Name: WG490918-01 8330 CCV 500 PPB

```
    ==================================================================
    Acq. Operator   : ECL                           Seq. Line :   1
    Acq. Instrument : HPLC5                          Location : Vial 2
    Injection Date  : 9/4/2014 11:10:16 AM                Inj :   1
                                                   Inj Volume : 100 µl
    Acq. Method     : C:\Chem32\1\DATA\090414\090414 2\8330PLUS.M
    Last changed    : 9/2/2014 2:17:53 PM by ECL
    Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
    Last changed    : 9/4/2014 12:01:51 PM by ECL
    Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

    Sample Info     : 1,1 STD65351


    ==================================================================


    Signal 2: DAD1 C, Sig=210,16 Ref=360,100

    RetTime  Type     Area     Amt/Area    Amount   Grp   Name
     [min]          [mAU*s]                [ug/L]
    -------|------|----------|----------|----------|--|------------------
     16.462 VV      101.50038    4.84993  492.27012    Nitroglycerin #9

    Totals :                               492.27012


    1 Warnings or Errors :

    Warning : Calibration warnings (see calibration table listing)

    ==================================================================
                              *** End of Report ***
```

Data File C:\CHEM32\1\DATA\090414\090414 2\5L013528.D
Sample Name: WG490918-02 8330 CCV 500 PPB

==========

Acq. Operator	: ECL	Seq. Line :	12
Acq. Instrument	: HPLC5	Location :	Vial 2
Injection Date	: 9/4/2014 6:46:17 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\090414\090414 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/5/2014 2:38:06 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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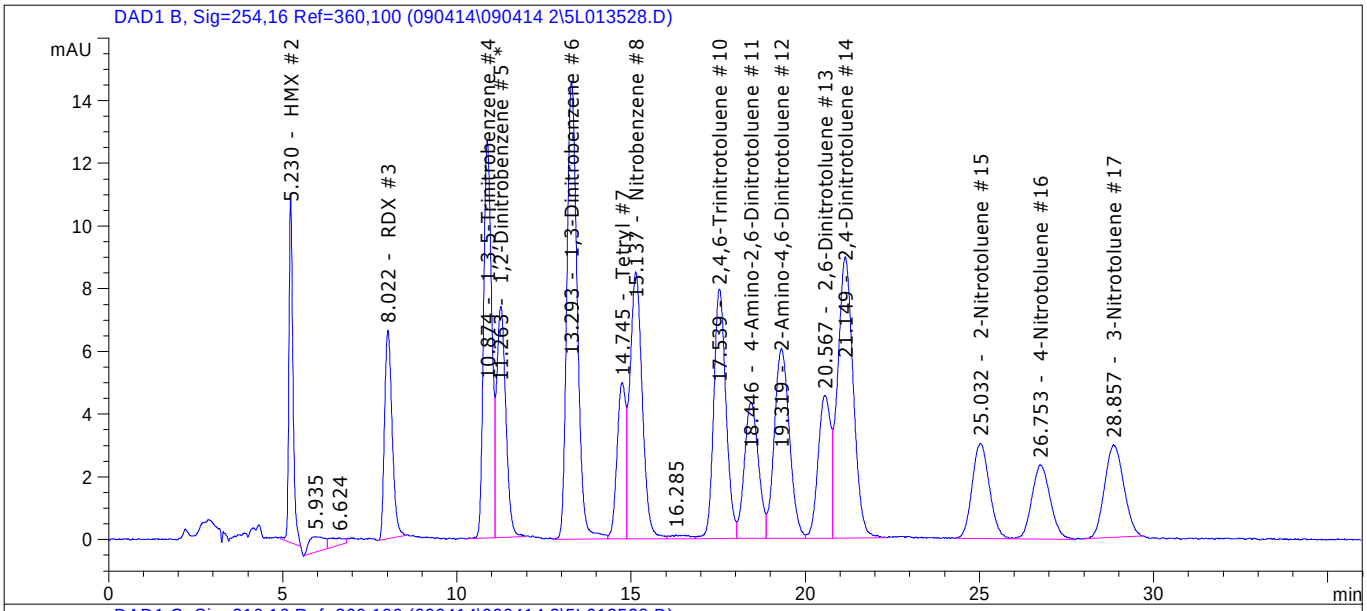

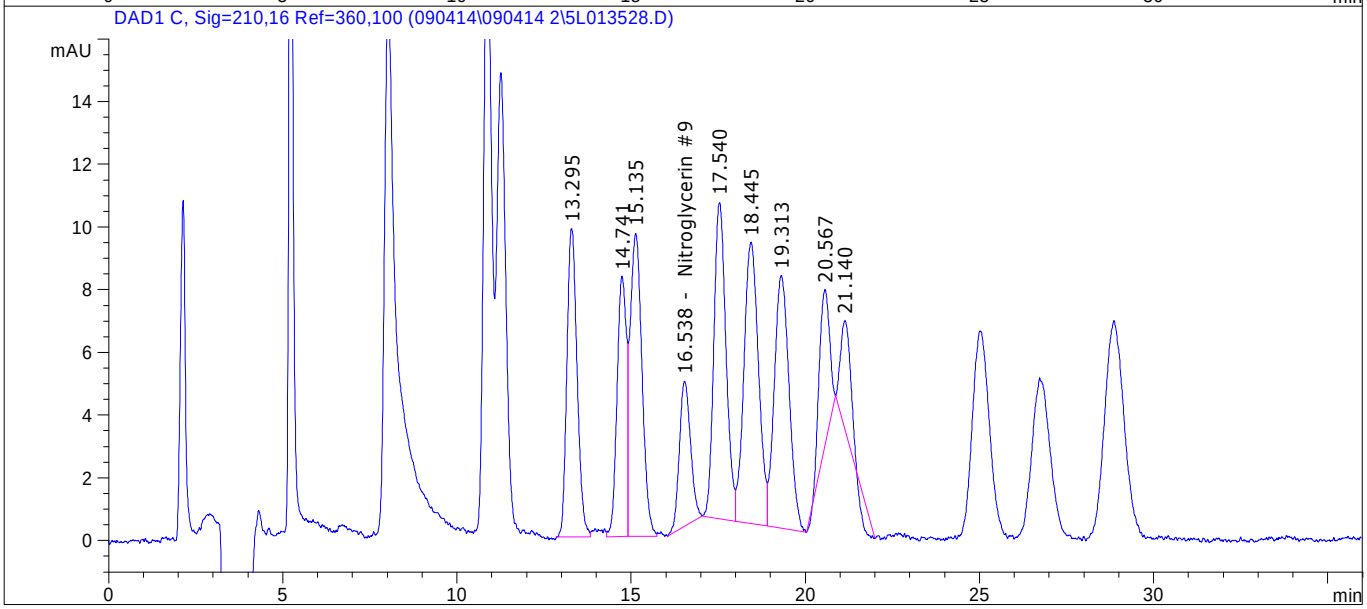

Data File C:\CHEM32\1\DATA\090414\090414 2\5L013528.D
Sample Name: WG490918-02 8330 CCV 500 PPB

==========

Acq. Operator : ECL Seq. Line : 12
Acq. Instrument : HPLC5 Location : Vial 2
Injection Date : 9/4/2014 6:46:17 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090414\090414 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/5/2014 2:38:06 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 9/5/2014 2:33:12 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.230	BBA	89.23097	5.95779	531.61957		HMX #2
8.022	VBA	100.66370	5.03670	507.01338		RDX #3
10.874	VV	206.32542	2.55902	527.99113		1,3,5-Trinitrobenzene #4
11.263	VBA	132.99121	3.64002	484.09083		1,2-Dinitrobenzene #5 *
13.293	VV	303.05179	1.69972	515.10399		1,3-Dinitrobenzene #6
14.745	VV	87.78308	4.44111	389.85443		Tetryl #7
15.137	VV	209.13686	2.40763	503.52453		Nitrobenzene #8
17.539	VV	194.50139	2.58807	503.38300		2,4,6-Trinitrotoluene #10
18.446	VV	122.07298	4.37997	534.67553		4-Amino-2,6-Dinitrotoluene #11
19.319	VV	181.98790	2.85217	519.06027		2-Amino-4,6-Dinitrotoluene #12
20.567	VV	114.21958	4.40285	502.89154		2,6-Dinitrotoluene #13
21.149	VV	280.60828	1.81850	510.28512		2,4-Dinitrotoluene #14
25.032	BV	103.93536	4.87620	506.80945		2-Nitrotoluene #15
26.753	VV	86.61858	5.86267	507.81594		4-Nitrotoluene #16
28.857	VBA	113.45133	4.25677	482.93630		3-Nitrotoluene #17

Totals : 7527.05501

Data File C:\CHEM32\1\DATA\090414\090414 2\5L013528.D
Sample Name: WG490918-02 8330 CCV 500 PPB

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :  12
Acq. Instrument : HPLC5                          Location : Vial 2
Injection Date  : 9/4/2014 6:46:17 PM                 Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\090414\090414 2\8330PLUS.M
Last changed    : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 9/5/2014 2:38:06 PM by ECL
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1 STD65351


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Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 16.538 VV      103.64982    4.84995  502.69639    Nitroglycerin #9

Totals :                               502.69639


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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                           *** End of Report ***
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Data File C:\CHEM32\1\DATA\090414\090414 2\5L013538.D
Sample Name: WG490918-03 8330 CCV 500 PPB

==========

Acq. Operator : ECL
Seq. Line : 22
Acq. Instrument : HPLC5
Location : Vial 2
Injection Date : 9/5/2014 1:16:47 AM
Inj : 1
Inj Volume : 100 µl

Acq. Method : C:\Chem32\1\DATA\090414\090414 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/5/2014 2:54:19 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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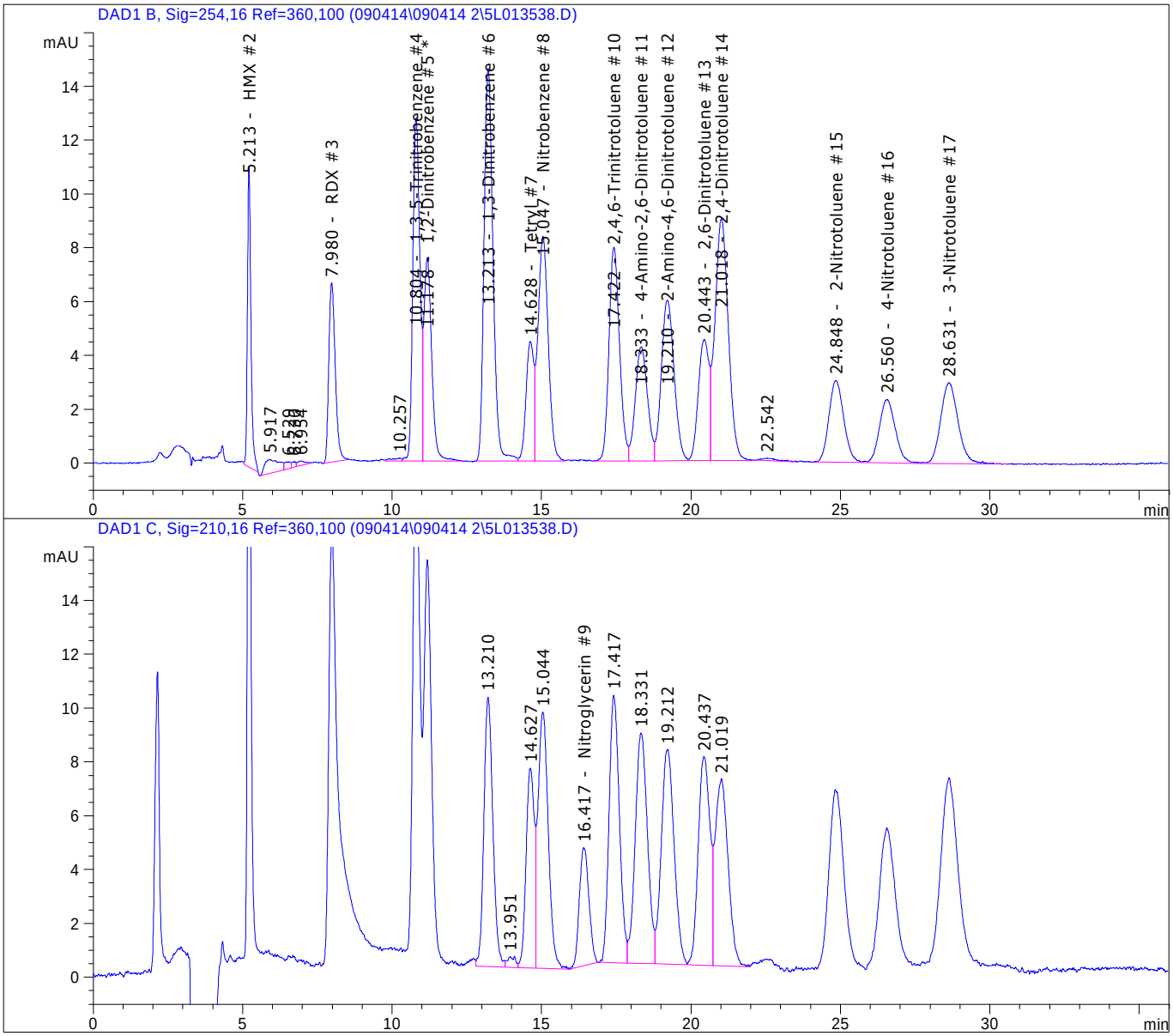

Data File C:\CHEM32\1\DATA\090414\090414 2\5L013538.D
Sample Name: WG490918-03 8330 CCV 500 PPB

==========

Acq. Operator : ECL Seq. Line : 22
Acq. Instrument : HPLC5 Location : Vial 2
Injection Date : 9/5/2014 1:16:47 AM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090414\090414 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/5/2014 2:54:19 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 9/5/2014 2:45:25 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.213	BBA	89.69261	5.95817	534.40378		HMX #2
7.980	BBA	100.30151	5.03612	505.13079		RDX #3
10.804	VV	208.72646	2.55884	534.09709		1,3,5-Trinitrobenzene #4
11.178	VBA	139.19995	3.64143	506.88668		1,2-Dinitrobenzene #5 *
13.213	BV	302.94083	1.69972	514.91586		1,3-Dinitrobenzene #6
14.628	VV	80.27032	4.44123	356.49876		Tetryl #7
15.047	VV	201.87985	2.40825	486.17717		Nitrobenzene #8
17.422	BV	196.45728	2.58806	508.44270		2,4,6-Trinitrotoluene #10
18.333	VV	120.85583	4.37990	529.33635		4-Amino-2,6-Dinitrotoluene #11
19.210	VV	178.19316	2.85213	508.23087		2-Amino-4,6-Dinitrotoluene #12
20.443	VV	111.42500	4.40238	490.53529		2,6-Dinitrotoluene #13
21.018	VBA	281.34653	1.81849	511.62585		2,4-Dinitrotoluene #14
24.848	BV	105.27065	4.87662	513.36483		2-Nitrotoluene #15
26.560	VV	87.84793	5.86306	515.05755		4-Nitrotoluene #16
28.631	VB	121.55109	4.25709	517.45363		3-Nitrotoluene #17

Totals : 7532.15721

Data File C:\CHEM32\1\DATA\090414\090414 2\5L013538.D
Sample Name: WG490918-03 8330 CCV 500 PPB

```
    ==================================================================
    Acq. Operator   : ECL                           Seq. Line :  22
    Acq. Instrument : HPLC5                          Location : Vial 2
    Injection Date  : 9/5/2014 1:16:47 AM                 Inj :   1
                                                   Inj Volume : 100 µl
    Acq. Method     : C:\Chem32\1\DATA\090414\090414 2\8330PLUS.M
    Last changed    : 9/2/2014 2:17:53 PM by ECL
    Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
    Last changed    : 9/5/2014 2:54:19 PM by ECL
    Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

    Sample Info     : 1,1 STD65351


    ==================================================================


    Signal 2: DAD1 C, Sig=210,16 Ref=360,100

    RetTime  Type     Area     Amt/Area    Amount   Grp   Name
     [min]          [mAU*s]                [ug/L]
    -------|------|----------|----------|----------|--|------------------
     16.417 VV       97.61896    4.84990  473.44249    Nitroglycerin #9

    Totals :                              473.44249


    1 Warnings or Errors :

    Warning : Calibration warnings (see calibration table listing)

    ==================================================================
                              *** End of Report ***
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Data File C:\CHEM32\1\DATA\090414\090414 2\5L013541.D
Sample Name: WG490918-04 8330 CCV 500 PPB

==========

Acq. Operator	: ECL	Seq. Line	: 25
Acq. Instrument	: HPLC5	Location	: Vial 2
Injection Date	: 9/5/2014 3:14:01 AM	Inj	: 1
		Inj Volume	: 100 µl

Acq. Method : C:\Chem32\1\DATA\090414\090414 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/5/2014 3:10:53 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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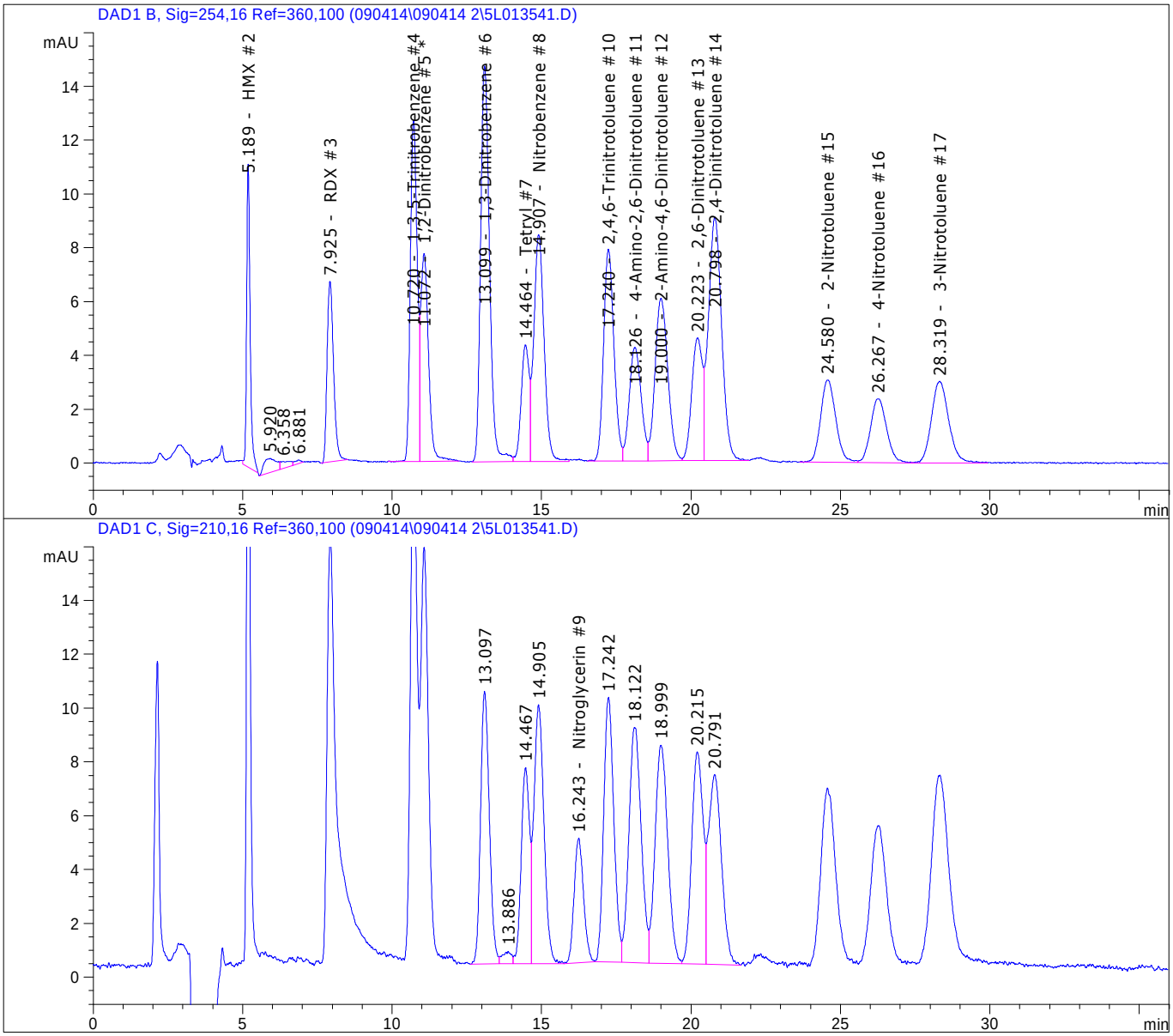

Data File C:\CHEM32\1\DATA\090414\090414 2\5L013541.D
Sample Name: WG490918-04 8330 CCV 500 PPB

==========

Acq. Operator : ECL Seq. Line : 25
Acq. Instrument : HPLC5 Location : Vial 2
Injection Date : 9/5/2014 3:14:01 AM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090414\090414 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/5/2014 3:10:53 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 9/5/2014 3:10:37 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.189	BBA	90.83733	5.95909	541.30776		HMX #2
7.925	BBA	100.03938	5.03570	503.76832		RDX #3
10.720	BV	203.04008	2.55928	519.63632		1,3,5-Trinitrobenzene #4
11.072	VBA	138.96152	3.64138	506.01125		1,2-Dinitrobenzene #5 *
13.099	BV	304.59894	1.69970	517.72711		1,3-Dinitrobenzene #6
14.464	VV	80.52899	4.44122	357.64721		Tetryl #7
14.907	VV	201.06841	2.40832	484.23746		Nitrobenzene #8
17.240	VV	189.57309	2.58810	490.63392		2,4,6-Trinitrotoluene #10
18.126	VV	117.41538	4.37970	514.24439		4-Amino-2,6-Dinitrotoluene #11
19.000	VV	179.21503	2.85214	511.14707		2-Amino-4,6-Dinitrotoluene #12
20.223	VV	112.88062	4.40263	496.97129		2,6-Dinitrotoluene #13
20.798	VV	280.93240	1.81849	510.87376		2,4-Dinitrotoluene #14
24.580	BV	107.62379	4.87733	524.91712		2-Nitrotoluene #15
26.267	VV	88.24619	5.86318	517.40355		4-Nitrotoluene #16
28.319	VB	122.44134	4.25712	521.24742		3-Nitrotoluene #17

Totals : 7517.77395

Data File C:\CHEM32\1\DATA\090414\090414 2\5L013541.D
Sample Name: WG490918-04 8330 CCV 500 PPB

==========

Acq. Operator : ECL Seq. Line : 25
Acq. Instrument : HPLC5 Location : Vial 2
Injection Date : 9/5/2014 3:14:01 AM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090414\090414 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/5/2014 3:10:53 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
16.243	VV	101.72591	4.84994	493.36407		Nitroglycerin #9

Totals : 493.36407

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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*** End of Report ***

Data File C:\CHEM32\1\DATA\090514\090514\5L013542.D
Sample Name: WG491289-01 8330 CCV 500 PPB

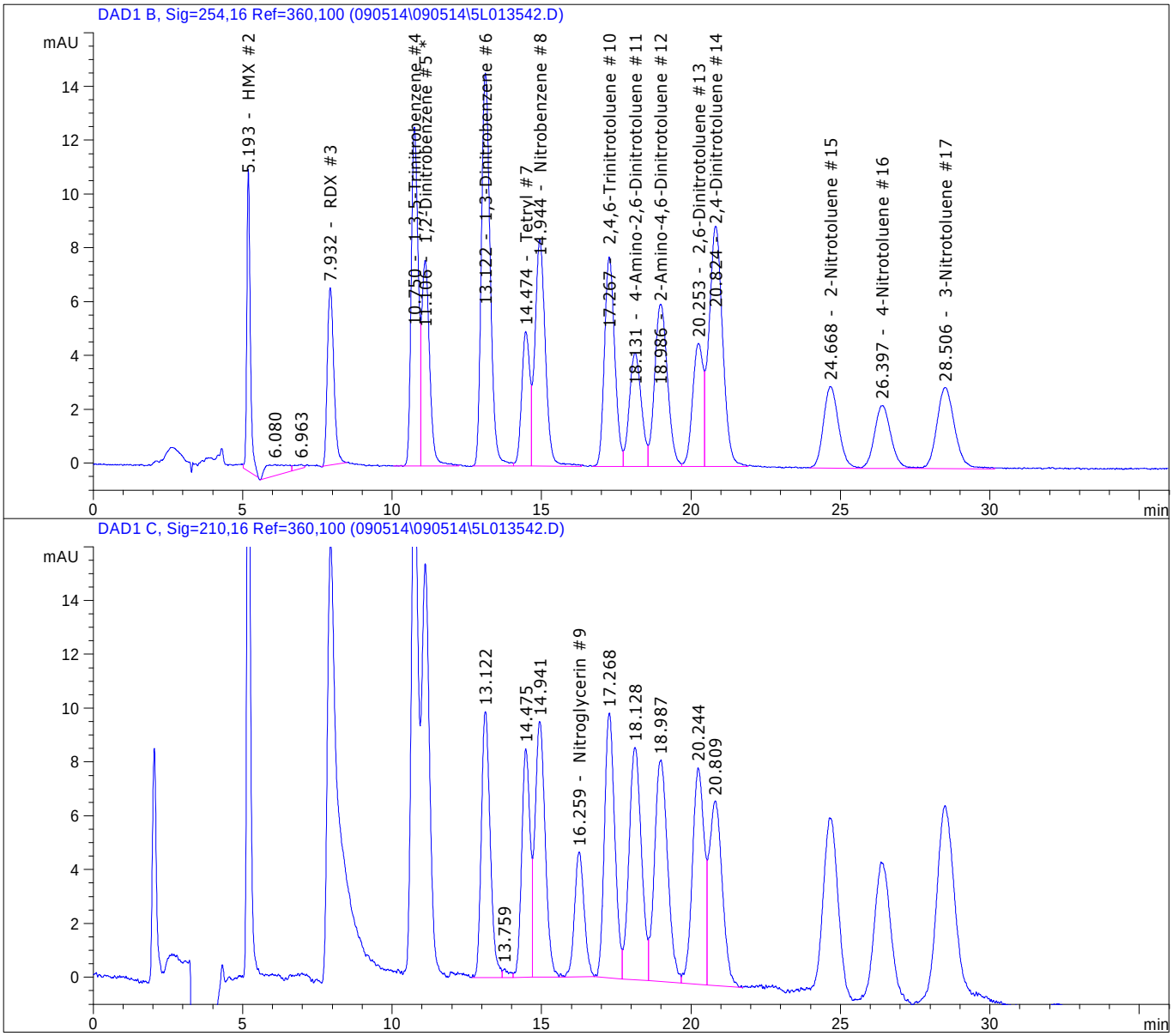
==========

Acq. Operator	: ECL	Seq. Line :	1
Acq. Instrument	: HPLC5	Location :	Vial 2
Injection Date	: 9/5/2014 5:08:29 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\090514\090514\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/5/2014 3:10:53 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

==========



Data File C:\CHEM32\1\DATA\090514\090514\5L013542.D
Sample Name: WG491289-01 8330 CCV 500 PPB

==========

Acq. Operator : ECL Seq. Line : 1
Acq. Instrument : HPLC5 Location : Vial 2
Injection Date : 9/5/2014 5:08:29 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090514\090514\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/5/2014 3:10:53 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

==========

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 9/5/2014 3:10:37 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.193	BBA	90.74749	5.95902	540.76590		HMX #2
7.932	BBA	99.36507	5.03460	500.26348		RDX #3
10.750	VV	204.37071	2.55917	523.02018		1,3,5-Trinitrobenzene #4
11.106	VB	138.73560	3.64133	505.18176		1,2-Dinitrobenzene #5 *
13.122	BV	300.15244	1.69976	510.18829		1,3-Dinitrobenzene #6
14.474	VV	95.72197	4.44101	425.10206		Tetryl #7
14.944	VB	202.04184	2.40824	486.56439		Nitrobenzene #8
17.267	VV	186.19167	2.58812	481.88647		2,4,6-Trinitrotoluene #10
18.131	VV	118.20998	4.37975	517.72998		4-Amino-2,6-Dinitrotoluene #11
18.986	VV	179.94963	2.85215	513.24347		2-Amino-4,6-Dinitrotoluene #12
20.253	VV	113.34543	4.40270	499.02647		2,6-Dinitrotoluene #13
20.824	VV	281.51151	1.81849	511.92546		2,4-Dinitrotoluene #14
24.668	VV	107.01918	4.87715	521.94889		2-Nitrotoluene #15
26.397	VV	89.50497	5.86357	524.81850		4-Nitrotoluene #16
28.506	VB	125.92889	4.25724	536.10969		3-Nitrotoluene #17

Totals : 7597.77499

Data File C:\CHEM32\1\DATA\090514\090514\5L013542.D
Sample Name: WG491289-01 8330 CCV 500 PPB

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :   1
Acq. Instrument : HPLC5                          Location : Vial 2
Injection Date  : 9/5/2014 5:08:29 PM                 Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\090514\090514\8330PLUS.M
Last changed    : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 9/5/2014 3:10:53 PM by ECL
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1 STD65351


==================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 16.259 VV      104.34029    4.84995  506.04568    Nitroglycerin #9

Totals :                               506.04568


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                           *** End of Report ***
```

Data File C:\CHEM32\1\DATA\090514\090514\5L013553.D
Sample Name: WG491289-02 8330 CCV 500 PPB

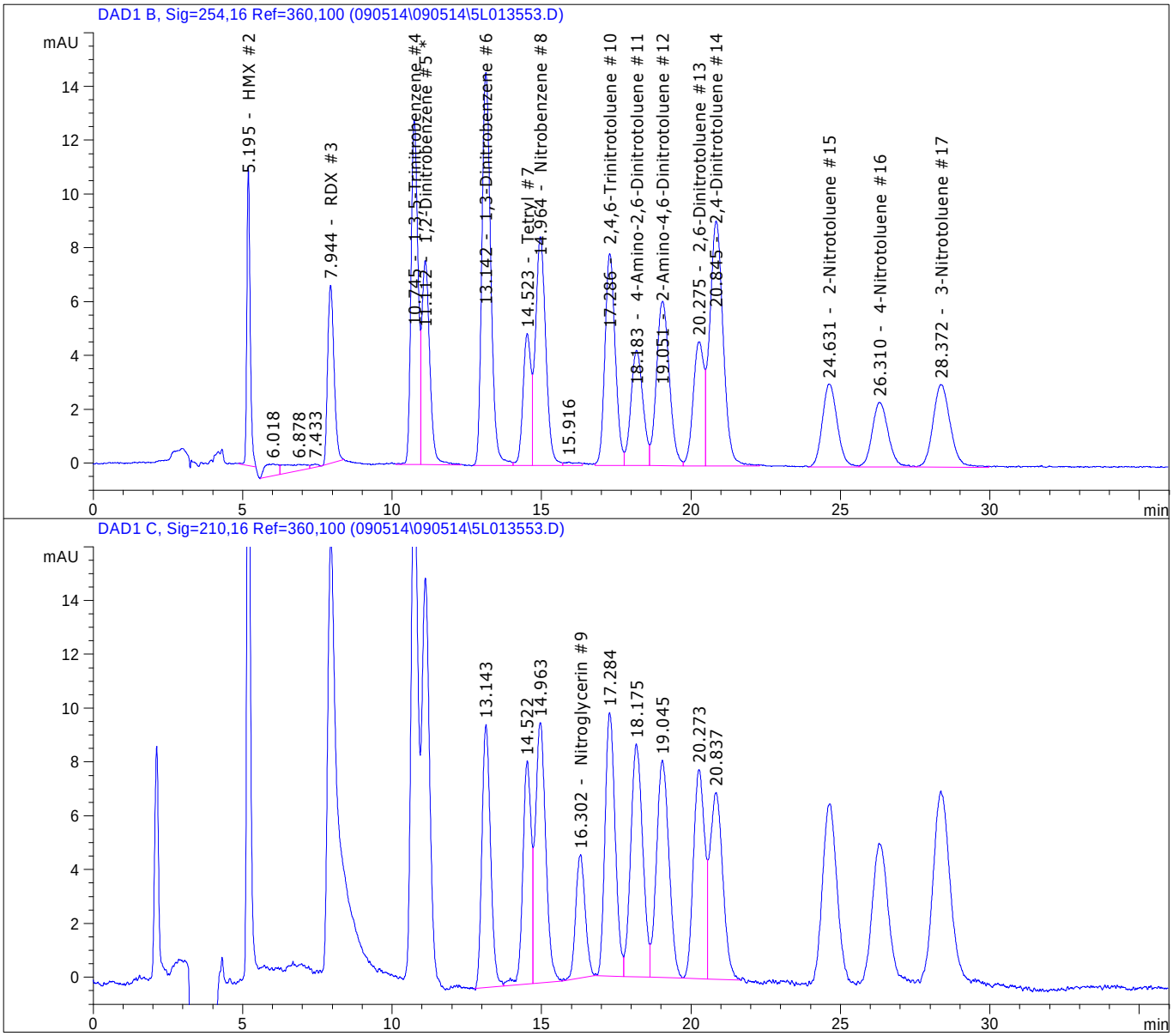
==========

Acq. Operator	: ECL	Seq. Line	: 12
Acq. Instrument	: HPLC5	Location	: Vial 2
Injection Date	: 9/6/2014 12:17:59 AM	Inj	: 1
		Inj Volume	: 100 µl

Acq. Method : C:\Chem32\1\DATA\090514\090514\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/8/2014 9:45:10 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

==========



Data File C:\CHEM32\1\DATA\090514\090514\5L013553.D
Sample Name: WG491289-02 8330 CCV 500 PPB

==========

Acq. Operator : ECL Seq. Line : 12
Acq. Instrument : HPLC5 Location : Vial 2
Injection Date : 9/6/2014 12:17:59 AM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090514\090514\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/8/2014 9:45:10 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 9/5/2014 3:10:37 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.195	BBA	85.81378	5.95487	511.00999		HMX #2
7.944	VBA	97.73119	5.03187	491.77113		RDX #3
10.745	VV	207.74782	2.55891	531.60836		1,3,5-Trinitrobenzene #4
11.112	VB	139.01648	3.64139	506.21305		1,2-Dinitrobenzene #5 *
13.142	BV	300.84265	1.69975	511.35851		1,3-Dinitrobenzene #6
14.523	VV	91.34105	4.44106	405.65134		Tetryl #7
14.964	VV	202.55356	2.40819	487.78762		Nitrobenzene #8
17.286	BV	189.38789	2.58810	490.15484		2,4,6-Trinitrotoluene #10
18.183	VV	120.32941	4.37987	527.02714		4-Amino-2,6-Dinitrotoluene #11
19.051	VV	182.89810	2.85218	521.65780		2-Amino-4,6-Dinitrotoluene #12
20.275	VV	115.39946	4.40304	508.10839		2,6-Dinitrotoluene #13
20.845	VB	285.01443	1.81846	518.28708		2,4-Dinitrotoluene #14
24.631	VV	107.18465	4.87720	522.76125		2-Nitrotoluene #15
26.310	VV	89.85265	5.86367	526.86649		4-Nitrotoluene #16
28.372	VB	123.39096	4.25715	525.29426		3-Nitrotoluene #17

Totals : 7585.55724

Data File C:\CHEM32\1\DATA\090514\090514\5L013553.D
Sample Name: WG491289-02 8330 CCV 500 PPB

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :  12
Acq. Instrument : HPLC5                          Location : Vial 2
Injection Date  : 9/6/2014 12:17:59 AM                Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\090514\090514\8330PLUS.M
Last changed    : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 9/8/2014 9:45:10 AM by ECL
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1 STD65351


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Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 16.302 VV      101.11832    4.84993  490.41684    Nitroglycerin #9

Totals :                               490.41684


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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                           *** End of Report ***
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Data File C:\CHEM32\1\DATA\090814\090814\5L013573.D
Sample Name: WG491373-01 8330 CCV 500 PPB

==========

Acq. Operator	: ECL	Seq. Line :	1
Acq. Instrument	: HPLC5	Location :	Vial 2
Injection Date	: 9/8/2014 12:33:28 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\090814\090814\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/8/2014 1:42:00 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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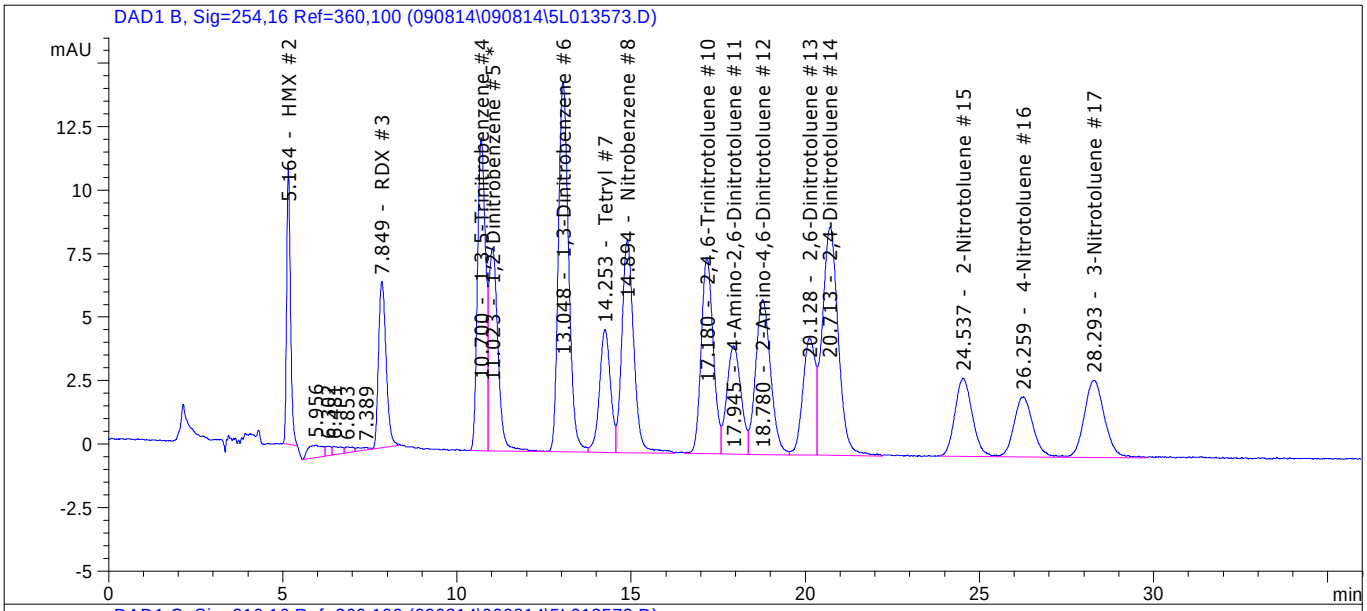

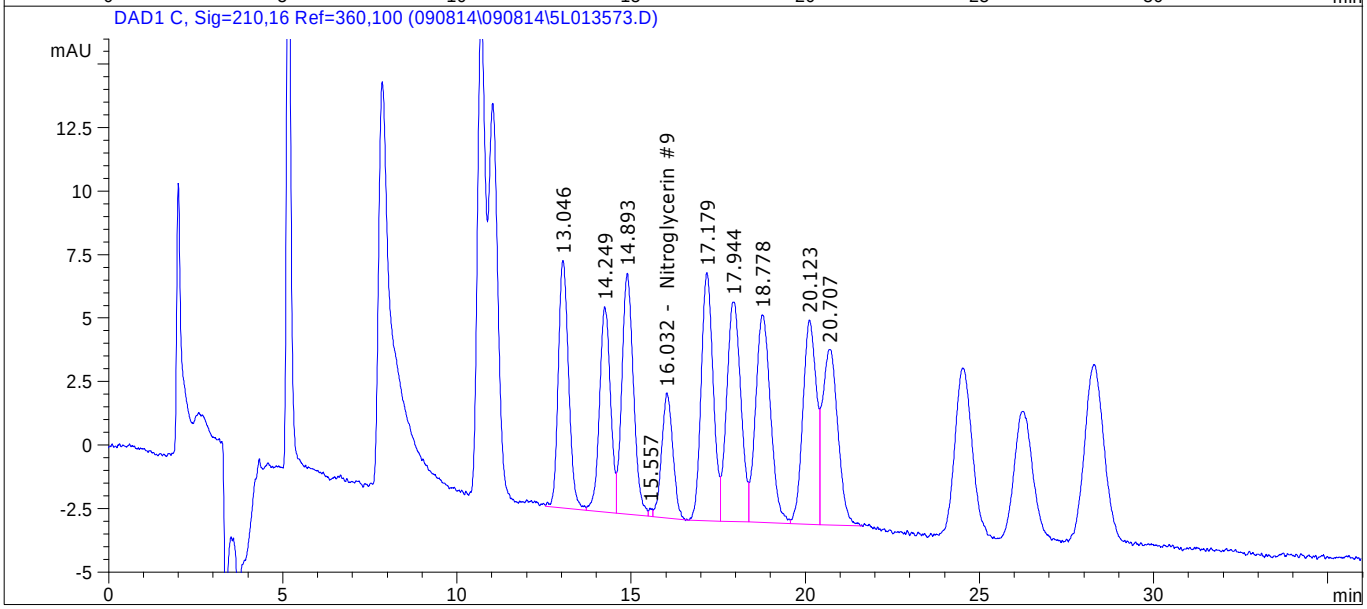

Data File C:\CHEM32\1\DATA\090814\090814\5L013573.D
Sample Name: WG491373-01 8330 CCV 500 PPB

==========

Acq. Operator : ECL Seq. Line : 1
Acq. Instrument : HPLC5 Location : Vial 2
Injection Date : 9/8/2014 12:33:28 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090814\090814\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/8/2014 1:42:00 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 9/8/2014 1:41:51 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.164	BBA	83.75455	5.95300	498.59045		HMX #2
7.849	VBA	98.50391	5.03318	495.78748		RDX #3
10.700	BV	201.48314	2.55940	515.67692		1,3,5-Trinitrobenzene #4
11.023	VV	144.01578	3.64244	524.56834		1,2-Dinitrobenzene #5 *
13.048	VV	300.57208	1.69976	510.89978		1,3-Dinitrobenzene #6
14.253	VV	105.42899	4.44090	468.19996		Tetryl #7
14.894	VV	199.11810	2.40850	479.57540		Nitrobenzene #8
17.180	VV	186.85229	2.58812	483.59546		2,4,6-Trinitrotoluene #10
17.945	VV	120.52502	4.37988	527.88521		4-Amino-2,6-Dinitrotoluene #11
18.780	VV	184.11607	2.85219	525.13364		2-Amino-4,6-Dinitrotoluene #12
20.128	VV	116.37291	4.40319	512.41250		2,6-Dinitrotoluene #13
20.713	VV	285.30902	1.81846	518.82207		2,4-Dinitrotoluene #14
24.537	BV	107.51157	4.87730	524.36616		2-Nitrotoluene #15
26.259	VV	89.94504	5.86370	527.41073		4-Nitrotoluene #16
28.293	VB	123.89055	4.25717	527.42326		3-Nitrotoluene #17

Totals : 7640.34737

Data File C:\CHEM32\1\DATA\090814\090814\5L013573.D
Sample Name: WG491373-01 8330 CCV 500 PPB

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :   1
Acq. Instrument : HPLC5                          Location : Vial 2
Injection Date  : 9/8/2014 12:33:28 PM                Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\090814\090814\8330PLUS.M
Last changed    : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 9/8/2014 1:42:00 PM by ECL
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1 STD65351


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Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 16.032 VV      109.54072    4.84999  531.27138    Nitroglycerin #9

Totals :                               531.27138


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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                           *** End of Report ***
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Data File C:\CHEM32\1\DATA\090814\090814\5L013584.D
Sample Name: WG491373-02 8330 CCV 500 PPB

==========

Acq. Operator	: ECL	Seq. Line	: 12
Acq. Instrument	: HPLC5	Location	: Vial 2
Injection Date	: 9/8/2014 8:15:53 PM	Inj	: 1
		Inj Volume	: 100 µl

Acq. Method : C:\Chem32\1\DATA\090814\090814\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/9/2014 8:52:43 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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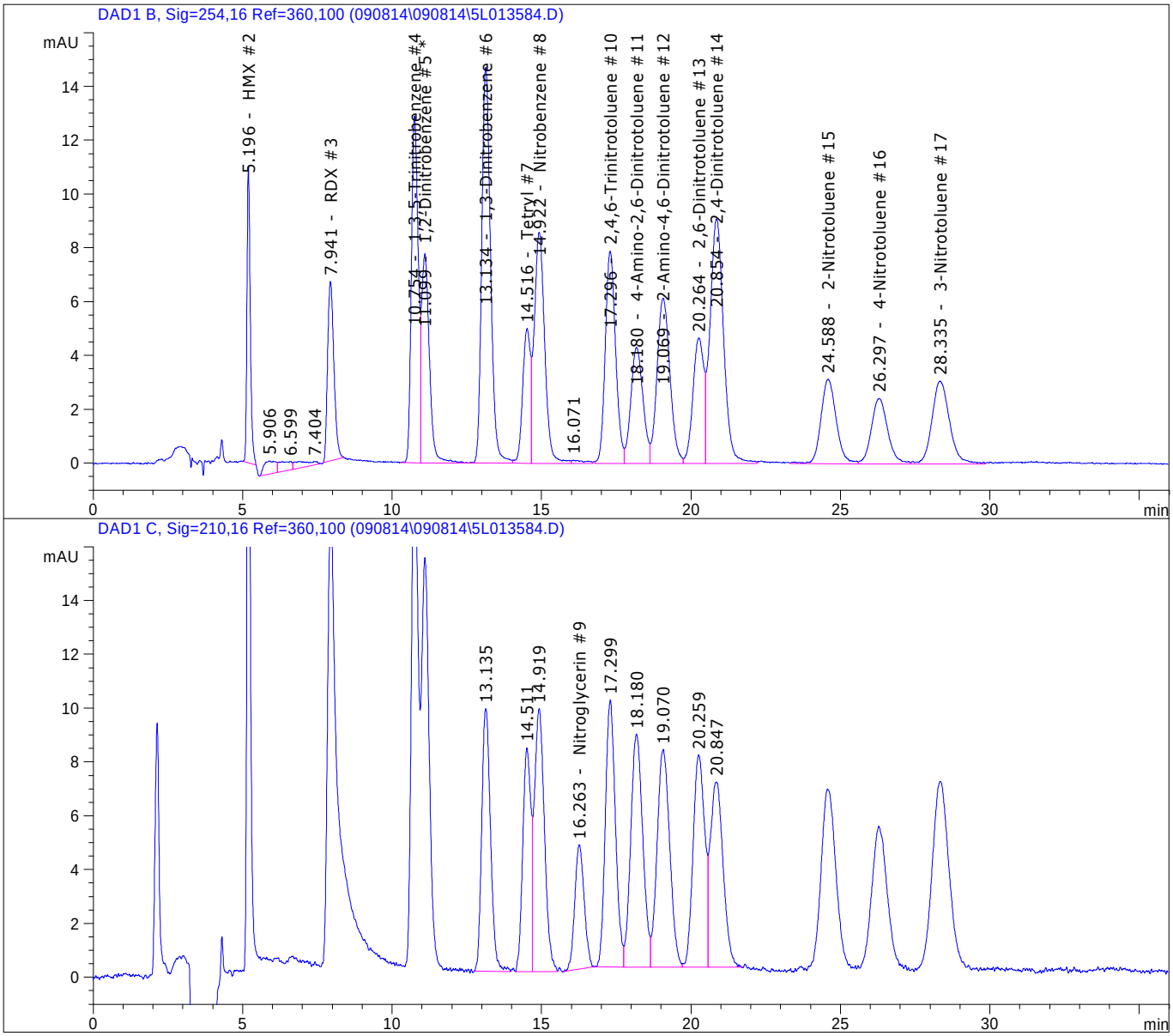

Data File C:\CHEM32\1\DATA\090814\090814\5L013584.D
Sample Name: WG491373-02 8330 CCV 500 PPB

==========

Acq. Operator : ECL Seq. Line : 12
Acq. Instrument : HPLC5 Location : Vial 2
Injection Date : 9/8/2014 8:15:53 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090814\090814\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/9/2014 8:52:43 AM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 STD65351

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 9/9/2014 8:14:57 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.196	BBA	85.13535	5.95426	506.91829		HMX #2
7.941	BBA	97.70052	5.03182	491.61172		RDX #3
10.754	VV	205.69868	2.55907	526.39729		1,3,5-Trinitrobenzene #4
11.099	VV	141.03484	3.64182	513.62359		1,2-Dinitrobenzene #5 *
13.134	VV	302.53592	1.69973	514.22936		1,3-Dinitrobenzene #6
14.516	VV	90.29733	4.44108	401.01738		Tetryl #7
14.922	VV	208.33209	2.40770	501.60080		Nitrobenzene #8
17.296	BV	189.99487	2.58810	491.72504		2,4,6-Trinitrotoluene #10
18.180	VV	122.38329	4.37998	536.03675		4-Amino-2,6-Dinitrotoluene #11
19.069	VV	184.29707	2.85219	525.65017		2-Amino-4,6-Dinitrotoluene #12
20.264	VV	119.20168	4.40363	524.91995		2,6-Dinitrotoluene #13
20.854	VV	287.03647	1.81844	521.95926		2,4-Dinitrotoluene #14
24.588	BV	111.62347	4.87848	544.55274		2-Nitrotoluene #15
26.297	VV	91.83676	5.86425	538.55408		4-Nitrotoluene #16
28.335	VV	126.54404	4.25726	538.73120		3-Nitrotoluene #17

Totals : 7677.52763

Data File C:\CHEM32\1\DATA\090814\090814\5L013584.D
Sample Name: WG491373-02 8330 CCV 500 PPB

```
==================================================================
Acq. Operator   : ECL                           Seq. Line :  12
Acq. Instrument : HPLC5                          Location : Vial 2
Injection Date  : 9/8/2014 8:15:53 PM                 Inj :   1
                                               Inj Volume : 100 µl
Acq. Method     : C:\Chem32\1\DATA\090814\090814\8330PLUS.M
Last changed    : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed    : 9/9/2014 8:52:43 AM by ECL
Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info     : 1,1 STD65351


==================================================================


Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/L]
-------|------|----------|----------|----------|--|------------------
 16.263 VV      101.91959    4.84994  494.30356    Nitroglycerin #9

Totals :                               494.30356


1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==================================================================
                           *** End of Report ***
```

RETENTION TIME WINDOWS

Lab Name: Microbac Laboratories, Inc.

Instrument ID: HPLC5

Column: Ultracarb 5 ODS

	STANDARD #1	STANDARD #2	STANDARD #3
Date Run	12/13/11	12/14/11	12/15/11
File #	5L005951	5L005994	5L006024

COMPOUND	STD #1 RT	STD #2 RT	STD #3 RT	RT WIN
HMX	5.719	5.716	5.719	0.005
RDX	8.757	8.748	8.752	0.014
1,3,5-Trinitrobenzene	11.812	11.800	11.809	0.019
1,2-Dinitrobenzene (Surr.)	12.113	12.093	12.099	0.031
1,3-Dinitrobenzene	14.419	14.394	14.412	0.039
Tetryl	15.864	15.829	15.856	0.055
Nitrobenzene	16.264	16.233	16.258	0.049
Nitroglycerin	17.745	17.709	17.731	0.054
2,4,6-Trinitrotoluene	18.831	18.795	18.827	0.059
4-Amino-2,6-Dinitrotoluene	19.804	19.762	19.798	0.068
2-Amino-4,6-Dinitrotoluene	20.906	20.858	20.893	0.074
2,6-Dinitrotoluene	21.945	21.898	21.940	0.077
2,4-Dinitrotoluene	22.706	22.651	22.693	0.086
2-Nitrotoluene	26.468	26.403	26.465	0.110
4-Nitrotoluene	28.336	28.254	28.330	0.137
3-Nitrotoluene	30.532	30.451	30.533	0.141

2.1.1.5 Raw QC Data

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013479.D
Sample Name: WG490381-01 BLANK

==========

Acq. Operator	: ECL	Seq. Line :	2
Acq. Instrument	: HPLC5	Location :	Vial 3
Injection Date	: 9/2/2014 3:39:31 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 2:57:48 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

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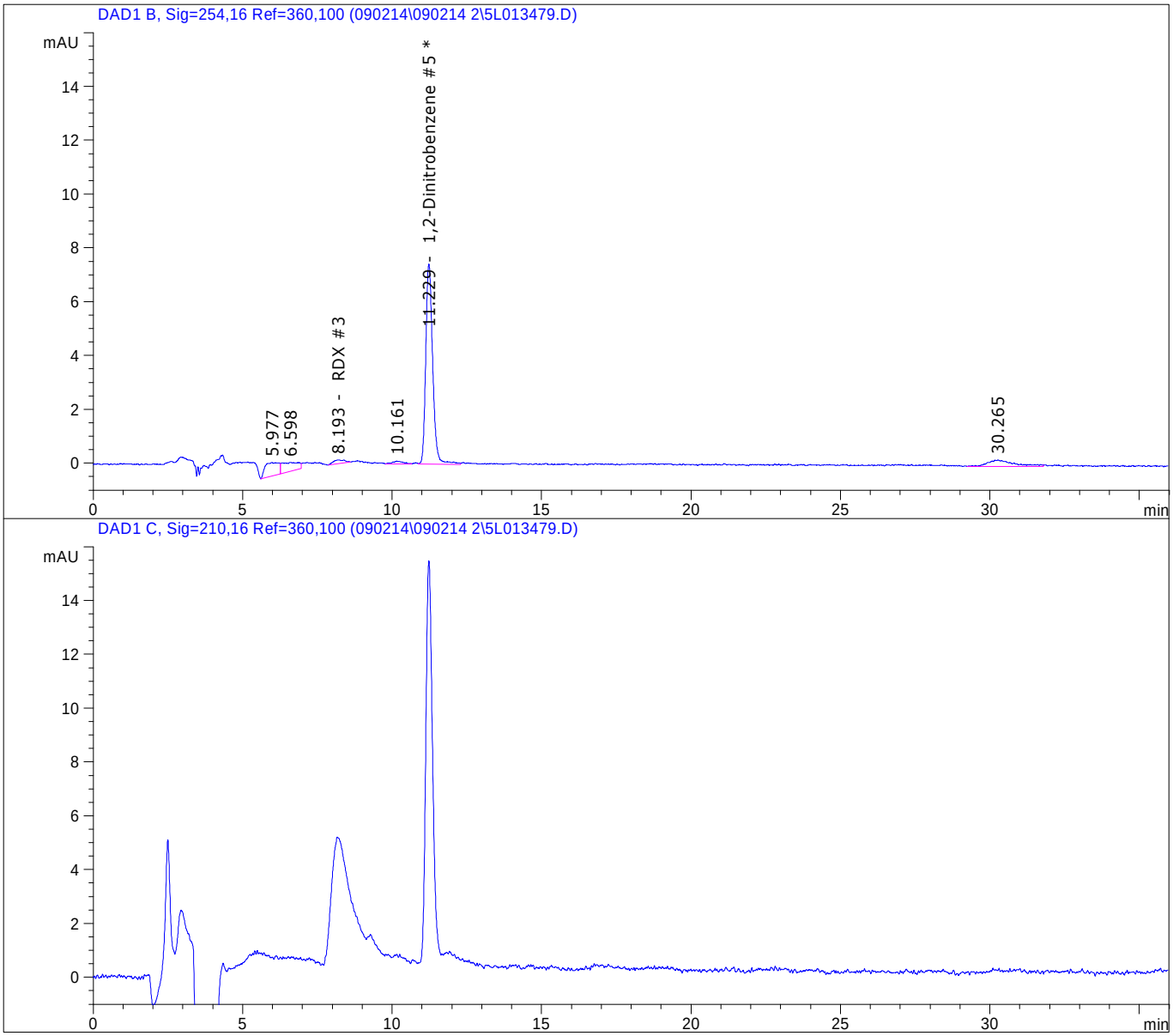

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013479.D
Sample Name: WG490381-01 BLANK

==========

Acq. Operator : ECL Seq. Line : 2
Acq. Instrument : HPLC5 Location : Vial 3
Injection Date : 9/2/2014 3:39:31 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 2:57:48 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 9/3/2014 2:53:21 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.216		-	-	-		HMX #2
8.193	BBA	3.39607	4.26257e-1	1.44760		RDX #3
10.824		-	-	-		1,3,5-Trinitrobenzene #4
11.229	VV	119.88984	3.63657	435.98816		1,2-Dinitrobenzene #5 *
13.217		-	-	-		1,3-Dinitrobenzene #6
14.630		-	-	-		Tetryl #7
15.077		-	-	-		Nitrobenzene #8
17.435		-	-	-		2,4,6-Trinitrotoluene #10
18.312		-	-	-		4-Amino-2,6-Dinitrotoluene #11
19.201		-	-	-		2-Amino-4,6-Dinitrotoluene #12
20.430		-	-	-		2,6-Dinitrotoluene #13
21.026		-	-	-		2,4-Dinitrotoluene #14
24.821		-	-	-		2-Nitrotoluene #15
26.530		-	-	-		4-Nitrotoluene #16
28.611		-	-	-		3-Nitrotoluene #17

Totals : 437.43576

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013479.D
Sample Name: WG490381-01 BLANK

==========

Acq. Operator : ECL Seq. Line : 2
Acq. Instrument : HPLC5 Location : Vial 3
Injection Date : 9/2/2014 3:39:31 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 2:57:48 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========

Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
16.399	-	-	-			Nitroglycerin #9

Totals : 0.00000

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

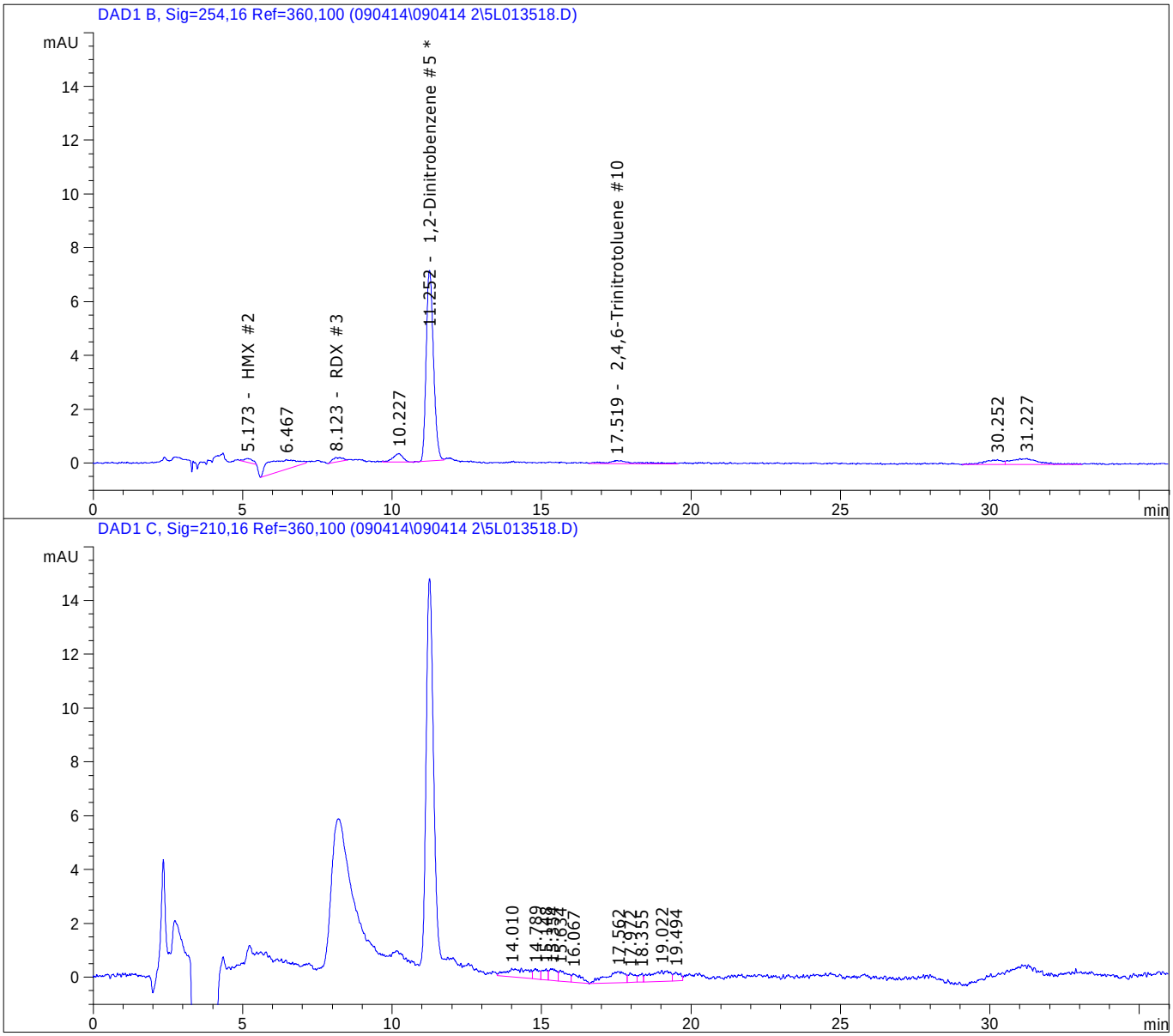
*** End of Report ***

Data File C:\CHEM32\1\DATA\090414\090414 2\5L013518.D
Sample Name: WG490559-01 BLANK

==========

Acq. Operator	: ECL	Seq. Line :	2
Acq. Instrument	: HPLC5	Location :	Vial 3
Injection Date	: 9/4/2014 12:05:03 PM	Inj :	1
		Inj Volume :	100 µl
Acq. Method	: C:\Chem32\1\DATA\090414\090414 2\8330PLUS.M		
Last changed	: 9/2/2014 2:17:53 PM by ECL		
Analysis Method	: C:\CHEM32\1\METHODS\8330PLDA.M		
Last changed	: 9/4/2014 12:01:51 PM by ECL		
Method Info	: OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013		
Sample Info	: 1,1 WATER		

==========



Data File C:\CHEM32\1\DATA\090414\090414 2\5L013518.D
Sample Name: WG490559-01 BLANK

==========

Acq. Operator : ECL Seq. Line : 2
Acq. Instrument : HPLC5 Location : Vial 3
Injection Date : 9/4/2014 12:05:03 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090414\090414 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/4/2014 12:01:51 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 9/3/2014 3:43:32 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.173	BBA	3.29289	4.04342	13.31455		HMX #2
8.123	VBA	3.62749	7.30657e-1	2.65045		RDX #3
10.827		-	-	-		1,3,5-Trinitrobenzene #4
11.252	VV	119.08544	3.63634	433.03476		1,2-Dinitrobenzene #5 *
13.228		-	-	-		1,3-Dinitrobenzene #6
14.636		-	-	-		Tetryl #7
15.042		-	-	-		Nitrobenzene #8
17.519	VB	7.65767	2.61630	20.03472		2,4,6-Trinitrotoluene #10
18.356		-	-	-		4-Amino-2,6-Dinitrotoluene #11
19.246		-	-	-		2-Amino-4,6-Dinitrotoluene #12
20.436		-	-	-		2,6-Dinitrotoluene #13
21.028		-	-	-		2,4-Dinitrotoluene #14
24.817		-	-	-		2-Nitrotoluene #15
26.526		-	-	-		4-Nitrotoluene #16
28.598		-	-	-		3-Nitrotoluene #17

Totals : 469.03448

Data File C:\CHEM32\1\DATA\090414\090414 2\5L013518.D
Sample Name: WG490559-01 BLANK

==========

Acq. Operator : ECL Seq. Line : 2
Acq. Instrument : HPLC5 Location : Vial 3
Injection Date : 9/4/2014 12:05:03 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090414\090414 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/4/2014 12:01:51 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========

Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
16.419		-	-	-		Nitroglycerin #9

Totals : 0.00000

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File C:\CHEM32\1\DATA\090414\090414 2\5L013522.D
Sample Name: WG490739-01 BLANK

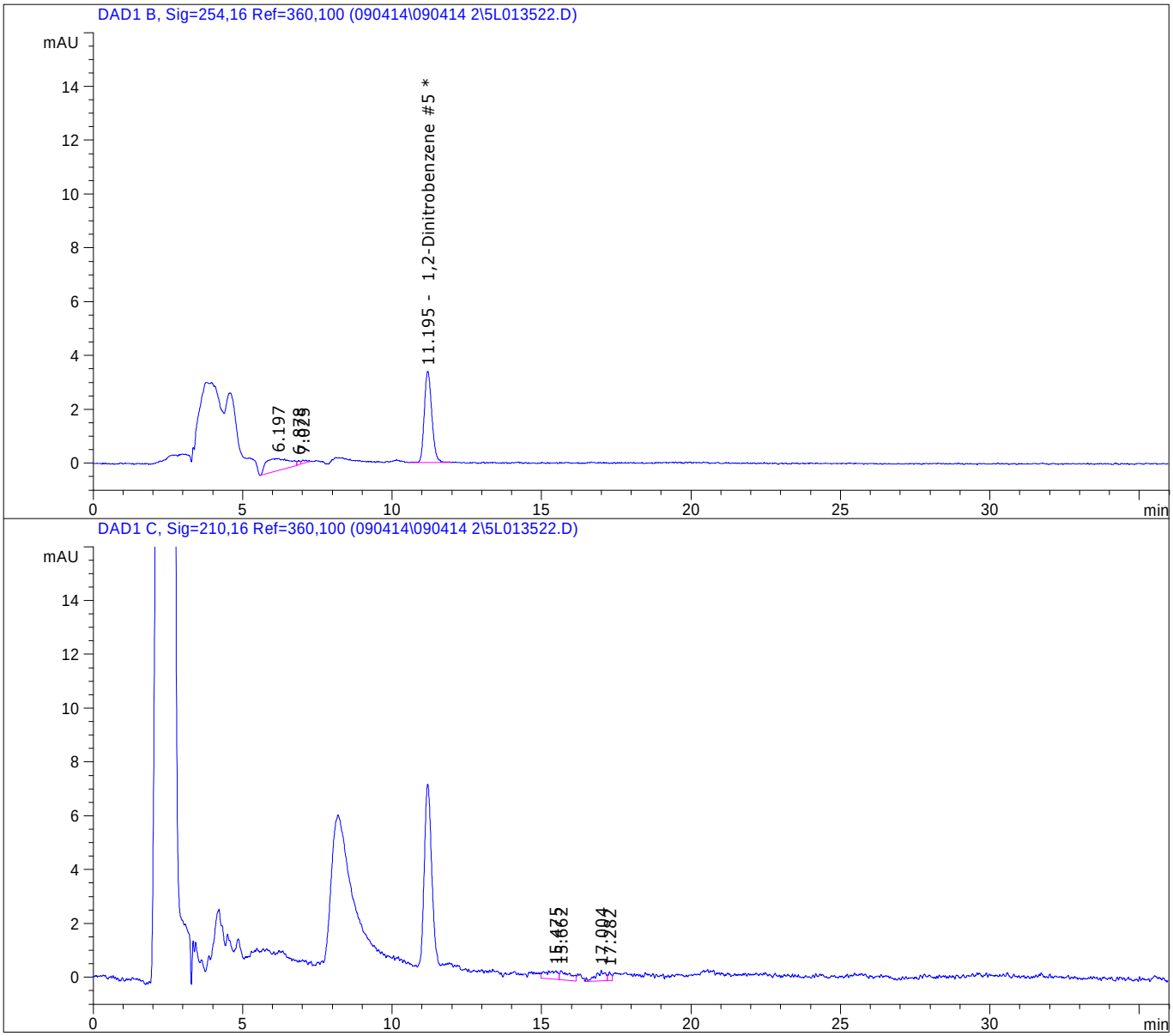
==========

Acq. Operator	: ECL	Seq. Line :	6
Acq. Instrument	: HPLC5	Location :	Vial 7
Injection Date	: 9/4/2014 2:51:48 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\090414\090414 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/5/2014 2:24:48 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 7,1 SOIL

==========



HPLC5 9/5/2014 2:28:04 PM ECL Page 1 of 3

Data File C:\CHEM32\1\DATA\090414\090414 2\5L013522.D
Sample Name: WG490739-01 BLANK

==========

Acq. Operator : ECL Seq. Line : 6
Acq. Instrument : HPLC5 Location : Vial 7
Injection Date : 9/4/2014 2:51:48 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090414\090414 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/5/2014 2:24:48 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 7,1 SOIL

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 9/5/2014 2:22:47 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.216		-	-	-		HMX #2
8.040		-	-	-		RDX #3
10.892		-	-	-		1,3,5-Trinitrobenzene #4
11.195	VBA	59.23649	3.60073	213.29489		1,2-Dinitrobenzene #5 *
13.323		-	-	-		1,3-Dinitrobenzene #6
14.781		-	-	-		Tetryl #7
15.168		-	-	-		Nitrobenzene #8
17.581		-	-	-		2,4,6-Trinitrotoluene #10
18.510		-	-	-		4-Amino-2,6-Dinitrotoluene #11
19.394		-	-	-		2-Amino-4,6-Dinitrotoluene #12
20.631		-	-	-		2,6-Dinitrotoluene #13
21.216		-	-	-		2,4-Dinitrotoluene #14
25.083		-	-	-		2-Nitrotoluene #15
26.822		-	-	-		4-Nitrotoluene #16
28.934		-	-	-		3-Nitrotoluene #17

Totals : 213.29489

Data File C:\CHEM32\1\DATA\090414\090414 2\5L013522.D
Sample Name: WG490739-01 BLANK

==========

Acq. Operator : ECL Seq. Line : 6
Acq. Instrument : HPLC5 Location : Vial 7
Injection Date : 9/4/2014 2:51:48 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090414\090414 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/5/2014 2:24:48 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 7,1 SOIL

==========

Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
16.566		-	-	-		Nitroglycerin #9

Totals : 0.00000

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

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*** End of Report ***

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013480.D
Sample Name: WG490381-02 LCS

==========

Acq. Operator	: ECL	Seq. Line :	3
Acq. Instrument	: HPLC5	Location :	Vial 4
Injection Date	: 9/2/2014 4:18:31 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 2:58:34 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

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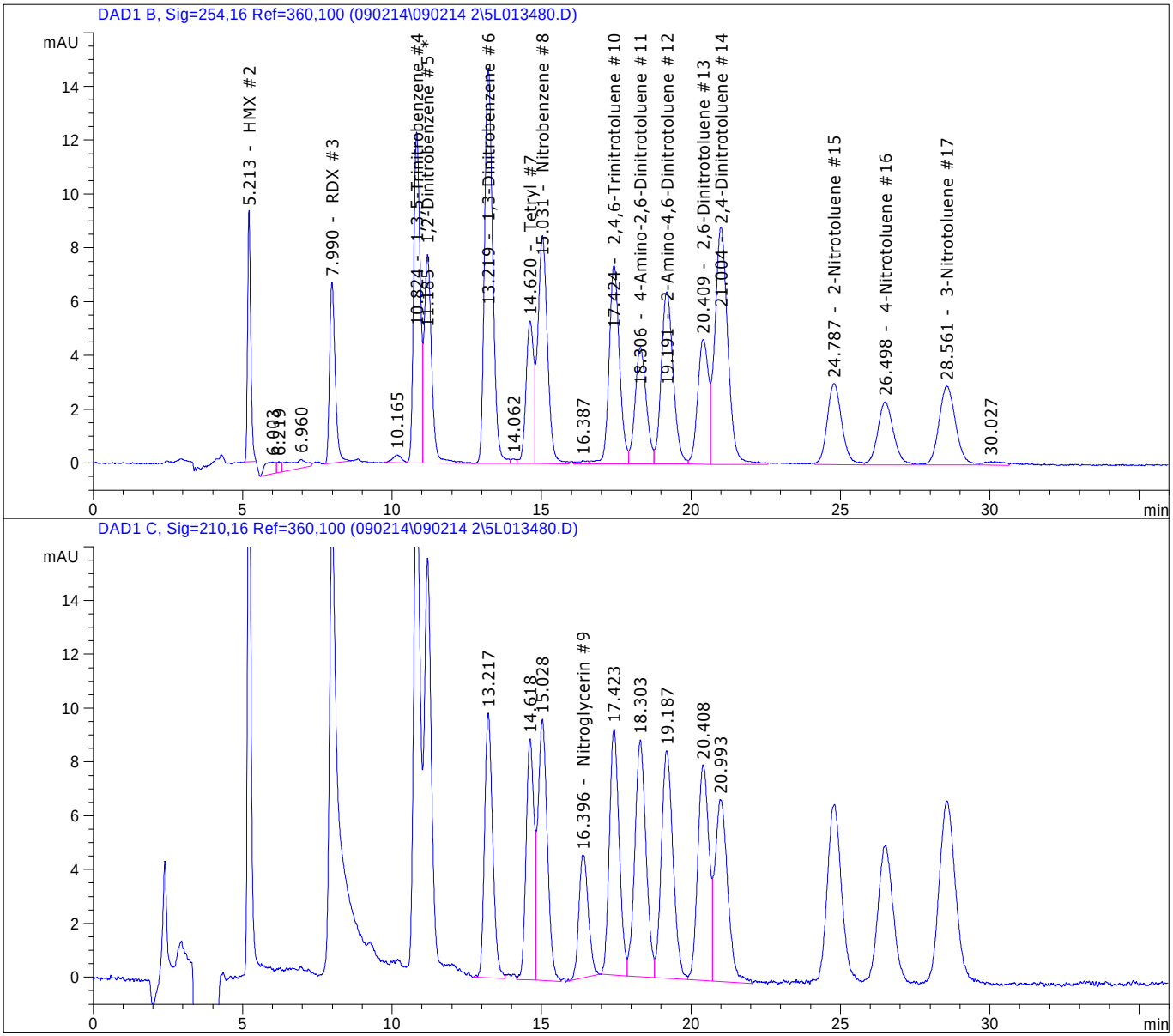

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013480.D
Sample Name: WG490381-02 LCS

==========

Acq. Operator : ECL Seq. Line : 3
Acq. Instrument : HPLC5 Location : Vial 4
Injection Date : 9/2/2014 4:18:31 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 2:58:34 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 9/3/2014 2:53:21 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.213	BBA	68.02984	5.93493	403.75245		HMX #2
7.990	BBA	87.91032	5.01335	440.72542		RDX #3
10.824	VV	185.28375	2.56083	474.48095		1,3,5-Trinitrobenzene #4
11.185	VV	133.07254	3.64004	484.38943		1,2-Dinitrobenzene #5 *
13.219	VV	277.40915	1.70012	471.62820		1,3-Dinitrobenzene #6
14.620	VV	95.85370	4.44101	425.68692		Tetryl #7
15.031	VV	188.88348	2.40948	455.11026		Nitrobenzene #8
17.424	VV	178.54692	2.58817	462.11019		2,4,6-Trinitrotoluene #10
18.306	VV	113.55354	4.37947	497.30391		4-Amino-2,6-Dinitrotoluene #11
19.191	VV	177.68474	2.85213	506.77994		2-Amino-4,6-Dinitrotoluene #12
20.409	VV	115.12928	4.40300	506.91378		2,6-Dinitrotoluene #13
21.004	VB	265.33749	1.81864	482.55210		2,4-Dinitrotoluene #14
24.787	BV	102.42147	4.87571	499.37732		2-Nitrotoluene #15
26.498	VV	85.30745	5.86224	500.09264		4-Nitrotoluene #16
28.561	VV	114.34763	4.25681	486.75591		3-Nitrotoluene #17

Totals : 7097.65944

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013480.D
Sample Name: WG490381-02 LCS

==========

Acq. Operator : ECL Seq. Line : 3
Acq. Instrument : HPLC5 Location : Vial 4
Injection Date : 9/2/2014 4:18:31 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 2:58:34 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========

Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
16.396	VV	100.29092	4.84992	486.40337		Nitroglycerin #9

Totals : 486.40337

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========

*** End of Report ***

Data File C:\CHEM32\1\DATA\090414\090414 2\5L013519.D
Sample Name: WG490559-02 LCS

==========

Acq. Operator	: ECL	Seq. Line :	3
Acq. Instrument	: HPLC5	Location :	Vial 4
Injection Date	: 9/4/2014 12:44:04 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\090414\090414 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/5/2014 2:23:18 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

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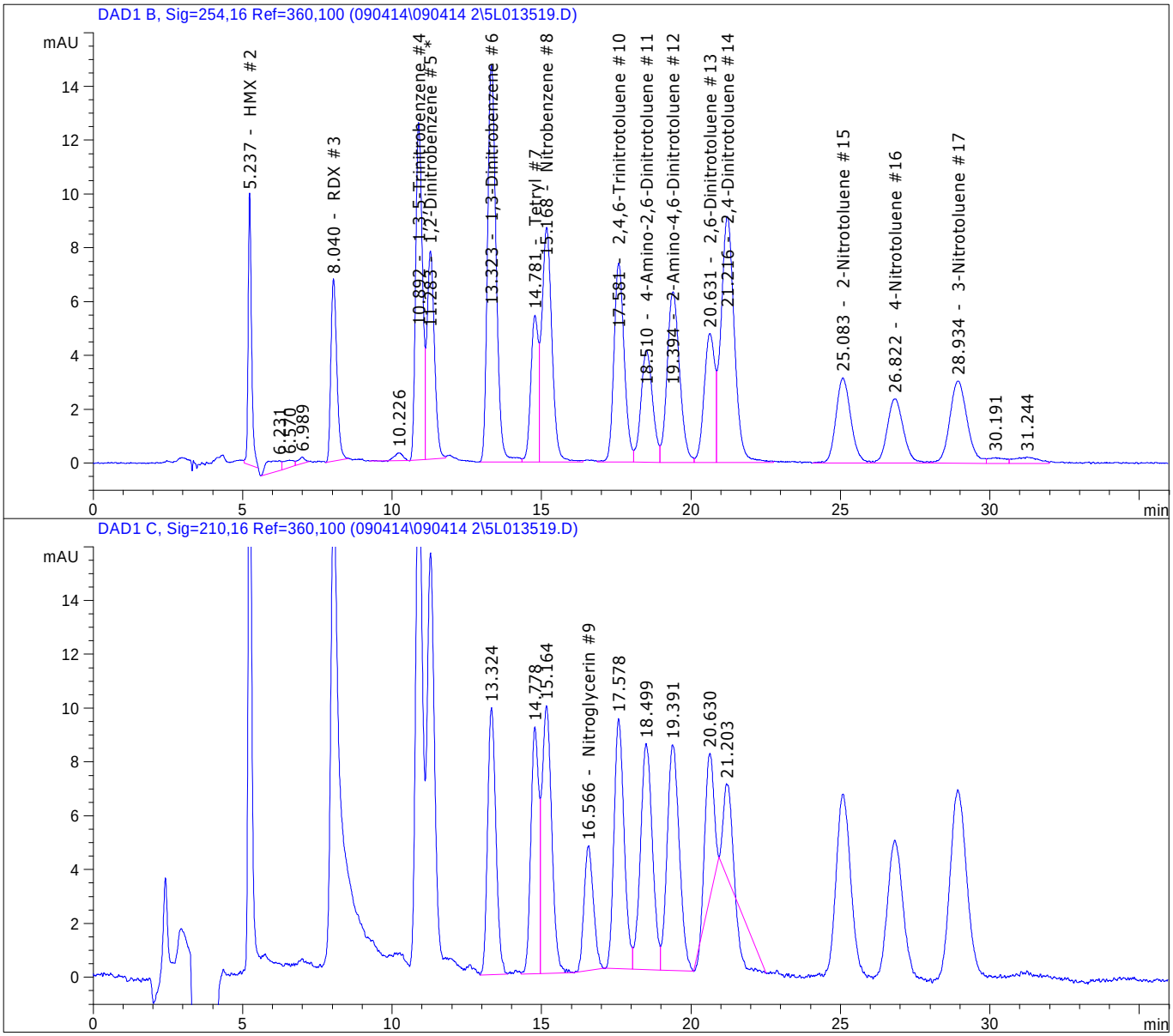

Data File C:\CHEM32\1\DATA\090414\090414 2\5L013519.D
Sample Name: WG490559-02 LCS

==========

Acq. Operator : ECL Seq. Line : 3
Acq. Instrument : HPLC5 Location : Vial 4
Injection Date : 9/4/2014 12:44:04 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090414\090414 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/5/2014 2:23:18 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 9/5/2014 2:22:47 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.237	BBA	79.27880	5.94858	471.59658		HMX #2
8.040	VBA	93.61421	5.02458	470.37239		RDX #3
10.892	VV	196.79840	2.55979	503.76336		1,3,5-Trinitrobenzene #4
11.283	VV	132.60100	3.63993	482.65813		1,2-Dinitrobenzene #5 *
13.323	BV	292.69135	1.69987	497.53839		1,3-Dinitrobenzene #6
14.781	VV	94.97146	4.44102	421.76989		Tetryl #7
15.168	VB	206.28540	2.40787	496.70833		Nitrobenzene #8
17.581	VV	177.71254	2.58818	459.95172		2,4,6-Trinitrotoluene #10
18.510	VV	113.89539	4.37949	498.80349		4-Amino-2,6-Dinitrotoluene #11
19.394	VV	184.41808	2.85219	525.99549		2-Amino-4,6-Dinitrotoluene #12
20.631	VV	119.97941	4.40374	528.35867		2,6-Dinitrotoluene #13
21.216	VB	283.82001	1.81847	516.11790		2,4-Dinitrotoluene #14
25.083	BV	108.44043	4.87757	528.92623		2-Nitrotoluene #15
26.822	VV	89.38480	5.86353	524.11058		4-Nitrotoluene #16
28.934	VV	123.21916	4.25715	524.56213		3-Nitrotoluene #17

Totals : 7451.23327

Data File C:\CHEM32\1\DATA\090414\090414 2\5L013519.D
Sample Name: WG490559-02 LCS

```
    ==================================================================
    Acq. Operator   : ECL                           Seq. Line :   3
    Acq. Instrument : HPLC5                          Location : Vial 4
    Injection Date  : 9/4/2014 12:44:04 PM                Inj :   1
                                                   Inj Volume : 100 µl
    Acq. Method     : C:\Chem32\1\DATA\090414\090414 2\8330PLUS.M
    Last changed    : 9/2/2014 2:17:53 PM by ECL
    Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
    Last changed    : 9/5/2014 2:23:18 PM by ECL
    Method Info     : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

    Sample Info     : 1,1 WATER


    ==================================================================


    Signal 2: DAD1 C, Sig=210,16 Ref=360,100

    RetTime  Type     Area     Amt/Area    Amount   Grp   Name
     [min]          [mAU*s]                [ug/L]
    -------|------|----------|----------|----------|--|------------------
     16.566 VV      100.71859    4.84993  488.47788    Nitroglycerin #9

    Totals :                               488.47788


    1 Warnings or Errors :

    Warning : Calibration warnings (see calibration table listing)

    ==================================================================
                              *** End of Report ***
```

Data File C:\CHEM32\1\DATA\090414\090414 2\5L013523.D
Sample Name: WG490739-02 LCS

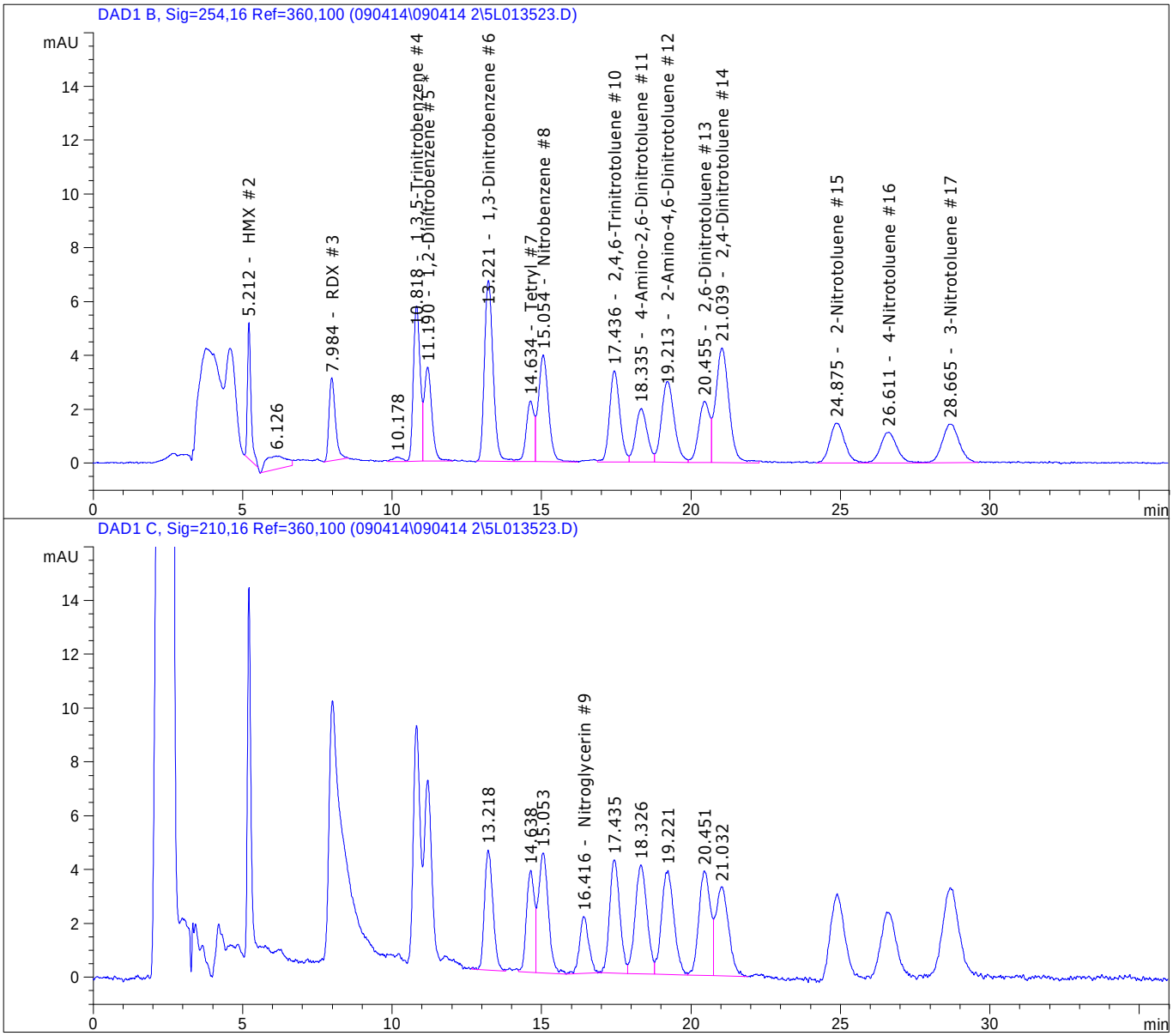
==========

Acq. Operator	: ECL	Seq. Line :	7
Acq. Instrument	: HPLC5	Location :	Vial 8
Injection Date	: 9/4/2014 3:30:52 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\090414\090414 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/5/2014 2:33:27 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 7,1 SOIL

==========



Data File C:\CHEM32\1\DATA\090414\090414 2\5L013523.D
Sample Name: WG490739-02 LCS

==========

Acq. Operator : ECL Seq. Line : 7
Acq. Instrument : HPLC5 Location : Vial 8
Injection Date : 9/4/2014 3:30:52 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090414\090414 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/5/2014 2:33:27 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 7,1 SOIL

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 9/5/2014 2:33:12 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.212	BBA	40.97800	5.87142	240.59889		HMX #2
7.984	VBA	45.47138	4.84132	220.14149		RDX #3
10.818	VV	91.41178	2.57909	235.75911		1,3,5-Trinitrobenzene #4
11.190	VBA	62.32775	3.60425	224.64469		1,2-Dinitrobenzene #5 *
13.221	BV	134.25485	1.70510	228.91736		1,3-Dinitrobenzene #6
14.634	VV	41.27042	4.44251	183.34425		Tetryl #7
15.054	VB	93.02010	2.42910	225.95552		Nitrobenzene #8
17.436	VV	81.48840	2.58967	211.02832		2,4,6-Trinitrotoluene #10
18.335	VV	54.23851	4.37163	237.11065		4-Amino-2,6-Dinitrotoluene #11
19.213	VV	89.55819	2.85049	255.28504		2-Amino-4,6-Dinitrotoluene #12
20.455	VV	57.98571	4.38475	254.25295		2,6-Dinitrotoluene #13
21.039	VB	132.62447	1.82119	241.53408		2,4-Dinitrotoluene #14
24.875	VV	51.78952	4.84286	250.80955		2-Nitrotoluene #15
26.611	VV	42.70573	5.83397	249.14383		4-Nitrotoluene #16
28.665	VBA	56.56647	4.25199	240.52015		3-Nitrotoluene #17

Totals : 3499.04589

Data File C:\CHEM32\1\DATA\090414\090414 2\5L013523.D
Sample Name: WG490739-02 LCS

==========

Acq. Operator : ECL Seq. Line : 7
Acq. Instrument : HPLC5 Location : Vial 8
Injection Date : 9/4/2014 3:30:52 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090414\090414 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/5/2014 2:33:27 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 7,1 SOIL

==========

Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
16.416	VV	45.52268	4.84899	220.73908		Nitroglycerin #9

Totals : 220.73908

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========

*** End of Report ***

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013481.D
Sample Name: WG490381-03 LCS DUP

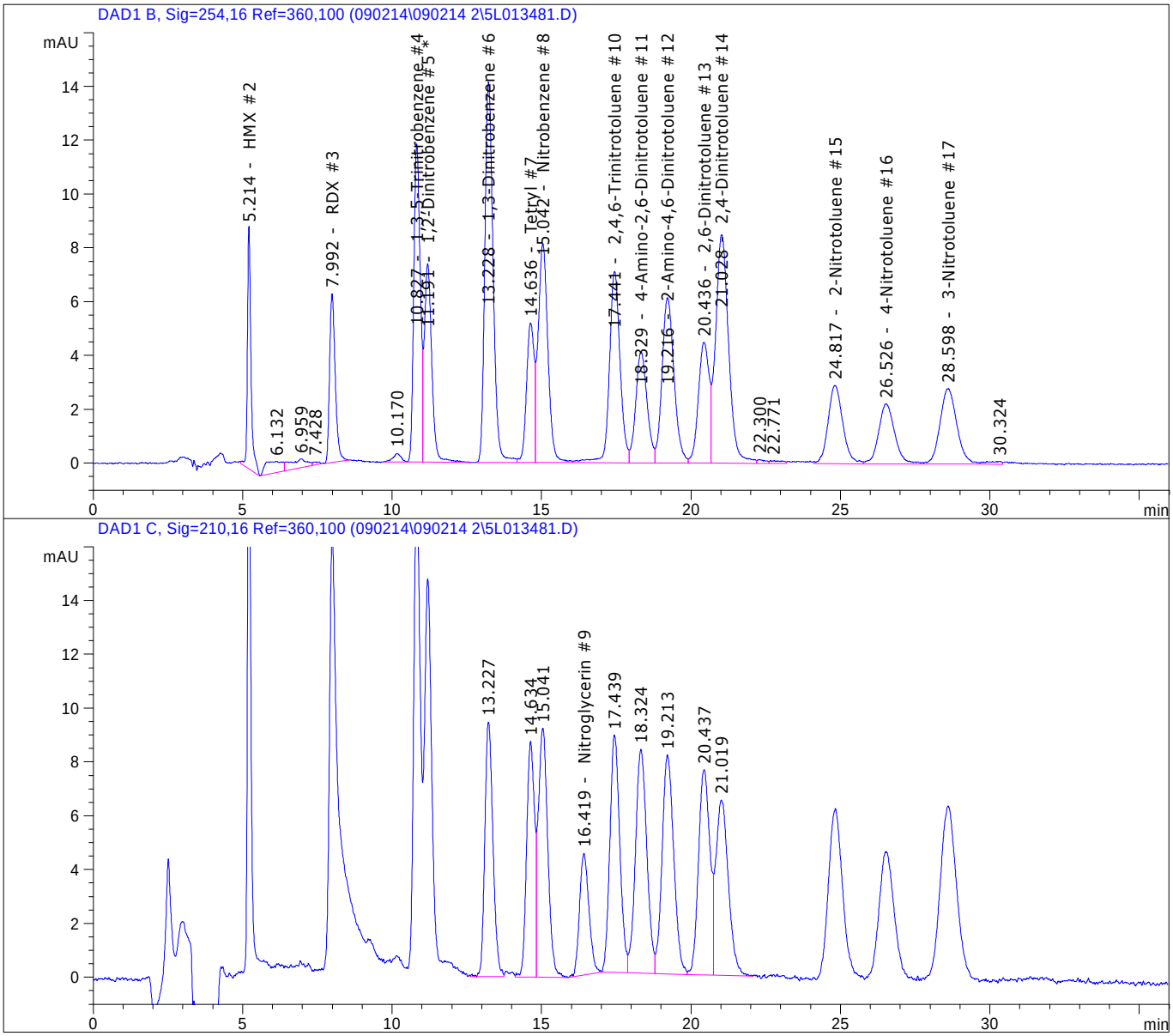
==========

Acq. Operator	: ECL	Seq. Line :	4
Acq. Instrument	: HPLC5	Location :	Vial 5
Injection Date	: 9/2/2014 4:57:31 PM	Inj :	1
		Inj Volume :	100 µl

Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 2:59:21 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========



Data File C:\CHEM32\1\DATA\090214\090214 2\5L013481.D
Sample Name: WG490381-03 LCS DUP

==========

Acq. Operator : ECL Seq. Line : 4
Acq. Instrument : HPLC5 Location : Vial 5
Injection Date : 9/2/2014 4:57:31 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 2:59:21 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========

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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 9/3/2014 2:53:21 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.214	BBA	73.65569	5.94228	437.68275		HMX #2
7.992	BBA	83.10835	5.00270	415.76628		RDX #3
10.827	VV	179.07695	2.56145	458.69669		1,3,5-Trinitrobenzene #4
11.191	VB	125.88958	3.63824	458.01666		1,2-Dinitrobenzene #5 *
13.228	BV	270.32629	1.70024	459.61958		1,3-Dinitrobenzene #6
14.636	VV	93.78288	4.44103	416.49273		Tetryl #7
15.042	VV	183.92950	2.40999	443.26812		Nitrobenzene #8
17.441	VV	176.90141	2.58818	457.85341		2,4,6-Trinitrotoluene #10
18.329	VV	109.96950	4.37923	481.58202		4-Amino-2,6-Dinitrotoluene #11
19.216	VV	172.29639	2.85208	491.40270		2-Amino-4,6-Dinitrotoluene #12
20.436	VV	112.65334	4.40259	495.96641		2,6-Dinitrotoluene #13
21.028	VV	258.08624	1.81871	469.38322		2,4-Dinitrotoluene #14
24.817	BV	99.61603	4.87476	485.60454		2-Nitrotoluene #15
26.526	VV	83.14415	5.86150	487.34956		4-Nitrotoluene #16
28.598	VV	109.73109	4.25661	467.08239		3-Nitrotoluene #17

Totals : 6925.76706

Data File C:\CHEM32\1\DATA\090214\090214 2\5L013481.D
Sample Name: WG490381-03 LCS DUP

==========

Acq. Operator : ECL Seq. Line : 4
Acq. Instrument : HPLC5 Location : Vial 5
Injection Date : 9/2/2014 4:57:31 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090214\090214 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/3/2014 2:59:21 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========

Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
16.419	VV	98.61834	4.84991	478.29020		Nitroglycerin #9

Totals : 478.29020

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========

*** End of Report ***

Data File C:\CHEM32\1\DATA\090414\090414 2\5L013520.D
Sample Name: WG490559-03 LCS DUP

==========

Acq. Operator : ECL
Seq. Line : 4
Acq. Instrument : HPLC5
Location : Vial 5
Injection Date : 9/4/2014 1:23:10 PM
Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090414\090414 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/5/2014 2:24:48 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

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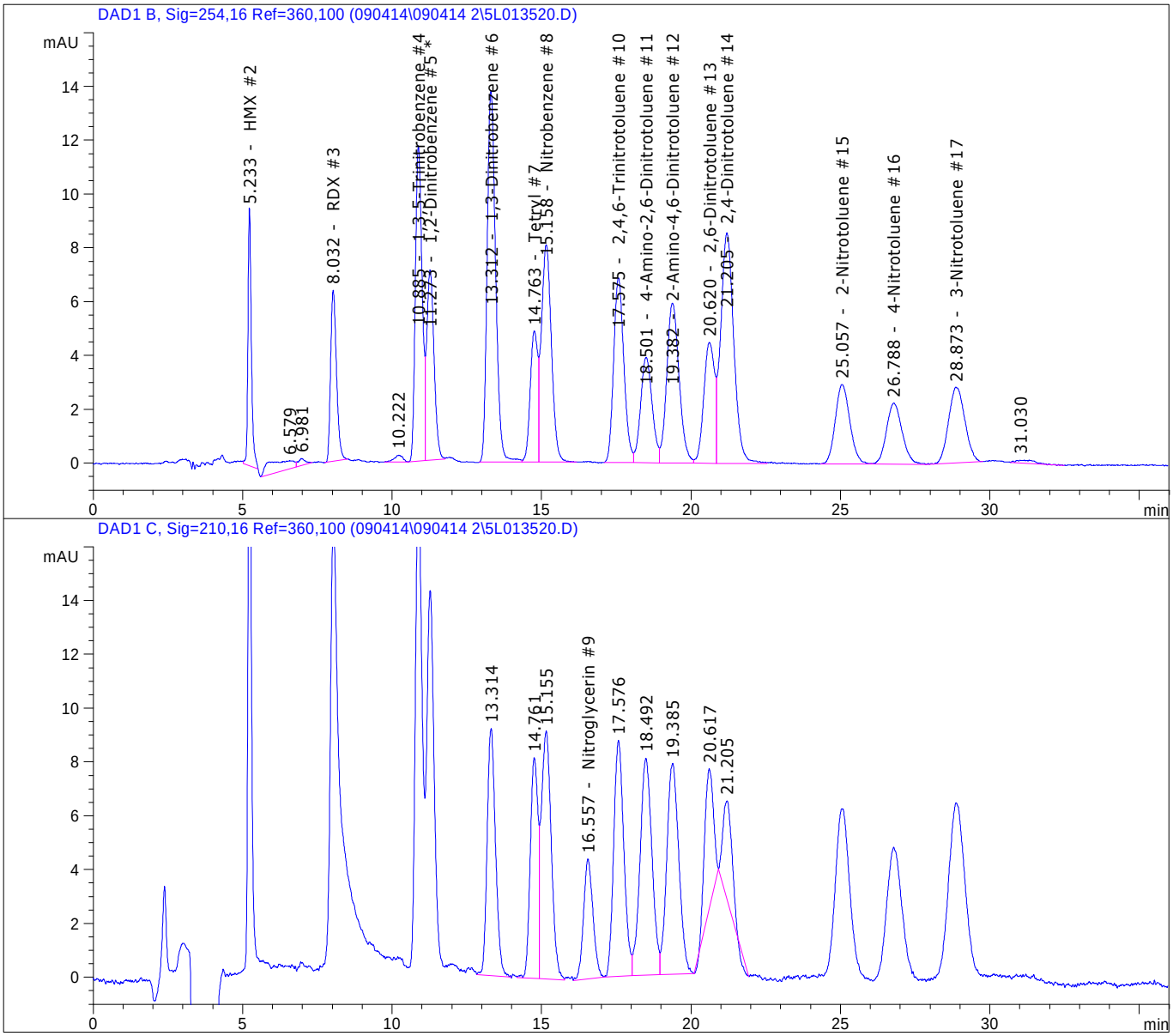

Data File C:\CHEM32\1\DATA\090414\090414 2\5L013520.D
Sample Name: WG490559-03 LCS DUP

==========

Acq. Operator : ECL Seq. Line : 4
Acq. Instrument : HPLC5 Location : Vial 5
Injection Date : 9/4/2014 1:23:10 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090414\090414 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/5/2014 2:24:48 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========

==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 9/5/2014 2:22:47 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
5.233	BBA	75.46774	5.94441	448.61149		HMX #2
8.032	VBA	87.35647	5.01218	437.84666		RDX #3
10.885	VV	184.28300	2.56093	471.93599		1,3,5-Trinitrobenzene #4
11.273	VV	120.73779	3.63682	439.10149		1,2-Dinitrobenzene #5 *
13.312	BV	272.16891	1.70021	462.74365		1,3-Dinitrobenzene #6
14.763	VV	85.42272	4.44115	379.37474		Tetryl #7
15.158	VB	188.31293	2.40953	453.74638		Nitrobenzene #8
17.575	BV	163.03503	2.58829	421.98231		2,4,6-Trinitrotoluene #10
18.501	VV	105.92107	4.37895	463.82304		4-Amino-2,6-Dinitrotoluene #11
19.382	VV	171.81483	2.85207	490.02845		2-Amino-4,6-Dinitrotoluene #12
20.620	VV	112.07187	4.40249	493.39541		2,6-Dinitrotoluene #13
21.205	VV	263.11682	1.81866	478.51917		2,4-Dinitrotoluene #14
25.057	BV	100.53418	4.87508	490.11203		2-Nitrotoluene #15
26.788	VV	83.16420	5.86151	487.46766		4-Nitrotoluene #16
28.873	VBA	107.24723	4.25650	456.49738		3-Nitrotoluene #17

Totals : 6875.18584

Data File C:\CHEM32\1\DATA\090414\090414 2\5L013520.D
Sample Name: WG490559-03 LCS DUP

==========

Acq. Operator : ECL Seq. Line : 4
Acq. Instrument : HPLC5 Location : Vial 5
Injection Date : 9/4/2014 1:23:10 PM Inj : 1
Inj Volume : 100 µl
Acq. Method : C:\Chem32\1\DATA\090414\090414 2\8330PLUS.M
Last changed : 9/2/2014 2:17:53 PM by ECL
Analysis Method : C:\CHEM32\1\METHODS\8330PLDA.M
Last changed : 9/5/2014 2:24:48 PM by ECL
Method Info : OVD-SOP#HPLC02: 8330 CALIBRATION August 30, 2013

Sample Info : 1,1 WATER

==========

Signal 2: DAD1 C, Sig=210,16 Ref=360,100

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/L]	Grp	Name
16.557	VV	97.09113	4.84990	470.88214		Nitroglycerin #9

Totals : 470.88214

1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========

*** End of Report ***

2.2 General Chemistry Data

2.2.1 Percent Solids Data

2.2.1.1 Raw Data

Example Percent Solids Calculations

1.0 Calculating the percent solids of a sample.

$$\%Solids = \frac{WT3 - WT1}{WT2 - WT1} \times F$$

Where:	
WT1 = Weight, in grams, of the empty container	1.30 g
WT2 = Weight, in grams, of the container and wet sample	21.274 g
WT3 = Weight, in grams, of the container and dried sample	5.21 g
F = Factor to get units as percent weight	100
%Solids = Percent solids present in sample.	19.58%

2.0 Calculating the percent moisture of a sample.

% Moisture = 100 - % Solids from 1.0 calculation

Microbac Laboratories Inc.

PERCENT SOLIDS

Workgroup (AAB#): WG490849 Analyst: JTP ADT(on): 09/03/2014 14:26
Method: D2216-90 Instrument: BAL014 ADT(off): 09/04/2014 07:52
SOP: K0003 Rev: 13

SAMPLE NUMBER	EMPTY PAN WT 1	WET WT 2	DRY WT 3A	DRY WT 3B	DRY WT 3C	PERCENT SOLID	PERCENT MOISTURE
L14081614-01	1.287	23.109	20.709			89.00	
L14081614-02	1.294	29.457	27.29			92.31	
L14081614-03	1.289	44.379	39.332			88.29	
L14081614-04	1.294	20.245	18.386			90.19	
L14081614-05	1.29	21.386	16.587			76.12	
L14081614-06	1.291	20.431	18.147			88.07	
L14081614-07	1.295	26.188	21.875			82.67	
L14081614-08	1.294	32.495	28.724			87.91	
L14081614-09	1.291	40.313	35.115			86.68	
L14081614-10	1.295	25.225	22.816			89.93	
L14081614-11	1.301	31.696	29.98			94.35	
L14081614-12	1.303	40.485	37.931			93.48	
L14081614-13	1.291	21.63	19.709			90.56	
L14081614-14	1.306	28.827	25.574			88.18	
L14081614-15	1.294	23.469	22.002			93.38	
L14081656-01	1.287	20.723	17.599			83.93	
L14081656-02	1.296	25.142	18.356			71.54	
L14081656-03	1.282	27.078	22.703			83.04	
L14081656-04	1.297	20.857	17.428			82.47	
L14081656-05	1.3	21.623	18.108			82.70	
L14081687-13	1.292	21.733	21.603			99.36	
L14081687-15	1.304	20.714	20.565			99.23	
L14090014-01	1.303	36.093	34.389			95.10	
L14090050-01	1.297	14.593	5.197			29.33	
L14090051-01	1.285	27.268	22.652			82.23	
L14090053-01	1.306	20.106	16.633			81.53	
L14090053-02	1.299	26.611	20.495			75.84	
L14090053-03	1.297	28.484	22.856			79.30	
L14090053-04	1.304	25.341	21.809			85.31	
L14090053-05	1.287	26.65	20.955			77.55	
L14090053-06	1.295	20.332	18.958			92.78	
L14090053-07	1.282	21.705	16.919			76.57	
L14090053-08	1.282	25.774	24.896			96.42	
L14090059-01	1.293	28.87	24.801			85.24	
WG490849-01	1.306	20.106	16.633			81.53	18.47
WG490849-02	1.287	20.723	17.599			83.93	16.07
WG490849-03	1.291	21.237	17.763			82.58	17.42
WG490849-04	1.299	21.202	17.948			83.65	16.35

Analyst: Joshua Pemberton

PERCENT_SOLIDS - Modified 04/24/2008
PDF ID: 3738719
Report generated: 09/04/2014 07:58

Microbac

3.0 Attachments

Microbac Laboratories Inc.
Ohio Valley Division Analyst List
September 10, 2014

---

001 - BIO-CHEM TESTING WVDEP 220
002 - REIC Consultants, Inc. WVDEP 060
003 - Sturm Environmental
004 - MICROBAC PITTSBURGH
005 - ES LABORATORIES
006 - ALCOSAN LABORATORIES
007 - ALS LABORATORIES
008 - BENCHMARK LABORATORIES
010 - MICROBAC CHICAGOLAND
ADC - ANTHONY D. CANTER
ADG - APRIL D. GREENE
ALS - ADRIANE L. STEED
AWE - ANDREW W. ESSIG
AZH - AFTER HOURS
BJO - BRIAN J. OGDEN
BKT - BRENDAN TORRENCE
BLG - BRENDA L. GREENWALT
BRG - BRENDA R. GREGORY
CAA - CASSIE A. AUGENSTEIN
CAF - CHERYL A. FLOWERS
CEB - CHAD E. BARNES
CJR - COURTNEY J. REXROAD
CLC - CHRYS L. CRAWFORD
CLS - CARA L. STRICKLER
CLW - CHARISSA L. WINTERS
CPD - CHAD P. DAVIS
CSH - CHRIS S. HILL
DAK - DEAN A. KETELSEN
DCM - DAVID C. MERCKLE
DEV - DAVID E. VANDENBERG
DIH - DEANNA I. HESSON
DLB - DAVID L. BUMGARNER
DLP - DOROTHY L. PAYNE
DSM - DAVID S. MOSSOR
ECL - ERIC C. LAWSON
ENY - EMILY N. YOAK
EPT - ETHAN P. TIDD
ERP - ERIN R. PORTER
FJB - FRANCES J. BOLDEN
JBK - JEREMY B. KINNEY
JDH - JUSTIN D. HESSON
JDS - JARED D. SMITH
JJS - JOHN J. STE MARIE
JLL - JOHN L. LENT
JMW - JEANA M. WHITE
JTP - JOSHUA T. PEMBERTON
JWR - JOHN W. RICHARDS
JWS - JACK W. SHEAVES
JYH - JI Y. HU
KAJ - KELLIE A. JOHNSON
KDW - KATHRYN D. WELCH
KEB - KATIE E. BARNES
KHR - KIM H. RHODES
KRA - KATHY R. ALBERTSON
KRB - KAELY R. BECKER
KRP - KATHY R. PARSONS
LEC - LAURA E. CARPENTER
LKN - LINDA K. NEDEFF
LLS - LARRY L. STEPHENS
LSB - LESLIE S. BUCINA
MBK - MORGAN B. KNOWLTON
MDA - MIKE D. ALBERTSON
MDC - MIKE D. COCHRAN
MES - MARY E. SCHILLING
MLB - MEGAN L. BACHE
MMB - MAREN M. BEERY
MRT - MICHELLE R. TAYLOR
MSW - MATT S. WILSON
PDM - PIERCE D. MORRIS
PIT - MICROBAC WARRENDALE
PRL - PAIGE R. LAMB
PSW - PEGGY S. WEBB
QX - QIN XU
RAH - ROY A. HALSTEAD
REK - BOB E. KYER
RLB - BOB BUCHANAN
RM - RAYMOND MALEKE
RNP - RICK N. PETTY
SAV - SARAH A. VANDENBERG
SDC - SHALYN D. CONLEY
SLM - STEPHANIE L. MOSSBURG
SLP - SHERI L. PFALZGRAF
TB - TODD BOYLE
TMB - TIFFANY M. BAILEY
TMM - TAMMY M. MORRIS
VC - VICKI COLLIER
WJB - WILL J. BEASLEY
WRR - WESLEY R. RICHARDS
WTD - WADE T. DELONG
XXX - UNAVAILABLE OR SUBCONTRACT

Microbac Laboratories Inc.
List of Valid Qualifiers
September 10, 2014

Qualkey: STD_ND=U

Qualifier	Description
*	Surrogate or spike compound out of range
+	Correlation coefficient for the MSA is less than 0.995
<	Result is less than the associated numerical value.
>	Result is greater than the associated numerical value.
A	See the report narrative
B	Analyte present in method blank
B1	Target analyte detected in method blank at or above the method reporting limit
B3	Target analyte detected in calibration blank at or above the method reporting limit
C	Confirmed by GC/MS
CG	Confluent growth
DL	Surrogate or spike compound was diluted out
E	Estimated concentration due to sample matrix interference
EDL	Elevated sample reporting limits, presence of non-target analytes
EMPC	Estimated Maximum Possible Concentration
F, S	Estimated result below quantitation limit; method of standard additions(MSA)
FL	Free Liquid
H1	Sample analysis performed past holding time.
I	Semiquantitative result (out of instrument calibration range)
J	The analyte was positively identified, but the quantitation was below the RL
J,B	Analyte detected in both the method blank and sample above the MDL.
J,H1	The analyte was positively identified, but the quantitation was below the RL. Sample analysis performed past holding time
J,P	Estimate; columns don't agree to within 40%
J,S	Estimated concentration; analyzed by method of standard addition (MSA)
L	Sample reporting limits elevated due to matrix interference
L1	The associated blank spike (LCS) recovery was above the laboratory acceptance limits.
L2	The associated blank spike (LCS) recovery was below the laboratory acceptance limits.
M	Matrix effect; the concentration is an estimate due to matrix effect.
N	Tentatively identified compound(TIC)
NA	Not applicable
ND, S	Not detected; analyzed by method of standard addition (MSA)
ND,L	Not detected; sample reporting limit (RL) elevated due to interference
NF	Not found by library search
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentrations >40% difference between the two GC columns
Q	One or more quality control criteria failed. See narrative.
QNS	Quantity of sample not sufficient to perform analysis
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition (MSA)
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TIC	Library Search Compound
TNTC	Too numerous to count
U	Not detected at or above adjusted sample detection limit
U,H1	Not detected; sample analysis performed past holding time.
UJ	Undetected; the MDL and RL are estimated due to quality control discrepancies.
W	Post-digestion spike for furnace AA out of control limits
X	Exceeds regulatory limit
X, S	Exceeds regulatory limit; method of standard additions (MSA)
Z	Cannot be resolved from isomer - see below

L14081687 / Revision: 0 / 319 total pages

COC No. A 42141

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: ARCADIS - U.S., Inc.

Project Contact: Jacque Powell

Contact Phone #: 713-953-4867

Turn Around Requirements: Standard

Location: Picatinny Arsenal

Project ID: GPOCoPICA. WY14.4MD14/PICA 079

Sampler (print): C. GOLDSMITH, N. Carrie

Signature: O. Bean

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other _____

ADDITIONAL REQUIREMENTS

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	2-Amino-4,6-DNT	4-Amino-2,6-DNT	Amino DNT	RDX	2,4,6-TNT	TOTAL # (LAB USE)
1-40MW001(082714)		X	8/27/14	1405	WG	1		1	1	1	1	1	
1-40MW005(082714)		X	8/27/14	1415	WG	1		1	1	1	1	1	
1-40MW006(082714)		X	8/27/14	1410	WG	1		1	1	1	1	1	
1-93MW002(082714)		X	8/27/14	1430	WG	1		1	1	1	1	1	
1-157MW001(082714)		X	8/27/14	1450	WG	1		1	1	1	1	1	
1-157MW003(082714)		X	8/27/14	1440	WG	1		1	1	1	1	1	
1-157MW004(082714)		X	8/27/14	1435	WG	1		1	1	1	1	1	
1-157MW002(082714)		X	8/27/14	1425	WG	1		1	1	1	1	1	
1-40MW003(082714)		X	8/27/14	1355	WG	1		1	1	1	1	1	
1-40MW002(082714)		X	8/27/14	1400	WG	1		1	1	1	1	1	
FB001(082714)		X	8/27/14	1200	WQ	1		1	1	1	1	1	
1-79SW001(082614)		X	8/26/14	1410	WS	1		1	1	1	1	1	
1-79SD001(082614)		X	8/26/14	1410	SD	1		1	1	1	1	1	
1-79SW002(082614)		X	8/26/14	1405	WS	1		1	1	1	1	1	
1-79SD002(082614)		X	8/26/14	1405	SD	1		1	1	1	1	1	

Microbac OVD
Received: 08/29/2014 10:17
By: COURTNEY REXROAD 221000058845
Courtney Rexroad

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Remarks:
Jacque L. Beem	8/28/14	1600					
Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)				

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

Page 1 of 1

Generated: 09/10/2014 10:34

Internal Chain of Custody Report

Login: L14081687
Account: 2273
Project: 2273.003
Samples: 15
Due Date: 09-SEP-2014

Samplenum	Container ID	Products
L14081687-01	428385	8330-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	29-AUG-2014 14:17	CLS		
2	PREP	W1	EXT	29-AUG-2014 14:29	CSH	CLS	
3	DISP	EXT	DISP	02-SEP-2014 07:58	BJO	BJO	
4	ANALYZ*	EXT	SEMI	02-SEP-2014 09:15	ECL	CSH	

Sample extract/digestate/leachate

Samplenum	Container ID	Products
L14081687-02	428386	8330-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	29-AUG-2014 14:17	CLS		
2	PREP	W1	EXT	29-AUG-2014 14:29	CSH	CLS	
3	DISP	EXT	DISP	02-SEP-2014 07:58	BJO	BJO	
4	ANALYZ*	EXT	SEMI	02-SEP-2014 09:15	ECL	CSH	

Sample extract/digestate/leachate

Samplenum	Container ID	Products
L14081687-03	428387	8330-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	29-AUG-2014 14:17	CLS		
2	PREP	W1	EXT	29-AUG-2014 14:29	CSH	CLS	
3	STORE	EXT	W1	29-AUG-2014 14:34	CLS	CSH	
4	PREP	W1	EXT	29-AUG-2014 15:20	CSH	CLS	
5	DISP	EXT	DISP	02-SEP-2014 07:58	BJO	BJO	
6	ANALYZ*	EXT	SEMI	02-SEP-2014 09:15	ECL	CSH	

Sample extract/digestate/leachate

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Internal Chain of Custody Report

Login: L14081687
Account: 2273
Project: 2273.003
Samples: 15
Due Date: 09-SEP-2014

Samplenum	Container ID	Products
L14081687-04	428388	8330-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	29-AUG-2014 14:17	CLS		
2	PREP	W1	EXT	29-AUG-2014 14:29	CSH	CLS	
3	STORE	EXT	W1	29-AUG-2014 14:34	CLS	CSH	
4	PREP	W1	EXT	29-AUG-2014 15:20	CSH	CLS	
5	DISP	EXT	DISP	02-SEP-2014 07:58	BJO	BJO	
6	ANALYZ*	EXT	SEMI	02-SEP-2014 09:15	ECL	CSH	

Sample extract/digestate/leachate

Samplenum	Container ID	Products
L14081687-05	428389	8330-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	29-AUG-2014 14:17	CLS		
2	PREP	W1	EXT	29-AUG-2014 15:20	CSH	CLS	
3	DISP	EXT	DISP	02-SEP-2014 07:58	BJO	BJO	
4	ANALYZ*	EXT	SEMI	02-SEP-2014 09:15	ECL	CSH	

Sample extract/digestate/leachate

Samplenum	Container ID	Products
L14081687-06	428390	8330-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	29-AUG-2014 14:17	CLS		
2	PREP	W1	EXT	29-AUG-2014 15:35	CSH	CLS	
3	DISP	EXT	DISP	02-SEP-2014 07:58	BJO	BJO	
4	ANALYZ*	EXT	SEMI	02-SEP-2014 09:15	ECL	CSH	

Sample extract/digestate/leachate

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Internal Chain of Custody Report

Login: L14081687
Account: 2273
Project: 2273.003
Samples: 15
Due Date: 09-SEP-2014

Samplenum	Container ID	Products
L14081687-07	428391	8330-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	29-AUG-2014 14:17	CLS		
2	PREP	W1	EXT	29-AUG-2014 15:35	CSH	CLS	
3	DISP	EXT	DISP	02-SEP-2014 07:58	BJO	BJO	
4	ANALYZ*	EXT	SEMI	02-SEP-2014 09:15	ECL	CSH	

Sample extract/digestate/leachate

Samplenum	Container ID	Products
L14081687-08	428392	8330-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	29-AUG-2014 14:17	CLS		
2	PREP	W1	EXT	29-AUG-2014 15:35	CSH	CLS	
3	DISP	EXT	DISP	02-SEP-2014 07:58	BJO	BJO	
4	ANALYZ*	EXT	SEMI	02-SEP-2014 09:15	ECL	CSH	

Sample extract/digestate/leachate

Samplenum	Container ID	Products
L14081687-09	428393	8330-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	29-AUG-2014 14:17	CLS		
2	PREP	W1	EXT	02-SEP-2014 09:11	RAH	CLS	
3	DISP	EXT	DISP	03-SEP-2014 08:03	JTP	JTP	
4	ANALYZ*	EXT	SEMI	03-SEP-2014 14:55	ECL	RAH	

Sample extract/digestate/leachate

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Internal Chain of Custody Report

Login: L14081687
Account: 2273
Project: 2273.003
Samples: 15
Due Date: 09-SEP-2014

Samplenum	Container ID	Products
L14081687-10	428394	8330-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	29-AUG-2014 14:17	CLS		
2	PREP	W1	EXT	02-SEP-2014 09:11	RAH	CLS	
3	DISP	EXT	DISP	03-SEP-2014 08:03	JTP	JTP	
4	ANALYZ*	EXT	SEMI	03-SEP-2014 14:55	ECL	RAH	

Sample extract/digestate/leachate

Samplenum	Container ID	Products
L14081687-11	428395	8330-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	29-AUG-2014 14:17	CLS		
2	PREP	W1	EXT	02-SEP-2014 09:11	RAH	CLS	
3	DISP	EXT	DISP	03-SEP-2014 08:03	JTP	JTP	
4	ANALYZ*	EXT	SEMI	03-SEP-2014 14:55	ECL	RAH	

Sample extract/digestate/leachate

Samplenum	Container ID	Products
L14081687-12	428396	8330-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	29-AUG-2014 14:17	CLS		
2	PREP	W1	EXT	29-AUG-2014 14:34	CSH	CLS	
3	DISP	EXT	DISP	02-SEP-2014 07:58	BJO	BJO	
4	ANALYZ*	EXT	SEMI	02-SEP-2014 09:15	ECL	CSH	

Sample extract/digestate/leachate

Samplenum	Container ID	Products
L14081687-13	428397	8330-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	29-AUG-2014 14:17	CLS		
2	PREP	W1	EXT	29-AUG-2014 14:29	CSH	CLS	
3	ANALYZ*	EXT	SEMI	05-SEP-2014 15:32	ECL	CSH	

Sample extract/digestate/leachate

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Internal Chain of Custody Report

Login: L14081687
Account: 2273
Project: 2273.003
Samples: 15
Due Date: 09-SEP-2014

Samplenum	Container ID	Products
L14081687-14	428398	8330-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	29-AUG-2014 14:17	CLS		
2	PREP	W1	EXT	29-AUG-2014 14:34	CSH	CLS	
3	DISP	EXT	DISP	02-SEP-2014 07:58	BJO	BJO	
4	ANALYZ*	EXT	SEMI	02-SEP-2014 09:15	ECL	CSH	

Sample extract/digestate/leachate

Samplenum	Container ID	Products
L14081687-15	428399	8330-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	29-AUG-2014 14:17	CLS		
2	PREP	W1	EXT	29-AUG-2014 14:29	CSH	CLS	
3	ANALYZ*	EXT	SEMI	05-SEP-2014 15:32	ECL	CSH	

Sample extract/digestate/leachate

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

NELAP Addendum - May 22, 2014

Non-NELAP LIMS Product and Description

The following is a list of those tests that are not included in the Microbac – OVL NELAP Scope of Accreditation:

Heat of Combustion (BTU)
Total Halide by Bomb Combustion (TX)
Particle Sizing - 200 Mesh (PS200)
Specific Gravity/Density (SPGRAV)
Total Residual Chlorine (CL-TRL)
Total Volatile Solids (all forms) (TVS)
Total Coliform Bacteria (all methods)
Fecal Coliform Bacteria (all methods)
Sulfite (SO3)
Thiodiglycol (TDG-LCMS)
Acetate (HPLC-UV)
Formate (HPLC-UV)
Acetaldehyde (HPLC-UV)
Propionaldehyde (HPLC-UV)
Fluoroborate (ISE)

SOLID AND HAZARDOUS CHEMICALS
Nitrogen, Ammonia by Method 350.1
Chromium, Hexavalent, Leachable by SM3500 Cr-B 2009
Phenolics, Total by Method 420.1

NELAP Accreditation by Laboratory SOP

NONPOTABLE WATER

OVL HPLC02/HPLC-UV

Nitroglycerin
Acetic acid
Butyric acid
Lactic acid
Propionic acid
Pyruvic acid

OVL MSS01/GC-MS

1,4-Phenylenediamine
1-Methylnaphthalene
1,4-Dioxane
Atrazine
Benzaldehyde
Biphenyl
Caprolactam

Hexamethylphosphoramide (HMPA)
Pentachlorobenzene
Pentachloroethane

NELAP Accreditation by Laboratory SOP

NONPOTABLE WATER

OVL MSV0I/GC-MS

1, 1, 2-Trichloro-1,2,2-trifluoroethane
1,3-Butadiene
Cyclohexane
Cyclohexanone
Dimethyl disulfide
Dimethylsulfide
Ethyl-t-butylether (ETBE)
Isoprene
Methylacetate
Methylcyclohexane
T-amylmethylether (TAME)
Tetrahydrofuran (THF)

OVL RSKOI/GC-FID

Isobutane
n-Butane
Propane
Propylene
Propyne

OVL HPLC07/HPLC-MS-MS

Hexamethylphosphoramide (XMPA-LCMS)

SOLID AND HAZARDOUS CHEMICALS

OVL MSS0I/GC-MS

1-Methylnaphthalene
Benzaldehyde
Biphenyl
Caprolactam
Pentachloroethane

NELAP Accreditation by Laboratory SOP

SOLID AND HAZARDOUS CHEMICALS

OVL MSV0I/GC-MS

1.3-Butadiene
Cyclohexane
Cyclohexanone
Dimethyl disulfide
Dimethylsulfide
Ethyl-t-butylether (ETBE)
Isoprene
Methylacetate
Methylcyclohexane
n-Hexane
T-amylmethylether (TAME)

PICATINNY ARSENAL
DATA VALIDATION REPORT
SDGs: L14061445, L14061574, L14061687, L14061689, L14070131, L14070273, L14070436, L14070452, L14070459, L14070524, L14070607, L14070647, L14070678 and L14070762
3rd Quarter PICATINNY

Analytical data was evaluated in accordance with applicable USEPA SW-846 method requirements, "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review" (October 1999), "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review" (July 2002), site-specific requirements defined in *Picatinny Arsenal Quality Assurance Project Plan* (ARCADIS, 2005), and any additional evaluation criteria set forth in the area specific Work Plan.

Field documentation was not reviewed. The electronic data review was performed utilizing the EQuIS Data Qualification Module (DQM). DQM checks for the following parameters:

- Holding times and preservation;
- Blank contamination;
  - Method blanks,
  - Trip blanks,
  - Equipment blanks;

Analyses were performed by Microbac Laboratories, Inc. Data qualifiers were applied electronically to the database with any additional qualifiers added manually. A summary of the data as amended by data qualifiers is included with the original hard copy reports.

The attached table summarizes the data that were qualified due to QC deficiencies. The table indicates compounds/analytes qualified based on electronic and manual validation. Refer to the associated method section of the validation checklist for a detailed explanation of qualification. All other data in this SDG are considered usable as reported.

PICATINNY ARSENAL
DATA VALIDATION REPORT
SDGs: L14061445, L14061574, L14061687, L14061689, L14070131, L14070273, L14070436, L14070452, L14070459, L14070524, L14070607, L14070647, L14070678 and L14070762
3rd Quarter PICATINNY

The following list of data qualifiers and definitions were applied in accordance with qualification criteria defined in the above guidance documents:

UB Compound/analyte detected in blank or associated blank, qualified as a non-detect at listed value.

J The analyte was positively identified, but the associated numerical value is the approximate concentration of the analyte in the sample.

UJ The analyte was not detected above the reporting limit; however, the reported quantitation limit is approximate and may, or may not represent the actual limit of quantitation necessary to accurately and precisely measure analyte in the sample.

R The sample result is rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria; and the presence or absence of the analyte cannot be verified.

DQM RUN BY:	Rachelle Borne	09/04/14
REVIEW PERFORMED BY:	Rachelle Borne	09/04/14
SIGNATURE:	Rachelle Borne	09/10/14
PEER REVIEW:	Jennifer Towell	09/10/14

PICATINNY ARSENAL
DATA VALIDATION REPORT
SDGs: L14061445, L14061574, L14061687, L14061689, L14070131, L14070273, L14070436, L14070452, L14070459, L14070524, L14070607, L14070647, L14070678 and L14070762
3rd Quarter PICATINNY

ANALYTICAL DATA PACKAGE DOCUMENTATION
GENERAL INFORMATION

	Reported		Performance Acceptable		Not
	No	Yes	No	Yes	Required
1. Sample results		X		X	
2. Parameters analyzed		X		X	
3. Method of analysis		X		X	
4. Sample collection date		X		X	
5. Laboratory sample received date		X		X	
6. Sample analysis date		X		X	
7. Copy of chain-of-custody form signed by lab sample custodian		X		X	
8. Narrative summary of QA or sample problems provided		X		X	

QA - quality assurance

Comments:

PICATINNY ARSENAL
DATA VALIDATION REPORT
SDGs: L14061445, L14061574, L14061687, L14061689, L14070131, L14070273, L14070436, L14070452, L14070459, L14070524, L14070607, L14070647, L14070678 and L14070762
3rd Quarter PICATINNY

The following samples were included in this SDG:

SDG	Sample ID	Sample Date	Parent Sample
L14061445	B-20/24IW003(062314)	6/23/2014	
L14061445	B-20/24IW010(062314)	6/23/2014	
L14061445	B-20/24MW006(062314)	6/23/2014	
L14061445	B-20/24MW006B(062314)	6/23/2014	
L14061445	B-20/24MW008(062314)	6/23/2014	
L14061445	B-20/24MW015(062314)	6/23/2014	
L14061445	B-20/24MW016(062314)	6/23/2014	
L14061445	B-20/24MW017(062314)	6/23/2014	
L14061445	B-20/24MW018(062314)	6/23/2014	
L14061445	B-DUP001(062314)	6/23/2014	B-20/24MW017(062314)
L14061445	B-20/24IW002B(062314)	6/23/2014	
L14061445	B-20/24IW003B(062314)	6/23/2014	
L14061445	B-20/24IW008(062314)	6/23/2014	
L14061445	B-20/24IW009(062314)	6/23/2014	
L14061445	B-20/24IW001B(062314)	6/23/2014	
L14061445	FB001(062314)	6/23/2014	
L14061445	TB1(6486)	6/23/2014	
L14061574	1515R002(0-0.5)	6/24/2014	
L14061574	C-34SD004(0-0.5)	6/24/2014	
L14061574	C-34SW008(062514)	6/25/2014	
L14061574	D-SDBS023(0-0.5)	6/25/2014	
L14061574	G-31SD004(0-0.5)	6/24/2014	
L14061574	G-52SD005(0-0.5)	6/24/2014	
L14061574	G-PB002(0-0.5)	6/24/2014	
L14061574	G-SD101-1(0-0.5)	6/25/2014	
L14061574	TB1(9431)	6/25/2014	
L14061574	FB001(062514)	6/25/2014	
L14061687	L-171MW10B(062614)	6/26/2014	
L14061687	L-171MW15(062614)	6/26/2014	
L14061687	DUPOO1(062614)	6/26/2014	L-171MW12(062614)
L14061687	DUPOO2(062514)	6/25/2014	L-5MW8(062514)
L14061687	DUPOO3(062514)	6/25/2014	L-6MW4(062514)
L14061687	L171MW1(062614)	6/26/2014	
L14061687	L171MW10B(062614)	6/26/2014	
L14061687	L-171MW11(062614)	6/26/2014	
L14061687	L-171MW11B(062614)	6/26/2014	

PICATINNY ARSENAL
DATA VALIDATION REPORT
SDGs: L14061445, L14061574, L14061687, L14061689, L14070131, L14070273, L14070436, L14070452, L14070459, L14070524, L14070607, L14070647, L14070678 and L14070762
3rd Quarter PICATINNY

SDG	Sample ID	Sample Date	Parent Sample
L14061687	L-171MW12(062614)	6/26/2014	
L14061687	L-171MW13(062514)	6/25/2014	
L14061687	L-171MW13B(062514)	6/25/2014	
L14061687	FB001(062514)	6/25/2014	
L14061687	L-171MW2(062614)	6/26/2014	
L14061687	L-171MW10(062614)	6/26/2014	
L14061687	L-171MW16(062514)	6/25/2014	
L14061687	L-171MW16B(062514)	6/25/2014	
L14061687	L-171MW17(062514)	6/25/2014	
L14061687	L-171MW17B(062514)	6/25/2014	
L14061687	L-171MW4(062614)	6/26/2014	
L14061687	L-171MW8(062614)	6/26/2014	
L14061687	L-171MW8B(062614)	6/26/2014	
L14061687	L-171MW9(062614)	6/26/2014	
L14061687	L-5MW4(062514)	6/25/2014	
L14061687	L-5MW4D(062514)	6/25/2014	
L14061687	L-5MW7(062514)	6/25/2014	
L14061687	L-5MW8(062514)	6/25/2014	
L14061687	L-6MW4(062514)	6/25/2014	
L14061687	L-6MW-4D(062514)	6/25/2014	
L14061687	L-DM5-2(062514)	6/25/2014	
L14061687	L-DM6-1(062514)	6/25/2014	
L14061687	L-DM6-2(062514)	6/25/2014	
L14061687	L-DM6-3(062514)	6/25/2014	
L14061687	FB002(062614)	6/26/2014	
L14061687	TB1(9596)	6/26/2014	
L14061689	FB001(062614)	6/26/2014	
L14061689	L-6MW4D(062714)	6/27/2014	
L14061689	L-DM17-3(062614)	6/26/2014	
L14061689	L-DM6-1(062714)	6/27/2014	
L14061689	TB1(8540)	6/27/2014	
L14061689	L-171MW13(062714)	6/27/2014	
L14061689	L-171MW16B(062714)	6/27/2014	
L14061689	L-171MW17B(062714)	6/27/2014	
L14061689	L-171MW17(062714)	6/27/2014	
L14061689	L-171MW16(062714)	6/27/2014	
L14061689	L-171MW13B(062714)	6/27/2014	
L14061689	DUP003(062714)	6/27/2014	L-6MW4(062714)

PICATINNY ARSENAL
DATA VALIDATION REPORT
SDGs: L14061445, L14061574, L14061687, L14061689, L14070131, L14070273, L14070436, L14070452, L14070459, L14070524, L14070607, L14070647, L14070678 and L14070762
3rd Quarter PICATINNY

SDG	Sample ID	Sample Date	Parent Sample
L14061689	FB001(062714)	6/27/2014	
L14061689	G-101MW5(062714)	6/27/2014	
L14061689	G-31MW001(062714)	6/27/2014	
L14061689	G-31MW002(062714)	6/27/2014	
L14061689	G-MW1-G(062714)	6/27/2014	
L14061689	G-MW3-G(062714)	6/27/2014	
L14061689	L-1711W010D(062714)	6/27/2014	
L14061689	L-1711W010S(062714)	6/27/2014	
L14061689	L-171MW14(062614)	6/26/2014	
L14061689	L-171MW14B(062614)	6/26/2014	
L14061689	L-171MW5(062614)	6/26/2014	
L14061689	L-171MW5B(062614)	6/26/2014	
L14061689	L-171MW6(062614)	6/26/2014	
L14061689	L-171MW6B(062614)	6/26/2014	
L14061689	L-171MW6C(062614)	6/26/2014	
L14061689	L-171MW7B(062614)	6/26/2014	
L14061689	L-6MW4(062714)	6/27/2014	
L14070131	J-2MW010(070114)	7/1/2014	
L14070131	J-2MW014(070114)	7/1/2014	
L14070131	J-2MW017(070114)	7/1/2014	
L14070131	J-2MW025(070114)	7/1/2014	
L14070131	J-2MW026(070114)	7/1/2014	
L14070131	J-2DUP001(070114)	7/1/2014	J-2MW026(070114)
L14070131	J-2MW027(070114)	7/1/2014	
L14070131	J-MW47-102(070114)	7/1/2014	
L14070131	J-MW47-101(070114)	7/1/2014	
L14070131	J-2MW004D(070114)	7/1/2014	
L14070131	J-2MW005(070114)	7/1/2014	
L14070131	TB1(070114)	7/1/2014	
L14070189	L125MW3(063014)	6/30/2014	
L14070189	L-1711W002(063014)	6/30/2014	
L14070189	L1711W005(063014)	6/30/2014	
L14070189	L171MW15(063014)	6/30/2014	
L14070189	L-5MW4(063014)	6/30/2014	
L14070189	L-5MW4D(063014)	6/30/2014	
L14070189	L-5MW7(063014)	6/30/2014	
L14070189	L-5MW8(063014)	6/30/2014	
L14070189	L-B1090MW2(063014)	6/30/2014	

PICATINNY ARSENAL
DATA VALIDATION REPORT
SDGs: L14061445, L14061574, L14061687, L14061689, L14070131, L14070273, L14070436, L14070452, L14070459, L14070524, L14070607, L14070647, L14070678 and L14070762
3rd Quarter PICATINNY

SDG	Sample ID	Sample Date	Parent Sample
L14070189	L-DM5-2(063014)	6/30/2014	
L14070189	L-171MW10(063014)	6/30/2014	
L14070189	L-171MW14B(063014)	6/30/2014	
L14070189	L-171MW6(063014)	6/30/2014	
L14070189	L-171MW10B(063014)	6/30/2014	
L14070189	L-171MW14(063014)	6/30/2014	
L14070189	L-171MW2(063014)	6/30/2014	
L14070189	L-171MW8B(063014)	6/30/2014	
L14070189	L-171MW8(063014)	6/30/2014	
L14070189	L-171MW6B(063014)	6/30/2014	
L14070189	L-171MW6C(063014)	6/30/2014	
L14070189	FB001(063014)	6/30/2014	
L14070189	L125MW1A(063014)	6/30/2014	
L14070189	L-DM6-2(063014)	6/30/2014	
L14070189	L-DM6-3(063014)	6/30/2014	
L14070189	TB1(9234)	6/30/2014	
L14070273	FB001(070114)	7/1/2014	
L14070273	DUP004(070214)	7/2/2014	L-161MW2(070214)
L14070273	F-104MW3(070114)	7/1/2014	
L14070273	F-104MW4(070114)	7/1/2014	
L14070273	F-104MW4(070214)	7/2/2014	
L14070273	F-104MW6A(070214)	7/2/2014	
L14070273	F-138MW1(070214)	7/2/2014	
L14070273	F-138MW4(070114)	7/1/2014	
L14070273	F-138MW4(070214)	7/2/2014	
L14070273	FB001(070214)	7/2/2014	
L14070273	F-MW138-1(070114)	7/1/2014	
L14070273	F-MWF2A(070114)	7/1/2014	
L14070273	F-MWF2B(070114)	7/1/2014	
L14070273	G-GM004(070114)	7/1/2014	
L14070273	G-GMW4(070214)	7/2/2014	
L14070273	G-GMW5(070114)	7/1/2014	
L14070273	G-MW52-2(070114)	7/1/2014	
L14070273	G-MWG-2B(070114)	7/1/2014	
L14070273	H-62MW2(070114)	7/1/2014	
L14070273	H-64MW2(070114)	7/1/2014	
L14070273	L-114MW1A(070114)	7/1/2014	
L14070273	L-114MW1A(070214)	7/2/2014	

PICATINNY ARSENAL
DATA VALIDATION REPORT
SDGs: L14061445, L14061574, L14061687, L14061689, L14070131, L14070273, L14070436, L14070452, L14070459, L14070524, L14070607, L14070647, L14070678 and L14070762
3rd Quarter PICATINNY

SDG	Sample ID	Sample Date	Parent Sample
L14070273	L-125MW1A(070214)	7/2/2014	
L14070273	L-125MW1B(070214)	7/2/2014	
L14070273	L-125MW1B)070114)	7/1/2014	
L14070273	L-125MW3(070214)	7/2/2014	
L14070273	L-138MW5B(070214)	7/2/2014	
L14070273	L-161MW1B(070214)	7/2/2014	
L14070273	L-161MW2(070214)	7/2/2014	
L14070273	L-161MW4B(070214)	7/2/2014	
L14070273	L-161MW5(070114)	7/1/2014	
L14070273	L-161MW5(070214)	7/2/2014	
L14070273	L-161MW5B(070214)	7/2/2014	
L14070273	L-161MW7(070114)	7/1/2014	
L14070273	L-17MW2(070114)	7/1/2014	
L14070273	L-17MW2(070214)	7/2/2014	
L14070273	L-17MW4(070214)	7/2/2014	
L14070273	L-17MW5(070214)	7/2/2014	
L14070273	L-17MW5B(070214)	7/2/2014	
L14070273	L-35(MW5C(070114)	7/1/2014	
L14070273	L-35MW5B(070114)	7/1/2014	
L14070273	L-35MW5B(070214)	7/2/2014	
L14070273	L-35MW5C(070214)	7/2/2014	
L14070273	L-B1038MW2(070214)	7/2/2014	
L14070273	L-B1038MW3(070214)	7/2/2014	
L14070273	L-B1090MW2(070114)	7/1/2014	
L14070273	L-DM17-3(070214)	7/2/2014	
L14070273	TB(01836)	7/2/2014	H-64MW2(070114)
L14070436	C-34SD003(0-0.5)	7/7/2014	
L14070436	C-34SD007(0-0.5)	7/7/2014	
L14070436	C-34SW008(070714)	7/7/2014	
L14070436	G-GPBSBD0026(0-0.5)	7/7/2014	
L14070436	H-BSSD029(0-0.5)	7/7/2014	
L14070452	FB001(070714)	7/7/2014	
L14070452	TB1(9596)	7/7/2014	L-171MW17(062514)
L14070452	G-104SW002(070714)	7/7/2014	
L14070452	L-104SW001(070714)	7/7/2014	
L14070452	L-161SW004(070714)	7/7/2014	
L14070452	L-161SW010A(070714)	7/7/2014	
L14070452	L-171SW003(070714)	7/7/2014	

PICATINNY ARSENAL
DATA VALIDATION REPORT
SDGs: L14061445, L14061574, L14061687, L14061689, L14070131, L14070273, L14070436, L14070452, L14070459, L14070524, L14070607, L14070647, L14070678 and L14070762
3rd Quarter PICATINNY

SDG	Sample ID	Sample Date	Parent Sample
L14070459	1-79SD001(070714)	7/7/2014	
L14070459	1-79SD002(070714)	7/7/2014	
L14070459	1-79SW001(070714)	7/7/2014	
L14070459	1-79SW002(070714)	7/7/2014	
L14070524	FB001(070814)	7/8/2014	
L14070524	I-40MW001(070814)	7/8/2014	
L14070524	I-40MW002(070814)	7/8/2014	
L14070524	I-40MW003(070814)	7/8/2014	
L14070524	I-40MW005(070814)	7/8/2014	
L14070524	I-40MW006(070814)	7/8/2014	
L14070607	TB1(9669)	7/10/2014	
L14070607	D-SW005(070914)	7/9/2014	
L14070607	E-11WG-MW001(070914)	7/9/2014	
L14070607	E-38-SW001(070914)	7/9/2014	
L14070607	E-38-SW004(070914)	7/9/2014	
L14070607	E-3WG-MW002(070914)	7/9/2014	
L14070607	E-70-MW004(070914)	7/9/2014	
L14070607	E-80-MW003(070914)	7/9/2014	
L14070607	E-82-MW001(071014)	7/10/2014	
L14070607	E-95-MW003(070914)	7/9/2014	
L14070607	E-MW001(070914)	7/9/2014	
L14070607	E-MW002(070914)	7/9/2014	
L14070607	E-MW012H(070914)	7/9/2014	
L14070607	E-MW012L(070914)	7/9/2014	
L14070607	FB001(070914)	7/9/2014	
L14070607	TB1(9289)	7/9/2014	
L14070647	G-101MW6(071019)	7/10/2014	
L14070678	C-23-MW001B(070814)_07/08/2014	7/8/2014	
L14070678	FB001(070814)_07/08/2014	7/8/2014	
L14070678	C-23-MW001B(070814)	7/8/2014	
L14070678	C-23-MWDM003(070814)	7/8/2014	
L14070762	D-111-1(070914)	7/9/2014	
L14070762	D-112-6(070914)	7/9/2014	
L14070762	D-112-7(070914)	7/9/2014	
L14070762	D-13-1(070914)	7/9/2014	
L14070762	D-41-1(070914)	7/9/2014	
L14070762	D-41-14(070914)	7/9/2014	
L14070762	D-41-16(070914)	7/9/2014	

PICATINNY ARSENAL
DATA VALIDATION REPORT
SDGs: L14061445, L14061574, L14061687, L14061689, L14070131, L14070273, L14070436, L14070452, L14070459, L14070524, L14070607, L14070647, L14070678 and L14070762
3rd Quarter PICATINNY

SDG	Sample ID	Sample Date	Parent Sample
L14070762	D-41-17(070914)	7/9/2014	
L14070762	D-41-8(070914)	7/9/2014	
L14070762	D-41-9(070914)	7/9/2014	
L14070762	D-92-3(070914)	7/9/2014	
L14070762	D-CAF-2(070914)	7/9/2014	
L14070762	D-CAF-6(070914)	7/9/2014	
L14070762	D-H-9(070914)	7/9/2014	
L14070762	D-MW21-1(070914)	7/9/2014	
L14070762	D-MWD-1(070914)	7/9/2014	
L14070762	D-PRB001(070914)	7/9/2014	
L14070762	D-PRB001(071014)	7/10/2014	
L14070762	D-PRB002(070914)	7/9/2014	
L14070762	D-PRB002(071014)	7/10/2014	
L14070762	D-PRB003(070914)	7/9/2014	
L14070762	D-PRB003(071014)	7/10/2014	
L14070762	D-PRB004(070914)	7/9/2014	
L14070762	D-PRB004(071014)	7/10/2014	
L14070762	D-PRB005(070914)	7/9/2014	
L14070762	D-PRB005(071014)	7/10/2014	
L14070762	D-PRB006(070914)	7/9/2014	
L14070762	D-PRB006(071014)	7/10/2014	
L14070762	D-PRB007(070914)	7/9/2014	
L14070762	D-PRB007(071014)	7/10/2014	
L14070762	D-PRB008(070914)	7/9/2014	
L14070762	D-PRB008(071014)	7/10/2014	
L14070762	D-PRB009(070914)	7/9/2014	
L14070762	D-PRB009(071014)	7/10/2014	
L14070762	D-PRB010(070914)	7/9/2014	
L14070762	D-PRB010(071014)	7/10/2014	
L14070762	D-PW-131(070914)	7/9/2014	
L14070762	D-PZ001(071014)	7/10/2014	
L14070762	D-PZ002(071014)	7/10/2014	
L14070762	D-PZ003(071014)	7/10/2014	
L14070762	DUP001(071014)	7/10/2014	D-PZ003(071014)
L14070762	FB001(071014)	7/10/2014	

PICATINNY ARSENAL
DATA VALIDATION REPORT
SDGs: L14061445, L14061574, L14061687, L14061689, L14070131, L14070273, L14070436, L14070452, L14070459, L14070524, L14070607, L14070647, L14070678 and L14070762
3rd Quarter PICATINNY

VOLATILES

Items Reviewed	DQM Deficiency		Qualification Applied	
	No	Yes	No	Yes
1. Holding times	DQM		DQM	
2. Blanks				
A. Method blanks		DQM		DQM
B. Equipment/Field blanks		DQM		DQM
C. Trip Blanks	DQM		DQM	

DQM – Data Qualification Module

Comments:
This section presents a discussion of any additions or changes to the electronic data validation for compounds analyzed utilizing Method 8260.

2A. (L14061687) Naphthalene. 1,2,4-trimethylbenzene, and chlorobenzene were detected in the method blank for batch 482871. The associated field samples were qualified as non-detect for these compounds if the sample concentrations were less than five times the blank values.

(L14070607) Methylene chloride was detected in the method blank. The associated field samples were qualified as non-detect for this compound if the sample concentration was less than ten times the blank value.

2B. (L14061445) Acetone and toluene were detected in the field blank. The associated field samples were qualified as non-detect for these compounds if the sample concentrations were less than five times the blank value for toluene and less than ten times the blank value for acetone.

(L14061574) Acetone and toluene were detected in the field blank. The associated field sample was non-detect for these compounds; therefore, qualification of the data was not warranted.

(L14061687) Acetone, benzene, naphthalene, toluene, trichloroethene, and 1,2,4-trimethylbenzene were detected in the field blanks. The associated field samples were qualified as non-detect for these compounds if the sample concentrations were less than five times the blank value for benzene, naphthalene, toluene, trichloroethene and 1,2,4-trimethylbenzene and less than ten times the blank value for acetone.

(L140601689) Acetone, benzene and toluene were detected in the field blank. The associated field samples were qualified as non-detect for these compounds if the sample concentrations were less than five times the blank value for benzene and toluene and less than ten times the blank value for acetone.

(L14070131) Acetone, naphthalene, toluene, 1.,2,4-trichlorobenzene, 1,2,4-trimethylbenzene, o-xylene, and m,p-xylene were detected in the field blanks. The associated field samples were qualified as non-detect for these compounds if the sample concentrations were less than five times the blank value for naphthalene, toluene, 1.,2,4-trichlorobenzene, 1,2,4-trimethylbenzene, o-xylene and m,p-xylene and less than ten times the blank value for acetone.

(L14070189) Acetone, benzene, naphthalene, toluene, 1,2,4-trimethylbenzene, o-xylene, and m,p-xylene were detected in the field blanks. The associated field samples were qualified as non-detect for these compounds if

the sample concentrations were less than five times the blank value for benzene, naphthalene, toluene, 1,2,4-trimethylbenzene, o-xylene and m,p-xylene and less than ten times the blank value for acetone.

(L14070273) Acetone, naphthalene, toluene, and 1,2,4-trichlorobenzene were detected in the field blank. The associated field samples were qualified as non-detect for these compounds if the sample concentrations were less than five times the blank value for naphthalene, toluene and 1,2,4-trichlorobenzene and less than ten times the blank value for acetone.

(L14070452) Acetone, benzene, naphthalene, toluene, 1,2,4-trichlorobenzene, 1,2,4-trimethylbenzene, o-xylene, and m,p-xylene were detected in the field blank. The associated field samples were non-detect for these compounds; therefore, qualification of the data was not warranted.

(L14070607) Acetone, benzene, naphthalene, toluene, 1,2,4-trimethylbenzene, o-xylene, and m,p-xylene were detected in the field blank. The associated field samples were qualified as non-detect for these compounds if the sample concentrations were less than five times the blank value for , benzene, naphthalene, toluene, 1,2,4-trimethylbenzene, o-xylene and m,p-xylene and less than ten times the blank value for acetone.

(L14070762) Acetone, benzene, naphthalene, toluene, 1,2,4-trimethylbenzene, and m,p-xylene were detected in the field blank. The associated field samples were qualified as non-detect for these compounds if the sample concentrations were less than five times the blank value for , benzene, naphthalene, toluene, 1,2,4-trimethylbenzene and m,p-xylene and less than ten times the blank value for acetone.

PICATINNY ARSENAL
DATA VALIDATION REPORT
SDGs: L14061445, L14061574, L14061687, L14061689, L14070131, L14070273, L14070436, L14070452, L14070459, L14070524, L14070607, L14070647, L14070678 and L14070762
3rd Quarter PICATINNY

SEMIVOLATILES

Items Reviewed	DQM Deficiency		Qualification Applied	
	No	Yes	No	Yes
1. Holding times	DQM		DQM	
2. Blanks				
A. Method blanks	DQM		DQM	
B. Equipment/Field blanks		DQM	DQM	

DQM – Data Qualification Module

Comments:
This section presents a discussion of any additions or changes to the electronic data validation for compounds analyzed utilizing Method 8270.

2B. (L14070436) Naphthalene, 1-methlynaphthalene, and 2-methylnaphthalene were detected in the field blank. The associated field samples were greater than five times the blank value; therefore, qualification of the data was not warranted.

PICATINNY ARSENAL
DATA VALIDATION REPORT
SDGs: L14061445, L14061574, L14061687, L14061689, L14070131, L14070273, L14070436, L14070452, L14070459, L14070524, L14070607, L14070647, L14070678 and L14070762
3rd Quarter PICATINNY

PESTICIDES

Items Reviewed	DQM Deficiency		Qualification Applied	
	No	Yes	No	Yes
1. Holding times	DQM		DQM	
2. Blanks				
A. Method blanks	DQM		DQM	
B. Equipment/Field blanks	DQM		DQM	

DQM – Data Qualification Module

Comments:
This section presents a discussion of any additions or changes to the electronic data validation for compounds analyzed utilizing Method 8081.

PICATINNY ARSENAL
DATA VALIDATION REPORT
SDGs: L14061445, L14061574, L14061687, L14061689, L14070131, L14070273, L14070436, L14070452, L14070459, L14070524, L14070607, L14070647, L14070678 and L14070762
3rd Quarter PICATINNY

PCBs

Items Reviewed	DQM Deficiency		Qualification Applied	
	No	Yes	No	Yes
1. Holding times	DQM		DQM	
2. Blanks				
A. Method blanks	DQM		DQM	
B. Equipment/Field blanks	DQM		DQM	

DQM – Data Qualification Module

Comments:
This section presents a discussion of any additions or changes to the electronic data validation for compounds analyzed utilizing Method 8082.

PICATINNY ARSENAL
DATA VALIDATION REPORT
SDGs: L14061445, L14061574, L14061687, L14061689, L14070131, L14070273, L14070436, L14070452, L14070459, L14070524, L14070607, L14070647, L14070678 and L14070762
3rd Quarter PICATINNY

EXPLOSIVES

Items Reviewed	DQM Deficiency		Qualification Applied	
	No	Yes	No	Yes
1. Holding times	DQM		DQM	
2. Blanks				
A. Method blanks	DQM		DQM	
B. Equipment/Field blanks	DQM		DQM	

DQM – Data Qualification Module

Comments:
This section presents a discussion of any additions or changes to the electronic data validation for compounds analyzed utilizing Method 8330.

PICATINNY ARSENAL
DATA VALIDATION REPORT
SDGs: L14061445, L14061574, L14061687, L14061689, L14070131, L14070273, L14070436, L14070452, L14070459, L14070524, L14070607, L14070647, L14070678 and L14070762
3rd Quarter PICATINNY

DISSOLVED GASES

Items Reviewed	DQM Deficiency		Qualification Applied	
	No	Yes	No	Yes
1. Holding times		DQM		DQM
2. Blanks				
A. Method blanks	DQM		DQM	
B. Equipment/Field blanks	NA		NA	

DQM – Data Qualification Module

Comments:
This section presents a discussion of any additions or changes to the electronic data validation for compounds analyzed utilizing Method AM20GAX.

1. Sample J-MW47-101(070114) was analyzed one day beyond the 14 day recommended holding time. The dissolved gas results for this sample were qualified as estimated.

PICATINNY ARSENAL
DATA VALIDATION REPORT
SDGs: L14061445, L14061574, L14061687, L14061689, L14070131, L14070273, L14070436, L14070452, L14070459, L14070524, L14070607, L14070647, L14070678 and L14070762
3rd Quarter PICATINNY

METALS

Items Reviewed	DQM Deficiency		Qualification Applied	
	No	Yes	No	Yes
1. Holding times	DQM		DQM	
2. Blanks				
A. Method blanks		DQM		DQM
B. Equipment/Field blanks		DQM	DQM	

DQM – Data Qualification Module

Comments:
This section presents a discussion of any additions or changes to the electronic data validation for compounds analyzed utilizing Methods 6010, 6020 and 7470A.

2A. (L14061574) Cadmium, nickel, and zinc were detected in the method blank. The associated field samples were qualified as non-detect for these metals if the sample concentrations were less than ten times the blank values.

2B. (L14061574) Zinc was detected in the field blank. The associated field samples were greater than ten times the blank value; therefore, qualification of the data was not warranted.

(L14070436) Zinc and selenium were detected in the field blank. The associated field samples were greater than ten times the blank values; therefore, qualification of the data was not warranted.

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PICATINNY ARSENAL
DATA VALIDATION REPORT
SDGs: L14061445, L14061574, L14061687, L14061689, L14070131, L14070273, L14070436, L14070452, L14070459, L14070524, L14070607, L14070647, L14070678 and L14070762
3rd Quarter PICATINNY

GENERAL CHEMISTRY

Items Reviewed	DQM Deficiency		Qualification Applied	
	No	Yes	No	Yes
1. Holding times	DQM		DQM	
2. Blanks				
A. Method blanks		DQM	DQM	
B. Equipment/Field blanks		DQM	DQM	

DQM – Data Qualification Module

Comments:
This section presents a discussion of any additions or changes to the electronic data validation for compounds analyzed utilizing Methods 9060, 300.0 and 310.2.

2A. (L14070762) Sulfate was detected in the method blank. The associated field samples were greater than five times the blank value; therefore, qualification of the data was not warranted.

2B. (L14061445) TOC was detected in the field blank. The field blank was the only sample analyzed for TOC in this SDG. No qualification is necessary.

PICATINNY ARSENAL
DATA VALIDATION REPORT
SDGs: L14061445, L14061574, L14061687, L14061689, L14070131, L14070273, L14070436, L14070452, L14070459, L14070524, L14070607, L14070647, L14070678 and L14070762
3rd Quarter PICATINNY

Qualifier Definitions:

J – Result is considered to be estimated at the value reported.
UJ – Result is considered not detected but estimated due to QC deficiencies.
UB – Non-detect at the Reporting Limit or at the concentration reported if greater than the RL due to associated blank contamination.
R – Result is qualified as unusable, data point is rejected.

Explanation/Notes:

Sample ID	Parameter	Result	Units	Qualifier	Reason
B-20/24IW003(062314)	Acetone	49.8	ug/L	UB	Blank Contamination
B-20/24MW006(062314)	Acetone	43.1	ug/L	UB	Blank Contamination
B-20/24MW006B(062314)	Acetone	42.2	ug/L	UB	Blank Contamination
B-20/24MW008(062314)	Acetone	6.85	ug/L	UB	Blank Contamination
B-20/24MW015(062314)	Acetone	47.2	ug/L	UB	Blank Contamination
B-20/24MW016(062314)	Toluene	0.744	ug/L	UB	Blank Contamination
B-20/24MW016(062314)	Acetone	42.5	ug/L	UB	Blank Contamination
B-20/24MW017(062314)	Acetone	41.1	ug/L	UB	Blank Contamination
B-20/24MW018(062314)	Acetone	6.02	ug/L	UB	Blank Contamination
B-DUP001(062314)	Acetone	40.1	ug/L	UB	Blank Contamination
B-20/24IW001B(062314)	Acetone	47.7	ug/L	UB	Blank Contamination
B-20/24IW002B(062314)	Acetone	44.7	ug/L	UB	Blank Contamination
B-20/24IW003B(062314)	Acetone	41.1	ug/L	UB	Blank Contamination
B-20/24IW008(062314)	Acetone	48.2	ug/L	UB	Blank Contamination
B-20/24IW009(062314)	Acetone	40.2	ug/L	UB	Blank Contamination
C-34SD004(0-0.5)	Cadmium	0.00334	umol/g	UB	Blank Contamination
G-31SD004(0-0.5)	Cadmium	0.00267	umol/g	UB	Blank Contamination
DUPOO1(062614)	Acetone	38.9	ug/L	UB	Blank Contamination
DUPOO2(062514)	Acetone	44.6	ug/L	UB	Blank Contamination
DUPOO2(062514)	Trichloroethene	0.476	ug/L	UB	Blank Contamination
DUPOO3(062514)	Acetone	34.2	ug/L	UB	Blank Contamination
DUPOO3(062514)	Trichloroethene	1.32	ug/L	UB	Blank Contamination
L171MW1(062614)	Acetone	33.0	ug/L	UB	Blank Contamination
L171MW1(062614)	1,2,4-Trimethylbenzene	0.325	ug/L	UB	Blank Contamination
L-171MW10(062614)	Acetone	6.19	ug/L	UB	Blank Contamination
L171MW10B(062614)	Acetone	4.92	ug/L	UB	Blank Contamination
L-171MW11(062614)	Acetone	37.0	ug/L	UB	Blank Contamination

PICATINNY ARSENAL
DATA VALIDATION REPORT
SDGs: L14061445, L14061574, L14061687, L14061689, L14070131, L14070273, L14070436, L14070452, L14070459, L14070524, L14070607, L14070647, L14070678 and L14070762
3rd Quarter PICATINNY

Sample ID	Parameter	Result	Units	Qualifier	Reason
L-171MW11B(062614)	Acetone	32.9	ug/L	UB	Blank Contamination
L-171MW11B(062614)	Naphthalene	0.201	ug/L	UB	Blank Contamination
L-171MW11B(062614)	1,2,4-Trimethylbenzene	0.263	ug/L	UB	Blank Contamination
L-171MW12(062614)	Acetone	39.0	ug/L	UB	Blank Contamination
L-171MW13(062514)	Toluene	0.322	ug/L	UB	Blank Contamination
L-171MW13(062514)	Acetone	49.7	ug/L	UB	Blank Contamination
L-171MW13B(062514)	Toluene	0.861	ug/L	UB	Blank Contamination
L-171MW13B(062514)	Acetone	50.8	ug/L	UB	Blank Contamination
L-171MW16(062514)	Acetone	47.2	ug/L	UB	Blank Contamination
L-171MW16B(062514)	Trichloroethene	0.964	ug/L	UB	Blank Contamination
L-171MW16B(062514)	Acetone	51.5	ug/L	UB	Blank Contamination
L-171MW16B(062514)	Toluene	0.935	ug/L	UB	Blank Contamination
L-171MW17(062514)	Acetone	43.3	ug/L	UB	Blank Contamination
L-171MW17B(062514)	Toluene	0.277	ug/L	UB	Blank Contamination
L-171MW17B(062514)	Acetone	45.2	ug/L	UB	Blank Contamination
L-171MW17B(062514)	Trichloroethene	0.353	ug/L	UB	Blank Contamination
L-171MW2(062614)	Acetone	3.98	ug/L	UB	Blank Contamination
L-171MW4(062614)	Acetone	35.8	ug/L	UB	Blank Contamination
L-171MW8(062614)	Acetone	37.4	ug/L	UB	Blank Contamination
L-171MW8B(062614)	Acetone	7.25	ug/L	UB	Blank Contamination
L-171MW9(062614)	Acetone	37.0	ug/L	UB	Blank Contamination
L-171MW9(062614)	Acetone	36.5	ug/L	UB	Blank Contamination
L-5MW4(062514)	Acetone	49.5	ug/L	UB	Blank Contamination
L-5MW4(062514)	Trichloroethene	0.254	ug/L	UB	Blank Contamination
L-5MW4D(062514)	Acetone	49.5	ug/L	UB	Blank Contamination
L-5MW4D(062514)	Trichloroethene	0.316	ug/L	UB	Blank Contamination
L-5MW7(062514)	Acetone	48.5	ug/L	UB	Blank Contamination
L-5MW8(062514)	Trichloroethene	0.488	ug/L	UB	Blank Contamination
L-5MW8(062514)	Acetone	44.4	ug/L	UB	Blank Contamination
L-6MW4(062514)	Trichloroethene	0.973	ug/L	UB	Blank Contamination
L-6MW4(062514)	Acetone	36.9	ug/L	UB	Blank Contamination
L-6MW-4D(062514)	Acetone	47.1	ug/L	UB	Blank Contamination
L-6MW-4D(062514)	Trichloroethene	0.765	ug/L	UB	Blank Contamination
L-DM5-2(062514)	Acetone	51.7	ug/L	UB	Blank Contamination
L-DM6-1(062514)	Acetone	45.9	ug/L	UB	Blank Contamination
L-DM6-2(062514)	Acetone	41.8	ug/L	UB	Blank Contamination

PICATINNY ARSENAL
DATA VALIDATION REPORT
SDGs: L14061445, L14061574, L14061687, L14061689, L14070131, L14070273, L14070436, L14070452, L14070459, L14070524, L14070607, L14070647, L14070678 and L14070762
3rd Quarter PICATINNY

Sample ID	Parameter	Result	Units	Qualifier	Reason
L-DM6-2(062514)	Trichloroethene	0.381	ug/L	UB	Blank Contamination
L-DM6-3(062514)	Acetone	51.5	ug/L	UB	Blank Contamination
L-171MW14(062614)	Acetone	35.5	ug/L	UB	Blank Contamination
L-171MW14B(062614)	Acetone	40.3	ug/L	UB	Blank Contamination
L-171MW5(062614)	Acetone	48.1	ug/L	UB	Blank Contamination
L-171MW5B(062614)	Acetone	41.8	ug/L	UB	Blank Contamination
L-171MW6(062614)	Acetone	46.1	ug/L	UB	Blank Contamination
L-171MW6B(062614)	Acetone	36.7	ug/L	UB	Blank Contamination
L-171MW6C(062614)	Acetone	38.5	ug/L	UB	Blank Contamination
L-171MW6C(062614)	Toluene	0.702	ug/L	UB	Blank Contamination
L-171MW7B(062614)	Toluene	0.265	ug/L	UB	Blank Contamination
L-171MW7B(062614)	Acetone	48.3	ug/L	UB	Blank Contamination
L-DM17-3(062614)	Acetone	47.1	ug/L	UB	Blank Contamination
J-2DUP001(070114)	Acetone	50.4	ug/L	UB	Blank Contamination
J-2MW004D(070114)	Acetone	40.1	ug/L	UB	Blank Contamination
J-2MW005(070114)	Acetone	42.2	ug/L	UB	Blank Contamination
J-2MW010(070114)	Acetone	52.5	ug/L	UB	Blank Contamination
J-2MW010(070114)	Naphthalene	0.526	ug/L	UB	Blank Contamination
J-2MW014(070114)	Acetone	47.7	ug/L	UB	Blank Contamination
J-2MW014(070114)	Toluene	0.876	ug/L	UB	Blank Contamination
J-2MW014(070114)	Naphthalene	0.360	ug/L	UB	Blank Contamination
J-2MW017(070114)	Acetone	50.7	ug/L	UB	Blank Contamination
J-2MW025(070114)	Acetone	44.7	ug/L	UB	Blank Contamination
J-2MW026(070114)	Acetone	49.3	ug/L	UB	Blank Contamination
J-2MW027(070114)	Acetone	44.0	ug/L	UB	Blank Contamination
J-MW47-101(070114)	Ethane	0.0042	ug/l	J	Holding Time
J-MW47-101(070114)	Methane	0.15	ug/l	J	Holding Time
J-MW47-101(070114)	Ethene	0.0085	ug/l	J	Holding Time
J-MW47-101(070114)	Acetone	44.7	ug/L	UB	Blank Contamination
J-MW47-102(070114)	Acetone	49.1	ug/L	UB	Blank Contamination
L125MW1A(063014)	Acetone	48.6	ug/L	UB	Blank Contamination
L125MW3(063014)	Acetone	49.9	ug/L	UB	Blank Contamination
L-B1090MW2(063014)	Acetone	47.7	ug/L	UB	Blank Contamination
DUP004(070214)	Acetone	43.3	ug/L	UB	Blank Contamination
F-104MW3(070114)	Acetone	43.8	ug/L	UB	Blank Contamination
F-104MW4(070114)	Acetone	44.9	ug/L	UB	Blank Contamination

PICATINNY ARSENAL
DATA VALIDATION REPORT
SDGs: L14061445, L14061574, L14061687, L14061689, L14070131, L14070273, L14070436, L14070452, L14070459, L14070524, L14070607, L14070647, L14070678 and L14070762
3rd Quarter PICATINNY

Sample ID	Parameter	Result	Units	Qualifier	Reason
F-138MW4(070114)	Acetone	49.5	ug/L	UB	Blank Contamination
F-MW138-1(070114)	Acetone	48.4	ug/L	UB	Blank Contamination
F-MWF2A(070114)	Acetone	38.0	ug/L	UB	Blank Contamination
F-MWF2B(070114)	Acetone	41.0	ug/L	UB	Blank Contamination
G-GM004(070114)	Acetone	46.8	ug/L	UB	Blank Contamination
G-GMW5(070114)	Acetone	42.7	ug/L	UB	Blank Contamination
G-MW52-2(070114)	Acetone	46.2	ug/L	UB	Blank Contamination
G-MWG-2B(070114)	Acetone	35.6	ug/L	UB	Blank Contamination
H-62MW2(070114)	Acetone	42.3	ug/L	UB	Blank Contamination
H-64MW2(070114)	Acetone	42.4	ug/L	UB	Blank Contamination
L-114MW1A(070114)	Acetone	49.1	ug/L	UB	Blank Contamination
L-125MW1B)070114)	Acetone	43.7	ug/L	UB	Blank Contamination
L-161MW1B(070214)	Acetone	6.36	ug/L	UB	Blank Contamination
L-161MW2(070214)	Acetone	44.8	ug/L	UB	Blank Contamination
L-161MW4B(070214)	Acetone	47.1	ug/L	UB	Blank Contamination
L-161MW5(070114)	Acetone	46.1	ug/L	UB	Blank Contamination
L-161MW7(070114)	Acetone	47.5	ug/L	UB	Blank Contamination
L-17MW2(070114)	Acetone	48.5	ug/L	UB	Blank Contamination
L-35(MW5C(070114)	Acetone	48.3	ug/L	UB	Blank Contamination
L-35MW5B(070114)	Acetone	40.4	ug/L	UB	Blank Contamination
L-B1038MW2(070214)	Acetone	46.4	ug/L	UB	Blank Contamination
L-B1038MW3(070214)	Acetone	46.6	ug/L	UB	Blank Contamination
E-11WG-MW001(070914)	Methylene chloride	0.434	ug/L	UB	Blank Contamination
E-3WG-MW002(070914)	Methylene chloride	0.355	ug/L	UB	Blank Contamination
E-70-MW004(070914)	Methylene chloride	0.427	ug/L	UB	Blank Contamination
E-80-MW003(070914)	Acetone	39.0	ug/L	UB	Blank Contamination
E-82-MW001(071014)	Methylene chloride	0.366	ug/L	UB	Blank Contamination
E-95-MW003(070914)	Acetone	36.4	ug/L	UB	Blank Contamination
E-MW001(070914)	Acetone	35.0	ug/L	UB	Blank Contamination
E-MW002(070914)	Acetone	40.3	ug/L	UB	Blank Contamination
E-MW012H(070914)	Methylene chloride	0.341	ug/L	UB	Blank Contamination
E-MW012L(070914)	Methylene chloride	0.383	ug/L	UB	Blank Contamination
D-111-1(070914)	Acetone	10.9	ug/L	UB	Blank Contamination
D-112-7(070914)	Acetone	6.47	ug/L	UB	Blank Contamination
D-13-1(070914)	Acetone	32.4	ug/L	UB	Blank Contamination
D-41-1(070914)	Acetone	32.8	ug/L	UB	Blank Contamination

PICATINNY ARSENAL
DATA VALIDATION REPORT
SDGs: L14061445, L14061574, L14061687, L14061689, L14070131, L14070273, L14070436, L14070452, L14070459, L14070524, L14070607, L14070647, L14070678 and L14070762
3rd Quarter PICATINNY

Sample ID	Parameter	Result	Units	Qualifier	Reason
D-41-14(070914)	Acetone	6.95	ug/L	UB	Blank Contamination
D-41-16(070914)	Acetone	6.37	ug/L	UB	Blank Contamination
D-41-17(070914)	Acetone	6.76	ug/L	UB	Blank Contamination
D-41-8(070914)	Acetone	34.0	ug/L	UB	Blank Contamination
D-41-9(070914)	Acetone	33.8	ug/L	UB	Blank Contamination
D-92-3(070914)	Acetone	11.4	ug/L	UB	Blank Contamination
D-CAF-2(070914)	Acetone	11.6	ug/L	UB	Blank Contamination
D-CAF-6(070914)	Acetone	9.73	ug/L	UB	Blank Contamination
D-MW21-1(070914)	Acetone	8.64	ug/L	UB	Blank Contamination
D-MWD-1(070914)	Acetone	6.76	ug/L	UB	Blank Contamination
D-PRB001(070914)	Acetone	8.06	ug/L	UB	Blank Contamination
D-PRB001(070914)	Methylene chloride	0.870	ug/L	UB	Blank Contamination
D-PRB002(070914)	Acetone	10.0	ug/L	UB	Blank Contamination
D-PRB002(070914)	Methylene chloride	0.337	ug/L	UB	Blank Contamination
D-PRB003(070914)	Acetone	7.46	ug/L	UB	Blank Contamination
D-PRB003(070914)	Methylene chloride	0.314	ug/L	UB	Blank Contamination
D-PRB004(070914)	Acetone	7.84	ug/L	UB	Blank Contamination
D-PRB004(070914)	Methylene chloride	0.429	ug/L	UB	Blank Contamination
D-PRB005(070914)	Acetone	6.03	ug/L	UB	Blank Contamination
D-PRB005(070914)	1,2,4-Trichlorobenzene	0.288	ug/L	UB	Blank Contamination
D-PRB006(070914)	Acetone	5.79	ug/L	UB	Blank Contamination
D-PRB007(070914)	Acetone	5.32	ug/L	UB	Blank Contamination
D-PRB008(070914)	Acetone	5.92	ug/L	UB	Blank Contamination
D-PRB009(070914)	Acetone	5.43	ug/L	UB	Blank Contamination
D-PRB010(070914)	Acetone	4.05	ug/L	UB	Blank Contamination
D-PZ001(071014)	Benzene	0.163	ug/L	UB	Blank Contamination
D-PZ002(071014)	1,2,4-Trichlorobenzene	0.307	ug/L	UB	Blank Contamination
D-PZ002(071014)	Benzene	0.236	ug/L	UB	Blank Contamination
D-PZ003(071014)	Benzene	0.146	ug/L	UB	Blank Contamination
DUP001(071014)	Acetone	5.55	ug/L	UB	Blank Contamination

Appendix B

Sampling Logs and Field Forms
(Provided on CD)

ARCADIS

HydraSleeve™ Field Form

Site: Picatinny Arsenal, NJ
Location: PICA 079, Area 800
Well ID: 40MW-3

Well Type: ■ Monitoring ☐Other: _____
Well Finish: ■ Stick Up ☐Flush Mount
Measuring Pt: ■ Top of inner Casing ☐Other (specify): _____
Total Depth (ftbgs): 36.40 **Screened Interval (ftbgs):** _____
Well Casing: Diameter: 2 4 Material: PVC
Well Screen: Diameter: 2 4

Deployment

Date and Time of Deployment: Date: ~~7~~ 7-7-14 Time: 1250
Weather Conditions: Sunny + 85°F
Depth to groundwater at time of deployment: 5.81
Type of PDB used: ☐Lab Filled (Modified Trip Blank must be taken at time of deployment)
X Field Filled (Modified Equipment Blank of fill water must be taken at time of deployment. If PDB isn't filled at well head, blank must travel with samplers until last sampler is deployed. Blank is then taken.)

Dimensions of PDB: Length (in.) 18" Diameter (in.) 1.75"
Position of PDB weight: ☐Attached to bottom of PDB and suspended in well
☐Attached to bottom of deployment line and suspended in well
X Attached to bottom of deployment line and resting on bottom of well (preferred)

Retrieval (note: minimum deployment period is 2 weeks)

Date and Time of Retrieval: Date: 7-8-14 Time: 1315
Total # of days deployed: 1 day
Weather Conditions: Sunny + 85 °F
Depth to groundwater at time of retrieval: 5.82
Downhole Field Parameters Upon Retrieval:
Temp: 16.20 (mV) **ORP:** 210.8 (mV) **Water quality meter:** _____ **YSI 600 XL**
pH: 6.55 **DO:** 0.34 (mg/L) **Serial #:** 16835

Notes/Observations: Turb 68.5 ntu

Field Sampling Technician: Name(s) and Company

Name	Company
Ruben Alonso and N. Krasnecky	ARCADIS

ARCADIS

HydraSleeve™ Field Form

Site: Picatinny Arsenal, NJ
Location: PICA 079, Area 800
Well ID: 40MW-2

Well Type: ■ Monitoring ☐Other: _____
Well Finish: ■ Stick Up ☐Flush Mount
Measuring Pt: ■ Top of inner Casing ☐Other (specify): _____
Total Depth (ftbgs): 34.8 **Screened Interval (ftbgs):** _____
Well Casing: Diameter: 4 Material: PVC
Well Screen: Diameter: 4

Deployment

Date and Time of Deployment: Date: 7-7-14 Time: 1305
Weather Conditions: Sunny + 88°
Depth to groundwater at time of deployment: 11.56
Type of PDB used: ☐Lab Filled (Modified Trip Blank must be taken at time of deployment)
X Field Filled (Modified Equipment Blank of fill water must be taken at time of deployment. If PDB isn't filled at well head, blank must travel with samplers until last sampler is deployed. Blank is then taken.)

Dimensions of PDB: Length (in.) 18" Diameter (in.) 1.75"
Position of PDB weight: ☐Attached to bottom of PDB and suspended in well
☐Attached to bottom of deployment line and suspended in well
X Attached to bottom of deployment line and resting on bottom of well (preferred)

Retrieval (note: minimum deployment period is 2 weeks)

Date and Time of Retrieval: Date: 7-8-14 Time: 1320
Total # of days deployed: 1 day
Weather Conditions: Sunny + 88
Depth to groundwater at time of retrieval: 11.59
Downhole Field Parameters Upon Retrieval:
Temp: 16.77 (mV) **ORP:** 206.8 (mV) **Water quality meter:** _____ **YSI 600 XL**
pH: 6.50 **DO:** 0.32 (mg/L) **Serial #:** 16835

Notes/Observations:

Field Sampling Technician: Name(s) and Company

Name	Company
Ruben Alonso and N. Krasnecky	ARCADIS

ARCADIS

HydraSleeve™ Field Form

Site: Picatinny Arsenal, NJ
Location: PICA 079, Area 800
Well ID: 40MW-56

Well Type: ■ Monitoring ☐Other: _____
Well Finish: ■ Stick Up ☐Flush Mount
Measuring Pt: ■ Top of inner Casing ☐Other (specify): _____
Total Depth (ftbgs): 31.72 **Screened Interval (ftbgs):** _____
Well Casing: Diameter: 2 Material: _____
Well Screen: Diameter: 2

Deployment

Date and Time of Deployment: Date: 7-7-14 Time: 1320
Weather Conditions: Sunny + 88°
Depth to groundwater at time of deployment: 12.73
Type of PDB used: ☐Lab Filled (Modified Trip Blank must be taken at time of deployment)
X Field Filled (Modified Equipment Blank of fill water must be taken at time of deployment. If PDB isn't filled at well head, blank must travel with samplers until last sampler is deployed. Blank is then taken.)

Dimensions of PDB: Length (in.) 18" Diameter (in.) 1.75"
Position of PDB weight: ☐Attached to bottom of PDB and suspended in well
☐Attached to bottom of deployment line and suspended in well
X Attached to bottom of deployment line and resting on bottom of well (preferred)

Retrieval (note: minimum deployment period is 2 weeks)

Date and Time of Retrieval: Date: 7-8-14 Time: 1325
Total # of days deployed: 1 day
Weather Conditions: Sunny + 88°F
Depth to groundwater at time of retrieval: 12.78
Downhole Field Parameters Upon Retrieval:
Temp: 14.13 (mV) **ORP:** 217.6 **(mV)** **Water quality meter:** _____ **YSI 600 XL**
pH: 6.23 **DO:** 0.21 **(mg/L)** **Serial #:** 16835

Notes/Observations:

Field Sampling Technician: Name(s) and Company

Name	Company
Ruben Alonso and N. Krasnecky	ARCADIS

ARCADIS

HydraSleeve™ Field Form

Site: Picatinny Arsenal, NJ
Location: PICA 079, Area 800
Well ID: 40MW-1

Well Type: ■ Monitoring ☐Other: _____
Well Finish: ■ Stick Up ☐Flush Mount
Measuring Pt: ■ Top of inner Casing ☐Other (specify): _____
Total Depth (ftbgs): 34.1 **Screened Interval (ftbgs):** _____
Well Casing: Diameter: 4 Material: _____
Well Screen: Diameter: 4

Deployment

Date and Time of Deployment: Date: 7-7-14 Time: 1315
Weather Conditions: Sunny + 88
Depth to groundwater at time of deployment: 10.98
Type of PDB used: ☐Lab Filled (Modified Trip Blank must be taken at time of deployment)
X Field Filled (Modified Equipment Blank of fill water must be taken at time of deployment. If PDB isn't filled at well head, blank must travel with samplers until last sampler is deployed. Blank is then taken.)

Dimensions of PDB: Length (in.) 18" Diameter (in.) 1.75"
Position of PDB weight: ☐Attached to bottom of PDB and suspended in well
☐Attached to bottom of deployment line and suspended in well
X Attached to bottom of deployment line and resting on bottom of well (preferred)

Retrieval (note: minimum deployment period is 2 weeks)

Date and Time of Retrieval: Date: 7-8-14 Time: 1330
Total # of days deployed: 1 day
Weather Conditions: Sunny + 88
Depth to groundwater at time of retrieval: 10.97
Downhole Field Parameters Upon Retrieval:
Temp: 14.66 (mV) **ORP:** 220.5 (mV) **Water quality meter:** _____ **YSI 600 XL**
pH: 6.12 **DO:** 0.26 (mg/L) **Serial #:** 16835

Notes/Observations:

Field Sampling Technician: Name(s) and Company

Name	Company
Ruben Alonso and N. Krasnecky	ARCADIS

ARCADIS

HydraSleeve™ Field Form

Site: Picatinny Arsenal, NJ
Location: PICA 079, Area 800
Well ID: 40MW-~~6~~5

Well Type: ■ Monitoring ☐ Other: _____
Well Finish: ☐ Stick Up ■ Flush Mount
Measuring Pt: ■ Top of inner Casing ☐ Other (specify): _____
Total Depth (ftbgs): 36.45 **Screened Interval (ftbgs):** _____
Well Casing: Diameter: 4 Material: PVC
Well Screen: Diameter: 4

Deployment

Date and Time of Deployment: Date: 7-7-14 Time: 1330
Weather Conditions: Sunny + 88
Depth to groundwater at time of deployment: 7.36
Type of PDB used: ☐ Lab Filled (Modified Trip Blank must be taken at time of deployment)
X Field Filled (Modified Equipment Blank of fill water must be taken at time of deployment. If PDB isn't filled at well head, blank must travel with samplers until last sampler is deployed. Blank is then taken.)

Dimensions of PDB: Length (in.) 18" Diameter (in.) 1.75"
Position of PDB weight: ☐ Attached to bottom of PDB and suspended in well
☐ Attached to bottom of deployment line and suspended in well
X Attached to bottom of deployment line and resting on bottom of well (preferred)

Retrieval (note: minimum deployment period is 2 weeks)

Date and Time of Retrieval: Date: 7-8-14 Time: 1335
Total # of days deployed: 1 day
Weather Conditions: Sunny + 80°F
Depth to groundwater at time of retrieval: 7.38
Downhole Field Parameters Upon Retrieval:
Temp: 13.47 (mV) **ORP:** 210.9 **(mV)** **Water quality meter:** _____ **YSI 600 XL**
pH: 6.18 **DO:** 0.69 **(mg/L)** **Serial #:** 11835

Notes/Observations:

Field Sampling Technician: Name(s) and Company

Name	Company
Ruben Alonso and N. Krasnecky	ARCADIS

ARCADIS
Infrastructure, environment, facilities

SURFACE WATER SAMPLE COLLECTION LOG

Sample ID 79SW-1

Project Name and No. GP06PICA.LM13.1MD13

Date 7-7-14

Sampling Personnel Ruben Alonso and Nick Krasnecky

Time 1300

Weather Sunny +88

DESCRIPTION OF SAMPLE LOCATION:

Name of Water Body Lake Picatinny

Depth of Water 1.0-2.0

Velocity slow/calm

Other Comments

Substrate Description

Sample Location and Depth (ft) at 79SW-1 map location ~1.0-2.0' deep

Description of Nearby Vegetation trees, low weeds

FIELD PARAMETERS:

Sample Method Bailer

Sample Description Surface water from Lake Picatinny

Temperature (°C/°F) 28.83

pH ~~8.27~~ 8.17

Dissolved Oxygen 1.39

SC ~~0.133~~ 0.149

Salinity 0.07

TUR: 40.56

CONTAINER DESCRIPTION From _____ Lab ___X___ ARCADIS _____

Bottle Type	Analysis	Preservative
~~40 ml. glass vial~~	~~VOCs~~	~~HCL~~

TOTAL: 3

ARCADIS
Infrastructure, environment, facilities

SOIL/SEDIMENT SAMPLE COLLECTION LOG

Sample ID: 79SD-1
Date: 7-7-14
Time: 1300
Weather: Sunny + 88

Project Name and No.: GP06PICA.LM13.1MD13
Sampling Personnel: Ruben Alonso and Nick Krasnecky

DESCRIPTION OF SAMPLE LOCATION:

_____ Soil X Sediment

Location: _____
Sample depth (ft): _____
Soil type: _____

Name of Water Body: Lake Picatinny
Location: AT 79SD-1
Depth of Water: 1.0'-2.0'
Velocity of water: None/calm
Sample depth (ft): 0.0 - 0.5 bgs
Substrate description: _____
Description of vegetation: trees, low weeds

FIELD PARAMETERS:

Sample Method: Hand Auger
Sample Description: Sediment
Color: Brown
Odor: none
Salinity: _____

CONTAINER DESCRIPTION: From _____ Lab X ARCADIS

Container	Analysis
4 oz clear glass jar	2-Amino-4,6-DNT
	4-Amino-2,6-DNT
	Amino DNT
	RDX
	2,4,6-TNT

TOTAL: 2

ARCADIS
Infrastructure, environment, facilities

SURFACE WATER SAMPLE COLLECTION LOG

Sample ID 79SW-2

Project Name and No. GP06PICA.LM13.1MD13

Date 7-7-14

Sampling Personnel Ruben Alonso and Nick Krasnecky

Time 1245

Weather Sunny + 85°

DESCRIPTION OF SAMPLE LOCATION:

Name of Water Body Lake Picatinny

Depth of Water 1.0' - 2.0'

Velocity ~~[illegible]~~ calm / none

Other Comments

Substrate Description

Sample Location and Depth (ft) AT 79SW-2 MAP location ~ 1.0-2.0 foot depth

Description of Nearby Vegetation grass low weeds

FIELD PARAMETERS:

Sample Method Bailer

Sample Description Surface water.

Temperature (°C/°F) 30.67

pH 8.26

Dissolved Oxygen 2.21

SC 0.166

Salinity 0.08

CONTAINER DESCRIPTION From _____ Lab X ARCADIS _____

Bottle Type	Analysis	Preservative
40 ml. glass vial	VOCs	HCL

TOTAL: 3

ARCADIS
Infrastructure, environment, facilities

SOIL/SEDIMENT SAMPLE COLLECTION LOG

Sample ID: 79SD-2
Project Name and No.: GP06PICA.LM13.1MD13
Date: 7-7-14
Sampling Personnel: Ruben Alonso and Nick Krasnecky
Time: 1245
Weather: Sunny +85°F

DESCRIPTION OF SAMPLE LOCATION:

_____ Soil X _____ Sediment

Location: _____
Name of Water Body: Lake Picatinny
Sample depth (ft): _____
Location: AT 79SD-2 MAP locatio
Soil type: _____
Depth of Water: 0-0.5'
Velocity of water: none/ calm
Sample depth (ft): 0-0.5'
Substrate description: _____
Description of vegetation: grass, low weeds

FIELD PARAMETERS:

Sample Method: Hand Auger
Sample Description: Sediment
Color: Brown
Odor: none
Salinity: _____

CONTAINER DESCRIPTION: From _____ Lab X ARCADIS

Container	Analysis
4 oz clear glass jar	2-Amino-4,6-DNT
	4-Amino-2,6-DNT
	Amino DNT
	RDX
	2,4,6-TNT

TOTAL: 2

COC No. A 42140

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: ARCADIS - U.S. Inc.

Project Contact: Jacelyne Powell

Contact Phone #: 715-953-9807

Turn Around Requirements: Standard

Location: Picatinny Arsenal

Project ID: F06PICA. LM14. 3MDK/PICA 079

Sampler (print): C. Goldsmith, N. Comie

Signature: [illegible]

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other _____

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	2-Amino-4,6-DNT	4-Amino-2,6-DNT	Amino DNT	RDX	2,4,6-TNT										TOTAL # (LAB USE)	ADDITIONAL REQUIREMENTS
1-40mw001(070814)		X	7/8/14	1330	WG	1		X	X	X	X	X											
1-40mw002(070814)		X	7/8/14	1320	WG	1		X	X	X	X	X											
1-40mw003(070814)		X	7/8/14	1315	WG	1		X	X	X	X	X											
1-40mw005(070814)		X	7/8/14	1335	WG	1		X	X	X	X	X											
1-40mw006(070814)		X	7/8/14	1325	WG	1		X	X	X	X	X											
F1001(070814)		X	7/8/14	1200	WG	1		X	X	X	X	X											

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
[illegible]	7/9/14	1600					

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks:
						COOLER ID# 10546

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

COC No. A 40711

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: ARCADIS - U.S., Inc.

Project Contact: Jacique Powell

Contact Phone #: 713-953-4807

Turn Around Requirements: Standard

Location: Picatinny Arsenal

Project ID: GP06PICA.LM14.3MD14 / PICA 079

Sampler (print): C. Goldsmith, N. Comrie

Signature: [illegible]

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other _____

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	Explosives 8330	TOTAL # (LAB USE)	ADDITIONAL REQUIREMENTS
1-79SW001(070714)		X	7/7/14	1300	WS	1		1		
1-79SD001(070714)		X	7/7/14	1300	SE	1		1		
1-79SD002(070714)		X	7/7/14	1245	SE	1		1		
1-79SW002(070714)		X	7/7/14	1245	WS	1		1		

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
[illegible]	7/8/14	1600					

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks:
						COOLER ID# 8110

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

ARCADIS

HydraSleeve™ Field Form

Site: Picatinny Arsenal, NJ

Location: PICA 079, Area I

Well ID: 40MW-1

Well Type: ■ Monitoring ☐Other: _____

Well Finish: ■ Stick Up ☐Flush Mount

Measuring Pt: ■ Top of inner Casing ☐Other (specify): _____

Total Depth (ftbgs): 34.1 **Screened Interval (ftbgs):** 24.27'-34.27'

Well Casing: Diameter: 4" Material: PVC

Well Screen: Diameter: 4"

Deployment

Date and Time of Deployment: Date: 8-26-14 Time: 1438

Weather Conditions: Sunny + 88°

Depth to groundwater at time of deployment: 12.53

Type of PDB used:
☐Lab Filled (Modified Trip Blank must be taken at time of deployment)
X Field Filled (Modified Equipment Blank of fill water must be taken at time of deployment. If PDB isn't filled at well head, blank must travel with samplers until last sampler is deployed. Blank is then taken.)

Dimensions of PDB: Length (in.) 18" Diameter (in.) 1.75"

Position of PDB weight:
☐Attached to bottom of PDB and suspended in well
☐Attached to bottom of deployment line and suspended in well
X Attached to bottom of deployment line and resting on bottom of well (preferred)

Retrieval (note: minimum deployment period is 2 weeks)

Date and Time of Retrieval: Date: 8-27-14 Time: 1405

Total # of days deployed: ~~Sunny + 88°~~ 1

Weather Conditions: Sunny + 88

Depth to groundwater at time of retrieval: ~~12.53~~ 12.58

Downhole Field Parameters Upon Retrieval:

Temp: 17.94 (mV) **ORP:** 219.4 (mV) **Water quality meter:** _____ **YSI 600**

pH: 6.19 **DO:** 0.35 (mg/L) **Serial #:** _____

Notes/Observations: Turb = 1.85

Field Sampling Technician: Name(s) and Company

Name	Company
Chris Goldsmith and Nick Comrie	ARCADIS

ARCADIS

HydraSleeve™ Field Form

Site: Picatinny Arsenal, NJ
Location: PICA 079, Area I
Well ID: 40MW-5

Well Type: ■ Monitoring ☐Other: _____
Well Finish: ■ Stick Up ☐Flush Mount
Measuring Pt: ■ Top of inner Casing ☐Other (specify): _____
Total Depth (ftbgs): 36.5 **Screened Interval (ftbgs):** 26.69'-36.69'
Well Casing: Diameter: 4" Material: PVC
Well Screen: Diameter: 4"

Deployment

Date and Time of Deployment: Date: 8-26-14 Time: 1447
Weather Conditions: Sunny 88°F
Depth to groundwater at time of deployment: 8.88
Type of PDB used: ☐Lab Filled (Modified Trip Blank must be taken at time of deployment)
X Field Filled (Modified Equipment Blank of fill water must be taken at time of deployment. If PDB isn't filled at well head, blank must travel with samplers until last sampler is deployed. Blank is then taken.)

Dimensions of PDB: Length (in.) 48" Diameter (in.) 1.75"
Position of PDB weight: ☐Attached to bottom of PDB and suspended in well
☐Attached to bottom of deployment line and suspended in well
X Attached to bottom of deployment line and resting on bottom of well (preferred)

Retrieval (note: minimum deployment period is 2 weeks)

Date and Time of Retrieval: Date: 8-27-14 Time: 1415
Total # of days deployed: 1
Weather Conditions: Sunny 88°F
Depth to groundwater at time of retrieval: 9.05
Downhole Field Parameters Upon Retrieval:
Temp: 16.54 (mV) **ORP:** 227.2 (mV) **Water quality meter:** _____ **YSI 600**
pH: 6.00 **DO:** 0.32 (mg/L) **Serial #:** _____

Notes/Observations:

Field Sampling Technician: Name(s) and Company

Name	Company
Chris Goldsmith and Nick Comrie	ARCADIS

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1.55 - SU

ARCADIS

HydraSleeve™ Field Form

Site: Picatinny Arsenal, NJ

Location: PICA 079, Area I

Well ID: 40MW-6

Well Type: ■ Monitoring ☐ Other: _____

Well Finish: ☐ Stick Up ■ Flush Mount

Measuring Pt: ■ Top of inner Casing ☐ Other (specify): _____

Total Depth (ftbgs): 31.72 **Screened Interval (ftbgs):** 24.0'-34.0'

Well Casing: Diameter: 2" Material: PVC

Well Screen: Diameter: 2"

Deployment

Date and Time of Deployment: Date: 8-26-14 Time: 1441

Weather Conditions: Sunny +80°

Depth to groundwater at time of deployment: 14.34

Type of PDB used:
☐ Lab Filled (Modified Trip Blank must be taken at time of deployment)
X Field Filled (Modified Equipment Blank of fill water must be taken at time of deployment. If PDB isn't filled at well head, blank must travel with samplers until last sampler is deployed. Blank is then taken.)

Dimensions of PDB: Length (in.) 48" Diameter (in.) 1.75"

Position of PDB weight:
☐ Attached to bottom of PDB and suspended in well
☐ Attached to bottom of deployment line and suspended in well
X Attached to bottom of deployment line and resting on bottom of well (preferred)

Retrieval (note: minimum deployment period is 2 weeks)

Date and Time of Retrieval: Date: 8-27-14 Time: 1410

Total # of days deployed: 1

Weather Conditions: Sunny + 88

Depth to groundwater at time of retrieval: 14.41

Downhole Field Parameters Upon Retrieval:

Temp: 15.13 (mV) **ORP:** 219.7 (mV) **Water quality meter:** _____ **YSI 600**

pH: 6.20 **DO:** 0.30 (mg/L) **Serial #:** _____

Notes/Observations:

Field Sampling Technician: Name(s) and Company

Name	Company
Chris Goldsmith and Nick Comrie	ARCADIS

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-0.2 1

ARCADIS

HydraSleeve™ Field Form

Site: Picatinny Arsenal, NJ

Location: PICA 079, Area 800

Well ID: 93MW-2

Well Type: ■ Monitoring ☐Other: _____

Well Finish: ■ Stick Up ☐Flush Mount

Measuring Pt: ■ Top of inner Casing ☐Other (specify): _____

Total Depth (ftbgs): 36.98 **Screened Interval (ftbgs):** _____

Well Casing: Diameter: 4 Material: PVC

Well Screen: Diameter: 4

Deployment

Date and Time of Deployment: Date: 8.26.14 Time: 1501

Weather Conditions: Sunny + 88°F

Depth to groundwater at time of deployment: 12.96

Type of PDB used: ☐Lab Filled (Modified Trip Blank must be taken at time of deployment)

X Field Filled (Modified Equipment Blank of fill water must be taken at time of deployment. If PDB isn't filled at well head, blank must travel with samplers until last sampler is deployed. Blank is then taken.)

Dimensions of PDB: Length (in.) 48" Diameter (in.) 1.75"

Position of PDB weight: ☐Attached to bottom of PDB and suspended in well

☐Attached to bottom of deployment line and suspended in well

X Attached to bottom of deployment line and resting on bottom of well (preferred)

Retrieval (note: minimum deployment period is 2 weeks)

Date and Time of Retrieval: Date: 8-27-14 Time: 1430

Total # of days deployed: 1

Weather Conditions: Sunny + 85°F

Depth to groundwater at time of retrieval: 13.03

Downhole Field Parameters Upon Retrieval:

Temp: 15.65 (mV) **ORP:** 255.5 (mV) **Water quality meter:** _____ **YSI 600 XL**

pH: 5.87 **DO:** 2.36 (mg/L) **Serial #:** _____

Notes/Observations: TURB = 2.11

Field Sampling Technician: Name(s) and Company

Name	Company
Chris Goldsmith and Nick Comrie	ARCADIS

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2.8 gm cross

ARCADIS

HydraSleeve™ Field Form

Site: Picatinny Arsenal, NJ

Location: PICA 079, Area 800

Well ID: 157MW-1

Well Type: ■ Monitoring ☐ Other: _____

Well Finish: ☐ Stick Up ■ Flush Mount

Measuring Pt: ■ Top of inner Casing ☐ Other (specify): _____

Total Depth (ftbgs): 36.35 **Screened Interval (ftbgs):** _____

Well Casing: Diameter: 4 Material: _____

Well Screen: Diameter: 4

Deployment

Date and Time of Deployment: Date: 8-26-14 Time: ~~14~~ 1512

Weather Conditions: Sunny 88°F

Depth to groundwater at time of deployment: 11.14

Type of PDB used:
☐ Lab Filled (Modified Trip Blank must be taken at time of deployment)
X Field Filled (Modified Equipment Blank of fill water must be taken at time of deployment. If PDB isn't filled at well head, blank must travel with samplers until last sampler is deployed. Blank is then taken.)

Dimensions of PDB: Length (in.) 48" Diameter (in.) 1.75"

Position of PDB weight:
☐ Attached to bottom of PDB and suspended in well
☐ Attached to bottom of deployment line and suspended in well
X Attached to bottom of deployment line and resting on bottom of well (preferred)

Retrieval (note: minimum deployment period is 2 weeks)

Date and Time of Retrieval: Date: 8-27-14 Time: 1450

Total # of days deployed: 1

Weather Conditions: Sunny 88

Depth to groundwater at time of retrieval: 11.22

Downhole Field Parameters Upon Retrieval:

Temp: 15.38 (mV) **ORP:** 162.8 (mV) **Water quality meter:** _____ **YSI 600 XL**

pH: 5.67 **DO:** 1.92 (mg/L) **Serial #:** _____

Notes/Observations: Turb = ~~[illegible]~~ 7.53

Field Sampling Technician: Name(s) and Company

Name	Company
Chris Goldsmith and Nick Comrie	ARCADIS

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6" ~~PVC~~ 4" PVC 2.2 yp

ARCADIS

HydraSleeve™ Field Form

Site: Picatinny Arsenal, NJ
Location: PICA 079, Area 800
Well ID: 157MW-3

Well Type: ■ Monitoring ☐Other: _____
Well Finish: ■ Stick Up ☐Flush Mount
Measuring Pt: ■ Top of inner Casing ☐Other (specify): _____
Total Depth (ftbgs): 36.65 **Screened Interval (ftbgs):** _____
Well Casing: Diameter: 4 Material: PVC
Well Screen: Diameter: 4

Deployment

Date and Time of Deployment: Date: 8-26-14 Time: ~~14~~ 1510
Weather Conditions: Sunny + 88°F.
Depth to groundwater at time of deployment: 10.73
Type of PDB used: ☐Lab Filled (Modified Trip Blank must be taken at time of deployment)
X Field Filled (Modified Equipment Blank of fill water must be taken at time of deployment. If PDB isn't filled at well head, blank must travel with samplers until last sampler is deployed. Blank is then taken.)

Dimensions of PDB: Length (in.) ~~48~~" Diameter (in.) 1.75"
Position of PDB weight: ☐Attached to bottom of PDB and suspended in well
☐Attached to bottom of deployment line and suspended in well
X Attached to bottom of deployment line and resting on bottom of well (preferred)

Retrieval (note: minimum deployment period is 2 weeks)

Date and Time of Retrieval: Date: 8-27-14 Time: 1440
Total # of days deployed: 1
Weather Conditions: Sunny + 80
Depth to groundwater at time of retrieval: 10.81
Downhole Field Parameters Upon Retrieval:
Temp: 14.99 (mV) **ORP:** 115.9 (mV) **Water quality meter:** _____ **YSI 600 XL**
pH: ~~6.01~~ 5.85 **DO:** 1.89 (mg/L) **Serial #:** _____

Notes/Observations:

Field Sampling Technician: Name(s) and Company

Name	Company
Chris Goldsmith and Nick Comrie	ARCADIS

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6" 2.4 up

ARCADIS

HydraSleeve™ Field Form

Site: Picatinny Arsenal, NJ

Location: PICA 079, Area 800

Well ID: 157MW-4

Well Type: ■ Monitoring ☐Other: _____

Well Finish: ■ Stick Up ☐Flush Mount

Measuring Pt: ■ Top of inner Casing ☐Other (specify): _____

Total Depth (ftbgs): ~~95~~ 35.9 **Screened Interval (ftbgs):** _____

Well Casing: Diameter: 2 Material: _____

Well Screen: Diameter: 2

Deployment

Date and Time of Deployment: Date: 8-26-14 Time: 1505

Weather Conditions: Sunny + 88°F

Depth to groundwater at time of deployment: 9.52

Type of PDB used:
☐Lab Filled (Modified Trip Blank must be taken at time of deployment)
X Field Filled (Modified Equipment Blank of fill water must be taken at time of deployment. If PDB isn't filled at well head, blank must travel with samplers until last sampler is deployed. Blank is then taken.)

Dimensions of PDB: Length (in.) 18" Diameter (in.) 1.75"

Position of PDB weight:
☐Attached to bottom of PDB and suspended in well
☐Attached to bottom of deployment line and suspended in well
X Attached to bottom of deployment line and resting on bottom of well (preferred)

Retrieval (note: minimum deployment period is 2 weeks)

Date and Time of Retrieval: Date: 8-27-14 Time: 1435

Total # of days deployed: 1

Weather Conditions: Sunny + 85

Depth to groundwater at time of retrieval: 9.62

Downhole Field Parameters Upon Retrieval:

Temp: 13.45 (mV) **ORP:** ~~15~~ 9.0 (mV) **Water quality meter:** _____ **YSI 600 XL**

pH: 6.15 **DO:** 2.02 (mg/L) **Serial #:** _____

Notes/Observations: Turb = 1258 NU

Field Sampling Technician: Name(s) and Company

Name	Company
Chris Goldsmith and Nick Comrie	ARCADIS

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4" casing 2.4 up

ARCADIS

HydraSleeve™ Field Form

Site: Picatinny Arsenal, NJ

Location: PICA 079, Area 800

Well ID: 157MW-2

Well Type: ■ Monitoring ☐Other: _____

Well Finish: ■ Stick Up ☐Flush Mount

Measuring Pt: ■ Top of inner Casing ☐Other (specify): _____

Total Depth (ftbgs): 35.7 **Screened Interval (ftbgs):** _____

Well Casing: Diameter: ~~Ø~~ 4 Material: PVC

Well Screen: Diameter: 4

Deployment

Date and Time of Deployment: Date: 8-26-14 Time: 1457

Weather Conditions: Sunny +88°F

Depth to groundwater at time of deployment: 10.06

Type of PDB used: ☐Lab Filled (Modified Trip Blank must be taken at time of deployment)

X Field Filled (Modified Equipment Blank of fill water must be taken at time of deployment. If PDB isn't filled at well head, blank must travel with samplers until last sampler is deployed. Blank is then taken.)

Dimensions of PDB: Length (in.) 18" Diameter (in.) 1.75"

Position of PDB weight: ☐Attached to bottom of PDB and suspended in well

☐Attached to bottom of deployment line and suspended in well

X Attached to bottom of deployment line and resting on bottom of well (preferred)

Retrieval (note: minimum deployment period is 2 weeks)

Date and Time of Retrieval: Date: 8-27-14 Time: ~~14~~ 1425

Total # of days deployed: 1

Weather Conditions: Sunny +85°

Depth to groundwater at time of retrieval: 10.11

Downhole Field Parameters Upon Retrieval:

Temp: 15.27 (mV) **ORP:** 240.1 **(mV)** **Water quality meter:** _____ **YSI 600 XL**

pH: 5.78 **DO:** 3.02 **(mg/L)** **Serial #:** _____

Notes/Observations: Turb = 2.48

Field Sampling Technician: Name(s) and Company

Name	Company
Chris Goldsmith and Nick Comrie	ARCADIS

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2.05 up

ARCADIS

HydraSleeve™ Field Form

Site: Picatinny Arsenal, NJ
Location: PICA 079, Area I
Well ID: 40MW-3

Well Type: ■ Monitoring ☐Other: _____
Well Finish: ■ Stick Up ☐Flush Mount
Measuring Pt: ■ Top of inner Casing ☐Other (specify): _____
Total Depth (ftbgs): 36.4 **Screened Interval (ftbgs):** 26.64'-36.64'
Well Casing: Diameter: 4" Material: PVC
Well Screen: Diameter: 4"

Deployment

Date and Time of Deployment: Date: 8-26-14 Time: 1425
Weather Conditions: Sunny + 80°
Depth to groundwater at time of deployment: 7.43
Type of PDB used: ☐Lab Filled (Modified Trip Blank must be taken at time of deployment)
X Field Filled (Modified Equipment Blank of fill water must be taken at time of deployment. If PDB isn't filled at well head, blank must travel with samplers until last sampler is deployed. Blank is then taken.)

Dimensions of PDB: Length (in.) 48" Diameter (in.) 1.75"
Position of PDB weight: ☐Attached to bottom of PDB and suspended in well
☐Attached to bottom of deployment line and suspended in well
X Attached to bottom of deployment line and resting on bottom of well (preferred)

Retrieval (note: minimum deployment period is 2 weeks)

Date and Time of Retrieval: Date: 8-27-14 Time: 1355
Total # of days deployed: 1
Weather Conditions: Sunny + 85
Depth to groundwater at time of retrieval: 7.47
Downhole Field Parameters Upon Retrieval:
Temp: 17.70 (mV) **ORP:** 248.1 (mV) **Water quality meter:** _____ **YSI 600**
pH: 5.88 **DO:** 0.52 (mg/L) **Serial #:** _____

Notes/Observations: Turb = 1.55

Field Sampling Technician: Name(s) and Company

Name	Company
Chris Goldsmith and Nick Comrie	ARCADIS

ARCADIS

HydraSleeve™ Field Form

Site: Picatinny Arsenal, NJ
Location: PICA 079, Area I
Well ID: 40MW-2

Well Type: ■ Monitoring ☐Other: _____
Well Finish: ■ Stick Up ☐Flush Mount
Measuring Pt: ■ Top of inner Casing ☐Other (specify): _____
Total Depth (ftbgs): 34.75 **Screened Interval (ftbgs):** 24.97'-34.97'
Well Casing: Diameter: 4" Material: PVC
Well Screen: Diameter: 4"

Deployment

Date and Time of Deployment: Date: 8-26-14 Time: 1433
Weather Conditions: Sunny +85°
Depth to groundwater at time of deployment: 13.17
Type of PDB used: ☐Lab Filled (Modified Trip Blank must be taken at time of deployment)
X Field Filled (Modified Equipment Blank of fill water must be taken at time of deployment. If PDB isn't filled at well head, blank must travel with samplers until last sampler is deployed. Blank is then taken.)

Dimensions of PDB: Length (in.) 48" Diameter (in.) 1.75"
Position of PDB weight: ☐Attached to bottom of PDB and suspended in well
☐Attached to bottom of deployment line and suspended in well
X Attached to bottom of deployment line and resting on bottom of well (preferred)

Retrieval (note: minimum deployment period is 2 weeks)

Date and Time of Retrieval: Date: 8-27-14 Time: 1400
Total # of days deployed: 1
Weather Conditions: Sunny +80
Depth to groundwater at time of retrieval: 13.23
Downhole Field Parameters Upon Retrieval:
Temp: 17.19 (mV) **ORP:** 214.1 (mV) **Water quality meter:** _____ **YSI 600**
pH: 6.40 **DO:** 0.64 (mg/L) **Serial #:** _____

Notes/Observations: Turb = 1.97 ntu

Field Sampling Technician: Name(s) and Company

Name	Company
Chris Goldsmith and Nick Comrie	ARCADIS

ARCADIS
Infrastructure, environment, facilities

SURFACE WATER SAMPLE COLLECTION LOG

Sample ID 79SW-1

Project Name and No. GP06PICA.LM14.2MD14

Date 8-26-14

Sampling Personnel C. Goldsmith and N. Comrie

Time 1410

Weather Sunny +85°

DESCRIPTION OF SAMPLE LOCATION:

Name of Water Body Lake Picatinny

Depth of Water 1.0 ft

Velocity none

Other Comments

Substrate Description

Sample Location and Depth (ft) at 79SW-1 surface water MAPPED sample location ~ 1.0' deep

Description of Nearby Vegetation Trees, high weeds

FIELD PARAMETERS:

Sample Method Bailer

Sample Description Surface water sample - grab sample Sample is clear in color

Temperature (°C/°F) 27.66

pH 8.74

Dissolved Oxygen 11.79

SC 0.143

Salinity 0.07

Turb = 5.55

CONTAINER DESCRIPTION From _____ Lab X ARCADIS _____

Bottle Type	Analysis	Preservative
1-1 Liter Glass Amber	Explosives	None

TOTAL: 1

ARCADIS
Infrastructure, environment, facilities

SOIL/SEDIMENT SAMPLE COLLECTION LOG

Sample ID: 79SD-1
Date: 8-26-17
Time: 1410
Weather: Sunny + 80

Project Name and No.: GP06PICA.LM14.2MD14
Sampling Personnel: C. Goldsmith and Nick Comrie
UXO support team member

DESCRIPTION OF SAMPLE LOCATION:

_____ Soil
X Sediment

Location:
Sample depth (ft):
Soil type:

Name of Water Body: Lake Picatinny
Location: 79SD-1 map location
Depth of Water: 10"
Velocity of water: now
Sample depth (ft): 1.05
Substrate description:
Description of vegetation: Trees, high weeds

FIELD PARAMETERS:

Sample Method: Hand Auger
Sample Description: fine to medium ~~sand~~ sand, trace gravel, loose
Color: Brown (DARK
Odor: none
Salinity:

CONTAINER DESCRIPTION: From _____ Lab X ARCADIS

Container	Analysis
4 oz clear glass jar	2-Amino-4,6-DNT
	4-Amino-2,6-DNT
	Amino DNT
	RDX
	2,4,6-TNT

TOTAL: 1

ARCADIS
Infrastructure, environment, facilities

SURFACE WATER SAMPLE COLLECTION LOG

Sample ID 79SW-2

Project Name and No. GP06PICA.LM14.2MD14

Date 8-26-14

Sampling Personnel C. Goldsmith and N. Comrie

Time 1405

Weather

DESCRIPTION OF SAMPLE LOCATION:

Name of Water Body Lake Picatinny

Depth of Water 1.0'

Velocity none

Other Comments

Substrate Description

Sample Location and Depth (ft) Sample at 79SW2 MAD location ~ 1.0' feet

Description of Nearby Vegetation high / medium grass and weeds

FIELD PARAMETERS:

Sample Method Bailer

Sample Description surface water from Lake
water is clear

Temperature (°C/°F) 26.66

pH 6.58

Dissolved Oxygen 12.73

SC 0.162

Salinity 0.08

TURB = 3.25 clear

CONTAINER DESCRIPTION From _____ Lab ___X___ ARCADIS _____

Bottle Type	Analysis	Preservative
1-1 Liter Glass Amber	Explosives	None

TOTAL: 1

ARCADIS
Infrastructure, environment, facilities

Page _____ of _____

SOIL/SEDIMENT SAMPLE COLLECTION LOG

Sample ID: 79SD-2
Date: 8-26-14
Time: 1405
Weather: Sunny +80°

Project Name and No.: GP06PICA.LM14.2MD14
Sampling Personnel: C. Goldsmith and Nick Comrie
UXO support team member

DESCRIPTION OF SAMPLE LOCATION:

_____ Soil
X Sediment

Location: _____
Sample depth (ft): _____
Soil type: Dark brown fine to med sand trace gravel

Name of Water Body: Lake Picatinny
Location: LAKE Picatinny 79SD-2 locate
Depth of Water: 1.0
Velocity of water: none
Sample depth (ft): 1.0
Substrate description: _____
Description of vegetation: medium grass

FIELD PARAMETERS:

Sample Method: Hand Auger
Sample Description: Dark brown, fine to medium sand trace gravel
Color: Brown
Odor: none
Salinity: _____

CONTAINER DESCRIPTION: From _____ Lab X ARCADIS

Container	Analysis
4 oz clear glass jar	2-Amino-4,6-DNT
	4-Amino-2,6-DNT
	Amino DNT
	RDX
	2,4,6-TNT

TOTAL: 1

COC No. A 42141

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: ARCADIS - U.S., Inc.

Project Contact: Jacque Powell

Contact Phone #: 713-953-4867

Turn Around Requirements: Standard

Location: Pratiny Arsenal

Project ID: GPDLOPICA. LH14.4ND14/PICA 079

Sampler (print): C. GOLDSMITH, N. Carrie

Signature: T. Beem

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other _____

ADDITIONAL REQUIREMENTS

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	2-Amino-4,6-DNT	4-Amino-2,6-DNT	Amino DNT	RDX	2,4,6-TNT	TOTAL # (LAB USE)
1-40MW001(082714)		X	8/27/14	1405	WG	1		1	1	1	1	1	
1-40MW005(082714)		X	8/27/14	1415	WG	1		1	1	1	1	1	
1-40MW006(082714)		X	8/27/14	1410	WG	1		1	1	1	1	1	
1-93MW002(082714)		X	8/27/14	1430	WG	1		1	1	1	1	1	
1-157MW001(082714)		X	8/27/14	1450	WG	1		1	1	1	1	1	
1-157MW003(082714)		X	8/27/14	1440	WG	1		1	1	1	1	1	
1-157MW004(082714)		X	8/27/14	1435	WG	1		1	1	1	1	1	
1-157MW002(082714)		X	8/27/14	1425	WG	1		1	1	1	1	1	
1-40MW003(082714)		X	8/27/14	1355	WG	1		1	1	1	1	1	
1-40MW002(082714)		X	8/27/14	1400	WG	1		1	1	1	1	1	
FB001(082714)		X	8/27/14	1200	WQ	1		1	1	1	1	1	
1-795W001(082614)		X	8/26/14	1410	WS	1		1	1	1	1	1	
1-795D001(082614)		X	8/26/14	1410	SD	1		1	1	1	1	1	
1-795W002(082614)		X	8/26/14	1405	WS	1		1	1	1	1	1	
1-795D002(082614)		X	8/26/14	1405	SD	1		1	1	1	1	1	

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
T. Beem	8/29/14	1600					

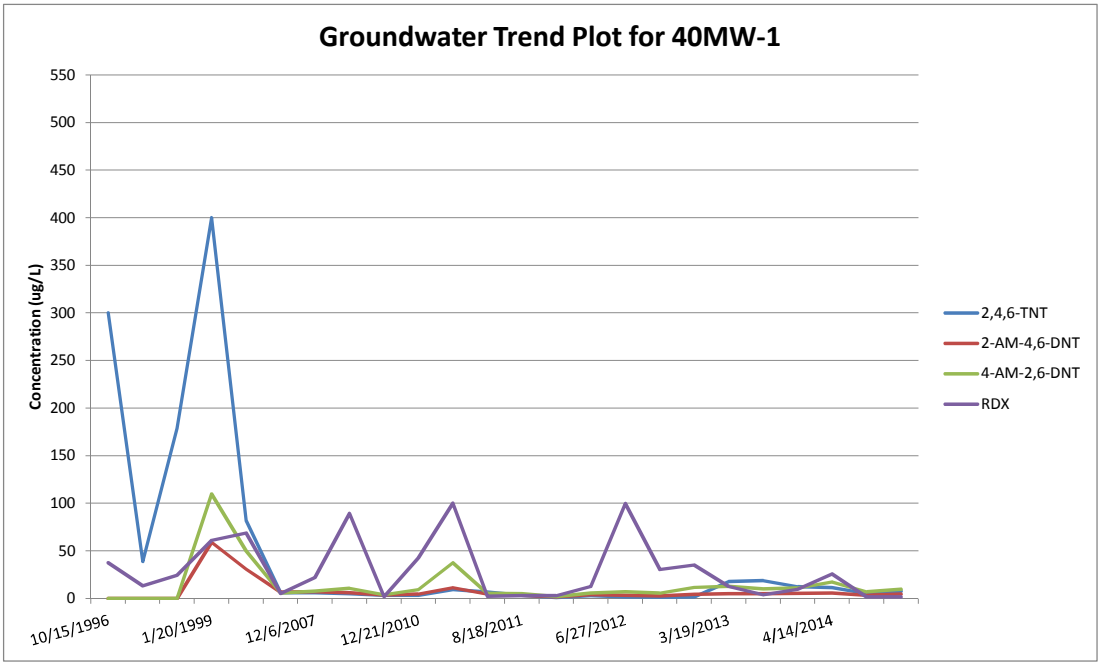
Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks:

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

Appendix C

Data Trend Plots

Appendix C
Groundwater Data Trend Plots - Site 40
2014 Annual Monitoring Report (Third and Fourth Quarter)
Group 1 Sites (PICA-079)
Picatinny Arsenal, New Jersey



Chemical	LOC (ug/L)	10/15/1996	12/18/1997	7/16/1998	1/20/1999	8/9/2002	3/2/2007	12/6/2007	1/30/2008	9/18/2010	12/21/2010	3/2/2011
2,4,6-TNT	2	300	38.87	178.71	400	82	5.89	5.88	4.87	3.16	3.29	9.38
2-AM-4,6-DNT	73	---	---	---	59	31	6.73	6.83	5.9	3.71	4.79	11.20
4-AM-2,6-DNT	73	---	---	---	110	50	5.7	7.57	10.6	4.1	9.35	37.60
RDX	2	37.7	13.47	24.41	61	69	5.23	22.1	89.4	2.08	42.7	100

Chemical	LOC (ug/L)	6/7/2011	8/18/2011	12/20/2011	3/23/2012	6/27/2012	9/11/2012	12/18/2012	3/19/2013	5/10/2013	1/28/2014	4/14/2014
2,4,6-TNT	2	6.72	3.16	1.07	2.87	1.49	1.29	0	17.8	18.8	12.5	11.5
2-AM-4,6-DNT	73	4.53	3.44	1.51	3.85	3.12	2.64	0	4.81	4.9	5.2	5.66
4-AM-2,6-DNT	73	5.31	4.98	1.92	5.55	6.94	5.75	0.401 J	12.8	10	11.1	17.5
RDX	2	2.24	3.08	2.8	12.8	99.9	30.4	5.26	12.6	3.85	9.63	25.8

Chemical	LOC (ug/L)	7/8/2014	8/27/2014
2,4,6-TNT	2	5.43	7.65
2-AM-4,6-DNT	73	3.32	4.73
4-AM-2,6-DNT	73	7.14	9.76
RDX	2	1.74	1.72

Note:
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2014 Annual Monitoring Report (Third and Fourth Quarter)
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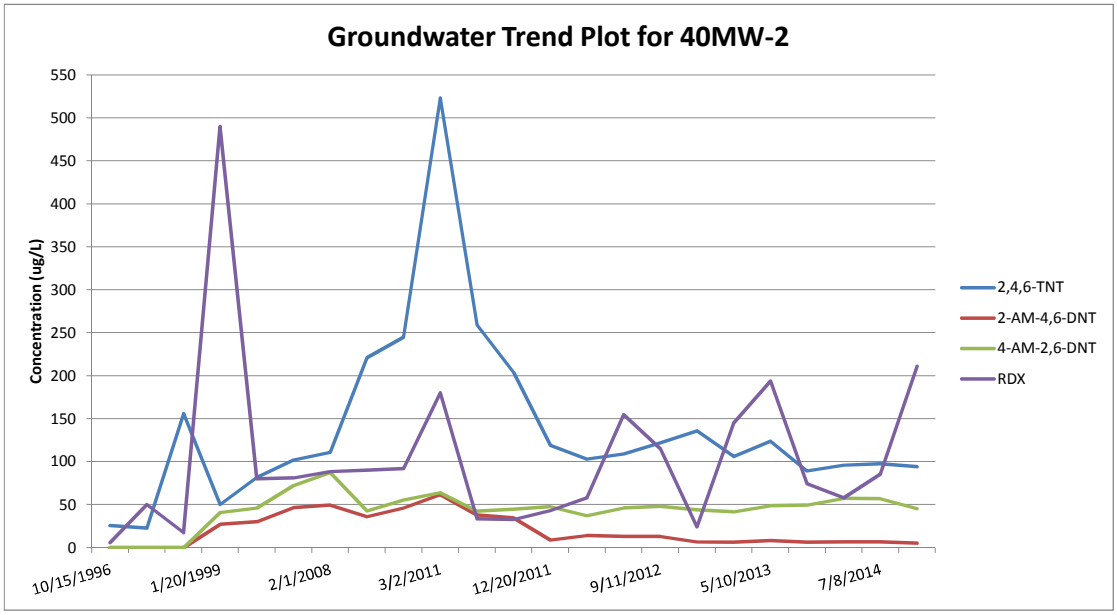
Picatinny Arsenal, New Jersey



Chemical	LOC (ug/L)	10/15/1996	12/18/1997	7/16/1998	1/20/1999	8/21/2002	12/7/2007	2/1/2008	9/18/2010	12/21/2010	3/2/2011	6/7/2011
2,4,6-TNT	2	25.6	22.61	155.98	50	82	102	111	221	245	523	259
2-AM-4,6-DNT	73	---	---	---	27	30	46.5	49.5	36	46.1	61.9	37.7
4-AM-2,6-DNT	73	---	---	---	41	46	72	87.4	42.9	55.4	63.8	42.4
RDX	2	5.81	50.02	17.43	490	80	80.9	88.5	89.9	91.7	180	33.5

Chemical	LOC (ug/L)	8/18/2011	12/20/2011	3/23/2012	6/27/2012	9/11/2012	12/18/2012	3/19/2013	5/10/2013	1/28/2014	4/14/2014	7/8/2014
2,4,6-TNT	2	204	119	103	109	122	136	106	124	89.3	96.1	97.5
2-AM-4,6-DNT	73	34.6	8.9	13.9	13	12.8	6.72	6.22	8.03	6.17	6.7	6.48
4-AM-2,6-DNT	73	44.7	47.4	37.3	45.9	47.8	44	41.7	48.7	49.6	57.2	56.9
RDX	2	32.5	43.1	58.0	155	115	24	145	194	74.4	57.9	85.5

Chemical	LOC (ug/L)	8/27/2014
2,4,6-TNT	2	94.1
2-AM-4,6-DNT	73	5.11
4-AM-2,6-DNT	73	45.5
RDX	2	211

Note:
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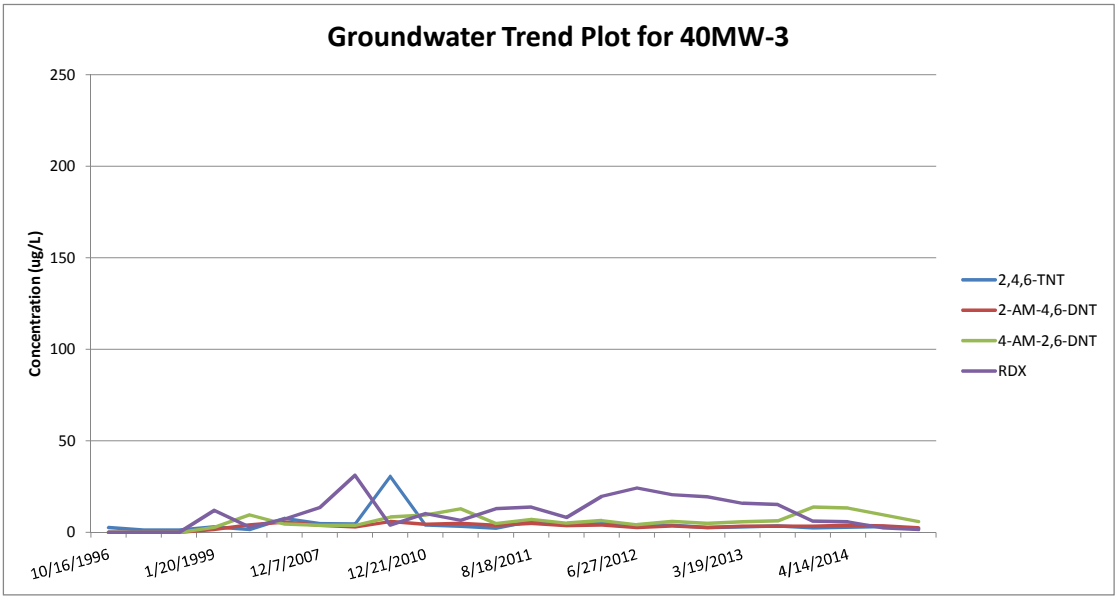
Groundwater Data Trend Plots - Site 40
2014 Annual Monitoring Report (Third and Fourth Quarter)
Group 1 Sites (PICA-079)
Picatinny Arsenal, New Jersey



Chemical	LOC (ug/L)	10/16/1996	12/18/1997	7/16/1998	1/20/1999	8/21/2002	3/2/2007	12/7/2007	2/1/2008	9/18/2010	12/21/2010	3/2/2011
2,4,6-TNT	2	2.48	1.23	1.21	2.9	1.5	7.54	4.82	4.55	30.6	3.9	3.3
2-AM-4,6-DNT	73	---	---	---	1.5	4.1	5.59	3.75	2.85	5.93	4.3	4.8
4-AM-2,6-DNT	73	---	---	---	2.8	9.5	4.43	3.86	3.8	8.35	9.33	12.8
RDX	2	0	0	0	12	2.9	7.21	13.6	31.3	3.99	10.3	6.6

Chemical	LOC (ug/L)	6/7/2011	8/18/2011	12/20/2011	3/23/2012	6/27/2012	9/11/2012	12/18/2012	3/19/2013	5/10/2013	1/28/2014	4/14/2014
2,4,6-TNT	2	2.14	6.06	3.81	4.83	3.52	3.85	2.49	2.85	3.34	2.31	2.66
2-AM-4,6-DNT	73	3.79	4.74	3.54	3.87	2.61	3.37	2.59	3.17	3.21	3.28	3.79
4-AM-2,6-DNT	73	4.91	7.02	4.93	6.38	4.18	5.85	4.83	5.67	6.18	13.8	13.3
RDX	2	12.80	13.80	8.20	19.70	24.3	20.5	19.4	15.8	15.2	6.02	5.64

Chemical	LOC (ug/L)	7/8/2014	8/27/2014
2,4,6-TNT	2	3.09	1.77
2-AM-4,6-DNT	73	3.48	2.4
4-AM-2,6-DNT	73	9.48	5.79
RDX	2	2.42	1.47

Note:
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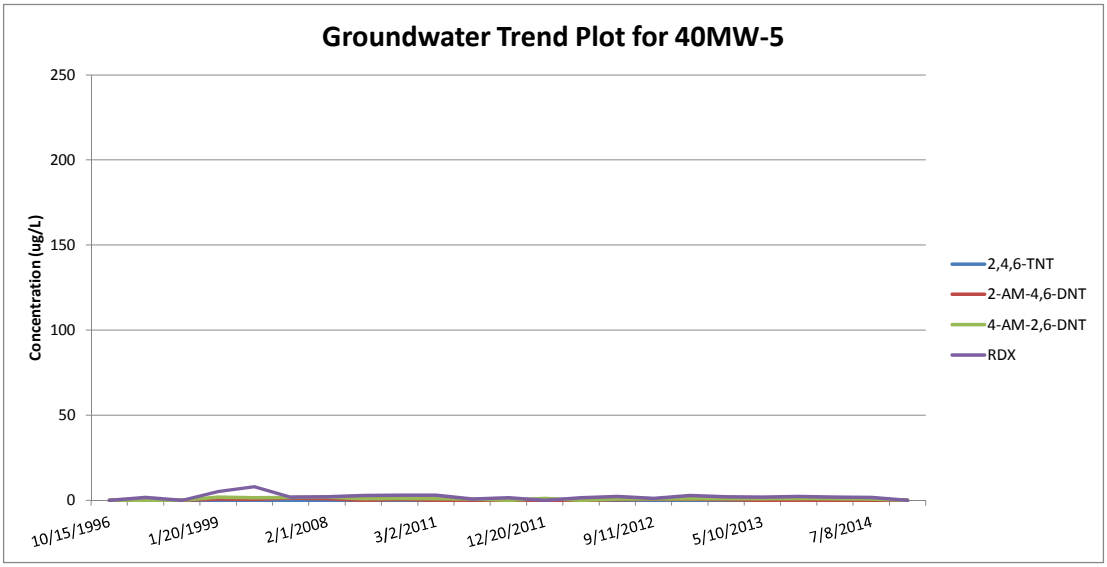
Concentrations exceeding the applicable screening criterion are shaded.



Chemical	LOC (ug/L)	10/15/1996	12/18/1997	7/14/1998	1/20/1999	8/21/2002	12/7/2007	2/1/2008	9/18/2010	12/21/2010	3/2/2011	6/7/2011
2,4,6-TNT	2	0	0	0	0	0	0	0	0	0	0	0
2-AM-4,6-DNT	73	---	---	---	0.57	0.49	1.17	0.939	0	0.505	0	0
4-AM-2,6-DNT	73	---	---	---	1.7	1.5	1.6	1.71	0.784	1.01	0.87	0.66
RDX	2	0	1.67	0	5.2	8	1.71	2.02	2.67	2.84	2.88	0.71

Chemical	LOC (ug/L)	8/18/2011	12/20/2011	3/23/2012	6/27/2012	9/11/2012	12/18/2012	3/19/2013	5/10/2013	1/28/2014	4/14/2014	7/8/2014
2,4,6-TNT	2	0	0	0	0	0	0	0	0	0	0	0
2-AM-4,6-DNT	73	0	0	0	0.342	0.461	0.443	0.375	0	0	0	0
4-AM-2,6-DNT	73	0	1.13	0	0.731	0.676	0.92	0.924	0.87	1.09	0.725	0.728
RDX	2	1.44	0	1.38	2.11	1.08	2.77	2.05	1.73	2.09	1.76	1.52

Chemical	LOC (ug/L)	8/27/2014
2,4,6-TNT	2	0
2-AM-4,6-DNT	73	0
4-AM-2,6-DNT	73	0
RDX	2	0

Note:
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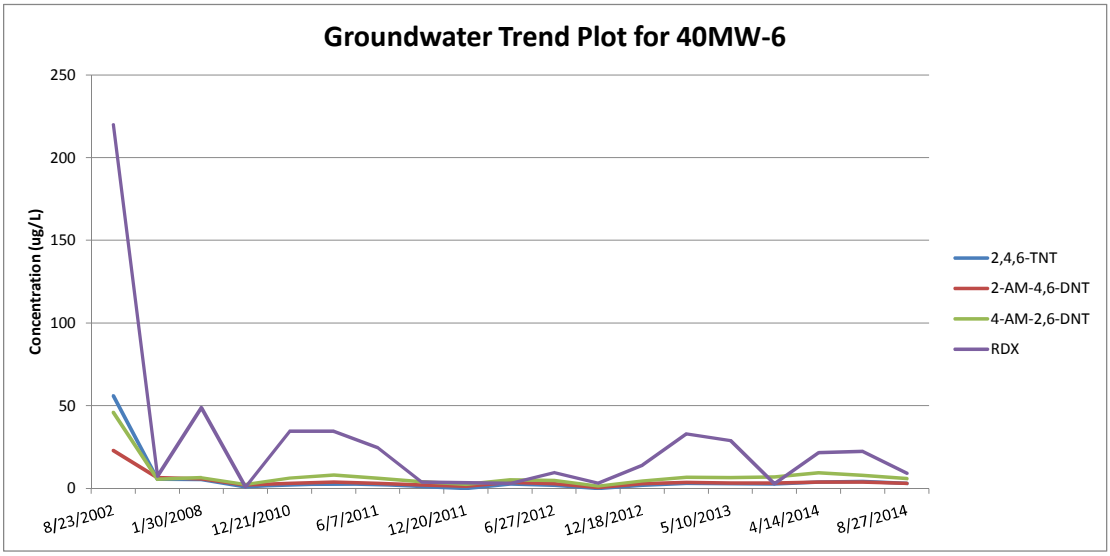
Appendix C
Groundwater Data Trend Plots - Site 40
2014 Annual Monitoring Report (Third and Fourth Quarter)
Group 1 Sites (PICA-079)
Picatinny Arsenal, New Jersey



Chemical	LOC (ug/L)	8/23/2002	12/6/2007	1/30/2008	9/18/2010	12/21/2010	3/2/2011	6/7/2011	8/18/2011	12/20/2011	3/23/2012	6/27/2012
2,4,6-TNT	2	56	5.5	5.29	0.966	2.09	2.69	2.26	1.12	0	2.72	1.9
2-AM-4,6-DNT	73	23	6.48	5.74	2.04	3.08	3.9	3.07	2.16	1.39	3.59	2.93
4-AM-2,6-DNT	73	46	5.54	6.48	2.52	6.31	8.03	6.11	3.95	2.42	5.18	4.86
RDX	2	220	7.57	48.9	0.956	34.6	34.5	24.80	3.75	3.45	3.14	9.59

Chemical	LOC (ug/L)	9/11/2012	12/18/2012	3/19/2013	5/10/2013	1/28/2014	4/14/2014	7/8/2014	8/27/2014
2,4,6-TNT	2	0	1.83	3.00	2.78	2.61	3.73	4.23	3
2-AM-4,6-DNT	73	0.493	2.84	3.60	3.16	3.19	3.85	3.87	3.04
4-AM-2,6-DNT	73	1.57	4.50	6.69	6.45	6.87	9.51	7.91	5.99
RDX	2	3.19	14.0	33.1	29.0	2.92	21.6	22.3	9.29

Note:
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Appendix C
Groundwater Data Trend Plots - Site 40
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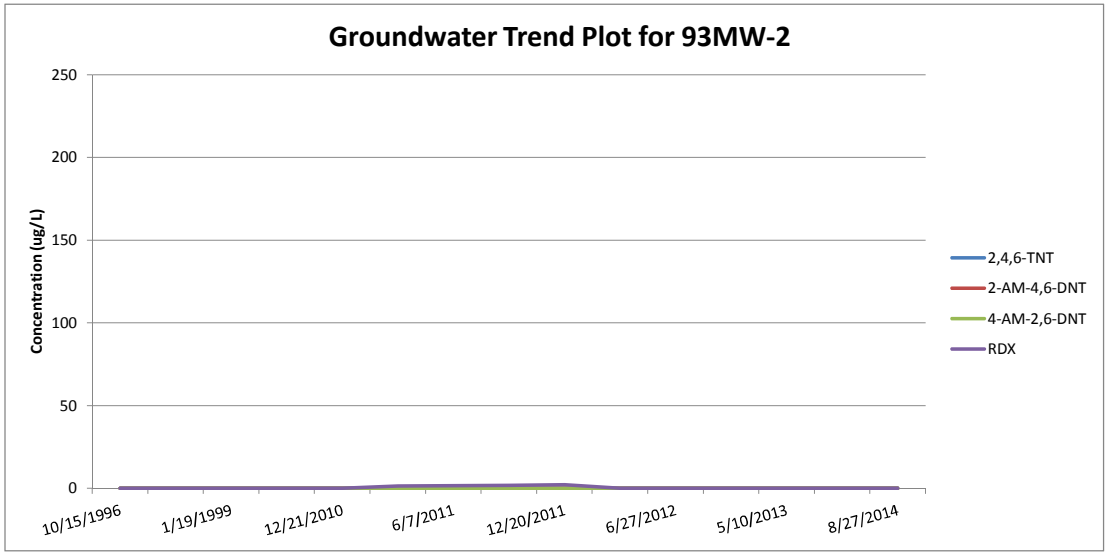

Chemical	LOC (ug/L)	10/15/1996	7/13/1998	1/19/1999	9/18/2010	12/21/2010	3/2/2011	6/7/2011	8/18/2011	12/20/2011	3/23/2012	6/27/2012
2,4,6-TNT	2	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00
2-AM-4,6-DNT	73	---	---	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00
4-AM-2,6-DNT	73	---	---	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00
RDX	2	0.0	0.0	0.0	0.0	0.0	1.32	1.61	1.83	2.07	0.00	0.00

Chemical	LOC (ug/L)	12/18/2012	5/10/2013	4/14/2014	8/27/2014
2,4,6-TNT	2	0.00	0.00	0.00	0.00
2-AM-4,6-DNT	73	0.00	0.00	0.00	0.00
4-AM-2,6-DNT	73	0.00	0.00	0.00	0.00
RDX	2	0.00	0.00	0.00	0.00

Note:
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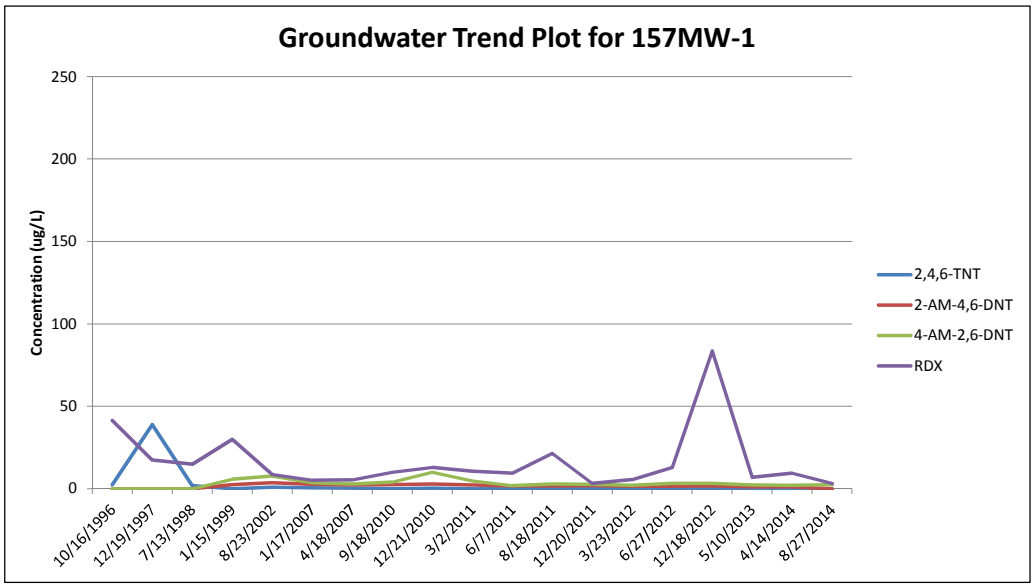
Concentrations exceeding the applicable screening criterion are shaded.



Chemical	LOC (ug/L)	10/16/1996	12/19/1997	7/13/1998	1/15/1999	8/23/2002	1/17/2007	4/18/2007	9/18/2010	12/21/2010	3/2/2011
2,4,6-TNT	2	2.54	38.87	1.96	0	0.99	0.42	0.33	0	0.27	0
2-AM-4,6-DNT	73	---	---	---	2.4	3.6	2.7	2.2	2.4	2.92	2.25
4-AM-2,6-DNT	73	---	---	---	5.7	7.7	3.7	2.9	4	9.96	4.72
RDX	2	41.4	17.39	14.83	30	8.6	5.1	5.4	10.1	12.9	10.60

Chemical	LOC (ug/L)	6/7/2011	8/18/2011	12/20/2011	3/23/2012	6/27/2012	12/18/2012	5/10/2013	4/14/2014	8/27/2014
2,4,6-TNT	2	0	1	2	0	0	0	0	0	0
2-AM-4,6-DNT	73	1.59	1.65	1.80	1.42	1.43	1.65	1.18	0	0
4-AM-2,6-DNT	73	1.83	2.83	2.57	2.06	3.32	3.27	2.22	0	2.38
RDX	2	9.51	21.50	3.20	5.49	13	83.6	6.86	0	3.2

Note:
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Groundwater Data Trend Plots - Site 40
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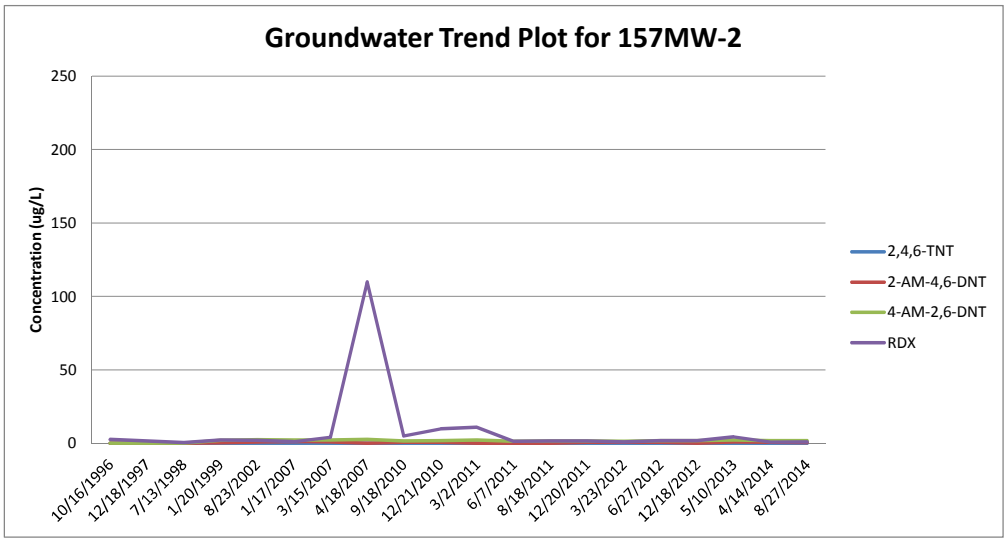
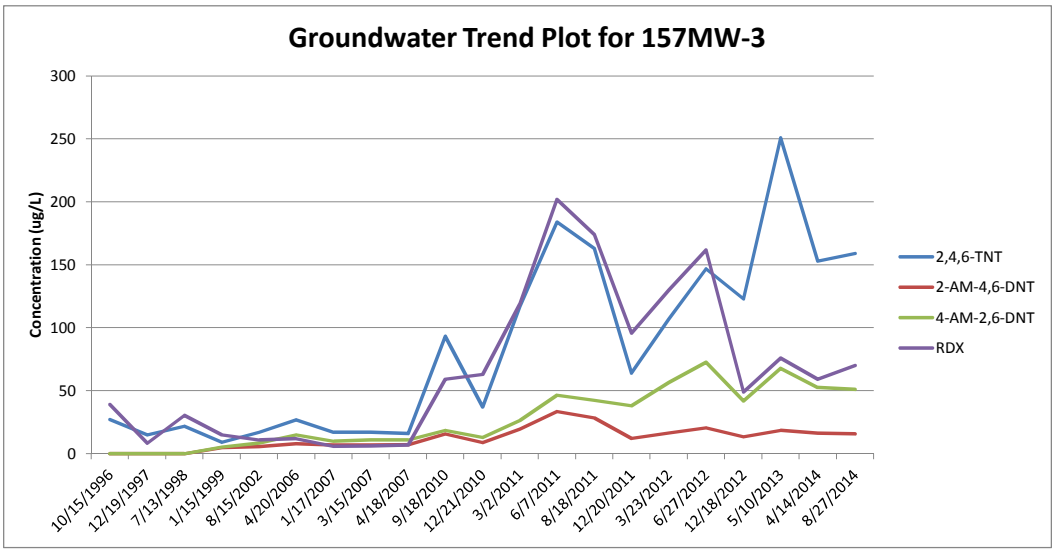


Chemical	LOC (ug/L)	10/16/1996	12/18/1997	7/13/1998	1/20/1999	8/23/2002	1/17/2007	3/15/2007	4/18/2007	9/18/2010	12/21/2010
2,4,6-TNT	2	0	0	0	0	0	0	0	0	0	0.00
2-AM-4,6-DNT	73	---	---	---	0.40	0.95	1.20	1	0	0.83	0.75
4-AM-2,6-DNT	73	---	---	---	2.10	2.40	2.30	2.20	2.80	1.71	1.72
RDX	2	2.65	1.54	0.55	2.20	2.10	1.30	4.20	110.00	5.03	10

Chemical	LOC (ug/L)	3/2/2011	6/7/2011	8/18/2011	12/20/2011	3/23/2012	6/27/2012	12/18/2012	5/10/2013	4/14/2014	8/27/2014
2,4,6-TNT	2	0	0	0	0	0	0	0	0	0	0
2-AM-4,6-DNT	73	0	0	0	1	1	1	0.582	0.887	0.744	0.61
4-AM-2,6-DNT	73	2.32	1.34	1.72	1.70	1.51	1.82	1.79	2.3	1.83	1.86
RDX	2	10.90	1.37	1.55	1.53	0.98	1.94	1.92	4.41	0.95	0.872

Note:
All the results shown as zero are less than the method detection limit.
Concentrations exceeding the applicable screening criterion are shaded.

Appendix C
Groundwater Data Trend Plots - Site 40
2014 Annual Monitoring Report (Third and Fourth Quarter)
Group 1 Sites (PICA-079)
Picatinny Arsenal, New Jersey



Chemical	LOC (ug/L)	10/15/1996	12/19/1997	7/13/1998	1/15/1999	8/15/2002	4/20/2006	1/17/2007	3/15/2007	4/18/2007	9/18/2010
2,4,6-TNT	2	27.1	14.86	21.8	9.2	17	27	17	17	16	93.2
2-AM-4,6-DNT	73	---	---	---	4.9	5.6	7.8	6.8	6.9	7.1	15.6
4-AM-2,6-DNT	73	---	---	---	5.4	8.3	15	10	11	11	18.6
RDX	2	39	8.26	30.49	15	11	12	5.9	6	6.8	59.3

Chemical	LOC (ug/L)	12/21/2010	3/2/2011	6/7/2011	8/18/2011	12/20/2011	3/23/2012	6/27/2012	12/18/2012	5/10/2013	4/14/2014
2,4,6-TNT	2	37.1	117	184	163	64	107	147	123	251	153
2-AM-4,6-DNT	73	8.78	19.5	33.6	28.4	12.2	16.6	20.6	13.5	18.6	16.3
4-AM-2,6-DNT	73	12.9	26.3	46.6	42.3	38.1	56.6	72.6	41.8	67.8	52.6
RDX	2	63	119	202	174	96	130	162	49	76.1	59.3

Chemical	LOC (ug/L)	8/27/2014
2,4,6-TNT	2	159
2-AM-4,6-DNT	73	15.7
4-AM-2,6-DNT	73	51.1
RDX	2	70.1

Note:
All the results shown as zero are less than the method detection limit.
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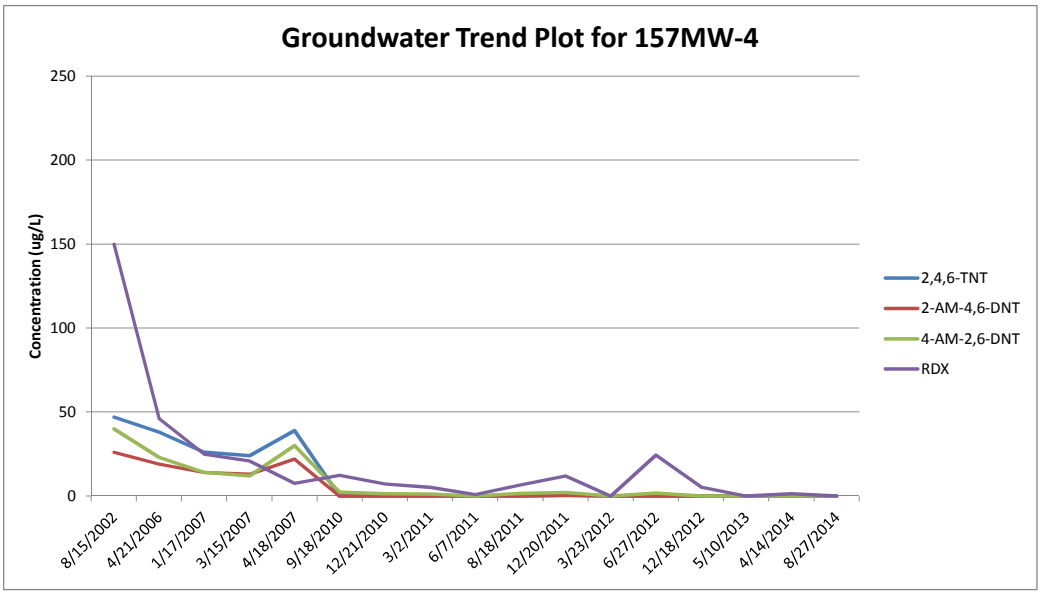
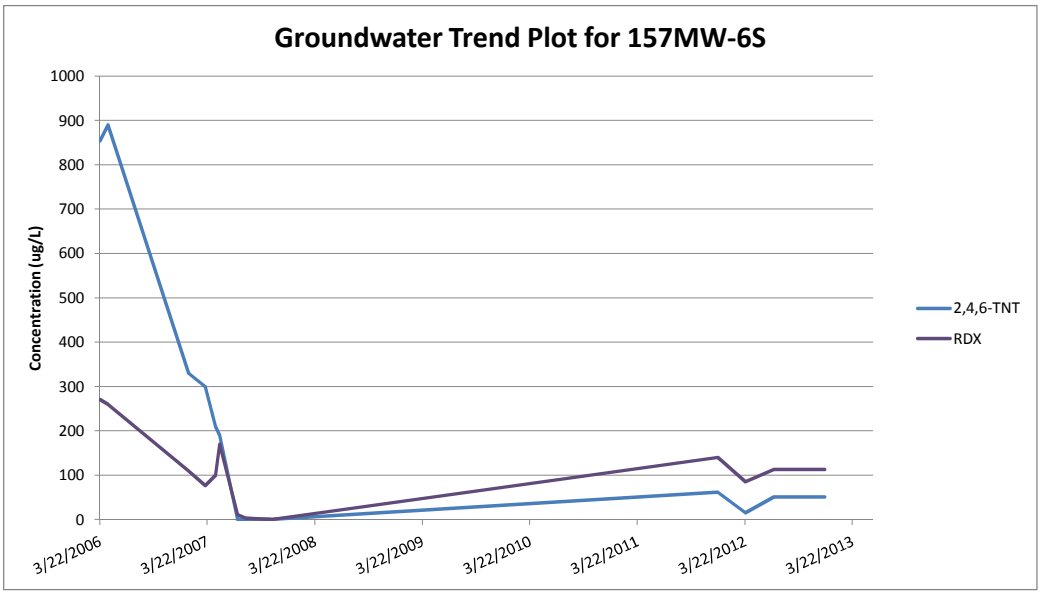
Appendix C
Groundwater Data Trend Plots - Site 40
2014 Annual Monitoring Report (Third and Fourth Quarter)
Group 1 Sites (PICA-079)
Picatinny Arsenal, New Jersey



Chemical	LOC (ug/L)	8/15/2002	4/21/2006	1/17/2007	3/15/2007	4/18/2007	9/18/2010	12/21/2010	3/2/2011	6/7/2011	8/18/2011
2,4,6-TNT	2	47	38	26	24	39	0	0	0	0	0
2-AM-4,6-DNT	73	26	19	14	13	22	0	0	0	0	0
4-AM-2,6-DNT	73	40	23	14	12	30	2.32	1.23	1.14	0	1
RDX	2	150	46	25	21	7.6	12.3	7.14	5.06	1	7

Chemical	LOC (ug/L)	12/20/2011	3/23/2012	6/27/2012	12/18/2012	5/10/2013	4/14/2014	8/27/2014
2,4,6-TNT	2	0	0	0	0	0	0	0
2-AM-4,6-DNT	73	0	0	0	0	0	0	0
4-AM-2,6-DNT	73	2	0	1.68	0.401	0	0	0
RDX	2	12	0	24.3	5.26	0	1.29	0

Note:
All the results shown as zero are less than the method detection limit.
Concentrations exceeding the applicable screening criterion are shaded.



Chemical	LOC (ug/L)	3/22/2006	4/18/2006	1/17/2007	3/15/2007	4/18/2007	5/3/2007	7/2/2007	7/31/2007	9/5/2007	10/26/2007
2,4,6-TNT	2	854	890	330	300	210	190	0	0	0	0
RDX	2	271	260	110	77	100	170	11	3.5	1.8	0

Chemical	LOC (ug/L)	12/20/2011	3/23/2012	6/27/2012
2,4,6-TNT	2	61.3	15.7	50.6
RDX	2	140	85.8	113

Note:
All the results shown as zero are less than the method detection limit.
Concentrations exceeding the applicable screening criterion are shaded.